# Defence Equipment and Support

## Submarine Dismantling Project

## Strategic Environmental Assessment (SEA)
## Stage 'A' Scoping Report - Update

## Non-Technical Summary

December 2010

Defence Equipment & Support

MINISTRY OF DEFENCE

## Third-Party Disclaimer



## Document Revisions

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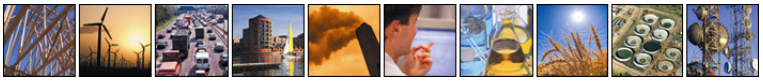

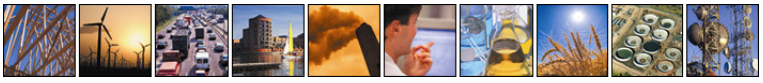

# Submarine Dismantling Project

## Strategic Environmental Assessment Scoping Report: Updated Non-Technical Summary

December 2010

Prepared by Entec UK Limited and Defence Estates for Defence Equipment and Support, Ministry of Defence.

**Report for**

In-Service Submarines
Defence Equipment and Support
Ministry of Defence

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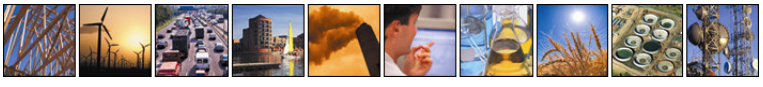
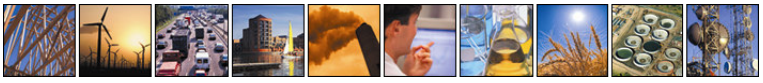




## Introduction

This is the Non-Technical Summary ('NTS') of the updated Scoping Report produced as part of the Strategic Environmental Assessment (SEA) of the Submarine Dismantling Project (SDP[1]). The Scoping Report is the first stage of the SEA process, and sets out the way in which the Ministry of Defence (MOD) proposes to undertake the SEA assessment. Due to the complexity of the project, the MOD has undertaken this scoping stage in two phases; this stage 'A2' report takes into account the comments received during the first phase of scoping consultation.

## 1. What is Strategic Environmental Assessment?

SEA is a way by which the significant environmental effects of the SDP proposals can be identified and assessed before any major decisions are made on the outcome. This will allow potentially damaging effects to be avoided, minimised or mitigated, whilst positive ones can be enhanced.

SEA is required by legislation for certain strategic plans and programmes prepared by public bodies. The SEA Directive was implemented across Europe in 2004[2]; to date the Regulations have mainly been used in the development of Regional Spatial Strategies, Local Development Frameworks and other land-use plans by Local and Regional Authorities. However, SEAs for the plans and programmes of central government departments and agencies are now being published (see http://www.direct.gov.uk/en/AdvancedSearch/Searchresults/index.htm?fullText=SEA+consultations+2010 for examples).

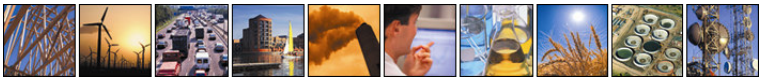
The purposes of SEA are:

- to identify and measure the potentially significant environmental effects of a plan or programme (in Scotland, this also includes strategies);
- to give the public the ability to see and comment upon the effects that the plan or programme may have on them and their communities, and to encourage them to comment on it, and to suggest improvements; and
- to ensure that environmental issues are properly considered throughout the planning stage, with appropriate measures being taken wherever possible to avoid, reduce or manage damaging environmental impacts and to enhance beneficial impacts.

All of the above must be completed before the plan or programme is given formal approval and planning permissions for the resulting developments are sought.

[1] The SDP was previously known as the Interim Storage of Laid-Up Submarines (ISOLUS) project.

[2] European Union Directive 2001/42/EC (known as the SEA Directive) was transposed into UK legislation on the 20th July 2004 as Statutory Instrument No. 1633 – *The Environmental Assessment of Plans and Programmes Regulations 2004*. This applies to plans and programmes which have the potential to affect England and/or the UK as a whole. Devolved administrations have their own legislation in force.



The main stages of the SEA process (as applied to the MOD's SDP strategy) are:

**Stage A** The scope of the SEA assessment (essentially, what issues will be covered) is proposed in a Scoping Report, and the proposed approach is then agreed with Statutory government consultees. **This Non-Technical Summary describes what is in that report in non-technical language.**

**Stage B** The likely environmental effects of the SDP's 'reasonable options' are assessed. This includes short- and long-term, direct and indirect effects, as well as cumulative effects (where multiple small effects add together to have a large combined impact) and synergistic effects (where effects add together to create an impact greater than the sum of their parts).

**Stage C** An Environmental Report is written detailing the results of the assessments, and proposing ways to improve the environmental performance of the SDP.

**Stage D** Public Consultation takes place on both the SDP proposals and its' Environmental Report, after which the responses are considered and integrated into the final decisions on how to proceed with the proposals.

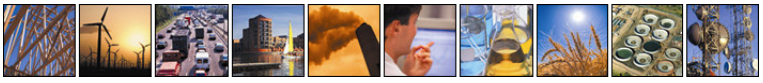
**Stage E** The environmental effects of the selected options are monitored, largely through subsequent statutory assessments at project level. A post-adoption report will be published to show how MOD has taken the public's feedback into account.

Although the strict applicability of the SEA Regulations to the SDP remains unclear, the MOD is undertaking an environmental assessment on the SDP proposals incorporating the requirements of the SEA Directive, as this is considered to be good practice. Undertaking an SEA will help ensure that the potential environmental implications of the options are assessed early on, so they can help inform, shape and improve the project as it develops. The approach will follow both MOD[3] and wider government[4] guidance.

This second (or 'Stage A2') Scoping Report provides a further opportunity for the UK's Statutory Consultation Bodies (listed in **Box 1**) to comment on the scope and the level of detail which should be included in the environmental assessment. The updated Scoping Report will also be sent to relevant Government departments and agencies for comment.

[3] The Environmental and Sustainability Appraisal Tool Handbook (Chapter Two: SEA) MOD, 2009. http://www.mod.uk/DefenceInternet/AboutDefence/CorporatePublications/DefenceEstateandEnvironmentPublications/DefenceEstates/SustainabiltyAndEnvironmentalAppraisalToolHandbook.htm

[4] A Practical Guide to the Strategic Environmental Assessment Directive. ODPM (now the Department for Communities and Local Government), 2006. http://www.communities.gov.uk/publications/planningandbuilding/practicalguidesea).



**Box 1: UK Statutory Consultation Bodies:**

- The Environment Agency (England and Wales); Scottish Environment Protection Agency (SEPA); Northern Ireland Environment Agency;
- English Heritage; Historic Scotland; Cadw (Welsh Historic Monuments);
- Natural England; Scottish Natural Heritage; Countryside Council for Wales; and
- The Scottish Government and Welsh Assembly Government.

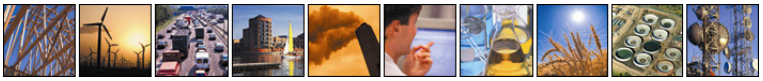
The SEA assessment will evaluate the environmental effects of the SDP's strategic options. The main output of the SEA assessment process will be an Environmental Report, which will be issued for public consultation alongside the draft SDP proposals.

## 2. What is in the Scoping Report Update?

The Scoping Report forms the first formal stage (Stage A) of the SEA process and sets out the following information:

- an introduction to the SDP;
- the generic options for dismantling the submarines and managing the resulting waste streams until the Geological Disposal Facility (GDF) becomes available;
- a description of the current and future state of the UK environment (the 'baseline conditions'), making particular reference to any existing environmental problems that the project could impact;
- a list of relevant plans, programmes and strategies at International, National and Local Authority level, to indicate how the SDP could be affected by outside factors (such as waste or climate change strategies);
- to identify relevant plans, programmes and environmental protection objectives which will need to be taken into account in planning for dismantling;
- the proposed SEA objectives and assessment questions, by which the environmental performance of the SDP's alternative options can be assessed (these are included in this NTS);
- a top-line assessment of the potentially significant environmental effects that the SDP could have; and
- the proposed content of the Environmental Report.

The MOD will again be asking UK Statutory Consultees (listed in **Box 1**) whether they either agree with the information in the report or have anything to add.



## 3. Background to the UK's Redundant Submarines

**Laid-up submarines at Devonport**

When a nuclear-powered submarine leaves service with the Royal Navy, the nuclear fuel is removed from the reactor and sent for long-term storage at the Nuclear Decommissioning Authority (NDA) site at Sellafield, Cumbria. Serviceable equipment is then removed for re-use. Currently, Babcock International at Devonport has the only nuclear licensed site in the UK with the capability to defuel nuclear submarines. By law, this work cannot be undertaken on a non-licensed site.

The hull is then laid up for long-term afloat storage in Devonport. Until 2004, submarines were also defueled at Rosyth in Scotland, and seven submarines remain there in long-term afloat storage. The majority of the radioactivity remaining in the defueled submarines is contained within the Reactor Pressure Vessel (RPV), the metal container which houses the reactor. This radioactivity is mainly the result of activated steel in the RPV. The RPV is contained within the Reactor Compartment (RC) as shown in **Figure 1** below. Since it is held behind the same internal safety barriers as when the submarine was operational, it is safe to be stored afloat for a prolonged period.

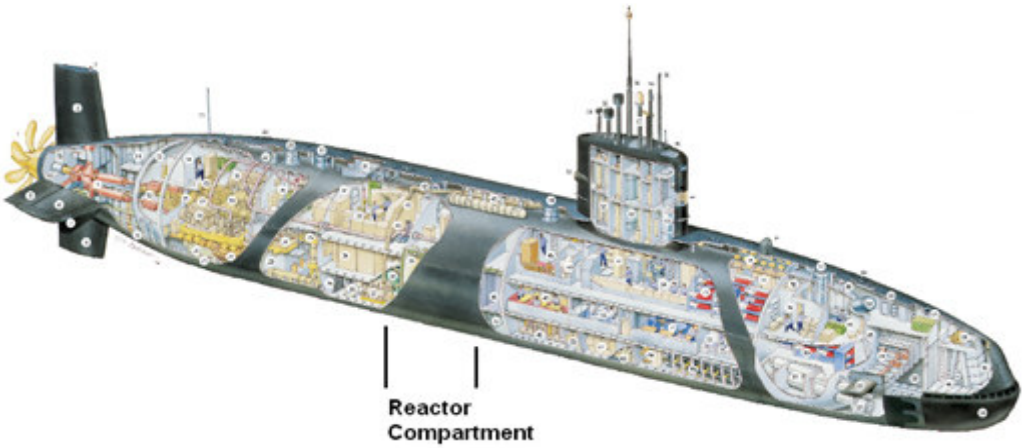
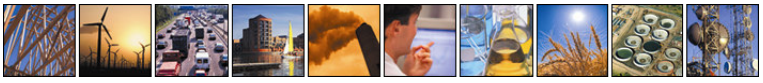



Figure 1 - Cross-Section of a Royal Navy Submarine, showing the location of the Reactor Compartment

To date, 16 nuclear-powered submarines have left naval service and are stored safely afloat. Seven are at Rosyth; the remaining nine submarines are stored at Devonport, five of which await defueling. Whilst afloat storage has proved to be a very safe arrangement for over 30 years, it does not fulfil MOD or wider Government long-term nuclear decommissioning policies, which require that nuclear decommissioning and disposal operations should be carried out *as soon as reasonably practicable*. Additionally, afloat storage capacity at Devonport is expected to run out around 2020, and the cost of maintaining the redundant submarines is increasing significantly as they age and the number of submarines in afloat storage increases. As such, the current situation is not sustainable.



## 3. What is the Submarine Dismantling Project about?

Project ISOLUS (Interim Storage of Laid-Up Submarines) was set up in 2000 to develop and implement a safe, environmentally responsible, secure and cost-effective way of dismantling and disposing of the UK's 27 redundant and defueled nuclear submarines, of past and current classes[5], as a more sustainable alternative to continued afloat storage. In 2009, the project was renamed the Submarine Dismantling Project (SDP) to better reflect the nature of its objectives.

The SDP extends over an estimated 60-year period and involves dismantling the defueled submarines, reusing or recycling as much of the resulting non-radioactive material as practicable, and storing the residual Intermediate-Level Radioactive Waste (ILW) until the proposed Geological Disposal Facility (GDF) which will eventually house the Intermediate-Level Waste from the submarines becomes available at some point beyond 2040 (see http://www.nda.gov.uk/aboutus/geological-disposal and http://mrws.decc.gov.uk/ for more details on the GDF).

The Low-Level Radioactive Waste (LLW) from the Reactor Compartment has an established disposal route to the UK National LLW Repository in Cumbria, and before dismantling the nuclear fuel will already have been removed for long-term storage at Sellafield. Both dismantling and ILW storage are likely to need specialist equipment and facilities, which will eventually need to be decommissioned. At this stage, no decisions have been made about whether more than one initial dismantling site and/or one interim storage facility will be required. However, it will be possible to dismantle the non-radiological front and rear parts of the submarine at a commercial ship-breaking facility elsewhere in the UK. **Figure 2** explains the key indicative stages of the SDP (note that these stages may not occur in strict sequence, and some overlap is possible)

[5] (6x 'Superb' Class; 7x 'Trafalgar' Class; 2x 'Valiant' Class; 3x 'Churchill' Class; HMS Dreadnought; 4x 'Resolution' Class; 4x 'Vanguard' Class). The scope of the SDP *does not* include disposal of ASTUTE class or successor to the Vanguard Class submarines, although facilities will retain the flexibility to accommodate future classes of submarines where possible.

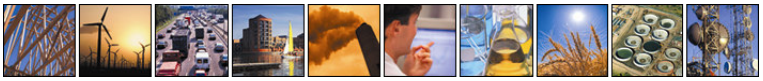
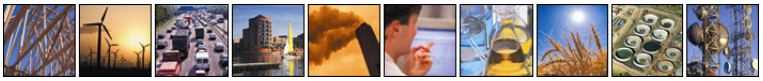


**Figure 2 Key Indicative Stages and Activities of the SDP Programme**

| | |
|---|---|
| **I** | Design and Develop the initial Submarine Dismantling Capability, and |
| **II** | Design and Develop the Interim ILW Storage Capability. |
| **III** | Dock Submarines and Process the Reactor Compartments (RCs). |
| **IV** | Dismantle the Front and Rear Sections of the Submarines; Process all Wastes except ILW. |
| **V** | Transport RC/ RPV / packaged ILW to Interim Storage |
| **VI** | Dismantle RC/ Reactor Pressure Vessel (RPV) (if required); transfer packaged ILW to the GDF. |
| **VII** | Decommission the SDP Facilities. |

The key underpinning principles of the SDP are that:

- continued afloat storage is not a reasonable long term option, due to both MOD and wider Government decommissioning policies, together with storage capacity constraints and long-term cost;
- the Royal Navy's redundant submarines cannot be dismantled or disposed of abroad, for defence and security reasons;
- all submarines will already have been defueled before they undergo dismantling, so there will be neither irradiated fuel nor High Level Waste (HLW) to manage as part of the process;
- the proposed GDF is not expected to be available until at least 2040, which means that some form of interim ILW storage will be necessary;
- all dismantling activity on the Reactor Compartment must take place at a site that holds an appropriate civil Nuclear Licence and/or military Authorisation (whether this is at a new or an existing facility);
- most of the radiological work involved in dismantling (e.g. work involving radioactive materials) is already established practice in submarine refits and in civil reactor decommissioning, so there will be very few new technical procedures involved;
- the non-radiological front and rear parts of the submarine (which form the bulk of each vessel) do not have to be dismantled at a Nuclear Licensed or Authorised site, and could potentially be handled at a commercial ship breaking facility that could be selected by competition to give better value for money;
- where feasible, dismantled materials will be re-used or recycled (rather than be disposed of); and



- the principles of legal compliance, adopting industry good practice, openness and transparency will be applied to the project; further public consultation will be undertaken before any major decisions are made.

## 4. Public Consultation on the SDP

Two public consultations on the project have been held to date (in 2002 and 2003). An independent advisory group also provides ongoing advice and guidance. See www.submarinedismantling.co.uk for more information.

A key recommendation of these consultation processes was that MOD's management of its radioactive waste should fit with the recommendations made by the independent Committee on Radioactive Waste Management (CoRWM), set up by the Government in November 2003 to recommend a strategy for the long-term management of the UK's legacy higher-activity solid radioactive materials, which includes spent nuclear fuel, High-Level Waste and ILW. CoRWM recommended that a programme of robust, safe and secure interim storage of ILW would be required until the proposed GDF (and/or a near-surface Repository) is established, which fits well with the strategic aims of the SDP.

The third public consultation, of which the SEA Environmental Report will be a part, will be conducted on the proposed implementation options for the SDP.

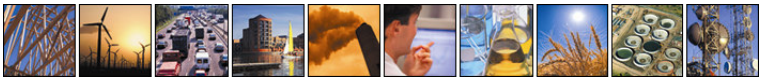
## 5. What Options are being considered?

The SDP is a national project which consists of seven discrete stages (**Figure 2**). Stage I (development of the initial dismantling facility/ies) involves identifying potentially suitable locations to undertake dismantling of the Reactor Compartment. Stage II (development of the interim ILW storage facilities) involves identifying the best means of storage for the ILW that arises from that initial dismantling. Stage III involves determining the best initial dismantling option (e.g. the extent to which the Reactor Compartment is taken apart 'up front'). Stages IV-VII are 'process' stages, whereby proven industry practices will be used to achieve the desired outcomes. The third public consultation will be seeking people's views on the overall proposals for all of the SDP Stages (Stages I-VII), and *specifically* on the various options for achieving Stages I-III which are outlined below:-

### Stage I - Where should Submarine dismantling activities be undertaken?

The initial dismantling facility/ies could be developed on undeveloped, 'greenfield' land; on previously-developed 'brownfield' land (both of which would need to be Licensed for nuclear work), or on 'existing' sites which are already Licensed or Authorised. These categories have evolved from the basic distinctions of using an existing licensed/authorised nuclear site, versus developing a new site. The 'new site' category divides itself into building on land which is not built up, and building on already developed or derelict land.

Since sites on 'undeveloped' and 'previously-developed' land could potentially be anywhere in the UK, MOD proposes to include these *generic* site options in the SEA and the public consultation.



There are only a small number of 'existing' nuclear Licensed[6] or Authorised sites in the United Kingdom that could practically undertake initial submarine dismantling (for example, any sites must have access to the sea so inland sites would not be feasible). MOD considers it reasonable to identify those potentially suitable sites, to look at them in more detail and to assess the environmental effects of undertaking SDP activities there.

The process of identifying these potential candidate 'existing' sites has been completed on an indicative basis. The *indicative* site list for initial dismantling includes the following establishments:

- **Devonport Royal Dockyard, Plymouth;**
- **Rosyth Royal Dockyard, Fife.**

It should be noted that this implies three initial dismantling site options, involving either Devonport Royal Dockyard or Rosyth Royal Dockyard, or some combination of both sites.

An explanation of the indicative site selection process can be found in the SDP Proposed Site Criteria and Screening Paper, which has been placed on the SDP web-site at the same time as this second statutory consultation. This list is only indicative at this stage and the project intends to engage with local site stakeholders at these sites before confirming the list, at the same time as concluding Stage A of the SEA.

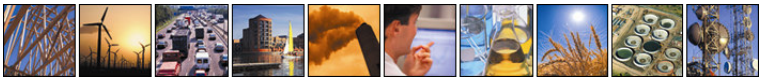
The non-radiological front and rear sections of the submarine (which form the bulk of each vessel) do not necessarily need to be dismantled at a Nuclear Licensed site, although all dismantling has by law to take place at a suitably-licensed ship-breaking facility. This gives the options of either undertaking all dismantling work at the initial dismantling site(s), or of sending the front and rear sections to a commercial ship-breaking facility elsewhere in the UK. This could present significant opportunities to maximise value for money without compromising safety. The submarines cannot be dismantled abroad.

### Stage II – What is the best way of managing the ILW until the GDF becomes available?

As for initial dismantling, the interim storage capability could be sited on undeveloped 'greenfield' land, previously developed 'brownfield' land, or on 'existing' Licensed or Authorised sites in the UK. These 'Existing' sites are owned by either the MOD, the Nuclear Decommissioning Authority (NDA) or by Commercial operators. The current practice in the civil nuclear sector is that ILW is stored where it is generated. There is, therefore, no established precedent for transfer of ILW between stores. The NDA have challenged this position in their latest draft Strategy[7] and are exploring opportunities to share current and planned storage facilities to improve value for money and reduce the environmental impact of new store build. The development of such a national waste consolidation strategy represents a significant opportunity for MOD to realise better value for money in conjunction with wider Government liabilities, but it is not sufficiently mature to support the screening of potential candidate sites.

[6] See http://www.hse.gov.uk/nuclear/licensees/pubregister.pdf for full list

[7] Nuclear Decommissioning Authority, Draft Strategy Published September 2010 for Consultation



At this stage, therefore, the MOD proposes to assess the generic site options ('greenfield' sites, 'brownfield' sites and 'existing' sites), and then to assess what the environmental effects might be of developing ILW storage capability on the three different types of 'existing' site (namely those under MOD, NDA and commercial ownership).

### Stage III - How should the Reactor Compartments be dismantled?

There are three main options for handling the Reactor Compartment (the central 'slice' of the submarine), which houses the nuclear reactor that powers the vessel. These are:

- Cut out and store the entire Reactor Compartment (RC), which is the least invasive solution in the short-term, and is current practice in the USA, Russia and France.
- Partially dismantle the RC to extract the Reactor Pressure Vessel (RPV) and store it intact. The LLW would be removed, and any ILW external to the RPV would be packaged for interim storage.
- Fully dismantle the RC *in situ,* remove the LLW and package the ILW into GDF-compatible, transportable containers. This is referred to as the 'cut up' option.

In all of these options, the reactor will have to be fully dismantled and packaged as in the 'cut up' option, before the waste can be placed in the GDF. The most significant difference between these options will therefore be *when* the nuclear reactor will be dismantled and the ILW packaged for final disposal. Storing the RC or the RPV would simply mean deferring the full processing and packaging of ILW until the proposed GDF becomes available, some time after 2040.

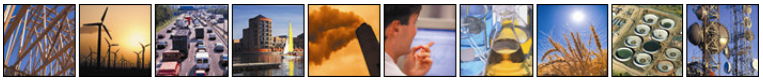
## 6. What is the Proposed Scope of the SEA?

The MOD is proposing to do the following:

- Firstly, to assess the generic environmental impacts that could arise from each stage of the SDP (Stages I to VII in **Figure 2**). This will include assessing the environmental impacts associated with the three different initial dismantling options, and with developing dismantling and storage facilities on undeveloped land, previously-developed land and on 'existing' UK Nuclear Licensed or Authorised sites *(noting that the project will aim to use an 'Existing' site if possible).*
- Secondly, to assess what the environmental impacts might be if initial submarine dismantling takes place at the indicative 'existing' Nuclear Licensed or Authorised sites, and what the generic environmental effects of providing interim ILW storage facilities at MOD, NDA or Commercial sites could be. These are shown in **Table 1**.

Assessing individual sites will clearly contain more detail than the generic assessments, since site-specific information will be available. However, SEA is not meant to be a detailed assessment of individual options, so the findings will remain relatively high-level.

Whichever site(s) are finally chosen, further site-specific environmental assessments will be required by law before any development can take place. MOD expects that these will include (but not be limited to) Town and Country Planning Environmental Impact Assessment, Environmental Impact

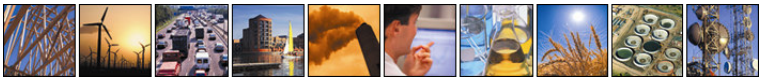


Assessment for Nuclear Decommissioning and Environmental Permitting[8]. All of these will include further public consultation.

**Table 1 Types of Assessment Proposed for Each Stage of the SDP**

| Key Stages of the Submarine Dismantling Project | Generic Assessment for the SDP's strategic options | Site-level Assessment for the SDP's strategic options |
|---|---|---|
| **Stage I**: Develop the initial dismantling capability | Assess each generic site category (undeveloped site, developed site or 'existing' Licensed/Authorised nuclear site). | Assess credible 'existing' Licensed/Authorised sites. |
| **Stage II**: Develop the interim ILW storage capability | Assess each generic site category (undeveloped site, developed site or 'existing' Licensed/Authorised nuclear site).<br>Consideration of different generic 'existing' site types, where relevant. | |
| **Stage III**: Dock submarines and process Reactor Compartments | Assess transport of submarines to dismantling facility/ies.<br>Assess each technical option for processing the reactor compartment. | Consideration of site-specific transport issues, where relevant. |
| **Stage IV**: Dismantle the fore and aft sections and process all materials (except ILW) | Generic assessment of ship-breaking, including consideration of on-site and off-site final dismantling. | |
| **Stage V:** Transport RC/RPV/ ILW to interim storage | Generic assessment of transport options | Consider site-specific issues where relevant. |
| **Stage VI**: Dismantle RC/ RPV (if appropriate); transfer packaged ILW to proposed Geological Disposal Facility (ca. 2040) on | Generic assessment of the dismantling process (as per stage III) if required; generic assessment of transport options. | Consider site-specific transport issues, where relevant. |
| **Stage VII:** Decommission SDP | Generic assessment of the | |

[8] The Town & Country Planning (Environmental Impact Assessment) (Amendment) (England) Regulations 2008, plus devolved equivalents; the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999; and the Environmental Permitting Regulations 2010



| Key Stages of the Submarine Dismantling Project | Generic Assessment for the SDP's strategic options | Site-level Assessment for the SDP's strategic options |
|---|---|---|
| facilities once all submarines have been processed | decommissioning process. | |

## 8. What Environmental Issues are Relevant for the SDP?

The SEA Directive requires that the existing environmental issues which are relevant to the plan or programme are identified at scoping stage. These have been identified by reviewing the plans and programmes and assessing the baseline information, and are summarised in **Table 2** below. They are not exhaustive and are not presented in any order of priority.

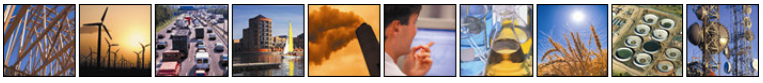
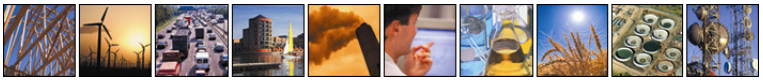


**Table 2 Key Environmental Issues for the SDP**

| |
|---|
| **Biodiversity and Nature Conservation:** Consideration will be given to the potential effects of the SDP proposals on the natural environment, including fisheries and areas protected for their wildlife and conservation importance. |
| **Population:** Consideration will be given to the potential effects of SDP proposals on local communities, including socio-economic impacts and the extent to which proposals present opportunities for community benefit, e.g. through skills development. *(Note that assessment of economic effects is not an environmental issue and is not required by SEA, but has been included to reflect the importance of these issues to the wider public).* |
| **Human Health and Wellbeing:** The potential effects of SDP proposals on people's health and on health service provision will be assessed. This will include issues related to radiological work. |
| **Health (Noise and Vibration):** The potential noise-related impacts of the SDP options will be assessed on people and communities. |
| **Soil and Geology:** Consideration will be given to potential effects on soil extent, variety and quality (including contamination and on the SDP's potential to disturb historic contamination). The potential effects on protected/important geological features will also be assessed. |
| **Water:** Consideration will be given to potential effects on surface waters, groundwater systems and the marine environment, including the effects of Licensed and unplanned discharges to water. |
| **Air:** Consideration will be given to potential effects on air quality, including construction, transport and the effects of Licensed and unplanned radioactive discharges to the atmosphere. |
| **Climate Change and Energy Use:** Consideration will be given to the likely impacts of climate change, such as storminess, water availability and temperature. The SEA will also assess the potential effects of the SDP itself on energy use and greenhouse gas emissions. |
| **Coastal Change and Flood Risk**: Consideration will be given to existing and future flood risks, as well as the effects on coastlines of projected sea level rise and a possible increase in storm intensity. The effects of land instability and erosion will also be assessed. |
| **Material Assets (Transport):** The SDP will necessarily involve dismantled components and materials being transported off-site. Consideration will be given to the potential effects of transporting oversized, hazardous and/or radioactive materials on existing transport systems and infrastructure, particularly through urban and other sensitive areas. |
| **Material Assets (Waste Management):** The SDP is essentially a waste management programme. Consideration will be given to potential waste volumes and the effects this may have on current waste management infrastructure and the market for recycled materials. The extent to which the SDP proposals represent good practice (e.g. reduce, re-use, recycle, dispose) will also be assessed. |
| **Material Assets (Materials and Land Use):** The SDP will involve the development of new or upgraded facilities. Consideration will be given to the potential effects of the SDP on land use, on the use of finite resources such as minerals, and on the quality and environmental performance of buildings and facilities. |
| **Cultural Heritage:** Consideration will be given to the potential effects of the SDP on the historic environment, including cultural heritage resources, historic buildings and archaeological features. |
| **Landscape and Townscape:** Consideration will be given to the potential effects of the SDP proposals on the quality and attractiveness of landscapes and townscapes, as well as on public access to open spaces. |

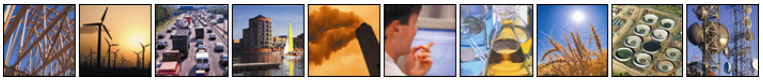


## 9. What are the Proposed SEA Objectives and Guide Questions?

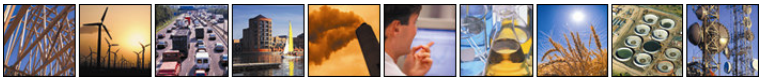
The review of relevant plans, programmes and environmental protection objectives, analysis of the baseline evidence and the assessment of the relevant environmental issues for the SDP (as listed above) have been used to establish a number of SEA Objectives - essentially guiding principles for sustainable development - which the project should seek to accommodate. For each objective, guideline questions will be used to assess the environmental performance of the different project options. Suggested objectives and guide questions are shown in **Table 3** below. Following the first consultation, we have amended the existing assessment categories and have included a new category on coastal change and flood risk.

**Table 3 Proposed SEA Objectives and Assessment Questions**

| Assessment Category and Overall Objective | Proposed Assessment Questions *Will the SDP Proposals…* |
|---|---|
| **A. Biodiversity and Nature Conservation**<br>Protect and enhance habitats, species and ecosystems. | Affect animals or plants, including protected species?<br>Affect designated nature conservation sites?<br>Affect the structure and function of natural systems (ecosystems)?<br>Affect public access to areas of wildlife interest?<br>Have an impact on fisheries? |
| **B. Population**<br>Promote a strong, diverse and stable economy with opportunities for all; minimise disturbance to local communities and maximise positive social impacts. | Affect the social infrastructure and amenities available to local communities?<br>Affect local population demographics and/ or levels of deprivation in surrounding areas?<br>Affect opportunities for investment, education and skills development?<br>Affect the number or types of jobs available in local economies?<br>Affect how diverse and robust local economies are?<br>Affect the sense of positive self-image and the attractiveness of surrounding areas as places to live, work and invest in? |
| **C. Health and Wellbeing**<br>Protect and enhance health, safety and wellbeing of workers and communities; minimise any health risks associated with processing submarines. | Affect the health or safety of SDP workers, or other people working at the proposed sites?<br>Affect the health, safety and well-being of local communities?<br>Affect local healthcare infrastructure and provision? |
| **D. Noise and Vibration**<br>Minimise disturbance and stress to people, wildlife and historic buildings caused by noise and vibration. | Significantly increase levels of noise and vibration?<br>Affect the amount of noise and vibration felt by local communities? |



| Assessment Category and Overall Objective | Proposed Assessment Questions<br>*Will the SDP Proposals…* |
|---|---|
| **E. Geology and Soils**<br>Minimise threats to the extent and quality of soils and geological resources. | Have an effect on soil quality, variety, extent and/or compaction levels?<br>Have an effect on soil function and processes?<br>Increase the risk of significant soil contamination?<br>Have an effect on any known and existing contamination?<br>Affect geological conservation sites and important geological features?<br>Affect land stability? |
| **F. Water**<br>Maximise water efficiency, protect and enhance water quality. | Affect demand for water resources?<br>Affect the amount of waste water and surface runoff produced?<br>Cause any changes in radioactive or other hazardous discharges to water?<br>Affect the quality of groundwater, surface waters or sea water?<br>Affect the distribution and quality of freshwater or marine sediments? |
| **G. Air**<br>Minimise emissions of pollutant gases and particulates and enhance air quality | Affect air quality?<br>Cause a change in radioactive emissions to air?<br>Affect emissions of ozone-depleting substances?<br>Create a nuisance for people or wildlife (for example from dust or odours)? |
| **H. Climate Change and Energy Use**<br>Reduce energy consumption, minimise detrimental effects on the climate from greenhouse gases and maximise resilience to climate change. | Affect the amount of carbon dioxide and other greenhouse gases emitted?<br>Be significantly affected by climate change (for example rising temperatures and more extreme weather events)?<br>Affect how climate change might impact on the wider environment?<br>Promote or impede the use of energy efficiency measures, low carbon and/ or renewable energy sources?<br>Have wider implications for combating the effects of climate change? |
| **I. Coastal Change and Flood Risk**<br>Minimise the risks from coastal change and flooding to people, property and communities. | Affect existing flood risks?<br>Be at risk of flooding from any source?<br>Affect coastal processes and/or erosion rates?<br>Be affected by coastal processes and/or erosion? |
| **J. Material Assets (Transport)**<br>Minimise the detrimental impacts of travel and transport on communities and the environment, whilst maximising positive effects. | Affect the number and frequency of heavy, oversized, radioactive and/ or hazardous loads being transported off-site, particularly through sensitive areas (e.g. population centres, historic areas and vulnerable ecosystems?)<br>Increase or decrease traffic congestion around SDP sites?<br>Increase or decrease the risk of traffic accidents around SDP sites? |

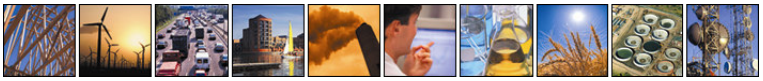


| Assessment Category and Overall Objective | Proposed Assessment Questions *Will the SDP Proposals…* |
|---|---|
| **K. Material Assets (Waste Management)**<br>Minimise waste arisings, promote reuse, recovery and recycling and minimise the impact of wastes on the environment and communities. | Increase the amount of radioactive waste to be disposed of?<br>Affect the amount of hazardous waste to be disposed of?<br>Affect the amount of non-hazardous wastes produced?<br>Affect the capacity of existing waste management systems, both nationally and locally?<br>Maximise re-use and recycling of recovered components and materials?<br>Help achieve government and national targets for minimising, recovering and recycling waste?<br>Affect the environmental risks associated with managing radioactive and hazardous wastes? |
| **L. Land Use and Materials**<br>Contribute to the sustainable use of land and natural and material assets. | Change patterns of land use on or around SDP sites?<br>Affect any existing or proposed redevelopment/regeneration programmes?<br>Lead to the loss of undeveloped land or green spaces?<br>Increase the burden on limited natural resources such as aggregates or wood?<br>Promote the use of sustainable design and construction practices and help the government achieve its targets for the quality of built environments?<br>Make best use of existing infrastructure and resources? |
| **M. Cultural Heritage**<br>Protect and where appropriate enhance the historic environment including cultural heritage resources, historic buildings and archaeological features. | Affect designated or locally-important archaeological features?<br>Affect the fabric and setting of historic buildings, places or spaces that contribute to local distinctiveness, character and appearances? |
| **N. Landscape and Townscape**<br>Protect and enhance landscape and townscape quality and visual amenity. | Have significant visual impacts (including those at night)?<br>Affect protected/designated landscapes or townscapes, such as National Parks or Conservation Areas?<br>Affect the intrinsic character of local landscapes or townscapes?<br>Affect public access to open spaces or the countryside? |

## 10. How will the Assessments be undertaken?

For each of the options within the SDP (shown in **Figure 2** and **Table 1**), assessment will be undertaken using an SEA matrix which has been developed by the MOD to meet the SEA's statutory requirements. The matrix is shown in **Table 4.** This will enable both the nature and magnitude of the environmental effects to be recorded. Specific elements to be included within the assessment will include:

- The potential environmental effects of each SDP option.
- The 'mitigation' measures that could be used to reduce any potentially significant negative effects that the SDP may have, and to enhance any potentially positive effects that it may have.



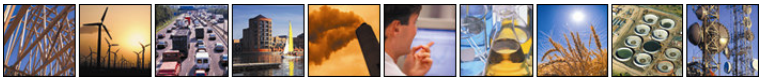
- The assumptions and uncertainties that underpin the assessment.
- The additional information that would be required to address any uncertainties and to undertake more detailed site-specific assessment.
- The timescales over which the potential effects are likely to occur. For the Submarine Disposal Programme, the proposed definitions of timescale are: Short term = up to five years after each activity begins; medium term = over five years and to the end of the activity; long term = the ongoing time period after the activity has ceased.

Symbols and colour coding will also be used to indicate significant (positive or negative) impacts.

**Table 4 EXAMPLE Assessment Matrix (extract) for each SDP Option**

| **Assessment Category and Objective** | **Likely Effects** (including direct , indirect, cumulative and synergistic effects, and possible mitigation measures) | **Timescale** | | |
|---|---|---|---|---|
| | | Short-Term | Medium-Term | Long-Term |
| **A. Biodiversity and Nature Conservation:** Protect and enhance habitats, species and ecosystem functionality. | A description of the biodiversity and nature conservation effects of each option will be provided here, with reasoning and justification included… | - | 0 | 0 |
| **B. Population:** Promote a strong, diverse and stable economy with opportunities for all, minimise disturbance to local communities and maximise positive social impacts. | A description of the population effects of each option will be provided here… | ++ | + | 0 |
| **C. Health, Safety and Wellbeing**<br><br>Protect and enhance health, safety and wellbeing of communities and minimise potential risk associated with processing radioactive and non-radioactive materials. | A description of the health and wellbeing effects of each option will be provided here… | 0 | 0 | + |
| **….etc** | | | | |

| ++ Strongly positive effect | + Positive effect | 0 No significant effects | - Negative effect | - - Strongly negative effect |
|---|---|---|---|---|

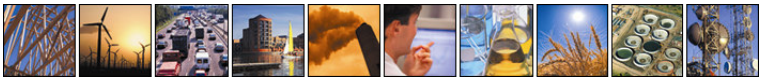


## 11. What are the Next Steps of the SEA Process?

This second Non-Technical Summary and the accompanying updated Scoping Report have been sent to the UK's Statutory Consultation Bodies for comment. Input has also been invited from relevant Government Departments and Agencies, and the UK's Devolved Administrations. Comments from the Scoping Consultees are being invited during the second five week consultation period, starting on the date the Scoping Report is received (the total consultation period will be seven weeks, to allow for the Christmas and New Year break). Comments and responses received during that period will be considered and used to refine the scope of the assessment. The comments received (and MOD's response to them) will be made public. The comments received from the first Statutory Consultation can be found in Annex F of the main Scoping Report.

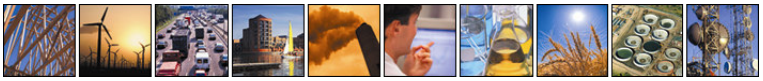
The SEA Environmental Report will form part of the consultation material for the third national public consultation on the SDP. This 12-week public consultation will seek the views of those interested in the SDP proposals. It will be a national consultation, although specific events will take place in the areas around credible sites. The views and representations received during the public consultation will be published once the consultation has ended, with MOD's initial response to them. The MOD will study the recommendations and will use them to help inform strategic decisions on the way forward, and to optimise the environmental performance of the SDP as it moves towards the detailed planning stage.

Whilst it may not be possible for all comments and suggestions to be accepted, MOD will take all feedback fully into account before any final decisions are made, and will make those decisions and justifications public.

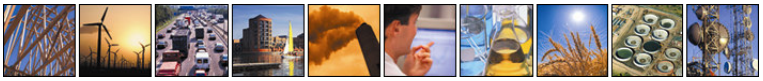


# Abbreviations and Glossary

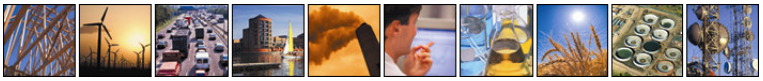
| | |
|---|---|
| Authorisation | Authorisations allow specific defence-related nuclear activity to take place at a specific site. Such 'Authorised' sites are not subject to the Nuclear Installations Act (unlike civil nuclear sites) and so activities are not formally 'Licensed.' Instead, Authorisations are granted by the Defence Nuclear Safety Regulator. |
| 'Brownfield,' previously-developed land | This term refers to land which is, or has, been previously been built upon or otherwise developed. Ideally, there should be sufficient existing infrastructure in place (such as a dock to accommodate the submarines), but there would be no nuclear facilities or specialist personnel available. |
| CoRWM | Committee on Radioactive Waste Management<br>This independent committee provides scrutiny and advice to Government on the long term management of radioactive waste, including storage and disposal. See http://www.corwm.org.uk/default.aspx |
| Final Dismantling | This is the process whereby the non-radiological front and rear sections of the submarines (which form the bulk of each vessel) are dismantled. The issues associated with this are very similar to those for conventional, surface ships. |
| GDF | Geological Disposal Facility<br>This is the government's proposed long-term, below-ground facility for disposing of the UK's Higher-Activity Nuclear Waste, which includes high-level materials such as spent nuclear fuels, and Intermediate-Level Waste. The GDF has yet to be built. See http://mrws.decc.gov.uk/en/mrws/cms/home/What_is_geolog/What_is_geolog.aspx for more details. |
| 'Greenfield' or undeveloped land | This term refers to land that has not previously been developed (such as farmland), or which has been used but has reverted back to a largely 'natural' state (such as disused quarries). On such land, there would be no existing infrastructure or other resources suitable to undertake submarine dismantling or store ILW, so most or all the required infrastructure would need to be developed from scratch. |
| ILW | Intermediate-Level Waste<br>This is radioactive waste with a radiological activity above 4 GigaBecquerels (GBq) per tonne of alpha or 12 GBq/tonne of beta-gamma decay, but which does not generate sufficient levels of heat to require it to be cooled during storage. By contrast, nuclear fuels are generally much more active, and do have to be cooled. The major components of ILW from submarines are metals and organic materials, with smaller quantities of cement, graphite and ceramics. ILW has no current final disposal route, so most is stored at or close to where it has been generated. |



| | |
|---|---|
| Initial Dismantling | This is the process whereby the Reactor Compartment, which contains the Reactor Pressure Vessel, is dismantled. This work has to take place on site with an appropriate nuclear site Licence, issued by the Nuclear Installations Inspectorate of the Health and Safety Executive. There are three technical options for initial dismantling in the SDP - namely RC cut out and storage, RPV cut out and storage, and packaged waste cut up and storage. |
| ISOLUS | Interim Storage of Laid-Up Submarines<br><br>This is the former name of the Submarine Dismantling Project. It was changed to the Submarine Dismantling Project in 2009. |
| Licence | A Nuclear Licence allows specific nuclear activities to take place at a specific site. Such 'Licensed' sites are subject to the Nuclear Installations Act (1965), with Authorisations being granted by the Nuclear Installations Inspectorate. Nuclear power stations and other civil activities are Licensed in this way. |
| LLW | Low-Level Waste<br><br>This is defined as radioactive waste that has below 4 Gbq per tonne of alpha activity and below 12 GBq per tonne of beta-gamma activity. It covers a variety of materials which arise principally as lightly contaminated miscellaneous scrap and redundant equipment. LLW has an existing disposal route to the current UK LLW Repository in Cumbria. |
| MRWS | Managing Radioactive Waste Safely<br><br>This is the UK Government's published approach to managing the nation's radioactive wastes, irrespective of where they come from and their level of activity. The SDP will adhere to this approach. See http://mrws.decc.gov.uk/ for more details. |
| NDA | Nuclear Decommissioning Authority<br><br>This government agency is responsible for developing the UK's nuclear low-level waste strategy and plans, and for managing the long-term arrangements for the UK's higher-level radioactive wastes including spent nuclear fuels and ILW. The NDA manages the MOD's spent nuclear fuel on behalf of the government. See http://www.nda.gov.uk/ for more details. |
| Packaged Waste Storage | This term refers to fully dismantling the Reactor Compartment, so that the radioactive materials can be cut up and packaged in appropriate containers for transport, interim storage and disposal in the proposed GDF. |
| RC | Reactor Compartment.<br><br>This is the central 'slice' of the submarine which contains the nuclear reactor (housed within the Reactor Pressure Vessel) and associated pipe-work. Reactor Compartments are around 700 tomes in weight, 10 metres in diameter and around nine metres long (depending on submarine type). The approximate location of the Reactor Compartment can be seen in Figure 1. |



| | |
|---|---|
| RC Storage | This term refers cutting out the complete Reactor Compartment, separating it from the rest of the submarine. The RC is then stored intact. This is the current approach used by the USA, France and Russia. *This was previously referred to as the RC 'cut out' option.*<br><br>RCs will be far too large to fit into the proposed GDF intact. This means that each RC will eventually have to be 'cut up' to fully packaged waste before it can be disposed of. |
| RPV | Reactor Pressure Vessel<br><br>This is a self-contained metal vessel that contains the nuclear reactor itself. Prior to defueling, the RPV contains the nuclear fuel. It is located within the wider Reactor Compartment (RC). |
| RPV Storage | This term refers to cutting out the Reactor Pressure Vessel and removing it from the submarine. The RPV is then stored intact in specialist shielded packaging and the associated pipe-work is placed into transportable containers. *This was previously referred to as the 'RPV cut out'' option.*<br><br>RPVs will be too large to fit into the proposed GDF intact. This means that each RPV will eventually have to be 'cut up' to fully packaged waste before it can be disposed of. |
| SDP | Submarine Dismantling Project www.submarinedismantling.co.uk |
| SEA | Strategic Environmental Assessment<br><br>An assessment undertaken on certain public plans and programmes to ascertain the potential environmental effects that it may have, to identify ways in which damaging effects can be avoided and benefits can be enhanced. SEA also gives the public the opportunity to see what impacts a strategic plan might have on them and to shape the approach taken. |



# Defence Equipment and Support

# Submarine Dismantling Project - Strategic Environmental Assessment

## Scoping Report Update

December 2010

Defence Equipment & Support

MINISTRY OF DEFENCE

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## Document Revisions

| No. | Details | Date |
|---|---|---|
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| 2 | Draft for Internal Comment | 11.10.10 |
| 3 | Further review and approval | 18.10.10 |
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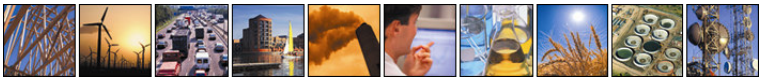
| 5 | Final approval | 06.12.10 |





**Report for**

In-Service Submarines
Defence Equipment and Support
Ministry of Defence

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# Defence Equipment and Support

# Submarine Dismantling Project

# Strategic Environmental Assessment Scoping Report

December 2010

Prepared by Entec UK Limited and Defence Estates for Defence Equipment and Support, Ministry of Defence.

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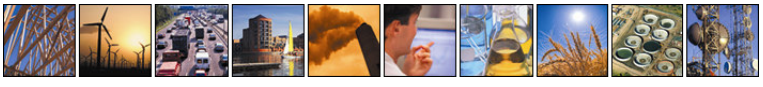
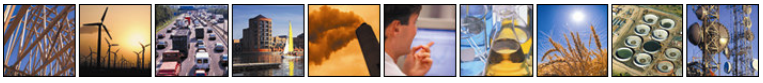
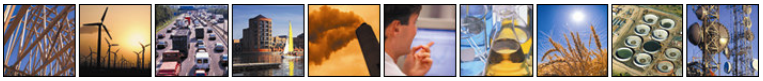
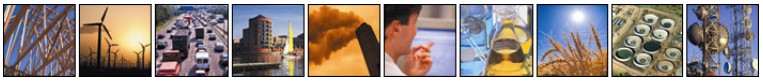


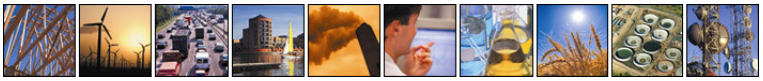


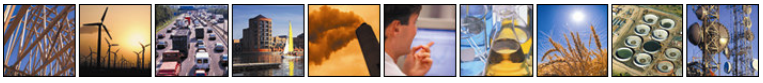
# Contents











# 1. Introduction

## 1.1 Context

Project ISOLUS (Interim Storage Of Laid-Up Submarines) was established in 2000 to develop and implement a timely solution for the dismantling and ultimate disposal of the UK's 27 defueled nuclear submarines at the end of their life. The project, which extends over a 60 year period, encompasses the provision of facilities, personnel and processes to dismantle the defueled nuclear submarines (of past and currently in-service classes).

In May 2009, project ISOLUS was formally renamed the Submarine Dismantling Project (SDP) to more accurately reflect the scope of work.

Recognising the importance that public confidence would play in the development of any solution, Ministerial commitments were made that public consultation would be undertaken before any major decisions are taken. Two Public Consultations on the project have been held to date, carried out by independent researchers at the Centre for the Study of Environmental Change at Lancaster University (see http://www.submarinedismantling.co.uk/Consultation.html for further information).

The third Public Consultation will be conducted in due course on the proposed options for the SDP. The Strategic Environmental Assessment (SEA) Environmental Report will be available for this consultation and will inform the project as a whole, with assessments being undertaken of the key indicative stages of the project (see (**Figure 1.1**). These stages will include:

- the development and operation of the initial submarine dismantling facilities required to undertake the radiological work;
- the development and operation of an interim ILW storage solution;
- the technical options for processing the reactor compartments;
- the processing-related operations, including the transport and management of the submarines and resulting wastes including ILW, Low Level Waste (LLW), hazardous wastes and inert materials; and
- the eventual decommissioning of all facilities, when no longer required.

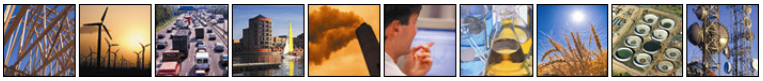


**Figure 1.1 Key Indicative Stages and Activities of the SDP**

| | |
|---|---|
| **I** | Design and Develop the initial Submarine Dismantling Capability, and |
| **II** | Design and Develop the Interim ILW Storage Capability (sequence may be interchangeable). |
| **III** | Dock Submarines and Process the Reactor Compartments (RCs). |
| **IV** | Dismantle the Front and Rear Sections of the Submarines; Process all Wastes except ILW. |
| **V** | Move the Reactor Compartment, Reactor Pressure Vessel or packaged ILW to the Interim Storage Facility/ies. |
| **VI** | Dismantle RC/Reactor Pressure Vessel (RPV) (if required); transfer packaged ILW to the GDF. |
| **VII** | Decommission the SDP Facilities. |

## 1.2 Purpose of this Report

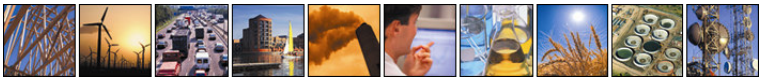
This Scoping Report Update is the second formal output of the SEA process for the Submarine Dismantling Project, and updates the Stage 'A1' generic scoping report, which was released for five weeks of consultation on June 17th 2010. The purpose of this report is:

- to set out our proposed approach for undertaking the SEA assessment; and
- to provide the scoping consultees with sufficient information to enable them to comment on the information which, in their view, should be included in the Environmental Report, to ensure that the scope and detail of the SEA are appropriate and comply with the relevant statutory requirements[1].

This updated report includes the accepted amendments suggested by the scoping consultees. It also includes relevant contextual information on the 'existing' Licensed or Authorised Nuclear sites which have been assessed (through a separate siting process) as being potential candidates for initial dismantling of the Reactor Compartment. This site selection report will be made available at the same time that this report is released. The Scoping Report will then be consulted upon in the same manner for five weeks.

This update report sets out the proposed scope and level of detail of the information to be included in the SEA assessment and the subsequent Environmental Report. Following the second round of scoping consultation, it will be reviewed in light of comments received and may be amended further, if necessary.

[1] Directive 2001/42/EC on the assessment of certain plans and programmes on the Environment, enacted through the Environmental Assessment of Plans and Programmes Regulations 2004.



The SEA scoping bodies comprise the Statutory Consultees referred to in the SEA Regulations and include representatives from England, Scotland, Wales and Northern Ireland. MOD is also consulting other relevant Government Departments and agencies, including (but not limited to) DEFRA, DECC, DCLG and the UK Nuclear Decommissioning Authority.

## 1.3 The Requirements for SEA

SEA became a statutory requirement following the adoption of European Union Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment. This was transposed into UK legislation on the 20 July 2004 as *Statutory Instrument No.1633 - The Environmental Assessment of Plans and Programmes Regulations 2004*. The objective of the SEA Directive is:

'*To provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to contributing to sustainable development*'.

Throughout the course of the development of a plan or programme, the aim of the SEA is to identify the associated environmental effects of implementing the plan or programme and to propose measures to avoid, manage or mitigate any significant adverse effects and to enhance any beneficial effects. The main requirements and stages of the SEA are:

- determining the scope of the assessment and agreeing the proposed approach to assessment with Scoping Consultees (Stage A);
- assessing the likely direct, indirect and cumulative effects of the proposed SDP strategic options (Stage B);
- recording those effects in an SEA Environmental Report (Stage C);
- undertaking a consultation exercise on the SEA Environmental Report and the SDP proposals (Stage D);
- integrating the SEA findings into the decisions on how to proceed with SDP (Stage D);
- informing the public about that decision and the extent to which the SEA and consultation findings have been taken into account (Stage D); and
- undertaking periodic monitoring of the associated impacts of the selected options (Stage E).

These stages (and the resulting outputs) are set out in **Figure 1.2**.

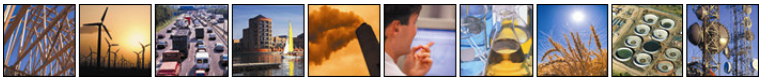
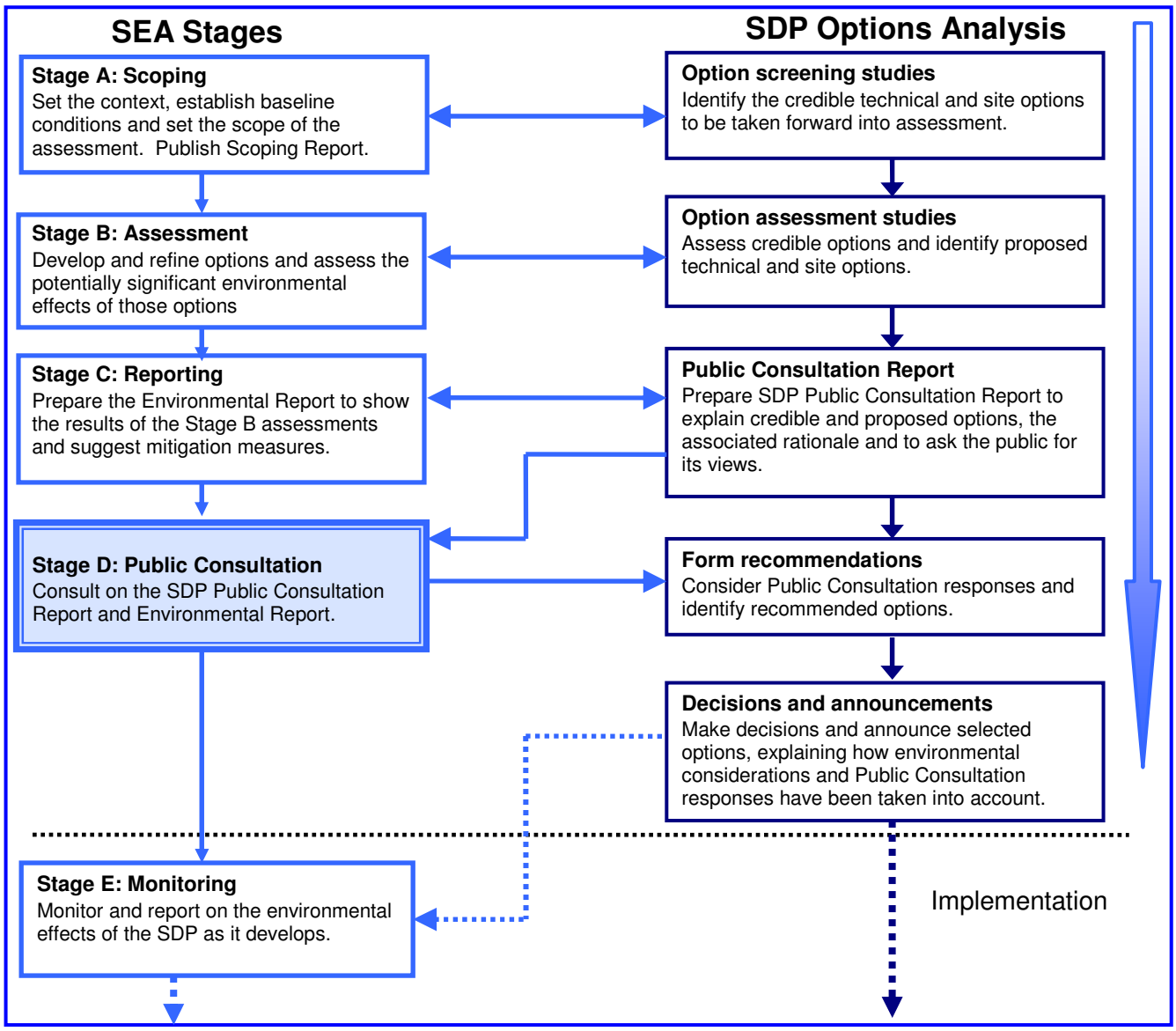
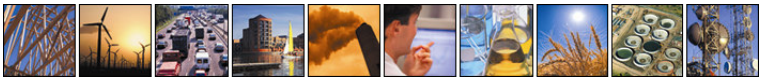


**Figure 1.2 Overview of the SEA Process within the context of the SDP**




Note: These stages are based on guidance in '*A Practical Guide to the Strategic Environmental Assessment Directive'*, ODPM (2005) and '*The Environmental and Sustainability Appraisal Tool Handbook for the MOD Estate (Volume Two: SEA)', MOD (2009).*

Although the strict applicability of the SEA Regulations to the SDP remains unclear, the MOD will undertake an environmental assessment incorporating the requirements of the SEA Directive on the SDP proposals, as this is considered to be good practice. This precautionary position will help ensure that potential environmental implications of the proposals are assessed up-front and hence available to



inform the decision making process. The approach will follow both MOD[2] and wider government[3] guidance.

The following activities have been undertaken to complete Stage A and produce this Scoping Report update (in line with the ODPM and MOD guidance):

- **Identifying relevant plans and programmes:** A review has been undertaken of international, European, national, regional and relevant sub-regional plans and programmes, to establish how the SDP could be affected by outside factors, and to help identify any relevant environmental protection objectives which need to be taken into account during the SDP's preparation.
- **Collecting baseline information:** A review has been undertaken of current and predicted baseline environmental conditions following a 'business as usual' scenario, again conducted from international to sub-regional level, as appropriate. This will provide an evidence base for current environmental problems, prediction of effects and proposals for monitoring. It also helps inform the development of the SEA objectives.
- **Identifying environmental problems:** The baseline has been used to identify key environmental issues to help show where the SEA should be focussed.
- **Developing SEA objectives:** Objectives (and associated assessment questions) have been developed to provide a means by which the environmental performance of the SDP options can meaningfully be assessed.

The final element is to complete consultation with appropriate bodies to ensure that the SEA covers the likely significant environmental effects of the SDP. The first stage of this process (the generic, Stage 'A1' report) was completed in July 2010. This report forms the second stage of SEA Scoping (Stage 'A2') which includes relevant site-specific contextual information to inform the subsequent assessment.

Regulation 12 of the SEA Regulations concerns the appropriateness, scope and level of detail of the information that must be included in the Environmental Report. Schedule 2 of the Regulations (and Annex I of the Directive) provides more specific direction in this regard. This Scoping Report presents proposals for the scope and level of detail of this information for the consultation bodies to comment upon. Following the conclusion of scoping consultation, it is intended that the information in this report will be used in the Environmental Report.

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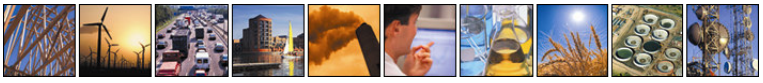
[2] The Environmental and Sustainability Appraisal Tool Handbook (Chapter Two: SEA) MOD, 2006. http://www.mod.uk/DefenceInternet/AboutDefence/CorporatePublications/DefenceEstateandEnvironmentPublications/DefenceEstates/SustainabiltyAndEnvironmentalAppraisalToolHandbook.htm

[3] A Practical Guide to the Strategic Environmental Assessment Directive. ODPM (now the Department for Communities and Local Government), 2006. http://www.communities.gov.uk/publications/planningandbuilding/practicalguidesea ).



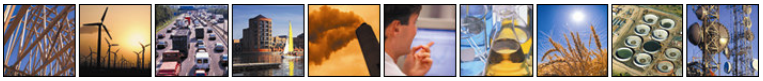
## 1.4 Consultation Responses to the First Scoping Report

The first (generic) scoping consultation was undertaken between June 17th and July 23rd, 2010. All nine Statutory Bodies provided responses, as did the Scottish Government. Of the eight other relevant Government Departments and Agencies invited to participate, four did so. Three non-respondents were content to leave feedback to the relevant Statutory Bodies.

The received submissions, along with the MOD's response to each point raised, are detailed in Annex F. The key points raised by consultation are shown in **Table 1.1** below, structured according to the questions posed in the Stage 'A1' generic scoping report.

**Table 1.1 Overview of Issues Raised From the First Stage of Scoping Consultation**

| Question | Summary of Consultee Responses |
|---|---|
| Do you have any comments on the proposed alternative options outlined for the SDP? | Most respondents were generally content with the scope of the alternatives presented.<br>Questions were tabled about why 'greenfield,' 'brownfield' and 'existing Licensed/ Authorised' sites were chosen as generic site categories, and there was some confusion about whether these effectively formed site selection criteria.<br>Several respondents suggested that the scope should consider different ship-breaking options or sites. Comments were also received about the importance of using existing facilities where possible to minimise environmental impact. |
| Do you agree with the main environmental issues identified? | Respondents generally agreed that all relevant environmental issues were captured by the report, although there was some confusion between the aims and content of Sections 3 (baseline issues) and 5 (scoping of potential effects).<br>More emphasis was requested on certain areas, such as management of non-radiological wastes, risks from invasive species, outdoor access opportunities and the effects of dredging. It was suggested that the environmental categories be re-ordered to give a single focus for coastal change, flooding and climate change risks. |
| Are there additional plans, programmes and strategies which should be considered in the SEA? | It was generally noted that the Scoping Report gave insufficient consideration to the plans, programmes, policies and environmental protection objectives of the UK's Devolved Administrations.<br>Several respondents requested clarification about the applicability of Habitats Regulations Assessment to the SDP at strategic (Plan) level.<br>DECC highlighted that the proposed NDA Strategy should be included, as it includes consideration of non-NDA liabilities such as MOD wastes. |
| Do you know of any additional baseline evidence which will help to inform the SEA process? | A range of baseline data was suggested to help target the assessment. The majority concerned the devolved administrations. Respondents wished to see site-specific data in the updated scoping report. |



| Question | Summary of Consultee Responses |
|---|---|
| Do you agree that the proposed SEA objectives cover the breadth of issues appropriate for assessing the SDP? | There was one substantive change to the SEA objectives proposed, regarding flood risk and coastal change.<br><br>Suggestions were made to amend or create additional assessment questions across a number of areas, including landscape, public access, waste management and land use. |
| When and how should we be seeking your opinions on site-specific information? | Most respondents agreed that the two-stage approach to scoping, whereby the report is updated when potentially credible sites are identified, is reasonable. The importance of including undeveloped 'greenfield ' and previously-developed 'brownfield' land in the SEA, and hence avoiding restriction of alternatives to 'credible' existing Licensed/Authorised sites only, was also made.<br><br>Several consultees indicated a preference for including credible civil ship-breaking sites in the assessment of options for the non-radiological parts of the submarines.<br><br>DECC later highlighted that the draft NDA Strategy (which closed to public consultation on 24 Nov 10) is exploring potential opportunities to share current and planned storage facilities to improve value for money and reduce the environmental impact of new store build. The development of such a national waste consolidation strategy represents a significant opportunity for MOD to realise better value for money in conjunction with wider government liabilities, but is not sufficiently mature to support the screening of potential candidate sites. |
| Do you have any further suggestions regarding the proposed approach to SEA? | A wide range of comments were received on this section, all of which will help shape the MOD's approach to undertaking the SEA. Details can be found at **Annex F.** |

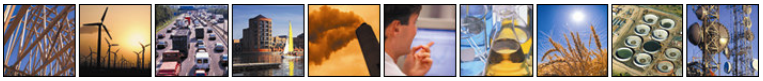
This updated report has taken the majority of comments on board, and so contains numerous amendments, as well as the addition of site-specific background data. The headline changes that have been made to this Stage A2 report in response to the comments received are as follows:

- The inclusion of National baseline information (including devolved plans, programmes etc where relevant) for Wales, Scotland and Northern Ireland. This is important to ensure that all areas of the United Kingdom are given equal consideration by the SEA.
- The restructuring of the assessment categories to include an additional section on Coastal Change and Flood Risk. This will focus this important issue in one area, and replace disparate (and overlapping) references to flooding, coastal erosion and climate change risks in the other assessment categories.
- The clarification of the definitions for the generic land types upon which SDP facilities may be developed.

## 1.5 Scope of the SEA for the SDP

The Submarine Dismantling Project represents (for the purposes of SEA) a national programme which consists of seven stages (see **Figure 1.1**). *Note however that the SDP is referred to throughout this report as a **project**, as this fits with the MOD's standard nomenclature.*

**Stages I and II** (development of dismantling and interim ILW storage capabilities) are spatial in nature and involve a number of strategic site options. **Stage III** (dismantling the reactor compartment) has a



number of potential technical options. **Stages IV** (processing non-radiological sections), **V** (movement of ILW to interim storage) and **VI** (movement of ILW to the GDF) will all include a number of transport options. **Stage VII** (decommissioning of SDP facilities) will be purely generic in nature.

The SEA will therefore firstly assess the potentially significant environmental effects (including short, medium and long term direct, indirect and cumulative effects) associated with each of the seven SDP stages. This will be completed at a generic level and will consider the strategic options for each stage, including the generic assessment of developing SDP facilities on undeveloped, previously developed and existing Licensed/Authorised sites.

Once completed, the generic assessment will be followed by a determination of the site-specific effects that could arise from initial dismantling at a number of potential candidate 'existing' nuclear Licensed/Authorised sites, identified through a separate siting study. The assessments will help illustrate the potential environmental impacts arising from implementing the reasonable alternatives for each of these stages, to help inform the public consultation process.

Finally, the combination of feasible dismantling site, technical and transport options and feasible interim storage options will be assessed to provide an indication of the cumulative effects of the SDP.

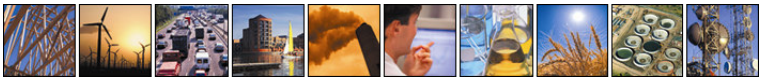
The third Public Consultation (of which the SEA will be a part) will then inform government decisions about the overall dismantling process, the initial dismantling site(s) and the management process for interim storage for ILW arisings (required because the proposed Geological Disposal Facility ('GDF') which will eventually house the ILW is not expected to be available to the MOD until *at least* 2040).

This assessment is strategic in nature. Whilst it will consider potential candidate 'existing' Nuclear Licensed or Authorised sites for dismantling, it does not constitute a detailed site-level assessment. Following decisions on the proposed way forward, site-specific issues will be addressed through the consenting process for individual developments. This will include Environmental Impact Assessments associated with Town and Country Planning and nuclear decommissioning, Environmental Permitting, and/or Habitats Regulation Assessment, as appropriate. The practices involved in the SDP may also be subject to the separate process of justification under the Justification of Practices Involving Ionising Radiation Regulations 2004.

## 1.6 Environmental Effects to be Considered

The range of potential environmental effects under consideration has been informed primarily by the SEA Directive and Regulations, using published government guidance[4]. Annex I of the SEA Directive requires that the assessment should include information on the "*likely significant effects on the environment, including on issues such as: biodiversity; population; human health; fauna; flora; soil; water; air; climatic factors; material assets; cultural heritage, including architectural and archaeological heritage; landscape; and the inter-relationship between the issues referred to*". In order to demonstrate consistency with the SEA Directive, these environmental categories have been used throughout this

[4] Office of the Deputy Prime Minister (2005). A Practical Guide to the Strategic Environmental Assessment Directive.



report, with further definition taken from the MOD Sustainability and Environmental Appraisal Tools Handbook (2009).

In the absence of detailed guidance on their content, a number of these environmental categories (population, human health and material assets) can be subject to varying interpretation. Within this report:

- 'population' includes information on demographics and generic socio-economic issues;
- 'human health' includes information on mortality, illness and indices of perceived well-being; and
- 'material assets' includes information on transport, waste management, land use and materials.

This SEA is not intended to address wider socio-economic issues that are outside the scope of the Directive. Should the SEA indicate that socio-economic effects may be significant, further socio-economic impact assessment will be undertaken as appropriate. The wider public consultation (of which the SEA will be a part) will demonstrate how social, economic and environmental issues associated with the SDP have been taken into account to arrive at specific options.

The SEA will include consideration of direct, indirect, cumulative and synergistic effects.

## 1.7 Habitats Regulations Assessment

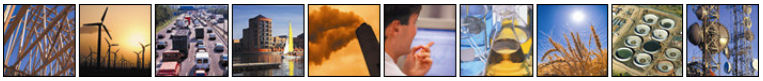
Defence Estates (as a Competent Authority) has conducted a draft screening of the SDP proposals on behalf of the Ministry of Defence, in accordance with the EC Habitats Directive (92/43/EEC) and transposing Regulations.

It has been determined that the SDP may be subject to HRA at Plan level, since a number of European Designated sites are within 20km of (or otherwise potentially affected by) a potential candidate site for SDP activity. A separate HRA screening document is being produced, and will be consulted upon with Statutory Bodies and other Competent Authorities, in parallel with (but separate from) the SEA consultation process. The findings of the SEA and HRA will inform each other, to ensure consistency of approach. HRAs may also be required at individual project level, once consultations have been completed and strategic decisions have been made.

## 1.8 How the Information will be Presented

To meet the SEA requirements, information on the following is required:

- the current state of the environment and likely evolution without the implementation of the plan or programme;
- the environmental characteristics of areas likely to be significantly affected;
- any relevant existing environmental problems, especially in terms of nature conservation; and



- the relationship of the proposals to other relevant plans and programmes.

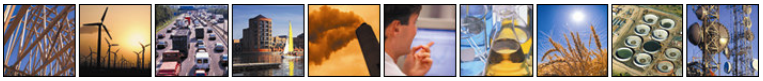
**Table 1.2** (below) details how we propose to address these requirements in the SEA.

### Table 1.2 SEA Information Requirements Addressed Within this SEA Scoping Report

| SEA Information Requirements | Scoping Report Reference |
|---|---|
| ***Schedule 2 of the SEA Regulations (SI 2004 No. 1633) sets out the following information requirements:*** | ***The following sections of this scoping report address the requirements of the SEA Regulations:*** |
| 1. An outline of the contents and main objectives of the plan or programme, and of its relationship with other relevant plans and programmes. | This requirement is addressed in **Section 2 (SDP), Section 4 (plans and programmes)** and **Annex B and C**. It will be further reported on in the SEA Environmental Report. |
| 2. The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme. | This requirement is addressed in **Annexes A and C. It** will be further reported on in the SEA Environmental Report. |
| 3. The environmental characteristics of areas likely to be significantly affected. | This requirement is addressed in **Section 3 (baseline information), Annexes A and C**. It will be further reported on in the SEA Environmental Report. |
| 4. Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Council Directive 79/409/EEC on the conservation of wild birds[5] and Council Directive 92/43/EEC (the Habitats Directive[6]). | This requirement is addressed in **Section 3 (baseline information), Annexes A and C.** It will be further reported on in a separate Habitats Regulations Assessment and in the SEA Environmental Report |
| 5. The environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation. | This requirement is addressed in **Section 4 (plans and programmes), Annexes B and C**. It will be further reported on in the SEA Environmental Report. |

[5] Council Directive 79/409/EEC on the conservation of wild birds. The Directive provides a framework for the conservation and management of, and human interactions with, wild birds in Europe. In the UK, the provisions of the Birds Directive are implemented through the Wildlife & Countryside Act 1981 (as amended) and The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended).

[6] Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (EC Habitats Directive). In the UK the Directive has been transposed into national laws by means of the Conservation (Natural Habitats, & c.) Regulations 1994 (as amended). The 'Habitats Regulations' apply to the UK land area and its territorial sea (to 12 nautical miles from the coast), and are supported by government policy guidance.



| SEA Information Requirements | Scoping Report Reference |
|---|---|
| 6. The likely significant effects on the environment, including short, medium and long-term effects, permanent and temporary effects, positive and negative effects, and secondary, cumulative and synergistic effects, on issues such as: biodiversity; population; human health; fauna; flora; water; air; climatic factors; material assets; cultural heritage, including architectural and archaeological heritage; landscape; and the inter-relationship between the issues referred to in sub-paragraphs (a) to (l). | A provisional indication of the likely effects of the SDP has been provided in **Section 5 (scoping of effects)** to provide direction about which environmental issues need to be included. However, it is the purpose of Stage B of the SEA process to assess the potential effects of the SDP's 'reasonable alternative' options. In consequence, more specific detail on the likely significant effects of the SDP will be provided in the SEA Environmental Report. |
| 7. The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme. | It is not appropriate to consider this requirement at this stage in the environmental assessment process. In many cases, effects will be so site specific that environmental measures and mitigations can only be meaningfully determined through the later tiers of environmental assessment such as Environmental Impact Assessment and Habitats Regulations Assessment. However in broad terms the 'mitigation hierarchy' will be applied where practicable and results reported in the SEA Environmental Report. Examples of these types of measure are included in **Section 6 (assessment and reporting).** |
| 8. An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information. | This requirement is addressed in **Section 2 (SDP) and Section 6 (assessment and reporting)** and will be further reported on in the SEA Environmental Report. |
| 9. A description of the measures envisaged concerning monitoring of environmental conditions | As detailed at point 7 above, it is not appropriate to consider this requirement at this stage in the environmental assessment process. However where practicable, monitoring regimes will be identified through the further SEA consultation and assessments, with results reported in the SEA Environmental Report. |
| 10. A non-technical summary of the information provided under paragraphs 1 to 9. | A Non-Technical Summary is provided with this Scoping Report. A Non-Technical Summary will accompany the SEA Environmental Report. |

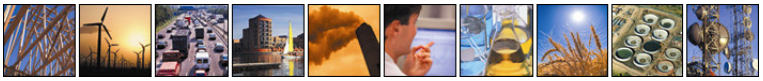
## 1.9 Scoping Report Structure

This Scoping Report is structured as follows:

**Non Technical Summary**
Provides a summary of the Scoping Report, including information on both the SDP and the proposed approach to assessment.

**Section 1: Introduction (pp 1-14)**
Includes a summary of the SDP, an overview of proposed scope, report contents and an outline of how to respond to the consultation.

**Section 2: The Submarine Dismantling Project (pp 15-26)**
Outlines the SDP and its strategic objectives, and explains how the MOD proposes to apply SEA to it.



**Section 3: Baseline Information (pp 27- 36)**
Outlines the review of current and projected national, regional and sub-regional baseline conditions for the environmental categories required by the Directive. Further detailed information is contained at Annex A and C.

**Section 4: Other Plans and Programmes and Environmental Protection Objectives (pp 37- 48)**
Outlines the review of the international, national, regional and sub-regional plans or programmes, and the relationship with the SDP. Further information can be found at Annex B and C.

**Section 5: Scoping of Potential Significant Effects (pp 49 - 68)**
Outlines the potentially significant effects of the SDP proposals on the key aspects of the environment, to scope the issues that should be included in the assessment.

**Section 6: Assessment and Reporting (pp 69 - 80)**
Outlines the proposed SEA objectives and guide questions, how cumulative effects will be assessed, and reporting structure.

**Section 7: Summary and Next Steps (pp 81- 82)**
Provides the conclusion of the draft updated Scoping Report and details the next steps in the assessment process.

**Annex A: Review of National Baseline Information**
Presents in detail the national baseline conditions for the environmental categories required by the SEA Directive and their likely evolution in the event of the SDP not taking place.

**Annex B: Review of National Plans, Programmes and Environmental Protection Objectives**
Presents details of relevant international, European and National plans, programmes and environmental protection objectives, as highlighted in **Section 4**.

**Annex C: Review of Sub-Regional Baseline Information and Plans/Programmes**
Presents in detail the site-specific baseline conditions for the environmental categories required by the SEA Directive and their likely evolution in the event of the SDP not taking place. Also includes relevant sub-regional plans, programmes and environmental protection objectives.

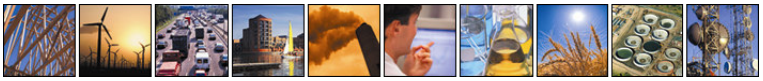
**Annex D: Abbreviations and Glossary**

**Annex E: Quality Assurance Checklist**

**Annex F: Responses Received from Scoping Consultees to the A1 Scoping Report**

## 1.10 Consultation on the Second Scoping Report

This Scoping Report Update has been revised to include changes made in response to the first Stage 'A' consultation, and relevant information on the 'existing' nuclear Licensed/Authorised sites which the MOD considers may be potentially credible as a base for initial submarine dismantling. The site selection methodology used to select this indicative list of potential candidate sites will be published as a separate site selection report, alongside this updated Scoping Report. This report will be sent to the UK Statutory



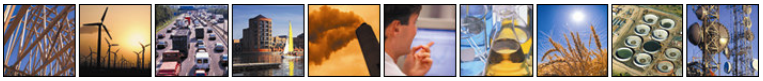
Consultees identified under the SEA Regulations[7]. Other relevant central Government departments and agencies will also be invited to provide input.

For the purposes of this SEA, the Statutory and Non-Statutory Consultees shall be collectively referred to as the 'Scoping Consultees.' The updated Scoping Report and Non-Technical Summary will be posted on the SDP web-site at the beginning of the consultation period.

Comments from all of these bodies will be invited during the second consultation. As this straddles the Christmas and New Year break, a total period of seven weeks has been given, allowing for a fortnight of holiday. MOD will also place the Scoping Report and Non-Technical Summary on the internet, via (www.submarinedismantling.org.uk), for information. This is not a public consultation. Responses received from the Scoping consultees will inform the final version of the Scoping Report, which will form the basis of the SEA assessment.

The Environmental Report itself will be published for public consultation at the same time as the draft SDP proposals, as part of the third SDP public consultation exercise.

[7] The Environment Agency, English Heritage, Natural England, Northern Ireland Environment Agency, Historic Scotland, Scottish Natural Heritage, Scottish Environment Protection Agency, Cadw (Welsh Historic Monuments), Countryside Council for Wales, and the Environment Agency Wales.



## 1.11 Key Questions for Scoping Consultees

We would welcome your views on this updated Scoping Report. The consultation period will run from December 6th 2010 – January 24th 2011. We are particularly interested to receive your views on the following:

1. **Do you have any further comments on the revised approach to undertaking the SEA?** These are presented in Section 2.

2. **Do you agree with the revised national baseline information?** The national baseline presented in Section 3 and Annex A has been updated to reflect comments received during the Stage 'A1' consultation. Is the information accurate, and is there any relevant information still missing? If so, please forward details.

3. **Do you agree with the additional sub-regional baseline information?** This is presented in Section 3 and Annex C. Is the information accurate, and is there any relevant information missing? If so, please forward details.

4. **Are there additional plans, programmes and strategies which should be considered in the SEA?** The national plans and programmes in Annex B has been updated to reflect comments received during the A1 consultation. Sub-regional information is presented in Annex C. If there are any additional plans, programmes or strategies identified, please state their source, how they are relevant to the assessment of the SDP and what objectives they contain. Please also state whether the objectives they contain are captured by other plans, programmes and strategies already reviewed.

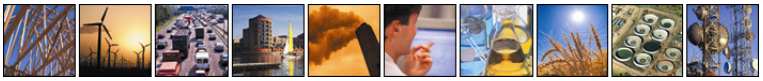
5. **Do you agree that the revised SEA objectives (Section 6) cover the breadth of issues appropriate for assessing the SDP?** Are there elements (or other topics) which should be scoped in or out of consideration during the assessment stage? If so, please describe the reasons for this and state what additional objectives would be relevant.

6. **Do you have any further suggestions regarding the proposed approach to SEA?**

Please provide comments by **5pm on January 24th .** Comments should be sent to:

**Post:** Phill Minas
Entec UK Ltd
17 Angel Gate
City Road
London
EC1V 2SH

**Email:** Phillip.minas@entecuk.co.uk



# 2. The Submarine Dismantling Project

## 2.1 What is the SDP?

### 2.1.1 Aim and Scope

The overall aim of the Submarine Dismantling Project (SDP) is to define, develop, procure and implement a timely solution for the dismantling and disposal of the UK's redundant, defueled nuclear-powered submarines which inspires public confidence, is safe, environmentally responsible, secure and cost-effective. The project (which was set up in 2000 as Project ISOLUS) will provide an alternative to the continued afloat storage of the defueled submarines, which will include the eventual disposal of Intermediate Level Waste (ILW) to the proposed ILW disposal facility, referred to in this report as the National Geological Disposal Facility, or GDF.[8]

The scope of the SDP, which extends over a 60 year period, encompasses the following:

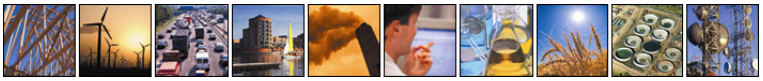
- provision of facilities and expertise to dismantle the Royal Navy's 27 nuclear submarines (of past and current classes[9]) once defueled, re-using and recycling as much non-radiological material as possible;
- provision of interim, land-based storage for the resultant ILW until at least 2040, pending the availability of the proposed UK GDF; and
- the eventual decommissioning of the dismantling and storage facilities used in this process.

### 2.1.2 What is the Background to the SDP?

When a nuclear powered submarine leaves service with the Royal Navy, a process known as De-fuel, De-equip and Lay-Up Preparation (DDLP) is undertaken. This is conducted as soon as possible, but is dependant on the availability of suitable docks and facilities. Currently, Babcock International Group at Devonport has the only UK submarine dockyard licensed to remove used fuel (upgraded facilities are currently being built there, and are due to come into service in 2013). The reactor is defueled and the

[8] Details of the GDF programme can be found at http://mrws.decc.gov.uk/en/mrws/cms/home/What_is_geolog/What_is_geolog.aspx. Note that the Scottish Government position differs from the UK government position and is that of 'near site, near surface' long-term storage. Further information can be found at http://www.scotland.gov.uk/Topics/Environment/waste-and-pollution/Waste-1/16293/higheractivitywastepolicy.

[9] 6x 'Superb' Class; 7x 'Trafalgar' Class; 2x 'Valiant' Class; 3x 'Churchill' Class; HMS Dreadnought; 4x 'Resolution' Class; 4x 'Vanguard' Class. The scope of the SDP does not include disposal of ASTUTE class or successor to the Vanguard Class submarines, although facilities will retain the flexibility to accommodate future classes of submarines where possible.



fuel, the most highly radioactive material in the submarine, is removed for long-term storage at the Nuclear Decommissioning Authority (NDA) site at Sellafield, Cumbria. The remaining radioactive material (mainly irradiated steel, classed as Low and Intermediate-Level Wastes (LLW/ILW)), is contained securely in the reactor compartment and remains in the submarine, which is stored safely afloat.

To date, 16 nuclear powered submarines have left naval service and are stored safely afloat; seven are located at Rosyth, Scotland, and nine are on the south coast of England in Devonport, five of which await defueling. Whilst afloat storage has proved to be a very safe arrangement for over 20 years, it no longer fulfils MOD[10] or wider Government[11] policies, which require that nuclear decommissioning and disposal operations should be carried out "as soon as reasonably practicable." There are also issues of public perception and of afloat storage capacity, which is expected to run out before 2020. The cost of maintaining the laid-up submarines (all which will be out of service by 2040) and conducting unplanned remedial work is increasing as they age, and this situation is not sustainable in the long term.

In 1998, approval was given to proceed with an in-house study into options for the interim storage of nuclear submarines following their withdrawal from service. The resulting ISOLUS Investigation Concept Phase Report[12] recommended that a land storage strategy for the ILW contained within reactor compartments was the most viable option and should be pursued. In May 2000, the recommendations of the study were accepted and Project ISOLUS was formally established. The project gained Initial Gate approval in 2002, and is currently in its Assessment Phase. In May 2009, the project was formally re-titled the Submarine Dismantling Project (SDP) to better reflect the nature of the project.

The key underpinning principles and assumptions of the SDP are that:

- due to both MOD and wider Government decommissioning policies, together with storage capacity constraints and increasing costs, continued long-term afloat storage is not a reasonable option;
- for defence and security reasons, the UK's redundant submarines cannot be disposed of abroad;
- all submarines will already have been defueled before they are docked for dismantling, so will not contain any nuclear fuels nor any associated High Level Waste (HLW);
- the proposed GDF is assumed to become available in time. However, it is not expected to be available until at least 2040, necessitating provision of an interim ILW storage solution;
- Low-Level Waste will continue to have a disposal route via the NDA;
- all activity on the Reactor Compartment must take place at a site that holds an appropriate Nuclear Licence and/or Authorisation (whether this is new or an existing facility);
- most of the radiological work involved in dismantling is already established practice in submarine refitting and in decommissioning of civil reactors, so there will be very few new technical procedures involved;

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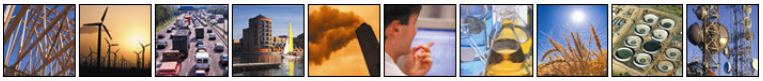
. [10] "MOD policy for decommissioning and the disposal of radioactive waste and residual nuclear material arising from the nuclear programme", issued 9 Oct 07.

[11] Govt policy framework: Managing Radioactive Waste Safely (MRWS), DEFRA & Devolved Administrations, 2001. 'Managing the nuclear legacy – a strategy for action.' DTI, 2002. The Decommissioning of the UK Nuclear Industry's Facilities – Amendment to Command 2919. DTI, 2004.MRWS White Paper – A Framework for Implementing Geological Disposal. 2008.

[12] The ISOLUS Investigation Concept Phase Report, issued 26 May 1999



- the non-radiological front and rear parts of the submarine do not have to be dismantled at a Nuclear Licensed or Authorised site, and could be processed at a commercial ship-breaking facility that could be selected by competition to give better value for money;
- the waste hierarchy will apply throughout; where feasible, materials from dismantling will be re-used or recycled (rather than be disposed of); and
- transparency will be applied to the project, and further public consultation will be undertaken before any major decisions are made.

### 2.1.3 Public Consultation on the SDP

Recognising the importance that public acceptability plays in the development of the solution, an iterative process of public consultation is being undertaken prior to major decisions being made. Two consultations have been held to date, conducted by independent researchers at Lancaster University:

- **Front End Consultation (FEC):** This consultation in 2001[13] was to identify what members of the public and other stakeholders considered should be taken into account when developing a solution.
- **Consultation on ISOLUS Outline Proposals (CIOP)**: In 2003, four Industry groups submitted outline proposals to meet the ISOLUS/SDP requirement to the MOD[14]. These formed the subject of the CIOP, and generated a degree of controversy and criticism. The CIOP report was published in May 04; MOD's response was released through the then Minister for Defence Procurement in Feb 05[15], following extensive consultation with Other Government Departments and Devolved Administrations.

A key CIOP recommendation was that ISOLUS should be aligned with the process of the Committee on Radioactive Waste Management (CoRWM), set up by Government in November 2003 as an independent body to recommend a strategy for the long term management of the UK's legacy higher-activity solid radioactive waste. Work on identifying potential interim ILW storage sites was suspended, in order to achieve a cohesive cross-Government approach to radioactive waste management. CoRWM's report was issued on 31 July 2006[16]; Government and Devolved Administrations responded on 25 October 2006[17].

As part of a package of recommendations, CoRWM recommended geological disposal coupled with a programme of robust, safe and secure interim storage, until a higher-activity waste disposal facility is

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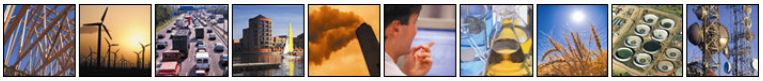
[13] See http://www.submarinedismantling.co.uk/assets/downloads/publicconsultation/ISOLUS_consultation_report.pdf

[14] See http://www.submarinedismantling.co.uk/ConsultationCOIP.asp

[15] Min(DP)'s statement in response to the Consultation on ISOLUS Outline Proposals (CIOP), Feb 05. http://www.submarinedismantling.co.uk/assets/downloads/documentlibrary/CONSULTATION-OUTLINE-2003/02/isolus-ciop-mod-responses.pdf

[16] Managing our Radioactive Waste Safely, CoRWM's recommendations to Government, 31/07/06, http://www.corwm.org.uk/Pages/Lnk_pages/key_issues.aspx

[17] Response to the Report and Recommendations from the Committee on Radioactive Waste Management (CoRWM), By the UK Government and he devolved administrations, 25 October 2006. http://www.corwm.org.uk/Pages/Lnk_pages/key_issues.aspx

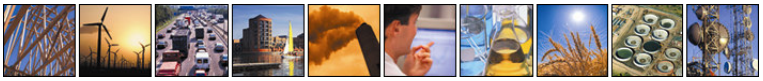


available. This fitted well with the strategic aims of the SDP. As a result, the MOD was able to continue developing the strategies for processing submarines and interim storage of the resultant ILW.

## 2.2 Key Stages, Activities and Options of the SDP

At this stage, the SDP is a National programme consisting of a number of broadly sequential stages, which may, however, overlap or coincide:

- **Stage I: Design and Develop the Initial Submarine Dismantling Capability** - This involves providing the means (essentially the facilities, processes and personnel) to safely dock and then dismantle the nuclear elements of the 27 defueled and de-equipped nuclear-powered submarines. There are three generic types of land where this capability could be developed; namely undeveloped land, previously-developed land and existing Licensed or Authorised sites. These are discussed further in Section 2.3.1.
- **Stage II: Design and Develop the Interim ILW Storage Capability** - This involves providing the means (essentially the facilities, processes and personnel) to safely store the arising ILW, until such time as the proposed GDF becomes available. This could take place on any of the three generic land types described above.
- **Stage III: Dock Submarines and Process Reactor Compartments** - This involves docking the defueled submarines into the dismantling facility before processing the Reactor Compartments in line with industry good practice. There are three different technical options under consideration for achieving this; namely Reactor Compartment (RC) storage, Reactor Pressure Vessel (RPV) storage and Packaged Waste storage. These are discussed further in **Section 2.3.2**.
- **Stage IV: Dismantle the Front and Rear Sections of the Submarines and Process all Wastes except ILW** - This involves recovering re-useable components and then taking the rest of each submarine apart in accordance with appropriate industry good practice, to produce recyclable and non-recyclable waste streams. There is an opportunity to maximise value for money by transporting the non-radiological fore and aft sections of the submarine to an established commercial ship recycling facility elsewhere in the UK, since these sections will not need to be processed at a Nuclear Licensed or Authorised site. Low-level radioactive waste (LLW) from the submarine programme has a current disposal route to the NDA's National LLW Repository in Cumbria, and continued access for SDP materials to a National LLW facility is assumed. This is discussed further in **Section 2.3.3**.
- **Stage V: Move the ILW to Interim Storage** - This involves transporting the ILW from the dismantling facility/ies to interim storage. The modes of transport used to move the ILW will depend upon the size of the packages, the location(s) of the dismantling and storage facilities and the availability of suitable transport infrastructure. This is discussed further in **Section 2.3.4**.
- **Stage VI: Dismantle RC/Reactor Pressure Vessel (RPV) (if required); transfer packaged ILW to GDF.** If the RC is fully dismantled into packaged waste at Stage III, this stage will solely involve transporting the packaged ILW to the GDF. If, however, initial dismantling at Stage III involves separation of the RC or the RPV this Stage will see these components being dismantled to fully-packaged ILW, in a similar manner to Stage I. The fully-packaged ILW will then be transported to the GDF. This is discussed further in **Section 2.3.5**.



- **Stage VII: Decommission the SDP Facilities** - This involves safely decommissioning the dismantling and interim storage facilities, and returning them to a condition that is consistent with any proposed future use. This is discussed further in **Section 2.3.5**.

## 2.3 Proposed Approach to Applying SEA to each of the SDP Stages

### 2.3.1 Stage I - Site options for Submarine Dismantling and Stage II - Site options for ILW Storage

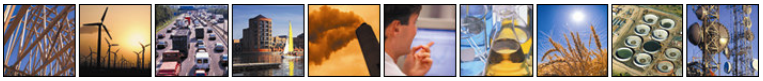
Stages I and II could feasibly be undertaken on one single site (if space were available), or on multiple sites; e.g. using one or more sites for dismantling and one or more sites for ILW storage.

In their broadest sense, these sites fall into one of the following three generic categories of land:

- **Undeveloped, 'greenfield' sites.** These would be new sites developed on land that has not previously been subject to industrial development, such as farmland or parkland, or which has been abandoned after historic use and has reverted to a 'natural' state - such as a disused quarry or mine workings. At a site on such land, there would be no existing dock, or ship handling facility, nuclear License or expertise to undertake the required work; most or all the required infrastructure would need to be developed from scratch.
- **Previously-developed, 'brownfield' sites.** These would be new sites developed on land that is or has been developed and occupied by buildings or infrastructure. Ideally, there should be sufficient existing infrastructure in place (such as a dock to accommodate the submarines), but there would be no nuclear facilities or qualified personnel available. Commercial ship-breaking facilities without a Nuclear License or Authorisation would fall into this category.
- '**Existing,' Nuclear-Licensed and/ or Authorised sites.** This comprises developed sites where specific nuclear activities have been Licensed or Approved[18] by the UK nuclear regulators, and where current nuclear expertise exists. Ideally, there should be sufficient existing infrastructure in place, such as a dock to accommodate the submarines. Within this category, there are three generic site types: Licensed and Authorised sites owned by the MOD, Licensed sites owned by the UK Nuclear Decommissioning Authority (NDA) and Licensed sites owned by commercial operators.

The generic site categories have evolved from the basic distinctions of using an existing Licensed/ Authorised nuclear site, versus developing a new site. The 'new site' category intuitively divides itself into building on land which is not built up, and building on already developed or derelict land. Note that

[18] It is important to note that it is the undertaking of the nuclear activity per se, rather than the site itself, that is approved, although the term "Authorised/ Licensed site" is commonly used.



these definitions have been substantially updated to reflect consultee feedback from Stage 'A1' and are no longer based solely on the definitions provided in PPS3 (housing).

### Initial Submarine Dismantling

There are only a small number of 'existing' nuclear Licensed or Authorised sites in the United Kingdom, and only some of these could practicably undertake submarine dismantling - for example, sites would have to have sea access, so those sites not on the coast would not be feasible. The MOD considers it reasonable to name those potentially suitable dismantling sites at this stage, especially since the location of the dismantling site(s) will be a determining factor in the nature and scale of the subsequent environmental effects (especially in relation to EU-designated sites).

An indicative list of the potential candidate 'existing' Licensed/Authorised sites has been developed using operational criteria derived from the project's Key User Requirements. The list of these potential candidate sites can be found at **Table 2.1;** further details and environmental baselines for these sites are included in the Annexes to this updated report. The site selection logic which has given rise to the indicative dismantling site list (the SDP Proposed Site Criteria and Screening Paper) will also be made available to Scoping Consultees.

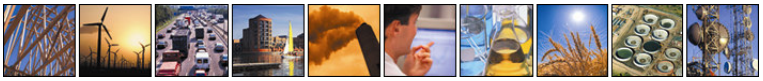
**Table 2.1 Potential Candidate Sites for Initial Submarine Dismantling**

| Site | Location | Owner |
|---|---|---|
| Devonport Royal Dockyard | Plymouth, England. | Babcock International Group |
| Rosyth Royal Dockyard | Fife, Scotland. | Babcock International Group |

It should be noted that this list implies three credible options of the initial dismantling site involving either Devonport Royal Dockyard or Rosyth Royal Dockyard or a combination of both sites. It should also be noted that consideration of individual Licensed or Authorised dismantling sites in the SEA does not imply the exclusion of the other generic options to develop SDP capability on undeveloped or previously-developed sites. These remain within the scope of the SEA at a generic level, with the associated costs, benefits and environmental impacts considered.

However, as there are an almost unlimited number of undeveloped and previously-developed sites in the UK, it is considered disproportionate in relation to the scale of the SDP (the volume of ILW that is estimated to arise from SDP is less than 0.2% of the national ILW inventory) to attempt to consider each one individually, unless the possibilities for using an existing nuclear licensed or authorised site are exhausted. This conclusion is supported by the findings of the earlier public consultations[19] and in comments received from the Environment Agency during the first part of Statutory Consultation.

[19] Project ISOLUS, Front End Consultation, Final Report, September 2001 and Project ISOLUS, Consultation on Outline Proposals, Final Report, September 2001. Both reports can be viewed at www.submarinedismantling.co.uk



### Interim ILW Storage

The current practice in the civil sector is that ILW is stored at the point of generation until a disposal solution becomes available; as a result, there is no established precedent for transfer of ILW between stores. NDA have challenged this position in their latest draft Strategy , (which closed for public consultation on 24th November 2010), and are exploring opportunities to share current and planned storage facilities to improve value for money and reduce the environmental impact of new store build. The development of such a national waste consolidation strategy represents a significant opportunity for MOD in conjunction with wider government liabilities, but it is not sufficiently mature to support the screening of potential candidate sites at this time.

At this stage, therefore, the MOD proposes to assess the generic site options of undeveloped 'greenfield' sites, previously-developed 'brownfield' sites and 'Existing' Licensed/ Authorised sites, considering any specific environmental effects associated with the different types of site ownership (e.g. those owned by the MOD, NDA or Commercial operators).

### Summary

In summary, the SEA will **firstly** consider the environmental effects associated with developing the initial dismantling and interim ILW storage capabilities at undeveloped, previously-developed and existing Licensed/ Authorised sites. **Secondly**, the SEA will then consider the environmental effects associated with developing initial dismantling facilities at those named 'existing' Licensed or Authorised sites that are reasonably able to accommodate SDP activity. The SEA will also assess the significant environmental effects of developing ILW storage capability on the three different types of 'existing' site (namely those under MOD, NDA and commercial ownership), should any significant differences become clear.

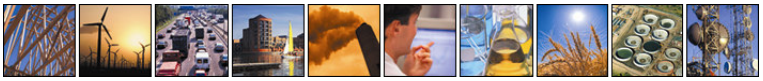
Assessment of individual sites will clearly be at a greater level of detail than the generic assessment of the site types; however this will not remove any requirement for the subsequently-selected site(s) to be assessed against the EIADR or EIA Regulations[21].

## 2.3.2 Stage III - Dock Submarines and Process the Reactor Compartment

Stage III entails moving and docking the defueled submarines into the initial dismantling facility/ies, and dismantling the Reactor Compartments to remove the remaining radiological material.

The extent to which the submarines will need to be moved depends on the location of the initial dismantling facility/ies relative to the existing interim storage locations at Devonport and Rosyth. Unless the submarines are dismantled *in situ*, it follows that some of the submarines will need to be transported off-site by sea.

[21] The Town & Country Planning (Environmental Impact Assessment) (Amendment) (England) Regulations 2008, plus devolved equivalents; the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999



The extent to which each Reactor Compartment is taken apart will determine what form the resulting radioactive waste will be in, and hence affect the design of the interim store. Three such 'technical options' have been considered:

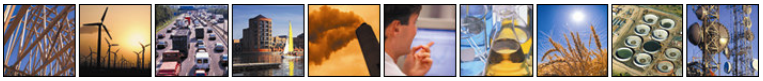
- Cut-out and Storage of the Intact Reactor Compartment would entail removing the intact RC from each submarine hull. The rest of the submarine would be dismantled using standard commercial 'ship breaking' processes. This is the current approach adopted by the USA, Russian Federation and France. The RCs would be stored intact on land until the proposed GDF becomes available at some point after 2040. Only at that point would the RC be fully dismantled. Dose reduction measures would be applied to demonstrate the application of As Low As is Reasonably Practicable ('ALARP') principles during dismantling, to minimise occupational dose. ALARP would mean, for instance, that the oldest submarines would be dismantled first.
- Storage of the Reactor Pressure Vessel and Associated Intermediate-Level Waste would entail cutting into the RC and removing the RPV, which would then be stored intact. The other components of the RC would be fully dismantled. The low-level radioactive wastes (LLW) would be transported to the National LLW Repository in Cumbria. The stored RPV would be dismantled once the GDF becomes available. 'ALARP' dose reduction measures would again be applied to minimise occupational dose during dismantling.
- Storage of Fully-Packaged ILW would entail full processing of the RC 'up front,' and prior to interim storage. The LLW would be packaged and transferred to the National LLW facility, while the ILW would be suitably packaged into GDF-compliant, NDA-approved containers and then stored on land at the interim store until the GDF becomes available. 'ALARP' dose reduction measures would again be applied to minimise occupational dose during dismantling.

Note that all of these options will ultimately require the reactor compartment to be completely dismantled and the ILW placed into GDF-compliant containers, to allow final disposal. The significant difference between these options is when this will be completed. RC and RPV storage would mean deferring full dismantling and processing until some point in the future, once the GDF becomes available.

MOD is currently reviewing these technical options to determine which solution best balances safety, practicality and value for money. The results of this assessment will be presented in the forthcoming public consultation, alongside all other supporting studies. These options were previously subject to public consultation through the FEC and CIOP. However, it is considered appropriate to consult on them again now, because both the definition of these technical options, and the supporting evidence, has matured significantly since those earlier consultations.

The SEA will assess the generic impacts of both submarine transport and the three technical options for processing the reactor compartment. Site-specific impacts will also be considered in relation to the proposed initial dismantling facility/ies.

Detailed technical assessment will be undertaken, and the safety case proven, through the development of a Demonstrator project, which will prove the industrial process by dismantling at least one submarine. The key decisions on the Demonstrator (including location) will not be taken until after the public consultation has been completed and feedback has been assessed.



### 2.3.3 Stage IV - Dismantle the Front and Rear Sections of the Submarines, and Process all Wastes except ILW

The non-radiological front and rear sections that form the bulk of each submarine will not have to be dismantled at a Licensed or Authorised site, once they are given approval to be dismantled by the Nuclear Installations Inspectorate. This creates the options of i) undertaking all the dismantling work at the selected Licensed/Authorised site; or ii) undertaking the nuclear work at this facility, but then sending the remaining boat sections to a commercial ship-breaking facility elsewhere in the UK, which may present opportunities for competition and maximising value for money.

The SEA will assess generic impacts of ship-breaking and managing the resulting waste streams. This will highlight any significant differences in the environmental impacts of ship-breaking at the initial dismantling site versus a generic commercial site. However, the scope will not extend to a comparative assessment of individual commercial ship-breaking sites, since these are established facilities whose activities are licensed under identical regulatory requirements to ensure appropriate environmental standards are met. It is not considered reasonable or necessary to assess any alternatives to such well-established standards.

The disposal routes for Low Level Waste (LLW) and Very Low Level Waste (VLLW) are well established, with an NDA repository in operation that is able to receive MOD LLW in operation. Future disposal options for these lower-level wastes have now been set out at National level[22], and it is not considered reasonable or necessary to consider alternative options to this established process. The environmental impacts associated with the long-term management of LLW will not be assessed, as these have been (or will be) subject to environmental assessment by the NDA and so are outside the scope of the SDP**.**

### 2.3.4 Stage V - Move the RC/RPV/packaged ILW to Interim Storage

The best form(s) of transport for the radioactive waste streams will be largely determined by the physical form of the waste (e.g. whether as an intact RC, extracted RPV or as fully-packaged ILW) and by the physical characteristics and transport links of the processing and storage site(s). It is already known that off-site transport of intact RCs is only feasible by sea, as RCs will be too large to travel by road or rail.

The SEA will assess the generic impacts of transporting the RC, RPV or packaged ILW by road, rail and sea/waterway, as appropriate. Site-specific impacts will also be considered in relation to the feasible transport links associated with proposed dismantling sites.

The scope of the SDP (and hence the SEA) does not extend to that of the spent nuclear fuel, as this is removed from the submarines at Devonport before the submarines enter the scope of the SDP, and is stored at the fuel Repository at Sellafield. Spent fuels are not classified as waste.

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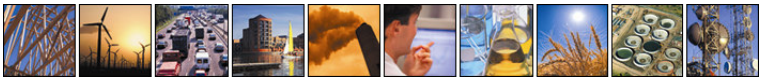
[22] Policy for the Long-Term Management of Solid Low-Level Radioactive Waste in the United Kingdom. Publ. Defra, DTI & Devolved Administrations; 26 March 2007.



### 2.3.5 Stage VI: Dismantle RC/RPV (if required); transfer packaged ILW to the Proposed Geological Disposal Facility

Once the GDF is operational and able to accept ILW from submarines, the ILW will need to be transported to the GDF in compliant packaging. If the RCs are taken apart and fully packaged up-front at Stage III, no more work will be needed, and this stage will only involve transporting the packages to the repository. If, however, the RCs are stored intact or partially processed to RPVs and packaged waste, further dismantling and / or packaging will be required before ILW can be received by the GDF.

The generic environmental impacts associated with dismantling stored RCs or RPVs at some point in the future are covered by Stage III, as the processes and issues will be very similar to those associated with full dismantling. Any significant differences between the environmental impacts of 'early' cut-up and 'late' cut-up will be highlighted.

The generic impacts associated with transporting the packaged ILW are covered by Stage V, as the processes and issues will be very similar.

Note that, although reference is made to the proposed UK GDF, the environmental issues associated with its' development are subject to separate assessment process by the NDA and so are outside the scope of the SDP**.**

### 2.3.6 Stage VII: Decommission SDP Facilities

The submarine processing facility/ies will be operational until around 2046; interim storage until at least 2040. Since decommissioning is so far in the future, there are significant uncertainties about the nature and magnitude of the associated environmental effects. The SEA will assess the generic impacts of decommissioning, using evidence gained from the civil nuclear industry. However it is not proposed to include site-specific assessment, as anything more than a generic assessment at this stage would not be meaningful.

## 2.4 Summary

The proposed application of SEA to the SDP is summarised in **Table 2.2**. The SEA will firstly consider the generic environmental effects associated with each stage of the SDP. This assessment will be followed by a determination of the site-specific effects that could arise from initial submarine dismantling at candidate 'existing' nuclear Licensed or Authorised sites.

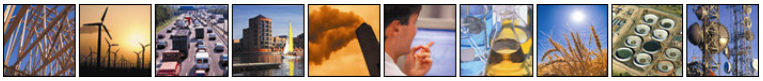
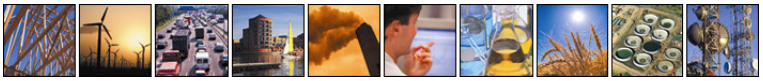


**Table 2.2 Summary of the Level of SEA Assessment for the Key Stages of the SDP**

| Key Stages of the SDP | Proposed Generic Assessment for SDP strategic options | Proposed Site-level Assessment for SDP strategic options |
|---|---|---|
| Stage I<br>Develop the initial dismantling capability | Assess each generic site category (undeveloped site, developed site or 'existing' Licensed/ Authorised nuclear site) | Assess credible 'existing' Licensed/Authorised sites |
| Stage II<br>Develop the interim ILW storage capability | Assess each generic site category (undeveloped site, developed site or 'existing' Licensed/Authorised nuclear site).<br>Consideration of different generic 'existing' site types, where relevant. | |
| Stage III<br>Dock submarines and process Reactor Compartments | Assess transport of submarines to dismantling facility/ies<br>Assess each technical option for processing the reactor compartment | Consideration of site-specific transport issues where relevant |
| Stage IV<br>Dismantle the fore and aft sections and process all materials (except ILW) | Generic assessment of ship-breaking, including consideration of on-site and off-site final dismantling | |
| Stage V<br>Transport RC/RPV/ ILW to interim storage | Generic assessment of transport options | Consider site-specific issues where relevant |
| Stage VI<br>Dismantle RC/ RPV (if appropriate); transfer packaged ILW to Geological Disposal Facility (ca. 2040) on | Generic assessment of the dismantling process (as per stage III) if required; generic assessment of transport options | Consider site-specific transport issues where relevant |
| Stage VII<br>Decommission SDP facilities once all submarines have been processed | Generic assessment of the decommissioning process | |

The SEA will inform the development of the SDP's strategic direction, by firstly assessing the reasonable strategic options at each stage of operation, including comparative assessment of developing new sites versus use of existing Nuclear Licensed/Authorised facilities.

The inclusion of site-specific assessments for candidate 'existing' initial dismantling sites in the scoping report and public consultation is made **firstly** on the basis that, if the generic assessments of land type were undertaken using the draft assessment criteria, they would be likely to point favourably to using existing facilities, as opposed to developing new ones (this will be formally tested during the Stage B assessment). **Secondly,** there are only a small number of potentially feasible 'existing' Nuclear



Licensed or Authorised sites in the United Kingdom, so it is quite reasonable to consider them individually. There are, however, an almost unlimited number of undeveloped and previously-developed sites in the UK, and it is not feasible to consider each one individually, given the relatively small scale of the project.

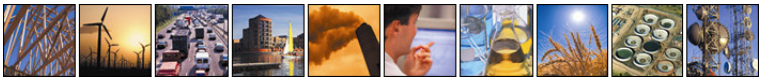
A separate Proposed Site Criteria and Screening Paper will provide detailed explanation about the site selection process and why certain sites have been selected as potentially suitable (and hence included as the 'reasonable alternatives' in the SEA), whilst others been discounted. This logic will also be explained in the public consultation.

It must be noted that consideration of individual Licensed or Authorised sites in the SEA does not imply the exclusion of the other generic options to develop SDP capability on undeveloped or previously-developed land. These remain within the scope of the SEA, with the associated costs, benefits and environmental impacts considered.

The relative assessment of potential candidate sites will clearly contain more detail than the generic assessments, since site-specific information will be available. Whichever site(s) are eventually chosen, further site-specific environmental assessments will be needed before any development can take place. We expect that these will include (but not be limited to) Town and Country Planning Environmental Impact Assessment, Environmental Impact Assessment for Nuclear Decommissioning and Environmental Permitting[23].

These choices are presented within the context that indefinite afloat storage of redundant submarines (the 'do minimum' option) is not a reasonable long-term solution for the United Kingdom. As a result, this 'do minimum' option will be used as a baseline comparator in the SEA and not be subject to assessment in its own right as a 'reasonable alternative.' This option will also be used as a baseline comparator in the wider public consultation process.

[23] The Town & Country Planning (Environmental Impact Assessment) (Amendment) (England) Regulations 2008, plus devolved equivalents; the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999; and the Environmental Permitting Regulations 2010



# 3. Baseline Information

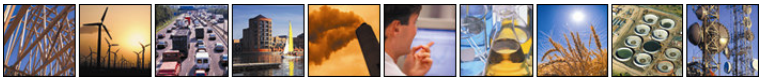
## 3.1 Introduction

An essential part of the SEA process is to identify the current state of the environment and its likely evolution under a 'business as usual' scenario. Only with sufficient knowledge of the existing baseline conditions can the key potential effects of the SDP proposals be identified, characterised and assessed. The SEA also requires that the actual effects of implementing the SDP on the baseline are monitored.

Annex I of the SEA Directive requires that the subsequent assessment (to be contained in the Environmental Report) should include information on the "*likely significant effects on the environment, including on issues such as: biodiversity; population; human health; fauna; flora; soil; water; air; climatic factors; material assets; cultural heritage, including architectural and archaeological heritage; landscape; and the inter-relationship between the issues referred to*". To support a comprehensive assessment of potential effects, a baseline for each of these environmental categories has been considered. **Table 3.1** presents how the proposed categories in this report are consistent with the SEA Directive requirements.

**Table 3.1 Scope of Effects Considered by SDP Scoping Report**

| Annex I SEA Directive Effects | Categories Considered by SDP Scoping |
|---|---|
| Biodiversity, Flora and Fauna | Biodiversity and Nature Conservation |
| Population | Population including socio-economic effects |
| Human Health | Human Health and Wellbeing |
| | Health (Noise and Vibration) |
| Soil | Soil and Geology |
| Water | Water |
| Air | Air |
| Climatic factors | Climate Change and Energy Use |
| | Coastal Change and Flood Risk |
| Material assets | Material assets (Transport) |
| | Material assets (Waste Management) |
| | Material assets (Land Use and Materials) |
| Cultural heritage, including architectural and archaeological heritage | Cultural heritage, including architectural and archaeological heritage |
| Landscape | Landscape and Townscape |



## 3.2 Baseline Data

**Annex A** provides a summary of the current and projected national baselines for each SEA category, regional baselines for each SEA category. **Annex C** provides a summary of the current and projected sub-

**C** sets out for each SEA category.

Consistent with the requirements of Annex 1 (b), (c) and (d) of the SEA Directive, **Annex A** and **Annex**

- relevant aspects of the current state of the environment;
- the likely evolution of these baseline conditions without the implementation of the SDP; and
- characteristics and current problems in areas of particular environmental importance.

**Annex A** presents information that has been collected at the national level (UK, England, Scotland, with the implementation of stages 1 to 3 of the SDP. the assessment of the generic issues associated

**Annex C** presents baseline data at sub-regional level for each local authority area that includes a potential candidate site for dismantling. These local authority areas (and the indicative sites located within them) are as follows:

- Plymouth (for Devonport Royal Dockyard and /Her Majesty's Naval Base Devonport)
- Fife (for Rosyth Royal Dockyard).

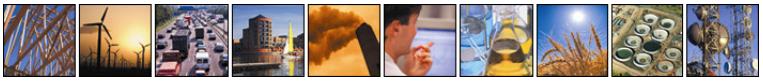
Information has been used from a variety of sources including Defra, DECC, the Environment Agency, Natural England, the Office of National Statistics, Welsh Assembly Government, the Scottish Environmental Protection Agency and DoE(NI). On occasion, for some of the categories within the baseline, there are specific data that we have not been able to identify. Where this occurs, this has been identified and consultee support is welcomed in identifying suitable sources of the outstanding information.

Following consultation and amendment, this information will be used to inform the assessment of the credible site options for dismantling and storage, to be reported in the Environmental Report. This information includes more detailed information on local conditions and trends, particularly for Special Areas of Conservation (SAC) and Special Protection Areas (SPAs) designated under Directive 79/409/EEC and 92/43/EEC [24].

## 3.3 Key Baseline Issues

From an analysis of current and projected baseline conditions, the following issues have been identified as being relevant to the SDP. Under each topic, the reference to the assessment objectives indicates

[24] A European Site is any classified SPA and any SAC from the point where the Commission and the Government agree the site as a Site of Community Importance.

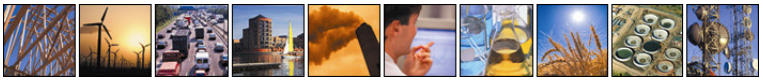


how these issues have been reflected within the assessment methodology (**see Section 6**). Please note that the issues summarised in **Section 3.3** below are those identified by the national and sub-regional baselines as being particularly pertinent. They *do not,* however, anticipate the potential effects of the SDP on these baseline conditions. The provisional assessment of the SDP's potential environmental effects is outlined in **Section 5** and these effects will be included in the scope of the SEA Stage B assessment.

### 3.3.1 Key Biodiversity and Nature Conservation Baseline Issues

- Areas already covered by European designations and SSSIs are predominantly well managed and improving in condition; 94% of UK SSSIs are currently recorded as being in Favourable or Unfavourable Recovering condition. There is a presumption against harming the integrity of a European-designated site (including Ramsar sites). Protected habitats and species (such as at sensitive coastal locations) may affect where and how SDP activities can take place.
- Species and habitats outside of such designated areas are, however, more vulnerable and often in decline. For example, most of England's (unprotected) semi-natural habitats have recently been assessed as being insufficiently protected, under-managed or isolated.
- Too few people have access to wildlife, leading to a loss of cultural connection with the natural environment.
- The trend of increasing development pressure at coastal and estuarine areas (often accompanied by coastal engineering projects such as sea defences) is having an adverse affect on biodiversity, particularly through impacts on water quality and loss of habitat.
- **Plymouth** (home to Devonport) has nine SSSIs, one SAC and one SPA (the Tamar Estuaries Complex, which is predominantly in favourable condition). Current threats to the designated features of SACs and SPAs are mainly from increased coastal development, dredging and increased marine activity. Plymouth has six designated Local Nature Reserves, mostly situated on the eastern side of the city.
- **Fife's** coastland and wetlands are important sites for migrating wildfowl and breeding seabird populations. Fife (home to Rosyth) has 48 SSSIs, two SACs, two SPAs, one Ramsar site, seven local nature reserves and one regional park. The environmental problems and threats affecting biodiversity in Fife include fragmentation of habitats due to development pressures; non native invasive species; climate change impacts; agricultural practices; and land and freshwater pollution (including nutrient enrichment). Fife's wetlands, in particular, appear to be declining due to changes in habitat distribution and land use.

These issues are reflected in the assessment process though Objective A (Biodiversity and Nature Conservation),Objective D (Noise and Vibration), Objective F (Water), Objective G (Air), Objective H (Climate Change and Energy Use), Objective L (Land Use and Materials) and Objective N (Landscape and Townscape).



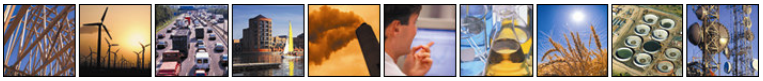
## 3.3.2 Key Population and Socio-Economic Baseline Issues

- The UK population continues to grow; however, there is a decline in those of working age and competition from the civil sector for those with requisite civil or defence-related nuclear skills and experience. This may affect when and where the SDP's radiological activities can feasibly take place.
- The UK economy is currently in recovery; however unemployment rates have been rising and may continue to rise beyond 2010. Disadvantage continues to exist in many communities, both in remote areas and inner cities.
- Budget constraints may affect current delivery plans, in line with the situation for wider national and local government.
- Defence activity generally brings positive economic impacts around its facilities and bases, due to relatively stable employment levels and inward investment.
- **Plymouth** has a resident population of 256,700 with 67% of population of working age. The area has relative lower wages than the UK averages. Plymouth has a strong and recognisable industrial and military heritage which has left behind a set of ongoing and evolving specialisms in Advanced Engineering and Maritime industries. However, in recent years there has been a decline in employment in technology and knowledge based activities in Plymouth. The Naval Base is the largest in Western Europe, and accounts for 10% of Plymouth's income.
- **Fife's** resident population is 363,500 with 78% of the working age population economically active. The area has relatively lower wages than UK average. Fife is more dependent on manufacturing than Scotland as a whole, but is seeing a shift to a more modern service economy. Specialist manufacturing in defence, marine engineering and electronics remain important.

These issues are reflected in the assessment process though links with Objective B (Population).

## 3.3.3 Key Health Baseline Issues

- Health problems associated with radiological exposure are generally a minor issue in the UK; the great majority of the average public dose comes from natural sources of radiation, although testing and accidental releases do contribute to this. Background levels of natural radiation vary considerably from area to area, and any additional exposure (however small) may be an important issue for those communities who are already exposed to high natural background levels.
- Health inequalities exist in many communities, often exacerbated by poor access to or use of health services. Any future funding constraints on health services are likely to affect this situation.
- **Plymouth** has an average life expectancy slightly below the UK average. Life expectancy in Plymouth is going up overall; however, some deprived areas have lower than average rates. Studies report that whilst Plymouth has higher cancer rates than the national average, this is likely to be due to socio-economic deprivation and smoking rather than any other actives in the city.
- The trend in **Fife** is of gradually improving health. Between 1995 and 2004, death rates from cancer, CHD, cerebrovascular disease and respiratory disease decreased; CHD by 36%, cerebrovascular and respiratory disease by 25%.



These issues are reflected in the assessment process though links with Objective C (Health and Wellbeing).

### 3.3.4 Key Health (Noise and Vibration) Baseline Issues

- Ambient noise levels are gradually increasing in the UK as a result of an increasing - and increasingly mobile - population. The cumulative impacts of noise on sensitive groups in local communities may create or exacerbate existing health issues.
- For both sub-regional baselines, road traffic noise (especially from major through-routes) is identified as the key cause for disturbance, e.g. the A90 north of the Forth Road Bridge in Fife. Councils are recording an increase in noise complaints.

These issues are reflected in the assessment process though links with Objective D (Noise and Vibration), Objective I (Transport) and Objective A (Biodiversity and Nature Conservation).

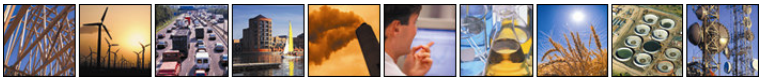
### 3.3.5 Key Soils and Geology Baseline Issues

- Significant areas across the UK carry a burden of contamination from industrial activity, although this is progressively being cleaned up as sites are redeveloped. Whilst contamination is remediate during redevelopment, the process can be expensive.
- Disturbance of contaminated sites carries the risk of pollution pathways being created or re-opened for any existing ground contamination.
- **Plymouth** has four SSSIs designated for their geological importance. Plymouth also has a large number of unlicensed, historic waste disposal sites containing a variety of wastes, many of which were closed prior to the establishment of the Control of Pollution Act in 1974.
- **Fife** (including Clackmannanshire) has 24 geological SSSIs and 7,000 potentially contaminated sites, mainly as a result of the area's industrial heritage.

These issues are reflected in the assessment process though links with Objective E (Geology and Soils), Objective L (Land Use and Materials) and Objective F (Water).

### 3.3.6 Key Water Baseline Issues

- Between 1985 and 2005, UK radioactive emissions to water fell by 87% and that trend is on-going.
- The majority of UK coastal waters (around 94%) conform to the requirements of the Water Framework Directive.
- 26% of rivers, 36% of lakes and reservoirs and 27% of estuaries and coasts in England and Wales are at good or better ecological status in every one of the characteristics looked at for



Water Framework Directive (WFD) targets. 98.3% of England's bathing waters met the EC's minimum water quality standards in 2009, up from 96% in 2008.

- There are 182 protected areas in UK inshore waters with a marine element, which includes 81 Special Protection Areas (SPAs) with marine habitats for birds, 98 Special Areas of Conservation (SACs) with marine habitats or species and three Marine Nature Reserves. In total the area coverage of these sites exceeds 1.8 million hectares, or 2.2% of UK waters.

- The annual per-capita radiation dose to people in the UK from all EC marine discharges was 0.68µSv (down from 1.17µSv in 1998). Around 10% of this is due to nuclear industry.

- Climate change and the effects of an increasing population are placing growing pressure on the availability and quality of surface and ground-water resources. In some parts of the country, availability of sufficient water supplies may constrain future development.

- **Plymouth's** inland water quality is generally considered to be good (65% were in good biological condition with 100% in good chemical condition. Plymouth Sound and Estuaries SAC and the Tamar Estuaries Complex SPA are protected water features. The water in Plymouth Sound is assessed as having good ecological quality, but poor chemical quality. A 2004 Natural England study reported that the radionuclides discharged into the Plymouth Sound and Estuaries SAC was of low radiological significance. .

- In **Fife,** water quality is relatively good. In 2007, the 80% of bathing waters in Fife meet quality standards. In 2006 609km of rivers were sampled for quality. 20% were rated excellent; 42% were rated as good; 26% were rated fair; and 12% were rated as poor. Isle of May SAC, Firth of Tay and Eden Estuary SAC, Firth of Tay and Eden Estuary SPA, Firth of Forth SPA, Cameron Reservoir SPA, Forth Islands SPA, South Tayside Goose Roosts SPA, and Loch Leven SPA are all protected water features within Fife. As a result of river basin management plans, there is a general trend of increasing freshwater quality from reduced agricultural and point source pollution.

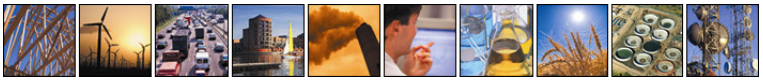
These issues are reflected in the assessment process though links with Objective F (Water), Objective H (Climate Change and Energy Use) and Objective A (Biodiversity and Nature Conservation).

### 3.3.7 Key Air Baseline Issues

- Air quality has improved in the UK over the last sixty years as a result of the switch from coal to gas and electricity for heating of domestic and industrial premises, stricter controls on industrial emissions, higher standards for the composition of fuel and tighter regulations on emissions from motor vehicles. However, poor air quality - particularly from vehicles - remains a significant issue for community health and for biodiversity, especially in/downwind of urban areas and major transport networks. Air pollution continues to damage peoples' health. Air pollution is a significant cause of decline in the condition of 55 of UK SSSIs.

- Between 1985 and 2005, UK radioactive emissions to the atmosphere fell by 83% and that trend is on-going.

- For all the sub-regional baselines, air quality is considered good overall, when assessed against national air quality standards



These issues are reflected in the assessment process though links with Objective G (Air), Objective A (Biodiversity and Nature Conservation) and Objective C (Health and Wellbeing).

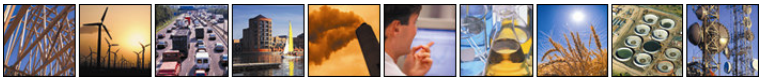
### 3.3.8 Key Climate Change and Energy Baseline Issues

- Energy security is becoming a significant emerging issue for the United Kingdom as national fossil fuel resources are depleted; the development of the suite of energy infrastructure NPSs is attempting to address these issues. This (currently) recommends development of low/zero carbon sources, including new nuclear power facilities.
- The UK's Climate Projections (UKCP09) show that the country as a whole is likely to experience hotter drier summers, warmer wetter winters and rising sea levels, particularly in the South East of England. This is likely to have a significant effect on a range of environmental conditions, including the water environment. This may have a significant impact on where and how submarine dismantling can take place.
- The UK national target of an 80% cut in greenhouse gas emissions by 2050 (compared to 1990 levels) has been incorporated into MOD policies and procedures for energy and the built environment. This will affect the design and execution of SDP activities.
- Per-capita energy consumption in West Berkshire, Plymouth, Copeland, North Ayrshire and Fife were all higher than both regional and national averages (with consequently higher than average per-capita $CO_2$ emissions). However, average commercial and industrial electricity consumption per customer in Argyll and Bute was significantly lower than the Scottish and national averages.

These issues are reflected in the assessment process though links with Objective H (Climate Change and Energy Use), Objective A (Biodiversity and Nature Conservation) and Objective F (Water).

### 3.3.9 Key Coastal Change and Flood Risk Baseline Issues

- Sea levels are rising, with worst case scenarios of a 1.9m increase in sea level by 2100 (with up to 0.76m more likely). The south and east of England will experience the greatest effective increases, due to the effects of post-glacial rebalancing.
- Many coastal sites (especially in the south and east of the country) are already prone to erosion, due to their underlying geology, coupled with rising sea levels and increased storm intensity.
- Increasing development pressures on and around the coastal environment (often accompanied by coastal engineering projects such as sea defences) are conflicting with the need for their effective management in the face of climate change. Shoreline management plans are being implemented across the country to assess and manage these risks.
- **Plymouth** is affected by flooding; a significant amount of this is caused by ineffective drainage and insufficient sewer capacity. High-risk areas (Flood Zone 3 in PPS 25) extend along the western side of the City. Plymouth is likely to be affected by rising sea levels and subsequent flooding.



- **Fife** has a relatively long coastline and tidal flooding is already an issue. Many areas are at risk from rising sea levels and increased storminess. 3% of houses are within a fluvial flood risk area. In Fife, most watercourses are small and fast flowing, and flooding is usually caused by short-duration, intense rainfall. Of the two larger rivers in Fife (the Leven and Eden), the latter is historically subject to significant flooding, whilst the Leven shows little tendency to flood.

These issues are reflected in the assessment process though links with Objective I (Coastal Change and Flood Risk), Objective H (Climate Change and Energy Use), Objective A (Biodiversity and Nature Conservation) and Objective F (Water).

### 3.3.10 Key Material Assets (Transport) Baseline Issues

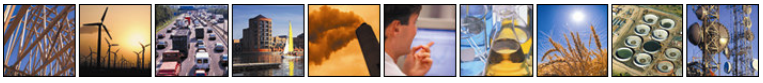
- The UK has major road, rail, air and water transport infrastructures. However, all are under increasing pressure as the population increases and becomes more mobile, and as networks age.
- The transport of radiological materials by road and rail in the UK is controlled by the NII and DfT and has an excellent safety record. Nevertheless, any transport of such materials off-site carries a remote risk of accidental damage.
- Each of the sub-regional baselines has recorded an increase in vehicle movements, an increase in the movement of freight by road and increasing congestion.

These issues are reflected in the assessment process though links with Objective J (Transport).

### 3.3.11 Key Material Assets (Waste Management) Baseline Issues

- In 2007, defence accounted for 2% of UK total radiological waste arisings. The SDP will, however, add to the accumulating ILW and LLW in the UK that will need to be disposed of.
- There is currently no centralised UK higher-activity radioactive waste storage capacity. Intermediate-level waste (ILW) is generally stored at or close to the point of generation, whilst spent fuels are stored at Sellafield. The delivery of a National Geological Disposal Facility is being planned, with a current in-service date of around 2040. However, this date is not guaranteed, so ILW may have to be stored for longer than this; a design life of 100 years has been adopted for the interim storage solution.
- Reuse and recycling rates for industrial wastes are increasing, due to the combined effects of statutory, reputational and financial drivers. However, there are still high levels of waste being disposed of, with limited opportunity for recycling hazardous and very low-level radioactive materials.
- Each sub-regional baseline records an increase in the quantities of waste arising along with significant increases in recycling rates. Limited landfill capacity is noted as a critical future issue for a number of areas.

These issues are reflected in the assessment process though links with Objective K (Waste Management) and Objective L (Land Use and Materials).



### 3.3.12 Key Material Assets (Land Use and Materials) Baseline Issues

- 5.6% of UK land is currently classed as 'built up.' Development targets in Regional Spatial Strategies, which placed significant pressure for economic development and housing on undeveloped land, have now been scrapped; nevertheless, development pressure remains, and it is not expected that previously-developed land will be able to fully deliver the UK's future needs. This will continue to place development pressures in rural areas and the urban fringe.

- The Defence Estate strategy and recent Strategic Defence and Security Review are driving significant and progressive reductions in the amount of MOD-owned land across the UK. This may impact the availability of military land for SDP activity.

- Consistent with the national trends, within the sub-regional baselines, there has been an increase in the location of development on previously developed land. No data was found on any particular land use or materials supply issues. *Consultee input welcome*.

These issues are reflected in the assessment process though links with Objective L (Land Use and Materials) and Objective A (Biodiversity and Nature Conservation).

### 3.3.13 Key Cultural Heritage Baseline Issues

- The MOD is responsible for a significant number of designated cultural heritage sites and features (782 listed buildings and 723 scheduled monuments). Appropriate management has resulted in over 80% of these now being in good or fair condition.

- **Plymouth** has 37 SAMs, 750 listed buildings and 14 conservation areas. Many of Plymouth's most important buildings are associated with the Dockyard, such as the Royal William Yard and Naval Hospitals and are listed as Grade II* or Grade I reflecting their significance.

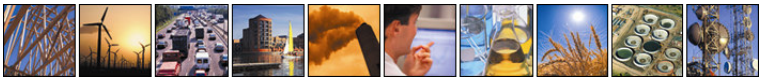
- **Fife** has 260 SAMs 795, 4910 (Category A: 41; Category B: 410; Category C(S): 390) and 48 conservation areas. No data was found on particular cultural heritage issues. *Consultee input welcome*.

These issues are reflected in the assessment process though links with Objective M (Cultural Heritage) and Objective L (Landscape and Townscape).

### 3.3.14 Key Landscape and Townscape Baseline Issues

- The UK has many important and protected landscapes which may be sensitive to development. The character of the UK's landscapes are broadly being maintained, however 20% show signs of neglect.

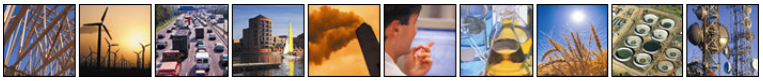
- The natural environment of the UK is much less 'rich' than 50 years ago and remains under pressure from more intense use of the land and sea; continuing economic development, climate change and increased pressures from public access.



- **Plymouth's** diverse landscape includes historic waterfronts and dockyards surrounding the large Ria/natural harbour; parkland, hilltop planting, steep wooded slopes, ridges and valleys. The South Devon AONB has dominant views of Plymouth Sound with its commercial and naval shipping and busy waterfronts.

- **Fife** is composed of mainly open countryside, and includes six Areas of Great Landscape Value (AGLV) (covering 70,640ha). Fife's wetlands appear to be progressively reducing, and there is an acknowledged trend of increasing development pressure on landscapes more generally in the area.

These issues are reflected in the assessment process though links with Objective N (Landscape and Townscape), Objective A (Biodiversity and Nature Conservation) and Objective M (Cultural Heritage).



# 4. Review of Plans, Programmes and Environmental Protection Objectives

This section outlines the plans, programmes and environmental protection objectives, established at International, European, National and sub-regional level, which are relevant to the SDP. A full review of National plans and programmes (including those for devolved administrations) is provided in **Annex B.** Information relevant to individual areas at sub-regional level is provided in Annex C.

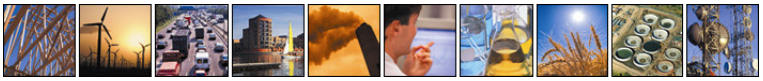
## 4.1 Review of Plans and Programmes

The SEA scoping process needs to identify and review other relevant plans, programmes, policies and strategies (herein after referred to as 'plans and programmes') that are applicable to the SDP and outline the nature of the project's relationship with them. They are set at an International, European, National and Sub-Regional level, covering a variety of topics (including spatial and resource planning).

**Annex B** contains the review of the International, European and National plans and programmes relevant to the SDP, whilst **Annex C** provides sub-regional information.

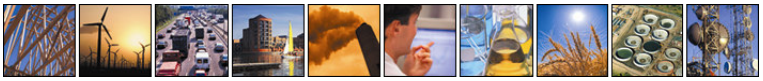
## 4.2 Key Environmental Protection Objectives

From the review of these plans and programmes, a number of key environmental protection objectives have been identified. These are summarised below, along with an indication of where the policy objectives are reflected in the SEA assessment objectives (discussed further in **Section 6.1)**. The key objectives and policy messages have been structured around the environmental categories taken from SEA Directive Annex I issues (and used to structure the baseline information in the previous section). **Table 4.1** (below) provides a précis of relevant National and International environmental protection objectives.

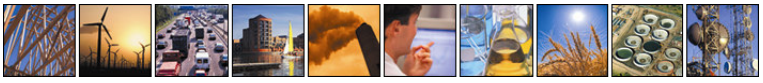


## Table 4.1 Key Environmental Protection Objectives

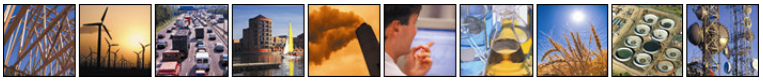
| SDP SEA Topic | Summary Objectives and Policy Messages (See Annex B and C for full list) | SEA objectives link (see Section 6.1) |
|---|---|---|
| **Biodiversity and Nature Conservation** | **International**<br><br>To protect international/European protected wildlife areas (including SACs, SPAs and Ramsar sites).<br><br>To contribute to the conservation of global biodiversity.<br><br>To ensure that the conservation and enhancement of natural heritage including wetland conservation is reflected in land use planning.<br><br>To protect and enhance the ecosystems and the biological diversity of the maritime areas.<br><br>To ensure the conservation of biodiversity in order to continue to harness the derived health and wellbeing benefits for the population.<br><br>To identify where operators are financially liable for threats of or actual damage to the environment under the "polluter pays" principle.<br><br>To anticipate, prevent and act on causes of significant reduction or loss of biodiversity.<br><br>**National**<br><br>To conserve and enhance biological diversity within the UK.<br><br>To ensure that the quality of habitats and biodiversity is enhanced or at least conserved and take account of key priority habitats and species in decision making.<br><br>To protect of the network of nationally protected wildlife areas (including SSSIs).<br><br>To protect marine biodiversity with UK jurisdiction, both within and beyond UK territorial waters.<br><br>**MOD**<br><br>To conserve, and where appropriate, enhance biodiversity as part of estate ownership, to contribute to the UK commitment to halt the loss of biodiversity by 2010 and onwards, whilst ensuring the provision of defence capabilities.<br><br>To achieve this aim the MOD will be an exemplar in the management of designated sites where compatible with military requirements; ensure natural environment requirements and best practice are fully integrated into estate management practices; and contribute, as appropriate, to the UK BAP and County biodiversity strategies. | Objective A Biodiversity and Nature Conservation<br><br>Objective C Health and Wellbeing |
| **Population** | **International**<br><br>To grants public rights to information, public participation and access to justice.<br><br>To undertake appropriate consultation with consultation bodies and the public during the SEA process.<br><br>To achieve economic development and reduction of inequalities whilst adhering to the principles of social and environmental justice and sustainable development.<br><br>To promote full employment, quality and productivity at work and promoting inclusion by addressing disparities in access to labour markets.<br><br>To promote the economic development of disadvantaged areas within the European Union.<br><br>**National** | Objective B Population<br><br>Objective C Health and Wellbeing |



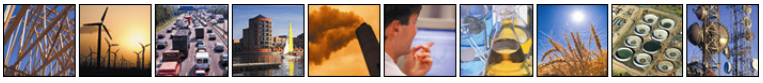
| SDP SEA Topic | Summary Objectives and Policy Messages (See Annex B and C for full list) | SEA objectives link (see Section 6.1) |
|---|---|---|
| | To create strong, prosperous communities and deliver better public services.<br><br>To narrow the gap between deprived neighbourhoods and the rest of the country.<br><br>To achieve economic development and reduction of inequalities whilst adhering to the principles of social and environmental justice and sustainable development.<br><br>To create places shaped by their communities where people are proud to live.<br><br>To raise the productivity of the UK economy, maximise job opportunities, improve economic performance and reduce the gap in economic growth rates between regions.<br><br>To deliver sustainable development; build prosperous communities; promote regeneration; and tackle deprivation.<br><br>To ensure more and better jobs as a result of sustainable economic development.<br><br>To promote the vitality and viability of town and other centres as important places for communities.<br><br>To develop and support successful, thriving, safer and inclusive urban and rural communities.<br><br>To create inclusive and locally distinctive rural communities whilst continuing to protect the open countryside for the benefit of all.<br><br>To raise the quality of life and the environment in rural areas by promoting thriving.<br><br>**MOD**<br><br>The delivery of Defence capability will contribute to the creation of more sustainable UK communities, and an environment in which people can fulfil their potential.<br><br>To deliver this aim the MOD will:<br><br>• Help build the skills of young people.<br><br>• Create a workforce that is drawn from the breadth of society and ensure that the unique contribution of every individual in that workplace is respected and valued.<br><br>• Provide a safe and healthy workplace.<br><br>• Manage the social impacts of Defence activities on UK communities (civilian and Armed Forces).<br><br>• To improve effectiveness within the context of practicality, achievability and value for money on an ongoing basis.<br><br>• To provide economic, environmental and social justification for any decision to procure new facilities as opposed to the re-use of existing facilities.<br><br>Ensure that procurement strategies take full account of economic, environmental and social impacts. | |
| **Health and Wellbeing** | **International**<br><br>To ensure children have safe water and clean air.<br><br>To ensure that measures to improve the health and wellbeing of the population are appropriately supported.<br><br>To preserve, protect and improve the quality of the environment and to protect human health.<br><br>To promote good health throughout the lifespan of the population.<br><br>Support Dynamic Health Systems and New Technologies. | Objective C Health and Wellbeing<br><br>Objective B Population |



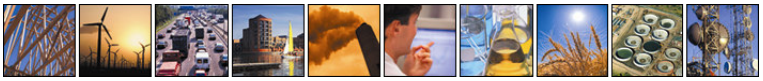
| SDP SEA Topic | Summary Objectives and Policy Messages (See Annex B and C for full list) | SEA objectives link (see Section 6.1) |
|---|---|---|
| | To reduce inequities in health.<br><br>**National**<br><br>To and minimise work-related injuries and ill-health.<br><br>To ensure workers and the public are protected from ionising radiation.<br><br>To reduce and where possible avoid the effects and causes of statutory nuisance and to comply with all relevant UK environmental legislation.<br><br>**MOD**<br><br>In addition to the MOD SD Action Plan targets detailed above in Population, the Secretary of State's policy statement requires the department to avoid work-related fatalities and minimise work-related injuries and ill-health.<br><br>To comply with the letter and the spirit of UK environmental law applicable to ionising radiations so far as is reasonably practicable, regardless of any Crown or Defence Exemptions.<br><br>To reduce exposure of the workforce, members of the public and the environment to levels of radiation which are as low as reasonably practicable (ALARP).<br><br>To justify the use of ionising radiations before their introduction and to reduce exposure of the workforce, members of the public and the environment to levels which are as low as reasonably practicable (ALARP). | |
| **Health (Noise and Vibration)** | **International**<br><br>To prevent critical health effects as a result of high levels of noise in and around dwellings.<br><br>To promote transport systems that do not generate noise levels which may have negative effects on human health.<br><br>To avoid, prevent or reduce the harmful effects including annoyance due to exposure to environmental noise.<br><br>**National**<br><br>To minimise the adverse impact of noise without placing unreasonable restrictions on development or adding unduly to the costs and administrative burdens of business.<br><br>To ensure noise reduction occurs where there may be adverse impacts of noise on human health or protected species.<br><br>To incorporate noise reduction measures in the construction of rail guided transport systems.<br><br>**MOD**<br><br>To reduce and where possible avoid the effects and causes of statutory nuisance and to comply with all relevant UK environmental legislation.<br><br>MOD establishments are not allowed to create excessive noise liable to cause a nuisance as part of activities not directly connected with the operation of equipment, training of personnel or other military operations.<br><br>To make every effort to keep the disturbance to the public caused by the noise generated by military activity to a minimum. Where possible, activities generating substantial noise will be kept at a distance from residential areas, and night time activity will be limited to achieving training objectives which cannot be met during the day. | Objective B Population<br><br>Objective C Health and Wellbeing |
| **Soil and Geology** | **International**<br><br>To ensure that soil resources are protected and that expansion of organic farmland and | Objective E |



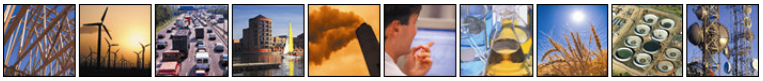
| SDP SEA Topic | Summary Objectives and Policy Messages (See Annex B and C for full list) | SEA objectives link (see Section 6.1) |
|---|---|---|
| | adoption sustainable farming techniques can be facilitated.<br><br>To protect soil on the basis of the principles of: preservation of soil functions; prevention of soil degradation; mitigation of its effects; and restoration of degraded soils.<br><br>To take precautionary measures where soil function may be affected.<br><br>To identify areas at risk of erosion, organic matter decline, salinisation, compaction and landslides.<br><br>To limit the introduction of dangerous substances into the soil, to avoid accumulation in soil that would hamper soil functions and create a risk to human health and the environment.<br><br>**National**<br><br>To ensure development takes a strategic approach to the conservation, enhancement and restoration of geology; and where appropriate incorporate design features to beneficial geological features.<br><br>To ensure contaminated land is identified and remediated where appropriate.<br><br>To protect and preserve the environment and guard against pollution to land.<br><br>To preserve, where possible, the best and most versatile agricultural land.<br><br>**MOD**<br><br>To establish a complete picture of risks associated with land quality across the Defence Estate and have in place robust mechanisms for managing those risks to an acceptable level.<br><br>To maintain a Corporate EMS based on ISO 14001 across the Estate. …to maintain a view of the impacts of MOD activities and the impact of land quality on MOD activities. | Geology and Soils<br><br>Objective C Health and Wellbeing<br><br>Objective A Biodiversity and Nature Conservation |
| **Water** | **International**<br><br>To ensure that the water and ecological quality of freshwater and marine environments is enhanced and at least conserved.<br><br>To ensure sustainable use of water resources and reduced pollution and physical impacts.<br><br>To facilitate the integrated management of both the coastal zone and River Basin Districts to ensure sustainable use and protection of resources.<br><br>To encourage the sustainable use of water resources and protect: aquatic ecology, drinking water, and bathing waters.<br><br>To provide information to the public on bathing water quality.<br><br>To protect the environment from the adverse effects of urban waste water discharges and discharges from industrial processes.<br><br>To prevent the pollution of groundwater.<br><br>To protect the marine environment across Europe.<br><br>To protect the health of European water consumers.<br><br>**National**<br><br>To protect the water environment in a way that allows it to adjust flexibly to changing climate.<br><br>To reduce pressure on the environment caused by water taken for human use; promote water use efficiency; and protect vital water supply infrastructure. | Objective F Water<br><br>Objective A Biodiversity and Nature Conservation<br><br>Objective C Health and Wellbeing<br><br>Objective H Climate Change and Energy Use<br><br>Objective I Coastal Change and Flood Risk<br><br>Objective M Cultural Heritage |



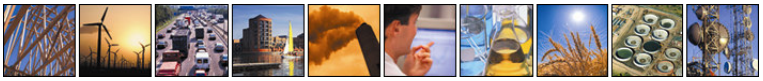
| SDP SEA Topic | Summary Objectives and Policy Messages (See Annex B and C for full list) | SEA objectives link (see Section 6.1) |
|---|---|---|
| | To improve the coastal environment particularly in urbanised or despoiled areas.<br><br>To improve quality of the UK water environment and the ecology which it supports.<br><br>To prevent pollution of the maritime area covered by the OSPAR Convention from ionising radiation.<br><br>**MOD**<br><br>To ensure all MOD sites become more water efficient to comply with Government and MOD targets.<br><br>To conduct activities in accordance with government policy and to comply with the letter and spirit of environmental law.<br><br>To support the aims and objectives of the UK Marine Bill, with exceptions negotiated solely to support operational capability or retain classified information. | |
| **Air** | **International**<br><br>To promote cleaner transport technologies and manage the demand for transport to prevent detrimental effects to human health from air pollution.<br><br>To ensure that air quality is enhanced or at least maintained and ensure that measures are adopted to support continued air quality standards.<br><br>To monitor and reduce trans-boundary atmospheric pollution.<br><br>To ensure that information on ambient air quality is made available to the public.<br><br>To maintain air quality where it is good and improving it in other cases.<br><br>To attain levels of air quality that do not give rise to significant negative impacts on and risks to human health and the environment.<br><br>**National**<br><br>To align with the principles of sustainable development and the importance of controlling and minimising pollution.<br><br>To protect and preserve the environment and guard against pollution to air.<br><br>**MOD**<br><br>To comply with the provisions of relevant environmental legislation and work towards reducing the Department's contributions to, and impacts of, air pollution. .Crown exemption remains for smoke, but for training and operational purposes only.<br><br>To ensure all establishments operating prescribed processes (that would require an Environmental Permit) comply with the letter and spirit of the statutory requirements.<br><br>To minimise gaseous and particulate emissions, particularly where they include heavy metals or other substances on the Red List of substances considered particularly harmful in water.<br><br>To ensure vehicles comply with emission limits.<br><br>To ensure vessels in harbour or close to shore comply with Clean Air legislation.<br><br>To eliminate all sources of fluorinated greenhouse gasses and ozone-depleting substances as soon as is technically and economically feasible. | Objective G Air<br><br>Objective A Biodiversity and Nature Conservation<br><br>Objective C Health and Wellbeing<br><br>Objective J Transport |
| **Climate Change and Energy Use** | **International**<br><br>To prevent "dangerous" human interference with the climate system, namely through reductions in the emissions of greenhouse gases. | Objective H Climate Change and Energy<br><br>Objective A |



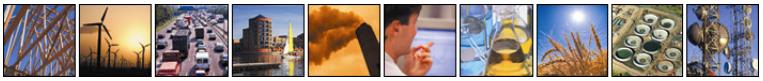
| SDP SEA Topic | Summary Objectives and Policy Messages (See Annex B and C for full list) | SEA objectives link (see Section 6.1) |
|---|---|---|
| | To promote renewable energy sources.<br><br>To promote sustainable development with regards to: energy development, efficiency and consumption, transportation, industrial development, terrestrial and marine resource development and land use.<br><br>To reduce emissions of carbon dioxide and combat the serious threat of climate change.<br><br>To help transform Europe into a low-carbon economy and increase its energy security.<br><br>To ensure that energy efficiency measures are put in place and, where possible, renewables are employed to contribute to appropriate Climate Change targets.<br><br>**National**<br><br>To improve carbon management and help the transition towards a low carbon economy.<br><br>To promote climate change risk management in all aspects of business to ensure future resilience for communities, businesses and the environment.<br><br>To pursue new development in places that are resilient to climate change; and in ways that are consistent with social cohesion and inclusion.<br><br>To conserve and enhance biodiversity, recognising that the distribution of habitats and species will be affected by climate change.<br><br>To reduce energy consumption, minimise detrimental effects on the climate from greenhouse gases and maximise resilience to climate change.<br><br>**MOD**<br><br>To be a leader amongst UK Government departments and Defence departments in EU and NATO States in the sustained reduction of $CO_2$ and other GHG emissions, and to ensure the continued delivery of Defence capability in a changing climate.<br><br>To ensure that the emissions of the GHGs that result from defence activities are continually reduced, such that Defence will eventually not be a significant contributor to the causes of climate change.<br><br>To agree and implement an effective process to enable Defence activities to continually adapt to a changing climate, such that Defence capability is not compromised and any potential benefits from the future climate are realised.<br><br>To reduce dependency on fossil fuels by ensuring that military equipment, estate and services are energy efficient and use low or zero-carbon energy sources where practicable. | Biodiversity and Nature Conservation<br><br>Objective B Population<br><br>Objective F Water<br><br>Objective G Air<br><br>Objective I Coastal Change and Flood Risk |
| **Coastal Change and Flood Risk** | **International**<br><br>To reduce and manage the risks that floods pose to human health, the environment, cultural heritage and economic activity.<br><br>**National**<br><br>To reduce the threat of flooding to people and their property; avoid inappropriate development in areas at risk of flooding; and sustainably manage risks from flooding and coastal erosion.<br><br>To ensure that policies and decisions in coastal areas are based on an understanding of coastal change over time.<br><br>To prevent new development from being put at risk from coastal change.<br><br>**MOD**<br><br>None identified. | Objective I.Coastal Change and Flood Risk<br><br>Objective A Biodiversity and Nature Conservation<br><br>Objective B Population<br><br>Objective F Water<br><br>Objective H Climate Change and Energy |



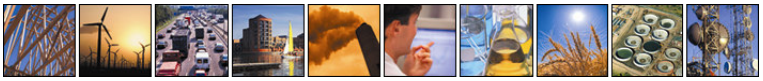
| SDP SEA Topic | Summary Objectives and Policy Messages (See Annex B and C for full list) | SEA objectives link (see Section 6.1) |
|---|---|---|
| **Material assets (Transport)** | **International** | |
| | To promote renewable energy usage in transport systems. | Objective J Transport |
| | To promote healthy and sustainable transport alternatives. | Objective A Biodiversity and Nature Conservation |
| | To improve the quality and effectiveness of transport in Europe. | Objective B Population |
| | **National** | Objective C Health and Wellbeing |
| | To reduce transport's emissions of CO2 and other greenhouse gases, with the desired outcome of minimising climate change. | Objective D Noise and Vibration |
| | To reduce the risk of death, injury or illness arising from transport, and promote travel modes that are beneficial to health. | |
| | To promote greater equality of transport opportunity for all citizens. | |
| | To improve journey time reliability on the strategic road network. | |
| | To improve experiences of travel and reduce barriers to travel by different modes of transport. | |
| | To support national economic competitiveness and growth, by delivering reliable and efficient transport networks. | |
| | To ensure radioactive material is safely transported. | |
| | **MOD** | |
| | To continually reduce emissions from air, road and rail business admin travel by MOD personnel. | |
| | To reduce the use of marine, land and aviation fuels as much as reasonably practicable, without impacting on operational capability, while at the same time assessing the viability of alternatives to these fuels. | |
| | To develop a Defence Travel Emissions Strategy with targets and actions for all modes of transport. | |
| | The development of a Defence Travel Emissions Strategy in 2009 will bring with it targets and actions for modes of business transport other than road transport. | |
| **Material assets (Waste Management)** | **International** | |
| | To ensure that waste reduction is at the forefront of waste management and where disposal is unavoidable ensure a high level of protection for the environment and human health. | Objective K Waste |
| | To adopt waste management principles such as the "polluter pays principle" and the "waste hierarchy". | Objective A Biodiversity and Nature |
| | To protect human health and the environment against harmful effects caused by the collection, transport, treatment, storage and tipping of waste. | Objective C Health and Wellbeing |
| | To help Europe become a recycling society that seeks to avoid waste and uses waste as a resource. | Objective E Geology and Soils |
| | To achieve and maintain a high level of nuclear safety through the enhancement of national measures and technical cooperation. | Objective F Water |
| | To establish and maintain effective defences against radiological hazards in nuclear installations in order to protect people and the environment, etc. | Objective G Air |
| | To prevent nuclear accidents and limit their consequences. | |
| | **National** | |



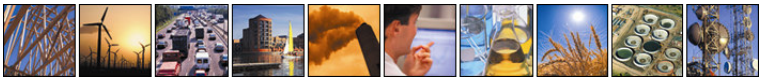
| SDP SEA Topic | Summary Objectives and Policy Messages (See Annex B and C for full list) | SEA objectives link (see Section 6.1) |
|---|---|---|
| | To decouple waste growth (in all sectors) from economic growth and put more emphasis on waste prevention and re-use.<br><br>To increase diversion from landfill of municipal and non-municipal waste and secure better integration of treatment for all waste.<br><br>To increase recycling of resources and recovery of energy from residual waste using a mix of technologies.<br><br>To ensure waste is disposed of as near as possible to the place of production.<br><br>To ensure the layout and design of new development should support sustainable waste management.<br><br>**MOD**<br><br>To recover and recycle more waste than is sent to landfill by 2012.<br><br>To become a zero waste to landfill organisation by 2020.<br><br>The production of all waste streams (both hazardous and non-hazardous waste) from all units and/or establishments must be reduced and minimised.<br><br>To manage waste in accordance with the Waste Hierarchy and waste management options must move to the preferred options of waste reduction and re-use. | |
| **Material assets (Land Use and Materials)** | **International**<br><br>To adopt a sustainable approach to land use though consideration of: economic development, social inclusion, environmental protection and prudent use of resources.<br><br>To promote establishment of a multi centre regional organisation structures and balanced urban system.<br><br>**National**<br><br>To improve housing affordability in the market sector and ensure appropriate social housing availability.<br><br>To promote and enhance existing centres, by focusing development in such centres and encouraging a wide range of services in a good environment, accessible to all.<br><br>To encourage well-designed and greener homes, linked to good schools, transport and healthcare.<br><br>To promote development of previously developed land.<br><br>To achieve a sustainably built and managed central government estate that minimises carbon emissions, waste and water consumption and increases energy efficiency.<br><br>To achieve sustainably built and managed properties and roads throughout the public sector.<br><br>To implement government supply-chains and public services that are increasingly low carbon, low waste and water efficient, which respect biodiversity and deliver wider sustainable development goals.<br><br>To adopt an integrated approach to sustainable development which includes: economic development; social inclusion; environmental protection; and prudent use of resources.<br><br>To engage in positive planning and proactive management of development, rather than simply regulation and control.<br><br>To have a planning system this is transparent, accessible and accountable.<br><br>To promote more sustainable patterns of development. | Objective L Land Use and Materials<br><br>Objective A Biodiversity and Nature<br><br>Objective B Population<br><br>Objective E Geology and Soils<br><br>Objective K Waste<br><br>Objective M Cultural Heritage |

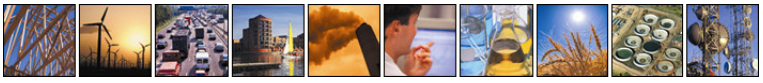


| SDP SEA Topic | Summary Objectives and Policy Messages (See Annex B and C for full list) | SEA objectives link (see Section 6.1) |
|---|---|---|
| | To raise the quality of life and the environment in rural areas.<br><br>**MOD**<br><br>To procure, use and dispose of its estate, equipment, goods and services in a way that meets Government sustainable development objectives and targets, whilst ensuring the continued effective delivery of Defence capability.<br><br>To become a national leader in sustainable procurement.<br><br>To embed Sustainable Procurement in all aspects of MOD acquisition and throughout the Defence supply chain.<br><br>To deliver sustainable defence buildings (through the application of Office of Government Commerce (OGC) minimum procurement standards, including the application of BREEAM standards or equivalent.<br><br>To improve effectiveness within the context of practicality, achievability and value for money, on an ongoing basis.<br><br>To provide economic, environmental and social justification for any decision to procure new facilities as opposed to the re-use of existing facilities.<br><br>To ensure that procurement strategies take full account of economic, environmental and social impacts. | |
| **Cultural heritage, including architectural and archaeological heritage** | **International**<br><br>To identify, protect and preserving potential sites of World Heritage.<br><br>To protect and sustain the historic environment for the benefit of current and future generations<br><br>To identify and protect important heritage features.<br><br>To collect and disseminate scientific information on cultural and archaeological heritage to aid conservation and public awareness.<br><br>**National**<br><br>To protect listed buildings, scheduled monuments and buildings within conservation areas.<br><br>To protect and promote stewardship of the historic environment.<br><br>To promote positive planning and management to bring about sensible solutions to the treatment of sites with archaeological remains and to reduce the areas of potential conflict between development and preservation.<br><br>To adopt a presumption in favour of the physical preservation of nationally important archaeological remains and their settings, whether scheduled or not.<br><br>To protect shipwreck features of historical, archaeological or artistic importance.<br><br>To safeguard internationally and nationally-designated historically or culturally significant sites.<br><br>**MOD**<br><br>To conserve and enhance the historic environment for the benefit of future generations and to reflect the ethos and heritage of the MOD.<br><br>To promote the sustainable use of the historic environment, in recognition of its importance as an integral part of cultural heritage and the role it plays in supporting defence capability.<br><br>Adopt the Department for Culture Media and Sport's Protocol for the Care of the Historic | Objective M Cultural Heritage<br><br>Objective B Population<br><br>Objective L Land Use and Materials<br><br>Objective N Landscape and Townscape |



| SDP SEA Topic | Summary Objectives and Policy Messages (See Annex B and C for full list) | SEA objectives link (see Section 6.1) |
|---|---|---|
| | Government Estate. Where responsibility for management of historic property is transferred to the private sector, for example through PPP/PFI arrangements, the Protocol standards will be incorporated into contractual arrangements. | |
| **Landscape and Townscape** | **International**<br><br>Ensure that development is 'appropriate' particularly in relation to protected landscapes.<br><br>To protect, manage and plan landscapes throughout Europe.<br><br>**National**<br><br>To provide public access to the countryside and promote sustainable farming and protection of wildlife.<br><br>To retain attractive landscapes, and enhance landscapes near to where people live.<br><br>To improve damaged and derelict land around towns.<br><br>To retain land in agricultural, forestry and related uses.<br><br>**MOD**<br><br>To promote the objectives of statutory designated areas (National Parks and AONBs) wherever possible.<br><br>Reasonable measures should be undertaken in respect of landscape designations to mitigate the impacts of any development proposals on landscape character.<br><br>Management of sites should seek to maintain the character of the landscape by safeguarding and, where practicable, enhancing or developing significant landscape features. | Objective N Landscape and Townscape<br><br>Objective A Biodiversity and Nature Conservation<br><br>Objective B Population<br><br>Objective C Health and Wellbeing<br><br>Objective L Land Use and Materials<br><br>Objective M Cultural Heritage |





# 5. Scoping Potentially Significant Effects of the SDP

This section sets out the potentially significant environmental effects associated with the SDP at a generic level to inform which issues should be considered in more detail at Stage B. The effects outlined below are indicative, and illustrate those issues that are likely to be determined as relevant during the assessment. Information is presented for development, operation and decommissioning phases and includes reference to all seven stages of the SDP. These generic effects may also occur at the indicative candidate sites; this will be tested at Stage B. In many cases, detailed site-specific information will not be determined until later tiers of environmental assessment (such as EIA) are undertaken.

Where appropriate, the opportunity to scope out specific effects which are not considered relevant, or for which no effects are anticipated, is identified. However, issues (or topics) may be scoped in at later stages in the assessment process as additional information emerges. In this way, the scoping stage is seen as an ongoing and iterative process and as the SDP is developed, alternatives are considered and opinions expressed during consultation are reviewed.

## 5.1 Biodiversity and Nature Conservation

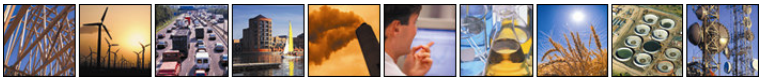
- The significance of any effects to biodiversity, flora or fauna will depend upon the site location relative to sensitive receptors.

### 5.1.1 Development Phase

- Internationally and nationally-protected sites are likely to be significantly affected if there are adverse effects to the conservation features (whether a habitat or species) that underpin the reasons for the designation. There is also potential for indirect, cumulative and synergistic effects on habitats and species from development.

- Disturbance to designated sites could occur from development of SDP facilities. Where the potential for any adverse effect on the conservation objectives of a European designated site could arise, individual proposals will be subject to a Habitat Regulations Assessment (HRA) and formal discussion with the relevant statutory conservation body. Note that the MOD has assessed the SDP as also subject to HRA at Plan level. *Scoped in for Further Assessment?* ✓

- Both land take and disturbance (e.g. noise or dust) are likely to be of greater magnitude for undeveloped or previously-developed 'brownfield' land which has been left undisturbed and reverted to a 'wild' state. Land take effects on localised biodiversity, flora and fauna are likely to be permanent; whilst construction disturbance effects are likely to be of short duration and could be mitigated. The degree to which both land take and disturbance effects are significant will depend on factors including: the scale of construction required, and the proximity to protected species or habitats. *Scoped in for Further Assessment?* ✓



- Additional dredging, *if required,* could have impacts on wildlife and biodiversity in the aquatic and intertidal environment. The magnitude of such impacts will depend on the location, the extent and duration of activities, and the quality of the existing environment. *Scoped in for Further Assessment?* ✓

- The construction phase may require large material movements with consequent impacts on biodiversity, flora and fauna adjoining local transport networks. Such effects are likely to be of short duration and may be mitigated. *Scoped in for Further Assessment?* ✓

- Construction of new or upgraded facilities may indirectly impact on habitats and species through the supply chain, for example through sourcing mineral, aggregate or timber resources. *Scoped in for Further Assessment?* ✓

- Significant effects could also occur from construction materials, or from existing contaminants on the site. *Scoped in for Further Assessment?* ✓

### 5.1.2 Operation Phase

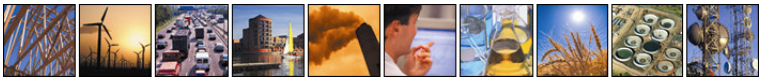
- Operational activities at the dismantling site(s) will be closely regulated and subject to stringent Health and Safety and Environmental Permitting requirements. Use of Best Available Techniques (BAT) principles will also need to be adopted. To a large extent, these measures will also safeguard local biodiversity by minimising harmful discharges. However, this does not provide a basis for scoping potentially significant effects out of further consideration. *Scoped in for Further Assessment?* ✓*(on a precautionary basis).*

- Operational activities resulting in elevated as noise or vibration levels are likely to be sustained throughout the submarine dismantling process. Such disturbance is likely to be associated with the operation of plant and power tools, and will be similar in nature to current refit and repair activities. Although environmental measures would necessarily be in place to manage and minimise disturbance, potentially significant effects may still occur. *Scoped in for Further Assessment?* ✓*(on a precautionary basis).*

- If any of the submarines are to be towed significant distances for initial dismantling or subsequent ship-breaking, there is a slight potential for spreading invasive species between waters. The likelihood of such an effect will depend on the invasive species (if any) at Rosyth and Devonport. *Scoped in for Further Assessment?* ✓*(on a precautionary basis).*

- Operational discharges of both radioactive and non-radioactive liquids, gases and solid wastes (including dusts) will largely be managed through Environmental Permitting regimes and the application of BAT, so there is little risk of significant effects on biodiversity from normal operations. Nevertheless, the potential for significant effects are included, due the potential for the receiving environment to be sensitive and/or protected. *Scoped in for Further Assessment?* ✓ *(on a precautionary basis).*

- Removal or cut-up of the Reactor Compartment carries a remote risk of unforeseen accidental discharge of radioactive and non-radioactive contaminants to water, air or land, which could subsequently affect biodiversity. Due to the sensitivity of this issue, it will be considered further. *Scoped in for Further Assessment?* ✓*(on a precautionary basis).*



- Dismantling and interim storage will both entail the use of transport. Activity will be relatively small in magnitude relative to local and national transport levels, but sustained throughout the operational phase. Potentially significant effects on biodiversity from transport (including development of transport infrastructure and the remote risk of accident) are scoped in for further assessment in the 'transport' section.

- Once the RC, RPV or packaged ILW has been placed into interim storage, it is assumed that there will be limited activity at the site until the GDF becomes available and the waste is processed and/or moved. Potential effects from operation of the interim storage site are associated with on-site transport and movement of storage containers. Interim storage will be closely regulated and subject to stringent health and safety standards. However, there is a remote risk of accidental emissions from unforeseen breaches of storage containers coupled with pollutant pathways into the air, land or water. *Scoped in for Further Assessment?* ✓ *(on a precautionary basis).*

- If the RCs or RPVs are stored, they will eventually have to be processed and packaged into GDF-compliant containers. The environmental effects of such as operation are expected to be similar to those for the initial dismantling site (described above). The impacts will therefore be considered in that assessment.

### 5.1.3 Decommissioning Phase

- Decommissioning of the dismantling and interim storage facilities (following the movement of stored radioactive wastes to a permanent disposal facility) will have similar impacts to those of the construction phase (such as dust, waste, noise and habitat disturbance). These are unlikely to have a significant effect on biodiversity as the necessary statutory controls will be in place to minimise impacts. *Scoped in for Further Assessment?* ✓ *(on a precautionary basis).*

## 5.2 Population

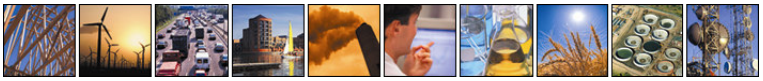
The significance of effects on local populations are likely to depend upon site location, the nature of the adjacent community, prevailing economic conditions, labour market conditions and the workforce skills required.

### 5.2.1 Development Phase

- The development phase may require significant amounts of labour, depending on the type of site being developed. Use of existing sites, where most or all the required infrastructure is already in place, may require little or no additional construction; however developing a new site would require a significant workforce. *Scoped in for Further Assessment?* ✓

- Development of the dismantling and interim storage facilities is unlikely to require significant development of specialist construction skills in the local or wider community. *Scoped in for Further Assessment?* ***X***

- Should new facilities be required, the construction phase could require large material movements, with consequent effects on populations adjoining local transport networks. These are likely to be



of short duration and could be mitigated. *Scoped in for Further Assessment?* ✓*(on a precautionary basis).*

- Any construction associated with initial dismantling and interim storage facilities is likely to require significant investment in products, services and people. It is expected that such investment would benefit local economies and service providers; however, this would depend upon the scale and duration of the proposals, as well as procurement practices, the site location and prevailing economic and labour market conditions. *Scoped in for Further Assessment?* ✓

- Effects to the wider economy could also be significant, depending on the scale of development and construction may take advantage of products and services from across the UK. *Scoped in for Further Assessment?* ✓

### 5.2.2 Operation Phase

- The operational phase could create and support local jobs, skills development and inward investment, in proportion to the scale of the operations themselves. This is expected to be greatest for the initial dismantling operation and subsequent ship-breaking, which would require a mix of skilled posts, including specialist nuclear expertise. *Scoped in for Further Assessment?* ✓

- The proximity of industrial operations to disadvantaged communities could exacerbate existing deprivation issues. *Scoped in for Further Assessment?* ✓

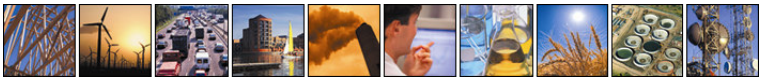
- SDP activities could create additional demands on local community infrastructure (depending on the number of additional employment opportunities created, the extent to which the additional employment opportunities can be met by local people and the circumstances of each employee). *Scoped in for Further Assessment?* ✓

### 5.2.3 Decommissioning Phase

- The decommissioning phase is likely to require skilled labour, in proportion to the scale and complexity of the infrastructure. *Scoped in for Further Assessment?* ✓

- In the long-term, there may be a reduction in investment, skills development and employment opportunities once the SDP is complete. Such effects are not likely to be significant, due to the transferable skills associated with those roles. *Scoped in for Further Assessment?* **X**

- Decommissioning of the dismantling and interim storage facilities may create additional disturbance for local populations, through additional through traffic, noise, dust etc. The scale of the impact will depend on the size and complexity of the facilities. Such disturbance is likely to be sustained throughout the decommissioning process. Measures would necessarily be in place to manage levels and durations of disturbance. *Scoped in for Further Assessment?* ✓*(on a precautionary basis).*



## 5.3 Health

The significance of any local construction effects to peoples' health will depend upon site location and nature relative to local populations.

### 5.3.1 Development Phase

- Development of the dismantling and the interim storage facilities is not expected to have any potentially significant health and safety risks beyond those encountered on a normal construction project, since all standard precautions will be taken to safeguard workers and the public. *Scoped in for Further Assessment?* ✓ *(on a precautionary basis).*

- The development phase may require large material movements on and off site, with consequent implications for health and safety, particularly adjoining local transport networks. Such effects are likely to be of short duration and can be minimised. *Scoped in for Further Assessment?* ✓ *(on a precautionary basis).*

- There is the potential for development to affect existing public access to recreational or amenity sites, with subsequent indirect impacts on health. The effects could be greater where new sites are developed, as access could be lost to a significant area of previously-accessible land. Existing sites are unlikely to have much existing public access that could be blocked. *Scoped in for Further Assessment?* ✓

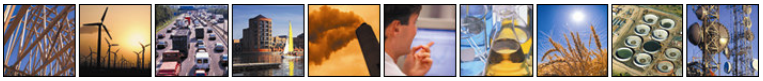
- There is a small risk of health effects from accidental discharges of construction-related materials to water, air or land, or from the creation of new pollution pathways for existing contaminants on the site (for example where contaminated land or sediment is disturbed). *Scoped in for Further Assessment?* ✓

### 5.3.2 Operation Phase

- Operational activities at the dismantling site will be closely regulated and subject to stringent health and safety standards. However, this does not provide a basis for *unilaterally* scoping potentially significant effects associated with 'normal' operations out of Further Assessment. Each issue should be considered on its merits.

#### Dismantling

- Dismantling operations on the reactor compartment would result in those workers involved being exposed to ionising radiation, although this is not expected to be as high as for day-to-day operations on in-service submarines due to the absence of any nuclear fuel, and radioactive decay in the laid-up submarines. There is potential for ILW to be placed in short-term 'buffer' storage at the initial dismantling site until it can be moved. The principle of As Low As Reasonably Practicable ('ALARP') must apply to all radiological waste management activities. *Scoped in for Further Assessment?* ✓



- Due to the stringent safety controls already in place, no additional direct radiation exposure from dismantling is expected under normal conditions for other site users, nor for the local or wider community. Further to this, operational discharges of liquids, gases and solid wastes to the environment would be closely managed through Environmental Permitting regimes and the application of Best Available Techniques (BAT) for dismantling. Such scheduled discharges are therefore unlikely to have any significant effects on people's health. However, the importance of perceived risks to health from radiological discharges means that the issue must be considered further. *Scoped in for Further Assessment? ✓(on a precautionary basis).*

- Anxiety about pollution (with or without actual additional exposure) is known to be a risk to health. As alluded to above, perception of additional involuntary risk needs to be explored. *Scoped in for Further Assessment? ✓*

- Dismantling activities always carry a remote risk of unforeseen accidental discharges of radioactive or non-radioactive contaminants, which could potentially affect the health of workers and the local population. *Scoped in for Further Assessment? ✓(on a precautionary basis).*

## Transport

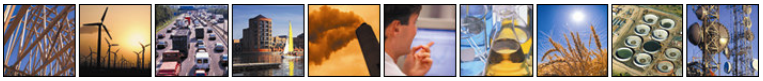
- Dismantling and interim storage will both require transport activities, the nature of which will be dictated by the form of the waste. Such activities are likely to be small in magnitude relative to local and national transport levels, but sustained throughout the operational phase. Transport carries health and safety implications, particularly for workers and the communities adjoining transport networks. Such effects are likely to be of short duration and can be minimised. *Scoped in for Further Assessment? ✓(on a precautionary basis).*

- The transport of radioactive materials to the interim storage site will be strictly regulated and subject to stringent packaging/health and safety requirements to prevent workers or the public from being injured or exposed to any accidental emissions from radioactive material. There remains a remote risk of an accident resulting in injury or release of radiation into the environment. Nevertheless, the importance of perceived risk (and associated anxiety effects) for radioactive materials necessitates this issue to be considered. *Scoped in for Further Assessment? ✓(on a precautionary basis).*

- The transport of other materials such as scrap metal and hazardous materials will also be regulated to prevent workers or the public from being injured through accident or exposed to any hazardous agents. Nevertheless, some risk remains of an accident resulting in injury or release of harmful materials into the environment. The importance of perceived risk (and associated anxiety effects) for hazardous materials necessitates this issue to be considered. *Scoped in for Further Assessment? ✓(on a precautionary basis).*

## Storage

- Once the RC, RPV or packaged ILW has been placed into interim storage, it is assumed that there should be limited activity at the interim storage site until the GDF becomes available and the waste is processed and/or moved. Potential effects from operating the interim storage site are associated with on-site transport and movement of storage containers. These activities are strictly controlled by health and safety requirements to prevent workers or the public from being injured or



exposed to radiation. Nevertheless, the importance of safety issues, particularly for radioactive materials, necessitates this issue to be assessed further. *Scoped in for Further Assessment?* ✓*(on a precautionary basis).*

- If the RCs or RPVs are stored, they will eventually have to be processed and packaged into GDF-compliant containers. The environmental effects of such an operation are expected to be similar to those for the initial dismantling site (described above). The impacts will therefore be considered in that assessment.

### 5.3.3 Decommissioning Phase

- Decommissioning may lead to a small increase in permitted and unforeseen discharges of dusts, effluent and run-off to the environment. The scale of the impact will depend on the size and complexity of the facilities. Operational discharges to the environment would be managed through Environmental Permitting regimes in force at the time; such discharges are therefore very unlikely to have any significant effects on health. *Scoped in for Further Assessment?* ✓*(on a precautionary basis).*

## 5.4 Human Health (Noise)

- The significance of noise impact will depend upon site location relative to local populations and other sensitive local receptors.

### 5.4.1 Development Phase

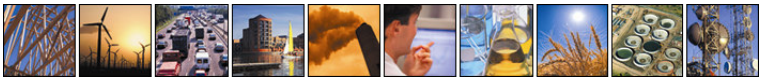
- Use of industrial plant and tools has the potential to generate occupational noise levels which may have health and safety implications for construction workers. However, statutory construction health and safety requirements will require noise minimisation and appropriate safety equipment to be used, including the use of ear defenders. *Scoped in for Further Assessment?* **X**

- Construction, if required, is expected to generate similar noise levels to any industrial construction project, with effects being relatively localised. Standard noise reduction measures would need to be employed to reduce levels of disturbance to other site users and the wider community. *Scoped in for Further Assessment?* ✓

- The development phase may require material movements with consequent impacts on noise levels adjoining local transport networks. Such potential significant effects are likely to be of short duration and reversible, but may contribute to health effects. *Scoped in for Further Assessment?* ✓

### 5.4.2 Operation Phase

- As for the construction phase, occupational noise levels may be significant. However, health and safety requirements will again require appropriate mitigation measures to be taken before operations can proceed. *Scoped in for Further Assessment?* **X**



- The construction phase may require material movements with consequent impacts on noise levels adjoining local transport networks. Such potential significant effects are likely to be of short duration but sustained throughout the development phase. *Scoped in for Further Assessment?* ✓

- Operational activities, including transportation, may result in elevated noise levels (e.g. through the use of grinding and cutting tools, pressure hammers etc) throughout the submarine dismantling process. These are likely to be localised in nature and, although measures will be taken to minimise noise disturbance, they may be locally significant in combination with other noise from local industry, traffic etc. *Scoped in for Further Assessment?* ✓

- Interim storage is expected to be a relatively passive activity, and unlikely to generate levels of noise that could significantly affect worker or public human heath. *Scoped in for Further Assessment?* **X**

- Any further processing of the RC or RPV prior to emplacement in the GDF will have similar impacts to those for the initial dismantling site (described above). The impacts will therefore be considered in that assessment. *Scoped in for Further Assessment?* ✓

### 5.4.3 Decommissioning Phase

- Decommissioning of the dismantling and interim storage facilities is expected to generate similar noise levels to those encountered on a normal demolition project, with the duration of disturbance proportional to the size and complexity of the facilities. Any effects are likely to be localised in nature, and measures will be taken to minimise noise disturbance. However, in combination with other noise from local industry, traffic etc. they may be locally significant. *Scoped in for Further Assessment?* ✓ *(on a precautionary basis).*

## 5.5 Soil and Geology

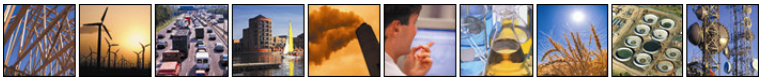
- The significance of construction on soils and geology will depend upon site locations relative to sensitive local receptors.

### 5.5.1 Development Phase

- Development of the initial dismantling and ILW storage sites (which are planned to be on-surface facilities) has the potential to affect geological SSSI features or Regionally-Important Geological Sites, depending on location. *Scoped in for Further Assessment?* ✓

- Development may result in soil compaction or permanent loss of the soil resource. The degree to which these effects are significant will depend on factors including the scale of construction, the amount of permanent land take and the importance of soil type affected. Effects will be greater where the soil has for example been activity used, is classified as Best and Most Versatile Land or is rich in carbon. *Scoped in for Further Assessment?* ✓

- There is a small risk of soil contamination from accidental discharges to land (including via air or water) during construction. There is also a risk of new pollution pathways being created for existing contaminants on the site. This risk is greater for an existing site or previously-developed



land where contaminated land or sediment could be disturbed. *Scoped in for Further Assessment?* ✓

- There is a risk that any construction, demolition, or change of use may affect land stability, geomorphology and/or soil erosion rates, on- or off-site. The nature of the effects will depend on the geology and physical nature of the area, the size of the development and the extent to which dredging, piling and other invasive construction techniques are used. *Scoped in for Further Assessment?* ✓

### 5.5.2 Operation Phase

- Operational discharges of both radioactive and non-radioactive liquids, gases and solid wastes will be strictly managed through Environmental Permitting regimes and the use of Best Available Techniques (BAT). Such discharges are therefore unlikely to cause significant effects on soils, sediments or geological features, but the importance of the issue for the SDP necessitates further consideration. *Scoped in for Further Assessment?* ✓*(on a precautionary basis).*

- Dismantling activities always carry a remote risk of unforeseen accidental discharges of radioactive or non-radioactive contaminants to land. *Scoped in for Further Assessment?* ✓*(on a precautionary basis).*

- Operational activities associated with interim storage will be limited and are unlikely to significantly affect soils or geology. *Scoped in for Further Assessment?* **X**

- The environmental effects of processing the RCs or RPVs in the future are expected to be similar to those for the initial dismantling site (described above). The impacts will therefore be considered in that assessment.

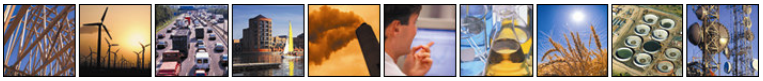
- Although the interim storage site will be closely regulated, there remains a remote risk of an unforeseen breach of the storage containers, which could potentially affect soils, sediments or geological features. *Scoped in for Further Assessment?* ✓*(on a precautionary basis).*

### 5.5.3 Decommissioning Phase

- Decommissioning may lead to an increase in discharges of dusts, effluent, solid wastes and run-off to soils or sediments. The scale of the impact will depend on the size and complexity of the facilities. Discharges will be managed through Environmental Permitting regimes in force at the time, minimising the risk of significant impact from 'normal' decommissioning operations; however the possible risk of unforeseen discharges necessitates this issue to be considered further. *Scoped in for Further Assessment?* ✓*(on a precautionary basis).*

## 5.6 Water

- The significance of any effects on water resources and the water environment will depend upon site location relative to sensitive local receptors.



### 5.6.1 Development Phase

- Construction activities will necessarily involve the use of water. The extent of water use will depend on the amount of development and the construction techniques and materials used. This may have an indirect effect on water resources, particularly in drier areas or those with existing drainage capacity problems. *Scoped in for Further Assessment?* ✓

- Development will also create waste water and additional surface run-off. Surface and ground water control and protection measures will have to be employed during construction; however, there remains the possibility that water quality in streams, rivers, inshore waters or aquifers could be affected. *Scoped in for Further Assessment?* ✓

- Additional dredging, if required, could have impacts on water quality and the aquatic and estuarine environment, depending on the location, extent and duration of activities along with quality of the existing aquatic environment. *Scoped in for Further Assessment?* ✓

- There is a small risk of significant effect on the water environment from accidental discharges (including via air or land) of construction materials or excavated soil/sediment. This is a particular risk where dredging is required. There is also a risk of new pollution pathways being created for existing contaminants (especially for previously-developed land where contaminated land or sediment could be disturbed). *Scoped in for Further Assessment?* ✓

### 5.6.2 Operation Phase

- SDP operations will both use and discharge fresh water. Depending on the nature and scale of operations, this may have an indirect effect on water resources, particularly in drier areas or those with existing drainage capacity problems. *Scoped in for Further Assessment?* ✓

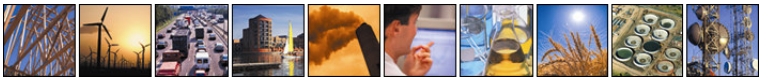
- Operational discharges of both radioactive and non-radioactive liquids, gases and solid wastes will be strictly managed through the Environmental Permitting regime and the use of 'ALARP' and BAT principles. Such discharges are therefore unlikely to cause significant effects on the water environment, but the importance of the issue for the SDP necessitates further consideration. *Scoped in for Further Assessment?* ✓*(on a precautionary basis).*

- Dismantling and storage activities always carry a remote risk of unforeseen accidental discharges of radioactive or hazardous contaminants, which could affect the water environment. This would be a particular issue where a site is close to an internationally or nationally-designated freshwater or marine environment. *Scoped in for Further Assessment?* ✓*(on a precautionary basis).*

- The effects of processing the RCs or RPVs in the future are expected to be similar to those for the initial dismantling site (described above). The impacts will therefore be considered in that assessment.

### 5.6.3 Decommissioning Phase

- Decommissioning of the dismantling and interim storage facilities may lead to an increase in both permitted and unforeseen discharges to ground or surface waters. The scale of the impact will depend on the size and complexity of the facilities. Operational discharges to the environment will



be managed through Environmental Permitting regimes/BAT principles in force at the time; such discharges are therefore unlikely to have any significant effects on water quality. *Scoped in for Further Assessment?* ✓ *(on a precautionary basis)*.

## 5.7 Coastal Change and Flood Risk

The initial dismantling site will need to be at a coastal location to receive the submarines; depending on how the submarines undergo initial dismantling, the interim ILW storage site may also be at the coast. Most commercial ship-breaking facilities are also coastal.

### 5.7.1 Development Phase

- Any land-take and subsequent development has the potential to cause an increase in surface-water runoff, with subsequent flood risks both on and off the development. The degree to which the development increases existing flood risks will depend on factors including the scale of construction, elevation, topography and geology of the site, the local water infrastructure and projected rain-fall. *Scoped in for Further Assessment?* ✓

- The development site(s) could be affected by flooding. This may result in flood damage to facilities, disruption of activity, health and safety risks or the potential mobilisation of hazardous materials on and off site. Flood risk assessments will inform site selection and appropriate flood defence measures will be used. *Scoped in for Further Assessment?* ✓

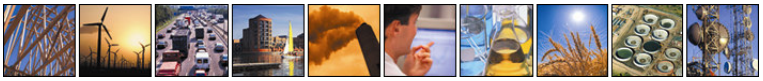
- Additional dredging, *if required,* could have impacts on the geomorphology of the water and estuarine environment, depending on the location, extent and duration of activities along with quality of the existing aquatic environment. *Scoped in for Further Assessment?* ✓

- Due to the coastal location of at least the initial dismantling site, there is potential for disruption to existing pollution control infrastructure, flood and/or coastal defences. *Scoped in for Further Assessment?* ✓

### 5.7.2 Operation Phase

- Operational activities at the dismantling and the interim storage sites have the potential to be affected by flooding, particularly in low-lying and/or coastal areas. This may result in flood damage to facilities, disruption of activity or the potential mobilisation of hazardous materials both on- and off-site (although all radioactive materials would necessarily be held safely in a sealed and water-tight environment). Appropriate flood defence measures will be incorporated into site designs. *Scoped in for Further Assessment?* ✓

- Dismantling activities, ship breaking and potentially interim storage also have the potential to be affected by progressive coastal changes linked to climate change. The impacts will be felt more in the southern and eastern parts of the country due to the compounding effects of post-glacial rebalancing. *Scoped in for Further Assessment?* ✓



### 5.7.3 Decommissioning Phase

- The eventual decommissioning of the dismantling and interim storage facilities may affect coastal processes and flood risks in the future. The scale of the impact will depend on the size and location of the facilities. *Scoped in for Further Assessment?* ✓

## 5.8 Air

- The significance of effects on air quality will depend upon site location relative to sensitive local receptors.

### 5.8.1 Development Phase

- The development of the dismantling and the interim storage facilities is expected to generate dust and particulate levels similar to those encountered on any construction project. The amount of dust will be proportional to the amount of excavation required, and the pollution potential will tend to be higher for previously-developed sites where contamination could be expected. Effects are likely to have a relatively small radius of effect, with longer-range impacts expected in the direction of the prevailing wind. Standard dust reduction measures would need to be employed, where required. *Scoped in for Further Assessment?* ✓

- The development phase may require large material movements with consequent impacts on air quality adjoining local transport networks. Such potential significant effects are likely to be of short duration. *Scoped in for Further Assessment?* ✓*(on a precautionary basis)*.

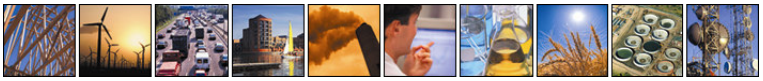
- Air quality effects may also occur due to (accidental) discharges to air (including via land or water) from materials used during construction. *Scoped in for Further Assessment?* ✓

### 5.8.2 Operation Phase

- The dismantling process may result in operational discharges of both radioactive and non-radioactive gasses and particulates to the air. These will be strictly managed through the Environmental Permitting regime and the use of 'ALARP' and BAT principles; as such, emissions are not envisaged to have significant effects on air quality. However, the importance of the issue for the SDP necessitates further consideration. *Scoped in for Further Assessment?* ✓*(on a precautionary basis).*

- Initial dismantling, ship-breaking and interim storage will both require transport. Vehicle movements are likely to be relatively small in magnitude compared to local and national transport levels, but sustained throughout the operational phase. *Scoped in for Further Assessment?* ✓*(on a precautionary basis)*.

- Dismantling activities always carry a remote risk of accidental discharges of radioactive or non-radioactive contaminants to air (including via land or water). *Scoped in for Further Assessment?* ✓*(on a precautionary basis)*.



- Once radioactive waste has been placed into interim storage, it is assumed that there will be limited activity at the site until the GDF becomes available and the waste is processed and/or moved. Operational emissions to air will be associated with generators and mobile plant. These operational activities are unlikely to significantly affect air quality. *Scoped in for Further Assessment?* **X**

- There is a remote risk of an unforeseen breach of the storage containers, potentially allowing pollutants into the air. *Scoped in for Further Assessment?* ✓*(on a precautionary basis)*.

- The environmental effects of processing the RCs or RPVs in the future are expected to be similar to those for the initial dismantling site (described above). The impacts will therefore be considered in that assessment.

### 5.8.3 Decommissioning Phase

- Decommissioning of the dismantling and interim storage facilities may lead to an increase in both permitted and unforeseen discharges to the atmosphere. The scale of the impact will depend on the size and complexity of the facilities. Discharges will be managed through Environmental Permitting regimes/ BAT principles in force at the time, minimising the risk of significant impact. *Scoped in for Further Assessment?* ✓*(on a precautionary basis).*

## 5.9 Climate Change and Energy Use

### 5.9.1 Development Phase

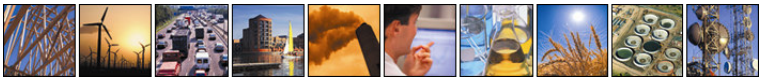
- Development activities, if required, will use energy and hence cause the direct and indirect emission of $CO_2$ and other greenhouse gasses. The magnitude of effects depends on the size of the development, the type of materials used and the distance travelled - construction traditionally uses material with high embodied carbon values, such as concrete and steel. There will be opportunities through facility design, construction and subsequent operation to ensure that energy efficiency is optimised. *Scoped in for Further Assessment?* ✓

- Climate change effects such as intensified weather events have the potential to affect the development of both the dismantling site and the interim storage site. Such effects may result in damage to facilities or disruption of construction activity. *Scoped in for Further Assessment?* ✓

### 5.9.2 Operation Phase

- The significance of climate change on operational activities will be predicated upon the location of the site.

- Both initial dismantling and subsequent ship-breaking (and associated transportation) have the potential to be energy intensive and result in direct/indirect greenhouse gas emissions. At this stage, total carbon footprint of the operational phase is uncertain, although there are opportunities to maximise operational energy efficiency. *Scoped in for Further Assessment?* ✓



- Interim storage is assumed to be a relatively passive activity and is not expected to be energy intensive. There is the opportunity to maximise operational energy efficiency in development and in transportation. *Scoped in for Further Assessment?* ✓

- If the RCs or RPVs are stored, they will eventually have to be processed and packaged into GDF-compliant containers. The environmental effects of such an operation are expected to be similar to those for initial dismantling (described above). The impacts will therefore be considered in that assessment.

### 5.9.3 Decommissioning Phase

- Decommissioning and any associated remediation activities are expected to have an energy demand (and greenhouse gas emissions profile) similar to other industrial demolition projects. *Scoped in for Further Assessment?* ✓

## 5.10 Material Assets (Transport)

- Note that the effects of transport on other environmental receptors such as air quality, climate change, health etc. are discussed more fully in those sections, rather than in this section.

### 5.10.1 Development Phase

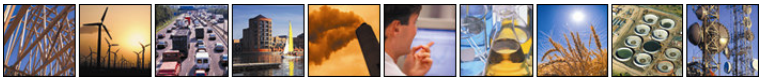
- Development of the dismantling and interim storage sites may require large numbers of vehicle movements to transport construction materials to site and remove construction waste. This will have consequent impacts on local and regional transport networks, the magnitude of which will depend on the sensitivity and capacity of those networks, and the length of the development phase. *Scoped in for Further Assessment?* ✓

- Depending on the extent and type of development, long transport distances may be involved in SDP supply chains. *Scoped in for Further Assessment?* ✓

- The location and transport requirements of the SDP may necessitate improvements to local transport networks, which may affect local communities and wildlife. This will be particularly significant if the site is remote to the existing transport systems. *Scoped in for Further Assessment?* ✓

### 5.10.2 Operation Phase

- The SDP will involve moving the laid-up submarines to the initial dismantling facility/ies. Once initially processed, the dismantled radiological components will need to be taken to the Interim ILW storage facility/ies, which may involve off-site transportation. The non-radiological portions of the submarines will also need to be moved off-site - the working assumption is that these sections will be dealt with at a commercial ship-breaking facility.



- Local and regional transport infrastructure (road, rail and seaways) are likely to be affected. The magnitude of the effects will vary from site to site (and distances between them); however, an increase in the overall number of vehicle movements (when compared to baseline conditions) may be expected, which could cause direct or indirect disturbance to communities and wildlife. The form of the waste will also affect the magnitude of disruption, with out-sized loads causing greater disturbance around the affected transport networks. These effects would be sustained throughout the operational phase as submarines are dismantled. *Scoped in for Further Assessment?* ✓

- The further the distance travelled, the greater the environmental impacts from fume, noise and vibration. The locations of the National LLW facility GDF will be fixed; however the locations for the SDP facilities are not yet decided upon. Their proximity to these national repositories and to disposal facilities for Very Low Level Waste (VLLW) and non-radiological materials need to be considered. *Scoped in for Further Assessment?* ✓

- Transportation always carries a risk of an unforeseen accident. Where radioactive materials are being carried, the public perception that there may be a risk of radioactive discharge requires that the issue of transport safety is considered further, even though the actual risk of any discharge is remote. *Scoped in for Further Assessment?* ✓*(on a precautionary basis)*.

### 5.10.3 Decommissioning Phase

- Decommissioning of the dismantling and interim storage facilities will require the use of transport infrastructure in a similar manner to the development phase, with the scale and duration of disturbance proportional to the size and complexity of the facilities. Effects are likely to be most obvious locally to these facilities. *Scoped in for Further Assessment?* ✓*(on a precautionary basis)*.

## 5.11 Material Assets (Waste Management)

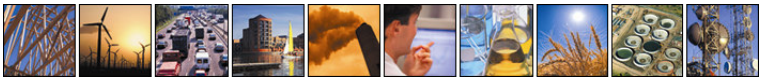
### 5.11.1 Development Phase

- Facility development will inevitably give rise to construction wastes, including excavated material. Waste volumes will depend on the scale of development, design, the materials used and the construction and site waste management practices adopted. *Scoped in for Further Assessment?* ✓

- The development phase will bring opportunities to minimise through-life waste volumes through careful design. *Scoped in for Further Assessment?* ✓

### 5.11.2 Operation Phase

- The SDP is essentially a waste management project. Dismantling activities will generate recoverable materials, hazardous and controlled waste streams, as well as a relatively small amount of radioactive material. The magnitude of effects will depend on the volume of wastes



generated, the capacity of existing waste management infrastructure and the viability of recycling and reuse options. The waste hierarchy should apply, and wastes will have to be managed through Environmental Permitting and use of BAT principles. *Scoped in for Further Assessment?* ✓

- Once the RC, RPV or packaged ILW has been placed into interim storage, it is assumed that there will be limited operational waste arising until the material is removed to the GDF and the facility is decommissioned. *Scoped in for Further Assessment?* ✓ *(on a precautionary basis).*

- The interim storage site will be secure and closely regulated. There is a remote risk of unforeseen breaches of waste storage containers; however the waste will be in a secure, solid form, and the risk of radiological waste being released into the environment is not considered significant. Nevertheless, the importance of perceived risk (and associated anxiety effects) for radioactive materials necessitates this issue to be included. *Scoped in for Further Assessment?* ✓*(on a precautionary basis).*

- The environmental effects of processing the RCs or RPVs in the future are expected to be similar to those for the initial dismantling site (described above). The impacts will therefore be considered in that assessment.

### 5.11.3 Decommissioning Phase

- Decommissioning and any associated remediation are expected to generate significant amounts of materials, some of which may become waste. The waste hierarchy will apply; non-hazardous materials may be reused, recycled or disposed of as waste; hazardous wastes (which may include a small quantity of LLW) will require a specialist disposal route. The volume of waste will depend on the size and complexity of the facilities. *Scoped in for Further Assessment?* ✓

## 5.12 Material Assets (Land Use and Materials)

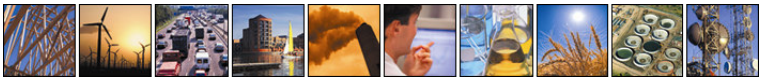
### 5.12.1 Development Phase

- Any new facilities for initial dismantling and/or interim ILW storage may involve land-take. The amount of land developed will depend on the scale of the development and the capacity of any existing infrastructure to accommodate SDP activities. The environmental effects of land-take will depend on the size of plot required, location, current and surrounding land uses and the potential effects of climate change. *Scoped in for Further Assessment?* ✓

- Any developments are likely to require the use of building materials and services. Depending on the nature and scale of the facilities, there is the potential for impacts through the supply chain on limited or sensitive natural resources such as minerals, metals and timber products, as well as from long-distance transport. *Scoped in for Further Assessment?* ✓

### 5.12.2 Operation Phase

- The majority of land use effects are associated with the initial land take during construction and any consequent land use changes. As the operational activities constitute the proposed land use,



the potential significant effects of operational activities on land use are not taken forward for Further Assessment. *Scoped in for Further Assessment?* **X**

- Effects on neighbouring land *might* occur as a result of operational actives at the dismantling or interim storage sites, although the precise nature and risk of such effects has yet to be defined. *Scoped in for Further Assessment?* ✓*(on a precautionary basis).*

### 5.12.3 Decommissioning Phase

- Decommissioning and any associated remediation will need to leave the sites in a suitable state for reuse or redevelopment. Hence, the sites will eventually become available for reuse and this could subsequently affect local land use patterns. *Scoped in for Further Assessment?* ✓

- The environmental effects of processing the RCs or RPVs in the future are expected to be similar to those for the initial dismantling site (described above). The impacts will therefore be considered in that assessment.

## 5.13 Cultural Heritage

- The significance of any local construction effects on cultural heritage will depend upon site location relative to sensitive local receptors.

### 5.13.1 Development Phase

- Development has the potential to affect unknown archaeological features. Any effects are likely to be restricted to the areas of ground disturbance, and the potential for disturbance is likely to depend on the size of the plot, the historic context of the site and the density of previous finds. *Scoped in for Further Assessment?* ✓

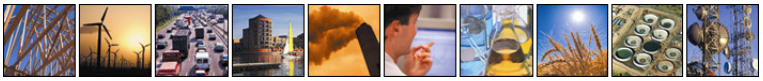
- Development also has the potential to affect the setting of existing heritage features. Any effects could potentially have a large radius of effect, depending on viewpoints and the local historic context. *Scoped in for Further Assessment?* ✓

- Use of construction plant and ground-disturbing activities such as piling and HGV movements have the potential to generate vibration and dust, which may adversely affect sensitive historic/designated structures in the immediate vicinity of the site and/or transport routes. *Scoped in for Further Assessment?* ✓*(on a precautionary basis).*

### 5.13.2 Operation Phase

- Operational activities are not expected to significantly disturb the ground, as any land take will have occurred during the development phase. The impacts on known or unknown archaeology from operational activities are therefore unlikely to be significant. *Scoped in for Further Assessment?* **X**

- Visual and other impacts (such as dust) from operational activities and transport could possibly affect the setting and value of cultural heritage features. These could potentially have a large



radius of effect, depending on viewpoints and local historic context. *Scoped in for Further Assessment?* ✓

- The SDP will dispose of the UK's past and current submarine fleet. There is an opportunity to preserve a submarine or artefacts from them as pieces of nationally-important cultural and military heritage. *Scoped in for Further Assessment?* ✓

- There is expected to be only very limited activity at the storage site. Potential disturbances are associated with on-site transport and placement of storage containers, which are unlikely to significantly affect cultural heritage. *Scoped in for Further Assessment?* **X**

### 5.13.3 Decommissioning Phase

- Decommissioning and any associated remediation are not expected to result in greater below ground disturbance than has already occurred during the development phase. *Scoped in for Further Assessment?* **X**

- Decommissioning may generate disturbance (such as noise, traffic and dust); as well as potentially changing the built environment if structures are removed or replaced. Such effects could affect the setting of existing cultural heritage features. Measures would necessarily be in place to manage levels and durations of disturbance. *Scoped in for Further Assessment?* ✓*(on a precautionary basis).*

## 5.14 Landscape and Townscape

- The significance of any local construction effects on the landscape will depend upon site location relative to sensitive local receptors and the degree of change in the prevailing landscape and townscape character.

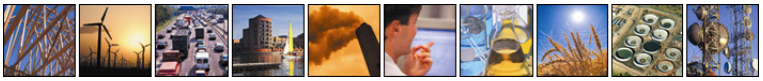
### 5.14.1 Development Phase

- Development activity has the potential to affect landscape and townscape character. Effects could have a large radius of effect, depending on viewpoints and local topography. *Scoped in for Further Assessment?* ✓

- Development activities are more likely to result in significant visual effects where developments are within (or have viewpoints from) conservation areas, protected/designated landscapes or areas of high landscape value. *Scoped in for Further Assessment?* ✓

- Landscape effects are likely to be of greater magnitude where undeveloped and undisturbed, previously developed land which has reverted to a 'wild' state are affected, as such sites are perceived to contribute more positively to prevailing landscape character. *Scoped in for Further Assessment?* ✓*(on a precautionary basis).*

- Development of any new facilities may lead to a reduction or loss of public access into the area(s) developed, which could include coastal sites. *Scoped in for Further Assessment?* ✓

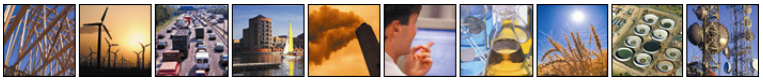


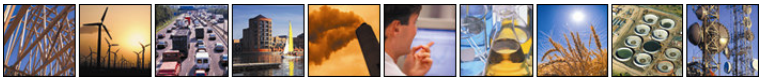
### 5.14.2 Operation Phase

- The provision of facilities and subsequent operational activities at the dismantling site may entail changes in landscape or townscape character. These potential effects of are therefore scoped in for Further Assessment. *Scoped in for Further Assessment?* ✓

### 5.14.3 Decommissioning Phase

- Decommissioning is expected to generate disturbance (such as noise, traffic and dust); as well as potentially changing the built environment if long-standing structures are removed or replaced. Such effects have the potential to affect the setting of landscape or townscape features, as well as the amenity value of landscapes themselves. Measures will be in place to manage levels and durations of disturbance. *Scoped in for Further Assessment?* ✓





# 6. Assessment and Reporting

This section presents the proposed framework for undertaking the SEA including the revised draft objectives and guide questions (**Section 6.1**). The revised draft objectives reflect the issues arising from the analysis of the environmental baseline, its evolution and the review of plans, programmes and strategies (see **Sections 3 and 4, Annex A, Annex B and Annex C**). The method of considering cumulative effects in the Environmental Report is described in **Section 6.3**. The proposed form and content of the Environmental Report is outlined in **Section 6.4**.

## 6.1 Proposed SEA Categories, Objectives and Guide Questions

Establishing appropriate objectives and guide questions is central to the assessment process. The objectives and guide questions provide a method to enable the consistent and systematic assessment of the effects of the SDP.

**What are SEA Objectives?**

'Objectives specify a desired direction for change and how they should *focus on outcomes*, not how the outcomes will be achieved (e.g. not specifying targets). They should focus on the ends rather than the means; on the state of the environment rather than the pressures on it. For instance, they should focus on "improving biodiversity" or "improving access", rather than say establishing wildlife areas or protecting rail corridors (Therivel, R. (2005) *SEA in Action*).

The revised draft SEA objectives described in this section have been informed by examination of the baseline evidence, incorporating the identification of key issues, and the review of plans and programmes and the associated environmental protection objectives summarised in the previous section. They have also been revised to reflect comments received by the statutory consultees on the generic Scoping Report. The development of the objectives also reflects guidance contained in *The Environmental and Sustainability Appraisal Tool Handbook for the MOD Estate (Volume Two: SEA)* (MOD 2009). Broadly, the objectives present the preferred environmental outcome which usually involves minimising detrimental effects and enhancing positive effects.

Revised guide questions are proposed for each objective and have been developed to provide a detailed framework against which the SDP proposals can be assessed. Where appropriate the guide questions anticipate the more specific effects outlined in **Section 5**. A general assumption that underpins the proposed objectives is that all existing legal requirements will be met, and as such, statutory compliance has not been reflected individually in the objectives or guide questions.

The objectives and assessment questions listed in **Table 6.1** will be reviewed following the second consultation period.

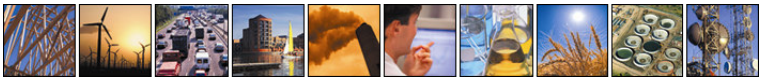
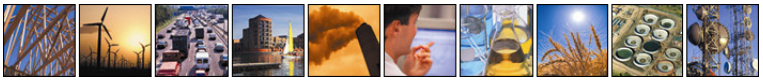
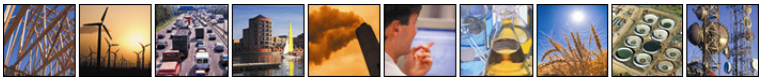


**Table 6.1 Proposed SEA Themes, Objectives and Guide Questions**

| Assessment Category and Overall Objective | Proposed Assessment Questions<br>*Will the SDP Proposals…* |
|---|---|
| **A. Biodiversity and Nature Conservation**<br>Protect and enhance habitats, species and ecosystems. | Affect animals or plants, including protected species?<br>Affect designated nature conservation sites?<br>Affect the structure and function of natural systems (ecosystems)?<br>Affect public access to areas of wildlife interest?<br>Have an impact on fisheries? |
| **B. Population**<br>Promote a strong, diverse and stable economy with opportunities for all; minimise disturbance to local communities and maximise positive social impacts. | Affect the social infrastructure and amenities available to local communities?<br>Affect local population demographics and/ or levels of deprivation in surrounding areas?<br>Affect opportunities for investment, education and skills development?<br>Affect the number or types of jobs available in local economies?<br>Affect how diverse and robust local economies are?<br>Affect the sense of positive self-image and the attractiveness of surrounding areas as places to live, work and invest in? |
| **C. Health and Wellbeing**<br>Protect and enhance health, safety and wellbeing of workers and communities; minimise any health risks associated with processing submarines. | Affect the health or safety of SDP workers, or other people working at the proposed sites?<br>Affect the health, safety and well-being of local communities?<br>Affect local healthcare infrastructure and provision? |
| **D. Noise and Vibration**<br>Minimise disturbance and stress to people, wildlife and historic buildings caused by noise and vibration. | Significantly increase levels of noise and vibration?<br>Affect the amount of noise and vibration felt by local communities? |
| **E. Geology and Soils**<br>Minimise threats to the extent and quality of soils and geological resources. | Have an effect on soil quality, variety, extent and/or compaction levels?<br>Have an effect on soil function and processes?<br>Increase the risk of significant soil contamination?<br>Have an effect on any known and existing contamination?<br>Affect geological conservation sites and important geological features?<br>Affect land stability? |
| **F. Water**<br>Maximise water efficiency, protect and enhance water quality. | Affect demand for water resources?<br>Affect the amount of waste water and surface runoff produced?<br>Cause any changes in radioactive or other hazardous discharges to water?<br>Affect the quality of groundwater, surface waters or sea water?<br>Affect the distribution and quality of freshwater or marine sediments? |



| Assessment Category and Overall Objective | Proposed Assessment Questions<br>*Will the SDP Proposals…* |
|---|---|
| **G. Air**<br>Minimise emissions of pollutant gases and particulates and enhance air quality | Affect air quality?<br>Cause a change in radioactive emissions to air?<br>Affect emissions of ozone-depleting substances?<br>Create a nuisance for people or wildlife (for example from dust or odours)? |
| **H. Climate Change and Energy Use**<br>Reduce energy consumption, minimise detrimental effects on the climate from greenhouse gases and maximise resilience to climate change. | Affect the amount of carbon dioxide and other greenhouse gases emitted?<br>Be significantly affected by climate change (for example rising temperatures and more extreme weather events)?<br>Affect how climate change might impact on the wider environment?<br>Promote or impede the use of energy efficiency measures, low carbon and/ or renewable energy sources?<br>Have wider implications for combating the effects of climate change? |
| **I. Coastal Change and Flood Risk**<br>Minimise the risks from coastal change and flooding to people, property and communities. | Affect existing flood risks?<br>Be at risk of flooding from any source?<br>Affect coastal processes and/or erosion rates?<br>Be affected by coastal processes and/or erosion? |
| **J. Material Assets (Transport)**<br>Minimise the detrimental impacts of travel and transport on communities and the environment, whilst maximising positive effects. | Affect the number and frequency of heavy, oversized, radioactive and/ or hazardous loads being transported off-site, particularly through sensitive areas (e.g. population centres, historic areas and vulnerable ecosystems?)<br>Increase or decrease traffic congestion around SDP sites?<br>Increase or decrease the risk of traffic accidents around SDP sites? |
| **K. Material Assets (Waste Management)**<br>Minimise waste arisings, promote reuse, recovery and recycling and minimise the impact of wastes on the environment and communities. | Increase the amount of radioactive waste to be disposed of?<br>Affect the amount of hazardous waste to be disposed of?<br>Affect the amount of non-hazardous wastes produced?<br>Affect the capacity of existing waste management systems, both nationally and locally?<br>Maximise re-use and recycling of recovered components and materials?<br>Help achieve government and national targets for minimising, recovering and recycling waste?<br>Affect the environmental risks associated with managing radioactive and hazardous wastes? |
| **L. Land Use and Materials**<br>Contribute to the sustainable use of land and natural and material assets. | Change patterns of land use on or around SDP sites?<br>Affect any existing or proposed redevelopment/regeneration programmes?<br>Lead to the loss of undeveloped land or green spaces?<br>Increase the burden on limited natural resources such as aggregates or wood?<br>Promote the use of sustainable design and construction practices and help the government achieve its targets for the quality of built environments?<br>Make best use of existing infrastructure and resources? |



| Assessment Category and Overall Objective | Proposed Assessment Questions *Will the SDP Proposals…* |
|---|---|
| **M. Cultural Heritage**<br>Protect and where appropriate enhance the historic environment including cultural heritage resources, historic buildings and archaeological features. | Affect designated or locally-important archaeological features?<br>Affect the fabric and setting of historic buildings, places or spaces that contribute to local distinctiveness, character and appearances? |
| **N. Landscape and Townscape**<br>Protect and enhance landscape and townscape quality and visual amenity. | Have significant visual impacts (including those at night)?<br>Affect protected/designated landscapes or townscapes, such as National Parks or Conservation Areas?<br>Affect the intrinsic character of local landscapes or townscapes?<br>Affect public access to open spaces or the countryside? |

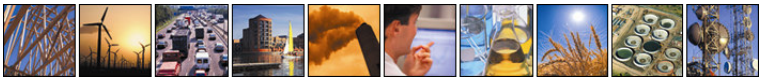
## 6.2 Completing the Assessment

The assessment of the SDP proposals will be undertaken by testing the options against the SEA objectives and detailed assessment questions identified in this Scoping Report Update. Commentary on impacts will include:

- the nature and scale of the potential environmental effects (what is expected to happen);
- when the effect could occur (timing);
- what mitigation measures might be appropriate for potentially significant negative effects;
- what options there are to enhance positive effects;
- assumptions and uncertainties that underpin the appraisal; and
- what additional information will be required to address uncertainties and to undertake more detailed site-specific assessment.

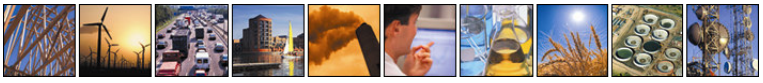
Effects will be characterised as short, medium or long term. It is proposed that, for SDP, short term effects = up to five years after each activity begins; medium term effects = five years to the end of the activity; long term effects = after the activity has ceased (with respect to radioactive materials this could be very lengthy). *Consultees' views on this proposal are welcomed.*

**Tables 6.2 and 6.3** set out the proposed assessment framework developed to meet the requirements of the SEA Directive. It contains the SDP SEA themes, objectives and guide questions. **Table 6.2** will be used to record the assessment of the generic effects associated with each SDP stage and with developing the three generic land use types (undeveloped 'greenfield,' previously-developed 'brown-field' and 'existing' Licensed/ Authorised sites). **Table 6.3** will be used to record the assessment of the effects associated with developing individual licensed or authorized sites.



## Table 6.2 Proposed Assessment Framework for Generic Land Use Type Options

| Options / Objectives | Option 1: 'Greenfield' site | Option 2: 'Brownfield' site | Option 3: 'Existing' Licensed/ Authorised Site |
|---|---|---|---|
| **A. Biodiversity and Nature Conservation**<br>Protect and enhance habitats, species and ecosystem functionality. | **Context:** The UK Government is committed to promoting sustainable development by conserving and enhancing biodiversity and the integrity of the habitats on which wildlife depends. This is set out in a number of documents such as the *Habitat Regulations* (as amended 1998), *UK Sustainable Development Strategy, PPS9 Biodiversity and Geological Conservation* and the Biodiversity Strategy for England *Working with the grain of nature* (2002). A variety of legislation exists to enforce this in a number of circumstances (e.g. Countryside and Rights of Way Act (1981, 2000) and the Environmental Protection Act (1990)). There are also a number of European Directives which place requirements on the UK and other Member countries to make the provision for the protection of specified habitats and species.<br><br>The MOD is the UK's largest public owner of sites designated for nature conservation, including 171 SSSI and their equivalent in Northern Ireland, Areas of Special Scientific Interest (ASSIs). Over 110 also had international and European nature conservation designations. In March 2008 the following percentages of MOD managed SSSIs were in target condition: 85% in England (against a Government target of 95% by 2010), 68% in Scotland (target 95% by 2010), 78% in Wales (target 85% by 2013) and 57% in Northern Ireland (target 95% by 2013). The Defence Lands Handbook (JSP 362, 1980), following amendment, reflects the need for appropriate assessment regarding EU protected sites. A Memorandum of Understanding exists between the MOD and Defra which enables mutual agreement to be agreed on planned activities. Similarly, the MOD has a Joint Declaration of Intent with statutory bodies including Natural England, Scottish Natural Heritage and the Countryside Council for Wales. This requires the MOD to consult the statutory bodies before changing patterns of land use, activities or changes in intensification of use. | | |
| | Score: Negative - <br><br>Key Effects:<br><br>Uncertainty:<br><br>Mitigation: | Score: Positive + <br><br>Key Effects:<br><br>Uncertainty:<br><br>Mitigation: | Score: Major positive ++ <br><br>Key Effects:<br><br>Uncertainty:<br><br>Mitigation: |



### Table 6.3 Proposed Assessment Matrix for Initial Dismantling Sites

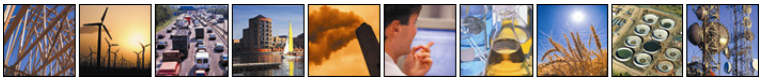
| Assessment Category and Objective | Likely Effects (including direct , indirect, cumulative and synergistic effects, and possible mitigation measures) | Timescale | | |
|---|---|---|---|---|
| | | Short-Term | Medium-Term | Long-Term |
| **A. Biodiversity and Nature Conservation:** Protect and enhance habitats, species and ecosystem functionality. | A description of the biodiversity and nature conservation effects of each option will be provided here, with reasoning and justification included… | - | 0 | 0 |
| **B. Population:** Promote a strong, diverse and stable economy with opportunities for all, minimise disturbance to local communities and maximise positive social impacts. | A description of the population effects of each option will be provided here… | ++ | + | 0 |
| **C. Health, Safety and Wellbeing**<br><br>Protect and enhance health, safety and wellbeing of communities and minimise potential risk associated with processing radioactive and non-radioactive materials. | A description of the health and wellbeing effects of each option will be provided here… | 0 | 0 | + |
| **….etc** | | | | |

| ++ Strongly Significant positive effect | + Significant positive effect | 0 No significant effects | - Significant negative effect | - - Strongly significant negative effect |
|---|---|---|---|---|

*Note: This draft SEA matrix is for illustrative purposes only. The full matrix will be finalised after comments have been received on the SEA categories, objectives and appraisal criteria.*

**Box 6.1** provides examples of the factors that are likely to be considered when determining the relative significance of a potential effect (and will be in addition to the information that is provided in Annex II of the SEA Directive). The SEA Directive includes the following as material factors to be considered:

- the probability, duration, frequency and reversibility of the effects;
- the cumulative nature of the effects;
- the trans-boundary nature of the effects;
- the risks to human health or the environment (e.g. due to accidents);
- the magnitude and spatial extent of the effects (geographical area and size of the population likely to be affected);
- the value and vulnerability of the area likely to be affected; and
- the effects on areas or landscapes which have a recognised national, European or international protection status.



**Box 6.1 Examples of Factors that Could Influence the Determination of Significance**

| Significant Effect | Minor Effect |
|---|---|
| Extensive | Localised |
| Will affect many people | Will affect few people |
| Large change in environmental conditions | Small change in environmental conditions |
| Effect will be unusual or particularly complex | Effect will be ordinary or simple |
| Will affect valuable or scarce features or resources | Will not affect valuable or scarce features or resources |
| High risk that environmental standards will be breached | Low risk that environmental standards will be breached |
| High likelihood that protected sites/areas/features will be affected | Low likelihood that protected sites/areas/features will be affected |
| High probability of effect occurring | Low probability of effect occurring |
| Irreversible | Reversible |
| Mitigation difficult | Mitigation straightforward |

Identifying effective mitigation measures will also be a fundamental part of the SEA. Box 6.2 provides information on types and examples of mitigation measures that might be proposed. However, any mitigation measures that are identified will be suggestions only. No attempt will be made to estimate financial costs for mitigation.

**Box 6.2 Suggested Mitigation measures**

Mitigation measures may include:

a. Enhancement - where there are no negative impacts, but measures are adopted to achieve a positive move towards the sustainability objectives.

b. Avoidance or reduction - where negative impacts are avoided or minimised.

c. Mitigation - where negative impacts occur but measures can be put in place to ameliorate them.

d. Compensation - where negative impacts occur that cannot be mitigated (e.g. an area of habitat that is unavoidably damaged may be compensated for by recreating similar habitat elsewhere). Compensation is a last resort.

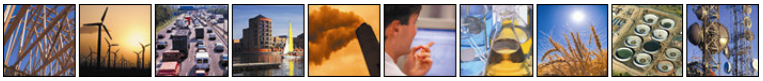
Examples of how mitigation measures could be incorporated into the SDP proposals could include:

e. Applying technical measures during the implementation stage of an option (e.g. application of design principles or considerate constructors' scheme);

f. Undertaking further research to provide more information on major issues and resolve uncertainties;

g. Undertaking further assessments to assess specific issues in depth (e.g. Archaeological Evaluation, Appropriate Assessment or Built Environment Assessments such as BREEAM, CEEQUAL or DREAM);

h. Applying ongoing management tools (e.g. Environmental Management System or Construction



Environmental Management Plan); and

i. Working with partners such as the Environment Agency, Local Authority or Regional Development Agency.

## 6.3 Considering Cumulative Effects

The SEA Directive, and its implementing regulations in the UK, requires that secondary, cumulative and synergistic effects are considered as part of the assessment.

**Table 6.4 Definitions of Secondary, Cumulative and Synergistic Effects**

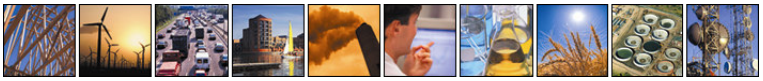
| Type of Effect | Definition* |
|---|---|
| Secondary (or indirect) | Effects that do not occur as a direct result of the SDP, but occur at distance from the direct impacts or as a result of a complex pathway. Examples of a secondary effect of the SDP would include the materials (and embedded carbon) used in the development of the dismantling and interim storage capability. |
| Cumulative | Effects that occur where several individual activities which each may have an insignificant effect, combine to have a significant effect. Examples of a cumulative effect of the SDP could include the potential effects on a European designated site, where a habitat or species is vulnerable and the cumulative effects of disturbance and pollutant emissions arising from development and operation causes a significant impact. |
| Synergistic | Effects that interact to produce a total effect that is greater than the sum of the individual effects. This may also relate to the potential for additive synergy between radioactive materials and non-radioactive materials, such as other chemical compounds, asbestos etc). |

*Adapted from SEA guidance, ODPM (2005)

For the assessment of cumulative effects to be effective, guidance indicates that these effects should be considered throughout the stages of assessment in preference to being seen as a separate assessment. In the course of completing this Scoping Report Update, this was achieved by:

- collecting baseline information and completing a review of plans and programmes which took a broad view of potential impacts (please refer to **Sections 3, 4 and 5 and Annexes A, B and C**); and
- ensuring appropriate reference is made to guidance such as that produced by Institute of Ecology and Environmental Management which includes consideration of potential direct, indirect and cumulative effects arising from activities on European designated sites (SACs and SPAs) and sites of national nature conservation importance (SSSIs and NNRs).

A matrix similar to that shown in **Table 6.5** could be used to summarise the generic effects of each of the stages considered for the SDP proposals. This assessment will include consideration of the secondary or indirect effects (such as the potential effect any discharge to water would have on water quality which



then may affect biota). The cumulative effects of each of the stages can then be summarised and their relative positive and negative effects considered.

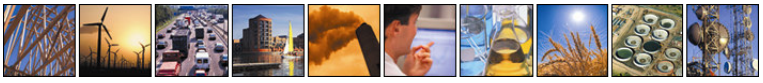
**Table 6.5 Example of a Cumulative Assessment Matrix (illustrative purposes only)**

| Stage | Stage I Location and development of dismantling and processing capability | | | | Stage II Location and development of interim storage capability | | | | Stage III etc… | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sustainability Objectives | Biodiversity & Nature Conservation | ? | Energy & Climate Change | 0 | Biodiversity & Nature Conservation | + | Energy & Climate Change | + | Biodiversity & Nature Conservation | ++ | Energy & Climate Change | ++ |
| | Communities & Social Values | 0 | Transport | 0 | Communities & Social Values | +? | Transport | + | Communities & Social Values | +? | Transport | + |
| | Health, Safety & Well-Being | + | Waste | + | Health, Safety & Well-Being | 0 | Waste | ? | Health, Safety & Well-Being | 0 | Waste | ? |
| | Noise & Vibration | + | Land Use & Built Environment | + | Noise & Vibration | ? | Land Use & Built Environment | + | Noise & Vibration | ? | Land Use & Built Environment | ? |
| | Geology & Solis | 0 | Economy & Employment | + | Geology & Solis | ++ | Economy & Employment | ++ | Geology & Solis | ++ | Economy & Employment | + |
| | Water & Drainage | + | Historic Environment | 0 | Water & Drainage | ++ | Historic Environment | - | Water & Drainage | ++ | Historic Environment | -- |
| | Air Quality | 0 | Landscape & Townscape | 0 | Air Quality | ++ | Landscape & Townscape | ++ | Air Quality | ++ | Landscape & Townscape | + |
| | • Positive impacts because….<br>• Negative impacts because…<br>• Impacts dependent on….. | | | | • Positive impacts because….<br>• Negative impacts because…<br>Impacts dependent on….. | | | | • Positive impacts because….<br>• Negative impacts because…<br>Impacts dependent on….. | | | |

The consideration of the generic cumulative effects will be supplemented with consideration of the potential effects of the proposed siting options. It is anticipated that a number of preferred options from the myriad of potential options will be presented for public consultation, which will be assessed in detail. When considering these siting options, reference will also be made to any other relevant significant plans or programmes to identify the potential 'in combination' effects.

## 6.4 Environmental Report Content

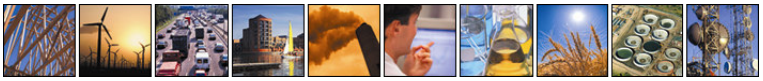
The assessment of potential effects will be presented in the SEA Environmental Report, which will be published alongside the other public consultation documents for the SDP. The Environmental Report has the following purpose:



- to ensure that the significant potential environmental impacts associated with the different SDP options are identified, characterised and assessed;
- to propose measures to mitigate the adverse effects identified and, where appropriate, to enhance potential positive effects;
- to provide a framework for monitoring the potential impacts arising from the adoption of the selected SDP options; and
- to provide sufficient information to those affected so that the SDP achieves its stated aims with respect to public consultation and stakeholder engagement.

In accordance with the requirements of Schedule 2 of the SEA Regulations (which reproduce the SEA Directive Annex I issues), the SEA Environmental Report will consist of:

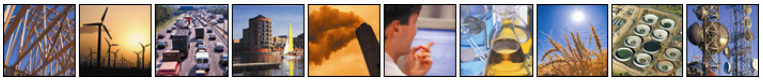
- A Non-technical Summary.
- A chapter setting out the scope and purpose of the assessment.
- A chapter setting out the main objectives of the SDP and its relationship to other relevant plans and programmes. This will include consideration of all stages of the SDP.
- A chapter setting out the proposed approach to assessment including the relevant environmental protection objectives.
- A chapter outlining the likely significant environmental effects of the SDP options (e.g. the 'reasonable alternatives' within the project), including cumulative effects, mitigating measures, uncertainties and risks. This will also include issues associated with transport of waste and the eventual decommissioning of the dismantling and storage facilities. The reasons for selecting the proposed options and any difficulties encountered in completing the assessment will be explained.
- A chapter presenting views on implementation and monitoring.
- An Annex, structured by each SDP SEA topic, setting out all the information contained in the baseline, evolution of the baseline, key issues and plans and programmes along with the detailed generic and site specific assessments. It is anticipated that each topic section will contain:
    - introduction - provides an overview and definition of the topic;
    - summary of Plans and Programmes - provides an overview of the policy context in which the SDP sits;
    - overview of the Baseline - provides an overview of the baseline and the key topic specific baseline factors which will need to be considered as part of the appraisal;
    - existing Problems - highlights some of the existing pressures on the topic area, particularly in relation to the SDP;
    - likely Evolution of the Baseline - provides an overview of how the baseline is likely to change in the absence of the SDP, an understanding of this is key to understanding the effects of the SDP on the topic area;

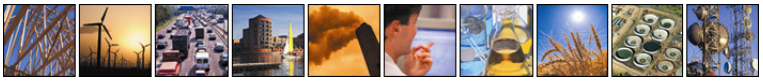


- assessment objective and guide questions;
- assessment - including information on the potential nature and scale of effects, proposed mitigation measures (where appropriate) and measures for enhancement, assumptions and uncertainties and additional information that may be required;
- monitoring requirements;
- summary - each section will be summarised in a tabular format with a clear indication of what mitigation and enhancements would help to minimise the adverse environmental effects of the SDP proposals; and
- an Annex outlining statutory consultee responses to scoping.

- An Annex outlining how the Quality Assurance checklist identified in the ODPM SEA Guidance has been met.

Please also refer to **Table 1.1 (Section 1)** which sets how the information gathered in this Scoping Report Update will be used to support the completion of the Environmental Report, in line with the SEA requirements.





# 7. Summary and Next Steps

This Scoping Report Update presents the findings of the second stage of scoping (Stage A2) of the assessment process for undertaking the SEA of the SDP. The structure is derived from good practice guidance provided by ODPM (now DCLG) and the MOD. It has been prepared to meet the requirements of the SEA Directive and associated Regulations. It fulfils the requirements of Stage A, as outlined within the Quality Assurance Checklist presented in **Annex E**.

The environmental issues considered to be relevant to the SDP are summarised in **Table 7.1** below. They are not exhaustive and are not presented in any order of priority.

**Table 7.1 Key Environmental Issues for the SDP**

**Biodiversity and Nature Conservation:** Consideration will be given to the potential effects of the SDP proposals on the natural environment, including fisheries and areas protected for their wildlife and conservation importance.

**Population:** Consideration will be given to the potential effects of SDP proposals on local communities, including socio-economic impacts and the extent to which proposals present opportunities for community benefit, e.g. through skills development. *(Note that assessment of economic effects is not an environmental issue and is not required by SEA, but has been included to reflect the importance of these issues to the wider public).*

**Health and Wellbeing:** The potential effects of SDP proposals on people's health and on health service provision will be assessed. This will include issues related to radiological work.

**Health (Noise and Vibration):** The potential noise-related impacts of the SDP options will be assessed on people and communities.

**Soil and Geology:** Consideration will be given to potential effects on soil extent, variety and quality (including contamination and on the SDP's potential to disturb historic contamination) The potential effects on protected/ important geological features will also be assessed.

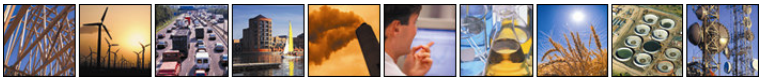
**Water:** Consideration will be given to potential effects on surface waters, groundwater systems and the marine environment, including the effects of Licensed and unplanned discharges to water.

**Air:** Consideration will be given to potential effects on air quality, including construction, transport and the effects of Licensed and unplanned radioactive discharges to the atmosphere.

**Climate Change and Energy Use:** Consideration will be given to the likely impacts of climate change, such as storminess, water availability and temperature. The SEA will also assess the potential effects of the SDP itself on energy use and greenhouse gas emissions.

**Coastal Change and Flood Risk**: Consideration will be given to existing and future flood risks, as well as the effects on coastlines of projected sea level rise and a possible increase in storm intensity. The effects of land instability and erosion will also be assessed.

**Material Assets (Transport):** The SDP will necessarily involve dismantled components and materials being transported off-site. Consideration will be given to the potential effects of transporting oversized, hazardous and/or radioactive materials on existing transport systems and infrastructure, particularly through urban and other sensitive areas.



**Material Assets (Waste Management):** The SDP is essentially a waste management programme. Consideration will be given to potential waste volumes and the effects this may have on current waste management infrastructure and the market for recycled materials. The extent to which the SDP proposals represent good practice (e.g. reduce, re-use, recycle, dispose) will also be assessed.

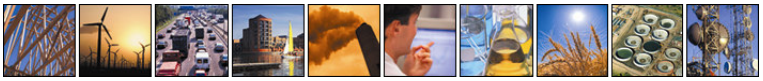
**Material Assets (Materials and Land Use):** The SDP will involve the development of new or upgraded facilities. Consideration will be given to the potential effects of the SDP on land use, on the use of finite resources such as minerals, and on the quality and environmental performance of buildings and facilities.

**Cultural Heritage:** Consideration will be given to the potential effects of the SDP on the historic environment, including cultural heritage resources, historic buildings and archaeological features.

**Landscape and Townscape:** Consideration will be given to the potential effects of the SDP proposals on the quality and attractiveness of landscapes and townscapes, as well as on public access to open spaces.

Comments from Scoping Consultees will be invited during the second consultation on the proposed methodology, objectives, and other information set out within this report. Following the end of consultation, the comments received will be considered and the assessment process amended as appropriate. The information will also be placed in the public domain.

The next stages of the SEA process (Stages B and C) involve the prediction and evaluation of the effects that the credible SDP options are likely to have. The assessment will propose, where appropriate, mitigating measures for adverse impacts as well as opportunities to enhance beneficial aspects.



# Submarine Dismantling Project

## SEA Scoping Report Update

## Annex A - Review of National Baseline Conditions

December 2010

Defence Equipment & Support

MINISTRY OF DEFENCE

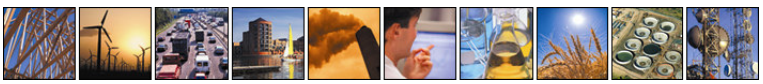
This Annex contains the following information:

- Table A1 – Baseline Information

  National-level information is provided for each of the SEA Annex I categories to provide the appropriate context for generic assessment of the strategic options for the SDP. The baseline information has been drawn from information held by both the UK Government and Devolved administrations, as well as from published MOD sources, where relevant.

- Table A2 – Summary of Trends in the National Baseline, Key targets and the Likely Evolution of the Baseline (following a 'Business as Usual' Scenario)

  This table sets out the recent trends in baseline conditions, together with key National targets and an assessment of likely evolution of the National baseline without the implementation of the SDP programme.



## Table A1 - Summary of the Current National Baseline by SDP SEA Topic

### Biodiversity and Nature Conservation

#### National:

- Number of SSSIs: Over 4,000 (around 1,400 SSSIs in Scotland).[1]
- Number of SACs: 608 covering around 2,505,165ha (approx. 10% of the UK's land area). [1]
- Number of SPAs: 256 covering around 1,610,812ha (approx. 6.7% of the UK land area). [1]

Other important sites: 146 Ramsar sites covering around 3% of the UK land area[1]. UK maps showing the distribution of protected sites are available online.[2]

Current issues for biodiversity, flora and fauna: Current cause of unfavourable condition in designated sites include: lack of remedial management; under- or over-grazing; water management; water quality; development with planning permission; and air pollution. [1]

As at 1 January 2008 the overall condition of habitats in SSSIs has been assessed as 80% favourable or recovering. SSSI condition varies between habitats. The only habitats with less than 50% in favourable or recovering condition are rivers and streams, and canals. The habitats with the greatest area in unfavourable condition are bogs, heathlands, and intertidal mudflats and saltmarsh. An analysis of the causes of unfavourable condition and threats to the range of habitats has revealed the key pressures and risks to be:

- habitat destruction and fragmentation by development;
- agricultural intensification and changes in agricultural management practices;
- changes in woodland and forestry management;
- water abstraction, drainage or inappropriate river management;
- inappropriate coastal management;
- lack of appropriate habitat management;
- atmospheric pollution (acid precipitation, nitrogen deposition);
- water pollution from both point and wider (diffuse) agricultural sources;
- climate change and sea level rise;
- sea fisheries practices;
- recreational pressure and human disturbance; and
- invasive and non-native species.[1]

The population (and range) of some species and the extent of some habitats in England has declined as a result of changes in land use, and is continuing to decline particularly since the end of the Second World War although some species have increased in population and range due to their adaptability[10].

There are 182 protected areas in UK inshore waters with a marine element, which includes 81 Special Protection Areas (SPAs) with marine habitats for birds, 98 Special Areas of Conservation (SACs) with marine habitats or species and three Marine Nature Reserves. In total the area coverage of these sites exceeds 1.8 million hectares, or 2.2% of UK waters[3]

#### Scotland:

- Number of SSSIs: 1450 covering 13% of Scotland.
- Number of SACs: 239 covering 9.6% of Scotland.
- Number of SPAs: 147 covering 8.2% of Scotland.
- Other important sites: 51 Ramsar sites covering 3.9% of Scotland.[4]

Current issues for biodiversity, flora and fauna: The Scottish Biodiversity Group's report in 2000, Action for Scotland's Biodiversity identified seven key issues: farming, forestry and fisheries as the main three with land development, air quality, water quality and transport[5]

#### Wales: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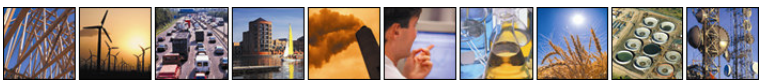

Designated biodiversity and geodiversity sites either partially or completely within Wales include:

- Number of SSSIs: Over 1,000.
- Number of SACs: 92.
- Number of SPAs: 20.
- Other important sites: 10 Ramsar sites[6]

### Northern Ireland:

In March 2009, a total of 99,300 hectares had been declared as Areas of Special Scientific Interest (ASSIs), 66,400 hectares as SACs, 114,600 hectares as SPAs and 77,700 hectares as Ramsar sites. There is some overlap of area between these different types of designation and therefore, these cannot be totalled to give an absolute figure on the extent of designations.[7]

### MOD specific data:

The MOD rural and urban estate supports 37 UK Government Biodiversity Action Plan (UK BAP) priority habitats and 139 UK BAP priority species. [8]

In March 2009 the MOD had management responsibility for 172 Sites of Special Scientific Interest (SSSIs) and their equivalent in Northern Ireland, Areas of Special Scientific Interest (ASSIs). Over 110 also had international and European nature conservation designations. [8, 9]

In March 2009 the following percentages of MOD managed SSSIs were in target condition: 91.5% in England (against a Government target of 95% by 2010), 68% in Scotland (target 95% by 2010), 78% in Wales (target 85% by 2013) and 57% in Northern Ireland (target 95% by 2013). [8, 9]

## Population

### National Demographics:

Resident population of UK of 61,383,200 in mid-2008. [1]

- 62% of population is of working age (aged 15 to 64). (66.1% males and 58.1% females). [1]
- 76.5% of working age population is economically active. [2]
- 70% of working age population is in employment. [2]
- 7.8% of working age population is unemployed. [2]

Of those of working age in the UK in 2009: 29.8% have NVQ4 and above; 15.4% have NVQ3 and above; 16% have NVQ2 and above; 13.4% have NVQ1 and above; 8.7% have other qualifications; and 12.6% have no qualifications. [2]

In England and Wales, between 2008/09 and 2009/10 estimates from the British Crime Survey (BCS) indicate vehicle-related thefts fell by 17 per cent, burglary fell by 9% and violent crime fell by one per cent. All crime BCS crime fell by 9%.

**Number of crimes recorded by the police in England and Wales:[6]**

| | 2008/09 | 2009/10 | Change |
|---|---|---|---|
| | Number of offences (thousands) | | % |
| Vandalism | 2,700 | 2,408 | -11 |
| Burglary | 725 | 659 | -9 |
| Vehicle-related theft | 1,476 | 1,229 | -17 |
| Bicycle theft | 527 | 480 | -9 |
| Other household theft | 1,155 | 1,163 | 1 |
| Household acquisitive crime | 3,883 | 3,531 | -9 |
| All household crime | 6,583 | 5,939 | -10 |


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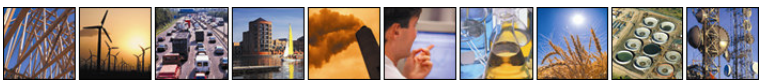

| | | | |
|---|---|---|---|
| Theft from the person | 725 | 525 | -28 |
| Other theft of personal property | 1,096 | 1,036 | -5 |
| All violence | 2,114 | 2,087 | -1 |
| Personal acquisitive crime | 2,094 | 1,895 | -9 |
| All personal crime | 3,936 | 3,648 | -7 |
| All BCS Crime | 10,518 | 9,587 | -9 |

In 2008/09, the UK had 33,396 schools: 3,209 nursery (150,300 students); 21,568 primary (4,868,800 students); 4,183 secondary (3,928,500 students); 1,378 special (100,900 students); and 511 pupil referral units (15,700 students).[7] (Total of 9,064,200 pupils at maintained schools and a further 627,100 at non-maintained schools). [7]

## Scotland:

Resident Population of 5,168,500 in mid-2008. [1]

- 67% of the population is of working age (aged 15 to 64). (49% males and 51% females). [1]
- 77% of working age population is economically active. [2]
- 71.2% of working age population is in employment. [2]
- 7.4% of working age population is unemployed. [2]

Of those of working age in 2009: 33.9% have NVQ4 and above; 15.4% have NVQ3 and above; 14.5% have NVQ2 and above; 9.8% have NVQ1 and above; 7.6% have other qualifications; and 13.3% have no qualifications. [2]

Differences in legal systems and police recording mean that the recorded crime figures for Scotland are not directly comparable with recorded crime figures for England and Wales. In Scotland, recorded vehicle theft and robbery decreased by 19 per cent and 16 per cent respectively between 2008/09 and 2009/10. Overall crime fell by 10%.

In 2008/09, Scotland had 5,521 schools: 2,645 nursery (105,400 students); 2,153 primary (370,800 students); 376 secondary (304,000 students); 234 special (7,700 students); and no pupil referral units.[7] (Total of 786,900 pupils at maintained schools and a further 30,700 at non-maintained schools). [7]

## Wales:

Resident Population of 2,993,400 in mid-2008. [1]

- 64.8% of the population is of working age (49.5% males and 50.5% females). [1]
- 72.7% of working age population is economically active. [2]
- 66.6% of working age population is in employment. [2]
- 8.4% of working age population is unemployed. [2]

Of those of working age in 2009: 27.3% have NVQ4 and above; 16.2% have NVQ3 and above; 17.3% have NVQ2 and above; 12.8% have NVQ1 and above; 7.7% have other qualifications; and 14.8% have no qualifications. [2]

Crime as above.

In 2008/09, Wales had 1,886 schools: 28 nursery (1,800 students); 1,478 primary (258,300 students); 223 secondary (205,400 students); 44 special (4,100 students); and 53 pupil referral units (500 students).[7] (Total of 470,100 pupils at maintained schools and a further 9,300 at non-maintained schools). [7]

## Northern Ireland:

Resident Population of 1,170,400 in mid-2008. [1]

- 65.94% of the population is of working age (49.73% males and 50.25% females). [1]
- 69.9% of working age population is economically active. [2]
- 65.1% of working age population is in employment. [2]

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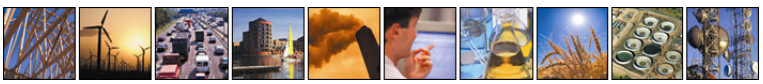

- 6.8% of working age population is unemployed. [2]

Of those of working age in 2009: 25.4% have NVQ4 and above; 14.8% have NVQ3 and above; 15% have NVQ2 and above; 10.5% have NVQ1 and above; 5% have other qualifications; and 22.3% have no qualifications. [2]

Between 2007/08 to 2008/09 violence against the person declined by 0.4%, burglary increased by 6.6% and robbery increased by 12.2%. Theft of a vehicle declined by 11.5% however all theft increased by 6.1%. Total crime in Northern Ireland overall increased by 1.5%.

In 2008/09, Northern Ireland had 1,252 schools: 98 nursery (8,200 students); 873 primary (164,800 students); 223 secondary (148,000 students); 42 special (4,600 students); and no pupil referral units.[7] (Total of 323,300 pupils at maintained schools and no students at non-maintained schools). [7]

## MOD specific data:

MOD employs some 281,000 military and civilian personnel. [8]

## National Socio-Economic:

In 2008 UK per capita Gross Value Added (GVA) was 20,520.[1]

In 2009 the median full-time gross hourly pay in UK was £12.43 (males' median being £13.09 and the female median being £11.42). This compares to £11.98 in 2008. [2] In the three months to July 2010 pay growth (including bonuses) rose by 1.2% in the private sector over the previous year compared with 2.7% for the public sector. Excluding bonus payments, growth in the private sector over the year was 1.3% compared with 2.8% for the public sector.[6]

In the period May - July 2010 the UK had a total of 29,158,000 [5] jobs.

In Jan 2009 - Dec 2009, the UK had an unemployment rate of 7.8% (all people of working age). This compares to the previous year when the UK had an unemployment rate of 5%.[3]

The recent UK recession has caused a downturn in many sectors and markets of the UK economy, however in the second quarter of 2010 the UK Economy grew by 1.7% compared to the second quarter of 2009. Changes between quarters have also been positive (UK GDP rose by 1.2% between the first and second quarter. [4] Output of the production industries rose by 2% between the second quarter of 2009 and the second quarter of 2010; output in the service industries rose 1.5%. Manufacturing output grew by 4.3% [4]

## Scotland:

In 2008 Scotland's per capita Gross Value Added (GVA) was 20,086.[1]

In 2009 the median full-time gross hourly pay in Scotland was £12.04 (males' median being £12.56 and the female median being £11.31). This compares to £11.60 in 2008 and represents growth of 3.8% in nominal hourly total full time pay over the previous year. [2]

In the period May - July 2010 Scotland had a total of 2,455,000 [5] jobs.

In Jan 2009 - Dec 2009, Scotland had an unemployment rate of 7.1% (all people of working age). This compares to the previous year when it had an unemployment rate of 5%.[3]

Output of the Scottish economy rose by 4.7% between 2007 and 2008 [1]

## Wales:

In 2008 Wales' per capita Gross Value Added (GVA) was 15,237.[1]

In 2009 the median full-time gross hourly pay in Wales was £11.29 (males' median being £12.02 and the female median being £10.36). This compares to £10.79 in 2008 and represents growth of 4.6% in nominal hourly total full time pay over the previous year. [2]

In the period May - July 2010 Wales had a total of 1,319,000 [5] jobs.

In Jan 2009 - Dec 2009, Wales had an unemployment rate of 8.4% (all people of working age). This compares to the previous year when it had an unemployment rate of 6.5%.[3]

Output of the Welsh economy rose by 3% between 2007 and 2008 [1]

## Northern Ireland:

In 2008 Northern Ireland's per capita Gross Value Added (GVA) was 16,188.[1]

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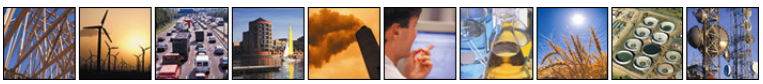

In 2009 the median full-time gross hourly pay in Northern Ireland was £11.05 (males' median being £11.37 and the female median being £10.69). This compares to £10.27 in 2008 and represents growth of 7.6% in nominal hourly total full time pay over the previous year. [2]

In the period May - July 2010 Northern Ireland had a total of 781,000 [5] jobs.

In Jan 2009 - Dec 2009, Northern Ireland had an unemployment rate of 6.8% (all people of working age). This compares to the previous year when it had an unemployment rate of 4%.[3]

Output of the Northern Irish economy rose by 3% between 2007 and 2008 [1]

### MOD specific data:

The MOD is a major source of employment. Some 281,000 [7] sailors, soldiers, airmen and civilians are directly employed in Defence, and many more are sustained indirectly in the Defence industry through the £38.6Bn the Department spent in 2008/09 to support and equip the Armed Forces. [3]

Defence and Aerospace is the United Kingdom's second largest industry sector. The Typhoon programme alone sustains an estimated 100,000 UK jobs, many highly skilled and paid, and has produced a number of technology spin-offs. [8]

## Human Health and Wellbeing

### National (Non-radiological)

- Life expectancy at birth for males of 77.53 years (2006 - 2008). [2]
- Life expectancy at birth for females of 81.74 years (2006 - 2008). [2]

In 2007 70% of males and 66% of females in UK rated their health as good; 21% of males and 22% of females rated their health as fairly good [1].

In 2007 the main causes of death in the UK were diseases of the circulatory system, and neoplasms (cancers) [1]. There are high levels of hypertension and overweight/obesity in the UK. Public health trends often correlate with deprivation and these figures for illness are invariably far less favourable in deprived areas. [3]

### Scotland:

- Life expectancy at birth for males of 75.04 years (2006 - 2008). [2]
- Life expectancy at birth for females of 79.92 years (2006 - 2008). [2]

In 2007 73% of males and 64% of females in UK rated their health as good; 20% of males and 26% of females rated their health as fairly good [1].

In 2007 the main causes of death in Scotland were diseases of the circulatory system, and neoplasms (cancers). [1]

### Wales:

- Life expectancy at birth for males of 76.98 years (2006 - 2008). [2]
- Life expectancy at birth for females of 81.37 years (2006 - 2008). [2]

In 2007 69% of males and 72% of females in UK rated their health as good; 17% of males and 16% of females rated their health as fairly good [1].

In 2007 the main causes of death in the UK were diseases of the circulatory system, and neoplasms (cancers). [1]

### Northern Ireland:

- Life expectancy at birth for males of 76.42 years (2006 - 2008). [2]
- Life expectancy at birth for females of 81.26 years (2006 - 2008). [2]

In 2007 67% of males and 63% of females in UK rated their health as good; 21% of males and 23% of females rated their health as fairly good [1].

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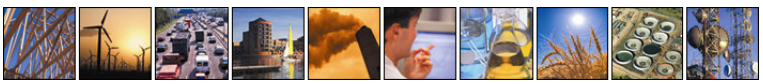

In 2007 the main causes of death in the UK were diseases of the circulatory system, and neoplasms (cancers). [1]

## National (Radiological)

Public radiological dose limits (excluding natural background radiation and medical procedures) are:

- the sum of exposures should not exceed the dose limit of 1mSv per year;
- the dose received from any new source does not exceed 0.3mSv per year; and
- the dose received from any single site does not exceed 0.5mSv per year.

Exposures to members of the public from artificial sources remain at a very low level. Individual annual doses to members of the public from practices, other than medical procedures, are generally much less than the annual dose limit of 1 mSv.[3]

The average radiation dose (including natural background radiation and medical procedures) to the UK population is approximately 2.7 mSv/y (around 84% is due to natural sources, which varies in intensity as a function of underlying geology). Only 0.1% of the annual average dose is directly due to radioactive discharges from nuclear and non nuclear sources. (The 2.7mSv is composed of: 0.33mSv natural Cosmic radiation; 0.35mSv natural Gamma radiation; 0.25mSv natural internal radiation; 1.3mSv natural Radon radiation; 0.41mSv artificial medical radiation; 0.006mSv artificial occupational radiation; 0.006mSv artificial fallout radiation from weapons testing in the past; 0.0009mSv artificial disposal radiation; and 0.0001mSv artificial consumer products radiation). [4]

The legal radiation dose limit set for workers is 20 mSv/y. [4]

## MOD specific data:

In 2003 radiological discharge was assessed as being insignificant or extremely low at all main defence related sites. Exposures of less than 5µSv were received by all critical groups around all defence sites except Holy Loch (9µSv). [4]

## Human Health (Noise)

### National:

- Percentage of people disturbed by residential sources: 26% in 2008. [1]
- Percentage of people disturbed by non-residential sources: 10% in 2008. [1]

Major sources of noise: Traffic, alarms, fireworks and children were the most cited causes of disturbing noise.[1]

Current issues for noise: Noise and vibration are predominantly local in nature and difficult to measure on a regional or national scale.[1] The UK planning system recognises that noise has the potential to seriously impact on quality of life and to cause disturbance to sensitive ecological receptors. [1] Essential operational military activities such as training and flying are exempt from Part III of the Environmental Protection Act 1990 and Directive 2002/49/EC on the Assessment and Management of Environmental Noise.[3]

### Scotland:

In 2008/09 a total of 58,313 noise complaints were received by local authorities in Scotland.[4]

Scottish Noise Mapping indicates that road traffic is the dominant noise exposure source. [6]

### Wales:

Wales Noise Mapping indicates that road traffic is the most dominant noise exposure source. [7]

### Northern Ireland:

In 2008/09 a total of 11,099 noise complaints were received by local authorities in Northern Ireland. [5]

Northern Ireland Noise Mapping indicates that road traffic is the dominant noise exposure source. [8]

### MOD specific data:


**References:**

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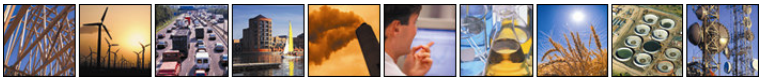

| | |
|---|---|
| The MOD's activities that are principal sources of noise are flying from airfields; ground-running and testing of engines; low flying; and use of air, gunnery and explosive ranges. There is no central analysis of MOD sources of environmental noise.[2] | http://www.doeni.gov.uk/noise_complaint_statistics_report_for_northern_ireland_200809.pdf<br>6. The Scottish Government, 2007, Noise Exposure Statistics Reported to Europe, http://www.scottishnoisemapping.org/public/noise-statistics.aspx<br>7. Welsh Assembly Government, Population Exposure, http://wales.gov.uk/desh/research/research/noise/populationexposure/populationexposure.xls?lang=en<br>8. http://www.noiseni.co.uk/index/maps-and-charts.htm |

## Soil and Geology

### National:

**Contamination:** In 2005 there was estimated to be around 413,906 hectares of land affected by industrial activity in England and Wales which may be contaminated, (around 2% of the land area in England and Wales), and a further 82,043 hectares in Scotland.[1] [2] The extent of contaminated land in Northern Ireland is currently unknown.

In England alone, there was estimated to be around 307,672 hectares of land that may be contaminated. A total of 659 sites had been determined as 'contaminated land' in England by the end of March 2007. The Contaminated Land Regime was extended to cover radioactivity from August 2006 in England, which introduced a system for identifying and remediating contamination that is exposing people to radiation in the long term. At the time of reporting, no site has been determined as contaminated land due to radioactivity.[2]

**Predominant geology:** The geology of the UK is diverse and has resulted in over 800 soil types. As a broad overview the following rock types exist in a progression from North West to South East (predominant rock types): Tertiary Volcanic Rocks; Crystalline Rock of Pre-Cambrian and later age; Lower Carboniferous to Cambrian; Triassic and Permian; Early Precambrian and Devonian; Jurassic; Cretaceous; Tertiary and Marine Pleistocene; and finally a return to Cretaceous.[3]

The quality of the land across the UK varies, with the best and most versatile agricultural land generally situated in the lowland and valley areas of England. Due to the topography and terrain, much of Scotland and Wales is classified as lower grade land. An estimated 21% of all farmland in England is Grade 1 and 2 land, with a similar percentage graded as subgrade 3a land. These grades are the best and most versatile land grades as classified under the Agricultural Land Classification System.[4]

**Topographic features:** The UK has a diversity of mountain ranges and flood plains. In England, the southern part of the country is predominantly lowland, with mountainous terrain north west of the Tees-Exe line (the Lowland-Upland divide across England), which includes the Cumbrian Mountains of the Lake District, the Pennines and limestone hills of the Peak District, Exmoor and Dartmoor.[5]

SSSIs with geological designation: Around 2,050 in the UK, of which there are an estimated 1,214 geological SSSIs in England.[6] [7] [13] [23]

**Other important features:** Across the UK there are also a number of non-statutory geological and geomorphological sites designated at a local level, i.e. often known as Local Geological Sites (formerly Regionally Important Geological and Geomorphological Sites (RIGS)). The number of Local Sites is unknown; however there are over 50 Local Sites groups in the UK.[6] The UK has six Geoparks (areas in Europe with an outstanding geological heritage); two in England, two in Scotland and one each in Wales and Northern Ireland. England's Geoparks are the North Pennines Area of Outstanding Natural Beauty and the English Riviera in Devon.[5]

**Current issues for soils and geology**: Human activity has left a legacy of soil contamination and pollution that pose a risk to water quality, ecosystems and human health as well as to land and

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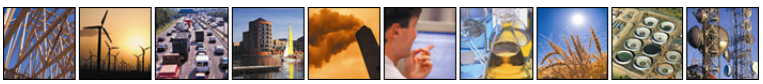

property value.

## Scotland:

**Contamination**: In 2005, there was estimated to be around 82,034 hectares of land affected by industrial activity in Scotland that may be contaminated. A total of 13 sites (equivalent to 53 hectares) had been determined as 'contaminated land' in Scotland by the end of 2008. [10]

**Predominant geology**: As a broad overview the following rock types exist in a progression from North East to South West (predominant rock types): Pre-Cambrian (the Highlands); Carboniferous (Midland Valley area); and Ordovician and Silurian (Southern Uplands). Scotland has a large variety of soils reflecting its geological and climatic diversity. Scotland's soil is predominantly carbon rich, with podzols, peat soils and gleys accounting for more than two-thirds. These soils are found throughout Scotland with the exception of the Central Valley, which is dominated by mineral soils. Soils in the north and west are more acidic on the whole and rich in organic matter. Scotland contains a much higher proportion of organic soils than the rest of the UK. [11]

The quality of land is highly variable with much of Scotland classified as Less Favoured Areas (suited only for improved grassland and rough grazing). Class 1 agricultural soils (suitable for a very wide range of crops) make up just 0.1% of the total land area according to the Land Capability for Agriculture classification scheme, which is distributed predominantly along the eastern coasts, and the Firths of Forth and Tay.[12]

**Topographic features:** Topographically, Scotland is divided into three main areas; the Highland region in the north, which includes the Cairngorm and Grampian mountain ranges; the Central Lowlands, which includes the major cities of Edinburgh and Glasgow; and the Southern Uplands, a pastoral upland area north of the English Border.

SSSIs with geological designation: Around 309 in Scotland.[13]

**Other important features:** Across Scotland there are also a number of non-statutory geological and geomorphological sites designated at a local level, often known as Local Geodiversity Sites. The number of Local Sites is unknown; however there are over 50 Local Sites groups in the UK.[7] Scotland has three Geoparks: North West Highlands Geopark, Lochaber Geopark and Shetland Geopark.[9]

Current issues for soils and geology: Climate change and loss of organic matter are the most significant threats to Scottish soils.[14] The effect of industry, agricultural practices, forestry and climate change upon soils, particularly carbon rich peat soils, is also a key issue. Key pollutants include chemicals, oil or waste. Organic waste, including sewage sludge, is one of the main sources of heavy metal contamination of soils from human activities.[15]

## Wales:

**Contamination:** In 2005, there was estimated to be around 24,200 hectares of land affected by industrial activity in Wales that may be contaminated.[1] A total of 122 sites had been determined as 'contaminated land' in Wales by the end of March 2007. [2]

The Contaminated Land Regime was extended to cover radioactivity from December 2006 in Wales, which introduced a system for identifying and remediating contamination that is exposing people to radiation in the long term. At the time of reporting, no site has been determined as contaminated land due to radioactivity. [2]

**Predominant geology:** Sedimentary rocks underlie the majority of Wales, which are then overlain by a suite of acid soils, characterised by a peaty surface horizon. As a broad overview the following rock types exist in a progression from North West to South East (predominant rock types): Ordovician; Silurian; Devonian; and Carboniferous Peat covers 3% to 4% of Wales and is predominantly acid blanket peat, but with small areas of raised bog and fen peat scattered in lowland areas.[16]

The majority of land in Wales (almost 80%) is classified as a Less Favoured Area (areas which are difficult to farm due to limitations such as climate, location or features of the landscape, e.g. mountainous or hilly areas), almost all of which falls within the Severely Disadvantaged Area subcategory. [17]

**Topographic features:** Wales is predominantly mountainous, with the Cambrian Mountains occupying almost the entire area. There are narrow coastal plains in the south and west and small lowland areas in the north.

SSSIs with geological designation: Around 450 in Wales.[7]

**Other important features:** There are 351 Geological Conservation Review Sites and 1 Geopark (Forest Fawr) in Wales. The Isle of Anglesey is currently preparing an application to become a


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11. State of the Environment Soil Quality Report, Scottish Environment Protection Agency, 2001
12. Land Use Strategy Strategic Environmental Assessment Screening and Scoping Report, Scottish Government, March 2010, http://www.scotland.gov.uk/Topics/Environment/Countryside/Landusestrategy/sea
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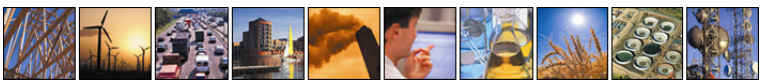

member of the Geopark Network, although it is not yet a Geopark. [9]

Current issues for soils and geology: Soils are vulnerable to degradation through erosion, contamination and a loss of nutrients. The small proportion of land that is classified as 'best and most versatile' agricultural land needs to be conserved. There is also a need to protect soils in uplands and wetlands which contain high amounts of carbon and are vulnerable to acidification. [18]

## Northern Ireland:

**Contamination**: In 2009, an estimated 12,000 sites were identified that had been used for a purpose which could potentially have caused contamination.[19] The Contaminated Land regime which is set out in Part 3 of the Waste Management and Contaminated Land Order (Northern Ireland) 1997 has been enacted in Northern Ireland but is not yet in force. This regime will identify 'contaminated land' (similar to Part 2A of the Environmental Protection Act 1990 in England, Scotland and Wales). [20]

**Predominant geology:** The geology of Northern Ireland varies considerably, although the predominant rock types are Igneous Basalt and Silurian sandstone and shale. The main types of soil in Northern Ireland are rankers, brown earths, podzols and gleys. [21]

Agri-food and Biosciences Institute Agricultural land classification of the region concludes the highest class of land (class 1) does not occur in Northern Ireland. Classes 2-3a account for 31% of the land and are the best and most versatile agricultural soils. [21]

**Topographic features:** Northern Ireland consists mainly of low-lying plateaus and hills. The highest region is the Mourne Mountains in the south east. Lough Neagh, the largest lake in the UK is around 30km west of Belfast.

Areas of Special Scientific Interest (ASSIs) with geological designation: Around 76 in Northern Ireland. [22] Most raised bogs in Northern Ireland are designated ASSI's (equivalent to a geological SSSI in England, Scotland and Wales).[19]

**Other important features**: Across Northern Ireland there are also a number of non-statutory geological and geomorphological sites designated at a local level. The number of Local Sites is unknown; however there are over 50 Local Sites groups in the UK.[7] There is one Geopark in Northern Ireland, the Marble Arch Caves Geopark, which straddles the border of Northern Ireland and the Republic of Ireland. [9]

Current issues for soils and geology: The main pressures in Northern Ireland are development, infrastructure, mineral extraction industries, and tourism. A major problem in farmland is the over-accumulation of phosphorus in the soil, due to agricultural fertilisers. The intensification and expansion of agriculture is a key pressure on soil quality and erosion. [19] [22]

## MOD specific data:

In March 2008 75% of the UK built estate (around 59,600 ha) was covered by a land assessment.[23] An estate wide Land Quality Assessment (LQA) programme has been established and is being managed by Defence Estates. The results of LQA carried out to date indicate there is no wide spread contamination on the defence estate. [24]


advice/soils-environment/

22. 'Our Environment, Our Heritage, Our Future' State of the Environment Report for Northern Ireland, Department of the Environment, March 2008, http://www.ni-environment.gov.uk/index/about-niea/state_of_the_environment/state_of_the_environment_report.htm
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# Water

## National:

**Major surface water features:** The UK has a diversity of inland and coastal waters (such as reservoirs, lakes, rivers, canals, estuaries, transitional waters, and coastal waters). Protected water features include waters designated for human consumption (including those abstracted from groundwater); areas designated for the protection of economically significant aquatic species (e.g. shellfish or freshwater fish); bathing waters (under the Bathing Waters Directive); nutrient-sensitive areas; and areas with waters important to protected habitats or species under the Habitats Directive or the Birds Directive.

**Protected sites:** There are 182 protected areas in UK inshore waters with a marine element, which includes 81 Special Protection Areas (SPAs) with marine habitats for birds, 98 Special Areas of Conservation (SACs) with marine habitats or species and three Marine Nature Reserves. In total the area coverage of these sites exceeds 1.8 million hectares, or 2.2% of UK waters.[1]

**Water quality:** 26% of rivers, 36% of lakes and reservoirs and 27% of estuaries and coasts in England


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2. Environment Agency http://www.environment-agency.gov.uk/research/library/data/112170.aspx (accessed 02/10/2010
3. GroundwaterUK http://www.groundwateruk.org/downloads/the_aquifers_of_the_uk.pdf (accessed 02/10/2010)
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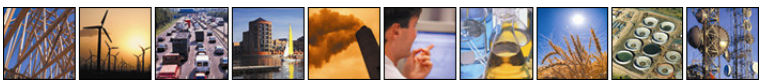

and Wales are at good or better ecological status in every one of the characteristics looked at for Water Framework Directive (WFD) targets. 98.3% of England's bathing waters met the EC's minimum water quality standards in 2009, up from 96% in 2008.[2]

**Major ground water features:** The principal aquifers of the UK are found in the lowlands of England. The most important are the Chalk, the Permo-Triassic sandstones, the Jurassic limestones and the Lower Greensand.[3]

**Radioactivity:** The annual per capita radiation dose to people in the UK from all EC marine discharges was 0.68µSv (from 1.17µSv in 1998). Around 10% of these discharges are from the nuclear industry.[4] Radioactivity in the marine environment arises from both naturally occurring and man-made sources, and can be harmful to humans and non-human species. The major sources of discharges are nuclear fuel production and reprocessing; research; nuclear power stations; and defence. In general radioactive discharges are strictly controlled, discharge levels have reduced and a strategy is in place to further reduce discharge levels in the future. Radioactivity levels in UK waters currently pose no risk of harm to humans or wildlife.[5]

## Scotland:

Overall Scotland's water environment is in a good condition but a wide range of problems exist at local levels. Approximately 40% of Scottish water bodies are at risk of failing to meet environmental standards set by the Water Framework Directive. Transitional waters are most at risk followed by lochs, groundwaters and rivers. The quality of coastal waters is high and improving further.[6]

Scotland has two river basin districts: the Scotland river basin district which covers most of Scotland and the Solway Tweed river basin district in the south of the country. In 2008, 65% of the Scotland river basin district surface water bodies and 76% of ground water bodies were classified (under the Water Framework Directive) as being of good or better condition. The significant water issues in the Scotland river basin district have been identified as diffuse source pollution; point source pollution; abstraction and flow regulation; changes to morphology; and invasive alien species.[7]

In 2008 45% of the surface water bodies and 82% of ground water bodies in the Solway Tweed river basin district were classified as good condition or better.[8] In 2009, 94% of Scotland's bathing waters achieved the EU mandatory standard and more than half of Scotland's bathing waters managed to achieve the more stringent guideline standard. This is a 3% increase in the number of beaches achieving mandatory compliance compared to 2008.[9]

## Wales:

The percentage of river lengths in Wales of good chemical quality has been consistently above 90% since 1994, and has remained at around 95% for the last three monitored years (2006-08). The percentage of river length in Wales of good biological quality has steadily increased since 2000, peaking at 88% in 2008.[10] In 2009, of the 82 EC-identified bathing waters monitored by Environment Agency Wales, 100% complied with the mandatory standards, up from 98.8% in 2008. EC identified beaches' performance against guideline standards also improved between 2008 and 2009, from 75.6% to 89.0% for UK Guideline standards.[11]

## Northern Ireland:

In 2009, 58% of river waterbodies in Northern Ireland (monitored under the Water Framework Directive) are of at least a good chemical standard (Class B and above) and 41% are of at least good biological standard. Groundwater is currently of a high quality, with less than 2% of monitoring sites having an annual mean concentration of more than 40mg $NO_3$/ l. In 2009 only two beaches (out of 24 monitored) in Northern Ireland failed to meet the mandatory standards, as stated by EC Bathing Water Directive, however less than half satisfied the guideline standards.[12]

## MOD specific data:

The MOD water consumption baseline for 2004/ 5 was established at 33.5 $Mm^3$. In 2008/9, the MOD used 25 M $m^3$. The target is to reduce water consumption to an average $3m^3$ per person per year for office builds or major office refurbishments.[13]

In 2002 radiological discharges at submarine berths in Plymouth, Loch Striven, Isle of Bute, Lock Goil, Loch Long and Gare Loch were below detectable levels. Levels were detectable at RRL Rosyth Dockyard (critical group dose of <1µSv), Barrow-in-Furness (critical group dose of 2µSv), Portsmouth and Isle of Wight (critical group dose of 1µSv).[14]


Ionising Radiation Exposure of the UK Population: 2005 Review, http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb_C/1195733839711?p=1197637096018

5. Defra http://chartingprogress.defra.gov.uk/clean-seas-radioactivity (accessed 04/10/2010)
6. SNIFFER http://www.seaguidance.org.uk/Upload/Documents/L3EX2CurrentstateandtrendsforWATERSCOT.PDF (accessed 04/10/2010)
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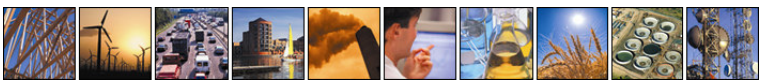
13. Sustainable Development Commission 2010 *Becoming the 'Greenest Government Ever', Government progress against the SOGE targets*
14. MOD, Sustainable Development Report and Action Plan, 2008, http://www.mod.uk/NR/rdonlyres/D8407A1C-CA68-4AD4-8E17-9F71B151AF6A/0/SusDevReport2008.pdf
15. MOD, Sustainable Development Report and Action Plan, 2009, http://www.mod.uk/NR/rdonlyres/F9E34976-9E39-4E0D-BADA-157975DF2118/0/stewardshiprpt200809v7.pdf

## Air

### National:

**Air quality:** Air quality in the UK is generally good. In 2008 urban background particulate levels averaged 20 micrograms per cubic metre (µg $m^{-3}$) (Air Quality Strategy Objective and EU Limit Value is 40 micro-grammes per cubic metre); roadside particulate levels averaged 28 µg $m^{-3}$; urban background ozone levels averaged 59 µg $m^{-3}$; and rural ozone levels averaged 71 µg $m^{-3}$.[1]

The annual per capita radiation dose to people in the UK from nuclear power station atmospheric discharges was 0.11µSv.[2] In the UK between 1985 and 2005 radioactive emissions to air fell by 83%.[1]

Number of AQMAs: 235 Local Authorities have declared AQMAs.[3]

**Major sources of air pollution:** Air Quality Management Areas (AQMAs) are predominantly in urban areas and are generally related to nitrogen dioxide ($NO_2$) and particulates ($PM_{10}$) emissions largely caused around road networks.

Number of days of moderator high air pollution**:** 26 days in urban areas in 2008. 45 days in rural areas in 2008.[1]

**Current issues for air quality:** People in deprived communities are exposed to 41% higher concentrations of nitrogen dioxide than those people living in average communities. [3] It is often very difficult to determine the effects of air pollution on SSSIs, given the complex interactions between pollution impacts, management and abiotic influences. As a result, the impacts of air pollution, and the identification of air pollution as an adverse activity affecting condition, are considered to be substantially under-reported.[4]

UK air quality distribution maps are available online.[3]

### Scotland:

**Air quality:** In Scotland this is generally good, however this is not the case when considering the more urban areas. No exceedences of the annual mean PM10 objective of 18µgm$^{-3}$ at background locations were identified; however, 67 junctions were identified as exceeding the objective across Scotland, 60% of which were located in Glasgow Urban Area. With regard to $N0_2$ data from 53 sites utilising automatic monitoring are available for 2008. Fourteen roadside or kerbside automatic sites exceeded the AQS Objective for the annual mean (40µg$^{m-3}$) all of which are close to busy roads. Seven of these sites also exceeded the AQS Objective of 200µg$^{m-3}$ for the hourly mean more than the permitted 18 times.

Provisional results from Scotland's network of automatic air quality monitoring stations in 2009 show that the UK Air Quality Strategy Objectives for carbon monoxide, benzene and 1,3-Butadienehave been met by the due dates. However, there remained a number of sites close to busy roads in urban areas that did not meet AQS Objectives for nitrogen dioxide and/or particulate matter as $PM_{10}$, together with several rural sites that did not meet the AQS Objective for ozone. [8]

**Major sources of air pollution:** Air Quality Management Areas (AQMAs) are predominantly in urban areas and are generally related to nitrogen dioxide ($NO_2$) and particulates ($PM_{10}$) emissions largely caused around urban areas provisionally through traffic activities.

### Wales:

Air quality in Wales continues to improve year on year and both emissions and ambient concentrations of key pollutants are decreasing, though annual average concentrations across the country have started to level out in recent years.[9]

Urban air quality in Wales is generally worse than in rural areas. The main causes of pollution at urban sites are fine particles ($PM_{10}$) and ozone. The main cause of pollution in rural areas is the variation in ozone levels, which is affected by the weather.

In 2008, the number of days when air pollution was moderate or higher was 26 in Cardiff and in 2008 was 104 in Port Talbot Margam[9].

UK Air Quality Strategy objectives have not been met, which has led to the declaration of 25 Air Quality Management Areas (AQMA's) in Wales (2008). The South-East Wales region has the worst air quality, followed by parts of north-east Wales. [9]

Moderate levels of ozone were recorded on 115 days during the year at one or more sites, and $PM_{10}$ levels were moderate or high on 47 days. [9]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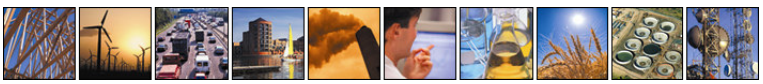

## Northern Ireland:

Northern Ireland's air quality has shown substantial improvement in recent years, with most measures well within the national air quality objectives. In particular, levels of pollutants associated with coal and oil combustion have reduced over the past decade. [7]

In 2008, the annual mean concentration of $PM_{10}$ in urban areas was 20.0µg/$m^3$ and at the Lough Navar rural background monitoring site, it was 12.0µg/$m^3$.In the last ten years, the rural concentration of $PM_{10}$ has been no higher than 15µg/$m^3$ and the urban concentration has been less than 28µg/$m^3$. All the readings in the last 10 years have been well below the 40µg/$m^3$ level that has been set as the UK Air Quality objective for the protection of human health for $PM_{10}$. [7]

## MOD specific data:

The MoD's air quality effects are largely the result vehicle emissions from operational vehicles (green fleet), troop transport/business vehicles (white fleet), aircraft and shipping. [10]

## Climate Change and Energy Use

### National:

Total (final) energy consumption: 152.7 m tonnes oil equivalent in the UK (2009).[1]

- Split between energy sources: petroleum; 47.5% natural gas; 30.5% electricity; 18%, others; 4% (includes coal, manufactured fuels, biomass, etc.). [1]
- Average commercial and industrial electricity usage per customer: 0.079077 GWh in Great Britain (2007). [2]
- Average commercial and industrial gas usage per customer: 0.63377900 GWh in Great Britain (2007).[2]

Total carbon dioxide emissions: In 2009, UK net emissions of carbon dioxide were provisionally estimated to be 480.9 million tonnes.[4] Carbon dioxide ($CO_2$) accounts for around 85% of total UK greenhouse gas emissions. [3] In 2009, 39% of $CO_2$ emissions were from the energy supply sector, 25% from road transport, 15% from business and 16% from residential fossil fuel use. In 2009, UK emissions of the basket of six greenhouse gases covered by the Kyoto Protocol were provisionally estimated to be 574.6 million tonnes carbon dioxide equivalent. This was 8.6 per cent lower than the 2008 figure of 628.3 million tonnes. [4]

All areas of the UK are getting warmer, and the warming is greater in summer than in winter. [5]

There is little change in the amount of precipitation (rain, hail, snow etc) that falls annually, but more is falling in the winter, with drier summers, for much of the UK. [5] Sea levels are rising, and are greater in the south of the UK than the north.[5]

**Current issues for energy and climate change:** UK is experiencing sea level rise of approximately 1mm per year. Global sea-level is rising at about 3mm per year [8]. Central England Temperature has risen by about 0.7 ºC over the last century, with 2004 being the warmest on record. [9] Sea-surface temperatures around the UK coast have risen over the past three decades by about 0.7 ºC. Global average temperatures are rising at about 0.2 ºC/decade. Severe windstorms around the UK have become more frequent in the past few decades, though not above that seen in the 1920s. Annual mean precipitation over England and Wales has not changed significantly since records began; however seasonal rainfall appears to be decreasing in summer and increasing in winter.[8]

### Scotland:

Total (final) energy consumption: 13.6m tonnes oil equivalent in Scotland (2007).[10]

- Split between energy sources: petroleum 41.4%; natural gas 37.7%; electricity 18.3%; others 2.6% (includes coal, manufactured fuels, biomass, etc.).[1]
- Average commercial and industrial electricity usage per customer: 0.090426 GWh in Great Britain (2007). [2]
- Average commercial and industrial gas usage per customer: 0.504155 GWh in Great Britain (2007).[2]

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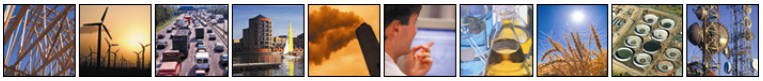

Total carbon dioxide emissions: In 2008, Scotland's net emissions of carbon dioxide were provisionally estimated to be 41 million tonnes.[4] In 2008, 8.4% of $CO_2$ emissions were from the energy supply sector, 26.3% from road transport, 39.7% from business and 25.5% from residential fossil fuel use.[10]

In 2008 Scotland's emissions of the basket of six greenhouse gases covered by the Kyoto Protocol were provisionally estimated to be 56.1 million tonnes carbon dioxide equivalent. This was three per cent lower than the 2007 figure of 57.8 million tonnes. [11]

## Wales:

Total (final) energy consumption: 8.1m tonnes oil equivalent in Wales (2007).[10]

- Split between energy sources: petroleum 45.2%; natural gas 32.6%; electricity 17.6%; others 4.6% (includes coal, manufactured fuels, biomass, etc.). [1]
- Average commercial and industrial electricity usage per customer: 0.075445 GWh in Wales (2007).[2]
- Average commercial and industrial gas usage per customer: 0.615,123 GWh in Wales (2007).[2]

Total carbon dioxide emissions: In 2008, Wales net emissions of carbon dioxide were provisionally estimated to be 32.4 million tonnes.[4] Carbon dioxide ($CO_2$) accounts for around 75.2% of total Wales greenhouse gas emissions. [3] In 2008, 24% of $CO_2$ emissions were from the energy supply sector, 20.3% from road transport, 30% from business and 25% from residential fossil fuel use.[10]

In 2007 Wales emissions of the basket of six greenhouse gases covered by the Kyoto Protocol were provisionally estimated to be 39 million tonnes carbon dioxide equivalent. This was seven per cent lower than the 2006 figure.

## Northern Ireland:

Total (final) energy consumption: 3.3m tonnes oil equivalent in Northern Ireland (2007).[10]

- Split between energy sources: petroleum; 92.6%others; 7.4% (includes coal, manufactured fuels, biomass, etc.). [1]
- Average commercial and industrial electricity usage per customer: 0.079077 GWh in Great Britain (2007). [2]
- Average commercial and industrial gas usage per customer: 0.63377900 GWh in Great Britain (2007).[2]

In 2008/09, 596 MWh of electricity in Northern Ireland was produced from renewable sources. This was equivalent to 7.3% of the total electricity consumption in that period.

There has been a sizable increase in the amount of electricity produced from renewable sources since 2000/01, when only 118MWh (1.4% of total electricity consumed) was renewable.

Total carbon dioxide emissions: In 2008, Northern Ireland net emissions of carbon dioxide were provisionally estimated to be 15.7 million tonnes.[10] Carbon dioxide ($CO_2$) accounts for around 85% of total UK greenhouse gas emissions. [3] In 2009, 6.3% of $CO_2$ emissions were from the energy supply sector, 31% from road transport, 34% from business and 30% from residential fossil fuel use.[10]

In 2007, Northern Irelands total greenhouse gas emissions accounted for 3.4% of the UK total.

Since 1990, Northern Ireland's total greenhouse gas emissions have decreased by 12.6%. This is less than the reduction seen for the UK as a whole, which has seen a decrease of 18.4% on 1990 levels.

The mean annual minimum and maximum temperature for Northern Ireland has been calculated from the Armagh Observatory temperature records:

- the 10 year moving average trend line shows that the annual minimum and maximum temperatures reached a low towards the end of the 19th century, and has been steadily increasing since;
- since 1990, the 10 year moving average mean annual minimum temperature has risen to its highest levels since the temperature records began;
- 1997 had the highest mean annual minimum temperature recorded in the period up to 2008 (7.02°C);
- the lowest mean annual minimum temperature (3.95°C) recorded in the period up to 2008 was recorded in 1879;

e/statistics/environment/eiyp/
9. MOD, Sustainable Development Report and Action Plan, 2009, http://www.mod.uk/NR/rdonlyres/F9E34976-9E39-4E0D-BADA-157975DF2118/0/stewardshiprpt200809v7.pdf
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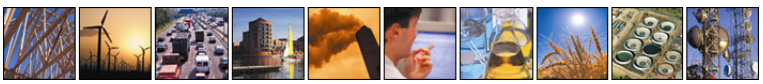

- in the last 10 years, the average annual maximum temperature has continued to slowly increase.
- 2007 had the highest mean annual maximum temperature recorded in the period up to 2008 (14.44°C); and
- the lowest mean annual maximum temperature (10.74°C) in the period up to 2008 was recorded in 1879.

### MOD specific data:

In 2008-09 the MOD produced 5.6 million tonnes of $CO_2$[9]. Over 2007-08 1.9 million tonnes of $CO_2$ was from estate energy use; 4.1 million tonnes of $CO_2$ was from motive fuel use; and 0.1 million tonnes of $CO_2$ was from business travel. Of the 4.1 million tonnes of $CO_2$ from fuel use: 0.4 million tonnes $CO_2$ was from ground fuel; 0.8 million tonnes $CO_2$ was from marine fuel; and 2.9 million tonnes of $CO_2$ was from aviation fuel.[7]

## Coastal Change and Flood Risk

### National:[1]

Coastal erosion is occurring along 17% of the UK coastline with 30% of England's coastal length eroding. Of the regions in England, Yorkshire and Humber has the greatest proportion of coastal length which is eroding at 56% (203km). Coastal erosion is occurring along 30% to 32% of the South East, South West and East Midlands coastlines whilst 27% and 18% of the North East and North West coastlines respectively are eroding. The East Midlands has the smallest proportion of coastal length which is eroding at 9% or 21km. [7]

In 2009, an estimated 2.7 million properties in England and Wales were in areas deemed to be at risk of flooding. Of these, some 580,000 were where the risk of flooding was greater than a 1 in 75 chance in any year. ('Risk' is the likelihood of flooding occurring given existing flood defences - not the extent to which flooding may cause damage).[1]

Regionally, London has the highest number of people at risk from flooding. In the Greater London area there are 542,000 properties (around one million people) located in the floodplain. However, although London does have the largest number of people at risk, 458,000 of those properties at risk in London (84%) are in areas with a low chance of flooding. This is mainly due to the major flood defences and flood defence structures in the Thames Estuary, including the Thames Barrier, reducing the risk of tidal flooding. The 84,000 properties (16%) in London where the risks are significant or moderate are located on the tributaries of the River Thames in north and south London. On these rivers, such as the Lee, Brent and Ravensbourne, the risk is from fluvial, or river flooding, after heavy rainfall. The number of properties in areas with a significant chance of flooding are highest in the South East, which has 25,000 more properties (around 64,000 people) in this highest risk category compared with the South West. The South East also has the largest number of properties in areas with a moderate or significant chance of flooding, with 259,000 properties, or around 460,000 people. The City of Kingston-upon-Hull and East Riding in Yorkshire are the two local authorities with the highest number of properties with a chance of flooding. However, other local authorities, such as Boston and North Somerset, have a higher share of properties in areas of significant flood chance. For instance, Boston has about two-thirds of its properties in areas with a significant chance of flooding. [9]

Sea levels are rising, and are greater in the south of the UK than the north.[5] The global-average sea level rose during the 20th century at an average rate of 1-2 mm/year, with some consensus on the larger value by the research community. The rate was larger (approximately 3mm/year) during the 1990s. UK sea level records are consistent with these values but with smaller trends observed in Scotland (where the land is uplifting) than in the south of the UK[8].

### Scotland:[2]

Coastal erosion is occurring along 12% of the Scottish coastline. [7]

In Scotland, an estimated 99,000 properties (around 3.9% of all properties) lie in areas at high to medium risk (i.e. areas where the risk of flooding is greater than a 1 in 200 annual probability) with 26,000 at risk from the sea and 73,000 at risk from rivers.[2]


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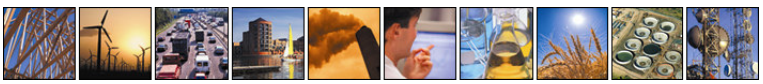

## Wales: [3]

Coastal erosion is occurring along 23% of the Welsh coastline. [7]

220,000 properties in Wales are at risk from river and sea flooding of which 64,000 are at significant risk (greater than a one in 75 chance in any year). Across the local authorities in Wales, Cardiff has the highest numbers of properties at risk from flooding from rivers or the sea. However, many of these are at low risk (less than one in 200 chance in any given year), mainly because of the flood defence structures in place in Cardiff. Although Cardiff is well defended, if these defences were to be overtopped then the consequences could be severe. Conwy has the largest number of properties at significant risk (greater than a 1 in 75 chance in any given year). This is largely because of the coastal flood risk. Coastal flooding is also the cause of the significant risk to property in Gwynedd and Newport. [10]

## Northern Ireland:[4]

Coastal erosion is occurring along 20% of Northern Ireland's coastline. [7]

It is estimated that some 60,000 properties in NI are at risk from flooding from an event with a one in 100 chance of occurrence in any one year. Nearly 14,000 of these are situated within the Greater Belfast Area.

National Assessment of Flood Risk

## Material Assets (Transport)

### National:

**Principal roads:** The UK has a network of Motorways and A-roads with provide good connectivity between regions and urban centres. Urban centres are served by 'dense and inter-twined road networks' reflecting the historic development these intra urban road links. [1]There was a significant decrease in heavy goods vehicle activity in 2009, with the amount of goods moved decreasing by 13 per cent from the 2008 level to 132 billion tonne kilometres, the amount of goods lifted decreasing by 18 per cent to 1,422 million tonnes and vehicle kilometres decreasing by 11 per cent to 18.8 billion vehicle kilometres (11.7 billion vehicle miles). [2]

In 2009, the overall motor vehicle traffic volume in Great Britain was 313.2 billion vehicle miles, down by 3.0 billion vehicle miles from last year. [3]

**Principal rail lines:** The UK has a network of main line rail connections with plans to improve capacity and track speeds. The volume of freight transported by rail has increased from 16.9 billion tonne kilometres in 1997 to 20.6 billion tonne kilometres in 2008/9. [7] Over the last 10 years, the percentage of domestic freight being transported by rail increased by one percentage point (up to 8% of total freight movements). However, over the past 55 years rail freight volumes have generally been in decline to 57% of those seen in 1953. [7]

**Principal airports:** There are 30 'major' airports in the UK. In 2008 there were 2,327,000 air traffic movements in Great Britain. Major UK airports include Heathrow, Gatwick, Stansted, East Midlands, Manchester, Glasgow, Aberdeen and Belfast. [5]

**Principal ferry ports**: Major UK sea ports include: Sullom Voe; Forth; Tees and Hartlepool; Hull; Grimsby and Immingham; Felixstowe; Harwich; London; Ramsgate; Dover; Portsmouth; Southampton; Milford Haven; Holyhead; Liverpool.[8] In 2009, 107 million tonnes of domestic freight was moved by water. In the last 10 years the amount of domestic freight transported by water has remained relatively constant at around 50 billion tonne kilometres which represents approximately 20% of the domestic freight movements. [6]

**Capacity or congestion issues:** Changes in the UK's rural/urban demographic have resulted in greater traffic volumes around certain urban hubs than those links were originally designed for. Congestion in towns and cities, and on some parts of the strategic road network, has become an ever increasing issue of importance. [1] Improvements to the rail network are helping to alleviate congestion on road networks. [7]

**Travel to work distance:** UK average of 9.7 kilometres for women and 16.6 kilometres for men. UK average time to travel to work of 22 minutes for women and 28 minutes for men (1999-2001 data).[9]

**Current issues for transport:** Half a million packages of radioactive materials are shipped within the UK each year, with the MoD making up only a very small proportion of these movements. The Low Level Waste (LLW) Repository at Drigg in Cumbria receives between 500 and 700 half-height ISO

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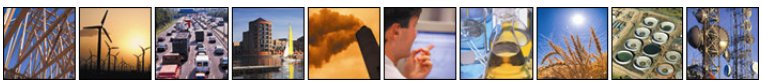

containers of LLW per year, predominantly by rail.[11]

## Scotland:

**Principal roads**: There were 55,838 kilometres of public road in Scotland on 1 April 2008. Unclassified roads accounted for almost half the road network - 26,446 km. There were 36,189 km of roads with a speed limit of over 40 mph - about two-thirds of the total network.

The length of motorway (excluding slip roads) has risen from 369 km in 1998 to 391 km in 2008. Between 1998 and 2008 the total length of the public road network increased by 1,849 km (three per cent), from 55,325 km in 1998 to 55,838 km in 2008, mainly due to a rise of 1,413 km in the total length of unclassified roads with a speed limit of up to 40 mph[21].

Principal rail lines: Scotland's rail network has around 340 railway stations and 3,000 kilometres of track; over 81 million passenger journeys are made on the network each year[26].

Rail freight has increased slightly from the mid-1990s "all-time low", to around 9-14 million tonnes in recent years [22]. ScotRail passenger numbers totalled 83.9 million in 2008/09, an increase of three per cent from the previous year, a 44 per cent rise since 1998/99 and a rise of 68 per cent since 1992/93 when records began. In the 2008 Scottish Household Survey, 91% agreed that the trains were on time, 83% agreed that services ran when the person needed them, and 55% agreed that the fares were good value.[23].

Principal airports: There were 24.3 million air terminal passengers in 2008, around 0.8 million (three per cent) less than the previous year and the third highest level ever recorded. There has been almost continuous growth from 1.2 million in 1960, with increases in all but six of the years since then. In 2008, more than half the passengers who used Scottish airports were travelling to or from other UK airports - principally London Heathrow (3.1 million), Gatwick (1.6 million), Stansted (1.2 million), Luton (0.9 million), Belfast (0.8 million) and Birmingham (0.9 million). International passenger numbers were greatest for flights to/from Amsterdam (1.1 million), Dublin (0.9 million) and Paris, Charles de Gaulle (0.5 million) [24].

Principal ferry ports: In 2008 there were 6.785 million passengers within and to and from Scotland. The most heavily-used routes were: Wemyss Bay - Rothesay (741,000); Largs - Cumbrae (711,000); Ardrossan - Brodick (707,000); Oban - Craignure (554,000) and Gourock - Dunoon (551,000). There were 1.9 million passenger journeys between Scotland and Northern Ireland in 2008: 1.1 million on the Stranraer - Belfast route, 628,000 on Cairnryan - Larne and 206,000 on Troon - Larne. The service between Troon and Belfast was withdrawn in December 2004. The numbers of cars carried on these routes (in 2008) were: 239,000 for Stranraer - Belfast ; 154,000 for Cairnryan - Larne and 59,000 for Troon - Larne.

The tonnages lifted in Scotland by coastal shipping when measured in "tonne-kilometres" shipping is around 14-17 billion[25].

## Wales:

Principal roads: The total road length in Wales in 2009 was 34,164 km. Unclassified minor surfaced roads contribute approximately half the total road length in Wales. The greatest length of motorway is in Newport, which accounts for 19 per cent of the total motorway in Wales. In 2009, 4.3 per cent of the motorway network and 5.8 per cent of the trunk road network required close monitoring of structural condition compared with 4.6 per cent and 6.2 per cent respectively in 2008.[13]

It is estimated that the volume of motor vehicle traffic on all roads in Wales in 2008 was similar to that in 2007. The volume of traffic has however grown by almost 14 per cent since 1999. Traffic on minor roads accounted for 37 per cent of all traffic. Traffic on motorways accounted for 12 per cent of all road traffic during 2008. [14]

Principal rail lines: There were approximately 25.3 million rail passenger journeys which either started or ended in Wales in 2008-09, an increase of 6 per cent compared to the previous year. During 2008-09, Cardiff was the destination of almost two-fifths (39 per cent) of rail passenger journeys within Wales. [17]

Principal airports: There is only one domestic airport within Wales which is Cardiff Airport. In 2009 aircraft movements at Cardiff International Airport were 27 per cent fewer than in 2008. The total number of passengers using Cardiff International Airport decreased by 18 per cent in 2009 to 1.63 million. [15]

Principal ferry ports: In 2008 there were 8,605 ship arrivals in Wales. This number has been in decline for the last five years with a reduction over the period of 22 per cent. There are 10 principal ferry ports in Wales with two of these accounting for 2/3 of the ship arrivals in Wales, namely Milford Haven and


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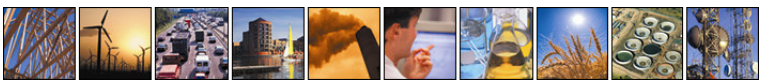

Holyhead. In 2008 there were over 55 million tonnes of goods and foreign and domestic traffic in ports in Wales. [15]

Travel to work distance: The National Travel Survey (NTS) estimates that on average around 1,000 trips are made in Wales, per person, per year, with people travelling an average distance of almost 140 miles a week. Approximately seven out of ten trips are made in either a car or a van. According to the Labour Force Survey more than four out of five people use a car, van, or minibus as their main mode of travel to work, with a further one in ten people choosing to walk.

The Living in Wales survey shows more than half of employed respondents, who are living in households with an annual gross household income of less than £20,800 (£400 per week), live within three miles of their place of work. Results from the NTS show that within 15 minutes journey time either on foot or by public transport, four out of five households have access to a doctor, nine out of ten households have access to a grocer, half of all households have access to a shopping centre, and almost one in five households have access to a hospital. NTS results show that one fifth of respondents travel on a local bus at least once a week, but conversely more than half of respondents never travel on a local bus, or use it less than once a year. [18]

Current issues: It is estimated that the volume of motor vehicle traffic on all roads in Wales in 2008 was similar to that in 2007 The volume of traffic has however grown by almost 14 per cent since 1999. Traffic on motorways accounted for 12 per cent of all road traffic during 2008. [18] During 2008, vehicle insurance offences accounted for almost one-quarter (24 per cent) of all motoring offences proceedings at magistrates' courts[19]. Three per cent of motorways and 5.8 per cent of trunk roads require close monitoring of their structural condition in 2009, a small reduction on 2008. Four per cent of Local Authority principal roads and eight per cent of non principal/classified roads were in need of further investigation of their structural condition in 2008/09[20].

## Northern Ireland:

Principal roads: 2010 there were 25,247 kilometres of public road in Northern Ireland. Unclassified roads accounted for the largest proportion of all roads (60%) followed by C roads (19%), B

roads (11%), A roads (9%) and Motorways (<1%). Analysis of the urban/rural split of the road network reveals that 21% of road lengths are urban (speed limit of 40 mph or less) and 79% are rural (speed limit of more than 40 mph). This varies between the different road types with C roads having the highest proportion of rural road length (94%) and unclassified roads having the lowest proportion of rural road length (73%). During 2009, 57.4 million tonnes of freight were lifted within Northern Ireland and transported by road in goods vehicles weighing over 3.5 tonnes, a decrease of 16% from 2008. Crude minerals (e.g. sand, gravel) were the greatest single commodity transported within Northern Ireland and accounted for 16.5 million tonnes, 29% of all tonnes moved.[12]

Principal rail lines: Northern Ireland has 211 route miles of track and 22 stations. During 2009-10, there were 10.0 million rail passenger journeys made, a decrease of 2% from 2008-09. Railway passenger receipts also decreased, from £29.0 to £28.5 million, a decrease of 2%.[12]

Principal airports: Between 2008 and 2009, air transport movements at Belfast International Airport decreased by 18%, George Best Belfast City Airport decreased by 6% and City of Derry Airport decreased by 28%. In 2009, Belfast International Airport accounted for 51% of all air transport movements, George Best Belfast City Airport 44% and City of Derry Airport 5%. Of the 85,849 air transport movements occurring during 2009, 92% were scheduled and 8% were chartered. During 2009, 7.5 million terminal passengers passed through Northern Ireland airports, representing a decrease of 9% on the 2008 figure. [12]

Principal ferry ports: There are three major ports in Northern Ireland namely, Belfast, Larne and Warrenpoint which saw 2.2 million sea passengers travelled between Northern Ireland and Great Britain ports during 2009 with an additional 19,000 travelling by sea between Northern Ireland and the Isle of Man. [12]

In 2009 the most frequently used method of travel to work in Northern Ireland was car, van or minibus, with 86% of the workforce interviewed in October to December using these methods. This compares to 71% in the United Kingdom as a whole.[12]

## MOD specific data:

As of 2010, the MOD has the freehold to 1,000Ha of Naval Base land,[10] principally at Faslane, Coulport and Marchwood. The Naval Bases at Portsmouth and Devonport are now largely contractor-owned. This has decreased from 1,400Ha in 1997 and is set to reduce further as a result of the SDSR.

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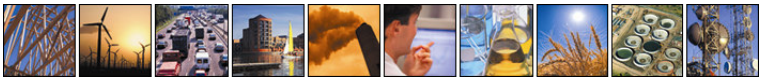

## Material Assets (Waste Management)

### National:

Waste management facilities: There are 3 LLW disposal sites within Great Britain; the main national repository is the LLW Repository near Drigg, in England. Further LLW disposal sites are at Dounreay and Clifton Marsh. Radioactive waste is managed on 36 sites in the UK, the majority of which are in England. There are 26 sites in England, including 7 sites owned by the MoD.

Radioactive waste arisings: The total volume of radioactive waste from all sources in the UK was estimated to be 290,230m$^3$ (total stocks of High Level Waste (HLW), Intermediate Level Waste (ILW) and Low Level Waste (LLW) at April 2007). Radioactive waste is classified by the level of radioactivity of the material. LLW accounts for 93% of UK arisings, ILW for 7% of UK arisings and HLW for <0.05% of UK arisings. The majority of radioactive waste in the UK is in England; an estimated 268,430m$^3$ (total stocks of HLW,ILW and LLW at April 2007), 91% of which is LLW, 9% is ILW and 0.04% is HLW.[1]

***Low Level Waste (LLW)*: LLW is defined as *w*aste that does not exceed specified levels of radioactivity (below 4 GBq/tonne of alpha or 12 GBq/tonne of beta-gamma activity). Overall, the major components of LLW are building rubble, soil and steel items such as framework, pipework and reinforcement from the dismantling and demolition of nuclear reactors and other nuclear facilities and the clean up of nuclear sites. However, at the present time most LLW is from the operation of nuclear facilities, and this is mainly paper, plastics and scrap metal items. Most LLW is sent to the LLWR near Drigg in Cumbria or in certain cases to specific landfill sites soon after it is produced. About 93% (3,200,000m$^3$) of radioactive waste falls into the LLW category.[1]

***Intermediate Level Waste (ILW):*** ILW is defined as wastes exceeding the upper boundaries for LLW that do not generate sufficient heat for this to be taken into account in the design of waste storage or disposal facilities. The major components of ILW are metal items such as nuclear fuel casing and nuclear reactor components, graphite from reactor cores, and sludges from the treatment of radioactive liquid effluents. ILW is stored in tanks, vaults and drums, with most waste requiring concrete to shield operators from the radiation. About 7% (about 240,000m$^3$) of radioactive waste is in the ILW category. [1]

***High Level Waste (HLW):*** HLW is defined as wastes in which the temperature may rise significantly as a result of its radioactivity, so this factor has to be taken into account in the design of waste storage or disposal facilities. Initially HLW comprises nitric acid solutions containing the waste products of reprocessing spent nuclear fuels. HLW is stored as liquid in water-cooled, stainless steel tanks or as vitrified glass blocks, and needs thick concrete walls to shield operators from the high radiation. Less than 0.1% (1,100m$^3$) is in the HLW category. [1] HLW does not include spent fuels or nuclear materials themselves; these are held in long-term storage and are not classified as wastes.

At present there are no facilities in the UK for disposing of LLW not suitable for near-surface disposal, ILW and HLW – and these wastes are currently stored. [2] Managing Radioactive Waste Safely (MRWS) is the process to identify and implement long-term management solutions for the UK's higher-activity radioactive waste. As part of the MRWS programme the Government set up the independent Committee on Radioactive Waste Management (CoRWM). In 2006, CoRWM recommended that geological disposal, coupled with a programme of robust, safe and secure interim storage until a disposal facility is available, would be the best approach for managing the UK's inventory of legacy higher activity radioactive waste. In 2007 CoRWM was reconstituted to provide independent scrutiny on the Government's and Nuclear Decommissioning Authority's (NDA) proposals, plans and programmes to deliver geological disposal, together with robust interim storage, as the long-term management option for the UK's higher activity wastes. In June 2008, UK Government, in conjunction with the devolved administrations for Wales and Northern Ireland (not Scotland), published a White Paper setting out the framework for managing higher-activity radioactive waste in the long-term through geological disposal, coupled with safe and secure interim storage and ongoing research and development to support its optimised implementation.[2]

Non-radioactive waste arisings: In 2004, total UK waste arisings were around 335 million tonnes. Of this 32% was construction and demolition waste; 29% was mining and quarrying waste; 13% was industrial waste; 12% was commercial waste; 9% was household waste; 5% was dredging waste; and agricultural and sewage wastes made up for less than 1% each. Commercial and industrial waste arisings were therefore around 0.84 million tonnes in 2004. In 2007, 73 million tonnes of waste were sent to landfill (a decrease of 19.5% since 2002). The amount of waste recycled or composted has increased accounting for 34% of waste in 2007/08.[4]

In 2002, 41% of commercial and industrial waste arisings were landfilled; 33% were recycled; 9% were

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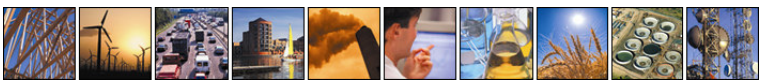

reused; 4% were treated; 4% were thermally treated; 4% were unrecorded; 3% went to land recovery; 2% were transferred; and 1% was unsampled.[5]

In 2004, total waste arisings in England were around 272,000,000 tonnes. Of this 32% was construction and demolition waste; 30% was mining and quarrying waste; 13% was industrial waste; 11% was commercial waste; 9% was household waste; 5% was dredged material; and agricultural and sewage wastes made up for less than 1% each.[3] In 2007, 73,000,000 tonnes of waste (household, commerce & industry, and construction & demolition) was sent to landfill (a decrease of 19.5% since 2002).[4]

Commercial and industrial waste arisings in England were estimated to be around 67,900.000 tonnes in 2002/2003. At that time, 41% of commercial and industrial waste arisings were landfilled; 33% were recycled; 9% were reused; 4% were thermally treated; and 2% was recovered by other means.[6]

Current issues for waste management: Commercial and industrial waste data is not routinely collated (Defra intend to carry out a national survey of commercial and industrial waste by the end of 2010). However it is subject to similar pressures as municipal waste, namely increased waste prevention, adoption of recycling and reuse alternatives and reduced reliance on landfill.

## Scotland:

Waste management facilities: Radioactive waste is managed at 7 sites in Scotland, which includes the MoD sites at HMNB Clyde, Rosyth and Vulcan support the UK's naval nuclear propulsion programme.[1] A contract is expected to be awarded for the development of a new LLW disposal facility at Dounreay in 2011.[6]

Radioactive waste arisings: The total predicted volume of radioactive waste from all sources in Scotland is estimated to be 429,500m$^3$ (lifetime total once all LLW and ILW are packaged. 90% of radioactive waste arisings in Scotland is LLW and 10% is ILW. No HLW is managed in Scotland.[1]

At present there are no facilities in Scotland for disposing of LLW and ILW - these wastes are currently stored.[2] The Scottish Government currently supports long-term interim storage of radioactive waste and therefore did not sponsor the MRWS White Paper. The Scottish Government is currently developing a detailed policy statement intended to enable waste producers to manage radioactive wastes arising from nuclear sites in Scotland.[7]

Non-radioactive waste arisings: In 2008, waste arisings in Scotland totalled 19,515,392 tonnes (controlled waste arisings). Of this, 15% was household waste; 41% was commercial & industrial waste; and 44% was construction & demolition waste. A total of 6,112,198 tonnes of Scottish waste was sent to landfill in 2008 (a decrease of 1,221,240 tonnes since 2007).[8]

Commercial and industrial waste arisings in Scotland were estimated to be around 7,945,915 tonnes in 2008. Of a recorded 4,873,501 tonnes of commercial and industrial waste, 46% of this waste was landfilled; 5% was incinerated; 46% was recycled; and 3% was composted.[8]

Current issues for waste management: The need to reduce waste arisings through sustainable design, increasing resource efficiency, re-use and recycling, and recovering value from products, and to divert as much waste from landfill as possible.[9]

## Wales:

Waste management facilities: Radioactive waste is managed at 3 sites in Wales, the NDA Magnox reactor station sites at Trawsfynydd and Wylfa – the former is shut down and being decommissioned, the latter is operational; and GE Healthcare's Maynard Centre at Cardiff.[6]

Radioactive waste arisings: The total predicted volume of radioactive waste from all sources in Wales is estimated to be 125,900m$^3$ (lifetime total once all LLW and ILW are packaged. Approximately 83% of radioactive waste arisings in Wales is LLW and 17% is ILW). No HLW is managed in Wales.[1]

At present there are no facilities in Wales for disposing of LLW and ILW – these wastes are currently stored and transported to the respository in Drigg, England.[2] The Welsh Assembly Government support CoRWM recommendations that geological disposal, preceded by safe and secure interim storage, is the best approach for the long-term management of higher activity radioactive wastes.

Non-radioactive waste arisings: In 2008, waste arisings in Wales totalled 7,200,000 tonnes. At that time, a total of 2,968,000 tonnes of waste was sent to landfill (a decrease of 1,409,000 tonnes since 1998/1999).[10]

Commercial and industrial waste arisings in Wales were estimated to be around 3,573,000 tonnes in 2007. At that time, 49% of commercial and industrial waste was recycled, composted or reused; 1% was incinerated; and 39% was landfilled.[11]

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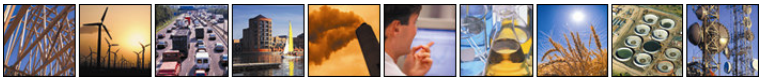

Current issues for waste management: The need to reduce waste production, by maximising recycling, minimising the amount of residual waste produced and achieving as close to zero landfill as possible.[11]

## Northern Ireland:

Waste management facilities: There are currently no nuclear licenced sites in Northern Ireland; only very small quantities of radioactive waste are produced from hospitals and industry.[6]

Radioactive waste arisings: There are no major radioactive waste producer sites in Northern Ireland.[6] The Department of the Environment Northern Ireland supports CoRWM recommendations that geological disposal, preceded by safe and secure interim storage, is the best approach for the long-term management of higher activity radioactive wastes.

Non-radioactive waste arisings: In 2005/ 6, waste arisings in Northern Ireland totalled 1,063,510 tonnes.

Total commercial and industrial waste arisings for Northern Ireland in 2004/05 were estimated to be around 1,560,371 tonnes.[12] A large proportion of commercial and industrial waste is suitable for recycling and recovery, however historically this material has been disposed of to landfill. The amount of commercial and industrial waste estimated to have been landfilled in 2004/05 was 64% (equivalent to 998,200 tonnes). In 2004/05 24% of commercial and industrial waste produced (equivalent to 379,817 tonnes) was recycled.[13]

Current issues for waste management: The continuing increase in the amount of waste produced in Northern Ireland due to economic and population growth, and the need to comply with the limits posed by the Landfill Directive. The need to address waste prevention therefore remains a priority.[13]

## MOD specific data:

Radioactive waste is managed on 7 sites owned by the MoD, which undertake operations in support of the atomic weapons programme (Aldermaston), the nuclear submarine propulsion programme (Barrow-In-Furness, Derby and Her Majesty's Naval Base (HMNB) Devonport) and other activities (Donnington, Eskmeals and HMNB Portsmouth).[1]

The MoD is estimated to account for around 2% of total LLW arisings in the UK.[1] In 2008/09 the MOD recycled and reused 51% of its total 177,000 tonnes of waste [14]

## Material Assets (Land Use and Materials)

### National:

Total area: The UK covers an area of 2,472,900 hectares (242,514km$^2$). England comprises the largest land area in the UK, covering an area of 13,028,100 hectares (130,281km$^2$). The smallest land area in the UK is Northern Ireland, which covers an area of 1,357,600 hectares (13,576km$^2$).[1]

Major land uses: In 2007 the UK had the following land cover: [2]

| UK Land Cover 2007 | '000s ha | % area |
|---|---|---|
| Broadleaved, Mixed and Yew Woodland | 1,488 | 6.0 |
| Coniferous Woodland | 1,380 | 5.6 |
| Linear Features | 527 | 2.1 |
| Arable and Horticulture | 4,657 | 18.8 |
| Improved Grassland | 5,067 | 20.5 |
| Neutral Grassland | 2,407 | 9.7 |
| Calcareous Grassland | 59 | 0.2 |
| Acid Grassland | 1,599 | 6.5 |
| Bracken | 263 | 1.1 |
| Dwarf Shrub Heath | 1,360 | 5.5 |
| Fen, Marsh, Swamp | 439 | 1.8 |
| Bog | 2,393 | 9.7 |
| Standing Open Waters | 265 | 1.1 |

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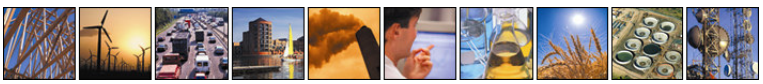

| | | |
|---|---|---|
| Rivers and Streams | 64 | 0.3 |
| Montane | 42 | 0.2 |
| Inland Rock | 106 | 0.4 |
| Built-up Areas and Gardens | 1,397 | 5.6 |
| TOTAL | 24,729 | 100 |

Average population density of UK: 247 people per km$^2$ (385 people per km$^2$ in England).[1]

Major land uses: In 2007 England had the following land cover:[2]

| England Land Cover 2007 | '000s ha | % area |
|---|---|---|
| Broadleaved, Mixed and Yew Woodland | 981 | 7.4 |
| Coniferous Woodland | 257 | 1.9 |
| Boundary and Linear Features | 353 | 2.7 |
| Arable and Horticulture | 4,002 | 30.4 |
| Improved Grassland | 2,856 | 21.7 |
| Neutral Grassland | 1,453 | 11.0 |
| Calcareous Grassland | 30 | 0.2 |
| Acid Grassland | 396 | 3.0 |
| Bracken | 91 | 0.7 |
| Dwarf Shrub Heath | 331 | 2.5 |
| Fen, Marsh and Swamp | 117 | 0.9 |
| Bog | 140 | 1.1 |
| Standing Open Water and Canals | 97 | 0.7 |
| Rivers and Streams | 29 | 0.2 |
| Built-up Areas and Gardens | 1,038 | 7.9 |
| Other land | 580 | 4.4 |
| Unsurveyed Urban Land | 428 | 3.5 |
| TOTAL | 13,180 | 100 |

In 2008, there was an estimated 63,750 hectares of previously-developed land in England, up from 2.6% from 62,130 hectares in 2007. An estimated 32,400ha of previously-developed land was vacant or derelict, 51% of the total. The remaining 31,350ha was in use but with potential for redevelopment.[3]
Current land use issues: There is currently increasing pressure on rural and agricultural land from developers as urban areas expand.

## Scotland:

Total area: Scotland covers an area of 7,792,500ha (77,925km$^2$) .[1]
Average population density of Scotland: 65 people per km$^2$. [1]
Major land uses: In 2007 Scotland had the following land cover:[2]

| Scotland Land Cover 2007 | '000s ha | % area |
|---|---|---|
| Broadleaved, Mixed and Yew Woodland | 251 | 3.1 |
| Coniferous Woodland | 956 | 11.9 |
| linear Features | 95 | 1.2 |
| Arable and Horticulture | 534 | 6.6 |
| Improved Grassland | 907 | 11.2 |
| Neutral Grassland | 461 | 5.8 |
| Calcareous Grassland | 26 | 0.3 |
| Acid Grassland | 983 | 12.3 |
| Bracken | 132 | 1.6 |
| Dwarf Shrub Heath | 894 | 11.1 |

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6. Environment Strategy for Wales, Welsh Assembly Government, May 2006, http://wales.gov.uk/topics/environmentcountryside/epq/envstratforwales/strategy/?lang=en
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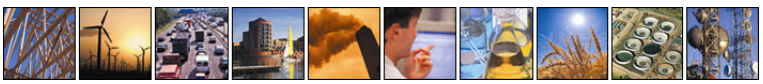


| | | |
|---|---|---|
| Fen, Marsh, Swamp | 239 | 3.0 |
| Bog | 2,044 | 25.6 |
| Standing Open Waters | 89 | 1.1 |
| Rivers and Streams | 21.3 | 0.3 |
| Built-up Areas and Gardens | 153 | 1.9 |
| Other land | 74 | 0.9 |
| Unsurveyed Urban Land | 38 | 0.5 |
| TOTAL | 8,012 | 100 |

In 2009, there was an estimated 10,863 hectares of derelict and urban vacant land in Scotland, of which 2,640 hectares (24%) were urban vacant and 8,224 hectares were derelict (76%).[4]

Current land use issues: The effects of changes in climate, lifestyles, settlement patterns, infrastructure requirements and the impacts of global markets on land uses, which place pressures on space and affects land use change. More than 80%of Scotland's population live in urban areas, and yet only 6% of land in Scotland is urban; this leads to a high monetary value being placed on urban land. There are also only relatively small areas of prime agricultural land in Scotland. [5]

## Wales:

Total area: Wales covers an area of 2,073,200ha (20,732km$^2$) .[1]

Average population density of Wales: 141 people per km$^2$

Major land uses: In 2007 Wales had the following land cover:[2]

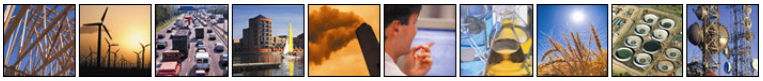
| Wales Land Cover 2007 | '000s ha | % area |
|---|---|---|
| Broadleaved, Mixed and Yew Woodland | 174 | 8.2 |
| Coniferous Woodland | 106 | 5 |
| Linear Features | 48 | 2.2 |
| Arable and Horticulture | 73 | 3.4 |
| Improved Grassland | 730 | 34.4 |
| Neutral Grassland | 263 | 12.4 |
| Calcareous Grassland | 1.2 | 0.1 |
| Acid Grassland | 211 | 9.9 |
| Bracken | 37 | 1.8 |
| Dwarf Shrub Heath | 117 | 5.5 |
| Fen, Marsh, Swamp | 36 | 1.7 |
| Bog | 48 | 2.3 |
| Standing Open Waters | 5 | 0.3 |
| Rivers and Streams | 6 | 0.3 |
| Montane | 0.1 | 0.004 |
| Inland Rock | 8 | 0.4 |
| Built-up Areas and Gardens | 132 | 6.2 |
| Other Land | 111 | 5.2 |
| Unsurveyed Urban Land | 15 | 0.7 |
| TOTAL | 2,121 | 100 |

Area of previously developed land available for redevelopment: *(No baseline data identified in relation to previously developed land in Wales, (consultee input welcome).*

Current land use issues: A key priority is the conservation and enhancement of land, developing in a sustainable and equitable way for the long term benefit of future generations, in particular considering the impact of climate change on land change. The very small proportion of land that is classified as 'best and most versatile' agricultural land in Wales makes it important to conserve it.[6]

## Northern Ireland:

Total area: Northern Ireland covers an area of 1,357,600ha (13,576km$^2$) .[1]



Average population density of Northern Ireland: 125 people per km$^2$.[1]

Major land uses: In 2007 Northern Ireland had the following land cover:[7]

| Northern Ireland Land Cover 2007 | ha | % area |
|---|---|---|
| Broadleaved/Mixed and Yew Wood | 81,699 | 5.77 |
| Coniferous Woodland | 60,617 | 4.28 |
| Roads, Tracks and Hard Verge | 30,951 | 2.19 |
| Arable and Horticulture | 48,917 | 3.46 |
| Improved Grassland | 573,010 | 40.47 |
| Neutral Grassland | 231,116 | 16.32 |
| Calcareous Grassland | 1,802 | 0.13 |
| Acid Grassland | 10,369 | 0.73 |
| Bracken – Dense | 2,645 | 0.19 |
| Heath (Dwarf Shrub) | 16,751 | 1.18 |
| Fen, Marsh and Swamp (Wetland) | 47,255 | 3.34 |
| Bog | 160,902 | 11.36 |
| Standing Open Water (Waterbodies) | 61,332 | 4.33 |
| Rivers and Streams | 5,495 | 0.39 |
| Montane* | <735 | / |
| Inland Rock | 5,450 | 0.39 |
| Urban/Built-up Areas | 74,098 | 5.23 |
| Supralittoral Rock | 1,581 | 0.11 |
| Supralittoral Sediment | 1,995 | 0.14 |
| TOTAL | 1,415,986 | 100 |

* Montane has not yet been surveyed, although the area of habitat is thought to be no greater than 735ha (the area of the land classification stratum in which it is located).

Area of previously developed land available for redevelopment: *(No baseline data identified in relation to previously developed land in Northern Ireland, (consultee input welcome).*

Current land use issues: The main pressure on land is development (including housing, industrial and recreational), infrastructure, extraction industries, agriculture and forestry, and tourism. Considerable new housing development has taken place on urban fringes as well as towns and villages. The sustainable management of land use change is a key priority. There is a need to move towards redevelopment of brownfield sites in order to relieve pressure on the development of Greenfield (previously undeveloped land).[8]

### MOD specific data:

The MoD is the third largest landowner in the UK with a diverse estate of some 238,000 hectares (1% of the UK mainland) valued at some £15.3 billion.[10] 79% of this is in England, 11% in Scotland, 9% in Wales and 1% in Northern Ireland. [10]

Since 2003 the MOD delivered 35,000 modernised Single Living Accommodation bed spaces it is anticipated that a further 21,000 bed spaces will be delivered by 2013, a total of 56,000 overall.[10]

The MOD's built estate covers approximately 80,000 hectares, with at least 45,000 buildings (including single living units) and approximately 52,000 houses. The MOD owns or manages an overall stock of 70,000 houses worldwide and 160,000 single living units, spread across more than 200 sites in 16 countries. [9, 10]

## Cultural Heritage

### National:

Number of Scheduled Monuments: No UK wide data. 19,717 in England.[1]

**References:**

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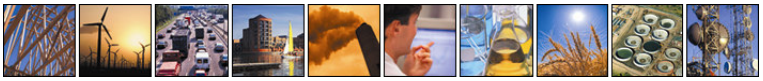

Number of listed buildings: No UK wide data. 374,081 in England (this relates to entries).[1]

Number of conservation areas: No UK wide data. 9,080 in England.[1]

Sites currently at risk: No UK wide data. 19,446 in England. [1]

Other important sites: The UK has 28 World Heritage Sites[3]. England has 43 registered historic battlefields; and 46 designated wrecks.[1]

## Scotland:

Number of Scheduled Monuments: 8,089 in Scotland.[2]

Number of listed buildings: In excess of 47,000. [9]

Number of conservation areas: In excess of 600. [9]

Sites currently at risk: 2,360. [13]

Other important sites: Scotland has five World Heritage Sites and more than 275 sites listed in the Inventory of Historic Parks, Gardens and Designed Landscapes. [9]

## Wales:

Number of Scheduled Monuments: 4,111. [10]

Number of listed building: 29,889. [10]

Number of conservation areas: 519. [10]

Sites currently at risk: A 2008 report for Cadw found that for a sample percentage of Listed Buildings in Wales, 9.6% were classed as being 'at risk'. [10]

Other important sites: Wales has two World Heritage Sites and a third site (the Pontcysyllte Aqueduct and Canal System) is being put forward for consideration. Wales also has a total of 386 registered parks and gardens, 127 monuments in state care and six designated historic wrecks. [10]

## Northern Ireland:

Number of Scheduled Monuments: 1,803. [11]

Number of listed buildings: 8,350. [11]

Number of conservation areas: 60. [11]

Sites currently at risk: A total of 437 buildings and monument were at risk in 2008. [11]

Other important sites: Northern Ireland has one World Heritage Site, 334 battlefields and 154 registered historic parks, gardens and demesnes. [12]

## MOD specific data:

In 2008/09, the MOD's historic estate comprised 797 listed buildings and 737 scheduled monuments.[7]

In 2009,34 listed buildings were Grade I; 134 were Grade II*; and 629 were Grade II. [8]

A number of MoD sites are within the boundaries of nine cultural World Heritage Sites. (Cornwall and West Devon Mining Landscape; Derwent Valley Mills; Edinburgh World Heritage Site; Liverpool - Maritime Mercantile City; The Tower of London; Stonehenge, Avebury and Associated Sites; Hadrian's Wall; St Kilda World Heritage Site; and City of Bath). [4]

A number of MoD sites have been placed on the English Heritage (EH) and Historic Scotland (HS) Registers of Parks and Gardens. These include: Halton House and Gardens; Chicksands Priory; RAF Bentley Priory; Amport House and Gardens; Minley Manor; Royal Naval Hospital, Haslar; Craigiehall and RAF Leuchars. [4]

Parts of the MoD estate lie within Local Planning Authorities (LPA) designated Conservation Areas including: RAF Bicester; RAF Hullavington; HMNB Portsmouth; Gosport; and RMA Sandhurst. [4]

At March 2009 the MOD report that 89% of the listed buildings and 80% of the scheduled monuments were in either good or fair condition. [6,7]

Current issues for cultural heritage: In 2007 the MOD had 28 Buildings at Risk entries. Since that report three buildings have been removed from the list (one by repair, one by disposal and one by transfer to English Partnerships) and three have been added. [5]


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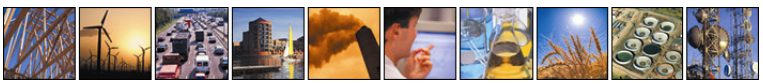

## Landscape

### National:

Statutory Designated sites for protection of wildlife and landscape include National Parks, Areas of Outstanding Natural Beauty, Country Parks, Historic Gardens and Designed Landscapes, Regional Parks (in Scotland) and World Heritage Sites.[3]

Other important (non-statutory) sites include Areas of Great Landscape Value (AGLVs) in Scotland; Heritage Coasts (in England and Wales); and National Trust/National Trust for Scotland properties. [3]

The UK has 15 National Parks [2].

The UK (excluding Scotland) has 49 AONBs.[1]

### Scotland:

Scotland has 40 National Scenic Areas (NSAs) covering more than one million hectares (12.7 % of Scotland). [7]

Other areas designated for their landscape include two national parks and three regional parks together with a number of AGLVs. [7]

### Wales:

There are four AONBs solely within Wales. [1]

Other areas designated for their landscape include three national parks covering 20% of Wales (Brecon Beacons, Snowdonia and Pembrokeshire Coast National Park); 495km of heritage coast, and 58 landscapes of outstanding/special historic interest. [5]

### Northern Ireland:

Northern Ireland has nine AONBs in addition to two proposed AONBs. [1]

There are no National Park areas in Northern Ireland.

The Giant's Causeway and Causeway Coast was declared a World Heritage Site in 1996. [6]

Northern Ireland has been characterised by the Northern Ireland Environment Agency into 130 distinct landscape areas. [6]

### MOD specific data:

The Ministry of Defence (MOD) is the third largest landowners in the United Kingdom with a diverse estate of some 238,000 hectares (1% of the UK mainland).[4] A proportion of this land (or land over which MOD has access rights for military purposes) is within National Parks (such as Dartmoor, Northumberland and the Brecon Beacons), AONBs or other statutorily or locally-important landscapes and townscapes. MOD maintains a presumption in favour of public access unless there are operational or training requirements, safety or security limits.

**References:**


1. National Association of AONB, http://www.aonb.org.uk
2. Association of National Park Authorities, http://www.nationalparks.gov.uk/
3. JNCC, landscape designations, http://www.jncc.gov.uk/page-1527
4. Source MOD Sustainable Development Report and Action Plan 2009: http://www.mod.uk/DefenceInternet/AboutDefence/CorporatePublications/HealthandSafetyPublications/SSDCD/SustainableDevelopmentPolicy/SustainableDevelopmentStrategyReportsAndActionPlans.htm
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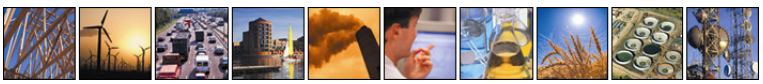
6. Department of the Environment, 2003. Shared Horizons, http://www.ni-environment.gov.uk/shared_horizons.pdf
7. Scottish Government, 2010, Land Use Strategy, Strategic Environmental Assessment Screening and Scoping Report, http://www.scotland.gov.uk/Resource/Doc/1051/0095735.pdf

## Table A2 - Summary of National Trends, Targets and Likely Evolution of the Baseline

### Biodiversity and Conservation

#### National Trends:

The general global trend in biodiversity is generally towards a decreased level of variability among living organisms. "Biodiversity loss has accelerated to an unprecedented level, both in Europe and worldwide. It has been estimated that the current global extinction rate is 1,000 to 10,000 times higher than the natural background extinction rate. In Europe some 42% of European mammals are endangered, together with 15% of birds and 45% of butterflies and reptiles".[1]

The global trend towards a decline in biodiversity is mirrored in the UK. In the UK, 30% of current biodiversity indicators are showing long term deterioration with 27% showing improvement. Areas of concern are: farmland/woodland/wetland birds; butterflies; bats; and marine ecosystem integrity. [5] In England the trend in populations of breeding wading birds on unprotected lowland wetland grasslands is towards a major decline. [3] However, SSSIs in England have experienced a dramatic improvement in the overall site condition over the last 10 years as a result of protection and management. [3]

In the UK there has been a trend (between 1996 and 2008) of a steady increase in the areas of SPAs and SACs in the UK. In 2009 over 80% of SACs and SPAs in England were in favourable or recovering condition. In 2008 in Scotland over 60% of SACs and over 70% of SPAs were in favourable or recovering condition[4].

There is a UK trend towards increased areas protected for biodiversity, flora and fauna. The overall total extent of land and sea protected in the UK has increased from 2.3 million to 3.8 million hectares between 1996 and 2009. [4] Despite the increase in area protected for its biodiversity there is concern that the protected site network as it exists is insufficient to protect biodiversity in England as a whole and that some species and habitats will be confined to these protected areas and more vulnerable to pressures and threats, including climate change[14].

The main reasons for the collapse of England's wildlife, summarised in Section 2.1.3 are not going to go away. Indeed they are likely to increase and will be exacerbated by climate change, making the corrective action advocated in this report even more important.

The Marine and Coastal Access Act contains provisions for a new type of marine protected area called Marine Conservation Zones (MCZs). MCZs will exist alongside European marine sites (SACs and SPAs), to form a marine protected areas network. Existing Marine Nature Reserves at Lundy and Skomer will be converted into MCZs. MCZs will protect areas covering the habitats and species which exist in our seas. They will be used to protect areas that are important to conserve the diversity of rare, threatened and representative habitats and species. The Act includes two new duties on all public bodies in respect of MCZs. Firstly all public bodies will be under a general duty to exercise their functions in a manner which will further the conservation objectives for MCZs. Secondly, public bodies will be under a duty not to authorise anything where there is a significant risk of it hindering the conservation objectives for a site.[6] The creation of a network of MCZs will create a new network of protected marine sites and should lead to an improvement in the biodiversity value of these sites.

#### Trends in Scotland:[7]

Results of the 2005 reporting round of the UK Biodiversity Action Plan have not yet been fully analysed on a national basis but revealed that:

- around 32% of priority habitats and 39% of priority species in Scotland were either stable or showing signs of recovery;
- approximately 32% of habitats and 18% of species were still declining; and
- a small proportion of priority species (12%) and habitats (7%) had no clear improving or declining trend in Scotland in the period 2002 - 2005.

#### Trends in Wales:[10]

SACs and SPAs are also known as Natura 2000 sites and are designated for their importance at the European level. Each Natura 2000 site is designated for one or more conservation features and the condition of these features is monitored on an approximate six-year cycle. For the period 2000 - 2008 the condition of the conservation features of SACs and SPAs (Natura 2000 sites) was assessed as follows:[8]

**References:**

1. European Commission, http://ec.europa.eu/environment/nature/biodiversity/intro/index_en.htm
2. Joint Nature Conservation Committee, 2009 Biodiversity Indicators, http://www.jncc.gov.uk/page-4229
3. State of the Natural Environment Report' (2008) http://naturalengland.etraderstores.com/NaturalEnglandShop/product.aspx?ProductID=31a51089-6654-4d48-8f89-30d3c8c66aee
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5. UK Biodiversity Indicators in Your Pocket 2010, http://www.jncc.gov.uk/pdf/BIYP_2010.pdf
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9. Countryside Council for Wales (2006) Sites of Special Scientific Interest (SSSIs) in Wales Current state of knowledge Report for April 2005 – Mar 2006
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12. Mackey, E.C. and Mudge, G. (2010). Scotland's Wildlife: An assessment of biodiversity in 2010. Scottish Natural Heritage, Inverness.
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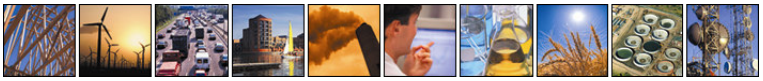


- 54% of Natura 2000 species features were in favourable condition, compared to 45% in unfavourable condition over the period 2000- 2008; and
- 60% of Natura 2000 habitats features were in favourable condition, compared to 25% unfavourable and 15% recovering for the period 2000 - 2008.

A 2006 review[9] of SSSIs in Wales found that:

- 12% of Wales is designated as Sites of Special Scientific Interest (SSSI);
- during 2005/6 Wales gained three SSSIs, an additional 399 ha;
- 71% of SSSIs by area are also sites of international importance for wildlife;
- one quarter of SSSIs can be reached within 1km of a town or city;
- 62% of SSSIs by area are classed as open access land;
- from a sample of SSSIs, 47% of designated habitats and species were considered to be in favourable condition;
- 25% of SSSIs by area are known to be owned or managed by conservation sector bodies; and
- 62 infringements to SSSI legislation were reported during 2005/6.

This compares with a 2005 review of SSSIs by CCW which found that 29% of the area covered by SSSIs was in favourable condition, 18% was in unfavourable but recovering condition, with a further 52% being in 'unfavourable and declining' condition. The remaining 1% was classified as partially destroyed.

### Trends in Northern Ireland:

Priority habitats and species are monitored over a three-year period by NIEA as an indicator of biodiversity. The overall status and trends of priority habitats and species, for which information is available, has remained relatively unchanged between 2005 and 2008.

### MOD Trends:

MOD is on target to achieve SDiG targets across the UK; further targets will be set to maintain adherence going forward

### National Targets:

Coastal defence authorities have a specific target to ensure no net loss of habitats covered by Biodiversity Action Plans.

Defra set out the aim of halting biodiversity loss in the UK by 2010.

The pan-government biodiversity framework target (captured within the MOD biodiversity strategy) requires 95% of SSSIs to be in 'Favourable' or 'Unfavourable Recovering' condition by 2010 (85% for Wales). In 2008 85% of SSSIs in England were in target conditions, 68% in Scotland, 78% in Wales and 57% in Northern Ireland. In March 2008 the following percentages of MOD managed SSSIs were in target condition: 85% in England, 68% in Scotland, 78% in Wales and 57% in Northern Ireland.

### Targets in Scotland:

Scotland's 2010 biodiversity targets underpin the high level target to halt the loss of biodiversity by 2010. Based on the European Biodiversity Action Plan framework and adopted by the Scottish Biodiversity Committee in March 2008, eight priority objectives, four supporting measures and 37 targets for action have been specified for Scotland.[12]

### Targets in Wales:

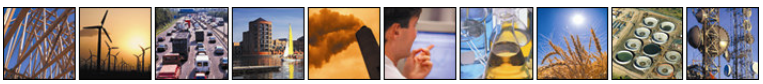
No detailed targets for biodiversity in Wales could be found. Consultee comment welcome.

### Targets in Northern Ireland:

In 2005 Northern Ireland Biodiversity Group produced a report which included a range of recommendations of measures that could be undertaken to improve the implementation of the Northern Ireland Biodiversity Strategy and stressed the urgency of these if the 2016 target of halting biodiversity loss is to be achieved.[13]

### MOD Targets:

MOD SOGE targets are to achieve 95% of SSSIs in England and Scotland to be at Favourable or Unfavourable Recovering condition by the end of 2010. The target in Wales is 85% by 2013, and in



| | |
|---|---|
| Northern Ireland it is 95% by 2013. | |

## Population

### i) Demographic Trends

### National Trends:

The current UK population is generally increasing, and projected to reach 71.6 million by 2033. [4]

The age structure of the UK population is moving towards an ageing population: those of pensionable age are projected to increase from 19.2% in 2008 to 21.8% of the population by 2033 (note that the pensionable age is to change over this period). Those aged between 15-64 years are projected to decrease from 62.1% to 60.5% of the population, whilst those under 16 are projected to decrease from 18.7% to 17.9% of the population by 2033. [4]

### Trends in Scotland, Wales and Northern Ireland:

Between 2008 and 2033, the population of Scotland is projected to increase from 5.17 to 5.84 million. The number of children aged under 16 is projected to decrease by 1.5% from 0.91 million in 2008 to 0.9 million by 2033; the number of people of working age is projected to increase by 2.1% from 3.24 million in 2008 to 3.31 million; the number of people of pensionable age is projected to rise by 23.9% from 1 million in 2008 to 1.34 million. [6]

The population of Wales is projected to increase to 3.35 million by 2033 (a 12 per cent increase). Although more births than deaths are projected throughout most of the projection period, net inward migration is the main reason for projected population growth. The number of children is projected to decrease slightly during the first five years of the projection period, with around one per cent less children in 2013 than in 2008. This is because the projected decrease in the number of older children is greater than the increase in the number of young children during the next few years. The number of pensioners is projected to increase during most of the projection period despite the change to state pension age. It is projected that there will be 185,000 (29 per cent) more pensioners in 2033 than in 2008. The population of Wales will become gradually older with the median age of the population rising from 41.1 years in 2008 to 44.2 years in 2033. [7]

In Northern Ireland, the population is projected to increase to 1,985,800 between 2008 and 2033 (an increase of 11.9%). The proportion of the population that is children under the age of 16 is projected to decrease from 21% of the total population in 2008 to 19% in 2033; the adult population (between the ages of 16 and 64) is also projected to decrease from 65% to 59% of the total population between 2008 and 2033 whilst the elderly population is projected to increase from 14% to 22% of the total population. [8]

### National Targets:

There are no formal targets for population growth in the UK (other than the recent intention to introduce non-EU immigration caps).

MOD targets to reach 8% ethnic minority representation in the Armed Forces by 2013 (existing MOD commitment). [3] MOD targets to reach 15% women representation in the Senior Civil Service (SCS) by 2009 (existing MOD commitment). [3] In 2009, 9.5% of the military workforce was female. [5]

### Targets in Scotland, Wales and Northern Ireland:

Scotland has a population target of matching the average European (EU15) population growth over the period from 2007 to 2017. Population growth in 2008 was slower than that of the EU 15 countries, and the gap in annual growth rates has increased. [2]

**References:**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3. MOD, Sustainable Development Report and Action Plan, 2008, http://www.mod.uk/NR/rdonlyres/D8407A1C-CA68-4AD4-8E17-9F71B151AF6A/0/SusDevReport2008.pdf
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7. Welsh Assembly Government 2008-based National Population Projections, http://wales.gov.uk/topics/statistics/headlines/pop2009/hdw20091021/?lang=en
8. Northern Ireland Statistics and Research Agency, 2008-based population projections, http://www.nisra.gov.uk/archive/demography/population/projections/popproj08.pdf


### ii) Socio-Economic Trends

### National Trends:

Gross Domestic Product rose by 1.2 per cent in the second quarter 2010 due to strong rebound in construction output from the weather-affected level in the first quarter, and a pick up in services sector growth. This is despite the negative impacts of the volcanic ash cloud and industrial action in the air transport sector. In the labour market, employment rose in the second quarter of the year, but remains below pre-recession levels and rates. There is evidence of a strong rise in part-time employment through the recession, with self-employment also strengthening during 2009. Recent output increases

**References:**


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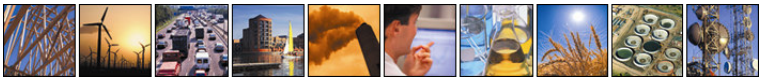

have been partly delivered through higher labour productivity. [1]

## Trends in Scotland, Wales and/or Northern Ireland:

In Scotland GDP fell by 3.5 per cent annually and remained unchanged during the first quarter of 2010 (seasonally adjusted). In the year to end-March 2010, the Scottish service sector fell by 2.4 per cent, the production sector fell by 7.1 per cent and the construction sector fell by 8.3 per cent. In the first quarter of 2010, the service sector fell by 0.2 per cent, the production sector remained unchanged and the construction sector grew by 2.8 per cent. [2]

In Wales production output for the four quarters ending Q1 2010 fell by 10.1 per cent compared with the previous four quarters. Production output for quarter 1 2010 rose by 5.2 per cent compared with the previous quarter. The figure for the same period for the UK rose by 1.0 per cent. Manufacturing output in Wales for the four quarters ending Q1 2010 fell by 9.7 per cent compared with the previous four quarters. Manufacturing output for quarter 1 2010 rose by 5.7 per cent compared with the previous quarter. The UK index rose by 1.4 per cent over the same period. For the four quarters to quarter 2 2010, the value of exports of goods from Wales fell by 15.6 per cent on the previous four quarters and rose by 35.5 per cent over 1999. Exports to EU countries accounted for 56 per cent of the total in the latest four quarters, compared to 52 per cent in the previous four quarters. Wales had the lowest level of GVA per head in the UK regions.[3]

Provisional results for the Northern Ireland Index of Production for the first quarter of 2010 show that output levels increased over the quarter in real terms (1.5%). This is the first quarter to report an increase after peaking in Q2 2008. Over the year NI Production levels fell by 1.9%. Manufacturing comprises the main element of the production index. Manufacturing output for Q1 2010 recorded a rise of 1.1% compared to the previous quarter. NI recorded a decrease of 2.8% in manufacturing output compared to the same period one year earlier. Over the latest four quarters NI manufacturing output decreased by 10.2% compared to the previous four quarters. Three of the six broad manufacturing subsectors reported an increase over the quarter, the remainder reported a decrease. Quarter 1 2010 manufacturing productivity increased by 1.4% over the quarter and by 2.8% compared to the same quarter one year earlier.

## National Targets:

DCLG aims to raise the productivity of the UK economy, maximise job opportunities for all and improve the economic performance of all English regions and reduce the gap in economic growth rates between regions.[5]

The UK Government aims to raise the rate of the UK's productivity growth over the economic cycle and narrow the productivity gap with our major industrial competitors. [6]

## Targets in Scotland:

The key targets for Scotland in terms of economic development to 2017 are:

- to match the GDP growth rate of the small independent EU countries;
- to raise Scotland's GDP growth rate to the UK level by 2011;
- to rank in the top quartile for productivity amongst our key trading partners in the OECD;
- to maintain our position on labour market participation as the top performing country in the UK and close the gap with the top 5 OECD economies;
- to match average European (EU-15) population growth over the period from 2007 to 2017, supported by increased healthy life expectancy in Scotland over this period;
- to increase overall income and the proportion of income earned by the three lowest income deciles as a group, and;
- to narrow the gap in participation between Scotland's best and worst performing regions.[7]

## Targets in Wales:

The key economic development targets for Wales to 2010 are to:

- increase net employment Raise by 175,000;
- increase net employment in Finance and Business services Raise by 20,000;
- increase stock of VAT registered businesses per 10,000 persons of working age Raise to 93% of UK average;
- increase business enterprise R&D expenditure as a % of GDP Raise to >1% 0.4%;
- growth in the value of exports Match UK growth;


Statistics, Economy, April 2010, http://www.scotland.gov.uk/Resource/Doc/933/0102344.pdf

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8. Welsh Assembly Government; Wales, A Vibrant Economy, http://new.wales.gov.uk/deet/publications/bande/wave/wavee.pdf?lang=en
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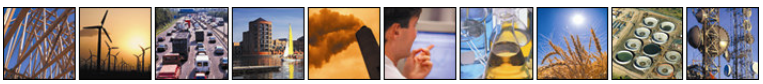

- increase the proportion of Welsh businesses using e-commerce Match UK average proportion;
- increase household disposable income per head of the population to 95% of UK average;
- increase tourism expenditure in Wales by an average of 6% per annum over period;
- reduce the proportion of adults of working age without qualifications to 1 in 10, and;
- increase the proportion of adults of working age with a level 4 qualification to over 3 in 10[8]

### Targets in Northern Ireland:

For Northern Ireland, the main economic development ralted objectives are to:

- increase awareness of the sector and establish its value to the local economy;

develop the sector and increase its business strength; and create a supportive and enabling environment. [9]

## Human Health

### National Trends:

Life expectancy at birth in the UK has reached its highest level on record for both males and females. A newborn baby boy could expect to live 77.7 years and a newborn baby girl 81.9 years if mortality rates remain the same as they were in 2007 - 09. Females continue to live longer than males, but the gap has been closing. Although both sexes have shown annual improvements in life expectancy at birth, over the past 27 years the gap has narrowed from 6.0 years to 4.2 years. Based on mortality rates in 1980 - 82, 26 per cent of newborn males would die before age 65, but this had reduced to 15 per cent based on 2007 - 09 rates. The equivalent figures for newborn females were 16 per cent in 1980 - 82 and 10 per cent in 2007 - 09. Life expectancy at age 65 - the number of further years someone reaching 65 in 2007 - 09 could expect to live - is also higher for women than for men. Based on 2007 - 09 mortality rates, a man aged 65 could expect to live another 17.6 years, and a woman aged 65 another 20.2 years. Within the UK, life expectancy varies by country. England has the highest life expectancy at birth, 78.0 years for males and 82.1 years for females. Life expectancy at age 65 is also higher for England than for the other countries of the UK. [11]

The current general trend in human health is generally towards improved health, greater life expectancy and reduced mortality from treatable conditions. [3]

Health in the UK is improving, but over the last 10 years health inequalities between the social classes have widened. [4]

Between the 1970s and 2000 the Radiological dose to the UK population as a whole, presented as a per capita dose to a population of 55 million, did not changed significantly as it was dominated by the constant level of exposure to natural sources of radiation.[1]

Between 2001 and 2003 the average annual dose to the public was 2.7 mSv. This is a slight increase over that found in the previous HPA review (where the average annual dose to the public was 2.6mSv (period 1992-1997)), mainly due to an increased contribution from medical irradiation. There has been a long-term trend towards lower occupational doses in the nuclear industry, and worker doses in medicine, general industry and research tend to be low. [2]

### Trends in Scotland:

Male life expectancy has improved across Scotland as a whole (from 72.3 years during 1994-98 to 73.9 years during 2001-05). Female life expectancy has improved across Scotland as a whole (from 77.9 years during 1994-98 to 79.1 years during 2001-05). Alcohol related and attributable hospital patient rates have increased over time for Scotland as a whole, although rates are declining in some areas of Scotland. The number of people being admitted to hospital with heart disease has been declining over time in Scotland as a whole, and in most but not all CHPs.[5]

### Trends in Wales:

In Wales the under 75 age standardised mortality rate shows substantial variation across Wales. These differences from the Wales rate are statistically significant. The under 75 age-standardised mortality rate has fallen in all LHB areas in Wales; overall it has declined by 18% between 1998 and 2007. This fall is likely to reflect not only the activities of health services, but also improvements in living standards in the latter part of the 20th century. The greatest causes of death in people aged under 75 in Wales are cancer, circulatory disease and respiratory disease, together accounting for

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4. The Government's Response to the Health Select Committee Report on Health Inequalities, May 2009, http://www.official-documents.gov.uk/document/cm76/7621/7621.pdf
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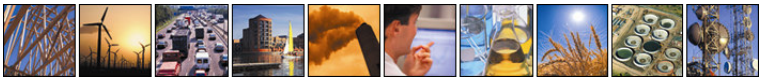


40%, 27% and 9% of approximately 11,000 deaths in 2007. [6]

## Trends in Northern Ireland:

In Northern Ireland between 1999-01 and 2004-06, male life expectancy at birth increased from 74.8 to 76.2 years (+1.4 years) and female life expectancy increased from 79.8 to 81.0 years (+1.3 years). A large proportion of the increase in life expectancy resulted from declining mortality due to Coronary Heart Disease which led to an increase overall of 0.8 years for males and 0.5 years for females in life expectancy. However reducing mortality due to other types of circulatory disease, respiratory disease and cancer also increased life expectancy. Rising mortality over time due to accidental deaths, suicides, chronic liver disease and all 'other' causes of death reduced life expectancy by almost half a year for both males and females.[7]

## National Targets:

- national target to reduce health inequalities by 10% in the three-year period 2009-2011, as measured by infant mortality and life expectancy at birth;
- by 2010, to reduce the death rate by cancer in people under 75 by at least a fifth (Department of Health (DoH), Saving Lives: Our Healthier Nation White Paper);
- by 2010, to reduce the death rate by Coronary Heart Disease and Stroke in people under 75 by at least two fifths (DoH, Saving Lives: Our Healthier Nation White Paper);
- by 2010, to reduce the death rate due to accidents by at least a fifth and serious injury by at least a tenth (DoH, Saving Lives: Our Healthier Nation White Paper); and
- by 2010, to reduce the death rate from mental illness due to suicide and undetermined injury by at least a fifth (DoH, Saving Lives: Our Healthier Nation White Paper).
- Dept of Health to reduce smoking in manual social groups, prevent and manage other risks for coronary heart disease and cancer especially targeting the over-50s and improve housing quality by tackling cold and dampness and reducing accidents (DoH, Saving Lives: Our Healthier Nation White Paper).
- NHS to improve health as well as treating sickness; give patients more rights and control over their own health and care; ensure quality at the heart of the NHS; strengthen the involvement of clinicians in decision making at every level of the NHS; empower frontline staff to lead change that improves quality of care for patients; value the work of NHS staff (Darzi, High quality care for all: NHS Next Stage Review final report).

## Targets in Scotland:

In Scotland, the Health Improvement Targets for 2010/11 are:

- achieve agreed completion rates for child healthy weight intervention programme by 2010/11;
- achieve agreed number of screenings using the setting-appropriate screening tool and appropriate alcohol brief intervention, in line with SIGN 74 guidelines by 2010/11;
- reduce suicide rate between 2002 and 2013 by 20%, supported by 50% of key frontline staff in mental health and substance misuse services, primary care, and accident and emergency being educated and trained in using suicide assessment tools/ suicide prevention training programmes by 2010;
- through smoking cessation services, support 8% of local Board's smoking population in successfully quitting (at one month post quit) over the period 2008/9 - 2010/11;
- increase the proportion of new-born children exclusively breastfed at 6-8 weeks from 26.6% in 2006/07 to 33.3% in 2010/11;
- achieve agreed number of inequalities targeted cardiovascular Health Checks during 2010/11; and
- at least 60% of 3 and 4 year olds in each SIMD quintile to have fluoride varnishing twice a year by March 2014. [9]

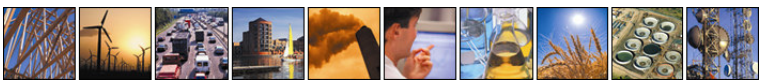
## Targets in Wales:

In Wales, the key strategy aims are:

- to ensure effective and timely treatment;
- to ensure effective and timely treatment;
- to remove barriers to early treatment;

http://www.scotland.gov.uk/Topics/Health/NHS-Scotland/17273/targets/Health

10. DHSSPS, a healthier future A Twenty Year Vision for Health and Wellbeing in Northern Ireland 2005 – 2025, http://www.dhsspsni.gov.uk/healthyfuture-main.pdf
11. Office for National Statistics, http://www.statistics.gov.uk/cci/nugget.asp?id=168



- to ensure the needs of older people are reflected in services and policy;
- to provide the most routine services quickly and easily locally while ensuring major operations are carried out with suitable professional support;
- to promote innovative solutions to addressing health inequalities; and
- to ensure funds follow the underlying needs for action to address health inequalities. [8]

### Targets in Northern Ireland:

The main public health targets for Northern Ireland are:

- improve male and female life expectancy here towards the levels of the best EU countries;
- reduce by two thirds the gap in life expectancy between those living in the most deprived 20% of electoral wards and the average life expectancy here for both men and women between 2000 and 2025;
- reduce the standardised death rate per 100,000 people under 80 years of age for cancer by 20% from 178 deaths for males in 2002 and 143 deaths for females to 142 deaths and 115 deaths respectively;
- increase the five-year cancer survival rates to the levels of the best European countries;
- reduce the death rate per 100,000 people under 80 years of age for coronary heart disease from 130 deaths for males in 2002 and 66 deaths for females to compare with the European country with the lowest death rate;
- reduce the death rate per 100,000 people under 80 years of age for respiratory disease by 50% from 49 deaths for males in 2002 and 43 deaths for females to 25 deaths and 21 deaths respectively;
- reduce the death rate per 100,000 people under 80 years of age for Stroke by 50% from 38 deaths for males in 2002 and 36 deaths for females to 19 deaths and 18 deaths respectively; and
- ensure that everyone with diabetes is screened annually for the risk of kidney disease so that problems can be identified early and managed in a community-based setting.
- reverse current trends towards a doubling in the prevalence of diabetes over the next 10 years and reduced the number of people with diabetes from current levels (30,000 to 50,000 in 2002) to levels comparable to European countries with the lowest prevalence;
- reduce the number of people with a preventable visual impairment from current levels (estimated 24,000 people in Northern Ireland) to be comparable with EU countries which have the lowest levels of blindness and visual impairment; and
- reduce the number of suicides for all persons per 100,000 by 50% and reduce the number of suicides for males aged 15-44 per 100,000 by 50%. [10]

### MOD Targets

- MOD to have no fatalities attributable to Health and Safety failures (standing commitment)
- MOD to reduce the number of serious injuries against the previous years' performance (standing commitment)

## Human Health (Noise)

### National Trends:

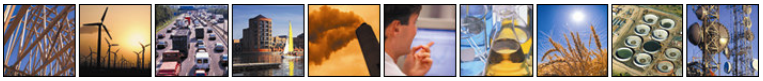
The number of noise complaints received by Environmental Health Officers in England and Wales (measured in rates per million of the population) more than doubled between 1990/91 and 2000/01 from 3,644 to 7,670. The greatest increase in noise complaints has been from domestic sources with an increase of 145% over the 10 year period whilst industrial/commercial sources increased by 39.4% to a rate of 1,273 per million of the population [1]

### Trends in Scotland:

Comparable noise complaints data is not available for Scotland and Northern Ireland.

Data issued by the Scottish Government highlights that after peaking at 10,460 in 1997/8, the total number of complaints about noise received by Scottish councils dropped each year, to 9,165 in


1. Office for National Statistics, Noise complaints received by Environmental Health Officers, http://www.statistics.gov.uk/cci/nscl.asp?ID=6914
2. The Scottish Government, 2009, Noise Complaints, http://www.scotland.gov.uk/Topics/Statistics/Browse/Environment/seso/sesoSubSearch/Q/SID/53
3. Department of the Environment, 2009, Noise Complaint Statistics for Northern Ireland, http://www.doeni.gov.uk/noise_complaint_statistics_report_for_no

2001/2002, before rising significantly to 28,217 in 2005/2006. After the introduction of the new way of reporting the number of noise complaints, the total number of noise complaints rose to 55,962 in 2006/07 and increased further to 58,313 in 2008/2009. These large increases in the number of noise complaints made to councils between 2005/06 and 2006/07 were mainly due to the introduction of dedicated noise teams in local authorities. [2]

### Trends in Northern Ireland:

There has been a 42% increase in total noise complaints made between 2003/04 and 2006/07 in Northern Ireland. There was a subsequent decrease of 2% in the total complaints received between 2006/07 and 2007/08 and further reduction of 5% between 2007/08 and 2008/09. Between 2003/04 and 2007/08 complaints from industry, manufacturing and workshops increased consistently, with a total increase of 25% over the five year period. This trend reversed between 2007/08 and 2008/09 when a decrease of 20% was experienced. This is most likely a direct result of the downturn in the economy.[3]

*No additional trend based data identified in relation to noise in Wales (consultee input welcome).*

### National Targets:

The Department for Business, Innovation and Skills (BIS) sets permissible sound levels for different types of equipment (DTI, The Noise Emission in the Environment by Equipment for use Outdoors Regulations 2001).

### Targets in Scotland, Wales and/or Northern Ireland:

Planning Advice Note 56: Planning and Noise sets out noise exposure categories for dwellings in Scotland.

Technical Advice Note 11 contains noise exposure categories for dwellings in Wales.

The Permitted Levels of Noise Direction sets out that the permitted level of noise from dwellings in Northern Ireland.


rthern_ireland_200809.pdf

4. Scottish Government, 1999, Planning Advice Note 56: Planning and Noise http://www.scotland.gov.uk/Publications/1999/04/PAN56
5. Welsh Assembly Government, 1997, Technical Advice Note 11: Noise http://wales.gov.uk/topics/planning/policy/tans/tan11?lang=en
6. Department of the Environment, 2010, Permitted Levels of Noise Directions http://www.doeni.gov.uk/permitted_level_of_noise__northern_ireland__directions_2010.pdf


## Soil and Geology

### National Trends:

As there are now more stringent statutory controls on land contamination and remediation, increased areas of historic contamination are being remediated and fewer areas are being left in a contaminated state following decommissioning of commercial and industrial sites. An estimated 58,500 inspections of land with the potential to be contaminated have been completed in England, Scotland and Wales (combined totals). Northern Ireland is in the early stages of implementing statutory monitoring and reporting of land contamination and remediation and therefore no trend data is readily available.

An estimated 25,000 inspections of land took place in England between 2000 and 2007.[1]

Soil degradation is accelerating. This is in part a natural phenomenon but some soil degradation processes are exacerbated by unsustainable human uses. Major threats include: erosion, organic matter decline, compaction, salinisation, landslides, contamination, sealing and biodiversity decline.[1]

There is a steady loss of soils to development, contaminated sites, damage by muddy floods and water pollution by silt and fertilisers.[1]

### Trends in Scotland, Wales and/or Northern Ireland:

In Scotland, an estimated 27,000 inspections of land with the potential to be contaminated have already been or are in the process of being undertaken (equating to an estimated 40% of all such sites). A total of 807 sites (equivalent to 1,864 hectares) of land that was affected by contamination have been remediated.[3]

There is some evidence that soils are becoming slightly less acidic in some areas of Scotland due to reduced acid deposition. Ecological damage to soils caused by run-off from roads and urban areas is likely to increase. Sewage sludge and other organic waste recycling to land are projected to continue. There is some emerging evidence that sewage sludge application (which can be high in zinc) may be having a long term affect on the long-term fertility of some soils. Agricultural land is being developed at twice the rate as in the 1990s. This development is likely to have occurred on some of Scotland's

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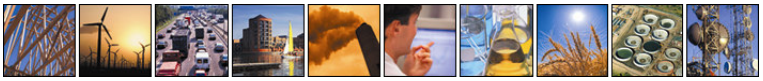
1. Dealing with contaminated land in England and Wales A review of progress from 2000-2007 with Part 2A of the Environmental Protection Act, Environment Agency, January 2009
2. Environment Agency, The state of soils in England and Wales, http://www.environment-agency.gov.uk/static/documents/Leisure/stateofsoils_1747056_1879364.pdf
3. Dealing with land contamination in Scotland: A review of progress 2000-2008, Scottish Environment Protection Agency, 2008, http://www.sepa.org.uk/land/land_publications.aspx
4. State of the environment and trends – Scotland, http://www.seaguidance.org.uk/11/State-of-the-Environment.aspx
5. Safeguarding our Soils: A Strategy for England, Defra, 2009, http://www.defra.gov.uk/environment/quality/land/soil/documents

versatile and productive soils. Loss of organic matter has been identified as a significant threat. There is some evidence that levels of organic matter may be declining.[4]

### Trends in Wales:

In Wales, an estimated 6,500 inspections of land with the potential to be contaminated have been completed between 2000 and 2007. [1]

In Scotland, Wales and Northern Ireland there is no routine monitoring of soil and limited information on trends. However, development, agriculture and forestry practices, along with climate change are likely to continue to pose a threat to soil quality.

### National Targets:

CLG sets out sites of regional and local biodiversity and geological interest have a fundamental role to play in meeting overall national biodiversity targets, contributing to the quality of life and the well-being of the community and in supporting research and education (PPS 9: Biodiversity and Geological Conservation).

'Safeguarding our Soils', the Soil Strategy for England outlines the Government's approach to safeguarding England's soils for the long term. The Strategy provides a vision to guide future policy development and sets out the practical steps that need to be taken to prevent further degradation of soils, enhance, restore and ensure their resilience, and improve understanding of the threats to soil and best practice in responding to them. The Strategy includes an action to significantly reduce the rate of loss of stored soil carbon by 2020.[5]

*No targets have been identified in relation to contaminated land in the UK (consultee input welcome).*

### Targets in Scotland, Wales and Northern Ireland:

No specific targets have been identified for soils and geology. However, across the UK a hierarchy of strategies, policies and legislation underpin the management of land. Some of these enable statutory designation at National and European level, others provide for local designations and appropriate management, with the aim of conserving and protecting the quality of habitats, geology and soils.

The Scottish Soil Framework sets out the vision for soil protection in Scotland, and formally acknowledges the important services soils provide to society. The Framework does not include policies or targets, but sets out actions for soil protection.

There are a number of European directives that are either currently being implemented or are under discussion that may influence the way in which land contamination is managed in the future (i.e. the Environmental Liabilities, Soil, Water, Groundwater and the Waste Framework Directives. The implementation of these regimes into UK legislation is likely to affect how contaminated land is dealt with.[1]

### MOD Targets:

- By 2010, the MOD will establish an estate-wide Land Quality Assessment (LQA) programme to make sure resources are prioritised effectively and to allow improved reporting in this area.

/soil-strategy.pdf

6. The Scottish Soil Framework, Scottish Government, May 2009, http://www.scotland.gov.uk/Resource/Doc/273170/0081576.pdf

## Water

### National Trends:

The current trend in water condition is generally towards increased water quality across natural environments, drinking water and bathing waters.[1] Current climate change predictions indicate that rainfall patterns will become increasingly seasonal, with lower amounts of flow in the summer. This will lead to lower summer river flows, especially in those catchments with a low groundwater component. This could lead to increased abstraction pressure, increased stress on sensitive hydrological systems and a decrease in dilution potential leading to a failure against water quality targets. Increased flooding and storm events also have the potential to increase runoff of pollutants into controlled waters, thus reducing water quality. Population pressures are predicted to increase in certain parts of Great Britain, for example in the south east. Increased population density will result in an increased pressure on natural resources and could exacerbate current problems or cause new ones.

The Environment Agency's Catchment Abstraction Management Strategies (CAMS) have identified a

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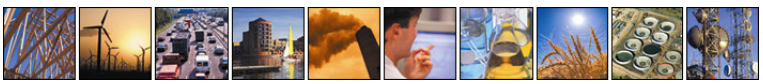
1. Defra, Sustainable Development Indicators, 2009, http://www.defra.gov.uk/sustainable/government/progress/documents/SDIYP2009_a9.pdf
2. Natural England http://www.naturalengland.org.uk/ourwork/marine/protectandmanage/mpa/mcz/default.aspx (accessed 04/10/2010)
3. Environment Agency http://www.environment-agency.gov.uk/research/library/data/112170.aspx (accessed



number of catchments in England and Wales which are designated as Over-Licensed or Over-Abstracted. Climate change is likely to result in lower summer rainfalls and more frequent/sever winter flood events. Such changes are likely to increase pressure on summer freshwater water availability and increase pollutant runoff into controlled waters during flood events. Unsustainable groundwater and surface water abstraction may contribute to environmental damage of rivers and wetlands at 500 sites in England and Wales, important conservation sites, including sites of national and international conservation importance.

The Marine and Coastal Access Act (2009) allows for the creation of Marine Conservation Zones (MCZs) in Great Britain (Northern Ireland MCZs will be introduced through separate legislation). MCZs will protect nationally important marine wildlife, habitats, geology and geomorphology. Sites will be selected to protect the range of marine wildlife.[2] This should lead to greater protection and improvement of marine habitats in the future.

Under the revised Bathing Water Directive all bathing waters will be required to achieve at least 'sufficient' quality by 2015, which is twice as stringent as the current mandatory standard. The overall quality of bathing waters is therefore likely to increase as water quality is improved to meet the increased standards.[3]

## Trends in Scotland:

In Scotland, the percentage of rivers of good quality has remained stable at around 88 per cent between 2000 and 2006, based on a combined chemical, biological and aesthetic assessment.[1] In most cases the risks to water quality are declining, the exception being groundwater. Local circumstances create local trends, e.g. upland lochs are particularly sensitive to environmental changes. The most important trends are the sources of effects. Environmental effects from industry are declining, whereas effects from urban development and intensification are increasing.[4]

## Trends in Wales:

In 2008, 88 per cent of rivers in Wales were of good biological quality. In all years since 1993 over 90 per cent of rivers in Wales have been of good chemical quality.[1]

## Trends in Northern Ireland;

In 2006, 54 per cent of rivers in Northern Ireland were of good biological quality, and 74 per cent of rivers were of good chemical quality.[1]

There has been some reduction in chemical pollution of NI rivers in recent years and the quality of the bathing waters around NI coasts is improving. The biological quality of NI rivers has deteriorated in recent years and levels of nutrients are relatively high in lakes and some rivers.[5]

## MOD trends;

In March 2009 water use had already reduced by almost 25%, against the 2004/05 baseline, due to leakage reduction, against a Government target of 25% by 2020.[6]

UK strategy for radioactive discharges projected liquid discharges for 2001 to 2020 from the defence sector[7]:

- tritium levels are projected to fall from around 700 GBq/yr in 2001-2005 to around 400 GBq/yr by 2016-2020;
- total Beta levels are projected to fall from around 5 GBq/yr in 2001-2005 to around 3 GBq/yr by 2016-2020; and
- total Alpha levels are projected to fall from around 0.1 GBq/yr in 2001-2025 to around 0 GBq/yr by 2016-2020.

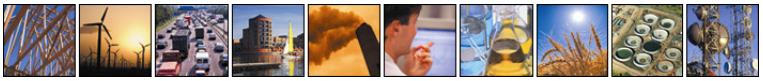
## National Targets:

The Environment Agency aims that by 2030 water use per person in England should fall by 130 litres/day.[8]

The Water Framework Directive (Directive 2000/60/EEC) requires that river basin management plans are prepared by December 2009. The objectives of the river basin management plans are required to be achieved by 2015.[8] T hose objectives are to:

- prevent deterioration, enhance and restore bodies of surface water, achieve good chemical and ecological status of such water and reduce pollution from discharges and emissions of hazardous substances;
- protect, enhance and restore all bodies of groundwater, prevent the pollution and deterioration of

02/10/2010)
4. SNIFFER http://www.seaguidance.org.uk/Upload/Documents/L3EX2CurrentstateandtrendsforWATERSCOT.PDF (accessed 04/10/2010)
5. SNIFFER http://www.seaguidance.org.uk/Upload/Documents/L3EX2CurrentstateandtrendsforWATERNI.PDF (accessed 04/10/2010)
6. MOD, Sustainable Development Report and Action Plan, 2008, http://www.mod.uk/NR/rdonlyres/D8407A1C-CA68-4AD4-8E17-9F71B151AF6A/0/SusDevReport2008.pdf
7. Defra http://www.defra.gov.uk/environment/radioactivity/government/discharges/pdf/rad_dischargestrat2.pdf
8. EU http://europa.eu/legislation_summaries/agriculture/environment/l28002b_en.htm
9. Future Water, the Government's Water Strategy for England
10. EA, Water Resources for the Future: A Strategy for England and Wales
11. Scottish Government (2009) The river basin management plan for the Scotland river basin district 2009–2015
12. Scottish Government and Environment Agency (2009) The river basin management plan for the Solway Tweed river basin district 2009–2015



groundwater, and ensure a balance between groundwater abstraction and replenishment; and

- preserve protected areas.

Defra aims that by 2030 at the latest, England has improved the quality of our water environment and the ecology which it supports, and continued to provide high levels of drinking water quality from its taps; sustainably manage risks from flooding and coastal erosion, with greater understanding and more effective management of surface water; ensure a sustainable use of water resources, and implement fair, affordable and cost reflective water charges; cut greenhouse gas emissions; and embed continuous adaptation to climate change and other pressures across the water industry and water users. [9]

Environment Agency aims to enhance water supply by up to 1100 Ml/d above present levels by the improvement of existing schemes and the development of some new resources. [10]

### Targets in Scotland, Wales and/or Northern Ireland:

The Scotland river basin district objective is to improve water quality such that 98% of surface water bodies and 94% of ground water bodies will be of good or better condition by 2027.[11] By 2027 the objective for the Solway Tweed river basin district is for 92% of surface water bodies and 93% of groundwater bodies to be of good or better quality.[12]

No overarching national targets were identified for Wales or Northern Ireland. Under the WFD the objectives of each of the river basin management plans are required to be achieved by 2015.

### MOD targets:

Reduce water consumption by 25% on the Office and non-Office Estate by 2020, relative to 2004/2005 levels (SOGE target). Reduce water consumption to an average of 3m3 per person/year for all office builds or major office refurbishments [6]

## Air

### National Trends:

The current trend in air condition is generally towards improved air quality, both in rural and urban settings. [1]

Between 1990 and 2008 there is no clear long-term trend in ozone levels with increases in urban background ozone levels of 40.5%, however between 1980 and 2007 nitrogen oxides (NOx) fell by 42 per cent, particulates ($PM_{10}$) fell by 59 per cent and sulphur dioxide (SO2) by 84 per cent (between 1990 and 2007). [4]

Reductions are a product of: improved technology; changes in energy generation; targeted air quality management policies; and reductions in specific greenhouse gases, $CO_2$, $CH_4$, $N_2O$, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride ($SF_6$).

Projections of UK total emissions: [2]

Best case scenario (full air quality target compliance):

- NOx: 2010 = 1136.4 ktonnes/yr; 2015 = 963.1 ktonnes/yr; 2020 = 799.1 ktonnes/yr; and
- PM10: 2010 = 133.5 ktonnes/yr; 2015 = 129.4 ktonnes/yr; 2020 = 134.4 ktonnes/yr.

Worst case scenario (extension of 2003 baseline):

- NOx: 2010 = 1151.0 ktonnes/yr; 2015 = 1030.3 ktonnes/yr; 2020 = 910.7ktonnes/yr; and

### Trends in Scotland:

In general, recent years have seen a marked improvement in Scotland's air quality. In particular, levels of pollutants associated with motor vehicle and industrial emissions have declined significantly over the past decade. There has been a smooth and clear long-term improvement in NOx concentrations due to the progressive reductions in emissions from combustion sources delivered by UK and EC policies. [6]

There has been an increase in background ozone over time; this is small but detectable at rural and remote locations in Scotland, but dramatic and relatively clear at urban background locations. [6]

There has been a general decline in urban background $PM_{10}$ concentrations since 1992, but that - for

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1. Defra, Sustainable Development Indicators, 2009, http://www.defra.gov.uk/sustainable/government/progress/documents/SDIYP2009_a9.pdf
2. UK Air Quality Archive, Updated Projections of Air Quality in the UK for Base Case and Additional Measures for the Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007, http://www.airquality.co.uk/reports/reports.php?action=category&section_id=17
3. UK Air Quality Achieve, http://www.airquality.co.uk/standards.php
4. Defra, Environment in your Pocket Statistics, 2009, http://www.defra.gov.uk/evidence/statistics/environment/eiyp/
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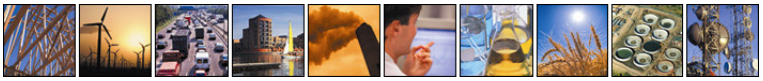
6. Air Pollution in Scotland, http://www.scottishairquality.co.uk/documents/reports2/240090518_AQ_in_Scotland_2006_4F_JB_FF.pdf
7. Welsh Air Quality Forum; Air Pollution in Wales, http://www.welshairquality.co.uk/



the last few years - concentrations have hovered around the 18 µg/m3 annual mean objective level.

- PM10: 2010 = 134.9 ktonnes/yr; 2015 = 135.4 ktonnes/yr; 2020 = 143.5 ktonnes/yr

### Trends in Wales:

There is a 'clear improvement' in the following Welsh air quality indicators: sulphur dioxide; nitrogen oxides; fine particulates; Non Methane Volatile Organic Compounds (NMVOC); carbon monoxide; and ammonia. There has also been an improvement in the area of natural and semi-natural habitat where deposition of acid exceeds critical loads.

The following indicators were rated 'stable' or they showed no clear trend:

- number of days when air pollution is moderate or higher in rural zones and urban agglomerations;
- air concentrations of Heavy Metals; and
- area of natural and semi-natural habitat where deposition of nitrogen compounds exceeds critical loads.[7]

### Trends in Northern Ireland:

Recent years have seen a marked improvement in Northern Ireland's air quality. In particular, levels of pollutants associated with coal and oil combustion have reduced significantly over the past decade.

The original air quality 'headline' indicator measures days of moderate or higher pollution. There is a clear downward trend in the 'headline' indicator for all pollutants: less so for rural ozone[8].

documents//news/322100927_AQ_Wales_15_English_web.pdf
8. Northern Ireland Department of Environment; Air Quality, http://www.airqualityni.co.uk/reports.php?n_action=trend

## Climate Change and Energy Use

### National Trends:

The current trend in energy use is generally towards increased consumption, however there have been some slight declines in recent years associated with mild winters. Since 1980 UK energy consumption by individual sectors has changed substantially: there have been rises of 68% for transport, 10% for the domestic sector and 3% for the service sector, whilst consumption by industry has fallen by 34%[2].

UKCP09 medium emission scenario with 90% probability: [3]

- 2080 mean winter temperature: the central estimates of change are projected to be generally between 2 and 3ºC across most of the country, with slightly larger changes in the south east and slightly smaller in the north west of Britain. [3]
- 2080 mean summer temperature: a more pronounced south to north gradient exists with changes in some parts of southern England being just over 4ºC and in parts of northern Scotland about 2.5ºC. [3]
- 2080 mean summer daily maximum temperature: central estimates show a gradient between parts of southern England, where they can be 5ºC or more, and northern Scotland, where they can be somewhat less than 3ºC. [3]
- 2080 mean annual precipitation: shows little change (few percent or zero). [3]
- 2080 mean winter precipitation: increases are in the range +10 to +30% over the majority of the country. Increases are smaller than this in some parts of the UK, generally on higher ground. [3]
- 2080 mean summer precipitation: general south to north gradient, from decreases of almost 40% in SW England to almost no change in Shetland. [3]
- The range of absolute sea level rise around the UK (before land movements are included) and across the three emissions scenarios is projected to be between 12 and 76 cm for the period

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3. OPSI, Climate Change Act 2008, http://www.opsi.gov.uk/acts/acts2008/ukpga_20080027_en_1
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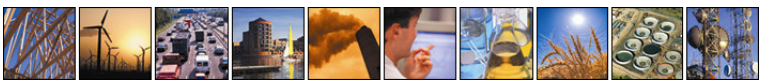
6. DECC, The UK Low Carbon Transition Plan: National Strategy for Climate and Energy, http://www.decc.gov.uk/assets/decc/white%20papers/uk%20low%20carbon%20transition%20plan%20wp09/1_20090909102052_

[1] Work is ongoing with Defra to define Carbon Neutrality and how this can be delivered. These targets will be reviewed in light of the ongoing work on the definition of carbon neutrality.



1990 - 2095, which is a wider spread than that of the global average. (The unlikely but plausible High++ scenario predicts levels of 93 cm to 1.9 m by 2100). [3]

- The projected long-term future trends in storm surge that we find in UKCP09 are physically small everywhere around the UK, and in many places can be accounted for by natural variability. The surge level we expect to be exceeded on average once in 2, 10, 20 or 50 yr is not projected to increase by more than 9cm by 2100 anywhere around the UK coast (not including the mean sea level change). The largest trends are found in the Bristol Channel and Severn Estuary. [3]
- Seasonal mean and extreme waves are generally expected to increase to the South West of the UK, reduce to the north of the UK and experience a small change in the southern North Sea. Changes in the winter mean wave height are projected to be between -35 and +5 cm. Changes in the annual maxima are projected to be between -1.5 and +1 m. [3]
- The shelf seas around the UK are projected to be 1.5-4ºC warmer and ~0.2 practical salinity units (p.s.u.) fresher (lower salinity) by the end of the 21st century for a medium emissions scenario. [3]

## Trends in Scotland

Since 1914 average temperatures in Scotland have risen by 0.5°C. Northern Scotland has warmed at a slower rate than the rest of the country, with average increases in temperature only being significant in spring. In northern Scotland, there has been little change in winter temperatures since 1914. Temperatures have increased in every season and in all parts of Scotland since 1961. This has been the fastest period of warming observed over the 1914 to 2004 period analysed in this study. Since 1961 average spring, summer and winter temperatures have risen by more than 1°C. Since 1961 average daily maximum temperatures have been increasing at a faster rate than average minimum, or night time, temperatures in Scotland. Globally, over approximately the same period, it is minimum temperatures that have increased at the faster rate. It is interesting to note that conversely the trend in Scotland over the 1914 to 2004 period also has the minimum temperatures increasing at the faster rate.

Scotland has become wetter since 1961, with an average increase of almost sixty percent in winter months in northern and western Scotland. For the majority of the country there has not been a large-scale significant change in average summer rainfall although some parts of north west Scotland have become up to forty five percent drier in summer. Contrary to the Scottish national trend, Aberdeenshire has seen little change in precipitation in winter months although this is compensated for in this region by a significant increase in precipitation in autumn (September-November).

Heavy rainfall events have increased significantly in winter, particularly in northern and western regions.

The snow season has shortened across the country since 1961, with the season starting later and finishing earlier in the year. The greatest reductions have occurred in northern and western Scotland.

Since 1961 there has been more than a twenty-five percent reduction in the number of days of frost (both air and ground frost) across the country. At the same time, the growing season length has increased significantly, with the greatest change occurring at the beginning of the season. [15]

## Trends in Wales

Estimated emissions of greenhouse gases in Wales reduced from 50.2 million tonnes of CO2 (CO2) equivalent in 2006 to 46.8 million tonnes of CO2 equivalent in 2007. CO2 emissions estimates also reduced from 41.9 million tonnes in 2006 to 39.0 million tonnes in 2007. Total non-CO2 greenhouse gases reduced from 8.2 million tonnes in 2006 to 7.8 million tonnes in 2007. CO2 emissions will continue to decrease. Emissions of greenhouse gases are expected to continue at a rate below the rate set at the base year. Emissions of total non-CO2 greenhouse gases are expected to continue to decrease.

Climate change could cause significant environmental effects in Wales. The UK Climate Programme (2009) modelled the effect of different climate emissions scenarios on climate. For western Britain including Wales, the central estimate (50% probability of occurring) indicates that there will be an increase in the amount of winter rainfall by around +33%, and an increase in average summer temperatures of 2.7-4.1oC (depending on location). It is also forecast that there will be an increase in the number of dry periods exceeding 10 days during summers and the number of extreme hot days. Sea levels are also forecast to rise, with Relative Sea Level in Cardiff forecast to be approximately 45cm greater than 1990 levels by 2095.

## Trends in Northern Ireland:

Since 1990, Northern Ireland's total greenhouse gas emissions have decreased by 12.6%. This is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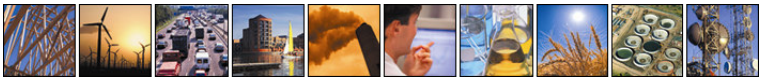


less than the reduction seen for the UK as a whole, which has seen a decrease of 18.4% on 1990 levels.

## National Targets:

The Climate Change Act requires an 80% cut in UK greenhouse gas emissions by 2050 (compared to 1990 levels). [4] DECC aims to put the UK on a path to a low carbon UK by cutting $CO_2$ emissions; investing in energy efficient and clean technologies, maintain secure energy supplies; and protecting the most vulnerable.[6]

The UK is committed to delivering 20% of its energy from renewable sources by 2020. [7,8]

There are plans for a new generation of nuclear power stations in the UK. [1]

DECC aims for no homes to be in fuel poverty by 2016-2018.[6]

## Targets in Scotland:

Scotland has set a clear path to achieving its target of reducing emissions by 42 per cent by 2020. Annual targets have been set for 2011- 2022. [16]

The Scottish Executive set targets in 2007 that 18% of electricity generated in Scotland should come from renewable sources by 2010 rising to 40% by 2020[17].

Scotland's existing target was established in 2007 and, aided by a rapid expansion in wind power, the country is on course to exceed its interim target of 31 per cent in 2011. The Scottish Government has now calculated that significantly higher levels of renewables could be deployed by 2020 with little change to the current policy, planning or regulation framework in Scotland now 80 per cent of Scottish electricity consumption to come from renewables by 2020. [18]

The 2020 Climate Change Act establishes an interim target for 2020 of at least 42 per cent reductions in emissions. [19]

## Wales:

One Wales: A Progressive Agenda for Wales, commits to annual reductions in greenhouse gas emissions of 3% per year in areas of devolved competence by 2011. This target:

- relates to the “basket” of six greenhouse gases - carbon dioxide, methane, nitrous oxide, hydroflourocarbons, perflourocarbons and sulphur hexafluoride; and
- includes all ‘direct’ greenhouse gas emissions in Wales (except those from heavy industry and power generation) and it also includes the emissions associated with electricity consumption, allocated to end-users in Wales.

Consequently, the 3% target covers approximately 69% of total greenhouse gas emissions in Wales.

To measure the target, Wales will compare the relevant emissions in each year from 2011 onwards to a baseline. This baseline will be an average of the relevant emissions between 2006 and 2010. Beginning with a 3% reduction in 2011, the target is to reduce greenhouse gas emissions by an additional 3% of the baseline in each year.

Wales are also committed to achieving at least a 40% reduction in all greenhouse gas emissions by 2020 against a 1990 baseline.

## Northern Ireland:

In January 2008, Office of the First Minister and Deputy First Minister (OFMDFM) published the 2008 - 2011 Programme for Government which set a target for a 25% decrease in Northern Irelands total greenhouse gas emissions by 2025. [11]

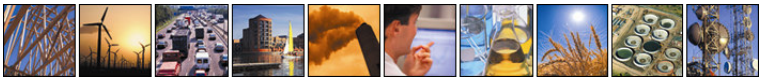
The Northern Ireland Renewables Obligation, published in October 2004, sets a target that by 2012, 12% of all electricity consumed in Northern Ireland is generated from indigenous renewable sources, for example wind farms. [12]

## MOD Target:

Reduce carbon dioxide emissions from buildings across the non-operational Estate by 12.5%, by 2010-11 and by 30% by 2020, relative to 1999/2000 baseline (SOGE target). [5]

Source at least 15% of our total non-operational electricity needs by 2010 from good quality Combined Heat and Power Systems (SOGE target). [5]

Source at least 10% of our total electricity needs from renewable sources by 2010 (SOGE target for



| | |
|---|---|
| MOD) [5]<br><br>Ensure the MOD Office Estate and all Top Level Budget Holders' Head Offices are carbon neutral by 20121 (MOD Commitment against SOGE). [5] | |

## Flooding and Coastal Change

### National Trends:[1]

Forecasts suggest that there will be considerable variation in erosion rates, both between and within regions. Many areas will experience little or no erosion of shorelines while others experience erosion of several hundred metres. Future erosion will be consistently severe on the east coast and major estuaries such as the Severn, Thames and Humber. As the erosion rates will (to first order) depend on the climate, although the national value of built assets directly at risk from coastal erosion is substantially lower than those at risk from coastal flooding, coastal flood risk is itself heavily influenced by the rate of coastal change. [6]

Almost two-thirds of the intertidal profiles in England and Wales have steepened over the past hundred years, a process which is particularly prevalent on coasts protected by hard engineering structures (this represents 46% of England's coastline; 28% of Wales; 20% of Northern Ireland and 7% Scotland). Both coastal erosion and steepening of intertidal profiles effects are expected to increase in the future due to the effects of climate change, especially sea-level rise and changes to the wave conditions. [4]

The total number of properties in England and Wales at risk of flooding saw an apparent increase of 23% between 2004 and 2009. However, with improvements to data collection methodology; revisions to modelling techniques; and reduced flood risks resulting from flood management works, year on year changes should be interpreted with caution.

Current climate change predictions indicate that rainfall patterns will become increasingly seasonal. This could lead to increased flooding and storm events.

The third assessment of the IPCC presented a range of projected sea-level rise between 1990 and 2100 of 9-88cm[4.] The most recent information for the UK from UKCIP forecasts a range of relative sea level rise by the 2080s (relative to the 1961-1990 mean) of between 20 and 80cm in south-west England and 0 and 60cm in Scotland. [5.]

The scenarios in UKCIP 09 lead to several predictions relevant to flooding:

- Annual average precipitation across the UK may decrease by between 0% and 15% by the 2080s, depending on the scenario.
- The seasonal distribution of precipitation will change. Winters will become wetter and summers drier. The biggest relative changes will be in the south and east. Under the High emissions scenario, winter precipitation in the south-east may increase by up to 30% by the 2080s.
- By the 2080s, the daily precipitation intensities that are experienced once every two years on average may become up to 20% heavier. The scenarios give no guidance on the effects of climate change on more extreme precipitation events.
- By the 2080s, depending on scenario, relative sea level may be between 2cm below and 58cm above the current level in western Scotland and between 26 and 86cm above the current level in south-east England.
- For some coastal locations, a water level that at present has a 2% annual probability of occurrence may have a 33% annual probability by the 2080s for Medium High emissions. [7]

### Trends in Scotland[2]:

Urban development is placing greater demands on urban drainage systems. Flooding due to loss of floodplains from agriculture is manageable under current and new policies. An increase in frequency and severity of flooding due to climate change is likely.

### Trends in Wales:

An increase in flooding (in both severity and frequency) can be expected as a result of development and the effects of climate change.

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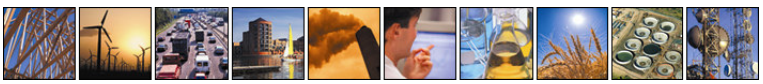

### Trends in Northern Ireland:[3]

With increasing development and climate change the number of properties at risk is likely to increase.

### National Targets:

Defra aims that by 2030 at the latest, England sustainably manages risks from flooding and coastal erosion, with greater understanding and more effective management of surface water.

### Targets in Scotland, Wales and Northern Ireland:

*No targets have been identified in relation to contaminated land in the UK (consultee input welcome).*

## Material Assets (Transport)

### National Trends:

The current trend in transport infrastructure is generally towards increased transport journeys. Road traffic in Great Britain has grown by 85% since 1980; rail travel has increased by nearly 70% since 1980; bus travel has increased over the last eight years (having fallen between 1980 and the mid 1990s); freight tonne kilometres moved in the UK has increased 40% since 1980; however walking and cycling for travel purposes have both declined significantly over the period 1996 - 2007.[1]

Freight moved (tonne-kilometres) increased roughly in line with economic growth (Gross Domestic Product) until 1998. Since then freight moved has remained stable while GDP has increased by 28 per cent.[2]

### Trends in Wales:

All commentators suggest that transport demand is likely to continue to rise with a continued rise in personal mobility. For example, rail passenger kilometres travelled are projected to increase by 33% between 2000 and 2010, road traffic is expected to increase by 31% between 2003 and 2025 and aviation demand is expected to more than double by 2030. The average distance people travel each year in Wales is continuing to grow at a considerable rate. Stockholm Environment Institute (SEI) predict that the land transport footprint per capita will increase by 6% 2020 or 12% if air travel is included. There is expected to be a continued high dependence on fossil fuels, with only gradual reduction of road emissions via clean electricity and hydrogen fuel cells, bio-fuels or diesel/petroleum hybrids. Aviation kerosene can be made from biomass.[5]

### Trends in Scotland:

On average, Scots travelled 7,056 miles per person per year within Great Britain in the two-year period 2007/2008. There has been a large rise in the distance travelled, with most of the increase being due to travel by car. Over about 20 years, the average distance travelled per person per year increased by 2,404 miles, of which 2,020 were by car. Other National Travel Statistics results for 2007/2008 include average distances travelled per Scottish resident per year of 478 miles by local bus as the main mode for the journey, 541 miles by surface rail, 171 miles by foot, 52 miles by taxi and 30 miles by bicycle.[5]

The Scottish Household Survey shows that the percentage of people travelling by car/van has decreased from 68 to 66 per cent with both the number of driver and passenger journeys showing falls in 2008.[5]

The total number of motor vehicles licensed in Scotland was over 2.7 million at the end of 2008. It has increased steadily over the years, with rises of 30 per cent since 1998, 26 per cent since 1999 and 23 per cent since 2000. However, there were fewer vehicles per 100 population in Scotland (52) than in Great Britain (58) in 2008.[5]

Traffic volume on Scotland's roads has tended to increase steadily - an overall increase of 18 per cent since 1996, the slight dip in 2000 was due to the fuel price protests. The volume of traffic on Motorways has grown by 46 per cent since 1996, in part due to the expansion of the Motorway network.[5]

### Trends in Northern Ireland:

Over the time period 2007-2009, each person in Northern Ireland travelled on average 6,002 miles per year (approximately 16 miles travelled per day), similar to 2006-2008 (6,033 miles). On average, there were 914 journeys made per person per year over the period 2007-2009 (approximately three journeys

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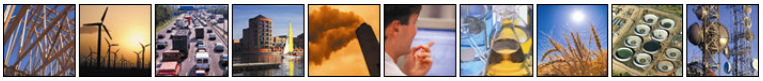

per day). There was no real difference when compared to 2006-2008 (926 journeys per person per year). The average journey length for the period 2007-2009 was 6.6 miles, similar to the journey length for 2006-2008 (6.5 miles). During 2007-2009, the longest journey length was for train journeys, averaging 20.6 miles. In contrast, the shortest journeys were walks which were 0.8 miles on average.

The number of road deaths occurring as a result of reported road traffic collisions increased by 7% from 107 in 2008 to 115 in 2009. [7]

During 2009-10, there were 10 million rail passenger journeys made, a decrease of 2% from 2008-09. [7]

In 2009, Belfast International Airport was the 13th busiest commercial airport in the UK with

4.5 million terminal passengers. This accounted for 2% of all UK terminal passengers. George Best Belfast City airport was the 16th busiest UK commercial airport with 2.6 million terminal passengers, 1% of all UK terminal passengers. [7]

## National Targets:

The Department for Transport (DfT) aims to:[3]

- maximise the overall competitiveness and productivity of the national economy, so as to achieve a sustained high level of GDP growth;.[3]
- reduce transport's emissions of CO2 and other greenhouse gases, with the desired outcome of avoiding dangerous climate change;. [3]
- contribute to better health and longer life expectancy through reducing the risk of death, injury or illness arising from transport, and promoting travel modes that are beneficial to health;. [3]
- improve quality of life for transport users and non-transport users, including through a healthy natural environment, with the desired outcome of improved well-being for all;. [3]
- promote greater equality of transport opportunity for all citizens, with the desired outcome of achieving a fairer society; and. [3]
- by 2010, increase the use of public transport (bus and light rail) by more than 12 per cent in England compared with 2000 levels, with growth in every region;.[4]
- Reduce the number of people killed or seriously injured in Great Britain in road accidents by 40 per cent and the number of children killed or seriously injured by 50 per cent, by 2010 compared with the average for 1994-98, tackling the significantly higher incidence in disadvantaged communities. [4]

*No target based data identified in relation to transport in Scotland, Wales and/or Northern Ireland (consultee input welcome).*

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## Material Assets (Waste Management)

### National Trends:

### Radioactive waste arisings:

There is currently a trend of increasing volumes of low level radioactive waste generated in the UK, predominantly due to dismantling of decommissioned nuclear sites. This trend for existing waste is not expected to be sustained into the long term as 95% of the total projected nuclear waste arisings for the next century have already been produced (excluding arisings from planned new build nuclear power stations).[1]

NDA radioactive waste projections for the UK (excluding new build nuclear power stations) are set out below. [1]

| Waste type | Volume (cubic metre) Stocks at 1 April 2007 | Estimated future arisings (1) | Lifetime total once all wastes are packaged |
|---|---|---|---|
| HLW | 1,730 | -646 (2) | 1,420 |
| ILW | 92,500 | 143,000 | 364,000 |
| LLW | 196,000 | 3,000,000 | 3,470,000 |

(1) These figures assume no new nuclear power stations. There are not currently projections which

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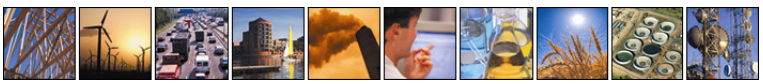

include new nuclear power station arisings.

(2) Future arisings of HLW have negative volumes. This is because Sellafield has reported future arisings of HLW to show that the volume of accumulated waste (liquid plus vitrified product) will fall as liquid waste existing at 1 April 2007 and forecast in the future is conditioned to a vitrified product.

NDA radioactive waste projections for England (excluding new build nuclear power stations) are set out below:[1]

| Waste type | Volume (cubic metre) Stocks at 1 April 2007 | Estimated future arisings (1) | Lifetime total once all wastes are packaged |
|---|---|---|---|
| HLW | 1,730 | -646 (2) | 1,420 |
| ILW | 80,700 | 112,000 | 298,000 |
| LLW | 186,000 | 2,670,000 | 2,980,000 |

(1) These figures assume no new nuclear power stations. There are not currently projections which include new nuclear power station arisings.

(2) Future arisings of HLW have negative volumes. This is because Sellafield has reported future arisings of HLW to show that the volume of accumulated waste (liquid plus vitrified product) will fall as liquid waste existing at 1 April 2007 and forecast in the future is conditioned to a vitrified product.

Plans for a new generation of nuclear power stations in the UK are likely to result in increased radiological waste arisings in the future. As yet the volumes of waste have not been quantified. However disposal is expected to be met nationally, with appropriate capacity planned into deep geological disposal infrastructure.[3]

## Non-radioactive waste arisings:

Waste management in the UK is moving towards greater reuse and recycling and less landfill. Between 2002 and 2007 in the UK, there was 19.5% decrease in waste disposed of in landfill sites. This includes waste produced by households, commerce and industry and construction and demolition.[4]

In England, the total amount of waste sent to landfill has decreased from 80,000,000 tonnes annually in 2000/01 to 72, 500,000 tonnes in 2004/05 at licenced landfill sites: with falls from 50% to 44% for industrial and commercial waste between 1998/99 and 2002/03.[4]

Between 1998/99 and 2002/03 there was a 1% reduction in the total amount (in tonnes) of commercial and industrial waste produced in England. Within this total, industrial waste had reduced to 38,000,000 tonnes in 2002/3 while the amount of commercial waste had grown to 30,000,000 tonnes. During this period. the tonnage of commercial and industrial waste sent to landfill has decreased, with more waste handled by transfer stations and treatment facilities.[5]

In 2002/3 for the first time, recycling and reuse had overtaken landfill as the most common method of waste management. Overall 44% was sent to landfill and 45% recycled.

## Trends in Scotland, Wales and/or Northern Ireland:

Similar to the National Trend, waste management in Scotland, Wales and Northern Ireland is moving towards waste prevention, greater reuse, recycling and composting, and the diversion of as much waste as possible from landfill.

In Scotland, total waste arisings increased by 1,483,444 tonnes between 2004 and 2008. During the same period, however, commercial and industrial waste arisings decreased. The total amount of Scottish Waste sent to landfill decreased from 7,814,879 tonnes to 6,112,198 tonnes over the same five year period.[6]

NDA radioactive waste projections for Scotland (excluding new build nuclear power stations) are set out below:[1]

| Waste type(1) | Volume (cubic metre) Stocks at 1 April 2007 | Estimated future arisings | Lifetime total once all wastes are packaged |
|---|---|---|---|
| ILW | 80,670 | 117,400 | 44,500 |
| LLW | 9,480 | 240,000 | 385,000 |


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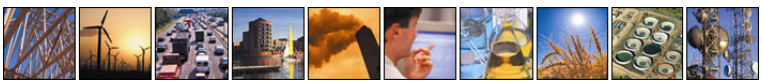


[1] No HLW is managed in Scotland.

In Wales, the landfilling of all wastes has decreased by 1,409,000 tonnes between 1998/99 (4,377,000 tonnes) and 2007 (2,968,000 tonnes).[7]

Commercial and industrial waste arisings rose slightly in 2007 when compared to the previous year, which reflects the increase in commercial waste production between 2002/03 and 2007 (and may also in part due to inaccuracies in monitoring. However, commercial and industrial arisings have decreased by 13% overall since 1998/99. The amount of commercial and industrial waste disposed of to landfill also continues to reduce; the amount of waste landfilled in 2007 was 57% of the 1998/99 figure [7]

Industrial waste arisings during the period 2010/11 to 2013/14 are predicted to remain relatively static in Wales, due to likely future decoupling between economic growth and waste growth because of regulatory and economic measures and cultural factors, and the decline, and likely further decline, in the industrial/manufacturing sector in Wales. During the same period, although there is expected to be continued growth in the commercial sector, commercial waste arisings are expected to remain static as further waste reduction/prevention measures are implemented.[7]

NDA radioactive waste projections for Wales (excluding new build nuclear power stations) are set out below:[1]

| Waste type[1] | Volume (cubic metre) | | |
|---|---|---|---|
| | Stocks at 1 April 2007 | Estimated future arisings | Lifetime total once all wastes are packaged |
| ILW | 3,100 | 13,900 | 21,900 |
| LLW | 697 | 83,400 | 104,000 |

[1] No HLW is managed in Wales.

In Northern Ireland, waste production is expected to continue to increase due to economic and population growth. Although, increased reuse, recycling and recovery of waste, and diversion of waste from landfill is expected to continue to increase as waste reduction/prevention measures continue to be implemented.[8]

The 2004/05 Commercial and Industrial Waste Arisings Survey reports an increase in commercial and industrial waste arisings from the previous years (estimated to be around 1,560,371 tonnes). However, it is difficult to draw direct comparisons due to the differences in data collection methods.[9]

In Northern Ireland there has also been increases in the proportion of commercial and industrial waste landfilled; 64% of waste was landfilled in 2004/05, compared to 40% and 41% in 2000 and 2002 respectively.[9]

There are currently no nuclear licenced sites in Northern Ireland, with only very small quantities of radioactive waste produced from hospitals and industry. However, any new nuclear development in Northern Ireland would increase radiological waste arisings in the future.

## National Targets:

Defra has established targets for England which includes a greater focus on waste prevention seeking to achieve a fall of 50% per person of household waste arising. Recycling and composting of household waste targets have been established - at least 40% by 2010, 45% by 2015 and 50% by 2020; and recovery of municipal waste - 53% by 2010, 67% by 2015 and 75% by 2020. [4]

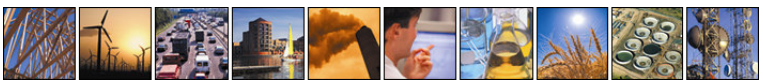
On the basis of the policies set out in Waste Strategy for England 2007, levels of commercial and industrial waste landfilled are expected to fall by 20% by 2010 compared to 2004. The Government is considering, in conjunction with the construction industry, a target to halve the amount of construction, demolition and excavation wastes going to landfill by 2012. [4]

## MOD Target:

- reduce total waste arisings by 5%, by March 2011, and by 25% by 2020 relative to the 2004/05 baseline (SOGE target)[10 11] and;
- increase recycling levels to be at 40% of the baseline by March 2011, and to 75% by 2020 (SOGE target). [10 11]

## Targets in Scotland, Wales and/or Northern Ireland:

Under the 'Zero Waste Plan', the Scottish Government has set a long term target of 70% recycling/composting and preparing for reuse of all waste arising in Scotland by 2025, regardless of its source. The Scottish Government has also set a target of no more than 5% of all waste produced to



go to landfill by 2025.[6]

'Towards Zero Waste' the Waste Strategy for Wales, sets the following targets for commercial and industrial waste:

- to achieve a reduction in commercial and industrial waste produced equivalent to at least 10% of the 1998 arisings by 2010;
- to reduce the amount of commercial and industrial waste sent to landfill to less than 80% of that landfilled in 1998/99 by 2010; and
- to reduce the amount of biodegradable commercial and industrial waste sent to landfill to less than 80% of that landfilled in 1998/99 by 2010.[7]

'Towards Waste Management', the Northern Ireland Waste Management Strategy for 2006 to 2020, sets the following targets:

- 60% of Commercial and industrial waste to be recycled by 2020;
- 75% of Construction, demolition and excavation Wastes to be recycled or reused by 2020; and
- recycling and composting of household wastes to be at: 35% by 2010; 40% by 2015; and 45% by 2020.[12]

## Material Assets (Land Use and Materials)

### National Trends:

The current trend in land use is generally towards increased development on previously-developed land accompanied by a decline in stocks of previously developed land available for redevelopment.

The percentage of all new development occurring on previously-developed land measured by land area) increased from 47% in 1990 to 52%in 2006.[1] A more recent figure is not available in the latest Defra statistic report published in 2010. However, the percentage of new dwellings built on previously developed land, or through the conversion of existing buildings, increased from 54% in 1990 to 70% in 2003, and then to 80% in 2009 (provisional estimate).[2]

Between 2002 and 2008 the total amount of previously-developed land in England declined by around 4%. In the same period vacant and derelict land declined by 20%, while land currently in use with potential for redevelopment increased by around 23%. [4]

Agricultural land use has increased (following on from a 3% increase of crop area and a 6% increase of grazing area between 1996 and 2008) [4]. There is also a fall in the amount of set aside land (which decreased by 14% between 1996 and 2007) as crop prices have increased. [5] Land use for forest and woodland is currently showing an upward trend, with around a 4% increase between 1996 and 2008.[4]

In England between 1989 and 2009 there has been a general trend of increasing development of residential buildings on previously developed land. There has also been a decline in development on agricultural land in favour of redevelopment of existing residential areas.[6]

MOD trend - The number of new build and refurbishment projects achieving the to achieve an excellent rating against the Defence Related Environmental Assessment Methodology (DREAM), the Building Research Establishment's Environmental Assessment Method (BREEAM) or equivalent (SOGE mandate) rating has improved from 50% of all projects assessed in 2006/2007, to 100% of new build and 78% of refurbishment projects for completed assessments undertaken in 2007/08.[7]

### Trends in Scotland, Wales and/or Northern Ireland:

Similar to the national trend, land management in Scotland, Wales and Northern Ireland is focusing on the redevelopment of previously developed land where possible.

In Scotland, since 2002 there has been a total increase of 217ha of derelict and urban vacant land, from 10,646ha in 2002 to 10,863ha in 2009. This is attributable to the land that has been brought back into productive use or removed due to naturalisation being balanced by a small number of large sites falling out of use. Since 2002, an average of 580ha of derelict and urban vacant land was brought back into use each year. The 2009 survey recorded 384ha of derelict and urban vacant land being reused since 2008.

The area of Broadleaved Woodland, Improved Grassland and Acid Grassland Broad Habitats increased by 19.5% in Scotland between 1998 and 2007. There was a corresponding decrease of 7.1% in the area of Coniferous Woodland. The area of the Arable and Horticulture Broad Habitat

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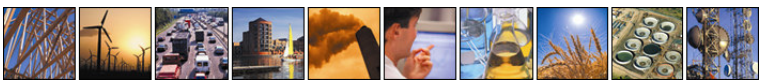
1. Sustainable Development Indicators in Your Pocket 2009, Defra, 2009, http://www.defra.gov.uk/sustainable/government/progress/documents/SDIYP2009_a9.pdf
2. Measuring Progress, Sustainable Development Indicators 2010, Defra, 2010, http://www.defra.gov.uk/sustainable/government/progress/documents/SDI2010_001.pdf
3. Previously Developed Land that may be Available for Development: Results from the 2008 National Land Use Database of Previously-Developed Land in England, Homes and Communities Agency, February 2010, http://www.homesandcommunities.co.uk/nlud-pdl-results-and-analysis.htm
4. Environment in your Pocket Statistics 2009, Defra, 2009, http://www.defra.gov.uk/evidence/statistics/environment/eiyp/pdf/eiyp2009.pdf
5. Defra, Environment in your pocket, 2008, http://www.defra.gov.uk/environment/statistics/eiyp/index.htm
6. Land Use Change Statistics (England) 2008 - Provisional Estimates (May 2009), Department for Communities and Local Government, May 2009, http://www.communities.gov.uk/publications/corporate/statistics/lucs2008provisionalmay
7. MoD Sustainable Development Report and Action Plan 2008,

decreased by 13.6% between 1998 and 2007. There was a corresponding increase of 9.1% in the area of Improved Grassland, but no significant increase in the area of Neutral Grassland across Scotland as a whole. The changes in the areas of Broad Habitats in Scotland reflect short-term influences, such as agricultural economics, and medium term influences, such as woodland planting and harvesting.[9]

In Wales, between 1998 and 2007 the area of built land has increased by 12.5%. Most Broad Habitats did not change significantly in area between 1998 and 2007 when averaged across Wales as a whole. However, a number of statistically significant changes in area have been noted between 1998 and 2007. In the lowland zone of Wales Broadleaved, Mixed and Yew Woodland increased, and in the upland zone, Arable and Horticultural Land increased, Neutral Grassland decreased and Acid Grassland increased. The possible drivers of these changes are unknown and require further research.[9]

In Northern Ireland, the most recent Countryside Survey showed that semi-natural habitat continues to decline, although the rate of loss has slowed from 1998. Agricultural land use and rural building continue to be the main processes resulting in habitat loss. From 1998 to 2007 the total area of Urban/Built-up Areas has increased by over 30%.[10] There has been a reduction in habitat diversity throughout lowland and upland landscapes, probably as a result of agricultural intensification. Woodland and scrub habitat, however, has increased as a result of conifer and woodland planting.[11]

No baseline data has been identified in relation to previously developed land in Wales and Northern Ireland and therefore trends could not be established. However, similar to National Trends, it is expected that current trend in land use is generally towards increased development on previously-developed land.

### National Targets:

*No specific targets have been identified for land use (consultee input welcome).* However, across the UK a hierarchy of strategies, policies and legislation underpin the management of land.

### MOD Targets:

All new build and major refurbishment construction projects will be designed to achieve an excellent rating against the Defence Related Environmental Assessment Methodology (DREAM), the Building Research Establishment's Environmental Assessment Method (BREEAM) or equivalent (SOGE mandate). [6]

### Targets in Scotland, Wales and/or Northern Ireland:

The Scottish Government are in the process of developing a Land Use Strategy (draft consultation version is available). The Strategy will set out a vision and long term objectives for an integrated approach to sustainable land use in Scotland.[11]


http://www.mod.uk/DefenceInternet/AboutDefence/CorporatePublications/HealthandSafetyPublications/SSDCD/SustainableDevelopmentPolicy/SustainableDevelopmentStrategyReportsAndActionPlans.htm

8. Scottish Vacant and Derelict Land Survey 2009, Scottish Government, January 2010, http://www.scotland.gov.uk/Publications/2010/01/26135819/0
9. Countryside Survey 2007, http://www.countrysidesurvey.org.uk/reports2007.html
11. Northern Ireland Countryside Survey 2007, Northern Ireland Environment Agency, 2009, http://www.ni-environment.gov.uk/nics2007_broad_habitat_change_1998-2007.pdf
10. 'Our Environment, Our Heritage, Our Future' State of the Environment Report for Northern Ireland, Department of the Environment, March 2008, http://www.ni-environment.gov.uk/index/about-niea/state_of_the_environment/state_of_the_environment_report.htm
11. Getting the Best from Our Land: A Draft Land Use Strategy for Scotland, January 2010, http://www.scotland.gov.uk/Topics/Environment/Countryside/Landusestrategy


## Cultural Heritage

### National Trends:

The current trend in cultural heritage condition is generally towards little change in the number of historic assets and a decline in the percentage of historic assets at risk. [1]
English Heritage report that there has been little change in the total number of historic assets between 2002 and 2009; the total number of listed buildings in England has increased by 0.9% during this period with the largest increase in Grade 2* (1.4%). The number of Scheduled Monuments has increased by 1.9% over the same period whilst registered parks and gardens increased by 7.3% (104) between 2002 and 2009. The number of Scheduled Monuments increased by 1.9% between 2002 and 2009.[1]
The number of Grade 1 and 2* listed buildings at risk has declined from 3.8% in 1999 to 3.1% (969) in 2009. [1]

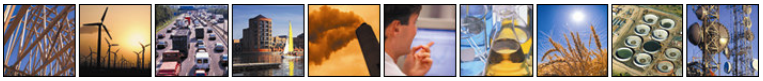
There is a trend of improving condition of MoD cultural heritage assets.[2]

Between 2005/06 and 2008/09 there was a 28% increase in the number of MoD Scheduled Monuments either in good or fair condition. [4]

There is currently little change in the number of MOD buildings at risk. In 2007 the MOD had 28 Buildings at Risk entries. Since 2007, three buildings have been removed from the list (one by repair,


**References:**

1. English Heritage, Heritage Counts 2009, England, http://hc.english-heritage.org.uk/upload/pdf/HC09_England_Acc.pdf?1286268742
2. MOD Heritage Report 2005/07 http://www.defence-estates.mod.uk/publications/corporate/MODHeritateReport2005-2007final.pdf
3. MOD, Stewardship Report on the Defence Estates, 2007-08, http://www.defence-estates.mod.uk/estate/estatestrategy.php
4. MoD Heritage Report 2007 – 2009,

one by disposal and one by transfer to English Partnerships) and three have been added. [3]

### Trends in Scotland, Wales and/or Northern Ireland:

In Wales there has been a small increase in the number of listed buildings (29,866 to 29,889), scheduled monuments (3,909 to 4,111) and conservation areas (511 to 519) between 2006 and 2008. A 2008 report for Cadw found that for a sample percentage of listed buildings in Wales between 2007 and 2008, those classed as 'at risk' fell slightly from 10.2% to 9.6% ; those classed as 'vulnerable' fell slightly from 17.5% to 17.3%; and those classed as 'not at risk' increased slightly from 72.4% to 73.2%. [5]

In Northern Ireland there has also been a small increase in Scheduled Monuments (1,423 in 1999/2000 to 1,803 in 2008/09), listed buildings (8,184 in 2003/04 to 8,350 in 2008/09) and conservation areas (57 to 60 between 2002/03 and 2008/09). The number of buildings and monuments at risk has increased between 2003/04 and 2008/09 by approximately 16% to 437. [6]
*No trend based data identified in relation to cultural heritage in Scotland (consultee input welcome).*

### National Targets:

To reduce the numbers of England's grade I and II* buildings and structural Scheduled Monuments at risk. [7]

### Targets in Scotland, Wales and/or Northern Ireland:

*No targets identified in relation to cultural heritage in Scotland, Wales or Northern Ireland (consultee input welcome).*

### MOD Targets:

The effects of the SDSR may impede MOD's to maintain its' historic estate at the same level in the future, especially where features have no practical use.


http://www.mod.uk/NR/rdonlyres/D0EEBC4D-5982-4C9F-BA4A-555936E544CD/0/heritage_report_0709.pdf

5. StatsWales, 2008, State of the Environment Indicator 26 http://www.statswales.wales.gov.uk/TableViewer/document.aspx?ReportId=6001
6. Department of the Environment, 2010, Northern Ireland Environmental Statistics Report
7. English Heritage, 2010, Heritage at Risk, http://www.english-heritage.org.uk/publications/har-2010-report/HAR-report-2010.pdf


## Landscape

### National Trends:

Over the last century the following landscape character trends have been experienced: [1]

- a gradual erosion of local distinctiveness in some areas, through a process of standardisation and simplification of some of the components that make up landscape character;
- a loss of some natural and semi-natural features and habitats such as ancient woodlands and unimproved grassland;
- a decline in some traditional agricultural landscape features such as farm ponds and hedgerows, and a loss of archaeological sites and traditional buildings;
- increased urbanisation, often accompanied by poor design standards and a decline in the variety of building materials, and the importation of urban and suburban building styles into rural areas; and
- a loss of remoteness and reduced tranquillity because of built development and traffic growth.

Natural England report that in 2008 existing landscape character was being maintained in 51% of England's landscapes, whilst in a further 10% existing character was being enhanced. However, 20% of landscapes were showing signs of neglect. [1]

Data from 1990 to 2003 indicates that in England the number of Character Areas with patterns of change that either maintain or enhance character has increased from 36% to 61%. The number of Character Areas with evidence of neglect or erosion of character has decreased. This evidence suggests that the character of the majority of English landscapes, at Character Area scale, is being sustained.[1]

### Trends in Scotland, Wales and/or Northern Ireland:

The Scottish landscape is vulnerable to a variety of pressures. Key threats and opportunities to landscape character include the development of new infrastructure, agriculture, the loss and expansion of woodland and natural processes. [3] The distinctive character of the Welsh landscape has been, and remains, under threat and is declining. Future changes to the farming subsidy regime have the potential to result in significant changes to the landscape. [4] Similarly, the main pressures on landscape character in Northern Ireland are development, infrastructure, extraction industries, agriculture, forestry and tourism. [5]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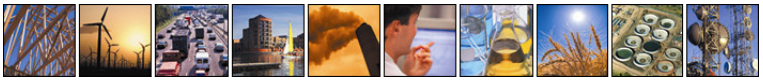
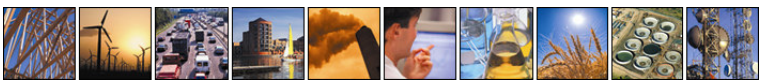
1. Natural England, State of the Natural Environment 2008, Landscape Characterisation and Change, http://www.naturalengland.org.uk/publications/sone/sections.aspx
2. Forestry Commission Scotland, Scottish Forestry Strategy
3. Scottish Natural Heritage, 2002, Natural Heritage Zones: A National Assessment of Scotland's Landscapes, http://www.snh.gov.uk/docs/B464892.pdf
4. ERM, 2009, Sustainability Appraisal of the Wales Waste Strategy: Sustainability Appraisal Report, http://wales.gov.uk/topics/environmentcountryside/epq/wastercycling/zerowastebackground/appraisals/?lang=en
5. Environment and Heritage Service, 2008, Our Environment, Our Heritage, Our Future: State of the Environment Report for Northern Ireland, http://www.ni-environment.gov.uk/index/about-niea/state_of_the_environment/state_of_the_environment_report.htm
6. Forestry Commission England, 2008, Delivery Plan 2008-2012:

| | |
|---|---|
| **National Targets:**<br>Forestry Commission England seeks to maintain the area of certified woodland and to ensure that 95% of woodland SSSIs are in favourable condition by 2011. [6] *No further targets identified in relation to landscape (consultee input welcome).*<br><br>**Targets in Scotland, Wales and/or Northern Ireland:**<br>Forestry Commission Scotland aimed to see Scotland's woodlands increase from 17.1% of land area to about 25% and bring 80% of the special features on Scotland's nationally important nature sites into favourable condition by March 2008. [4]<br>The Northern Ireland Forest Service seeks to increase new woodland cover by 550ha by 2010.<br>*No further targets identified in relation to landscape in Scotland, Northern Ireland and Wales (consultee input welcome).* | England's Trees, Woods and Forests<br>7. Northern Ireland Forest Service, 2010, Annual report 2009-2010, http://www.forestserviceni.gov.uk/index/about-us.htm |



# Submarine Dismantling Project

## SEA Scoping Report Update

## Annex B

## Review of National Plans and Programmes

December 2010

MINISTRY OF DEFENCE

Defence Equipment & Support

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
|---|---|
| **Biodiversity and Nature Conservation** | |
| **International/European (e.g. Directives)** | |
| Council of Europe (1979) *Bern Convention of European Wildlife and Natural Habitats* | **Objectives:** Contracting parties are under legal obligation to protect the species listed in the appendices to the convention.<br><br>**Targets:** No formal targets. |
| Council of Europe (1979) *Bern Convention of European Wildlife and Natural Habitats* | **Objectives:** Contracting parties are under legal obligation to protect the species listed in the appendices to the convention.<br><br>**Targets:** No formal targets. |
| EU (1978) *Freshwater Fish Directive* (78/659/EEC) as updated by *Quality of Fresh Waters Needing Protection or Improvement in Order to Support Fish Life* (2006/44/EC) | **Objectives:** Directive on the quality of fresh waters needing protection or improvement in order to support fish life has been significantly amended on several occasions. In order to attain the objectives of the Directive, Member States should designate the waters to which it will apply and set limit values corresponding to certain parameters. The waters so designated should be brought into conformity with these values within five years of this designation.<br><br>**Targets:** No formal targets. |
| EU (1992) *Habitats Directive* 92/43/EEC | **Objectives:** This Directive places a legal requirement on EU countries to make provision for the protection of specified habitats and species. This is achieved through the designation of Special Areas of Conservation.<br><br>**Targets:** No formal targets. |
| EU (2004) *Environmental Liability Directive* 2004/35/EC | **Objective:** Directive seeks to achieve the prevention and remedying of environmental damage - specifically, damage to habitats and species protected by EC law, and to species or habitat on a site of special scientific interest for which the site has been notified, damage to water resources, and land contamination which presents a threat to human health. It reinforces the “polluter pays” principle - making operators financially liable for threats of or actual damage.<br><br>**Targets:** No formal targets but legislation. |
| EU (2005) *European Community Biodiversity Strategy* COM98/42 | **Objectives:** The Biodiversity Strategy aims to anticipate, prevent and attack the causes of significant reduction or loss of biodiversity at the source, which will help both to reverse present trends in biodiversity decline and to place species and ecosystems, including agro-ecosystems, at a satisfactory conservation status, both within and beyond the territory of the EU.<br><br>**Targets:** No specific targets or indicators have been identified. |
| EU (2005) *European Community Biodiversity Strategy* COM98/42 | **Objectives:** The Biodiversity Strategy aims to anticipate, prevent and attack the causes of significant reduction or loss of biodiversity at the source, which will help both to reverse present trends in biodiversity decline and to place species and ecosystems, including agro-ecosystems, at a satisfactory conservation status, both within and beyond the territory of the EU.<br><br>**Targets:** No specific targets or indicators have been identified. |
| EU (2006) *Freshwater Fish Directive* 78/659/EEC (updated in 2006 by Directive 2006/44/EC on the Quality of Fresh Waters Needing Protection or Improvement in Order to Support Fish Life). | Directive on the quality of fresh waters needing protection or improvement in order to support fish life has been significantly amended on several occasions.<br><br>**Objectives:** In order to attain the objectives of the Directive, Member States should designate the waters to which it will apply and set limit values corresponding to certain parameters. The waters so designated should be brought into conformity with these values within five years of this designation.<br><br>**Targets:** No formal targets. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
|---|---|
| **Biodiversity and Nature Conservation** | |
| EU (2007) *Eel Regulations* Council Regulation No 1100/2007. | **Objective:** The regulation establishes a framework for the protection and sustainable use of eels in Europe through Eel Management Plans. The objective of each Eel Management Plan is to reduce anthropogenic mortalities so as to permit with high probability the escapement to the sea of at least 40% of the silver eel biomass relative to the best estimate of escapement that would have existed if no anthropogenic influences had impacted the stock.<br><br>**Targets:** By 31 July 2013, 60 % of eels less than 12cm in length caught annually should be reserved for restocking. Catches of eels in Community waters seaward of the boundary of eel river basins defined by Member States as constituting natural eel habitats should be reduced gradually by reducing fishing effort or catches by at least 50% based on the average fishing effort or catches in the years 2004 to 2006. |
| EU (2008) *Marine Strategy Framework Directive* 2008/56/EC | **Objective:** The Directive requires Member States to develop a marine strategy, including determining Good Environmental Status (GES) for their marine waters, and designing and implementing programmes of measures aimed at achieving it by 2020, using an ecosystem approach to marine management. It takes account both of socioeconomic factors and the cost of taking action in relation to the scale of the risk to the marine environment. Draft regulations establish a legal framework which assigns duties to the Secretary of State, Welsh and Scottish Ministers and the Department of the Environment in Northern Ireland have been published for consultation.<br><br>**Targets:** No formal targets. |
| EU (2009) *The Birds Directive* 2009/147/EC | **Objectives:** Makes it a legal requirement that EU countries make provision for the protection of birds. This includes the selection and designation of Special Protection Areas.<br><br>**Targets:** No formal targets. |
| OSPAR Commission (2003) *Biological Diversity and Ecosystems Strategy* | **Objectives:** This Strategy seeks to protect and enhance the ecosystems and the biological diversity of the maritime area, which are, or could be, affected as a result of human activities.<br><br>**Targets:** No specific targets or indicators have been identified. |
| Ramsar Convention on Wetlands (1971) | **Objectives**: Nationally to designate at least one wetland under the treaty. More relevant is the obligation to include wetland conservation consideration in land-use planning.<br><br>**Targets:** No formal targets. |
| United Nations (1979) *Bonn - Convention on Migratory Species* | **Objectives:** Signatories are under agreements or memoranda of understanding relating to the protection of migratory species.<br><br>**Targets:** No formal targets. |
| United Nations (1992) *Convention on Biological Diversity* | **Objectives:** This convention was one of the main outcomes of the 1992 Rio Earth Summit.<br><br>The key objectives of the Convention are:<br>• the conservation of biological diversity;<br>• the sustainable use of its components; and<br>• the fair and equitable sharing of the benefits arising from the use of genetic resources.<br><br>The achievement of the objectives in the Convention relies heavily upon the implementation of action at the national level. |
| **National (UK)** | |
| Communities and Local Government (2006) *Circular 06/05: Biodiversity and* | **Objective:** This circular provides administrative guidance on the application of the law relating to planning and nature conservation as it applies in England. It complements the expression of national planning policy in Planning Policy Statement 9: Biodiversity and Geological Conservation (PPS9) and |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
|---|---|
| **Biodiversity and Nature Conservation** | |
| *Geological Conservation* | the accompanying Planning for Biodiversity and Geological Conservation: A Guide to Good Practice.<br><br>**Targets:** No formal targets. |
| *Conservation of Habitats and Species Regulations 2010* | **Objective:** The regulations require sites of importance to habitats or species to be designated. It also makes it an offence to collect damage or kill any species listed under schedules 2 or 4. Any impact on such designated sites or listed species must be considered in regards to planning permission applications.<br><br>**Targets:** No formal targets. |
| Defra (2002) *Working with the grain of nature: a biodiversity strategy for England* | **Objectives:** This strategy sets out a number of indicators for biodiversity which are to be monitored by Defra, including the condition of SSSIs, populations of wild birds and progress with implementing biodiversity action plans (BAPs).<br><br>Updated indicators were published in March 2007.<br><br>**Targets:** No formal targets. |
| Defra (2007) *A Strategy for England's Trees, Woodlands and Forests* | **Objectives:**<br>• provide, in England, a resource of trees, woods and forests in places where they can contribute most in terms of environmental, economic and social benefits now and for future generations;<br>• ensure that existing and newly planted trees, woods and forests are resilient to the impacts of climate change and also contribute to the way in which biodiversity and natural resources adjust to a changing climate;<br>• protect and enhance the environmental resources of water, soil, air, biodiversity and landscapes (both woodland and non-woodland), and the cultural and amenity values of trees and woodland;<br>• increase the contribution that trees, woods and forests make to the quality of life for those living in, working in or visiting England; and<br>• improve the competitiveness of woodland businesses and promote the development of new or improved markets for sustainable woodland products and ecosystem services where this will deliver identifiable public benefits, nationally or locally, including the reduction of carbon emissions.<br><br>**Targets:** No formal targets. |
| *Environmental Protection Act (1990)* | **Objectives**: This Act sets out key statutory requirements for the UK regarding environmental protection (including waste and nature conservation).<br><br>**Targets**: No formal targets**.** |
| Marine and Coastal Access Act 2009 | **Objectives:** The Marine and Coastal Access Act sets out a number of measures including the establishment of Marine Conservation Zones (MCZs) and Marine Spatial Plans. It also includes amendments to the Salmon and Freshwater Fisheries Act, 1975.<br><br>**Targets:** No formal targets**.** |
| Marine Environment Protection is also afforded by relevant Pollution Prevention Guidance Notes (PPGs):<br><br>PPG 1 General guide to the prevention of pollution<br><br>PPG 2 Above ground oil storage tanks<br><br>PPG 5 Works and maintenance in or near water | **Objective:** These PPGs provide guidance on activities that are likely to be relevant to coastal construction and industrial operational activities.<br><br>**Targets:** No formal targets. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
|---|---|
| **Biodiversity and Nature Conservation** | |
| PPG 8 Storage and disposal of oil<br>PPG 13 Vehicle washing and cleaning<br>PPG 14 Marinas and crafts<br>PPG 21 Pollution incident response planning<br>PPG 22 Dealing with spillages on highways<br>PPG 26 Storage and handling of drums and intermediate bulk containers (IBCs) | |
| Office of the Deputy Prime Minister (2005). *PPS9: Biodiversity and Geological Conservation* | **Objectives:** The statement sets out a number of key planning principles:<br>• Development plan policies and planning decisions should be based upon up-to-date information about the environmental characteristics of their areas;<br>• Plan policies and planning decisions should aim to maintain, and enhance, restore or add to biodiversity and geological conservation interests;<br>• Plan policies on the form and location of development should take a strategic approach to the conservation, enhancement and restoration of biodiversity and geology and should recognise the contributions that sites, areas and features make, both individually and in combination;<br>• Plan policies should promote opportunities for the incorporation of beneficial biodiversity and geological features within the design of development;<br>• Development proposals where the principal objective is to conserve or enhance biodiversity and geological conservation interests should be permitted; and<br>• The aim of planning decisions should be to prevent harm to biodiversity and geological conservation interests.<br>**Targets:** No specific targets are given but it is noted that Sites of regional and local biodiversity and geological interest have a fundamental role to play in meeting overall national biodiversity targets; contributing to the quality of life and the well-being of the community; and in supporting research and education. |
| Sustainable Development Commission (2010) *Sustainable Development in Government Framework Targets* | **Objectives:** The Sustainable Development in Government (SDiG) framework was announced in March 2010, this will replace the SOGE targets when they expire in 2010/11. This framework is intended to reduce greenhouse gas emissions and ensure that the Government's estate is resilient to the impacts of changing climate. The framework also includes challenging targets on waste reduction and recovery, more efficient use of water, and it promotes the protection and enhancement of biodiversity, and positive engagement with the community.<br>**Targets:** Targets relating to biodiversity include:<br>• produce a biodiversity action plan (or demonstrate how they are building biodiversity planning into their estate/environmental management systems) and report progress annually;<br>• where applicable Sites of Special Scientific Interest (SSSIs) are maintained in target condition with continued progress towards achieving favourable condition; and<br>• all Departments, Agencies and Executive NDPBs to conduct sustainability appraisals of office relocations. |
| *The Conservation (Natural Habitats, &c.) Regulations (1994)* | **Objective:** The regulations require sites of European importance to habitats or species to be designated. This includes the establishment of Special Areas of Conservation (SAC). It also makes it an offence to collect damage or kill any species listed under schedules 2 or 4. Any impact on such designated sites or listed species is a material consideration with regard to planning applications. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
|---|---|
| **Biodiversity and Nature Conservation** | |
| | **Targets:** No formal targets. |
| *The Hedgerows Regulations 1997* | **Objective:** Regulations that it is against the law to remove most countryside hedgerows without permission of the LPA.<br><br>**Targets:** No formal targets. |
| *The National Parks and Access to the Countryside Act 1949* | **Objectives:**<br><br>An Act to:<br>• make provision for National Parks and the establishment of a National Parks Commission;<br>• to confer on the Nature Conservancy and local authorities powers for the establishment and maintenance of nature reserves;<br>• to make further provision for the recording, creation, maintenance and improvement of public paths and for securing access to open country, and to amend the law relating to rights of way;<br>• to confer further powers for preserving and enhancing natural beauty; and<br>• for matters connected with the purposes aforesaid.<br><br>**Targets:** Ultimately seeks to conserve and protect countryside and National Parks through legislation. |
| *The Natural Environment and Rural Communities (NERC) Act 2006* | **Objectives:**<br><br>Establishes Natural England as the main body responsible for conserving, enhancing and managing England's natural environment. It also covers biodiversity, pesticides harmful to wildlife and the protection of birds.<br><br>The Act:<br>• makes provision about bodies concerned with the natural environment and rural communities;<br>• makes provision in connection with wildlife, sites of special scientific interest, National Parks and the Broads;<br>• amends the law relating to rights of way;<br>• makes provision as to the Inland Waterways Amenity Advisory Council; and<br>• provides for flexible administrative arrangements in connection with functions relating to the environment and rural affairs and certain other functions; and for connected purposes.<br><br>**Targets:** Legislation rather than targets in Act. |
| *The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007* | **Objectives:** These Regulations make provision for implementing Council Directive 79/409/EEC on the conservation of wild birds and Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora in relation to marine areas where the United Kingdom has jurisdiction beyond its territorial sea.<br><br>The 2007 Regulations apply in the 'offshore area' beyond 12 nautical miles from the UK coast. They provide protection for a variety of marine species and wild birds through a number of offences that aim to prevent damaging activities affecting protected species and habitats.<br><br>**Targets:** No formal targets. |
| *The Protection of Badgers Act 1992* | **Objectives:** Sets out it is a serious offence to kill, injure or take a badger, or to damage or interfere with a sett unless a licence is obtained from a statutory authority. In spite of this, it can be hard to enforce the law, so badger baiting continues.<br><br>**Targets:** No formal targets. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Biodiversity and Nature Conservation** | |
| *The Wildlife and Countryside Act 1981* | **Objectives:** This is the main UK legislation relating to the protection of named floral and faunal species and the network of nationally protected wildlife areas: Sites of Special Scientific Interest (SSSI) and Special Protection Areas (SPA) for birds.<br><br>**Targets:** No formal targets. |
| UK Biodiversity Partnership (2007) *Conserving Biodiversity – The UK Approach* | **Objectives:** Sets out an approach to biodiversity conservation that is designed not only to meet the commitment to halt the loss of biodiversity by 2010, but to guide action well into the second decade of the 21st century at a time when the challenges faced by the natural environment are great.<br><br>The integrating framework of an Ecosystem Approach sets out the following priorities:<br>• protecting the best sites for wildlife;<br>• targeting action on priority species and habitats;<br>• embedding proper consideration of biodiversity and ecosystem services in all relevant sectors of policy and decision-making;<br>• engaging people, and encouraging behaviour change;<br>• developing and interpreting the evidence base; and<br>• ensuring that the UK plays a proactive role in influencing the development of Multilateral Environmental Agreements, and contributes fully to their domestic delivery.<br><br>**Target:** Halt the loss of biodiversity by 2010. |
| UK Biodiversity Partnership (1994) *The UK Biodiversity Action Plan* | **Objectives:** The overall goal of the UK Biodiversity Action Plan (BAP) is to conserve and enhance biological diversity within the UK and to contribute to the conservation of global biodiversity through all appropriate mechanisms.<br><br>The UK BAP incorporates six underlying principles:<br>• where biological resources are used, such use should be sustainable;<br>• wise use should be ensured for non-renewable resources;<br>• the conservation of biodiversity requires the care and involvement of individuals and communities as well as;<br>• governmental processes;<br>• conservation of biodiversity should be an integral part of Government programmes, policy and action;<br>• conservation practice and policy should be based upon a sound knowledge base; and<br>• the precautionary principle should guide decisions.<br><br>**Targets:** There are no key targets listed. |
| **National (MOD)** | |
| MOD Sustainable Operations on the Government Estate (SOGE): *Strategic Statement on Biodiversity* | **Objectives:**<br>• to be an exemplar in the management of designated sites where compatible with military requirements;<br>• to ensure natural environment requirements and best practice are fully integrated into the estate management; and<br>• to contribute, as appropriate, to the UK Biodiversity Action Plan (and Country Biodiversity Strategies).<br><br>**Targets:**<br>• to maintain and, where appropriate, enhance the biodiversity interest of Natura 2000 sites, Ramsar |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Biodiversity and Nature Conservation** | |
| | sites and SSSIs/ASSIs for which MOD has direct management responsibility;<br>• to minimise the potential impacts of MOD activities on SSSIs/ASSIs which are the management responsibility of other landowners;<br>• to ensure that where there is significant biodiversity interest on the estate, integrated rural/land management plans (IRMP/ILMP) are developed, or otherwise integrated with estate management;<br>• processes and military objectives;<br>• to ensure high quality and consistent application of appraisal tools that facilitates the sustainable use of biological resources and identification of impacts on biodiversity;<br>• to improve the co-ordination of biodiversity enhancement on the defence estate, and deliver the actions identified as priorities for MOD action for biodiversity;<br>• to improve methods to monitor biodiversity resources to ensure use is sustainable; and<br>• to identify species at risk on the defence estate, and evaluate potential for recovery (vulnerable species will be considered for recovery on a case-by-case basis). |
| MOD (2008) *Sustainable Development Report and Action Plan* (SDRAP) | **Objectives:** Conserve and enhance biodiversity, as part of estate stewardship, and to contribute to Government biodiversity objectives.<br><br>**Targets:** By 2010, 95% of Sites of Special Scientific interest (SSSI's) in sole ownership or control in target condition (SOGE target). |
| *MOD JSP 418, leaflet 10 – Marine Environmental Legislation* | **Objectives:** No formal targets.<br><br>**Targets:** No formal targets. |
| **National (Scotland)** | |
| *Nature Conservation Act (Scotland) 2004.* | **Objectives:** The Act places duties on public bodies in relation to the conservation of biodiversity, increases protection for Sites of Special Scientific Interest (SSSI), amends legislation on Nature Conservation Orders, provides for Land Management Orders for SSSIs and associated land, strengthens wildlife enforcement legislation, and requires the preparation of a Scottish Fossil Code.<br><br>**Targets**: No formal targets. |
| Scottish Executive (2000) *Planning Advice Note 60: Planning for Natural Heritage* | PAN 60 provides advice on how development and the planning system can contribute to the conservation, enhancement, enjoyment and understanding of Scotland's natural environment and encourages developers and planning authorities to be positive and creative in addressing natural heritage issues.<br><br>PAN 60 complements the National Planning Policy Guideline on Natural Heritage (NPPG 14) with examples of good planning practice in relation to natural heritage. It aims to promote good practice in planning for natural heritage and demonstrate that planning and the development process can be powerful mechanisms for realising natural heritage objectives and creating quality environments.<br><br>**Objectives/Targets:** The note does not include any specific objectives or targets. |
| Scottish Executive (2004) *Scotland's Biodiversity: It's in Your Hands – A strategy for the conservation and enhancement of biodiversity in Scotland* | **Objectives:** An Executive strategy setting out a 25 year framework for action to conserve and enhance biodiversity in Scotland.<br><br>The overall aim of this strategy is to conserve biodiversity for the health, enjoyment and wellbeing of the people of Scotland now and in the future.<br><br>The foregoing analysis suggests the need for balanced action across a range of areas to meet this broad aim. The required actions can be grouped under five major strategic objectives:<br>• species and habitats: To halt the loss of biodiversity and continue to reverse previous losses through targeted action for species and habitats; |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Biodiversity and Nature Conservation** | |
| | • people: To increase awareness, understanding and enjoyment of biodiversity, and engage many more people in conservation and enhancement;<br>• landscapes and ecosystems: To restore and enhance biodiversity in all our urban, rural and marine environments through better planning, design and practice;<br>• integration and co-ordination: To develop an effective management framework that ensures biodiversity is taken into account in all decision making; and<br>• knowledge: To ensure that the best new and existing knowledge on biodiversity is available to all policy makers and practitioners. |
| Scottish Executive Proposed Marine National Park. | **Objectives:** The proposal is to create a marine national park around an as-yet-undecided area of Scotland's coast. Two of the proposed locations are close to the Clyde NB. This is at the consultation stage.<br><br>**Targets:** There are no key targets listed. |
| Scottish Government (2010) *Scottish Planning Policy* | **Objectives**: Scottish Planning Policy (SPP) sets out the Scottish Government's policy on land use planning. Biodiversity and nature conservation is primarily addressed within the Landscape and Heritage chapter which promotes a broad approach to landscape and natural heritage incorporating the conservation of designated or protected sites and species taking into account the ecosystems and natural processes. SPP also seeks to establish integrated habitat networks.<br><br>In this context, the SPP:<br>• sets out national planning policy considerations in relation to Scotland's natural heritage;<br>• summarises the main statutory obligations in relation to the conservation of natural heritage;<br>• explains, as part of a wider framework for conservation and development, how natural heritage objectives should be reflected in development plans;<br>• describes the role of the planning system in safeguarding sites of national and international importance;<br>• provides guidance on the approach to be adopted in relation to local and non-statutory designations; and<br>• draws attention to the importance of safeguarding and enhancing natural heritage beyond the confines of designated areas.<br>SPP states that planning authorities should take the likely effect of proposed development on the marine environment into account<br><br>**Targets:** There are no targets listed. |
| Scottish Natural Heritage (2009) *Natural Heritage Futures Update Coasts and Seas* | **Objectives:** This statement provides an update to the Coasts and Seas National Prospectus that was one of a suite of documents published in 2002 to guide the future management of the natural heritage towards 2025. The biodiversity objective is to safeguard and enhance maritime biodiversity and ecosystems. Actions include to:<br>• implement proposals for new marine protected areas, improved species protection and wider seas measures to ensure these provide effective protective mechanisms for the natural heritage of coasts and seas;<br>• safeguard coastal and marine features of conservation importance within areas of special care and protection, including both sites formally designated under nature conservation legislation and other areas identified and managed through the marine spatial planning system; and,<br>• consider how to enhance biodiversity adaptation to climate change.<br>**Targets:** No specific targets are included. |
| **National (Wales)** | |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Biodiversity and Nature Conservation** | |
| Welsh Assembly Government (2008) *People, Places, Futures: The Wales Spatial Plan2008 Update* | **Objectives:** The Plan contains the following key theme in relation to the natural environment:<br><br>*Valuing our Environment*<br><br>The quality of our environment is a fundamental asset for its intrinsic value, and for our economy and quality of life. By safeguarding and enhancing both the natural and built environment we will attract people to and retain them within our communities and preserve the foundations for the future.<br><br>**Targets:** No formal targets. |
| Welsh Assembly Government (2008) *Wales Environment Strategy Action Plan 2008 - 2011* | **Objectives:** This second Environment Strategy Action Plan sets out rolling actions until 2010, to facilitate a more strategic approach to environmental improvement, and recognise the longer-term nature of environmental action and change. The Action Plan sets out actions under the headings: biodiversity, marine, access and recreation, flood and water management, ecosystems services, research and evidence, the historic environment, people and the environment, partnership and environmental quality.<br><br>**Targets:** Does not include any specific objectives or targets. |
| Welsh Assembly Government (2009) *Technical Advice Note 5: Nature Conservation and Planning* | **Objectives:** Technical Advice Note 5 sets out how the planning system should contribute to protecting and enhancing biodiversity and geological conservation. It stipulates that the planning system should:<br>• work to achieve nature conservation objectives through a partnership between local planning authorities, Countryside Council for Wales (CCW), the Environment Agency Wales, voluntary organisations, developers, landowners and other key stakeholders;<br>• integrate nature conservation into all planning decisions looking for development to deliver social, economic and environmental objectives together over time;<br>• ensure that the UK's international and national obligations for site, species and habitat protection are fully met in all planning decisions;<br>• look for development to provide a net benefit for biodiversity conservation with no significant loss of habitats or populations of species, locally or nationally;<br>• help to ensure that development does not damage, or restrict access to, or the study of, geological sites and features or impede the evolution of natural processes and systems especially on rivers and the coast; and<br>• plan to accommodate and reduce the effects of climate change by encouraging development that will reduce damaging emissions and energy consumption and that help habitats and species to respond to climate change.<br><br>**Targets:** Does not include any specific objectives or targets. |
| Welsh Assembly Government (2010) *Planning Policy Wales (Edition 3)* | **Objectives:** Planning Policy Wales sets out the land use planning policies of the Welsh Assembly Government. Chapter 5 sets out the following objectives for the conservation and improvement of natural heritage:<br>• promote the conservation of landscape and biodiversity, in particular the conservation of native wildlife and habitats;<br>• ensure that action in Wales contributes to meeting international responsibilities and obligations for the natural environment;<br>• ensure that statutorily designated sites are properly protected and managed;<br>• safeguard protected species, and<br>• to promote the functions and benefits of soils, and in particular their function as a carbon store.<br><br>**Targets:** No formal targets. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Biodiversity and Nature Conservation** | |
| **National (Northern Ireland)** | |
| Department for Regional Development & Department of the Environment (2005) *Joint Ministerial Statement* (Supersedes Paragraphs 46-48 of PPS1) | **Objectives:** PPS2 sets out the Department's land-use planning policies for the conservation of our natural heritage. It embodies the Government's commitment to sustainable development and to conserving the diversity of our habitats and wildlife. The Government's aims for nature conservation are:<br>• to ensure that its policies contribute to conservation of the abundance and diversity of the United Kingdom s wildlife and its habitats;<br>• to minimise the adverse effects on wildlife, where conflict of interest is unavoidable, and<br>• to meet its international responsibilities and obligations for nature conservation.<br>**Targets:** Does not include any specific targets. |
| Department of Environment (2002) *The Northern Ireland Biodiversity Strategy* | **Objectives:** Explains how the Northern Ireland Executive plan to safeguard biodiversity presently and in the future<br>**Targets:** There are indicators, targets and recommendations within implementation plans, HAPs and SAPs. Specific recommendations e.g. for |
| Department of Environment (2006) *An Integrated Coastal Zone Management Strategy for Northern Ireland 2006-2026* | **Objectives:** The strategy forms the basis to the management of the coastal area. Aims of the strategy most relevant to biodiversity include:<br>• to maintain and enhance Northern Ireland's natural resources within the coastal zone and protect, maintain and enhance the condition of designated nature conservation sites; and<br>• to conserve, protect and where possible enhance the estuarine and coastal environment and terrestrial ecosystems dependent on this such as marine wetlands and salt marshes.<br>**Targets:** Targets most relevant to biodiversity include:<br>• to achieve 95% of the features on statutory designated wildlife sites in or approaching favourable condition;<br>• to maintain and improve water quality;<br>• all designated bathing waters meet at least mandatory BWD standards and endeavour to meet guideline standards; and<br>• all coastal AONBs to have management plans by 2012. |
| Northern Ireland Executive (2010) *Everyone's involved Sustainable Development Strategy* | **Objectives:** One of the objectives of the strategy is 'striking an appropriate balance between the responsible use and protection of natural resources in support of a better quality of life and a better quality environment. Sub-objectives include to promote sustainable land and marine management, and to take action to halt biodiversity loss.<br>**Targets:** No specific targets are included. |
| Northern Ireland Planning Service (1993) *Planning Strategy for Rural Northern Ireland* | **Objectives:** The Planning Strategy is based upon an analysis of the key issues and opportunities relevant to rural Northern Ireland. It considers the complex inter-relationships between town and country and seeks to present a clear vision of the future development of the rural area. A strategic objective of the strategy is to protect and enhance the natural and man-made environment. Planning Policy Statements are gradually replacing the policy provisions of the Planning Strategy for Rural Northern Ireland. The Planning Strategy remains in force for those topics not covered by a PPS.<br>**Targets:** Does not include any specific targets. |
| Northern Ireland Planning Service (1998) *Planning Policy Statement 1: General Principles* | **Objectives:** This Statement sets out the general principles that the department observes in formulating planning policies, making development plans and exercising control of development. The department's approach to planning is underpinned by four key themes, including Sustainable Development. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Biodiversity and Nature Conservation** | |
| | **Targets:** Does not include any specific targets. |
| Office of the First Minister and Deputy First Minister (2007) *Programme for Government* | **Objectives:** Sets out the programme for government relating environmental, social and economic factors.<br>**Targets:** With regard to biodiversity the programme will seek to protect the natural environment by iincreasing by 1650 hectares the area of forest and woodland by 2011 and halting the loss of indigenous species and habitats by 2016. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
|---|---|
| **Population** | |
| **International / European (e.g. Directives)** | |
| United Nations (2001) Aarhus Convention: Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters | **Objectives:** The Aarhus Convention contains three broad themes or 'pillars':<br>• access to information,<br>• public participation, and<br>• access to justice.<br>The Convention grants the public rights and imposes on Parties and public authority's obligations regarding access to information and public participation and access to justice.<br>**Targets:** No formal targets. |
| European Directive 2001/42/EC on the Assessment of the Effects of Certain Plans and Programmes on the Environment (SEA Directive). | **Objectives:** The SEA Directive creates the following requirements for consultation:<br>• Authorities which, because of their environmental responsibilities, are likely to be concerned by the effects of implementing the plan or programme, must be consulted on the scope and level of detail of the information to be included in the Environmental Report. These authorities are designated in the SEA Regulations as the Consultation Bodies (Consultation Authorities in Scotland).<br>• The public and the Consultation Bodies must be consulted on the draft plan or programme and the Environmental Report, and must be given an early and effective opportunity within appropriate time frames to express their opinions.<br>• Other EU Member States must be consulted if the plan or programme is likely to have significant effects on the environment in their territories.<br>• The Consultation Bodies must also be consulted on screening determinations on whether SEA is needed for plans or programmes under Article 3(5), i.e. those which may be excluded if they are not likely to have significant environmental effects.<br>**Targets:** No formal targets. |
| European Commission. European Employment Strategy | **Objectives:** The overarching themes of the European Commission's European Employment Strategy: full employment, quality and productivity at work and promoting inclusion by addressing disparities in access to labour markets<br>**Targets:** No formal targets. |
| Integrated Guideline for Growth and Jobs 2008-11, Commission of the European Communities (Committee on Economic and Monetary Affairs, 2007) | **Objectives:**<br>• full employment;<br>• improving quality and productivity at work;<br>• strengthening social and territorial cohesion; and<br>• combating discrimination through removal of barriers to entry.<br>**Targets:** No formal targets. |
| **National (UK)** | |
| Strong and prosperous communities Local Government White Paper (2006) | **Objectives:**<br>The aim of this White Paper is to give local people and local communities more influence and power to improve their lives. It is about creating strong, prosperous communities and delivering better public services through a rebalancing of the relationship between central government, local government and local people. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
|---|---|
| **Population** | |
| | The key area objectives are:<br>• responsive services and empowered Communities;<br>• effective, accountable and responsive local Government;<br>• strong cities, strategic regions;<br>• local government as a strategic leader and place-shaper;<br>• a new performance framework;<br>• efficiency - transforming local services; and<br>• community cohesion.<br>**Targets:** No formal targets but aims are included in areas outlined above. |
| ODPM (2001) A New Commitment to Neighbourhood Renewal: National Strategy Action Plan. | **Objectives:** The strategy sets out the Government's vision for narrowing the gap between deprived neighbourhoods and the rest of the country through delivering the following goals:<br>• in all the poorest neighbourhoods, to have common goals of lower worklessness and crime, and better health, skills, housing and physical environment; and<br>• to narrow the gap on these measures between the most deprived neighbourhoods and the rest of the country.<br>**Targets:** Various targets sourced from other strategies under the headings of work, crime, education, health, and housing. |
| Department of Trade and Industry (2006) Review of Assisted Areas | **Objectives:** Assisted Areas are where regional aid is used to promote the economic development areas of certain disadvantaged areas within the European Union. This includes part of Argyll and Bute and Devonport.<br>**Targets:** No formal targets. |
| Planning Policy Statement 4: Planning for Sustainable Economic Growth (2009) | **Objectives:** Planning Policy Statement 4 (PPS4) sets out planning policies for economic development which is taken to include development which:<br>• provides employment opportunities;<br>• generates wealth; or<br>• produces or generates an economic output or product.<br>PPS4 states that the Government's objectives with respect to planning for economic development are to:<br>• build prosperous communities by improving the economic performance of cities, towns, regions, sub-regions and local areas, both urban and rural';<br>• reduce the gap in economic growth rates between regions, promoting regeneration and tackling deprivation;<br>• deliver more sustainable patterns of development, reduce the need to travel, especially by car and respond to climate change;<br>• promote the vitality and viability of town and other centres as important places for communities;<br>• raise the quality of life and the environment in rural areas by promoting thriving; and<br>• inclusive and locally distinctive rural communities whilst continuing to protect the open countryside for the benefit of all.<br>**Targets:** No formal targets. |
| PSA Delivery Agreement 1: Raise the Productivity of the UK Economy (HM | The Government's primary aim for the 2007 Comprehensive Spending Review (CSR07) period is to demonstrate further progress on its long-term objectives to: |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Population** | |
| Government, 2007) | • raise the rate of the UK's productivity growth over the economic cycle; and<br>• narrow the productivity gap with our major industrial competitors.<br>**Targets:** Indicator 1: Labour productivity (output per hour worked) over the economic Cycle. |
| Planning for a Sustainable Future: White Paper (2007) | **Objectives:**<br>• more and better jobs as a result of sustainable economic development;<br>• better infrastructure so people have access to reliable transport, clean and secure energy, clean water supplies, and better local amenities;<br>• continued protection and enhancement of the natural and historic environment;<br>• places shaped by their communities where people are proud to live;<br>• more efficient and timely systems in which controls are proportionate to impact and unnecessary costs are eliminated; and<br>• a more transparent and accountable planning system in which national and local government work together to ensure decisions at every level deliver the best outcomes for all.<br>**Targets:** No formal targets. |
| Sustainable Development Commission (2010) Sustainable Development in Government Framework Targets | **Objectives:** The Sustainable Development in Government (SDiG) framework was announced in March 2010, this will replace the SOGE targets when they expire in 2010/11. This framework is intended to reduce its greenhouse gas emissions and ensure that the Government's estate is resilient to the impacts of changing climate. The framework also includes challenging targets on waste reduction and recovery, more efficient use of water, and it promotes the protection and enhancement of biodiversity, and positive engagement with the community.<br>**Targets:** Targets relating to population include:<br>• all Departments, Agencies and Executive NDPBs to conduct sustainability appraisals of office relocations; and<br>• all Departments to encourage staff to take an active role in volunteering in the community. |
| **National (MOD)** | |
| MOD Sustainable Development Strategy, December 2008<br>&<br>MOD Sustainable Development Report and Action Plan 2008 | **Objectives:**<br>• help build the skills of young people;<br>• create a workforce that is drawn from the breadth of society and ensure that the unique contribution of every individual in that workplace is respected and valued;<br>• provide a safe and healthy workplace; and<br>• manage the social impacts of Defence activities on UK communities (civilian and Armed Forces).<br>**Targets:**<br>• ongoing target to continue to support the Cadet movement, by providing a range of opportunities for young people across the country including those in socially deprived areas, to help them meet life's challenges and realise their potential;<br>• ongoing target to work with other Departments and external partners on initiatives for young people and activities for school curricula to build skills;<br>• ongoing target to work closer with the Department for Children, Schools and Families to explore options for widening the reach of the Cadet Forces experience into a greater number of State schools/pupils;<br>• ongoing target to publish annually a report against the Equality and Diversity Scheme (MOD |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Population** | |
| | commitment);<br>• by 2013 reach 8% ethnic minority representation in the Armed Forces; and<br>• by 2009 reach 15% women representation in the Senior Civil service (SCS) (MOD commitment). |
| MOD, Joint Service Publication (JSP) 434 – Defence Construction in the Built Environment | **Objectives:**<br>To improve effectiveness within the context of practicality, achievability and value for money on an ongoing basis. This is defined as the optimum combination of whole life cost and quality to meet user requirements effectively and efficiently.<br>Justification should be provided for any decision to procure new facilities as opposed to the re-use of existing facilities and should take account of all likely economic, environmental and social costs and benefits.<br>Procurement strategies should take full account of the Government's commitment to sustainable development and of the economic, environmental and social impacts of its decisions.<br>**Targets:** No formal targets. |
| **National (Scotland)** | |
| The Scottish Government (2008) Scottish Sustainable Communities Initiative | **Objectives:** SSCI settlements will provide high quality, affordable homes for all sectors of the community, they may include opportunities for the creation of jobs, provision of education and other services necessary to enable high standards of living, cultural identity and create an environment which encourages healthy and active living. These new communities should fit well in the local landscape, maximise the opportunities of the location and should be fully integrated with public and active transport networks, rather than being dependent on the car. They will be successful places which have meaning for the people who will call them home.<br>**Targets:** No formal targets. |
| General Register Office (2007) Scotland's Population 2007 | **Objectives:** Provides a demographic breakdown of Scotland's population trends.<br>**Targets:** No formal targets. |
| Scottish Government (2010) Scottish Planning Policy | **Objectives:** Scottish Planning Policy (SPP) sets out the Scottish Government's policy on land use planning. With regard to economic development, SPP sets out the following five areas where planning can support growth:<br>• taking account of the economic benefits of proposed development in development plans and development management decisions;<br>• promoting development in sustainable locations, particularly in terms of accessibility;<br>• promoting regeneration and the full and appropriate use of land, buildings and infrastructure;<br>• supporting development which will provide new employment opportunities and enhance local competitiveness; and<br>• promoting the integration of employment generation opportunities with supporting infrastructure and housing development.<br>**Targets:** There are no key targets listed. |
| Scottish Executive (2004) Framework for Economic Development in Scotland | **Objectives:** Achieving four key outcomes is fundamental to the Executive's economic policy:<br>• economic growth - with growth accelerated and sustained through greater competitiveness in the global economy; |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Population** | |
| | • regional development - with economic growth a pre-requisite for all regions to enjoy the same economic opportunities and with regional development itself contributing to national economic prosperity;<br>• closing the opportunity gap - with economic growth a pre-requisite for all in society to enjoy enhanced economic opportunities, and with social development in turn contributing to national economic prosperity, and<br>• sustainable development - in economic, social and environmental terms.<br>The achievement of these desired outcomes depends upon a complex array of economic drivers. Establishing the underlying conditions and context for economic growth to flourish is, therefore, a critical step. There are four key enabling objectives:<br>• a stable and supportive macroeconomic environment;<br>• a facilitating national economic context: encompassing the physical, human and electronic infrastructure;<br>• dynamic competitiveness in Scottish enterprises; and<br>• economic policies and programmes to secure the social, regional and environmental objectives.<br>**Targets:** There are no key targets listed. |
| **National (Wales)** | |
| Welsh Assembly Government (2010) Planning Policy Wales (Edition 2) | **Objectives:** With respect to economic development, Planning Policy Wales sets out that the Welsh Assembly Government's objectives are to:<br>• enhance the economic success of both urban areas and the countryside, helping businesses to maximise their competitiveness;<br>• support initiative and avoid placing unnecessary burdens on enterprise;<br>• respect and encourage diversity in the local economy, for example in rural areas encouraging farm diversification and in urban areas promoting mixed use development; and<br>• promote the exploitation of new technologies which can provide new opportunities; and ensure that development for enterprise and employment uses is in line with sustainability principles and respects the environment in its location, scale and design, especially so as to address climate change.<br>**Targets:** No formal targets. |
| Welsh Assembly Government (2008) People, Places, Futures: The Wales Spatial Plan2008 Update | **Objectives:** The Wales Spatial Plan contains the following key themes which relate to population:<br>**Building Sustainable Communities**<br>Our future depends on the vitality of our communities as attractive places to live and work. We need to reduce inequalities between communities whilst retaining their character and distinctiveness.<br>**Promoting a Sustainable Economy**<br>We need an innovative, high value-added economy for Wales which utilises and develops the skills and knowledge of our people; an economy which both creates wealth and promotes the spreading of that prosperity throughout Wales; an economy which adds to the quality of life as well as the standard of living and the working environment.<br>**Respecting Distinctiveness**<br>A cohesive identity which sustains and celebrates what is distinctive about Wales, in an open and outward-looking way, is central to promoting Wales to the World, as well as to our future economic competitiveness and social and environmental wellbeing. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
|---|---|
| **Population** | |
| | **Targets:** No formal targets. |
| Welsh Assembly Government (2009) Technical Advice Note 12: Design | **Objectives:** TAN 12 sets out the Assembly Government's policies and objectives in respect of the design of new development. In relation to population, these objectives include:<br>• ensuring attractive, safe public spaces;<br>• security through natural surveillance; and<br>• ensuring ease of access for all.<br>**Targets:** No formal targets. |
| Welsh Assembly Government (2009) Capturing the Potential: A Green Jobs Strategy for Wales | **Objectives:** The Strategy sets out how businesses and other organisations could be helped to adapt and capitalise on the opportunities presented by the drive towards a local carbon, resource efficient and sustainable products and processes. It is underpinned by the following priorities:<br>• supporting business: Developing ways that Assembly Government can support businesses to help them successfully adapt and seek competitive advantage through resource efficiency and new low carbon products and services;<br>• fostering innovation and technology: Supporting the development and commercialisation of new sustainable technologies, energy services and low carbon products for the future; and<br>• investing in a more sustainable economy: Building upon the way decisions and investments are made to help drive the transition to a more sustainable economy.<br>**Targets:** None identified. |
| **National (Northern Ireland)** | |
| National Development Plan : Transforming Ireland - a Better Quality of Life for All (2007) | **Objectives:** The NDP sets out the roadmap to Ireland's future. The €184 billion Plan represents a major milestone in building a prosperous Ireland for all the people, characterised by sustainable economic growth, greater social inclusion and balanced regional development.<br>**Targets:**<br>• decisively tackle structural infrastructure deficits that continue to impact on competitiveness, regional development and general quality of life and to meet the demands of the increasing population;<br>• greatly enhance enterprise development, Science, Technology and Innovation, working age training and skills provision to improve economic performance, competitiveness and our capacity to generate new enterprise 'winners' from the indigenous sector as well as continue to attract high added value foreign direct investment;<br>• integrate regional development within the National Spatial Strategy framework of Gateway cities and Hub towns to achieve the goals of economic growth in the regions and provide for major investment in the rural economy;<br>• invest in long-term environmental sustainability to achieve our national goal of preserving the integrity of our natural environment for future generations as well as meeting our international responsibilities and Climate Change obligations; this also involves a more balanced, efficient and sustainable use of our land resources;<br>• realise the opportunities of strengthened all-island collaboration in areas of mutual interest to build up the island's competitive strengths particularly in the areas of infrastructure, R and D, skills and innovation and to enhance the provision of public services on the island;<br>• deliver a multi-faceted programme for Social Inclusion and improvements in the quality of life across all age groups and among all population cohorts; and<br>• provide value for taxpayers' money through robust and transparent appraisal, management and monitoring systems for NDP investment. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
|---|---|
| **Population** | |
| National Spatial Strategy for the Republic of Ireland 2002 - 2020 : People, Places and Potential | **Objectives:** This National Spatial Strategy for Ireland (NSS) is a twenty year planning framework designed to achieve a better balance of social, economic, physical development and population growth between regions. Its focus is on people, on places and on building communities.<br>**Targets:**<br>• support a better balance of activity and development between areas experiencing rapid development and congestion and areas that are economically under-utilised;<br>• guide Government departments and agencies in formulating and implementing policies and public investment decisions which have a strong spatial dimension or which may otherwise be affected by spatial considerations;<br>• set a national context for spatial planning to inform regional planning guidelines and strategies and county and city development plans and strategies;<br>• provide a framework, in conjunction with the Regional development Strategy for Northern Ireland, Shaping our Future, for the spatial dimension of the development of an all-island economy;<br>• inform strategic investment, transport and other infrastructure policy decisions, for both the public and private sector; it will also help to shape future National Development Plans and other investment plans promote certain strategically located places as part of an all-Ireland network which will energise the potential of urban and rural areas;<br>• support spatially balanced provision of key social and economic infrastructure, with a particular focus on this network of strategically located places;<br>• set out general principles of good spatial planning practice to help to develop ways in which the location of people and employment and the use of environmental resources can best serve national competitiveness, sustainability and a high quality of life; and<br>• be complemented by relevant plans and strategies of other public bodies. |
| Programme for Government (OFMDFM) 2008 -11 | **Objectives:** Growing the economy is our top priority. This is vital if we are to provide the wealth and resources required to build the peaceful, prosperous, fair and healthy society we all want to see. We need to meet the challenges of global competition and take advantage of new opportunities to make our economy more competitive, deliver increased prosperity and tackle disadvantage and poverty.<br><br>Strategic Objectives:<br>• over-arching aim is to build a peaceful, fair and prosperous society in Northern Ireland, with respect for the rule of law and where everyone can enjoy a better quality of life now and in years to come;<br>• to achieve this, need to pursue an innovative and productive economy and a fair society that promotes social inclusion, sustainable communities and personal health and well-being;<br>• this must also be done in ways that protect and enhance the physical and natural environment;<br>• and use resources as efficiently and sustainably as possible; and<br>• equality is an important issue for the Executive and for society. Inequalities exist, and must strive to eliminate all forms of inequality.<br>**Targets:**<br>Targets established for economic performance, creating a fairer society, developing new infrastructure and delivering more efficient and effective public services. |
| Lifetime Opportunities: Government's Anti-poverty and Social Inclusion Strategy for Northern Ireland (OFMDFM) | **Objectives:** Lifetime Opportunities is structured around a number of general challenges which become the priorities for future policy and action. These are as follows:<br><br>• eliminating Poverty;<br>• eliminating Social Exclusion;<br>• tackling Area Based deprivation;<br>• eliminating Poverty From Rural Areas; |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
|---|---|
| **Population** | |
| | • shared Future-Shared Challenges;<br>• tackling Inequality in the Labour Market;<br>• tackling Health Inequalities; and<br>• tackling Cycles of Deprivation<br><br>**Targets:**<br>• end child poverty by 2020;<br>• by 2025, 70% of all infants will be breast-fed at one week after birth (50% by 2010);<br>• by 2020, ensure that every child lives in a decent and safe home, which is warm;<br>• provide opportunities for young children in rural areas to benefit from projects and schemes such as accessible rural transport, day care provision, crèches and initiatives that also support their parents as well as seeking to improve their overall quality of life;<br>• by 2020, to ensure that all children fulfil their potential to obtain basic numeracy and literacy levels before they leave school;<br>• by 2020, to have substantially improved the educational attainment of pupils from disadvantaged backgrounds; and<br>• to have improved the mental health and wellbeing of young people aged between 16 and 24 by a fifth, between 2001 and 2025 as measured by the General Health Questionnaire (GHQ) 12 Score.<br><br>**Working age adults : targets:**<br>• contribute to the UK Employment Rate Aspiration of 80% by 2050;<br>• subject to economic conditions make progress on increasing Northern Ireland's employment rate by 2008 and contribute to an overall UK Lone Parent employment rate target of 70% by 2010;<br>• by its actions and interventions, DEL will contribute to the overall government aim of reducing the percentage of adults with no formal qualifications to 18% by 2014 and to 15% by 2020;<br>• by 2020, to equip NI farm businesses to adjust to greater trade □ealize□zation and, help to □ealize the development potential of the food production, processing, fishing, forestry, horticulture, equine, amenity and leisure sectors;<br>• by 2015, to ensure that the needs of rural communities are met by equitable access to public services and programmes, and through programmes which enhance economic opportunities in rural areas and which strengthen and enhance their social infrastructure; and<br>• provision of and access to a decent fuel efficient home including social housing in a safe environment, free from the fear of crime, attuned to individual and household need by 2020.<br><br>**Older citizens targets:**<br>• reduce gap in life expectancy between those living in the fifth most deprived areas and the Northern Ireland average by two thirds for both men and women between 2000 and 2025;<br>• by 2020, ensure that every pensioner lives in a decent, warm, secure home in a community where they experience reduced levels of isolation and loneliness;<br>• by March 2010, improve the quality of life and independence of people in need, so that 45% of all who require community services are supported as necessary, in their own homes; and<br>• by 2020, to provide opportunities for older people in rural areas to benefit from the Rural Development Programme by increasing accessibility through rural transport routes, projects that encourage social participation and inclusion and aim to positively benefit the lives of older farmers and their families. |
| 2015 Economic Vision for the Northern | **Objectives:** To achieve this vision there are a number of challenges facing Government in NI. Specifically, NI must: |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Population** | |
| Ireland Economy (2005) | • raise productivity rates through increased investment in innovation, creativity, enterprise and skills;<br>• encourage companies of all types and sizes to become more market aware, outward looking and committed to business improvement;<br>• encourage stronger and better links between business and education;<br>• increase the levels of new business start ups and ensure that a culture of enterprise and entrepreneurship is instilled from school age;<br>• change the risk averse culture that prevails across the public and private sectors - with greater focus on private sector finance;<br>• ensure businesses in tourism deliver world class excellence in order to realise the full potential of local tourism (urban and rural);<br>• increase the economic activity rate, an untapped labour reserve;<br>• adopt a targeted approach to Foreign Direct Investment (FDI), which provides wider economic benefits to the economy and put structures in place to encourage investment across all of Northern Ireland so that all areas benefit from sustainable economic growth and high value added employment;<br>• encourage local businesses in those sectors that offer the most potential to compete globally and facilitate those firms engaged in innovative areas offering the prospect of significant exploitation of early stage product cycle profitability;<br>• ensure that all practical measures to assist local business are promoted within the context of the national economic policy framework;<br>• work to address those challenges arising from the European Commission's proposals for Regional Aid post 2006; and<br>• enhance all-island cooperation through the further development of collaborative, knowledge-intensive, all-island trade and business development networks and supporting programmes.<br>**Targets:**<br>The extent to which NI successful in meeting this vision over the next decade will be measured by:<br>• closing the productivity gap with the UK and increasing Northern Ireland's Gross Value Added (GVA) per hour worked compared with international averages, and<br>• increasing the percentage of the Northern Ireland working age population who are economically active. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
|---|---|
| **Human health** | |
| **International / European (e.g. Directives)** | |
| Children's Environment and Health Action Plan for Europe (CEHAPE) 2004 | **Objectives:**<br>The CEHAPE highlights the main commitments on children's health and environment focusing on four regional priority goals (RPGs) for Europe:<br>• ensure safe water and adequate sanitation;<br>• ensure protection from injuries and adequate physical activity; and<br>• ensure clean outdoor and indoor air.<br>**Target:** No quantified targets but sub-targets within objectives above. |
| The (current) Bathing Water Directive (76/160/EEC) As revised by Bathing Water Directive (2006/7/EC) | Directive concerns the management of bathing water quality and repeals Directive 76/160/EEC.<br>**Objective:**<br>The purpose of this Directive is to preserve, protect and improve the quality of the environment and to protect human health.<br>**Targets**: Legislation rather than targets in Act. |
| World Health Organization European Centre for Environment and Health (2001), Health impact assessment in strategic environmental assessment (World Health Organization, Rome) | **Objective:**<br>Provides a review of Health Impact Assessment concepts, methods and practice to support the development of a protocol on Strategic Environmental Assessment to the Espoo Convention, which adequately covers health impacts.<br>**Targets:** No formal targets. |
| 'Together for Health – A Strategic Approach for the EU 2008-2013'. | **Objectives:**<br>The Health Strategy aims to:<br>• foster good health in an ageing Europe by promoting good health throughout the lifespan;<br>• protect citizens from health threats including communicable diseases, bioterrorism, and patient safety; and<br>• support dynamic health systems and new technologies.<br>The White Paper also sets out a number of cross-cutting principles such as solidarity, citizen participation in policy-making and the need to reduce inequities in health, to promote investment in health, to mainstream health in all policies, and to strengthen the EU's voice in Global Health.<br>**Targets:** No formal targets. |
| Canadian Lalonde Report 1974 | Report identified four health fields that were interdependently responsible for individual health:<br>• Environment - All matters related to health external to the human body and over which the individual has little or no control. Includes the physical and social environment.<br>• Human Biology - All aspects of health, physical and mental, developed within the human body as a result of organic make-up.<br>• Lifestyle - The aggregation of personal decisions, over which the individual has control. Self-imposed risks created by unhealthy lifestyle choices can be said to contribute to, or cause, illness or death. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Human health** | |
| | • Health Care Organisation - The quantity, quality, arrangement, nature and relationships of people and resources in the provision of health care.<br><br>**Targets:** No formal targets. |
| **National (UK)** | |
| Department of Health (2004) Choosing Health: making healthy choices easier | **Objectives:** This white paper outlines the results of a public consultation and the Government's broad approach to the improvement of public health. The themes of relevance involve the provision of information to the public and the demand of the public for access to resources to improve health. Information includes provision on the effects of personal life choices but will also include information on environmental circumstances which might affect personal health.<br><br>The demand for access to health resources includes the provision of health care facilities but also includes facilities to maintain a healthy lifestyle, e.g. sports fields.<br><br>**Targets:** No formal targets. |
| Health Protection Agency (2007) Children's Environment and Health Action Plan. A summary of current activities which address children's environment and health issues in the UK | Applies the objectives in the European document to the UK context. |
| Department of Health (1999) Saving Lives: Our Healthier Nation White Paper | **Objectives:**<br><br>An action plan to tackle poor health. DoH set out to:<br>• improve the health of everyone; and<br>• and the health of the worst off in particular.<br><br>**Targets:**<br><br>By the year 2010:<br>• cancer: to reduce the death rate in people under 75 by at least a fifth;<br>• coronary heart disease and stroke: to reduce the death rate in people under 75 by at least two fifths;<br>• accidents: to reduce the death rate by at least a fifth and serious injury by at least a tenth; and<br>• mental illness: to reduce the death rate from suicide and undetermined injury by at least a fifth. |
| Department of Health (2003) Tackling Health Inequalities: A programme for action | **Objectives:**<br>• improvements in early years support for children and families;<br>• improved social housing and reduced fuel poverty among vulnerable populations;<br>• improved educational attainment and skills development among disadvantaged populations;<br>• improved access to public services in disadvantaged communities in urban and rural areas, and<br>• reduced unemployment, and improved income among the poorest.<br><br>**Targets:**<br><br>Key targets are:<br>• reducing smoking in manual social groups;<br>• preventing and managing other risks for coronary heart disease and cancer such as poor diet and |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
|---|---|
| **Human health** | |
| | obesity, physical inactivity and hypertension through effective primary care and public health interventions - especially targeting the over-50s; and<br>• improving housing quality by tackling cold and dampness, and reducing accidents at home and on the road. |
| Securing good health for the whole population Report to the Treasury (Wanless, 2004) | This Review has been focused particularly on prevention and the wider determinants of health in England and on the cost-effectiveness of action that can be taken to improve the health of the whole population and to reduce health inequalities.<br>**Targets:** No formal targets. |
| Department of Health (2006) 'Our health, our care, our say: a new direction for community services' White Paper | **Objectives:**<br>The White Paper is aiming to achieve four main goals:<br>• health and social care services will provide better prevention services with earlier intervention;<br>• we will give people more choice and a louder voice;<br>• we need to do more on tackling inequalities and improving access to community services; and<br>• we will provide more support for people with long-term needs.<br>**Targets:** No formal targets. |
| Department of Health (2006) A stronger local voice: A framework for creating a stronger local voice in the development of health and social care services (July 2006) | **Objectives:**<br>This document sets out a framework for creating a stronger local voice in the development of health and social care services. Provides for the following actions:<br>• The Commission for Patient and Public Involvement in Health (CPPIH) and patient forums will be abolished and local involvement networks (LINks) will be established for every local authority area with social services responsibilities.<br>• LINks will establish a specific relationship with overview and scrutiny committees (OSCs) and have the power to refer matters to the OSCs.<br>• OSCs will be encouraged to focus their attention on the work of commissioners of health and social care services and are ideally placed to ask commissioners about the decisions they have made.<br>• The duties to involve and consult will be simplified and strengthened. There will be a new duty placed on commissioners to respond to what patients and the public have said.<br>• Work is being undertaken to explore ways of creating a stronger voice for patients, service users and members of the public at a national level.<br>• There will be a stronger user voice in regulation and in the regulation of involvement.<br>**Targets:** No formal targets. |
| High quality care for all: NHS Next Stage Review final report. (Darzi, 2008) | **Objective:** The vision this report sets out is of an NHS that gives patients and the public more information and choice, works in partnership and has quality of care at its heart - quality defined as clinically effective, personal and safe.<br>**Targets/Measures:**<br>• Create an NHS that helps people to stay healthy. For the NHS to be sustainable in the 21st century it needs to focus on improving health as well as treating sickness.<br>• We will give patients more rights and control over their own health and care.<br>• We will ensure quality at the heart of the NHS.<br>• We will strengthen the involvement of clinicians in decision making at every level of the NHS.<br>• We will empower frontline staff to lead change that improves quality of care for patients. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
|---|---|
| **Human health** | |
| | • We will value the work of NHS staff. NHS staff make the difference where it matters most and we have an obligation to patients and the public to enable them to make best use of their talents. |
| Health and Safety Commission A Strategy for Workplace Health and Safety in Great Britain to 2010 and beyond | **Objectives/Aims:**<br>HSC/E's continuing aims:<br>• protect people by providing information and advice; promoting and assuring a goal setting system of regulation; undertaking and encouraging research and enforcing the law where necessary;<br>• influence organisations to embrace high standards of health and safety and to recognise the social and economic benefits;<br>• work with business to prevent catastrophic failures in major hazard industries; and<br>• seek to optimise the use of resources to deliver our mission and vision.<br>HSC/E's new aims:<br>• develop new ways to establish and maintain an effective health and safety culture in a changing economy, so that all employers take their responsibilities seriously, the workforce is fully involved and risks are properly managed;<br>• do more to address the new and emerging work-related health issues;<br>• achieve higher levels of recognition and respect for health and safety as an integral part of a modern, competitive business and public sector and as a contribution to social justice and inclusion; and<br>• exemplify public sector best practice in managing our resources.<br>**Targets:** No formal targets. |
| Working for a Healthier Tomorrow – Dame Carol Black's Review of the health of Britain's working age population (2008) | **Objectives:**<br>• prevention of illness and promotion of health and well-being;<br>• early intervention for those who develop a health condition; and<br>• an improvement in the health of those out of work - so that everyone with the potential to work has the support they need to do so.<br>**Targets:** No formal targets. |
| Health Effects of Climate Change in the UK 2008 – An update of the Department of Health Report 2001/2002 | **Objectives:**<br>• The need for greater emphasis to be placed on climate change and its impacts and the need for governments to focus on this problem.<br>• Measures individuals can take to mitigate the effects of climate change on their health. Keeping cool in hot weather is important. The easy-to-remember advice "keep cool, keep clean, keep covered" remains sensible.<br>• The need for further research in many of the areas touched on in this report.<br>**Targets:** No formal targets. |
| HM Government (2007) PSA Delivery Agreement 23: Make Communities Safer | **Objectives:** The Government's vision is that:<br>• continuing to build on the significant reductions in crime achieved over recent years, fewer people are victims of crime, especially the most serious crime - violent, drug and alcohol-related crime - and the public are protected from the most harmful offenders; and<br>• local agencies are accountable and responsive to the needs and priorities of the local community, leading to increased public confidence in those agencies.<br>**Targets:** Indicator 4: The percentage of people perceiving ASB as a problem. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Human health** | |
| **National (MOD)** | |
| Secretary of State's Policy Statement on Safety, Health, Environmental Protection and Sustainable Development in the Ministry of Defence (2009) | **Objectives:**<br>• To avoid work-related fatalities and minimise work-related injuries and ill-health.<br>**Targets:** No formal targets. |
| MOD JSP 375, MOD Health and Safety Handbook (largely re-written under)JSP 815, Defence Environment and Safety Management) | **Objectives:**<br>• Conduct defence activities in a way that minimises the risk to personnel and to others, including members of the public, to As Low as is Reasonably Practicable (ALARP).<br>**Targets:** No formal targets. |
| MOD JSP 392, Radiation Safety Handbook (2008) and MOD JSP 418, leaflet 14 – Radiation. | **Objectives:**<br>• to comply with the letter and the spirit of UK environmental law applicable to ionising radiations so far as is reasonably practicable regardless of any Crown or Defence Exemptions; and<br>• to reduce exposure of the workforce, members of the public and the environment to levels of radiation which are as low as reasonably practicable (ALARP).<br>**Targets:** No formal targets. |
| MOD Sustainable Development Strategy, December 2008<br>&<br>MOD Sustainable Development Report and Action Plan 2008 | **Objectives:**<br>• provide a safe and healthy workplace; and<br>• manage the social impacts of Defence activities on UK communities (civilian and Armed Forces).<br>**Targets:**<br>• ongoing target of no fatalities attributable to Health and Safety failures;<br>• ongoing target of 10% reduction in the number of serious injuries against previous years' performance;<br>• by 2010 reduce number of working days lost per 100,000 workers from work related injury by 30% against figures from 2000 (Government target);<br>• by 2010 reduce the rate of fatal and major injury accidents by 10% between 2000 and 2010 (Government target); and<br>• by 2010 Reduce the rate of cases of work related ill health by 10% between 2000 and 2010 (Government Target). |
| **National (Scotland)** | |
| Sport Scotland (2009) A sport Scotland policy statement on sport and physical recreation in the outdoors | **Objectives:**<br>• statement looks to a future where sport and recreation in the outdoors is increasingly welcomed and positively managed, with an informed approach;<br>• where outdoor sport is well resourced and well promoted, and is supported by the provision of quality services, facilities and infrastructure, set in a quality environment; and<br>• where the value and contribution of outdoor sport and recreation is recognised and where existing opportunities to participate are protected and enhanced, and new opportunities developed, for all sectors of Scottish society. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
|---|---|
| **Human health** | |
| Scottish Executive Physical Activity Task Force (2003) Let's Make Scotland More Active: A strategy for physical activity | **Objectives:**<br>• to develop and maintain long-lasting, high-quality environments to support inactive people to become active;<br>• to provide accurate and evidence-based advice to staff who are involved in government policy and service delivery, and who work in the voluntary and private sectors;<br>• to raise awareness and develop knowledge and understanding about the benefits of physical activity and provide access to information; and<br>• to carry out research, monitoring and evaluation. |
| Scottish Executive (2003) 'Partnership for Care': Scotland's Health White Paper | **Objectives:** The white paper sets out the Executive's policy on health. It is about the promotion of health in the broadest possible sense and the creation of a health service that is fit for the 21st century.<br>It sees patients and national standards as key drivers of change in the health service and frontline staff as leaders of the change process; it outlines ways in which the redesign, integration and quality of services can be systematically progressed and it seeks a step change in approach to health improvement as an essential complement to the modernised, patient focused services of the 21st century.<br>The health improvement strategy identifies the following broad objectives:<br>• a new approach to improve health in Scotland and to reduce health inequalities;<br>• a sustained effort to tackle the lifestyles and circumstances which damage health;<br>• new actions focused on early years; teenage transition; the workplace; and in communities; and<br>• legislation to secure the place of Health Improvement in Community Planning. |
| The Scottish Executive (2003) Improving Health in Scotland – The Challenge | **Objectives:**<br>To set out the work programme of:<br>• the Scottish Executive's actions to improve health the strengthened Special Health Board formed by the integration of the Public Health Institute of Scotland (PHIS) with the Health Education Board for Scotland (HEBS) health improvement activities within NHS Boards;<br>• to relate work programmes and processes across Scotland that are central to health improvement including health improvement as a cross-cutting policy for the whole Programme for Government; Community Planning Partnerships; the health improvement work of COSLA and local authorities and the impact on health that arises from the work of the business sector, voluntary sector and other strands of Scottish life; and<br>• to encourage the many organisations and individuals within Scotland who contribute to health improvement and to allow them the opportunity to influence future work and phases of this long-term plan for change. |
| **National (Wales)** | |
| Welsh Assembly Government (2010) Planning Policy Wales (Edition 2) | **Objectives:** Planning Policy Wales sets out the land use planning policies of the Welsh Assembly Government. With regard to health, the Assembly states that planning policies and proposals should contribute to the protection and, where possible, the improvement of people's health and well-being. Consideration of the possible impacts of developments - positive and/or negative - on people's health at an early stage will help to clarify the relevance of health and the extent to which it needs to be taken into account.<br>**Targets:** No formal targets. |
| **National (Northern Ireland)** | |
| Investing in Health: A Public Health | **Objectives:** Unlike the public health strategies of many other countries, the goals, objectives and associated targets are not focused on diseases. The objectives are around the wider determinants of |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Human health** | |
| Strategy for Northern Ireland. | health, including:<br>• educational attainment;<br>• living and working conditions;<br>• the wider environment;<br>• mental and emotional health and well-being;<br>• accidental death and injuries; and<br>• healthy lifestyle choices.<br><br>**Targets:**<br>No explicit targets or indicators. |
| DHSSPS, a healthier future A Twenty Year Vision for Health and Wellbeing in Northern Ireland 2005 – 2025 | **Objectives:** To focus on tackling chronic diseases and the social and economic disadvantage that give rise to poor health. The majority of this will be managed in a community setting, in partnership with service users. Services will also focus on supporting, protecting and promoting the quality of life of those least able to protect themselves, including looked after children, vulnerable older people and people with disabilities or any other form of potential barrier to living a full life.<br><br>**Targets:**<br>• Improve male and female life expectancy here towards the levels of the best EU countries.<br>• Reduce by two thirds the gap in life expectancy between those living in the most deprived 20% of electoral wards and the average life expectancy here for both men and women between 2000 and 2025.<br>• Reduce the standardised death rate per 100,000 people under 80 years of age for cancer by 20% from 178 deaths for males in 2002 and 143 deaths for females to 142 deaths and 115 deaths respectively.<br>• Increase the five-year cancer survival rates to the levels of the best European countries.<br>• Reduce the death rate per 100,000 people under 80 years of age for coronary heart disease from 130 deaths for males in 2002 and 66 deaths for females to compare with the European country with the lowest death rate.<br>• Reduce the death rate per 100,000 people under 80 years of age for respiratory disease by 50% from 49 deaths for males in 2002 and 43 deaths for females to 25 deaths and 21 deaths respectively.<br>• Reduce the death rate per 100,000 people under 80 years of age for Stroke by 50% from 38 deaths for males in 2002 and 36 deaths for females to 19 deaths and 18 deaths respectively.<br>• Ensure that everyone with diabetes is screened annually for the risk of kidney disease so that problems can be identified early and managed in a community-based setting. We will also aim to address current trends towards 10% growth in haemodialysis per year, recognising that some of this growing need will be the result of inevitable demographic trends.<br>• Reverse current trends towards a doubling in the prevalence of diabetes over the next ten years and reduced the number of people with diabetes from current levels (30,000 to 50,000 in 2002) to levels comparable to European countries with the lowest prevalence.<br>• Reduce the number of people with a preventable visual impairment from current levels (estimated 24,000 people in Northern Ireland) to be comparable with EU countries which have the lowest levels of blindness and visual impairment.<br>• Reduce the number of suicides for all persons per 100,000 by 50% and reduce the number of suicides for males aged 15-44 per 100,000 by 50%. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Human Health (Noise)** | |
| **International / European (e.g. Directives)** | |
| EU Sixth Environmental Action Plan (2002 – 2012) | **Objectives:** The 6th EAP takes a broad look at the environmental challenges and provides a strategic framework for the Commission's environmental policy up to 2012.<br><br>The 6th EAP identifies four priority areas:<br>• climate change;<br>• nature and biodiversity;<br>• environment and health; and<br>• natural resources and waste.<br><br>**Targets:** This includes a long term objective which states: "to achieve reduction of the number of people regularly affected by long-term high noise levels from an estimated 100 million in 2000 by around 10% in 2010, and by 20% in 2020". |
| EU Directive (2002) 2002/49/EC Relating to the Assessment and Management of Environmental Noise - The Environmental Noise Directive | **Objectives:** The aim of the Directive is to define a common approach intended to avoid, prevent or reduce the harmful effects including annoyance due to exposure to environmental noise. Each Member State is expected to determine exposure to environmental noise through noise mapping, ensure that information on environmental noise and its effects is made available to the public and to adopt action plans based upon noise mapping results with a view to preventing and reducing environmental noise where necessary, and particularly where exposure effects could induce harmful effects on human health.<br><br>**Targets:** There are no specific targets or indicators of relevance. |
| World Health Organization (1999) Guidelines for Community Noise | **Objectives:** This provides recommendations for guideline levels to prevent critical health effects including LAeq levels for outdoor living areas, dwelling indoors, inside bedrooms and sound pressure levels for impulse sounds: toys, firearms, fireworks.<br><br>**Targets:** This sets specific standards to prevent health impacts. |
| WHO (2000) Transport, Environment and Health | **Objectives:** This report primarily focuses on increasing road transport, noting that road users generate excessive costs to themselves, other individuals and society - through noise, pollution and accidents - in the form of illness, injuries, deaths and damage to mental health and social relationships. The challenge is to promote healthy and sustainable transport alternatives to prevent the negative effects of transport systems on human health. Meeting this challenge requires commitment and action from governments. It summarises the latest scientific evidence on the impact of transport-generated air pollution, noise and accidents on behaviour and physical and mental health. The report also highlights the potential health benefits from non-motorised forms of transport, such as cycling and walking.<br><br>**Targets:** The report highlights the need for policy-makers to address the following issues:<br>• transport-related noise pollution;<br>• transport-related air pollution;<br>• the effects of transport of mental health and wellbeing;<br>• identifying key groups affected by transport health risks;<br>• and improving provisions for cycling and walking. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Human Health (Noise)** | |
| **National (UK)** | |
| Environmental Protection Act 1990 | **Objectives:** Defines within England, Scotland and Wales the legal framework for duty of care for waste, contaminated land and statutory nuisance (including noise emitted from premises so as to be prejudicial to health or a nuisance).<br><br>**Targets:** No formal targets. |
| Control of Pollution Act 1974 (and subsequent amendments) | **Objectives:** This makes further provision with respect to waste disposal, water pollution, noise, atmospheric pollution and public health.<br><br>**Targets:** There are no specific targets or indicators of relevance. |
| Noise Insulation (Railways and Other Guided Transport Systems) Regulations 1996 | **Objectives:** These Regulations apply to railway, tramway and other guided transport systems which have been authorised by or under statute. They impose a duty on the authority responsible for constructing the transport system concerned, or for adding to an existing system, to provide certain buildings with insulation against noise or to pay grant for insulation work to be carried out to such buildings.<br><br>**Targets:** There are no specific targets or indicators of relevance. |
| DTI (2001) The Noise Emission in the Environment by Equipment for use Outdoors Regulations 2001 (SI 2001/1701 as amended) | **Objectives:** Guide seeks to explain the requirements of the Regulations for technical documentation only and does not attempt to address all requirements of the Regulations, with respect to noise emissions in the environment by equipment for use outdoors.<br><br>**Targets:** Permissible sound levels are given for different types of equipment. |
| Environmental Noise (England) Regulations 2006 | **Objectives:** These regulations transpose the requirements under Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 (often known as the Environmental Noise Directive (END). The END requires:<br>• the use of harmonised noise indicators and computational measures so that data can be collected and compared in a standardised way;<br>• common protocols for noise mapping;<br>• the drawing up of noise maps;<br>• making information available to the public;<br>• the drawing up of local action plans; and<br>• collection of data by the Commission to inform future Community policy.<br>The Regulations will help identify:<br>• the extent to which people are exposed to high levels of noise; and<br>• what areas of relative quiet we might or could have to enable the development of measures to protect them and not have the noise environment inadvertently eroded.<br><br>**Targets:** No relevant targets or indicators. |
| ODPM (1994) PPG 24 Planning and Noise | **Objectives:** This PPG gives guidance to local authorities in England on the use of their planning powers to minimise the adverse impact of noise and builds on the advice previously contained in DOE Circular 10/73. The aim of this guidance is to provide advice on how the planning system can be used to minimise the adverse impact of noise without placing unreasonable restrictions on development or adding unduly to the costs and administrative burdens of business. The PPG:<br>• outline the considerations to be taken into account in determining planning applications both for |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Human Health (Noise)** | |
| | noise sensitive developments and for those activities which will generate noise;<br>• introduce the concept of noise exposure categories for residential development, encourages their use and recommends appropriate levels for exposure to different sources of noise; and<br>• advise on the use of conditions to minimise the impact of noise.<br>**Targets:** No relevant targets or indicators. |
| Rail Safety and Standards Board (2007) Overview of Environmental Noise, Diffuse Pollution and Biodiversity Management in the Great Britain Rail Industry | **Objectives:** This research summarises the current situation in the management of environmental noise, diffuse pollution and biodiversity. The output of this work is intended to inform the rail industry in the development of a sustainability strategy and inform Department for Transport (DfT) in the development of the long-term strategy for rail.<br>**Targets:** No formal targets. |
| Clean Neighbourhoods and Environment Act 2005 | **Objectives:** Introduces noise, litter and waste controls including site waste management plans, and classifies artificial lighting and insects as statutory nuisances.<br>**Targets:** No formal targets. |
| Noise Emission in the Environment by Equipment for Use Outdoors Regulations 2001 SI 1701 | **Objectives:** Establishes maximum noise levels for equipment used outdoors, mainly in construction and land maintenance, such as generators, lawn mowers, compaction machines and concrete breakers.<br>**Targets:** No formal targets. |
| Control of Noise (Codes of Practice for Construction and Open Sites) (England) Order 2002 SI 461 | **Objectives:** Approves four British Standards Institution codes of practice for appropriate methods of minimising noise and vibration from construction and open sites in England.<br>**Targets:** No formal targets. |
| **National (MOD)** | |
| Secretary of State's Policy Statement on Safety, Health, Environmental Protection and Sustainable Development in the Ministry of Defence (2009) | **Objectives:**<br>• To minimise work-related injuries and ill-health.<br>**Targets:** No formal targets. |
| MOD JSP 375, MOD Health and Safety Handbook (largely re-written through JSP 815, Defence Environment and Safety Management) | **Objectives:**<br>• Conduct defence activities in a way that minimises the risk to personnel and to others, including members of the public, to As Low as is Reasonably Practicable (ALARP).<br>**Targets:** No formal targets. |
| JSP 418 Leaflet 15, Statutory Nuisance. | The MOD has exemption from the health and statutory nuisances provisions of Part III of the Environmental Protection Act, in relation to Clause 79 (1) (g) - noises emitted from premises so as to be prejudicial to health or a nuisance. However this only applies to operational activities directly related to national security. MOD establishments are not allowed to create excessive noise liable to cause a nuisance as part of activities not directly connected with the operation of equipment, training of personnel or other military operations.<br>**Objectives:**<br>To reduce and where possible avoid the effects and causes of statutory nuisance and to comply with all relevant UK environmental legislation. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Human Health (Noise)** | |
| | To make every effort to keep the disturbance to the public caused by the noise generated by military activity to a minimum. Where possible, activities generating substantial noise will be kept at a distance from residential areas, and night time activity will be limited to achieving training objectives which cannot be met during the day.<br><br>**Targets:** No formal targets. |
| **National (Scotland)** | |
| Scottish Executive - Sound Advice on Noise - Don't suffer in silence | **Objectives:**<br>• tells you what you can do about noise from neighbours, local commercial and industrial premises and vehicles;<br>• describes additional noise controls such as bylaws and specific controls on noise from construction sites and loudspeakers; and<br>• explains how you can get involved in planning to prevent noise.<br><br>**Targets:** No formal targets. |
| Scottish Executive Development Department Circular 10/1999 - Planning and Noise | **Objectives:** Development plans should:<br>• guide noise-sensitive developments away from existing sources of significant noise or from programmed development such as new roads or areas reserved for noisy uses or activities; and<br>• ensure that potentially noisy developments are located in areas where noise will not be such an important consideration or where its impact can be contained or minimised.<br><br>**Targets:** No formal targets. |
| Scottish Executive (1999) Planning Advice Note: PAN 56 Planning and Noise | **Objectives:**<br>• indicates how noise issues should be handled in development plans and development control;<br>• outlines ways of mitigating the adverse impact of noise;<br>• provides specific guidance on noisy and noise-sensitive development;<br>• introduces the use of noise exposure categories; and<br>• gives guidance on the use of planning conditions relating to noise.<br><br>**Targets:** Sets out noise exposure categories for dwellings. |
| NHS Highland (2007) Your guide to local health services in Argyll & Bute Community Health Partnership | **Objectives:** Guide has been produced to inform public about community health services across Argyll and Bute. It outlines some of their plans for improving services and how you can get involved. It includes useful contact information to help you get the services you need.<br><br>**Targets:** No formal targets. |
| **National (Wales)** | |
| Welsh Assembly Government (1997) Technical Advice Note 11: Noise | **Objectives:** Sets out that local planning authorities must ensure that noise generating development does not cause an unacceptable degree of disturbance. They should also bear in mind that if subsequent intensification or change of use results in greater intrusion, consideration should be given to the use of appropriate conditions. Conversely, local planning authorities should consider whether proposals for new noise-sensitive development would be incompatible with existing activities, taking into account the likely level of noise exposure at the time of the application and any increase that may |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Human Health (Noise)** | |
| | reasonably be expected in the foreseeable future. Such development should not normally be permitted in areas which are, or are expected to become, subject to unacceptably high levels of noise and should not normally be permitted where high levels of noise will continue throughout the night.<br><br>**Targets:** Contains recommended noise exposure categories for new dwellings near existing noise sources. |
| Welsh Assembly Government (2010) Planning Policy Wales (Edition 2) | **Objectives:** Planning Policy Wales (PPW) sets out the land use planning policies of the Welsh Assembly Government. With regard to noise, PPW states that local planning authorities should make a careful assessment of likely noise levels where appropriate and have regard to any relevant Noise Action Plan before determining planning applications.<br><br>**Targets:** No formal targets. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Soil and Geology** | |
| **International / European (e.g. Directives)** | |
| EC (2006) Thematic Strategy on Soil Protection | **Objectives:**<br>The overall objective of the strategy is the protection and sustainable use of soil, based on the following guiding principles:<br>• preventing further soil degradation and preserving its functions;<br>• when soil is used and its functions are exploited, action has to be taken on soil use and management patterns;<br>• when soil acts as a sink/receptor of the effects of human activities or environmental phenomena, action has to be taken at source; and<br>• restoring degraded soils to a level of functionality consistent at least with current and intended use, thus also considering the cost implications of the restoration of soil.<br>**Targets:** No formal targets. |
| EC (1991) Nitrates Directive (91/676/EEC) | **Objectives:**<br>• Designate as Nitrate Vulnerable Zones (NVZs) all land draining to waters that are affected by nitrate pollution.<br>• Establish a voluntary code of good agricultural practice to be followed by all farmers throughout the country.<br>• Establish a mandatory Action Programme of measures for the purposes of tackling nitrate loss from agriculture. The Action Programme should be applied either within NVZs or throughout the whole country.<br>• Review the extent of their NVZs and the effectiveness of their Action Programmes at least every four years and to make amendments if necessary.<br>**Targets:** No formal targets. |
| Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001 – Amended in 2007 | **Objective:** Regulations require consent to be obtained for geological surveys related to oil and gas activities undertaken on the UKCS. The Amendment Regulations 2007 extend these provisions to UK waters (sea adjacent to UK from the low water mark up to the seaward limits of territorial waters), as well as requiring prior consent for the testing of equipment to be used in geological surveys.<br>**Targets:** No formal targets. |
| **National (UK)** | |
| ODPM (2005). PPS9: Biodiversity and Geological Conservation | **Objectives:** The statement sets out a number of key planning principles:<br>• development plan policies and planning decisions should be based upon up-to-date information about the environmental characteristics of their areas;<br>• plan policies and planning decisions should aim to maintain, and enhance, restore or add to biodiversity and geological conservation interests;<br>• plan policies on the form and location of development should take a strategic approach to the conservation, enhancement and restoration of biodiversity and geology and should recognise the contributions that sites, areas and features make, both individually and in combination;<br>• plan policies should promote opportunities for the incorporation of beneficial biodiversity and |

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| **Soil and Geology** | |
| | geological features within the design of development;<br>• development proposals where the principal objective is to conserve or enhance biodiversity and geological conservation interests should be permitted; and<br>• the aim of planning decisions should be to prevent harm to biodiversity and geological conservation interests.<br>**Targets:** No specific targets are given but it is noted that sites of regional and local biodiversity and geological interest have a fundamental role to play in meeting overall national biodiversity targets; contributing to the quality of life and the well-being of the community; and in supporting research and education. |
| UK Soil Indicators Consortium (Defra) – Formed in 2003 | **Objectives:**<br>1. To develop a set of policy relevant and scientifically robust indicators of soil quality that:<br>• cover all of the functions of soil;<br>• will pick up significant changes in soil quality in a timely manner;<br>• will meet the different requirements of the member organisations (make best use of collected data); and<br>• make use of existing research into indicators being supported by the member organisations.<br>2. To develop a UK monitoring scheme that:<br>• will better establish the state of our national soils;<br>• can be tailored to available resources and individual organisation needs;<br>• will be designed to pick up significant changes in soil quality; and<br>• builds upon previously funded research on the design of monitoring schemes.<br>**Targets:** No formal targets. |
| Defra (2009) Safeguarding our Soils: A Strategy for England | **Objectives:** The strategy sets out three main objectives:<br>• developing understanding of the impacts of degradation threats on soil functions and improving our monitoring regime;<br>• ensuring that the industry has the necessary skills and knowledge to tackle soil degradation and maintain levels of organic matter; and<br>• ensuring existing regulatory mechanisms and incentives work effectively to prevent soil degradation.<br>**Targets:** No formal targets. |
| Defra (2009) Code of Practice on the Sustainable Management of Soils on Construction Sites | **Objectives:** This Code of Practice for the sustainable use of soil on construction sites is a practical guide to assist anyone involved in the construction industry to protect the soil resources with which they work. It contains guidance of interest to those involved at all stages of construction projects, from the developer, designer, contractor, sub-contractor (earthworks, landscape) and regulator. Although the Code itself is not legislatively binding, by following it aims to help protect and enhance the soil resources on site and achieve wider benefits for the environment.<br>**Targets:** No formal targets. |
| PPG14 Development on Unstable | **Objective:** Purpose of PPG14 is principally to advise local authorities, landowners and developers on |

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| **Soil and Geology** | |
| Land (1990) | the exercise of planning controls over development on land which is unstable or is potentially unstable.<br><br>**Targets:** No formal targets. |
| Minerals Policy Statements (MPS) 1 – 'Planning and Minerals' (2006) | **Objectives:**<br>• to ensure the prudent, efficient and sustainable use of minerals and recycling of suitable materials, thereby minimising the requirement for new primary extraction;<br>• to conserve mineral resources through appropriate domestic provision and timing of supply;<br>• to safeguard mineral resources as far as possible;<br>• to prevent or minimise production of mineral waste;<br>• to secure working practices which prevent or reduce as far as possible, impacts on the environment and human health arising from the extraction, processing, management or transportation of minerals;<br>• to protect internationally and nationally designated areas of landscape value and nature conservation importance from minerals development, other than in exceptional circumstances;<br>• to secure adequate and steady supplies of minerals needed by society and the economy within the limits set by the environment;<br>• to maximise the benefits and minimise the impacts of minerals operations;<br>• to promote the sustainable transport of minerals;<br>• to protect and seek to enhance the overall quality of the environment once extraction has ceased;<br>• to secure closer integration of minerals planning policy with national policy on sustainable construction and waste management; and<br>• to encourage the use of high quality materials.<br><br>**Targets:** No formal targets. |
| MPS 2 – 'Controlling and Mitigating the Environmental Effects of Minerals Extraction in England' (2005) | **Objectives:** Mineral Planning Authorities (MPAs) should incorporate the objectives of sustainable development in minerals planning. These objectives recognise the potential conflict between the exploitation of resources and environmental aims. In order to reconcile such conflicts, MPAs should aim to:<br>• conserve minerals as far as possible, whilst ensuring an adequate supply to meet the needs of society;<br>• ensure that the environmental impacts caused by mineral operations and the transport of minerals are kept to an acceptable minimum;<br>• minimise production of waste and to encourage efficient use of materials, including appropriate use of high-quality materials, and recycling of waste;<br>• encourage sensitive working, restoration and aftercare practices during minerals extraction and to conserve or enhance the overall quality of the environment once extraction has ceased;<br>• safeguard the long-term capability of best and most versatile agricultural land, and conserve soil resources for use in a sustainable way; and<br>• protect areas of nationally-designated landscape or archaeological value, cultural heritage or nature conservation from mineral development, other than in exceptional circumstances where it has been demonstrated that the proposed development is in the public interest. |

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| **Soil and Geology** | |
| | **Targets:** No formal targets. |
| MPG 7 – Reclamation of mineral workings (1996) | **Objective:** Guidance deals with policies, consultations and conditions which are relevant to achieving effective reclamation of mineral workings.<br><br>**Targets:** No formal targets. |
| Contaminated Land (England) Regulations 2006 SI 1380 | **Objective:** Sets out provisions relating to the identification and remediation of contaminated land. Identifies sites requiring regulation as 'special sites' and adds land contaminated by radioactive substances to this classification.<br><br>**Targets:** No formal targets. |
| 1995 Environment Act | **Objectives:**<br><br>The main purpose of the Environment Act is to protect and preserve the environment and guard against pollution to air, land or water. The Act adopts an integrated approach to environmental protection and outlines where authorisation is required from relevant authorities to carry out certain procedures as well as outlining the responsibilities of the relevant authorities.<br><br>**Targets:** No formal targets. |
| Environmental Protection Act 1990 & Radioactive Contaminated Land (Modifications of Enactments) (England) Regulations 2007 | **Objectives:** Defines within England, Scotland and Wales the legal framework for duty of care for waste, contaminated land and statutory nuisance. The Part 2A Contaminated Land Regime of the Environmental Protection Act was modified in 2006 to cover radioactivity,and then a further modification made in 2007 to cover land contaminated with radioactivity originating from nuclear installations.<br><br>**Targets:** No formal targets. |
| Communities and Local Government (2010) Consultation Paper a new Planning Policy Statement: Planning for a Natural and Healthy Environment | **Objectives:** Once approved, this PPS will replace PPS9, PPG17, PPG20 and PPS7 in so far as it relates to landscape protection, soil and agricultural land quality, forestry, coastal access, heritage coast and the undeveloped coast. With regard to soil, the paper sets out that, when considering applications involving significant areas of agricultural land, local planning authorities should take account of the presence of best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) alongside other sustainability considerations. Where significant development of agricultural land is unavoidable, local planning authorities should seek to develop areas of poorer quality land (grades 3b, 4 and 5) in preference to that of a higher quality, except where this would be inconsistent with other sustainability considerations. Little weight should be given to the loss of agricultural land in grades 3b, 4 and 5, except in areas (such as uplands) where particular agricultural practices may themselves contribute to the quality and character of the environment or the local economy. Regarding geology, the paper states that local planning authorities should maximise opportunities for building-in beneficial geodiversity features in and around developments, as part of good design, using planning obligations where appropriate. Development proposals on previously developed land which has significant biodiversity, geodiversity or landscape interest of recognised local importance, or which provides opportunities for public access, should aim to retain this interest or access and incorporate it into any development of the site.<br><br>**Targets:** No formal targets. |
| **National (MOD)** | |
| MOD Sustainable Development Strategy, December 2008<br><br>&<br><br>MOD Sustainable Development Report and Action Plan 2008 | **Objective:**<br><br>• To establish a complete picture of risks associated with land quality across the Defence Estate and have in place robust mechanisms for managing those risks to an acceptable level.<br><br>**Targets:** |

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| **Soil and Geology** | |
| | • By 2010 establish an estate-wide Land Quality Assessment programme to make sure resources are prioritised effectively and to allow improved reporting in this area. |
| MOD JSP 418, leaflet 2 – Land Contamination | **Objectives:**<br>• To assess the land quality across the entire estate in order to provide a proper knowledge of the condition of the estate and ensure that it is 'suitable for use' and not causing harm to human health or the environment. Where it is identified that an unacceptable risk is posed by the presence of contamination early action must be taken to reduce and control those risks to an acceptable level.<br>• To maintain a Corporate EMS based on ISO 14001 across the Estate …to maintain a view of the impacts of MOD activities and the impact of land quality on MOD activities.<br>**Targets:** No formal targets. |
| MOD JSP 418, leaflet 14 – Radiation | **Objectives:**<br>• To reduce exposure of the workforce, members of the public and the environment to levels of radiation which are as low as reasonably practicable (ALARP).<br>**Targets:** No formal targets. |
| **National (Scotland)** | |
| The Scottish Executive (2003) Organic Action Plan for Scotland | **Objective:** The aim is to build a prosperous and sustainable organic sector. The Executive aims to see accelerated growth of organic farming where this can make the best contribution to environmental sustainability.<br>The Executive will act, within the powers and resources available to it, to remove barriers and create conditions to help the sector to develop such that:<br>• For products where Scotland's climate supports organic production, Scottish organic products can secure a market share at least the same as that attained by Scottish non-organic produce. Only an estimated 35% of organic produce sold is currently provided from domestic sources (as opposed to around 70% for non-organic products). We want to see Scottish organic products grow in market penetration so that they can meet at least 70% by value of overall Scottish consumer demand for organic products which can be sourced in Scotland, as well as succeeding in the broader UK and international markets.<br>• There can be a doubling of the area of arable land and improved grassland in organic conversion or production, with a view to these areas comprising 30% of Scotland's organic area by 2007, against a current 15%. |
| Scottish Government (2010) Scottish Planning Policy | **Objectives:** Scottish Planning Policy (SPP) sets out the Scottish Government's policy on land use planning. The following objectives are laid out for sustainable use of Scotland's sustainable resources:<br>• safeguard minerals as far as possible for future use;<br>• ensure a steady and adequate supply is maintained to meet the needs of society and the economy;<br>• encourage sensitive working practices during mineral extraction that minimise the environmental and transport impacts and once extraction has ceased, ensure sites are reclaimed to a high standard or enhance the value of the wider environment;<br>• promote the use and recycling of secondary materials in development plan policies in addition to those for the release of sites for extraction of primary materials;<br>• protect international, national and locally designated areas of acknowledged natural or built |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Soil and Geology** | |
| | heritage importance from adverse impacts; and<br>• minimise the potential adverse impact of minerals extraction on communities.<br>SPP also states that development on prime agricultural land should not be permitted unless it is to meet an established need, for example for major infrastructure development, where no other suitable site is available.<br>**Targets:** No formal targets. |
| Contaminated Land (Scotland) Regulations 2005 SSI 658 | **Objectives:** Introduces a scheme for remedying contaminated land, identifies 'special sites' enforced by SEPA, remediation notices and their contents, and sets out the information to be held on a contaminated land register maintained by local councils.<br>**Targets:** No formal targets. |
| Radioactive Contaminated Land (Scotland) Amendment Regulations 2009 SSI 202 | **Objectives:** The objectives for the radioactive contaminated land regime are broadly the same as those for the existing Part IIA Environment Protection Act regime. They include applying the principle that "the polluter pays" and the principle of sustainable development. The extension of the regime provides for access to and identification of land that may be contaminated by radioactivity. Where such land is causing lasting exposure of radiation to any person or where there is a significant possibility of such exposure, the regime will also allow for remediation, under circumstances where intervention is liable to be justified. The Regulations have to be read in conjunction with the existing Part IIA regime, since they are not stand-alone Regulations but modifying Regulations.<br>**Targets:** No formal targets. |
| Scottish Government (2000) Planning Advice Note 33 Development of Contaminated Land | **Objectives:** The objectives of this PAN are to provide advice on:<br>• the implications of the new contaminated land regime for the planning system;<br>• the development of contaminated land;<br>• the approach to contaminated land in development plans;<br>• the determination of planning applications when the site is or may be contaminated; and<br>• where further information and advice can be found.<br>**Targets:** No formal targets. |
| Scottish Government (2009) Scottish Soil Framework | **Objectives:** The main aim of the Framework is to promote the sustainable management and protection of soils consistent with the economic, social and environmental needs of Scotland. The Framework identifies a wide range of activities that will contribute to 13 soil outcomes:<br>• soil organic matter stock protected and enhanced where appropriate.<br>• soil erosion reduced and where possible remediated.<br>• soil structure maintained.<br>• greenhouse gas emission from soils reduced to optimum balance.<br>• soil biodiversity, as well as above ground biodiversity, protected.<br>• soils making a positive contribution to sustainable flood management.<br>• water quality enhanced through improved soil management.<br>• soil's productive capacity to produce food, timber and other biomass maintained and enhanced.<br>• soil contamination reduced.<br>• reduced pressure on soils by using brownfield sites in preference to Greenfield. |

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| **Soil and Geology** | |
| | • soils with significant historical and cultural features protected.<br>• knowledge and understanding of soils enhanced, evidence base for policy review and development strengthened, and<br>• effective co-ordination of all stakeholders' roles, responsibilities and actions.<br><br>**Targets:** No formal targets. |
| **National (Wales)** | |
| Welsh Assembly Government (2000) Technical Advice Note 6: Agricultural and Rural Development | **Objectives:** TAN 6 stipulates that, in considering planning applications, local planning authorities should consider the quality of agricultural land and other agricultural factors and seek to minimise any adverse affects on the environment.<br><br>**Targets:** No formal targets. |
| Welsh Assembly Government (2004) Minerals Technical Advice Note 1: Aggregates | **Objectives:**<br>• To provide aggregate resources in a sustainable way to meet society's needs for construction materials in line with the following objectives:<br>o maximising the use of secondary and recycled materials and mineral waste where practicable;<br>o ensuring planning permissions for future primary extraction are essential and properly planned for in accord with the Regional Technical Statement;<br>o eliminating over the next five years any likelihood of future primary aggregate extraction at historically obsolete and long dormant sites.<br>• to prevent unacceptable aggregates extraction from areas of acknowledged landscape, cultural, nature and geological conservation and hydrological importance;<br>• to reduce the impact of aggregates production;<br>• to achieve a high standard of restoration and aftercare, and provide for a beneficial after-use; and<br>• to encourage the efficient use of minerals and maximising the potential use of alternative materials as aggregates.<br>**Targets:** To increase the proportion of aggregates production n Wales from secondary and recycled sources to at least 25% of total aggregates supply within five years. |
| Radioactive Contaminated Land (Modifications of Enactments) (Wales) Regulations 2007 | **Objectives:** Modifies Part 2A Contaminated Land Regime of the Environmental Protection Act was modified in 2006 to cover land contaminated with radioactivity originating from nuclear installations.<br>**Targets:** No formal targets. |
| **National (Northern Ireland)** | |
| Waste and Contaminated Land (Northern Ireland) Order 1997 SI 2778 (NI 19) (including updates) | **Objectives:** The Order sets out the waste management regime covering waste carrier registration and identifying and remedying contaminated land. Part 3 of the 1997 Order provides a framework for a regulatory regime to deal with historically contaminated land and essentially replicates Part 2A of the Environmental Protection Act 1990, under which contaminated land regimes have been brought into force in England Scotland and Wales. However, these laws are not yet in force because the details of how they will be operated have not yet been established.<br><br>The Department of the Environment for Northern Ireland has gathered feedback from the public on proposals for how the contaminated land regime could work. A summary of the responses to the consultation has now been published. These responses will inform the development of a detailed |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Soil and Geology** | |
| | system for contaminated land in Northern Ireland.<br>**Targets:** No formal targets. |
| Radioactive Contaminated Land Regulations (Northern Ireland) 2006 SR 345 | **Objectives:** The Regulations outline basic safety standards for protecting the health of workers and the public from the dangers of ionising radiation.<br><br>**Targets:** No formal targets. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
|---|---|
| **Water** | |
| **International / European (e.g. Directives)** | |
| EU (1975) *Surface Water Abstraction Directive* 75/440/EEC | **Objective:** Directive concerns the quality requirements which surface fresh water used or intended for use in the abstraction of drinking water, hereinafter called "surface water", must meet after application of appropriate treatment. Ground water, brackish water and water intended to replenish water-bearing beds are not subject to this Directive.<br><br>**Targets:** No formal targets. |
| EU (1976) *Dangerous Substances Directive* 76/464/EEC | Directive covers discharges to inland surface waters, territorial waters, inland coastal waters and ground water.<br><br>**Objective:** It had the ambitious objective of regulating potential aquatic pollution by thousands of chemicals already produced in Europe at that time.<br><br>**Targets:** Directive uses legislation to reinforce the above objective. |
| EU (1979) *The Shellfish Waters Directive* 79/923/EEC | **Objective:** Directive concerns the quality of shellfish waters and applies to those coastal and brackish waters designated by the Member States as needing protection or improvement in order to support shellfish (bivalve and gasteropod molluscs) life and growth and thus to contribute to the high quality of shellfish products directly edible by man.<br><br>**Targets:** Directive uses legislation to reinforce the above objective. |
| EU (1980) *Groundwater Directive* 80/68/EEC | **Objective:** The purpose of this Directive is to prevent the pollution of groundwater by substances belonging to the families and groups of substances in lists I or II in the Annex.<br>Member States shall take the necessary steps to:<br>(a) prevent the introduction into groundwater of substances in list I; and<br>(b) limit the introduction into groundwater of substances in list II so as to avoid pollution of this water by these substances.<br>**Targets:** Directive uses legislation to reinforce the above objective. |
| EU (1991) *Urban Waste Water Treatment Directive* 91/271/EEC | **Objective:** Its objective is to protect the environment from the adverse effects of urban waste water discharges and discharges from certain industrial sectors (see Annex III of the Directive) and concerns the collection, treatment and discharge of:<br>• domestic waste water;<br>• mixture of waste water; and<br>• waste water from certain industrial sectors (see Annex III of the Directive).<br><br>**Targets:** Directive uses legislation to reinforce the above objective. |
| EU (1998) *Drinking Water Directive* 98/83/EC | **Objectives:** The objective of this Directive is to protect the health of the consumers in the European Union and to make sure the water is wholesome and clean.<br><br>The Directive also sets standards for the most common substances (so-called parameters) that can be found in drinking water. In the DWD a total of 48 microbiological and chemical parameters must be monitored and tested regularly.<br><br>**Targets:** Directive uses legislation to reinforce the above objective. |
| EU (2000) *The Water Framework* | **Objectives:** This Directive establishes a framework for the protection of inland surface waters, transitional waters, coastal water and groundwater. It also encourages the sustainable use of water |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Water** | |
| *Directive* | resources.<br><br>The key ones at European level are general protection of the aquatic ecology, specific protection of unique and valuable habitats, protection of drinking water resources, and protection of bathing water.<br><br>**Targets:** Requires surface freshwater and ground water bodies - such as lakes, streams, rivers, estuaries, and coastal waters - to be ecologically sound by 2015 and that the first review of the River Basin Management Plans should take place in 2020. |
| EU (2006) *Bathing Water Directive* 2006/7/EC concerning the management of bathing water quality | **Objectives:** Directive lays down provisions for:<br>(a) the monitoring and classification of bathing water quality;<br>(b) the management of bathing water quality; and<br>(c) the provision of information to the public on bathing water quality.<br>The purpose of this Directive is to preserve, protect and improve the quality of the environment and to protect human health by complementing Directive 2000/60/EC.<br>**Targets:** No formal targets. |
| EU (2007) *Eel Regulations* Council Regulation EC No 1100/2007) | **Objective:** The regulation establishes a framework for the protection and sustainable use of eels in Europe through Eel Management Plans. The objective of each Eel Management Plan is to reduce anthropogenic mortalities so as to permit with high probability the escapement to the sea of at least 40% of the silver eel biomass relative to the best estimate of escapement that would have existed if no anthropogenic influences had impacted the stock.<br><br>**Targets:** By 31 July 2013, 60 % of eels less than 12cm in length caught annually should be reserved for restocking. Catches of eels in Community waters seaward of the boundary of eel river basins defined by Member States as constituting natural eel habitats should be reduced gradually by reducing fishing effort or catches by at least 50% based on the average fishing effort or catches in the years 2004 to 2006. |
| EU (2007) *Floods Directive - on the assessment and management of flood risks* | **Objectives:** Directive's aim is to reduce and manage the risks that floods pose to human health, the environment, cultural heritage and economic activity. The Directive applies to inland waters as well as all coastal waters across the whole territory of the EU.<br><br>**Targets:** Directive requires Member States to assess if all water courses and coast lines are at risk from flooding, to map the flood extent and assets and humans at risk in these areas and to take adequate and coordinated measures to reduce this flood risk. |
| EU (2008) *Directive on Priority Substances* 2008/105/EC | **Objective:** That good chemical status is reached for a water body when compliance with all environmental quality standards for the priority substances and other pollutants listed in Annex I of the directive is achieved.<br><br>**Targets:** Directive uses legislation to reinforce the above objective. |
| EU (2008) *Marine Strategy Framework Directive* | **Objective:** The aim of the Marine Strategy Framework Directive is to protect more effectively the marine environment across Europe. It aims to achieve good environmental status of the EU's marine waters by 2021 and to protect the resource base upon which marine-related economic and social activities depend.<br><br>It dictates that the marine strategies to be developed by each Member State must contain a detailed assessment of the state of the environment, a definition of "good environmental status" at regional level and the establishment of clear environmental targets and monitoring programmes.<br><br>**Targets:** Member States shall take the necessary measures to achieve or maintain good environmental status in the marine environment by the year 2020 at the latest. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
|---|---|
| **Water** | |
| **National (UK)** | |
| *British Waterways Act 1995* | **Objectives:** Act covers entry onto land and sets out regulations and management for inland waterways.<br><br>**Targets:** No formal targets. |
| DCLG (2006) *Planning Policy Statement 25: Development and Flood Risk* | **Objectives:** PPS25 aims to ensure that flood risk is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding, and to direct development away from areas at highest risk. Where new development is, exceptionally, necessary in such areas, policy aims to make it safe without increasing flood risk elsewhere and where possible, reducing flood risk overall. The PPS also instructs regional and local planning authorities to prepare and implement planning strategies that help to deliver sustainable development that take into account flood risk.<br><br>**Targets:** Does not contain any targets. |
| DCLG (2010) *Planning Policy Statement 25 Supplement: Development and Coastal Change* | **Objectives:** This supplement sets out planning policies for managing development on coastal areas affected by coastal change. It states that planning should:<br>• ensure that policies and decisions in coastal areas are based on an understanding of coastal change over time;<br>• prevent new development from being put at risk from coastal change by:<br>o avoiding inappropriate development in areas that are vulnerable to coastal change or any development that adds to the impacts of physical changes to the coast, and<br>o directing development away from areas vulnerable to coastal change.<br>• ensure that the risk to development which is, exceptionally, necessary in coastal change areas because it requires a coastal location and provides substantial economic and social benefits to communities, is managed over its planned lifetime, and<br>• ensure that plans are in place to secure the long term sustainability of coastal areas.<br><br>**Targets:** Does not contain any targets. |
| Defra (2002) *UK Strategy for Radioactive Discharges 2001-2020* | **Objectives:** To deliver the UK's obligations under the OSPAR Radioactive Substances Strategy, in respect of progressive and substantial reductions in radioactive discharges. The objective of the OSPAR strategy is to prevent pollution of the maritime area covered by the OSPAR Convention (Convention for the Protection of the Marine Environment of the North-East Atlantic) from ionising radiation.<br>In particular, the OSPAR objective for 2020 is to reduce discharges to levels where the additional concentrations in the marine environment above historic levels, resulting from such discharges, are close to zero.<br>**Targets:**<br>• progressive and substantial reduction of radioactive discharges and discharge limits, to achieve the strategy targets for each sector;<br>• progressive reduction of human exposure to ionising radiation arising from radioactive discharges, as a consequence of reductions in discharges, such that a representative member of a critical group of the general public will be exposed to an estimated mean dose of no more than 0.02 millisieverts (mSv) a year from liquid radioactive discharges to the marine environment made from 2020 onwards;<br>• progressive reduction of concentrations of radionuclides in the marine environment resulting from radioactive discharges, such that by 2020 they add close to zero to historic levels. (The terms "close to zero" and "historic levels" are not defined in the OSPAR Strategy and the OSPAR Commission is continuing to work on establishing agreed definitions.) |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
|---|---|
| **Water** | |
| Defra (2005) *Making Space for Water: Taking forward a new Government Strategy for flood and coastal erosion risk management in England* | **Objectives:** To reduce the threat of flooding to people and their property. Also to deliver the greatest environmental, social and economic benefit, consistent with the Government's sustainable development principles.<br><br>**Targets:** No formal targets. |
| Defra (2010) *Draft Marine Policy Statement* | **Objectives:** The Marine Policy Statement will be the first step in new systems of marine planning being introduced around the UK. It will provide the high level policy context within which Marine Plans will be developed, and set the direction for marine licensing and other authorisation systems. The MPS is currently in draft form.<br>Defra will revise the draft MPS following consultation. It is unclear to what extent the MPS objectives will be changed.<br><br>**Targets:** No formal targets**.** |
| Department for Transport (2009) *Draft National Policy Statement for Ports* | **Objectives:** The draft NPS for Ports brings together national government policy for ports and sets out potential nationally significant infrastructure projects. In summary, government policy toward ports is to:<br>• encourage sustainable port development to cater for long-term forecast growth in volumes of imports and exports by sea with a competitive and efficient port industry capable of meeting the needs of importers and exporters cost effectively and in a timely manner;<br>• allow judgments about when and where new developments might be proposed to be made on the basis of commercial factors by the port industry or port developers operating within a free market environment; and<br>• ensure all proposed developments satisfy the relevant legal, environmental and social constraints and objectives, including those in the relevant European Directives and corresponding national regulations.<br>The consultation on the draft NPS has now concluded and DfT are now revising the NPS in light of comments received. It is unclear to what extent the NPS objectives will be changed.<br><br>**Targets:** No formal targets**.** |
| Environment Agency (2001) *Water Resources for the Future: A Strategy for England and Wales* | **Objectives:** This strategy seeks to promote water efficiency with household water metering to become widespread over the next 25 years. It also recommends the active promotion of water efficiency opportunities for commerce and industry.<br><br>**Targets:** Enhancement of water supply by up to 1100 Ml/d above present levels by the improvement of existing schemes and the development of some new resources. |
| Environment Agency (2009) *Water for people and the environment - Water resources strategy for England and Wales* | **Objectives:**<br>• enable habitats and species to adapt better to climate change;<br>• allow the way we protect the water environment to adjust flexibly to a changing climate;<br>• reduce pressure on the environment caused by water taken for human use;<br>• encourage options resilient to climate change to be chosen in the face of uncertainty;<br>• better protect vital water supply infrastructure;<br>• reduce greenhouse gas emissions from people using water, considering the whole life-cycle of use; and<br>• improve understanding of the risks and uncertainties of climate change.<br>**Target:** In England, the average amount of water used per person in the home is reduced to 130 litres each day by 2030. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Water** | |
| HM Government (2008) *Future Water, the Government's Water Strategy for England* | **Objectives:**<br>By 2030 at the latest, we have:<br>• improved the quality of our water environment and the ecology which it supports, and continued to provide high levels of drinking water quality from our taps;<br>• sustainably managed risks from flooding and coastal erosion, with greater understanding and more effective management of surface water;<br>• ensured a sustainable use of water resources, and implemented fair, affordable and cost reflective water charges;<br>• cut greenhouse gas emissions; and<br>• embedded continuous adaptation to climate change and other pressures across the water industry and water users.<br>**Targets:** Key targets are within the objectives above and further a number of sub-targets are included within the document. |
| Office of the Deputy Prime Minister (2004) *Planning Policy Statement 23 Pollution Control* | **Objectives:** The PPS sets out that possible adverse impacts on water quality and the impact of any possible discharge of effluent or leachates which may pose a threat to surface or underground water resources directly or indirectly through surrounding soils should be considered when preparing Local Development Documents and taking decisions on individual planning applications.<br>**Targets:** No formal targets**.** |
| Sustainable Development Commission (2010) *Sustainable Development in Government Framework Targets* | **Objectives:** The Sustainable Development in Government (SDiG) framework was announced in March 2010, this will replace the SOGE targets when they expire in 2010/11. This framework is intended to reduce its greenhouse gas emissions and ensure that the Government's estate is resilient to the impacts of changing climate. The framework also includes challenging targets on waste reduction and recovery, more efficient use of water, and it promotes the protection and enhancement of biodiversity, and positive engagement with the community.<br>**Targets:** Targets relating to water include:<br>• reduce water consumption by 7% (non-office estate) by 2016/17, relative to 2010/11 levels; and<br>• achieve a water consumption level of 6m3 per FTE on office estate by 2016/17. |
| *The Marine and Coastal Access Act 2009* | **Objectives:** The Marine and Coastal Access Act sets out a number of measures including the establishment of Marine Conservation Zones (MCZs) and Marine Spatial Plans. It also includes amendments to the Salmon and Freshwater Fisheries Act, 1975.<br>**Targets:** No formal targets**.** |
| **National (MOD)** | |
| MOD (2008) *Sustainable Development Strategy*<br>&<br>MOD (2008) *Sustainable Development Report and Action Plan* | **Objectives:**<br>• ensure all our sites become more water efficient to comply with Government and MOD targets.<br>**Targets:**<br>• by 2020 reduce water consumption by 25% on the office and non-office estate, relative to 2004/2005 levels (SOGE target);<br>• by December 2020 reduce water use (from consumption and leakage) by 6 million cubic metres from 2005/06 (MOD commitment);<br>• ongoing target to ensure that all new builds and major refurbishments are designed in line with water efficiency best practice through adherence to BREEAM/DREAM standards; and |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Water** | |
| | • by 2012 conduct water audits across our whole estate and implement recommendations. |
| *MOD JSP 418, leaflet 19 - Water Pollution*<br><br>*MOD JSP 418, leaflet 10 – Marine Environmental Legislation* | **Objectives:**<br><br>To conduct activities in accordance with government policy and to comply with the letter and spirit of environmental law.<br><br>To support the aims and objectives of the UK Marine Bill, with exceptions negotiated solely to support operational capability or retain classified information.<br><br>**Targets:** No formal targets**.** |
| **National (Scotland)** | |
| Scottish Environment Protection Agency (2005) *River Basin Planning Strategy for the Scotland River Basin District* | **Objectives:**<br>This Strategy describes planned actions within three key areas necessary for the development of effective river basin planning:<br>• establishing administrative arrangements and working principles to support RBMP production;<br>• delivering opportunities for participation and consultation; and<br>• integrating and coordinating the RBMP with other plans and planning. |
| Scottish Environment Protection Agency (2007) *Solway Tweed River Basin Planning – A Plan of Action (Consultation Document)* | The Plan of Action describes:<br>• stakeholders who SEPA/EA want to involve in river basin planning;<br>• the ways in which the public can influence the river basin planning work;<br>• the way SEPA/EA will work with existing groups;<br>• the key documents that SEPA/EA will produce;<br>• how SEPA/EA will link with other planning processes; and<br>• the river basin planning process and time scales set out in the Solway Tweed Regulations. |
| Scottish Environment Protection Agency (2009) *Groundwater Protection Policy for Scotland* | **Objective:** Details policies aimed to provide a sustainable future for Scotland's groundwater resources by protecting legitimate uses of groundwater and providing a common SEPA framework. |
| Scottish Executive (2001) *Rivers, Lochs, Coasts: The Future for Scotland's Waters* | **Objectives:**<br>Improvements to management and protection practises will involve:<br>• putting ecology at the heart of the system;<br>• tackling issues such as the impact of diffuse pollution from agriculture and urban areas;<br>• establishing a system of management that recognises that water systems are interdependent and ensures all those with an interest get their say;<br>• requiring the collection of better information so the problems are located;<br>• introducing a regime for regulation of the abstraction of water and other physical impacts on water courses so that where they cause problems they can be tackled;<br>• improving the existing system for control of discharges to make it more relevant and better able to cope with new industries;<br>• promoting sustainable development and biodiversity; and<br>• doing all of the above in a manner that properly balances the interests of the environment with |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Water** | |
| | those who depend upon it. |
| Scottish Executive (2004) *Implementation of the Water Environment and Water Services (WEWS) (Scotland) Act 2003 – Annual Report to the Scottish Parliament* | **Objectives:**<br>The basic objectives to be achieved as set out in Article 4(1) of the WFD are summarised as follows:<br>• prevent deterioration in the status of surface water bodies;<br>• protect, enhance and restore all bodies of surface water with the aim of achieving good surface water status by 2015;<br>• prevent deterioration of the status of groundwater bodies;<br>• protect, enhance and restore all bodies of groundwater with the aim of achieving good groundwater status by 2015;<br>• prevent or limit the input of pollutants to groundwater and reverse any significant and sustained upward trend in the concentration of pollutants in groundwater;<br>• comply with European wide measures against priority and priority hazardous substances; and<br>• achieve compliance with any relevant standards and objectives for protected areas. |
| Scottish Executive (2006) *Bathing Water Strategy for Scotland* | **Objectives:** The Bathing Water Strategy sets out a framework for meeting the challenges associated with implementing the revised Bathing Water Directive.<br>This revision requires stricter bacteriological standards to be met in the future and sets new requirements for the provision of information on water quality to the public, as well as for engaging public participation in matters relating to bathing waters. |
| Scottish Executive Scottish Coastal Forum (2004) *A Strategy for Scotland's Coast and Inshore Waters* | **Objectives:**<br>The main goals are:<br>• to deliver integrated management for the whole Scottish coast at the most appropriate geographical scale;<br>• establish an integrated system of spatial planning for Scotland's inshore marine area which combines with the terrestrial planning system;<br>• to achieve effective, strategic and adequately resourced leadership for the management and sustainable use of coastal resources;<br>• to safeguard the resources of Scotland's coast and inshore waters and to promote awareness of their value;<br>• to better understand and work with natural processes as far as possible;<br>• to achieve effective stakeholder participation at the appropriate geographical and administrative levels. and<br>• to co-ordinate research, data and information management activities, monitoring and evaluation of Scotland's Coasts and Inshore waters across Scotland. |
| Scottish Government (2010) *Scottish Planning Policy* | **Objectives:** Scottish Planning Policy (SPP) sets out the Scottish Government's policy on land use planning. With regard to flood risk, SPP states that developers and planning authorities should take a precautionary approach in taking decisions when flood risk is an issue and that development should not take place on land that could otherwise contribute to managing flood risk, for instance through managed coastal realignment, washland creation or as part of a scheme to manage flood risk. With respect to coastal issues, SPP states that planning authorities should take the likely effect of proposed development on the marine environment into account when preparing when making decisions on planning applications.<br>**Targets:** No formal targets. |
| Scottish Water (2006) *Scottish Water* | **Objectives:** Delivery Plan sets out two key objectives: |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Water** | |
| *Delivery Plan* | • we will progressively remove constraints on development in Scotland that are currently caused by lack of capacity for water or for waste water treatment; and<br>• we will improve the standard of service to our customers, giving even better quality and reliability.<br>**Targets:** In turn Scottish Water is committed to delivering the Ministerial Directions and other regulatory targets for the 2006 - 2010 period within the financial limits set out in the Final Determination. A number of targets are specified throughout the document in order to achieve this. |
| *The Water Environment (Controlled Activities) (Scotland) Regulations 2005* | These regulations set out the process by which activities that have the potential to affect Scotland's water environment are regulated. Authorisation under the Controlled Activities Regulations (CAR) is required for discharging to waters, disposal of pollutants to land, abstractions, impoundments and engineering works affecting water bodies.<br>The CAR provide for three levels of authorisation over point source discharges, abstractions, impoundments and engineering activities. This allows for proportionate controls over such activities so that environmental protection can be provided whilst minimising the regulatory burden.<br>**Targets:** No formal targets. |
| *The Water Environment and Water Services (Scotland) Act 2003* | **Objectives:**<br>• prevent deterioration in the status of surface water bodies;<br>• protect, enhance and restore all bodies of surface water with the aim of achieving good surface water status by 2015;<br>• prevent deterioration of the status of groundwater bodies;<br>• protect, enhance and restore all bodies of groundwater with the aim of achieving good groundwater status by 2015;<br>• prevent or limit the input of pollutants to groundwater and reverse any significant and sustained upward trend in the concentration of pollutants in groundwater;<br>• comply with European wide measures against priority and priority hazardous substances;<br>• achieve compliance with any relevant standards and objectives for protected areas; and<br>• establish a River Basin Management Plan (RBMP) for each River Basin District.<br>**Targets**: The WEWS sets out a timetable for implementation of requirements of the WDF up until 2015. |
| **National (Wales)** | |
| Welsh Assembly Government (2010) *Planning Policy Wales (Edition 3)* | **Objectives:** Planning Policy Wales (PPW) sets out the land use planning policies of the Welsh Assembly Government. Regarding water resources, PPW seeks to:<br>• protect and improve water resources through increased efficiency and demand management of water, particularly in those areas where additional water resources may not be available; and<br>• ensure that appropriate sewerage facilities are provided to convey, treat and dispose of waste water in accordance with appropriate legislation and sustainability principles.<br>In relation to flooding, Planning Policy Wales states that development proposals in areas defined as being of high flood hazard should only be considered:<br>Development proposals in areas defined as being of high flood hazard should only be considered where:<br>• new development can be justified in that location, even though it is likely to be at risk from flooding;<br>• the development proposal would not result in the intensification of existing development which may itself be at risk; and |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Water** | |
| | • new development would not increase the potential adverse impacts of a flood event.<br>In terms of coastal development, PPW states that, before major developments are permitted, it will be essential to demonstrate that a coastal location is required. Where development is considered to satisfy this test it should be designed so as to be resilient to the effects of climate change over its lifetime.<br>**Targets:** No formal targets. |
| Welsh Assembly Government (1998) *Technical Advice Note 14: Coastal Planning* | **Objectives:** To protect the coastline in relation to development, landscape, biodiversity and recreation<br>**Targets:** No formal targets |
| Welsh Assembly Government (2006) *Environment Strategy for Wales* | **Objectives:** This is WAG's long-term strategy for the environment of Wales. The purpose of the Strategy is to provide the framework within which to achieve an environment that is clean, healthy, biologically diverse and valued by the people of Wales. The Strategy focuses on five environmental themes: addressing climate change; sustainable resource use; distinctive biodiversity, landscapes and seascapes; our local environment; and environmental hazards.<br>Water related objectives include:<br>• to manage water resources sustainably without causing environmental damage;<br>• to increase water efficiency and maintain water quality;<br>• to maintain and enhance quality of water sources; understand and manage diffuse pollution sources; and<br>• to minimise the risk posed by exposure to chemicals.<br>**Targets:** No formal targets. |
| **National (Northern Ireland)** | |
| *Water Environment (Water Framework Directive) Regulations (Northern Ireland) 2003* | **Objectives:** These regulations transpose the Water Framework Directive into regulation in Northern Ireland. The objective of the regulations is to achieve a minimum standard of 'good' under the classification for water bodies.<br>**Targets:** No specific targets set out. |
| *Quality of Bathing Water Regulations (Northern Ireland) 1993.* | **Objectives:** These regulations transpose the Bathing Water Directive into regulation in Northern Ireland. The objective of the regulations is improve the quality of water bodies.<br>**Targets:** No specific targets set out. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Air** | |
| **International / European (e.g. Directives)** | |
| EC Ambient Air Quality and Cleaner Air for Europe (2008) (Directive 2008/50/EC) | **Objectives:**<br>• defines and establishes objectives for ambient air quality to avoid, prevent or reduce harmful effects on human health and the environment as a whole;<br>• assesses the ambient air quality in Member States using common methods and criteria;<br>• obtains information on ambient air quality in order to help combat air pollution and nuisance and to monitor long-term trends and improvements resulting from national and Community measures;<br>• ensures that such information on ambient air quality is made available to the public;<br>• maintain air quality where it is good and improving it in other cases; and<br>• promote increased cooperation between the Member States in reducing air pollution.<br><br>**Targets:** Targets set out in methodology for ambient air quality assessment. |
| UNCED Earth Summit Rio (1992) Agenda 21, Chapter 9: Protection of the Atmosphere. | **Objectives:** This chapter of Agenda 21 seeks to:<br>• improve the scientific basis for decision-making;<br>• promote sustainable development with regards to: energy development, efficiency and consumption, transportation, industrial development, terrestrial and marine resource development and land use;<br>• prevent stratospheric ozone depletion; and<br>• monitor and reduce trans-boundary atmospheric pollution.<br><br>**Targets:** No formal targets |
| European Commission (1996) Air Quality Framework Directive (Directive 96/62/EC) | **Objectives:** Overall, the improvement of air quality with adequate information obtained on ambient air quality to be provided to the public.<br><br>**Targets:** Mandatory limits or reductions for 11 air pollutants including: sulphur dioxide, nitrogen dioxide, particulate matter, lead, ozone, benzene, carbon monoxide, poly-aromatic hydrocarbons, cadmium, arsenic, nickel and mercury. |
| EU Thematic Strategy on Air Quality (2005) | The CAFÉ Programme forms the basis of the Thematic Strategy for Air Pollution for the EU. The Strategy sets health and environmental objectives and emission reduction targets for the main pollutants.<br>The aim of the CAFE Programme is to establish a long term, integrated strategy to tackle air pollution and to protect against its effects on human health and the environment.<br>**Objectives** are:<br>• to develop, collect and validate scientific information on the effects of air pollution;<br>• to support the correct implementation and review the effectiveness of existing legislation and to develop new proposals as and when necessary;<br>• to ensure that the requisite measures are taken at the relevant level, and to develop structural links with the relevant policy areas; and<br>• to develop an integrated strategy to include appropriate objectives and cost-effective measures.<br>The thematic strategy on air quality identifies that despite significant improvements in air quality across the EU, a number of serious air quality issues still persist. The strategy promotes an approach, which |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
|---|---|
| **Air** | |
| | focuses upon the most serious pollutants, and that more is done to integrate environmental concerns into other policies and programmes. The objective of the strategy is:<br>• To attain levels of air quality that do not give rise to significant negative impacts on and risks to human health and the environment.<br>The strategy emphasises the need for a shift towards less polluting modes of transport and the better use of natural resources to help reduce harmful emissions. |
| EU Sixth Environmental Action Plan (2002 – 2012) | The 6th EAP takes a broad look at the environmental challenges and provides a strategic framework for the Commission's environmental policy up to 2012.<br>The 6th EAP identifies four priority areas:<br>• climate change;<br>• nature and biodiversity;<br>• environment and health; and<br>• natural resources and waste.<br><br>The fields for which the strategies are developed are:<br>• air;<br>• waste prevention and recycling;<br>• marine environment;<br>• soils;<br>• pesticides;<br>• natural resources; and<br>• the urban environment.<br><br>**Targets:** A number of targets arise out of the priority areas, originating from other policy sources. |
| European Commission (1999) The Landfill Directive | The Directive is intended, by way of stringent operational and technical requirements on the waste and landfills, to prevent or reduce the adverse effects of the landfill of waste on the environment, in particular on surface water, groundwater, soil, air and human health.<br><br>**Targets:** Directive establishes guidelines and targets for the quantities of biodegradable waste being sent to landfill. |
| WHO (2005) Health Effects of Transport-Related Air Pollution | **Objectives:** This WHO report highlights the dangers which transport-related air pollution poses to people and society. Based on a substantial amount of evidence, it notes that an increase in car use across the world disproportionately affects the most vulnerable social groups, such as children and the elderly. The effects highlighted in the report mainly relate to those presented by air pollutants such as particulate matter (PM) and volatile organic compounds (VOCs). However, it also highlights the increased risk of road accidents and fatalities with increased car use.<br><br>**Targets:** Transport-related air pollution must be reduced so its effects on health can be prevented, and this requires:<br>• combining the development of cleaner transport technologies with the implementation of effective policies to manage the demand for transport; and<br>• selecting modes of transport that are safer for health and the environment. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Air** | |
| **National (UK)** | |
| Air Quality Strategy for England, Scotland, Wales and Northern Ireland (2007) | **Objective:** The Strategy sets out a way forward for work and planning on air quality issues; sets out the air quality standards and objectives to be achieved; introduces a new policy framework for tackling fine particles; identifies potential new national policy measures which modelling indicates could give further health benefits and move closer towards meeting the Strategy's objectives.<br><br>**Targets:** Specific limits on concentrations of the following air pollutants: benzene; butadiene; carbon monoxide; lead; nitrogen dioxide; ozone; particulate matter (PM10) and sulphur dioxide. |
| ODPM (2004) PPS23: Planning and Pollution Control | **Objectives:** The PPS is in line with the Government's commitment to the principles of sustainable development and the importance of controlling and minimising pollution. Appendix A contains matters that should be considered in the preparation of development plan documents and when taking decisions on individual planning applications. However, it does not contain a specific set of objectives.<br><br>**Targets:** Does not contain any targets. |
| UK Government Sustainable Development Strategy: Securing the Future (2005) and the UK's Shared Framework for Sustainable Development, One Future – Different Paths (2005) | **Objectives:** The Strategy sets out five guiding principles:<br>• living within Environmental Limits: Respecting the limits of the planet's environment, resources and biodiversity - to improve our environment and ensure that the natural resources needed for life are unimpaired and remain so for future generations;<br>• ensuring a Strong, Healthy and Just Society: Meeting the diverse needs of all people in existing and future communities, promoting personal wellbeing, social cohesion and inclusion, and creating equal opportunity for all;<br>• achieving a Sustainable Economy: Building a strong, stable and sustainable economy which provides prosperity and opportunities for all, and in which environmental and social costs fall on those who impose them (polluter pays), and efficient resource use is incentives;<br>• using Sound Science Responsibly: Ensuring policy is developed and implemented on the basis of strong scientific evidence, whilst taking into account scientific uncertainty (through the precautionary principle) as well as public attitudes and values; and<br>• promoting Good Governance: Actively promoting effective, participative systems of governance in all levels of society - engaging people's creativity, energy, and diversity.<br>It also sets out four priorities shared across the UK, namely:<br>• sustainable Consumption and Production;<br>• slimate Change and Energy;<br>• satural resources protection and environmental enhancement; and<br>• sustainable Communities.<br><br>**Targets:** Strategy lists 68 high level UK government strategy indicators, which will be used to measure the success with which the above objectives are being met. Relevant to air quality are:<br>Air quality and health: (a) annual levels of particles and ozone (b) days when air pollution is moderate or higher. |
| Defra (2000) Rural White Paper "Our Countryside: the Future: A Fair Deal for Rural England" | **Objectives:** The aim of this paper is to sustain and enhance the distinctive environment, economy and social fabric of the English countryside for the benefit of all.<br>The vision is of:<br>• a living countryside, with thriving rural communities and access to high quality public services;<br>• a working countryside, with a diverse economy giving high and stable levels of employment; and<br>• a protected countryside in which the environment is sustained and enhanced, and which all can |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Air** | |
| | enjoy.<br>A vibrant countryside which can shape its own future and with its voice heard by Government at all levels.<br>**Targets:** This paper sets a number of targets in order to achieve its aims. However a number of these are not directly relevant to this AoS.<br><br>The paper also sets out a number of useful indicators including:<br>• change in countryside quality including biodiversity, tranquillity, heritage, and landscape character<br>• populations of farmland birds;<br>• condition of SSSIs;<br>• rivers of good or fair quality; and<br>• air quality (low level ozone) in rural areas. |
| Air Quality Regulations 2000 and The Air Quality (Amendment) Regulations 2002 | **Objectives:** The Air Quality Regulations set out the air quality objectives for the UK for the following pollutants:<br>• benzene;<br>• 1,3 butadiene;<br>• carbon monoxide;<br>• lead;<br>• nitrogen dioxide;<br>• particulates (PM10); and<br>• sulphur dioxide.<br><br>**Targets:** The Regulations sets objectives for each air quality pollutant e.g. to achieve and maintain 40µg.m-3 of annual average nitrogen dioxide. |
| HM Government (2007) PSA Delivery Agreement 28 Secure a Healthy Natural Environment for Today and the Future | **Objectives:** "Lead the global effort to avoid dangerous climate change", and PSA 28, "Secure a healthy natural environment for today and the future". For each of these Agreements the Treasury has set out a number of individual areas in which progress will be tracked, to# build up a picture of how well the overall objective is being delivered.<br><br>**Targets:** Indicator 3 is relevant to this topic:<br><br>Air quality - meeting the Air Quality Strategy objectives for eight air pollutants as illustrated by trends in measurements of two of the more important pollutants which affect public health: particles and nitrogen dioxide. |
| 1995 Environment Act | **Objectives:** The main purpose of the Environment Act is to protect and preserve the environment and guard against pollution to air, land or water. The Act adopts an integrated approach to environmental protection and outlines where authorisation is required from relevant authorities to carry out certain procedures as well as outlining the responsibilities of the relevant authorities.<br><br>**Targets:** No formal targets. |
| WHO (2000) Transport, Environment and Health | **Objectives:** This report primarily focuses on increasing road transport, noting that road users generate excessive costs to themselves, other individuals and society - through noise, pollution and accidents - in the form of illness, injuries, deaths and damage to mental health and social relationships. The challenge is to promote healthy and sustainable transport alternatives to prevent the negative effects of transport systems on human health. Meeting this challenge requires commitment and action from governments. It summarises the latest scientific evidence on the impact of transport-generated air |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Air** | |
| | pollution, noise and accidents on behaviour and physical and mental health. The report also highlights the potential health benefits from non-motorised forms of transport, such as cycling and walking.<br>**Targets:** The report highlights the need for policy-makers to address the following issues:<br>• transport-related noise pollution;<br>• transport-related air pollution;<br>• the effects of transport of mental health and wellbeing;<br>• identifying key groups affected by transport health risks; and<br>• improving provisions for cycling and walking. |
| **National (MOD)** | |
| MOD JSP 418, leaflet 9 – Local Air Quality<br>MOD JSP 418 leaflet 15 - Statutory Nuisance **(updated Feb 2010)** | The MoD has an exemption from the Statutory Nuisance provisions of the Environmental Protection Act 1990 for operational activities directly related to national security.<br>**Objectives:**<br>• To comply with the letter and spirit of relevant environmental legislation and work towards reducing the Department's contributions to, and impacts of, air pollution. Crown exemption remains for smoke, but for training and operational purposes only.<br>• To minimise gaseous and particulate emissions, particularly where they include heavy metals or other substances on the Red List of substances considered particularly harmful in water.<br>• To ensure vehicles comply with emission limits.<br>• To ensure vessels in harbour or close to shore comply with Clean Air legislation.<br>**Targets:** No formal targets. |
| **National (Scotland)** | |
| Scottish Environment Protection Agency Policy Priorities Relevant to the Scottish Environment Protection Agency (Paper 2004/13) | **Objectives:** Paper summarises policies and priorities of the Scottish Executive, which, together with the specific provisions in SEPA's Management Statement Financial Memorandum and SEPA's statutory powers and duties, form the main elements of the policy framework for SEPA's activities.<br>**Targets:** Key target with reference to this topic:<br>• Air Quality and Global Atmosphere - minimise emissions of harmful pollutants to the air. Work within the UK strategy with a view to meeting by 2010 the targets in the National Emissions Ceilings Directive. |
| **National (Wales)** | |
| Welsh Assembly Government (2010) Planning Policy Wales (Edition 2) | **Objectives:** Planning Policy Wales (PPW) sets out the land use planning policies of the Welsh Assembly Government. Regarding air quality, PPW sets out the following potential material planning considerations:<br>• location, taking into account such considerations as the reasons for selecting the chosen site itself;<br>• impact on health and amenity;<br>• the risk and impact of potential pollution from the development, insofar as this might have an effect on the use of other land and the surrounding environment;<br>• prevention of nuisance; and |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Air** | |
| | • impact on the road and other transport networks, and in particular on traffic generation.<br><br>**Targets:** No formal targets. |
| **National (Northern Ireland)** | |
| Department for Regional Development (2001) Shaping Our Future: Regional Development Strategy for Northern Ireland 2025 | **Objectives:** Shaping Our Future is a Strategy to guide the future development of Northern Ireland to 2025. With specific regard to noise, Policy ENV6.4 seeks to promote an approach to building development and the use of land which is supportive to the well-being and safety of people including by reducing noise nuisance generally and seeking to ensure new housing developments are well separated from land uses characterised by high levels of noise disturbance.<br>**Targets:** No formal targets. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Climate Change and Energy Use** | |
| **International / European (e.g. Directives)** | |
| EU Emission Trading Scheme (EU ETS) | **Objectives:** The EU Emissions Trading Scheme (EU ETS) is a Europe wide scheme which aims to reduce emissions of carbon dioxide and combat the serious threat of climate change. EU ETS puts a price on carbon that businesses use and creates a market for carbon. It has been in place since 2005.<br><br>The UK is committed to building on the EU ETS as its main way of pricing carbon in the economy, to ensure emissions are effectively limited, and sees the EU ETS Review as an excellent opportunity to map out a long term policy framework and provide clear and convincing signals about the scheme. The key areas that need to be addressed to ensure EU ETS meets its potential are as follows:<br><br>• setting safe, stable and affordable emissions limits;<br>• building a global carbon market;<br>• expanding the scheme; and<br>• improving efficiency.<br><br>**Target:** The UK will allocate 246,175,998 allowances per annum in the second phase of the EU ETS (2008-2012), including those to be auctioned or sold. This equates to a cap of 1230,879,9916 allowances over the whole period. |
| UNCED Earth Summit Rio (1992) Agenda 21, Chapter 9: Protection of the Atmosphere. | **Objectives:** This chapter of Agenda 21 seeks to:<br><br>• improve the scientific basis for decision-making;<br>• promote sustainable development with regards to: energy development, efficiency and consumption, transportation, industrial development, terrestrial and marine resource development and land use;<br>• prevent stratospheric ozone depletion; and<br>• monitor and reduce transboundary atmospheric pollution.<br><br>**Targets:** No formal targets |
| United Nations (1997) The UN Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol to the UNFCCC | **Objectives:** To prevent “dangerous” human interference with the climate system, namely through reductions in the emissions of greenhouse gases.<br><br>**Targets**: A 12.5% reduction by 2008-2012 in the 1990 levels of the six listed gases: Carbon dioxide; Methane; Nitrous oxide; Hydrofluorocarbons; Perfluorocarbons and Sulphur hexafluoride. |
| EU Green Paper “adaptation to climate change in Europe – options for EU action” | **Objectives:** Sets out how Europe must adapt to climate change and a number of scenarios on how the EU can react.<br><br>**Targets:** No formal targets |
| European Climate Change Programme (ECCP) | **Objective:** The goal of the ECCP is to identify and develop all the necessary elements of an EU strategy to implement the Kyoto Protocol. The Second ECCP (running from 2005) includes a review of ECCP 1, aviation, CO2 and cars, carbon capture and storage, adaptation and a review of the EU ETS.<br><br>**Targets**: No formal targets |
| EU Sixth Environmental Action Plan (2002 – 2012) | The 6th EAP takes a broad look at the environmental challenges and provides a strategic framework for the Commission's environmental policy up to 2012.<br><br>The 6th EAP identifies four priority areas:<br><br>• climate change; |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Climate Change and Energy Use** | |
| | • nature and biodiversity;<br>• environment and health; and<br>• natural resources and waste.<br><br>**Targets:** A number of targets arise out of the priority areas, originating from other policy sources. |
| Directive 2009/28/EC on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC | **Objective:**<br><br>The Community recognises the need to promote renewable energy sources as a priority measure given that their exploitation contributes to environmental protection and sustainable development.<br><br>This Directive, which came into force on 25 June 2009, establishes a common framework for the use of energy from renewable sources in order to limit greenhouse gas emissions and to promote cleaner transport. To this end, national action plans are defined, as are procedures for the use of biofuels. Each Member State has a target calculated according to the share of energy from renewable sources in its gross final consumption for 2020. This target is in line with the overall '20-20-20' goal for the Community. Moreover, the share of energy from renewable sources in the transport sector must amount to at least 10 % of final energy consumption in the sector by 2020.<br><br>**Targets:**<br><br>Targets are largely enforced through Directive's Articles. The Directive is part of a package of energy and climate change legislation which provides a legislative framework for Community targets for greenhouse gas emission savings. It encourages energy efficiency, energy consumption from renewable sources, the improvement of energy supply and the economic stimulation of a dynamic sector in which Europe is setting an example.<br><br>Each Member State has a target calculated according to the share of energy from renewable sources in its gross final consumption for 2020. This target is in line with the overall '20-20-20' goal for the Community. Moreover, the share of energy from renewable sources in the transport sector must amount to at least 10 % of final energy consumption in the sector by 2020. |
| 2020 Climate and Energy Package (EC, 2008) | This package of far-reaching proposals aims to deliver the EU's ambitious commitments to fight climate change and promote renewable energy up to 2020 and beyond. The main aim is to help transform Europe into a low-carbon economy and increase its energy security. |
| **National (UK)** | |
| UK Climate Change Act 2008 | **Objectives:**<br>• to improve carbon management and help the transition towards a low carbon economy in the UK; and<br>• to demonstrate strong UK leadership internationally, signalling that we are committed to taking our share of responsibility for reducing global emissions in the context of developing negotiations on a post-2012 global agreement at Copenhagen next year.<br><br>**Key Targets:**<br>• Legally binding targets - Green house gas emission reductions through action in the UK and abroad of at least 80% by 2050, and reductions in CO2 emissions of at least 26% by 2020, against a 1990 baseline. The 2020 target will be reviewed soon after Royal Assent to reflect the move to all greenhouse gases and the increase in the 2050 target to 80%.<br>• A carbon budgeting system which caps emissions over five year periods, with three budgets set at a time, to set out our trajectory to 2050. The first three carbon budgets will run from 2008-12, |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Climate Change and Energy Use** | |
| | 2013-17 and 2018-22, and must be set by 1 June 2009. The Government must report to Parliament its policies and proposals to meet the budgets as soon as practical after that. |
| Climate Change – The UK Programme 2006: Tomorrow's Climate Today's Challenge (HM Government, March 2006) | **Objectives:**<br>The Climate Change Programme sets out the Government's commitments both at international and domestic levels to meet the challenge of climate change. It also sets out our approach to strengthening the role that individuals can play. We will encourage individuals as citizens, consumers, motorists and business people to take the action needed to help meet our goals. The Programme addresses:<br>The primary elements of the programme come at the following levels:<br>• international;<br>• domestic sector;<br>• energy supply sector;<br>• business sector;<br>• transport sector;<br>• public sector and local government;<br>• agriculture, forestry and land management sector; and<br>• personal action.<br>**Targets:**<br>The package of existing and new policy measures in the Programme are projected to reduce carbon dioxide emissions to 15 -18 per cent below 1990 levels - the new measures saving 12 million tonnes of carbon by 2010. |
| Stern Review of the Economics of Climate Change (2007) | Review assessed a wide range of evidence on the impacts of climate change and on the economic costs, and has used a number of different techniques to assess costs and risks. The Review estimates that if we don't act, the overall costs and risks of climate change will be equivalent to losing at least 5% of global GDP each year, now and forever. If a wider range of risks and impacts is taken into account, the estimates of damage could rise to 20% of GDP or more.<br>**Objectives:**<br>Key elements of future international frameworks should include:<br>• Emissions trading: Expanding and linking the growing number of emissions trading schemes around the world is a powerful way to promote cost-effective reductions in emissions and to bring forward action in developing countries.<br>• Technology cooperation: Informal co-ordination as well as formal agreements can boost the effectiveness of investments in innovation around the world. Globally, support for energy R and D should at least double, and support for the deployment of new low-carbon technologies should increase up to five-fold.<br>• Action to reduce deforestation: The loss of natural forests around the world contributes more to global emissions each year than the transport sector. Curbing deforestation is a highly cost-effective way to reduce emissions; large scale international pilot programmes to explore the best ways to do this could get underway very quickly.<br>• Adaptation: The poorest countries are most vulnerable to climate change. It is essential that climate change be fully integrated into development policy, and that rich countries honour their pledges to increase support through overseas development assistance.<br>**Targets:** The review does not provide specific targets but does outline scenarios for climate change adaptation and their potential economic consequences. |
| Environment Agency Climate Change | **Objective:** Seeks to embed climate change risk management into all aspects of its business to ensure future resilience for communities, businesses and the environment. A key aim is to continue to collect |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Climate Change and Energy Use** | |
| Adaptation Strategy (2008-11) | adaptation case-studies which capture best practice, and lessons learned.<br><br>**Targets:** No formal targets. |
| DCLG (2007) Planning Policy Statement: Planning and Climate Change - Supplement to Planning Policy Statement 1 | **Objectives:** To deliver sustainable development, and in doing so a full and appropriate response on climate change, regional planning bodies and all planning authorities should prepare, and manage the delivery of, spatial strategies that:<br>• make a full contribution to delivering the Government's Climate Change Programme and energy policies, and in doing so contribute to global sustainability;<br>• in providing for the homes, jobs, services and infrastructure needed by communities, and in renewing and shaping the places where they live and work, secure the highest viable resource and energy efficiency and reduction in emissions;<br>• deliver patterns of urban growth and sustainable rural developments that help secure the fullest possible use of sustainable transport for moving freight, public transport, cycling and walking; and, which overall, reduce the need to travel, especially by car;<br>• secure new development and shape places that minimise vulnerability, and provide resilience, to climate change; and in ways that are consistent with social cohesion and inclusion;<br>• conserve and enhance biodiversity, recognising that the distribution of habitats and species will be affected by climate change;<br>• reflect the development needs and interests of communities and enable them to contribute effectively to tackling climate change; and<br>• respond to the concerns of business and encourage competitiveness and technological innovation in mitigating and adapting to climate change.<br><br>**Targets:** No specific targets. |
| ODPM (2004) PPS22: Renewable Energy | **Objectives:** This planning policy statement aims to encourage positive planning which facilitates renewable energy developments to contribute to all four elements of the Government's sustainable development strategy. The PPS contains a number of principles that should be adhered to in planning for renewable energy, including:<br>• Development proposals should demonstrate environmental, economic and social benefits as well as how any environmental and social impacts have been minimised through careful consideration of location, scale, design and other measures.<br><br>In siting a renewable energy development:<br>• likely to have an adverse effect on a site of international importance for nature and heritage conservation, permission should only be granted once it has been shown that the site's integrity would not be adversely affected;<br>• within nationally recognised designations, permission for renewable energy projects should only be granted where it can be demonstrated that the objectives of designation of the area will not be compromised by the development and any significant adverse effects on the area are clearly outweighed by the environmental, social and economic benefits; and<br>• in Green Belt, careful consideration will need to be given to the visual impact of projects and developers will need to demonstrate very special circumstances that clearly outweigh any harm by reason of inappropriateness and other harm if projects are to proceed.<br><br>**Targets:** To generate 10% of UK electricity from renewable energy sources by 2010. The 2003 Energy White Paper ('Our energy - creating a low carbon economy') sets out the Government's aspirations to double that figure to 20% by 2020. |

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| **Climate Change and Energy Use** | |
| DTI (2007) 'Meeting the Energy Challenge: A White Paper on Energy' | **Objectives:** White Paper sets out the Government's international and domestic Energy Strategy to respond to changing circumstances with respect to tackling climate change and ensuring secure, clean and affordable energy as we become increasingly dependent on imported fuel. It addresses the long term energy challenges faced and delivers four energy policy goals.<br>**Targets:**<br>• to put ourselves on a path to cutting CO2 emissions by some 60% by 2050 with real progress by 2020;<br>• to maintain the reliability of energy supplies;<br>• to promote competitive markets in the UK and beyond; and<br>• to ensure that every home is adequately and affordably heated. |
| The Low Carbon Transition Plan | **Objectives:** The UK Low Carbon Transition Plan plots how the UK will meet the 34 percent cut in emissions on 1990 levels by 2020<br>**Targets:** None. |
| The Renewables Strategy (Decc 2009) | **Objectives:** The strategy sets out the path for us to meet our legally-binding target to ensure 15% of our energy comes from renewable sources by 2020.<br>**Targets:** None. |
| Energy Electricity Act 1989 | **Objectives:** Provides the core legislation for planning consents for the construction and operation of generating stations within England and Wales.<br>All planning proposals must address concerns about potential local environmental impacts, and effects on the community, etc. All Section 36 proposals must be submitted with an Environmental Impact Statement (ES). LPAs can also request an ES for non-Section 36 proposals. However, the development of renewables must be kept in the overall context of climate change and improving security of energy supply.<br>**Targets**: No formal targets, but legislation supports objectives. |
| DECC (2010) CRC Energy Efficiency Scheme | **Objectives:** The CRC Energy Efficiency Scheme is a new Government backed legislative carbon emissions trading scheme and will cover large business and public sector organisations.<br>CRC is intended to have a significant impact on reducing UK carbon emissions and offers the potential to save money through energy efficiency. It is designed to drive changes in behaviour and infrastructure, generate corporate awareness of the detrimental impacts of carbon emissions, and improve energy management practice.<br>The Scheme will begin in Mid 2010. Organisations that meet the criteria to participate will have to monitor emissions from energy use, report these emissions annually, and purchase and surrender a corresponding number of carbon emission allowances on a cap and trade basis.<br>CRC is considered to be broadly revenue neutral to the Exchequer. All revenue raised from the annual sale of allowances will be recycled back to participants. A proportion of this repayment will be based on the participant's performance in the Scheme.<br>**Targets:** No formal targets. |
| Sustainable Development Commission (2010) Sustainable Development in Government Framework Targets | **Objectives:** The Sustainable Development in Government (SDiG) framework was announced in March 2010, this will replace the SOGE targets when they expire in 2010/11. This framework is intended to reduce its greenhouse gas emissions and ensure that the Government's estate is resilient to the impacts of changing climate. |

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| **Climate Change and Energy Use** | |
| | **Targets:**<br>• to reduce its greenhouse gas emissions by 34% by 2020 (from 1999/2000 levels); and<br>• by 2015 all Departments to have completed a risk assessment and developed, implemented, monitored and reviewed an action plan to improve their estate's preparedness to the impacts of climate change. |
| **National (MOD)** | |
| MOD Sustainable Development Strategy, December 2008<br>&<br>MOD Sustainable Development Report and Action Plan 2008 | **Objectives:**<br>• to be a leader amongst UK Government departments and Defence departments in EU and NATO States in the sustained reduction of $CO_2$ and other GHG emissions, and to ensure the continued delivery of Defence capability in a changing climate;<br>• ensure that the effect of emissions from the GHGs that result from defence activities are continually reduced, such that Defence will eventually not be a significant contributor to the causes of climate change; and<br>• agree and implement an effective process to enable Defence activities to continually adapt to a changing climate, such that Defence capability is not compromised and any potential benefits from the future climate are realised.<br>**Targets:**<br>• reduce carbon dioxide emissions from buildings across the non operational estate by 12.5% by 2010/2011 and 30% by 2020, relative to 1999/2000 baseline (SOGE target);<br>• source at least 15% of MOD total non operational electricity needs from good quality Combined Heat and Power Systems, and 10% from renewable sources by 2010 (SOGE target);<br>• increase MOD-wide energy efficiency by 15% per $m^2$ by 2010 and 30% per $m^2$, relative to 1999/2000 levels (SOGE target);<br>• ensure all new buildings comply with "Planning Policy Statement 22: Renewable energy" so a percentage of energy requirements are from on-site renewable sources (aiming for 10%) and, wherever possible, carbon neutral (by means of energy efficiency, self generation and carbon offsetting);<br>• gain accreditation to the Energy Efficiency Accreditation Scheme across the MOD estate by December 2009; and<br>• by March 2010 validate MOD TLB energy management structures through accreditation to the Carbon Trust Standard (previously the Energy Efficiency Accreditation Scheme). |
| MOD Climate Change Strategy 2009 | **Objectives:**<br>• to reduce non-operational energy consumption and consequent $CO_2$ emissions across the MOD estate to their lowest sustainable levels, without compromising the delivery of UK defence capability;<br>• embed climate change awareness into MOD leadership, decision making and working culture;<br>• ensure that MOD GHG data reporting is timely, relevant, comprehensive, transparent and of the highest quality;<br>• ensure that ownership and responsibility for the development and delivery of the climate change |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Climate Change and Energy Use** | |
| | strategy is clearly defined throughout the MOD;<br>• to reduce the use of marine, land and aviation fuels as much as is reasonably practicable without impacting on operational capability, whilst at the same time assessing the viability of alternatives to those fuels;<br>• to reduce dependency on fossil fuels by ensuring that military equipment, estate and services are energy efficient and use low or zero-carbon energy sources where practicable;<br>• to procure and operate military equipment that has the adaptive capability to be capable of meeting its performance objectives across the required range of foreseeable operating environments; and<br>• to have an estate that is resilient to the impacts of climate change and adapted to take advantage of opportunities as a consequence of climate change.<br>**Targets:** As above. |
| **National (Scotland)** | |
| Climate Change (Scotland) Act 2009, Part 1, Section 1 (1) | **Objectives:** The guiding principles for sustainable development and climate change from the UK strategy are reflected in Scotland's program:<br>• living within environmental limits;<br>• ensuring a strong, healthy and just society;<br>• achieving a sustainable economy;<br>• promoting good governance; and<br>• using sound science responsibly.<br>**Targets:**<br>Target to reduce Scotland's emissions of greenhouse gases by 80 per cent by 2050 and an interim target for 2020 of at least 42 per cent reductions in emissions.<br>• annual targets;<br>• setting a limit on the use of carbon credits for 2010-12;<br>• allocating a share of international aviation and shipping emissions to Scotland, and setting a multiplier to account for the magnified impact of emissions at altitude; and<br>• carbon accounting regulations which will set out the circumstances in which carbon credits can be used and making provision for a scheme to track and record their use. |
| Scottish Government (2010) Scottish Planning Policy | **Objectives**: Scottish Planning Policy (SPP) sets out the Scottish Government's policy on land use planning. It includes the following principles to make positive provision for renewable energy developments by:<br>• supporting a diverse range of renewable energy technologies including encouraging the development of emerging and new technologies;<br>• recognising the importance of fully engaging with local communities and other stakeholders at all stages of the planning process;<br>• guiding development to appropriate locations and providing clarity on the issues that will be taken |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Climate Change and Energy Use** | |
| | into account when assessing specific proposals; and<br>• maximising environmental, economic and social benefits;<br>While at the same time:<br>• meeting international and national statutory obligations to protect designated areas, species and habitats and protecting the historic environment from inappropriate forms of development; and<br>• ensuring impacts on local communities and other interests are satisfactorily addressed. Such interests will vary from technology to technology. Further guidance is given in the following paragraphs.<br>**Targets:** 50% of Scotland's electricity to be generated from renewable sources by 2020 and 11% of heat demand to be met from renewable sources. |
| Determining and Delivering Scotland's Energy Future – Committee Inquiry | **Objectives:** Inquiry to determine, within the devolved context and the Parliament's competences the following key questions:<br>• what type of future is needed in Scotland in terms of the production, distribution and more efficient use of energy, given the issues of price, security of supply and sustainable development?<br>• how can this future be delivered in Scotland and how will we meet all the various targets and obligations? and<br>• what decisions need to be taken, by when and by whom to deliver on Scotland's energy future?<br>**Targets:** No formal targets. |
| Scottish Executive (2008) A Strategy for Scotland; Energy Efficiency and Micro-generation: Achieving a Low Carbon Future: A Strategy for Scotland: The Scottish Government Response | The strategy sets out the Executive's aims for improving energy efficiency and encouraging a greater uptake of micro-generation.<br>This strategy outlines a package of policies and measures to drive an increase in energy efficiency and encourage the uptake of micro-generation. The ambitious carbon savings target outlined in Changing Our Ways, Scotland's Climate Change Programme provides a backdrop for this strategy. All of the existing and new targets and commitments in the final Strategy will be compiled into a single Action Plan to be published during 2007. The Executive will use the action planning process to set energy efficiency and micro-generation targets. Progress being made against delivering these targets will be monitored through the Action Plan, which will be reviewed and reported on, on an annual basis. The Action Plan will include a summary of the carbon savings associated with the various actions, thus providing an overall picture of the contribution that energy efficiency and micro-generation will make to Scotland's Climate Change Programme targets.<br>The strategy does not contain any specific objectives/targets. |
| **National (Wales)** | |
| Welsh Assembly Government (2010) Planning Policy Wales (Edition 2) | **Objectives:** Planning Policy Wales sets out the land use planning policies of the Welsh Assembly Government. Regarding climate change and energy use, PPW sets out the following objectives:<br>• Promote resource-efficient and climate change resilient settlement patterns that minimise land-take (and especially extensions to the area of impermeable surfaces) and urban sprawl, especially through preference for the re-use of suitable previously developed land and buildings, wherever possible avoiding development on greenfield sites.<br>• Locate developments so as to minimise the demand for travel, especially by private car.<br>• Support the need to tackle the causes of climate change by moving towards a low carbon economy. This includes facilitating development that reduces emissions of greenhouse gases in a sustainable manner, provides for renewable and low carbon energy sources at all scales and facilitates low and zero carbon developments.<br>• Minimise the risks posed by, or to, development on, or adjacent to, unstable or contaminated land |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
|---|---|
| **Climate Change and Energy Use** | |
| | and land liable to flooding. This includes managing and seeking to mitigate the consequences of climate change<br>• Play an appropriate role to facilitate sustainable building standards (including zero carbon) that seek to minimise the sustainability and environmental impacts of buildings.<br>• Play an appropriate role in securing the provision of infrastructure to form the physical basis for sustainable communities (including water supplies, sewerage and associated waste water treatment facilities, waste management facilities, energy supplies and distribution networks and telecommunications), while ensuring proper assessment of their sustainability impacts.<br>• Maximise the use of renewable resources, including sustainable materials (recycled and renewable materials and those with a lower embodied energy). Where it is judged necessary to use non-renewable resources they should be used as efficiently as possible. The use of renewable resources and of sustainably produced materials from local sources should be encouraged and recycling and re-use levels arising from demolition and construction maximised and waste minimised<br>• Promote a greener economy.<br>**Targets:** To achieve annual carbon reduction-equivalent emissions reductions of 3% per year by 2011 in areas of devolved competence. |
| Welsh Assembly Government (2005) Technical Advice Note 8: Planning and Renewable Energy | **Objectives:** TAN 8 provides advice on renewable energy and planning including in relation to offshore wind and other onshore renewable energy technologies.<br>**Targets:** Reiterates the Assembly Government's target of 4TWh of electricity per annum to be produced by renewable energy by 2010 and 7TWh by 2020. In order to meet these targets the Assembly Government has concluded that 800MW of additional installed (nameplate) capacity is required from onshore wind sources and a further 200MW of installed capacity is required from off shore wind and other renewable technologies. |
| Welsh Assembly Government (2009) Technical Advice Note 12: Design | **Objectives:** TAN 12 sets out the Assembly Government's policies and objectives in respect of the design of new development. In relation to climate change and energy, these objectives include:<br>• achieving efficient use and protection of natural resources; and<br>• designing for change.<br>**Targets:** No formal targets. |
| Welsh Assembly Government (2010) Technical Advice Note 22: Planning for Sustainable Buildings | **Objectives:** Technical Advice Note 22 (TAN22) provides technical guidance on the implementation of the national planning policy on planning for sustainable buildings through the planning application process. It sets out that developers should provide clear evidence with their application (such as through the Design and Access Statement) to demonstrate compliance with national and local planning policies, and how they have a taken a realistic, considered and achievable approach in designing to meet the policy.<br>**Targets:** No targets set. |
| Welsh Assembly Government (2010) A Low Carbon Revolution: The Welsh Assembly Government Energy Policy Statement | **Objectives and Targets:** This policy statement sets out the Assembly Government's ambitions for low carbon energy in Wales. It comprises the following aims/targets:<br>• a step-change in the energy efficiency performance of all housing stock in Wales;<br>• a significant proportion of our energy to be generated locally or domestically;<br>• to promote the optimum use of offshore wind around the coast of Wales in order to deliver a further 15 kWh/d/p of capacity by 2015/16;<br>• to test the appropriateness and cost effectiveness of steps to exploit the tidal range of the Severn estuary;<br>• to capture at least 10% (8 kWh/d/p) of the potential tidal stream and wave energy off the Welsh coastline by 2025; |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
|---|---|
| **Climate Change and Energy Use** | |
| | • to have 4.5 kWh/d/p of installed onshore wind generation capacity by 2015/2017;<br>• to support small scale hydro and geothermal schemes where they are environmentally acceptable in order to generate at least 1 kWh/d/p;<br>• to deliver by 2020 up to 6 kWh/d/p in Wales of electricity from biomass - 50% indigenous/50% imported - and a heat potential of 2-2.5 kWh/d/p in Wales;<br>• that any new fossil fuel plants should be carbon capture ready with fully developed plans for carbon capture and storage; and that these plants maximise efficiency through use of waste heat and confirming where appropriate; and<br>• to maximise the short and long-term benefits for Wales' economy and society of the move to a low carbon energy system. |
| Welsh Assembly Government (2009) One Wales: One Planet, A New Sustainable Development Scheme for Wales | **Objectives:** The Sustainable Development Scheme sets out the Assembly Government's vision of a sustainable Wales and describes specific outcomes that WAG will seek to achieve through its main policies and programmes and processes that it will put in place to ensure its work coherently reflects the goals of sustainable development. The Scheme's vision is for Wales to be a nation that:<br>• lives within its environmental limits, using only its fair share of the earth's resources so that our ecological footprint is reduced to the global average availability of resources, and we are resilient to the impacts of climate change;<br>• has healthy, biologically diverse and productive ecosystems that are managed sustainably;<br>• has a resilient and sustainable economy that is able to develop whilst stabilising, then reducing, its use of natural resources and reducing its contribution to climate change;<br>• has communities which are safe, sustainable, and attractive places for people to live and work, where people have access to services, and enjoy good health; and<br>• is a fair, just and bilingual nation, in which citizens of all ages and backgrounds are empowered to determine their own lives, shape their communities and achieve their full potential.<br>The Scheme is underpinned by 2 core principles and 6 supporting principles all of which are pertinent to waste management. These are as follows:<br>• core principle 1: Involvement - to involve stakeholders in the development of policies and programmes, and the identification of solutions that meet their needs, promoting innovation in the way the Assembly Government deliver services;<br>• core principle 2: Integration - making connections between, and effectively integrating economic, social and environmental challenges;<br>• supporting principle 1: Reducing Wales' Ecological Footprint;<br>• supporting principle 2: Full costs and benefits - identifying and taking account of the full range of costs and benefits, including those over the long-term, those not measured in monetary terms (such as environmental costs and benefits), and those costs that are global as well as local in our policy making;<br>• supporting principle 3: Precautionary principle - using an evidence-based approach to decision-making;<br>• supporting principle 4: Polluter pays principle - ensuring that social and environmental costs of development fall on those who impose them;<br>• supporting principle 5: Proximity principle - solving problems, especially in managing waste and pollution locally, rather than passing them onto other places or to future generations; and<br>• supporting principle 6: Reflecting distinctiveness - reflecting and responding to the particular needs and issues of communities, and the differing economic, social and environmental circumstances in |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
|---|---|
| **Climate Change and Energy Use** | |
| | different parts of Wales.<br><br>**Targets:** To reduce by at least two thirds the total resources Wales currently uses by, amongst other elements:<br>• radically reducing by 80-90% use of carbon-based energy; and<br>• moving towards becoming a zero waste nation with 70% recycling across all sectors, and diverting waste from landfill by 2025. |
| **National (Northern Ireland)** | |
| Northern Ireland Executives Programme for Government 2008 - 2011 | **Objectives**: The new Executive's first Programme for Government sets out plans and priorities for 2008-2011 together with some longer term aspirations and intentions.<br><br>**Targets:** Sets a target for a 25% decrease in Northern Irelands total greenhouse gas emissions by 2025. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Coastal Change and Flood Risk** | |
| **International / European (e.g. Directives)** | |
| EU Floods Directive - On the assessment and management of flood risks (2007) | **Objectives:** Directive's aim is to reduce and manage the risks that floods pose to human health, the environment, cultural heritage and economic activity. The Directive applies to inland waters as well as all coastal waters across the whole territory of the EU.<br><br>**Targets:** Directive requires Member States to assess if all water courses and coast lines are at risk from flooding, to map the flood extent and assets and humans at risk in these areas and to take adequate and co-ordinated measures to reduce this flood risk. |
| EU (2008) Marine Strategy Framework Directive | **Objectives:** The Directive requires member states to take the necessary measures to achieve or maintain good environmental status in the marine environment through the development and implementation of marine strategies. The Directive has been transposed into UK law through The Marine Strategy Regulations 2010 (SI 2010 No. 1627)<br><br>**Targets:** To achieve or maintain good environmental status in the marine environment by the year 2020 at the latest. |
| **National (UK)** | |
| Defra (2005) Making Space for Water: Taking forward a new Government Strategy for flood and coastal erosion risk management in England | **Objectives:** To reduce the threat of flooding to people and their property. Also to deliver the greatest environmental, social and economic benefit, consistent with the Government's sustainable development principles.<br><br>**Targets:** No formal targets. |
| DCLG (2006) PPS25: Development and Flood Risk | **Objectives:** PPS25 aims to ensure that flood risk is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding, and to direct development away from areas at highest risk. Where new development is, exceptionally, necessary in such areas, policy aims to make it safe without increasing flood risk elsewhere and where possible, reducing flood risk overall. The PPS also instructs regional and local planning authorities to prepare and implement planning strategies that help to deliver sustainable development that take into account flood risk.<br><br>**Targets:** Does not contain any targets. |
| DCLG (2010) Planning Policy Statement 25 Supplement: Development and Coastal Change | **Objectives:** This supplement sets out planning policies for managing development on coastal areas affected by coastal change. It states that planning should:<br>• ensure that policies and decisions in coastal areas are based on an understanding of coastal change over time;<br>• prevent new development from being put at risk from coastal change by:<br>- avoiding inappropriate development in areas that are vulnerable to coastal change or any development that adds to the impacts of physical changes to the coast, and<br>- directing development away from areas vulnerable to coastal change<br>• ensure that the risk to development which is, exceptionally, necessary in coastal change areas because it requires a coastal location and provides substantial economic and social benefits to communities, is managed over its planned lifetime, and<br>• ensure that plans are in place to secure the long term sustainability of coastal areas. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Coastal Change and Flood Risk** | |
| | **Targets:** Does not contain any targets. |
| HM Government (2010) The Marine Strategy Regulations 2010 (SI 2010 No. 1627) | **Objectives:** To secure compliance with the requirements of the Marine Strategy Directive in the UK.<br>**Targets:** To take the necessary measures to achieve or maintain good environmental status of marine waters within the marine strategy area by 31st December 2020. |
| Future Water, the Government's Water Strategy for England (Feb 08) | **Objectives:**<br>By 2030 at the latest, we have sustainably managed risks from flooding and coastal erosion, with greater understanding and more effective management of surface water.<br>**Targets:** Key targets are within the objectives above and further a number of sub-targets are included within the document. |
| Department for Transport (2009) Draft National Policy Statement for Ports | **Objectives:** This draft NPS sets out a consultation draft of the (previous) government's policy toward nationally significant infrastructure proposals for port development in England and Wales. It states that the Government's objectives for transport should be followed, including the need:<br>• to sustain economic growth and improved productivity through reliable and efficient transport networks;<br>• to improve the environmental performance of ports and associated developments including transport and to help tackle climate change;<br>• to strengthen the safety and security of transport; and<br>• to enhance access to jobs, services and social networks.<br>The draft NPS notes that ports development is acceptable on flood prone land as it is water compatible. It also notes the potential for port development to have direct and indirect effects on the coastline which may be exacerbated by the effects of climate change.<br>The draft NPS has been consulted upon in 2009. The extent to which the objectives will be amended is uncertain.<br>**Targets:** No formal targets are included. |
| HM Government (2010) UK Marine Policy Statement: A draft for consultation | **Objectives:** The Marine Policy Statement (MPS) will be the framework for preparing Marine Plans and taking decisions that affect the marine environment. It will also set the direction for new marine licensing and other authorisation systems in each Administration. The MPS will apply to all UK waters. The policy objectives contained in the draft MPS reflect existing policies in the UK. One of the high level marine objectives it sets out are that *'the use of the marine environment is benefiting society as a whole, contributing to resilient and cohesive communities that can adapt to coastal erosion and flood risk, as well as contributing to physical and mental wellbeing.'*<br>**Targets:** No formal targets are included.<br>The draft MPS is currently being consulted upon. The extent to which the objectives will be amended is uncertain. |
| Marine & Coastal Access Act 2009 | The Marine and Coastal Access Act 2009 introduces new measures to manage the marine environment in a more sustainable manner, including the development of Marine Spatial Plans and Marine Conservation Zones. It also includes important amendments to the Salmon and Freshwater Fisheries Act, 1975.<br>**Objectives:** The Act's objectives are to ensure clean healthy, safe, productive and biologically diverse oceans and seas, by putting in place better systems for delivering sustainable development of the marine and coastal environment. It includes provision with regard marine functions and activities, including the establishment of the Marine Management Organisation and coastal access in England and Wales. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Coastal Change and Flood Risk** | |
| | **Targets:** No formal targets are included. |
| **National (Scotland)** | |
| Scottish Government (2010) Scottish Planning Policy | **Objectives:** Scottish Planning Policy (SPP) sets out the Scottish Government's policy on land use planning. The key aims of Scottish Planning Policy in relation to flooding are:<br>• to prevent developments which would be at significant risk of being affected by flooding;<br>• to prevent developments which would increase the probability of flooding elsewhere, and<br>• to provide a basis for planning decision making related to flood risk, the SPP provides a risk framework which divides flood risk into three categories and outlines an appropriate planning response.<br>With regard to flood risk, SPP states that developers and planning authorities should take a precautionary approach in taking decisions when flood risk is an issue and that development should not take place on land that could otherwise contribute to managing flood risk, for instance through managed coastal realignment, washland creation or as part of a scheme to manage flood risk. With respect to coastal issues, SPP states that planning authorities should take the likely effect of proposed development on the marine environment into account when preparing when making decisions on planning applications.<br>The SPP also notes that the risks associated with rising sea levels and coastal flooding should be taken into account when identifying areas that are suitable for development.<br>**Targets:** No formal targets. |
| **Scottish Executive (2006)** Scottish National Transport Strategy | **Objectives:** The strategy sets out three strategic outcomes:<br>• improve journey times and connections between our cities and towns and our global markets to tackle congestion and provide access to key markets - wealthier and fairer, safer and stronger;<br>• reduce emissions to tackle climate change - safer and stronger, wealthier and fairer; and<br>• improve quality, accessibility and affordability of transport, to give people the choice of public transport and real alternatives to the car - greener, healthier, smarter.<br>No explicit reference is made to flooding and coastal change in the strategy.<br>**Targets:** No formal targets are included. |
| **Flood Risk Management (Scotland) Act 2009** | **Objectives:** The Act includes a duty placed upon Scottish Ministers, SEPA, local authorities, Scottish Water and other responsible authorities to exercise their functions with a view to managing and reducing flood risk and to promote sustainable flood risk management.<br>**Targets:** No formal targets are included. |
| **National (Wales)** | |
| Welsh Assembly Government (2010) Planning Policy Wales Edition 3 | **Objectives:** PPW sets out that to meet the Assembly Government's objectives for sustainable development requires action through the planning system to move away from flood defence and the mitigation of the consequences of new development in areas of flood hazard towards a more positive avoidance of development in areas defined as being of flood hazard.<br>In terms of coastal development, PPW states that, before major developments are permitted, it will be essential to demonstrate that a coastal location is required. Where development is considered to satisfy this test it should be designed so as to be resilient to the effects of climate change over its lifetime.<br>**Targets:** No formal targets. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Coastal Change and Flood Risk** | |
| Welsh Assembly Government (2004) Technical Advice Note 15: Development and Flood Risk | **Objectives:** TAN 15 sets out a precautionary framework to guide planning decisions. The approach seeks to first, direct new development away from those areas which are at high risk of flooding and, second, where development has to be considered in high risk areas (zone C), allow only those developments which can be justified to be located within such areas.<br><br>**Targets:** No formal targets. |
| Welsh Assembly Government (1998) Technical Advice Note 14: Coastal Planning | **Objectives:**<br>• Protect the coastline in relation to development, landscape, biodiversity and recreation<br><br>**Targets:** No formal targets. |
| Welsh Assembly Government (2007) Making the Most of Wales' Coast - the Integrated Coastal Zone Management Strategy for Wales | **Objectives:** The ICZM recognises that the greatest challenge facing Wales' coastal areas is that posed by climate change, with the threat of sea level rise and increased incidence of coastal flooding among the expected effects. To address the risk of an increase in stormy weather due to climate change WAG are moving away from the traditional approach of building more and higher defences to one of managing the risk. Greater emphasis is being placed on understanding the flood risk and raising awareness of those at risk of the consequences they face. A set of Shoreline Management Plans has been completed for strategic sections of Wales' coast, identifying policy options for their future management. These will be updated in future to take account of the latest trends and evidence on flooding. A number of objectives relating to the implementation of ICZM are set out.<br><br>**Targets:** No formal targets are identified. |
| **National (Northern Ireland)** | |
| Department of the Environment (2005) Planning Policy Statement 15 (PPS 15) Planning and Flood Risk | **Objectives:** The primary aim of the PPS is to prevent future development that may be at risk from flooding or that may increase the risk of flooding elsewhere.<br><br>**Targets:** No formal targets are included. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
|---|---|
| **Material Assets (Transport)** | |
| **International / European (e.g. Directives)** | |
| Directive 85/337/EEC on the Assessment of the Effects of Certain Public and Private Projects on the Environment - as amended by Directive 97/11/EC | **Objectives:** The European Union requires an environmental impact assessment to be carried out before approval can be granted for certain public and private projects. The Directive lists the projects concerned, the information to be provided and the third parties to be consulted in connection with approving such a project.<br><br>**Targets**: An assessment is obligatory for transport infrastructure such as railways, airports, motorways, inland waterways and ports when the infrastructure exceeds certain specific thresholds. |
| Renewable Energy Directive/Fuel Quality Directive 2009 | **Objectives:** The Renewable Energy Directive (RED) imposes stretching renewables targets for 2020 across the EU.<br><br>Under the RED, the UK has to submit a National Action Plan to the European Commission<br>• Targets: Targets in the Renewable Energy Directive and Fuel Quality Directive (FQD) require by 2020:<br>• 20% of energy across the EU to be renewable;<br>• 15% of energy in the UK to be renewable;<br>• 10% of energy used in transport to be renewable; and<br>• a minimum reduction in GHG emissions from road transport of 6%. |
| WHO (2000) Transport, Environment and Health | **Objectives:** This report primarily focuses on increasing road transport, noting that road users generate excessive costs to themselves, other individuals and society - through noise, pollution and accidents - in the form of illness, injuries, deaths and damage to mental health and social relationships. The challenge is to promote healthy and sustainable transport alternatives to prevent the negative effects of transport systems on human health. Meeting this challenge requires commitment and action from governments. It summarises the latest scientific evidence on the impact of transport-generated air pollution, noise and accidents on behaviour and physical and mental health. The report also highlights the potential health benefits from non-motorised forms of transport, such as cycling and walking.<br>**Targets:** The report highlights the need for policy-makers to address the following issues:<br>• transport-related noise pollution;<br>• transport-related air pollution;<br>• the effects of transport of mental health and wellbeing;<br>• identifying key groups affected by transport health risks; and<br>• improving provisions for cycling and walking. |
| European Transport Policy for 2010: A Time to Decide (EC, 2001) | **Objectives:** The policy outlines the need to improve the quality and effectiveness of transport in Europe. A strategy has been proposed which is designed to gradually break the link between transport growth and economic growth to reduce environmental impacts and congestion. The policy advocates measures that promote an environmentally friendly mix of transport services.<br><br>**Targets:** No specific targets. |
| **National (UK)** | |
| The Planning Act 2008 | **Objectives:** The legislation builds on the proposals set out in the Planning White Paper, published on 21st May 2007, and introduces a new system for nationally significant infrastructure planning, alongside further reforms to the Town and Country Planning system. A major component of this |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Material Assets (Transport)** | |
| | legislation is the introduction of an independent Infrastructure Planning Commission (IPC), to take decisions on major infrastructure projects (transport, energy, water and waste). To support decision-making, the IPC will refer to the Government's National Policy Statements (NPSs), which will provide a clear long-term strategic direction for nationally significant infrastructure development.<br><br>**Targets:** No specific targets. |
| DfT (2008) Carbon Pathways: Informing Development of a Carbon Reduction Strategy for Transport | **Objectives:** This paper takes forward the analysis originally promised in TaSTS. It updates projections of transport CO2 emissions, clarifying the scale of the challenge facing transport. It considers the drivers of transport demand which should help in the identification of options for CO2 reduction.<br><br>**Targets:** No formal targets. |
| PPS 1: Planning and Climate Change – Supplement to PPS 1 (ODPM, 2007) | **Objectives:** This PPS sets out how spatial planning (in providing for the new homes, jobs and infrastructure needed by communities) should contribute to reducing emissions and stabilising climate change (mitigation) and take into account the unavoidable consequences (adaptation). Includes the key planning objective:<br><br>Deliver patterns of urban growth and sustainable rural developments that help secure the fullest possible use of sustainable transport for moving freight, public transport, cycling and walking; and, which overall, reduce the need to travel, especially by car.<br><br>**Targets:** No formal targets. |
| Towards a Sustainable Transport System (TaSTS): Supporting Economic Growth in a Low Carbon World (DfT, 2007) | **Objectives:** Document has three aims:<br>• it describes how the Government is responding to the recommendations made in the Eddington study to improve transport's contribution to economic growth and productivity, and how it is ensuring that transport will play its part in delivering the overall level of reductions in carbon emissions recommended by the Stern Review of the Economics of Climate Change;<br>• it sets out the Department for Transport's ambitious policy and investment plans for the period to 2013-14; and<br>• it proposes a new approach to longer term transport strategy, building on the model recommended by Sir Rod Eddington, and explains how we will engage with passengers, users, the transport industry and other stakeholders as we develop and implement that process.<br>**Targets:** The report identifies "five very broadly defined goals, which capture the full range of Government objectives that could be furthered by transport":<br>• maximising the overall competitiveness and productivity of the national economy, so as to achieve a sustained high level of GDP growth;<br>• reducing transport's emissions of CO2 and other greenhouse gases, with the desired outcome of avoiding dangerous climate change;<br>• contributing to better health and longer life expectancy through reducing the risk of death, injury or illness arising from transport, and promoting travel modes that are beneficial to health;<br>• improving quality of life for transport users and non-transport users, including through a healthy natural environment, with the desired outcome of improved well-being for all; and<br>• promoting greater equality of transport opportunity for all citizens, with the desired outcome of achieving a fairer society. |
| A Low Carbon Transport Strategy 2009 | Objectives: Carbon emissions from domestic transport will be reduced by up to 14 per cent over the next decade as a result of the Government's carbon reduction strategy:<br>• transport currently makes up 21 per cent of all UK domestic carbon emissions;<br>• the strategy sets out how an additional 85 million tonnes of CO2 from domestic transport can be saved from 2018-2022;<br>• the reduction will be achieved by: supporting a shift to new technologies and fuels; promoting |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Material Assets (Transport)** | |
| | lower carbon choices; and using market mechanisms to encourage the shift to lower carbon transport;<br>• a new freight industry steering group will be set up to find ways of measuring, reporting and reducing emissions across the sector;<br>• government will work with European partners to regulate CO2 from new vans and encourage development of ultra-low carbon vans; and<br>• eligibility criteria has been proposed for the £2-5,000 consumer incentives for electric and plug-in hybrids.<br><br>**Targets:** No formal targets. |
| The Eddington Transport Study (2006) | **Objectives:**<br>• The UK's congested and growing urban areas and their catchments.<br>• The UK's international gateways and supporting surface infrastructure: in particular, the major international passenger routes and principal international freight routes, where delays, including on surface access routes, and current and future capacity constraints, look likely to damage the competitiveness of the UK's imports and exports, and its leading role in the global airfreight logistics sector.<br>• A limited number of inter-urban corridors connecting urban areas and international gateways: where the unreliability of the transport network is adding costs to business, threatening productivity and innovation in the freight and logistics industries and both interregional and international trade. From a passenger perspective these corridors connect urban areas with each other and with international airports, and from a freight perspective they connect ports with distribution hubs and distribution hubs with their eventual markets.<br>**Targets:** Decision-making principles:<br>• start with a clear articulation of the policy objectives, and the transport outcomes required to deliver these objectives, focusing where relevant on the whole journey, rather than particular stages or modes in a journey;<br>• consider the full range of policy options for meeting the policy objectives;<br>• prioritise limited public resources on those policies that most cost-effectively deliver Government's objectives;<br>• ensure the evidence base can support this process Strategic Indicators;<br>• impact on GDP;<br>• impact on productivity;<br>• contribution to economic welfare; and<br>• reliability of the transport system. |
| HM Government (2007) PSA Delivery Agreement 5: Deliver Reliable and Efficient Transport Networks that Support Economic Growth | **Objectives:** This PSA will focus government investment in transport on supporting sustainable economic growth, and will set a clear strategic framework to facilitate private sector investment.<br>**Targets:** PSA sets out following indicators:<br>• journey time on main roads into urban areas;<br>• journey time reliability on the strategic road network, as measured by the average delay experienced in the worst 10 per cent of journeys for each monitored route;<br>• level of capacity and crowding on the rail network; and<br>• average benefit cost ratio of investments approved over the CSR07 period. |
| Young People and Transport: Understanding their Needs and | **Objectives:** This document highlights some important findings in relation to young people and their transport needs and requirements. The study explores the importance of travel in young people's lives, |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Material Assets (Transport)** | |
| Requirements (DfT, 2006) | patterns of travel behaviour, experiences of travel and barriers to travel by different modes of transport. Key findings included that cost and accessibility issues can act as a barrier for young people attempting to access further education, jobs and key services.<br><br>**Targets:** No formal targets. |
| Local Transport Act (2009) | **Objectives:** The Government is committed to ensuring that we are well equipped to meet not only today's transport challenges, but also those of ten or twenty years' time.<br><br>The Local Transport Bill is a key part of the Government's strategy for sustainable development. This Bill empowers local authorities to take appropriate steps to meet local transport needs in the light of local circumstances.<br><br>**Targets:** The Bill includes provisions on the frequency and timing of services as well as maximum fares. (This is not directly relevant to this study.) |
| Railways Act (2005) | **Objectives:** The main purpose of this Act is to tackle the longstanding structural problems of the railways. The Act gives effect to the proposals that require primary legislation in the White Paper The Future of Rail (2004).<br><br>**Targets:** No formal targets. |
| Delivering a Sustainable Transport System (DaSTS) (DfT, 2008) | **Objectives:**<br>• to support national economic competitiveness and growth, by delivering reliable and efficient transport networks;<br>• to reduce transport's emissions of carbon dioxide and other greenhouse gases, with the desired outcome of tackling climate change;<br>• to contribute to better safety and health and longer life-expectancy by reducing the risk of death, injury or illness arising from transport and by promoting travel modes that are beneficial to health;<br>• to promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society; and<br>• to improve quality of life for transport users and non-transport users, and to promote a healthy natural environment;<br>**Targets:** No formal targets. |
| Road Safety Act 2006 | **Objectives:** "An Act to make provision about road traffic, registration plates, vehicle and driver information, hackney carriages and private hire vehicles, and trunk road picnic areas."<br><br>**Targets:** No formal targets. |
| The Future of Transport White Paper – A Network for 2030 (DfT, 2004) | **Objectives:** This White Paper builds on the implementation of the 10 Year Plan for transport, and sets out the vision for transport for the following 30 years. It is a long-term strategy for a modern, efficient and sustainable transport system backed up by sustained high levels of investment. The aim is for a transport network that can meet the challenges of a growing economy and the increasing demand for travel, but that can also achieve environmental objectives.<br>**Targets:**<br>• by 2010, increase the use of public transport (bus and light rail) by more than 12 per cent in England compared with 2000 levels, with growth in every region;<br>• reduce the number of people killed or seriously injured in Great Britain in road accidents by 40 per cent and the number of children killed or seriously injured by 50 per cent, by 2010 compared with the average for 1994-98, tackling the significantly higher incidence in disadvantaged communities;<br>• improve air quality by meeting the Air Quality Strategy targets; and<br>• reduce greenhouse gas emissions to 12.5 per cent below 1990 levels in line with our Kyoto |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Material Assets (Transport)** | |
| | commitment. |
| PPG13 Transport (DfT, 2001) | **Objectives:**<br>• promote more sustainable transport choices for both people and for moving freight;<br>• promote accessibility to jobs, shopping and leisure facilities, by public transport, walking and cycling; and<br>• reduce the need to travel, especially by car.<br>**Targets:** No formal targets. |
| **National (MOD)** | |
| MOD Sustainable Development Strategy, 2009<br>MOD Climate Change Strategy, 2010<br>MOD Climate Change Strategy, 2009<br>MOD JSP 418, leaflet 16 – Travel and Transport | **Objectives**<br>• to reduce the use of marine, land and aviation fuels as much as is reasonably practicable without impacting on operational capability, whilst at the same time assessing the viability of alternatives to those fuels;<br>• to achieve a continued reduction in air, road and rail business administration travel by MOD personnel;<br>• the development of a Defence Travel Emissions Strategy in 2009 will bring with it targets and actions for modes of business transport other than road transport (not identified in 2010);<br>• develop a Defence Travel Emissions Strategy with targets and actions for all modes of transport; and<br>• manage the social impacts of defence activities on UK Civilian and Armed Forces communities.<br>**Targets**<br>• reduce emissions from road vehicles by 15% by 2010 against a 2005/06 baseline; and<br>• by 2010 Average new car emission level of 130g/km. |
| **National (Scotland)** | |
| Scotland's National Transport Strategy (2006) | **Objectives:**<br>• improved journey times and connections - making it quicker, easier and more reliable for passengers to travel between our towns and cities and across our global markets;<br>• reduced emissions - making sure that Scotland takes a lead in the future of sustainable transport; and<br>• improved quality, accessibility and affordability - ensuring everyone across Scotland has high quality public transport choices.<br>**Targets:** Indicators used in the strategy include:<br>• the average distance travelled by Scottish residents;<br>• the key elements of the strategic transport infrastructure;<br>• transport activity figures for Scotland;<br>• greenhouse gas emissions from transport in Scotland; and<br>• greenhouse gas emissions by transport sector. |
| Scottish Government (2010) Scottish Planning Policy | **Objectives:**<br>• to meet European and UK commitments and targets on greenhouse gases and local air quality;<br>• to maintain and enhance the natural and built environment, through avoiding or mitigating adverse environmental impacts; |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Material Assets (Transport)** | |
| | • minimising environmental intrusion and retaining, improving and enhancing areas for biodiversity;<br>• to maintain and enhance the quality of urban life, particularly the vitality and viability of urban centres;<br>• to reinforce the rural economy and way of life; and<br>• to ensure that the impact of development proposals on transport networks does not compromise their safety or efficiency.<br>**Targets:** No formal targets. |
| Scottish Executive (2005) Planning Advice Note 75: Planning for Transport | **Objective:** Create an accessible Scotland which has a safe, reliable and sustainable transport system.<br>**Targets:** No formal targets. |
| **National (Wales)** | |
| Welsh Assembly Government (2010) Planning Policy Wales (Edition 2) | **Objectives:** Planning Policy Wales (PPW) sets out the land use planning policies of the Welsh Assembly Government. Regarding transport, PPW sets out that the Assembly Government's wider transport objectives be achieved through:<br>• reducing the need to travel, especially by private car, by locating development where there is good access by public transport, walking and cycling;<br>• locating development near other related uses to encourage multi-purpose trips and reduce the length of journeys;<br>• improving accessibility by walking, cycling and public transport;<br>• ensuring that transport is accessible to all, taking into account the needs of disabled and other less mobile people;<br>• promoting walking and cycling;<br>• supporting the provision of high quality public transport;<br>• supporting traffic management measures;<br>• promoting sustainable transport options for freight and commerce;<br>• supporting sustainable travel options in rural areas;<br>• supporting necessary infrastructure improvements; and<br>• ensuring that, as far as possible, transport infrastructure does not contribute to land take, urban sprawl or neighbourhood severance.<br>**Targets:** No formal targets. |
| Welsh Assembly Government (2008) People, Places, Futures: The Wales Spatial Plan 2008 Update | **Objectives:** The Wales Spatial Plan contains the following key theme which relates to transport and accessibility:<br>*Achieving Sustainable Accessibility*<br>We will develop access in ways that protect the environment, encourage economic activity, widen employment opportunities, ensure quality services and integrate the social, environmental and economic benefits that travel can have.<br>**Targets:** No formal targets. |
| Welsh Assembly Government (2007) Technical Advice Note 18: Transport | **Objectives:** TAN 18 seeks to achieve integration of land use planning and the development of transport infrastructure by:<br>• promoting resource and travel efficient settlement patterns;<br>• ensuring new development is located where there is, or will be, good access by public transport, |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Material Assets (Transport)** | |
| | walking and cycling thereby minimising the need for travel and fostering social inclusion;<br>• managing parking provision;<br>• ensuring that new development and major alterations to existing developments include appropriate provision for pedestrians (including those with special access and mobility requirements), cycling, public transport, and traffic management and parking/servicing;<br>• encouraging the location of development near other related uses to encourage multi-purpose trips;<br>• promoting cycling and walking;<br>• supporting the provision of high quality, inclusive public transport;<br>• supporting provision of a reliable and efficient freight network;<br>• promoting the location of warehousing and manufacturing developments to facilitate the use of rail and sea transport for freight;<br>• encouraging good quality design of streets that provide a safe public realm and a distinct sense of place; and<br>• ensuring that transport infrastructure or service improvements necessary to serve new development allow existing transport networks to continue to perform their identified functions.<br>**Targets:** No formal targets. |
| Welsh Assembly Government (2009) Technical Advice Note 12: Design | **Objectives:** TAN 12 sets out the Assembly Government's policies and objectives in respect of the design of new development. In relation to transport , these objectives include:<br>• Promoting sustainable means of travel.<br>**Targets:** No formal targets. |
| Welsh Assembly Government (2008) The Wales Transport Strategy | **Objectives:** The Wales Transport Strategy comprises the following key outcomes:<br>• improve access to healthcare;<br>• improve access to education, training and lifelong learning;<br>• improve access to shopping and leisure facilities;<br>• encourage healthy lifestyles;<br>• improve the actual and perceived safety of travel;<br>• improve access to employment opportunities;<br>• improve connectivity within Wales and internationally;<br>• improve the efficient, reliable and sustainable movement of people;<br>• improve the efficient, reliable and sustainable movement of freight;<br>• improve sustainable access to key visitor attractions;<br>• increase the use of more sustainable materials in our country's transport assets and infrastructure;<br>• reduce the impact of transport on greenhouse gas emissions;<br>• adapt to the impacts of climate change;<br>• reduce the contribution of transport to air pollution and other harmful emissions;<br>• improve the positive impact of transport on the local environment;<br>• improve the effect of transport on our heritage; and<br>• improve the impact of transport on biodiversity;<br>**Targets:** The Transport Strategy identifies a number of key indicators related to the outcomes highlighted above. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Material Assets (Transport)** | |
| Welsh Assembly Government (2010) National Transport Plan | **Objectives:** There are five strategic priorities for the next five years:<br>• reducing greenhouse gas emissions and other environmental impacts;<br>• integrating local transport;<br>• improving access between key settlements and sites;<br>• enhancing international connectivity; and<br>• increasing safety and security.<br>**Targets:** None identified. |
| **National (Northern Ireland)** | |
| Northern Ireland<br><br>PPS 13 Transportation and Land Use | **Objectives:** The need to integrate land use and transportation is a key objective in delivering the transportation vision as set out in the RDS: "to have a modern, sustainable, safe transportation system which benefits society, the economy and the environment and which actively contributes to social inclusion and everyone's quality of life".<br>**Targets:** No formal targets. |
| Northern Ireland Regional Transport Strategy 2002-2012 | **Objectives:** The Regional Transportation Strategy (RTS) for Northern Ireland 2002-2012 identifies strategic transportation investment priorities and considers potential funding sources and affordability of planned initiatives over the next 10 years<br><br>**Targets:** The Strategy provides a range of transportation initiatives across Northern Ireland. Some of the principal initiatives include:<br>• upgrade of the existing rail network and services (with the possible exception of the Antrim-Knockmore line which is the subject of a separate review);<br>• provision of new, modern trains and increased rail capacity;<br>• quality Bus Corridors (QBCs) on all main Belfast commuter routes;<br>• provision of new, modern accessible buses;<br>• commencement of a rapid transit system in the BMA;<br>• local improvements in towns across Northern Ireland to assist pedestrians and cyclists and to provide new bus services throughout the day;<br>• introduction of innovative demand responsive transport services in rural areas;<br>• elimination of 75% of the road maintenance backlog - with two-thirds of this expenditure in rural areas;<br>• local highway infrastructure measures to improve safety, such as accident remedial schemes and traffic calming schemes; and<br>• Strategic highway improvements to provide, for example, up to 13 bypasses, approximately 85 kilometres of dual carriageway, 36 kilometres of widened single carriageway and 11 major junction improvements. |
| The Regional Strategic Transport Network Transport Plan 2015 | **Objectives:** The Plan takes a realistic view of the scale of possible investment by closely following the funding levels envisaged in the Regional Transport Strategy, which have been extrapolated to match the longer period of the Regional Strategic Transport Network Transport Plan.<br>The objectives are: |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Material Assets (Transport)** | |
| | • to support the Spatial Development Strategy in the RDS based on hubs, corridors and gateways;<br>• to develop and maintain the RSTN to enhance accessibility on an integrated basis for all users, including freight;<br>• to examine access to regional gateways and cross border links with an emphasis on improving connections from the five key transport and four link corridors;<br>• to contribute appropriately to the RTS targets;<br>• to conform to the relevant expenditure by mode envisaged in the RTS, or in a few cases present a case for a different approach;<br>• to set out plans for short, medium and longer-term proposals taking account of the RTS budget profile;<br>• to identify a set of targets, performance indicators and other outputs that can be used to measure progress against strategic objectives; and<br>• to provide input into local development plans prepared by DoE Planning Service. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Material Assets (Waste Management)** | |
| **International / European (e.g. Directives)** | |
| European Commission (2008) Waste Framework Directive (Directive 2008/98/EC) | **Objectives:** Overarching EU directive on waste and lays down basic guidance on the management of waste. It includes basic concepts and definitions related to waste management and lays down waste management principles such as the "polluter pays principle" or the "waste hierarchy".<br><br>**Targets:** Does not contain any targets. |
| European Commission (1999) The Landfill Directive | **Objectives:** This Directive is aimed at controlling the environmental impacts of waste disposal associated with landfills. The objective of note relates to the imposing of reduced limits on municipal waste allowed to be sent to landfill.<br><br>**Targets**: By 2010 the amount of biodegradable waste going to landfill must be 75% of the total produced in 1995; by 2013 the amount must be reduced to 50% and by 2020 to 35%. |
| EU Directive on Waste 75/442/EEC (as replaced by Directive 2006/12/EC) | **Objectives:** The essential objective of all provisions relating to waste management should be the protection of human health and the environment against harmful effects caused by the collection, transport, treatment, storage and tipping of waste. Some key objectives include:<br>• the recovery of waste and the use of recovered materials as raw materials should be encouraged;<br>• member states should, in addition to taking responsible action to ensure the disposal and recovery of waste, take measures to restrict the production of waste;<br>• it is important for the Community as a whole to become self sufficient in waste disposal and desirable for Member States individually to aim at such self sufficiency;<br>• waste management plans should be drawn up in the Member States;<br>• movements of waste should be reduced;<br>• ensure a high level of protection and effective control;<br>• subject to certain conditions, and provided that they comply with environmental protection requirements, some establishments which process their waste themselves or carry out waste recovery may be exempted from permit requirements; and<br>• that proportion of the costs not covered by the proceeds of treating the waste must be defrayed in accordance with the "polluter pays" principle.<br>**Targets**: Document includes legislation rather than targets. |
| EU Thematic Strategy on the Prevention and Recycling of Waste (2002-2012) (to be reviewed in 2010) | **Objective:** This long-term strategy aims to help Europe become a recycling society that seeks to avoid waste and uses waste as a resource. It will draw on the knowledge that the thematic strategy on resources, also adopted on 21 December 2005, will generate. Forms part of the Environment Action Programme of the European Community 2002-2012.<br><br>**Targets:** No formal targets. |
| The Euratom Treaty 1957 | **Objective:** Initially created to coordinate the Member States' research programmes for the peaceful use of nuclear energy, the Euratom Treaty today helps to pool knowledge, infrastructure and funding of nuclear energy. It ensures the security of atomic energy supply within the framework of a centralised monitoring system.<br><br>**Targets:** No formal targets. |
| Convention on Nuclear Safety Commission Decision 1999/819/Euratom | **Objective:**<br>• to achieve and maintain a high level of nuclear safety through the enhancement of national measures and technical cooperation;<br>• to establish and maintain effective defences against radiological hazards in nuclear installations in |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Material Assets (Waste Management)** | |
| | order to protect people and the environment, etc; and<br>• to prevent nuclear accidents and limit their consequences.<br>**Targets:** No formal targets. |
| Council Directive establishing a Community framework for the nuclear safety of nuclear installations [23/06/2009] | **Objective:**<br>• to establish a Community framework in order to maintain and promote the continuous improvement of nuclear safety and its regulation; and<br>• to ensure that Member States shall provide for appropriate national arrangements for a high level of nuclear safety to protect workers and the general public against the dangers arising from ionizing radiations from nuclear installations.<br>**Targets:** No formal targets. |
| Shipments of radioactive waste (Directive 92/3/Euratom) | **Objective:** To establish a system of control and prior authorisation for shipments of radioactive waste, to protect the health of workers and the general public and to avoid illicit traffic of such materials.<br>**Targets:** No formal targets. |
| Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal | **Objective:** The Basel Convention is a global agreement, ratified by several member countries and the European Union, for addressing the problems and challenges posed by hazardous waste. The key objectives of the Basel Convention are:<br>• to minimise the generation of hazardous wastes in terms of quantity and hazardousness;<br>• to dispose of them as close to the source of generation as possible; and<br>• to reduce the movement of hazardous wastes.<br>**Targets:** No formal targets. |
| Conference of the Parties to the Basel Convention (2002) Strategic Plan for the Implementation of the Basel Convention | **Objective:** The Strategic Plan for the implementation of the Basel Convention is the blueprint adopted by Parties in 2002 to give effect to the 1999 Basel Declaration on Environmentally Sound Management. It established priorities in terms of policy and programmes, selected priority waste streams and projects. The Strategic Plan covers the period from 2002 to 2011 until a new Strategic Framework is adopted by COP10.<br>**Targets:** No formal targets. |
| **National (UK)** | |
| Defra (2007) Waste Strategy for England 2007 | **Objective:** Sets out Defra's vision for sustainable waste management. Specific objectives include:<br>• decouple waste growth (in all sectors) from economic growth and put more emphasis on waste prevention and re-use;<br>• meet and exceed the Landfill Directive diversion targets for biodegradable municipal waste in 2010, 2013 and 2020;<br>• increase diversion from landfill of non-municipal waste and secure better integration of treatment for municipal and non-municipal waste;<br>• secure the investment in infrastructure needed to divert waste from landfill and for the management of hazardous waste; and<br>• get the most environmental benefit from that investment, through increased recycling of resources and recovery of energy from residual waste using a mix of technologies.<br>**Targets:**<br>• to reduce the amount of household waste not re-used, recycled or composted from over 22.2 |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Material Assets (Waste Management)** | |
| | million tonnes in 2000 by 29% to 15.8 million tonnes in 2010 with an aspiration to reduce it to 12.2 million tonnes in 2020 - a reduction of 45%;<br>• recycling and composting of household waste - at least 40% by 2010, 45% by 2015 and 50% by 2020; and<br>• recovery of municipal waste - 53% by 2010, 67% by 2015 and 75% by 2020.<br>It should be noted that Defra is currently undertaking a wide review of waste policies. This is not expected to cover hazardous waste, but will have implications for non-hazardous waste. |
| High Activity Sealed Radioactive Sources and Orphan Sources Regulations 2005 SI 2686 | **Objectives:** Specifies how high-activity sealed radioactive sources should be registered, kept, used or disposed of. Also covers detecting, recovering and dealing with radioactive sources that are not currently regulated ('orphan sources'). |
| Ionising Radiations Regulations 1999 SI 3232. | **Objectives:** Requires employers to protect employees and other people against ionising radiation arising from work with radioactive substances and other sources of ionising radiation. Also imposes certain duties on employees.<br>**Targets:** No formal targets. |
| Radioactive Material (Road Transport) (Amendment) Regulations 2003 SI 1867 | **Objectives:** Sets out measures to regulate the transportation of radioactive material by road, including prohibition and enforcement notices, powers of entry and offences.<br>**Targets:** No formal targets. |
| Environmental Permitting (England and Wales) Regulations 2010 SI 675 | **Objectives:** Provides a system for environmental permits and exemptions for industrial activities, mobile plant, waste operations, mining waste operations, water discharge activities, groundwater activities and radioactive substances activities. It also sets out the powers, functions and duties of the regulators.<br>**Targets:** No formal targets. |
| Trans-frontier Shipment of Radioactive Waste and Spent Fuel Regulations 2008 SI 3087 | **Objectives:** Establishes a system of authorisation and approval for shipping radioactive waste and spent nuclear fuel between member states and into and out of the EU.<br>**Targets:** No formal targets. |
| ODPM (2005) PPS10 Planning for Sustainable Waste Management | **Objectives:** The statement sets out a number of key planning objectives that aim to:<br>• drive waste management up the waste hierarchy;<br>• provide sufficient and timely provision of waste management facilities that meet the needs of their communities;<br>• implement the national waste strategy and support European legislation;<br>• secure the recovery and disposal of waste and ensure it does not harm human health or the environment;<br>• ensure waste is disposed of as near as possible to the place of production;<br>• reflects the concerns and interests of local communities, needs of waste collection/disposal authorities and business and encourages competition; and<br>• ensure the layout and design of new development should support sustainable waste management.<br>**Targets:** Does not contain any specific targets. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Material Assets (Waste Management)** | |
| Sustainable Development Commission (2010) Sustainable Development in Government Framework Targets | **Objectives:** The Sustainable Development in Government (SdiG) framework was announced in March 2010, this will replace the SOGE targets when they expire in 2010/11. This framework is intended to reduce its greenhouse gas emissions and ensure that the Government's estate is resilient to the impacts of changing climate. The framework also includes challenging targets on waste reduction and recovery, more efficient use of water, and it promotes the protection and enhancement of biodiversity, and positive engagement with the community.<br><br>**Targets:** Targets related to waste management include:<br>• increase waste recovery (recycling, external re-use, composting and energy from waste) to 80% of waste arisings by 2016/17 (60% of which would need to be achieved by recycling, external re-use, and composting); and<br>• in support of the joint industry and Government Sustainable Construction Strategy's ambition of reducing construction, demolition and excavation waste (CDEW) to landfill, set procurement requirements on each project over £300k to include targets for waste reduction, reuse and recovery in the Site Waste Management Plan from an early design stage, and report annually on the percentage of waste from these projects diverted from landfill. |
| Defra (2007) UK Ship Recycling Strategy | **Objectives:** The main objectives of the Strategy are:<br>• to develop a strategic approach to the recycling of UK-flagged vessels consistent with the UK's national and international sustainable development commitments; and<br>• to encourage, through the provision of guidance, the development of UK capacity for recycling of end-of-life vessels in an environmentally sound manner.<br>**Targets:** No formal targets. |
| Defra (2010) Strategy for Hazardous Waste Management in England | **Objectives:** The Strategy sets out the following principles for hazardous waste management:<br>• **Principle 1 - Waste Hierarchy** - Hazardous waste should be managed by waste producers and waste managers in accordance with the EU waste hierarchy. The hierarchy shall apply as a priority order in line with the Waste Framework Directive (2008/98/EC).<br>• **Principle 2 - Infrastructure Provision** - Look to the market for the development of hazardous waste infrastructure, which implements the hierarchy for the management of hazardous waste and meets the needs of the UK to ensure that the country as a whole is self sufficient in hazardous waste disposal, facilities are put in place for hazardous waste recovery in England, and the proximity principle is met.<br>• **Principle 3 - Reduce our Reliance on Landfill -** Continue to reduce reliance on landfill for hazardous waste, which should only be used where, overall, there is no better recovery or disposal option.<br>• **Principle 4 - No Mixing or Dilution** - Where hazardous waste cannot be prevented, waste producers and waste managers: a) shall not mix different categories of hazardous waste, or mix hazardous waste with other waste, substances or materials, unless under the terms of an environmental permit, and the mixing operation conforms to Best Available Techniques, (as identified in Article 2 of the Integrated Pollution Prevention and Control Directive); b) shall not treat hazardous waste by the dilution of hazardous substances and; c) must keep organic hazardous waste fractions separate from other streams to assist with their subsequent management in line with the hierarchy.<br>• **Principle 5** - **Treatment of Hazardous Organic Wastes -** Hazardous organic wastes that cannot be reused, recycled or recovered shall be subject to destruction using best available techniques, with energy recovery for all appropriate treatments. No hazardous organic waste shall be landfilled unless the requirements of the Landfill Directive are met.<br>• **Principle 6 - End reliance on the use of Landfill Directive waste acceptance criteria derogations** - The practice of relying on higher Landfill Directive waste acceptance criteria |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Material Assets (Waste Management)** | |
| | (derogation for 3x WAC) to enable hazardous waste to continue to be landfilled must end.<br>**Targets:** No formal targets. |
| **National (MOD)** | |
| MOD Sustainable Development Strategy, December 2008<br>&<br>MOD Sustainable Development Report and Action Plan 2008 | **Objectives:**<br>• to recover and recycle more waste than is sent to landfill by 2012; and<br>• become a zero waste to landfill organisation by 2020.<br>**Targets:**<br>• reduce total waste arisings by 5% by 2010 and 25% by 2020, relative to the 2004/05 baseline;<br>• increase recycling levels to 40% of total waste by 2010 and 75% by 2020; and<br>• by 2012, work with WRAP to stop half of MOD construction waste going to landfill. |
| MOD JSP 418, Leaflet 18 – Waste Management<br>MOD Sustainable Waste Management Strategy (2007) | **Objectives:**<br>• to actively support the Government's Waste Management Strategy and manage wastes in accordance with the waste management hierarchy;<br>• reduce and minimise the production of all waste streams (both hazardous and non-hazardous waste) from all units and/or establishments; and<br>• depending on the waste management infrastructure available, consign all residual waste to energy recovery operations by Dec 2012.<br>**Targets:** As above. |
| MOD JSP 418, Leaflet 14 – Radiation<br>MOD JSP 392, Radiation Safety Handbook (2008) | **Objectives:**<br>• To reduce exposure of the workforce, members of the public and the environment to levels which are as low as reasonably practicable (ALARP).<br>**Targets:** No formal targets. |
| **National (Scotland)** | |
| Scottish Government (2010) Scottish Planning Policy | **Objective:** Sets out a sustainable approach to waste management planning relies on a number of objectives including those reflected in the waste hierarchy, reduced reliance on landfill and a set of policy and spatial principles including the polluter pays; the precautionary and proximity principles (which address waste management, waste transport, environmental and health issues and cumulative impact).<br>**Target**: Scottish Government has adopted Zero Waste as a goal. |
| Scottish Government (2010) Scotland's Zero Waste Plan | **Objectives:** The Plan sets out the following strategic directions:<br>Resource Streams:<br>• Encourage waste prevention as a top priority across all resource streams, to reduce Scotland's overall resource use, reduce climate impacts, and increase resource efficiency.<br>• Take action to increase the quantity and quality of resources recycled, with the aim of achieving high levels of "closed loop" resource management.<br>• Develop clear and coordinated sector-specific programmes of work focusing on resource efficiency, infrastructure needs and the use of recyclate.<br>• Introduce policy levers that systematically drive the transition to a zero waste society across all resource streams. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Material Assets (Waste Management)** | |
| | • Continue to improve data on resource use and measurement from both business and the public sector, to steer government policy and raise business awareness of resource use.<br>• Introduce a new metric for waste that better captures the environmental impact of resource use. This will be used to drive Scotland's prevention, reuse and recycling objectives.<br>Economic Opportunity:<br>• Support the development of sustainable and high value markets for recyclate, with the aim of extracting highest value from resource flows.<br>• The Scottish Government will support the development of infrastructure and resource streams that will underpin markets for high quality recyclate.<br>• Encourage business, the public sector and householders to reuse or refurbish materials, or use recyclate or products containing recycled content to generate market supply.<br>• Provide market confidence to enable businesses to invest in innovative resource management infrastructure.<br>• Recover and utilise the electricity and/or heat from resources which cannot be reused or recycled for greater environmental or economic benefit, in line with Scotland's renewable energy goals.<br>Resource Management Sector:<br>• Encourage business investment in resource management and treatment by providing regulatory certainty and clear signals that investment in the future is of strategic interest.<br>• The land-use planning system will support the delivery of a zero waste Scotland.<br>• Scotland will have a waste regulation framework that supports resource management infrastructure and processes that protect the environment and deliver zero waste policies.<br>• Drive innovation by defining the outcomes of a zero waste Scotland, without being prescriptive about the means.<br>• Improve skill levels and health and safety in the resource management sector.<br>Education and Awareness:<br>• Deliver clear and targeted education and awareness programmes to meet the needs of the public, communities, businesses, local authorities, and the resource management industry.<br>• Local and national awareness campaigns are well targeted and build on common and consistent messages to encourage participation in prevention, reuse, recycling at home, work and public spaces.<br>• Develop the role of measures to influence waste behaviours, including incentives, to encourage households and businesses to take responsibility for minimising their own waste and using resources effectively.<br>• Accurate, informed and consistent understanding, at a local and national level, of the important role new waste infrastructure investment plays in delivering a zero waste Scotland.<br>• Encourage understanding of the value of resources within the education system.<br>**Targets**: Recycling 70% of all Scotland's waste, and only 5% of remaining waste ending up in landfill by 2025. |
| Consultation on the Detailed Statement of Policy for Scotland's Higher Activity Radioactive Waste (the Policy) | **Objectives:** This consultation document outlines the Scottish Government's proposals on the Detailed Statement of Policy in respect of Scotland's higher activity radioactive waste. The Scottish Government's policy for higher activity radioactive waste is to support long-term near surface, near site storage and disposal facilities so that the waste is monitorable and retrieveable and the need for transporting it over long distances is minimal.<br>It is proposed that the Policy will: |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Material Assets (Waste Management)** | |
| | • explicitly require waste producers and owners to apply the waste hierarchy;<br>• enable innovation to develop alternative management options for example, for treatment and packaging;<br>• allow the option of sending the waste elsewhere for treatment, including exporting it overseas;<br>• enable waste producers and owners in Scotland to consider alternative management options and revise existing, and develop new, planning assumptions to take account of the requirements of the Policy; and<br>• require regulators to take account of the application of the waste hierarchy when scrutinising the proposals of waste producers, owners and facility operators for management of the waste.<br>**Targets:** No formal targets. |
| **National (Wales)** | |
| Welsh Assembly Government (2010) Planning Policy Wales (Edition 2) | **Objectives:** Planning Policy Wales sets out the land use planning policies of the Welsh Assembly Government. It sets out that decisions on planning applications should have regard to the waste management objectives in the national waste strategy. The environmental impact of proposals for waste management facilities must be adequately assessed, supported by independent surveys where appropriate, to determine whether a planning application is acceptable and, if the adverse impacts on amenity cannot be mitigated, planning permission should be refused. Adequate facilities for the collection, composting and recycling of waste materials should be incorporated into the design of any major development.<br>**Targets:** No formal targets. |
| Welsh Assembly Government (2001) Technical Advice Note 21: Waste | **Objectives:** TAN21 sets out the following key principles in relate to the management of waste:<br>• proximity - waste should be treated and or disposed of as near to the source of origin as possible and as far as practically possible;<br>• self-sufficiency - waste should be treated or disposed of within a sensibly defined region; and<br>• the waste hierarchy - to manage waste in accordance with the following hierarchy: reduce; re-use; recover; disposal.<br>**Targets:** Sets out targets for waste to landfill in accordance with the Landfill Directive. |
| Welsh Assembly Government (2010) Towards Zero Waste, One Wales: One Planet – Overarching Waste Strategy Document for Wales | **Objectives:** The key outcomes that the Strategy aims to achieve are:<br>• a sustainable environment in which we reduce the impact of waste in Wales to within our environmental limits by 2050;<br>• a Fair and Just Society, in which citizens can achieve their full human potential and contribute to the wellbeing of Wales through actions on waste prevention, reuse and recycling; and<br>• a Prosperous Society With a sustainable, resource efficient economy.<br>**Targets:** The strategy sets out a long-term aim of zero waste by 2050 and a medium term aim of achieving a high recycling society by 2025. This is supported by a range of recycling and other waste management targets including in relation to commercial and industrial waste. |
| Environmental Permitting (England and Wales) Regulations 2010 SI 675 | **Objectives:** Provides a system for environmental permits and exemptions for industrial activities, mobile plant, waste operations, mining waste operations, water discharge activities, groundwater activities and radioactive substances activities. It also sets out the powers, functions and duties of the regulators.<br>**Targets:** No formal targets. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Material Assets (Waste Management)** | |
| **National (Northern Ireland)** | |
| Department of the Environment Northern Ireland (2006) Towards Resource Management: The Northern Ireland Waste Management Strategy 2006-2020 | **Objectives:** The aim of the Strategy is to help us manage waste and resources effectively. This means using material resources in a way that reduces the quantities of waste produced and, where waste is generated, to manage it in a way that minimises its impact on the environment and public health and contributes positively to economic and social development. In support of this aim, the key objectives of this Strategy are:<br>• to move from waste towards resources management;<br>• to demonstrate Government's commitment by setting an example to other sectors of good waste management practice and by using its purchasing power to drive change;<br>• to prevent waste, where possible;<br>• to use the necessary Government powers (legislative, regulatory and economic) to ensure improved waste management practices;<br>• to maximise recycling and recovery of those materials which enter the waste stream;<br>• to develop an integrated network of regional waste management facilities that represent value for money for Northern Ireland;<br>• to attract investment, support economic development and create opportunities for increased employment and wealth creation;<br>• to improve data to support investment and facilitate monitoring;<br>• to maintain a regulatory framework which supports those businesses that work towards more efficient and sustainable use of resources; and<br>• to promote, encourage and facilitate public action through providing the opportunity to contribute to environmental protection at individual and household levels.<br>**Targets:** 60% of commercial and industrial waste to be recycled by 2020. 75% of construction, demolition and excavation wastes to be recycled or reused by 2020. Recycling and composting of household wastes to be at: 35% by 2010; 40% by 2015; and 45% by 2020. |
| Radioactive Substances Act 1993 | **Objectives:** Sets out measures to regulate the use and disposal of radioactive substances including registration, authorisation, enforcement and offences.<br>**Targets:** No formal targets. |
| High-activity Sealed Radioactive Sources and Orphan Sources Regulations 2005, SI 2686 | **Objectives:** Specifies how high-activity sealed radioactive sources should be registered, kept, used or disposed of. Also covers detecting, recovering and dealing with radioactive sources that are not currently regulated ('orphan sources').<br>**Targets:** No formal targets. |
| Radioactive Material (Road Transport) (Northern Ireland) Order 1992 SR 234 (NI 2) | **Objectives:** Sets out measures to regulate the transportation of radioactive material by road in Northern Ireland, including prohibition and enforcement notices, powers of entry and offences.<br>**Targets:** No formal targets. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Material Assets (Land Use and Materials)** | |
| **International / European (e.g. Directives)** | |
| European Commission (1999) European Spatial Development Perspective | **Objectives:** The European Spatial Development Perspective (ESDP) is a framework for policy guidance to improve cooperation among Community sectoral policies which have a significant impact in spatial terms. The policy objectives and options of the ESDP are as follows:<br>• the establishment of a polycentric and balanced urban system;<br>• the production of integrated transport and communications concepts offering parity of access to infrastructure and knowledge throughout the Union; and<br>• the development and conservation of the natural and cultural heritage.<br><br>**Targets:** No formal quantitative targets. |
| European Sustainable Development Strategy (2006) | **Objectives:**<br>• environmental protection - Among others, preventing and reducing environmental pollution and promoting sustainable consumption and production;<br>• social equity and cohesion- Promoting a democratic, socially inclusive, healthy, safe and just society;<br>• economic prosperity; and<br>• meeting the EU international responsibilities.<br><br>**Targets:**<br>The following key challenge areas include a number of targets in achieving their respective objectives:<br>• climate change and clean energy;<br>• sustainable transport;<br>• sustainable consumption and production;<br>• conservation and management of natural resources;<br>• public health;<br>• social inclusion, demography and migration; and<br>• global poverty and sustainable development challenges. |
| United Nations World Summit on Sustainable Development, Johannesburg (2002) Commitments arising from Johannesburg Summit | **Objectives:** The World Summit on Sustainable Development proposed broad-scale principles which should underlie sustainable development and growth. It included objectives such as:<br>• greater resource efficiency (including decoupling economic growth from environmental degradation);<br>• support for business innovation and take-up of best practice in technology and management;<br>• work on waste and producer responsibility;<br>• removal of market barriers and creation of a level playing field for renewable energy and energy efficiency;<br>• new technology development;<br>• technology demonstration and risk limitation;<br>• push on energy efficiency;<br>• integration of water management plans; |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Material Assets (Land Use and Materials)** | |
| | • distribution and decentralisation of energy; and<br>• minimisation of significant adverse effects on human health and the environment from chemicals by 2020.<br><br>**Targets**: There are a number of follow-up processes e.g. "significantly" reduce rate of loss of biodiversity by 2010, but no specific targets. |
| **National (UK)** | |
| ODPM (2005) Planning Policy Statement (PPS) 1: Delivering Sustainable Development | **Objectives:** PPS1 supports the reform programme and, in particular, the Government's objectives for planning cultural change, by setting out the Government's vision for planning, and the key policies and principles that should underpin the planning system. These are built around three themes:<br>1. Sustainable development - the purpose of the planning system;<br>2. The spatial planning approach; and<br>3. Community involvement in planning.<br><br>The key policy messages are:<br>• the need for planning authorities to take an approach based on integrating the four aims of sustainable development: economic development; social inclusion; environmental protection; and prudent use of resources;<br>• the need for positive planning to achieve sustainable development objectives and proactive management of development, rather than simply regulation and control;<br>• the need for plans to set clear visions for communities and help to integrate the wide range of activities relating to development and regeneration; and<br>• the need for the planning system to be transparent, accessible and accountable, and to actively promote participation and involvement.<br><br>**Targets:** Does not contain any targets. |
| HM Treasury and ODPM (2004) Government's Barker Review of Housing Supply Delivering Stability: Securing our Future Housing | **Objective:** The barker review sets out the principle housing challenges facing the UK and recommendations for improving housing availability and affordability and set out the following objectives:<br>• to achieve improvements in housing affordability in the market sector;<br>• a more stable housing market;<br>• location of housing supply which supports patterns of economic development; and<br>• an adequate supply of publicly-funded housing for those who need it.<br><br>**Targets:** No formal targets. |
| Planning for a Sustainable Future: White Paper (2007) | **Objectives:** Five core principles underpin the Paper's proposals:<br>• planning must be responsive, particularly to longer term challenges such as increasing globalisation and climate change, and properly integrate our economic, social and environmental objectives to deliver sustainable development;<br>• the planning system should be streamlined, efficient and predictable;<br>• there must be full and fair opportunities for public consultation and community engagement;<br>• the planning system should be transparent and accountable; and |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| | **Material Assets (Land Use and Materials)** |
| | • planning should be undertaken at the right level of government - national, regional and local.<br><br>**Targets:** No formal targets but a number of objectives regarding numerous topics within Paper. |
| UK Government Sustainable Development Strategy: Securing the Future (2005) and the UK's Shared Framework for Sustainable Development, One Future – Different Paths (2005) | **Objectives:**<br>The Strategy sets out five guiding principles:<br>• living within Environmental Limits to improve our environment and ensure that natural resources are unimpaired and remain so for future generations;<br>• ensuring a Strong, Healthy and Just Society: Meeting the diverse needs of all people in existing and future communities, promoting personal wellbeing, social cohesion and inclusion, and creating equal opportunity for all;<br>• achieving a Sustainable Economy: Building a strong, stable and sustainable economy which provides prosperity and opportunities for all, and in which environmental and social costs fall on those who impose them (polluter pays), and efficient resource use is incentives;<br>• using Sound Science Responsibly: Ensuring policy is developed and implemented on the basis of strong scientific evidence, whilst taking into account scientific uncertainty (through the precautionary principle) as well as public attitudes and values;<br>• promoting Good Governance: Actively promoting effective, participative systems of governance in all levels of society - engaging people's creativity, energy, and diversity;<br>It also sets out four priorities shared across the UK, namely:<br>• sustainable Consumption and Production;<br>• climate Change and Energy;<br>• natural resources protection and environmental enhancement; and<br>• sustainable Communities.<br>**Targets:** Securing the Future committed all government departments to produce action plans setting out what they planned to do to deliver the above objectives. These are quantified within the Framework for Sustainable Development on the Government Estate. |
| Securing the Regions' Futures - Strengthening the Delivery of Sustainable Development in the English Regions (2006) | **Objectives:**<br>• using the sustainable development principles and priorities to underpin the refreshed or updated high-level regional strategies;<br>• creating a strengthened role for regional sustainable development roundtables as 'champion bodies';<br>• embedding sustainable development within the work of Government Offices and across their organisations so as to become exemplars in the regions;<br>• supporting the role of Regional Assemblies in delivering sustainable development through all their functions;<br>• working with Regional Development Agencies to help them deliver economic productivity, which delivers sustainable development at the same time - and to ensure that this contribution is fully reflected in Regional Development Agency assessments; and<br>• maximising the contribution which city-regions, sub-regions and inter-regional strategies can make to delivering sustainable development through innovative ways of working at these levels.<br><br>**Targets:** No formal targets. |
| HM Government (2005) Securing the Future: the UK Government Sustainable Development Strategy. | **Objectives**: The strategy sets out five key principles:<br>• living within environmental limits: respecting the limits of the planet's environment, resources and biodiversity - to improve our environment and ensure the natural resources needed for life are |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Material Assets (Land Use and Materials)** | |
| | unimpaired and remain so for future generations;<br>• ensuring a strong, healthy and just society: meeting the diverse needs of all people in existing and future communities, promoting personal wellbeing, social cohesion and inclusion, and creating equal opportunity for all;<br>• achieving a sustainable economy: building a strong, stable and sustainable economy which provides prosperity and opportunities for all, and in which environmental and social costs fall on those who impose them, and efficient resource use is incentivised;<br>• promoting good governance: actively promoting effective, participative systems of governance in all levels of society - engaging people's creativity, energy, and diversity; and<br>• using sound science responsibly: ensuring policy is developed and implemented on the basis of strong scientific evidence, whilst taking into account scientific uncertainty as well as public attitudes and values.<br>It also sets out four priorities shared across the UK, namely:<br>• sustainable consumption and production;<br>• climate change and energy;<br>• natural resource protection and environmental enhancement; and<br>• sustainable communities.<br><br>**Targets:** Securing the Future committed all government departments to produce action plans setting out what they planned to do to deliver the above objectives. These are quantified within the Framework for Sustainable Development on the Government Estate. |
| ODPM (2005) PPS6: Planning for Town Centres | **Objectives:** The Government is committed to developing and supporting successful, thriving, safer and inclusive communities, both urban and rural. Its key objective for town centres is to promote their vitality and viability by:<br>• planning for the growth and development of existing centres; and<br>• promoting and enhancing existing centres, by focusing development in such centres and encouraging a wide range of services in a good environment, accessible to all.<br>**Targets:** This PPS does not contain any targets. |
| ODPM (2004) PPS7: Sustainable Development in Rural Areas | **Objectives:** The Government's objectives for rural areas relevant to this PPS are:<br>• to raise the quality of life and the environment in rural areas;<br>• to promote more sustainable patterns of development;<br>• promoting the development of the English regions by improving their economic performance; and<br>• to promote sustainable, diverse and adaptable agriculture sectors.<br><br>**Targets:** There are no specific targets in the PPS. |
| UK Government Sustainable Procurement Action Plan (2007) | **Objectives:**<br>• a sustainably built and managed central government estate that minimises carbon emissions, waste and water consumption and increases energy efficiency (in line with Departmental sustainable operations targets);<br>• sustainably built and managed properties and roads throughout the public sector; and<br>• government supply-chains and public services that are increasingly low carbon, low waste and water efficient, which respect biodiversity and deliver wider sustainable development goals.<br>**Targets:**<br>• by 2020, the Government office estate would have reduced its emissions by around 180,000 |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Material Assets (Land Use and Materials)** | |
| | tonnes of carbon dioxide;<br>• save around 75,000 tonnes of carbon dioxide by 2010/11 from road vehicles;<br>• achieving a carbon neutral office estate by 2012 through offsetting between 475,000 and 550,000 tonnes of carbon dioxide per annum;<br>• in addition, by 2009, around 100,000 tonnes of carbon dioxide per year will be offset through the air travel offsetting scheme (to which all Departments have signed up);<br>• by 2020, the Government would increase its energy efficiency by around 100kWh per square metre and save around £1 million (based on net present value);<br>• by 2020, the Government estate would reduce its total waste arising by 30,000 tonnes and recycle around 65,000 tonnes of waste;<br>• a total of 220 Sites of Special Scientific Interest (SSSI) on the Government estate would be in target condition by 2010; and<br>• by 2020, the Government estate would have reduced its office water consumption by around 65,000 cubic metres. |
| Sustainable Development Commission (2010) Sustainable Development in Government Framework Targets | **Objectives:** The Sustainable Development in Government (SDiG) framework was announced in March 2010, this will replace the SOGE targets when they expire in 2010/11. This framework is intended to reduce its greenhouse gas emissions and ensure that the public sector is resilient to the impacts of changing climate. The framework also includes challenging targets on waste reduction and recovery, more efficient use of water, and it promotes the protection and enhancement of biodiversity, and positive engagement with the community.<br><br>**Targets:** Targets relating to procurement include:<br>• Central Government Departments and executive agencies to reach an average of Level 3 (mode) of the Flexible Framework that includes at least a Level 3 for measurement and results by end of 2012 and at Level five for all areas by end of March 2015<br>• Executive NDPBs all to reach Level 1 or above (across all areas: People, Policy) by 2011/12 and thereafter Level 5 by end of March 2015. This includes Non-Ministerial Departments who don't currently report against the SOGE targets. |
| **National (MOD)** | |
| MOD JSP 434 – Defence Construction in the Built Environment | **Objectives:**<br>• Ensure development satisfies the defence business need, whilst also satisfying the Government's commitment to sustainable development.<br>• Procurement decisions to take full account of whole life value, and include justification for any decision to procure new facilities as opposed to the re-use of existing facilities. Decisions should also take account of all likely economic, environmental and social costs and benefits.<br>• Apply Office of Government Commerce (OGC) minimum procurement standards, including "Quick Win" specifications wherever practicable, and meeting agreed BREEAM (Building Research Establishment Environmental Assessment Methodology), DREAM (Defence-Related Environmental Assessment Methodology) or equivalent standards.<br>• Suppliers are required to operate their own EMS, or equivalent systems for their own processes for which they are responsible, in a way that supports MOD EMSs.<br>• **Targets:** No formal targets. |
| MOD Sustainable Development Strategy, December 2008,<br><br>MOD Sustainable Development Report and Action Plan 2008, | **Objectives:**<br>• become a national leader in sustainable procurement by 2009; and<br>• deliver sustainable defence buildings. |

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| **Material Assets (Land Use and Materials)** | |
| MOD JSP 418, Chapter 17 – Sustainable Procurement; and<br>MOD Sustainable Procurement Strategy 2009 | **Targets:**<br>• achieve Level 3 of the Sustainable Procurement Task Force National Action Plan's Flexible Framework in all themes (and Level 5 in Engaging Suppliers);<br>• use Project Oriented Environmental Management Systems (POEMS) on all new equipment projects and implement lessons learned by sharing best practice;<br>• embed sustainable procurement principles into all commercial standards, guidance, processes and procurement strategy and policy;<br>• ensure that all new contracts comply with appropriate sustainability standards, such as OGC's 'Buy Sustainable' (previously Quick Wins) minimum requirements and BREEAM/DREAM standards; and<br>• ongoing target to participate in OGC's Property Benchmarking Scheme - aimed at improving the efficiency and effectiveness of corporate estate management. |
| **National (Scotland)** | |
| Scottish Executive (2005) Choosing our Future: Scotland's Sustainable Development Strategy | **Objectives:** The guiding principles for sustainable development and climate change reflect the five UK principles.<br>**Targets:** No direct targets but a range of suggestions for improving sustainability. |
| Scottish Executive (2009) National Planning Framework for Scotland 2 | **Objectives:** The National Planning Framework sets out the spatial strategy for Scotland to 2030. This strategy is underpinned by the following aims:<br>• to contribute to a wealthier and fairer Scotland by supporting sustainable economic growth and improved competitiveness and connectivity;<br>• to promote a greener Scotland by contributing to the achievement of climate change targets and protecting and enhancing the quality of the natural and built environments;<br>• to help build safer, stronger and healthier communities, by promoting improved opportunities and a better quality of life; and<br>• to contribute to a smarter Scotland by supporting the development of the knowledge economy.<br>The main elements of the spatial strategy to 2030 are to:<br>• support strong, sustainable growth for the benefit of all parts of Scotland;<br>• promote development which helps to reduce Scotland's carbon footprint and facilitates adaptation to climate change;<br>• support the development of Scotland's cities as key drivers of the economy;<br>• support sustainable growth in the rural economy;<br>• conserve and enhance Scotland's distinctive natural and cultural heritage, and continue to safeguard internationally protected sites, habitats and species;<br>• expand opportunities for communities and businesses by promoting environmental quality and good connectivity;<br>• promote development which helps to improve health, regenerate communities and enable disadvantaged communities to access opportunities;<br>• strengthen links with the rest of the world;<br>• promote more sustainable patterns of travel, transport and land use;<br>• realise the potential of Scotland's renewable energy resources and facilitate the generation of power and heat from all clean, low carbon sources;<br>• encourage a sufficient supply of homes which are affordable in places where people want to live; |

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| **Material Assets (Land Use and Materials)** | |
| | and<br>• facilitate the implementation of the National Waste Management Plan including waste management targets.<br><br>**Targets:** No formal targets. |
| The Town and Country Planning (Scotland) Act 1997 | **Objectives:** Principle piece of planning legislation governing the use and development of land within Scotland. Covers topics such as development plans, development control, compensation and enforcement.<br><br>**Targets:** No formal targets. |
| Scotland Rural Development Programme 2007-2013 – The Strategic Plan | **Objectives:** Rural Scotland should:<br>• be integral to Scotland's success, dynamic in harnessing its traditional strengths, and with an appetite for change;<br>• provide opportunity for young people - so that they do not have to leave rural areas to progress;<br>• offer a high quality of life to all its citizens, with access to quality services; and<br>• sustain and make the most of its natural and cultural heritage.<br><br>The following cross-cutting principles are to guide the approach to the strategy and the Programme itself:<br>• an integrated approach to policy delivery that combines economic, social and environmental actions;<br>• flexibility to meet diversity and local distinctiveness across rural Scotland; and<br>• promotion of sustainability, resilience and vigour in the rural economy, communities and natural heritage. |
| **National (Wales)** | |
| Welsh Assembly Government (2008) People, Places, Futures: The Wales Spatial Plan 2008 Update | **Objectives:** The Wales Spatial Plan provides the context and direction of travel for local development plans and the work of local service boards. The 2008 update brings the Wales Spatial Plan into line with One Wales, and gives status to the area work which has developed since 2006. The key themes of the update (and the Wales Spatial Plan before it) are set out below:<br><br>**Building Sustainable Communities**<br><br>Our future depends on the vitality of our communities as attractive places to live and work. We need to reduce inequalities between communities whilst retaining their character and distinctiveness.<br><br>**Promoting a Sustainable Economy**<br><br>We need an innovative, high value-added economy for Wales which utilises and develops the skills and knowledge of our people; an economy which both creates wealth and promotes the spreading of that prosperity throughout Wales; an economy which adds to the quality of life as well as the standard of living and the working environment.<br><br>**Valuing our Environment**<br><br>The quality of our natural environment has an intrinsic value as a life support system, but also promotes wellbeing for living and working and contributes to our economic objectives. Safeguarding and protecting our natural and historic assets, and enhancing resilience to address the challenges of |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Material Assets (Land Use and Materials)** | |
| | climate change, will enable us to attract people to our communities and provide the wellbeing and quality of life to encourage them to stay and preserve the foundations for the future.<br><br>**Achieving Sustainable Accessibility**<br><br>We will develop access in ways that protect the environment, encourage economic activity, widen employment opportunities, ensure quality services and integrate the social, environmental and economic benefits that travel can have.<br><br>**Respecting Distinctiveness**<br><br>A cohesive identity which sustains and celebrates what is distinctive about Wales, in an open and outward-looking way, is central to promoting Wales to the World, as well as to our future economic competitiveness and social and environmental wellbeing.<br><br>**Targets:** No formal targets. |
| Welsh Assembly Government (2009) Ministerial Interim Planning Policy Statement – Sustainable Building Design | **Objectives:** This Ministerial Interim Planning Policy Statement provides a new section 2.12 of Planning Policy Wales. It states that development proposals should mitigate the causes of climate change by minimising carbon and other greenhouse gas emissions, associated with their design, construction, use and eventual demolition. The overall aspiration is to secure zero carbon buildings while continuing to promote a range of low and zero carbon technologies as a means to achieve this. It also states that development proposals should include features that provide effective adaptation to and resilience against the current and predicted future effects of climate change.<br><br>**Targets:** Planning applications received on or after 1st September 2009 for non-residential development which will either have a floorspace of 1,000 sqm or more, or will be carried out on a site having an area of one hectare or more must meet the Building Research Establishment Environmental Assessment Method (BREEAM) 'Very Good' standard and achieve the mandatory credits for 'Excellent' under issue Ene1 - Reduction of $CO_2$ Emissions'. |
| Welsh Assembly Government (2009) One Wales: One Planet, A New Sustainable Development Scheme for Wales | **Objectives:** The Sustainable Development Scheme sets out the Assembly Government's vision of a sustainable Wales and describes specific outcomes that WAG will seek to achieve through its main policies and programmes and processes that it will put in place to ensure its work coherently reflects the goals of sustainable development. The Scheme's vision is for Wales to be a nation that:<br>• lives within its environmental limits, using only its fair share of the earth's resources so that the ecological footprint is reduced to the global average availability of resources, and we are resilient to the impacts of climate change;<br>• has healthy, biologically diverse and productive ecosystems that are managed sustainably;<br>• has a resilient and sustainable economy that is able to develop whilst stabilising, then reducing, its use of natural resources and reducing its contribution to climate change;<br>• has communities which are safe, sustainable, and attractive places for people to live and work, where people have access to services, and enjoy good health; and<br>• is a fair, just and bilingual nation, in which citizens of all ages and backgrounds are empowered to determine their own lives, shape their communities and achieve their full potential.<br><br>**Targets:** To reduce by at least two thirds the total resources Wales currently uses by, amongst other elements:<br>• radically reducing by 80-90% use of carbon-based energy; and<br>• moving towards becoming a zero waste nation with 70% recycling across all sectors, and diverting waste from landfill by 2025. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Material Assets (Land Use and Materials)** | |
| Welsh Assembly Government (2009) Technical Advice Note 12: Design | **Objectives:** Technical Advice Note 12 sets out the Assembly Government's land use planning policy in respect of promoting sustainability through good design. It contains the following objectives for good design:<br>• movement - promoting sustainable means of travel;<br>• access- ensuring access for all;<br>• character - sustaining or enhancing local character, promoting legible development, promoting a successful relationship between public and private space, promoting quality, choice and variety, promoting innovative design;<br>• community safety - ensuring attractive, safe public spaces and security through natural surveillance;<br>• environmental sustainability - achieving efficient use and protection of natural resources, enhancing biodiversity and designing for change.<br><br>**Targets:** No formal targets. |
| Welsh Assembly Government (2008) One Wales One Planet: | **Objectives:** One Wales One Planet seeks to build on the two previous WAG Sustainable Development Schemes. It sets out proposals to promote sustainable development, how WAG will make sustainable development a reality for people in Wales, and the benefits that people will see from this, particularly in less well-off communities. The strategy states that WAG are committed to working in partnership with others and notes that businesses can:<br>• develop resource efficiency within the organisation and through supply chains, improving productivity and competitiveness;<br>• reduce waste;<br>• develop environmental and sustainability policies and targets;<br>• monitor performance and resource use and report publicly on them;<br>• engage with the workforce in both adopting sustainable practices and encouraging employees to become sustainable champions in their own communities; and<br>• engage with and support local communities.<br><br>**Targets:** No formal targets. |
| **National (Northern Ireland)** | |
| Office of the First Minister and Deputy First Minister (2006) A Sustainable Development Strategy for Northern Ireland | **Objectives:** This strategy, the first sustainable development strategy for Northern Ireland, provides a Government framework for promoting sustainable development within Northern Ireland. The strategy sets out a number of strategic objectives and key targets associated with them. These are listed below:<br>• to become more resource efficient;<br>• to make the Northern Ireland public sector a UK regional leader in sustainable procurement;<br>• to minimise the unsustainable impacts of consumption;<br>• to conserve our landscape and manage it in a more sustainable way;<br>• to protect and enhance the freshwater and marine environment;<br>• to improve our air quality;<br>• to conserve, protect, enhance and sustainably re-use our historic environment;<br>• to protect and enhance biodiversity;<br>• to increase the economic wellbeing of the people of Northern Ireland;<br>• to create an attractive, high quality environment where people feel safe and which provides the conditions for health and social well-being; |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Material Assets (Land Use and Materials)** | |
| | • to promote the development of community engagement, civic leadership and responsible citizenship;<br>• reduce greenhouse gas emissions, principally by promoting energy efficiency and the use of renewables;<br>• establish Northern Ireland as a world class exemplar in thedevelopment and use of renewable energy technology;<br>• plan and prepare for climate change impacts in Northern Ireland;<br>• to provide access for all citizens to gain sustainable development skills and knowledge;<br>• to bring about the behavioural changes necessary to progress towards a sustainable society; and<br>• to strengthen the network of accountability for governance for sustainable development.<br>**Targets** (relevant to land use)**:**<br>• stabilise the Northern Ireland ecological footprint by 2005 and reduce it thereafter;<br>• increase Northern Ireland's forested area by at least 500 hectares per annum in line with recently published Forestry Strategy - A Strategy for Sustainability and Growth;<br>• ensure planning policy and guidance fully reflects the sustainable communities approach, integrates health objectives, incorporates greater consideration of crime prevention and permits development only within local environmental capacity; and<br>• develop and implement changes to Government policies and strategies to address adaptation issues. |
| Northern Ireland Planning Service (1998) PPS1: General Principles | **Objectives:** This Statement sets out the general principles that the department observes in formulating planning policies, making development plans and exercising control of development. The department's approach to planning is underpinned by the following four key themes:<br>• sustainable development;<br>• quality development;<br>• good design; and<br>• mixed use.<br>The statement seeks to promote the following:<br>• accountability;<br>• propriety; and<br>• public participation.<br>**Targets:** No formal targets. |
| Northern Ireland Planning Service (2010) PPS21: Sustainable Development In the Countryside | **Objectives:** This Statement PPS 21 sets out planning policies for development in the Northern Ireland countryside. The objectives of PPS 21 are:<br>• to manage growth in the countryside to achieve appropriate and sustainable patterns of development that meet the essential needs of a vibrant rural community;<br>• to conserve the landscape and natural resources of the rural area and to protect it from excessive, inappropriate or obtrusive development and from the actual or potential effects of pollution;<br>• to facilitate development necessary to achieve a sustainable rural economy; including appropriate farm diversification and other economic activity; and<br>• to promote high standards in the design, siting and landscaping of development in the countryside.<br>**Targets:** No formal targets. |

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| **Material Assets (Land Use and Materials)** | |
| Northern Ireland Planning Service (1993) Planning Strategy for Rural Northern Ireland | **Objectives:** This Strategy establishes the objectives and the policies for land use and development appropriate to the particular circumstances of Northern Ireland and which need to be considered on a scale wider than the individual District Council Area. The Planning Strategy is based upon an analysis of the key issues and opportunities relevant to rural Northern Ireland. It considers the complex inter-relationships between town and country and seeks to present a clear vision of the future development of the rural area. The objectives of the Strategy are:<br>• to protect and enhance the natural and man-made environment;<br>• to meet the future development needs of the rural community;<br>• to facilitate regeneration of the rural economy;<br>• to accommodate change, while maintaining the character of the countryside;<br>• to revitalise rural towns and villages in order to make them more attractive places in which to live and work; and<br>• to promote a high quality of design in new development.<br>Note: PPSs are gradually replacing the policy provisions of the Planning Strategy for Rural Northern Ireland and each PPS indicates those policies of the Strategy that it is superseding. In the meantime, the Planning Strategy remains in force for those topics not covered by a PPS or other policy publication and where still applicable, remain a material consideration until it is completely superseded.<br>**Targets:** No formal targets. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Cultural Heritage** | |
| **International / European (e.g. Directives)** | |
| European Convention on the Protection of the Archaeological Heritage 1992 | **Objectives:** Convention made agreements under the following topics:<br>• definition of the archaeological heritage;<br>• identification of the heritage and measures for protection;<br>• integrated conservation of the archaeological heritage;<br>• financing of archaeological research and conservation;<br>• collection and dissemination of scientific information;<br>• promotion of public awareness;<br>• prevention of the illicit circulation of elements of the archaeological heritage; and<br>• mutual technical and scientific assistance.<br><br>**Targets:** No formal targets. |
| UNESCO Convention concerning the Protection of the World Cultural and Natural Heritage (1972) | **Objectives:** Convention defines the kind of natural or cultural sites which can be considered for inscription on the World Heritage List.<br><br>The Convention sets out the duties of States Parties in identifying potential sites and their role in protecting and preserving them. By signing the Convention, each country pledges to conserve not only the World Heritage sites situated on its territory, but also to protect its national heritage.<br><br>**Targets:** No formal targets. |
| The World Heritage Committee's 'Operational Guidelines for the Implementation of the World Heritage Convention' (2008) | **Objectives:** Guidelines set the procedure for:<br>a) the inscription of properties on the World Heritage List and the List of World Heritage in Danger;<br>b) the protection and conservation of World Heritage properties;<br>c) the granting of International Assistance under the World Heritage Fund; and<br>d) the mobilization of national and international support in favour of the Convention.<br><br>**Targets:** No formal targets. |
| **National (UK)** | |
| Ancient Monuments and Archaeological Areas Act (1979). | **Objectives:** This Act provides for the scheduling of ancient monuments and protection of archaeological sites in U.K. law.<br><br>**Targets:** No formal targets. |
| The Planning (Listed Buildings and Conservation Areas) Act (1990) | **Objectives:** This legislation outlines the level of protection received by listed buildings, scheduled monuments and buildings within conservation areas.<br><br>**Targets:** No formal targets. |
| Communities and Local Government (2010) PPS5: Planning for the Historic Environment | **Objectives**: The Government's objectives for planning for the historic environment are:<br>• to deliver sustainable development by ensuring that policies and decisions concerning the historic environment:<br>o recognise that heritage assets are a non-renewable resource<br>o take account of the wider social, cultural, economic and environmental benefits of heritage |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Cultural Heritage** | |
| | conservation; and<br>o recognise that intelligently managed change may sometimes be necessary if heritage assets are to be maintained for the long term.<br>• to conserve England's heritage assets in a manner appropriate to their significance by ensuring that:<br>o decisions are based on the nature, extent and level of that significance, investigated to a degree proportionate to the importance of the heritage asset;<br>o wherever possible, heritage assets are put to an appropriate and viable use that is consistent with their conservation;<br>o the positive contribution of such heritage assets to local character and sense of place is recognised and valued; and<br>o consideration of the historic environment is integrated into planning policies, promoting place-shaping.<br>• to contribute to the knowledge and understanding of the past by ensuring that opportunities are taken to capture evidence from the historic environment and to make this publicly available, particularly where a heritage asset is to be lost.<br><br>**Targets:** Does not contain any specific targets. |
| Protection of Wrecks Act 1973 | **Objectives:** Act sets out that on account of the historical, archaeological or artistic importance of a vessel, or of any objects contained or formerly contained in it which may be lying on the sea bed in or near the wreck, sites ought to be protected from unauthorised interference.<br><br>**Targets:** No formal targets. |
| Protection of Military Remains Act 1986 | **Objectives:** The Act protects a number of named military vessel remains.<br><br>**Targets:** No formal targets. |
| Department for Culture, Media and Sport (2007) Heritage Protection for the 21st Century - White Paper | **Objectives:** This is a White Paper for England and Wales with some UK-wide elements. It has three core principles:<br>• developing a unified approach to the historic environment;<br>• maximising opportunities for inclusion and involvement; and<br>• supporting sustainable communities by putting the historic environment at the heart of an effective planning system.<br><br>**Targets:** No formal targets, but a number of measures/recommendations. |
| Treasure Act 1996 | **Objective:** Act designed to deal with finds of treasure, its ownership and rewards.<br><br>**Targets:** No formal targets. |
| English Heritage (2005): Wind Energy and the Historic Environment (guidance paper) | **Objectives:** English Heritage provide the following best practice objectives:<br>• implications for the historic environment of wind energy developments should be reflected in Regional Spatial Strategies, Local Development Frameworks and Supplementary Planning Documents;<br>• effects of wind energy programmes and projects on the historic environment should be evaluated in all levels of environmental impact assessment;<br>• consideration of the historic environment should include World Heritage Sites; marine, coastal and terrestrial archaeology; historic buildings and areas; designed landscapes ;and the historic character of the wider landscape;<br>• significance of internationally and nationally designated sites should be safeguarded, and physical |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Cultural Heritage** | |
| | damage to historic sites should be avoided;<br>• impact of wind energy developments on the setting and visual amenity of historic places should also be considered;<br>• where wind energy developments affect historic sites, national planning policies on the historic environment should be taken into account; and<br>• consideration should always be given to the reversibility of wind energy projects.<br><br>**Targets:** No formal targets. |
| English Heritage (2005): Biomass Energy and the Historic Environment (guidance paper) | **Objectives:** English Heritage provide the following best practice objectives:<br>• implications for the historic environment of biomass energy developments should be reflected in Regional Spatial Strategies, Local Development Frameworks and Supplementary Planning Documents;<br>• effects of biomass energy programmes and projects on the historic environment should be evaluated in all levels of environmental impact assessment;<br>• consideration of the historic environment should include World Heritage Sites; marine, coastal and terrestrial archaeology; historic buildings and areas; designed landscapes; and the historic character of the wider landscape;<br>• significance of internationally and nationally designated sites should be safeguarded and physical damage to other historic sites should be avoided;<br>• impact of biomass energy projects on the setting and visual amenity of historic places and landscapes should also be considered;<br>• where biomass energy developments affect historic sites, national planning policies on the historic environment should be taken into account; and<br>• local authority historic environment records should be consulted at an early stage in project planning.<br><br>**Targets:** No formal targets. |
| English Heritage (2005): Climate Change and the Historic Environment (guidance paper) | **Objectives:** Sets out English Heritage's current thinking on the implications of climate change for the historic environment. The paper is intended both for the heritage sector and also for those involved in the wider scientific and technical aspects of climate change; in the development of strategies and plans relating to climate change impacts; or in projects relating to risk assessment, adaptation and mitigation.<br><br>**Targets:** No formal targets. |
| English Heritage (2008): Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment | **Objectives:** English Heritage sets out in this document a logical approach to making decisions and offering guidance about all aspects of England's historic environment. This will help to ensure consistency in English Heritage carrying out their role as the Government's statutory advisor on the historic environment.<br><br>**Targets:** No formal targets. |
| Department for Culture, Media and Sport (2001) Historic Environment: A Force For the Future | **Objectives:**<br>• public interest in the historic environment is matched by firm leadership, effective partnerships, and the development of a sound knowledge base from which to develop policies;<br>• the full potential of the historic environment as a learning resource is realised;<br>• the historic environment is accessible to everybody and is seen as something with which the whole of society can identify and engage;<br>• the historic environment is protected and sustained for the benefit of our own and future generations; and |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Cultural Heritage** | |
| | • the historic environment's importance as an economic asset is skilfully harnessed.<br>**Targets:** No formal targets. |
| HM Government (2010) The Government's Statement on the Historic Environment for England 2010 | **Objectives:** Sets out the Government's vision for the historic environment for England. This vision states that "*the value of the historic environment is recognised by all who have the power to shape it; that Government gives it proper recognition and that it is managed intelligently and in a way that fully realises its contribution to the economic, social and cultural life of the nation*". This vision is underpinned by the following strategic aims:<br>• strategic leadership: Ensure that relevant policy, guidance, and standards across Government emphasize our responsibility to manage England's historic environment for present and future generations;<br>• protective framework: Ensure that all heritage assets are afforded an appropriate and effective level of protection, while allowing, where appropriate, for well managed and intelligent change;<br>• local capacity: Encourage structures, skills and systems at a local level which: promote early consideration of the historic environment; ensure that local decision makers have access to the expertise they need; and provide sufficiently skilled people to execute proposed changes to heritage assets sensitively and sympathetically;<br>• public involvement: Promote opportunities to place people and communities at the centre of the designation and management of their local historic environment and to make use of heritage as a focus for learning and community identity at all levels;<br>• direct ownership: Ensure all heritage assets in public ownership meet appropriate standards of care and use while allowing, where appropriate, for well managed and intelligent change; and<br>• sustainable future: Seek to promote the role of the historic environment within the Government's response to climate change and as part of its sustainable development agenda.<br>**Targets:** No formal targets. |
| 1983 National Heritage Act (amended 2002) | **Objectives:** Act makes further provision in relation to the functions of the Historic Buildings and Monuments Commission for England.<br>**Targets:** No formal targets. |
| **National (MOD)** | |
| MOD Sustainable Development Strategy, December 2008,<br>MOD Sustainable Development Report and Action Plan 2008, and<br>MOD Heritage Report 2005-7 | **Objectives:**<br>• conserve and enhance the historic environment for the benefit of future generations and to reflect the ethos and heritage of the MOD;<br>• appropriately monitor, maintain and manage MOD listed buildings, scheduled monuments and other historic environment features;<br>• ensure that the MOD's historic environment is reflected within any contractual framework with partners;<br>• ensure that the MOD's own ethos and heritage are reflected within its' estate management; and<br>• where possible, promote public access to the historic estate.<br>**Targets:**<br>• Remove MOD Buildings at Risk against baseline reported in the previous DCMS/English Heritage Biennial Conservation Report. |
| MOD SOGE Strategic Statement on Heritage | **Objectives:**<br>• promote the sustainable use of the MOD historic environment, in recognition of its importance as an integral part of cultural heritage and the role it plays in supporting defence capability;<br>• have a historic environment that is protected and well maintained or the benefit of current and future generations; |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Cultural Heritage** | |
| | • ensure the historic environment is managed to reflect the ethos and heritage of MOD and to promote a "sense of place" for those who work on, live on and visit the MOD estate;<br>• ensure the MOD historic environment is valued and promoted wherever practically possible; and<br>• have in place arrangements for protecting, maintaining and enhancing other heritage sites including, for example, archaeological sites, historic parks and gardens for which the MOD is responsible.<br><br>**Targets:**<br>• Adopt the Department for Culture Media and Sport's Protocol for the Care of the Historic Government Estate. Where responsibility for management of historic property is transferred to the private sector, for example through PPP/PFI arrangements, the Protocol standards will be incorporated into contractual arrangements. |
| **National (Scotland)** | |
| Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997 | **Objectives**: This legislation outlines the level of protection received by listed buildings, scheduled monuments and buildings within conservation areas.<br><br>**Targets**: No formal targets. |
| Scottish Executive (2006) Scotland's Culture | **Objectives:** The policy aims to:<br>• provide support nationally for talent and excellence in culture, and enable more people to enjoy culture; and<br>• to encourage more people to enjoy cultural activities locally by asking local authorities to develop cultural 'entitlements' for their area, to undertake cultural planning.<br><br>**Targets:** No specific targets identified, but next steps set out. |
| Scottish Government (2010) Scottish Planning Policy | **Objectives:**<br><br>Policies in Scottish Planning Policy (SPP) reflect the importance of the historic environment, as a key part of Scotland's cultural heritage, to the Scottish Government's central purpose. With the careful application of policy and sensitive decision making, the historic environment can often be adapted to accommodate new uses, offering opportunities for new and creative design, whilst retaining its special character. In principle, therefore, the aim should be to identify the best viable use that is compatible with the fabric, setting and character of the historic environment.<br><br>**Targets:** No formal targets. |
| Scottish Government (1994) Planning Advice Note 42 (PAN42): Archaeology in the Planning Process and Scheduled Monument Procedures | **Objectives:** Provides advice on the handling of archaeological matters within the planning process and on the separate controls over scheduled monuments under the Ancient Monuments and Archaeological Areas Act 1979.<br><br>**Targets:** No formal targets. |
| Scottish Government (2004) Planning Advice Note 71 (PAN71): Conservation Area Management | **Objectives:** PAN71 identifies good practice for managing change, sets out a checklist for appraising conservation areas and provides advice on funding and implementation.<br><br>**Targets:** No formal targets. |
| Historic Scotland (2007) Environmental Impact Assessment (Scoping). Scoping of Wind Farm Proposals. Assessment of Impact on the setting of the Historic Environment | **Objective:** Provides guidance on how impacts are to be assessed on setting and effectively mitigated.<br>**Targets:** No formal targets. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Cultural Heritage** | |
| Resource. Some General Considerations | |
| Historic Scotland (2009) Scottish Historic Environment Policy | **Objectives:** The Scottish Historic Environment Policy document sets out Scottish Ministers' policies for the historic environment. This document identifies the following key outcomes for Scotland's historic environment:<br>• key outcome 1: that the historic environment is cared for, protected and enhanced for the benefit of our own and future generations;<br>• key outcome 2: to secure greater economic benefits from the historic environment; and<br>• key outcome 3: the people of Scotland and visitors to our country value, understand and enjoy the historic environment.<br><br>**Targets:** No formal targets. |
| Natural Heritage (Scotland) Act 1991 | **Objectives:**<br>Act established a body to be known as "Scottish Natural Heritage" (in this Part of this Act referred to as "SNH") whose general aims and purposes were to be:<br>• to secure the conservation and enhancement of; and<br>• to foster understanding and facilitate the enjoyment of, the natural heritage of Scotland; and SNH shall have regard to the desirability of securing that anything done, whether by SNH or any other person, in relation to the natural heritage of Scotland is undertaken in a manner which is sustainable.<br><br>**Targets:** No formal targets. |
| **National (Wales)** | |
| Welsh Assembly Government (2010) Planning Policy Wales (Edition 3) | **Objectives:** Planning Policy Wales sets out the land use planning policies of the Welsh Assembly Government. Regarding the historic environment, the Assembly Government's objectives are to:<br>• preserve or enhance the historic environment, recognising its contribution to economic vitality and culture, civic pride and the quality of life, and its importance as a resource for future generations; and specifically to;<br>• protect archaeological remains, which are a finite and non-renewable resource, part of the historical and cultural identity of Wales, and valuable both for their own sake and for their role in education, leisure and the economy, particularly tourism;<br>• ensure that the character of historic buildings is safeguarded from alterations, extensions or demolition that would compromise a building's special architectural and historic interest; and<br>• ensure that conservation areas are protected or enhanced, while at the same time remaining alive and prosperous, avoiding unnecessarily detailed controls over businesses and householders.<br><br>**Targets:** No formal targets. |
| Welsh Assembly Government (2009) Technical Advice Note 12: Design | **Objectives:** TAN 12 sets out the Assembly Government's policies and objectives in respect of the design of new development. In relation to cultural heritage, these objectives include:<br>• sustaining or enhancing local character;<br>• promoting legible development;<br>• promoting a successful relationship between public and private space;<br>• promoting quality, choice and variety; and<br>• promoting innovative design. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Cultural Heritage** | |
| | **Targets:** No formal targets. |
| Welsh Assembly Government (2003) Review of the Historic Environment of Wales: A Consultation Document | This document is a review and does not contain objectives or targets as such. It can be assumed however that that the protection and enhancement of the historic environment is a key objective. |
| **National (Northern Ireland)** | |
| Planning (Conservation Areas) (Demolition) Regulations (Northern Ireland) 1988 | **Objectives:** This legislation outlines the level of protection received by buildings within conservation areas.<br><br>**Targets:** No formal targets |
| Planning (Listed Buildings) Regulations (Northern Ireland) 1992 | **Objectives:** This legislation outlines the level of protection received by listed buildings.<br><br>**Targets:** No formal targets. |
| Department of the Environment (1999) Planning Policy Statement 6: Planning Archaeology and the Built Heritage (PPS6) | **Objectives:** PPS6 sets out planning policies for the protection and conservation of archaeological remains and features of the built heritage. The PPS comprises planning policies covering archaeological sites and monuments, World Heritage Sites, historic parks, gardens and demesnes, listed buildings and conservation areas.<br><br>**Targets:** No formal targets. |
| Department of Culture, Arts and Leisure (2006) Architecture and the Built Environment for Northern Ireland | **Objectives:** Under this document, the Government is committed to:<br>• Becoming an exemplary client in the delivery of good design and thereby encourage the private sector to raise its standards.<br>• Facilitating the achievement of good design by promoting planning policies which are focused on architectural quality, good urban and rural design, appropriateness to locality and sustainability.<br>• Developing knowledge and skills amongst developers, practitioners and public sector clients, consistent with their duties and responsibilities concerning architecture and the built environment.<br>• Developing a greater public awareness and appreciation of the characteristics of good design in the built environment, and a greater understanding of their value and benefit. Encouraging public debate, interest and involvement.<br>• Promoting collaboration between artists, design professionals and clients thereby encouraging the integration of art in the design of public buildings and public places.<br><br>**Targets:** No formal targets. |
| Department for Regional Development (2001) Shaping Our Future: Regional Development Strategy for Northern Ireland 2025 | **Objectives:** Shaping Our Future is a Strategy to guide the future development of Northern Ireland to 2025. Policy ENV3 seeks to conserve the built environment by:<br>• safeguarding archaeological resource;<br>• safeguarding buildings of special architectural or historic interest;<br>• conserving the character of cities, towns and villages;<br>• conserving parks, gardens and demesnes which are of historic interest; and<br>• promoting the retention of vernacular buildings and industrial heritage features in urban and rural areas<br><br>**Targets:** No formal targets. |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Landscape** | |
| **International / European (e.g. Directives)** | |
| European Landscape Convention of 2000 | **Objectives:** Convention aims to encourage public authorities to adopt policies and measures at local, regional, national and international level for protecting, managing and planning landscapes throughout Europe. The European Landscape Convention introduced the concept of "landscape quality objectives" into the protection, management and planning of geographical areas.<br><br>**Targets:** No formal targets. |
| **National (UK)** | |
| Countryside and Rights of Way Act (2000) | **Objectives:** This Act increased the duty for provision of public access to the countryside and strengthened legislation relating to SSSIs. In particular, it requires public bodies to further the conservation and enhancement of SSSIs both in carrying out their operations, and in exercising their decision making functions.<br><br>**Targets:** No formal targets, though close monitoring of indicators is to be undertaken. |
| ODPM (2002) PPG17: Planning for Open Space, Sport and Recreation | **Objectives:** PPG17 does not contain a specific set of objectives. However, it does state that well-designed and implemented planning policies for open space, sport and recreation are fundamental to delivering broader Government objectives.<br>• open space and sports and recreational facilities that are of high quality should be recognised and given protection by Local Authorities; and<br>• subject to designated areas, Local Authorities should encourage the creation of sports and recreational facilities in countryside around towns and the development of areas of managed countryside, such as countryside parks, community forests, and agricultural show-grounds.<br><br>**Targets:** Does not contain any specific targets. |
| The National Parks and Access to the Countryside Act 1949 | **Objectives:**<br>An Act to:<br>• make provision for National Parks and the establishment of a National Parks Commission;<br>• to confer on the Nature Conservancy and local authorities powers for the establishment and maintenance of nature reserves;<br>• to make further provision for the recording, creation, maintenance and improvement of public paths and for securing access to open country, and to amend the law relating to rights of way;<br>• to confer further powers for preserving and enhancing natural beauty; and<br>• for matters connected with the purposes aforesaid.<br><br>**Targets:** Ultimately seeks to conserve and protect countryside and National Parks through legislation. |
| The Natural Environment and Rural Communities (NERC) Act 2006 | **Objectives:**<br>The Act<br>• makes provision about bodies concerned with the natural environment and rural communities;<br>• makes provision in connection with wildlife, sites of special scientific interest, National Parks and the Broads; |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Landscape** | |
| | • amends the law relating to rights of way;<br>• makes provision as to the Inland Waterways Amenity Advisory Council; and<br>• provides for flexible administrative arrangements in connection with functions relating to the environment and rural affairs and certain other functions; and for connected purposes.<br><br>**Targets:** Legislation rather than targets in Act. |
| 1967 Forestry Act (as amended 1999) | **Objectives:** Act restricts and regulates the felling of trees using legislation, under the Forestry Commission.<br><br>**Targets:** No formal targets. |
| 1968 Countryside Act | **Objectives:** An Act to enlarge the functions of the Agency established under the National Parks and Access to the Countryside Act 1949, to confer new powers on local authorities and other bodies for the conservation and enhancement of natural beauty and for the benefit of those resorting to the countryside and to make other provision for the matters dealt with in the Act of 1949 and generally as respects the countryside, and to amend the law about trees and woodlands, and footpaths and bridleways, and other public paths.<br><br>**Targets:** No formal targets. |
| 1986 Agriculture Act (with numerous revisions) | **Objectives:** An Act covering the provision of agricultural services and goods, agricultural marketing, compensation to tenants for milk quotas, conservation and farm grants. |
| Commons Act 2006 | **Objectives:** Act to protect common land and promote sustainable farming, public access to the countryside and the interests of wildlife. The Acts implementation is based around four themes; registration, management, works and town and village greens.<br><br>**Targets:** No formal targets. |
| ODPM (1995) PPG 2: Green Belts (Amended 2001) | **Objectives:**<br>• provide opportunities for access to the open countryside for the urban population;<br>• provide opportunities for outdoor sport and outdoor recreation near urban areas;<br>• retain attractive landscapes, and enhance landscapes near to where people live;<br>• improve damaged and derelict land around towns;<br>• secure nature conservation interest; and<br>• retain land in agricultural forestry and related uses.<br><br>**Targets:** No relevant targets or indicators |
| Communities and Local Government (2010) Consultation Paper a new Planning Policy Statement: Planning for a Natural and Health Environment | **Objectives:** Once approved, this PPS will replace PPS9, PPG17, PPG20 and PPS7 in so far as it relates to landscape protection, soil and agricultural land quality, forestry, coastal access, heritage coast and the undeveloped coast. With regard to landscape, it states that planning permissions granted for major developments in nationally designated areas should be carried out to high environmental standards through the use of conditions where necessary.<br><br>**Targets:** No formal targets. |
| ODPM (2004) PPS7: Sustainable Development in Rural Areas | **Objectives:** The Government's objectives for rural areas relevant to this PPS are:<br>• to raise the quality of life and the environment in rural areas; |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Landscape** | |
| | • to promote more sustainable patterns of development;<br>• promoting the development of the English regions by improving their economic performance; and<br>• to promote sustainable, diverse and adaptable agriculture sectors.<br>Integral to these objectives is the need to protect and manage landscape resources.<br><br>**Targets:** There are no specific targets in the PPS. |
| Marine and Coastal Access Act 2009 | **Objectives:** Seeks to ensure clean healthy, safe, productive and biologically diverse oceans and seas, by putting in place better systems for delivering sustainable development of marine and coastal environment.<br><br>**Targets:** No relevant targets or indicators. |
| Scottish Natural Heritage and the Countryside Agency (2002) Landscape Character Assessment Guidance for England and Scotland | **Objectives:** This guidance provides advice on Landscape Character Assessment. It does not contain any specific objectives however, the general themes identified within the guidance should be reflected in assessment objectives.<br><br>**Targets:** No relevant targets or indicators. |
| **National (MOD)** | |
| MOD JSP 362 - Defence Lands Handbook, Chapter 5 (Natural Environment – Conservation). | **Objectives:**<br>• promote the objectives of statutory designated areas (NPs and AONBs) wherever possible;<br>• in respect of landscape designations, reasonable measures should be undertaken to mitigate the impacts of any development proposals on landscape character; and<br>• management of sites should seek to maintain the character of the landscape by safeguarding and, where practicable, enhancing or developing significant landscape features, such as woodland, dry stone walls or hedges.<br><br>**Targets:** No relevant targets or indicators. |
| **National (Scotland)** | |
| Scottish Government (2010) Scottish Planning Policy | **Objectives:** Scottish Planning Policy (SPP) sets out the following broad principles with regard to landscape:<br>• planning authorities should take a broader approach to landscape and natural heritage than just conserving designated or protected sites and species, taking into account the ecosystems and natural processes in their area;<br>• the natural and cultural components of the landscape should be considered together, and opportunities for enhancement or restoration of degraded landscapes, particularly those affecting communities, should be promoted;<br>• the most sensitive landscapes may have little or no capacity to accept new development. Areas of wild land character in some of Scotland's remoter upland, mountain and coastal areas are very sensitive to any form of development or intrusive human activity and planning authorities should safeguard the character of these areas;<br>• landscapes and the natural heritage are sensitive to inappropriate development and planning authorities should ensure that potential effects, including the cumulative effect of incremental changes, are considered when deciding planning applications;<br>• while the protection of the landscape and natural heritage may sometimes impose constraints on |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Landscape** | |
| | development, with careful planning and design the potential for conflict can be minimised and the potential for enhancement maximised;<br>• planning authorities should apply the precautionary principle where the impacts of a proposed development on nationally or internationally significant landscape or natural heritage resources are uncertain but there is sound evidence for believing that significant irreversible damage could occur. Where the precautionary principle is justified, modifications to the proposal which would eliminate the risk of irreversible damage should be considered. The precautionary principle should not be used to impede development unnecessarily. Where development is constrained on the grounds of uncertainty, the potential for research, surveys or assessments to remove or reduce uncertainty should be considered.<br>**Targets:** No formal targets. |
| Scottish Government (2000) Planning Advice Note 60 (PAN60): Planning for Natural Heritage | **Objectives:** This PAN provides advice on how development and the planning system can contribute to the conservation, enhancement, enjoyment and understanding of Scotland's natural environment and encourages developers and planning authorities to be positive and creative in addressing natural heritage issues.<br>**Targets:** No formal targets. |
| National Trust for Scotland (2005) Landscape Policy | **Objectives:** The overall aim of this policy is to promote and conserve landscapes that:<br>• encompass Scotland's distinctive, local and diverse natural landforms, habitats and biodiversity;<br>• celebrate Scotland's rich and varied cultural heritage;<br>• reflect the achievements of its people and the aesthetic appreciation of its scenery;<br>• include places of tranquillity, wildness, drama and beauty; and<br>• improve our quality of life and sense of well-being.<br>**Targets:** No formal targets |
| The Countryside (Scotland) Act 1967 | **Objectives:** access to open country and public paths and long-distance routes.<br>**Targets:** No formal targets. |
| National Parks (Scotland) Act 2000 | Scottish National Parks deliver more integrated management of areas of outstanding natural and cultural heritage. They have the following four aims:<br>• to conserve and enhance the natural and cultural heritage;<br>• to promote the sustainable use of the natural resources of the area;<br>• to promote understanding and enjoyment (including enjoyment in the form of recreation) of the special qualities of the area by the public; and<br>• to promote sustainable social and economic development of the communities of the area<br>The National Park Authority for each National Park has responsibility for drawing up a National Park Plan and ensuring its implementation.<br>**Targets:** No formal targets. |
| Forestry Commission Scotland (2006) Scottish Forestry Strategy | **Objectives:**<br>Seven key themes will help achieve the Strategy's vision:<br>• using forestry, and adapting forestry practices, to help reduce the impact of climate change and help Scotland adapt to its changing climate;<br>• getting the most from Scotland's increasing and sustainable timber resource;<br>• strengthening forestry through business development to underpin sustainable forest management and support economic growth and employment across Scotland;<br>• improving the quality of life and well-being of people by supporting community development across |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
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| **Landscape** | |
| | Scotland;<br>• making access to, and enjoyment of, woodlands easier for everyone - to help improve physical and mental health in Scotland;<br>• protecting the environmental quality of our natural resources (water, soil and air), contributing to and improving our scenery, and helping to make the most of our unique historic environment, and<br>• helping to restore, maintain and enhance Scotland's biodiversity, and increasing awareness and enjoyment of it.<br><br>**Targets:**<br>• See Scotland's woodlands increase from 17.1% of our land area to about 25%.<br><br>The Scottish Executive has two wider commitments relevant to forestry:<br>• Bringing 80% of the special features on Scotland's nationally important nature sites into favourable condition by March 2008; and<br>• The forestry sector delivering annual carbon savings of 0.6 million tonnes of carbon (MtC) by 2010, 0.8 MtC by 2015 and 1.0 MtC by 2020. |
| Scottish Natural Heritage (2009) Natural Heritage Futures: An Overview | **Objective:** This document presents an overview of the Natural Heritage Futures programme. There are a total of six national and 21 local prospectuses which describe what is distinctive to each region in Scotland, a vision for the natural heritage for 2025 and objectives and actions required to pursue that vision.<br><br>**Targets:** Each prospectus contains a series of actions. |
| **National (Wales)** | |
| Welsh Assembly Government (2010) Planning Policy Wales (Edition 3) | **Objectives:** Planning Policy Wales sets out the land use planning policies of the Welsh Assembly Government. Regarding landscape, the Assembly Government's objectives are to:<br>• promote the conservation of landscape and biodiversity, in particular the conservation of native wildlife and habitats;<br>• ensure that action in Wales contributes to meeting international responsibilities and obligations for the natural environment; and<br>• ensure that statutorily designated sites are properly protected and managed.<br><br>**Targets:** No formal targets. |
| Welsh Assembly Government (2010) Technical Advice Note 6: Planning for Sustainable Rural Communities | **Objectives:** The purpose of this TAN is to provide practical guidance on the role of the planning system in supporting the delivery of sustainable rural communities. The TAN seeks to protect and enhance Wales' landscapes.<br><br>**Targets:** No formal targets. |
| **National (Northern Ireland)** | |
| Department of the Environment (2005) PPS6: Addendum – Areas of Townscape Character | **Objectives:** This document is an addendum to PPS 6 'Planning, Archaeology and the Built Heritage'. The Addendum provides additional planning policies relating specifically to Areas of Townscape Character, for demolition of buildings, new development and the control of advertisements. This |

| Relevant Plan, Programme, Strategy | Objectives and Targets Identified in the Document |
|---|---|
| **Landscape** | |
| | document is underpinned by objectives to:<br>• recognise the importance of Areas of Townscape Character; and<br>• ensure that development proposals respect the appearance and qualities of each townscape area and maintain or enhance character.<br><br>**Targets:** No formal targets. |
| Department of the Environment (2004) PPS8: Open Space, Sport and Recreation | **Objectives:** This PPS sets out the Department's planning policies for the protection of open space, the provision of new areas of open space in association with residential development and the use of land for sport and outdoor recreation, and advises on the treatment of these issues in development plans. The main objectives of this Planning Policy Statement are:<br>• to safeguard existing open space and sites identified for future such provision;<br>• to ensure that areas of open space are provided as an integral part of new residential development and that appropriate arrangements are made for their management and maintenance in perpetuity;<br>• to facilitate appropriate outdoor recreational activities in the countryside;<br>• to ensure that new open space areas and sporting facilities are convenient and accessible for all sections of society, particularly children, the elderly and those with disabilities;<br>• to achieve high standards of siting, design and landscaping for all new open space areas and sporting facilities; and<br>• to ensure that the provision of new open space areas and sporting facilities is in keeping with the principles of environmental conservation and helps sustain and enhance biodiversity.<br><br>**Targets:** No formal targets. |
| Department of the Environment (2010) PPS21: Sustainable Development in the Countryside | **Objectives:** PPS 21 sets out planning policies for development in the countryside. The PPS sets out the following objectives which are relevant to landscape:<br>• to manage growth in the countryside to achieve appropriate and sustainable patterns of development that meet the essential needs of a vibrant rural community;<br>• to conserve the landscape and natural resources of the rural area and to protect it from excessive, inappropriate or obtrusive development and from the actual or potential effects of pollution;<br>• to facilitate development necessary to achieve a sustainable rural economy; including appropriate farm diversification and other economic activity; and<br>• to promote high standards in the design, siting and landscaping of development in the countryside.<br><br>**Targets:** No formal targets. |
| Department for Regional Development (2001) Shaping Our Future: Regional Development Strategy for Northern Ireland 2025 | **Objectives:** Shaping Our Future is a Strategy to guide the future development of Northern Ireland to 2025. Policies relating to landscape and townscapes include the following:<br>• ENV 1.3 Protect, manage and enhance the resources of woodland and hedgerows as features of environmental and historic significance;<br>• ENV 1.4 Protect, enhance and encourage appreciation of the Region's landscapes;<br>• ENV 2.1 Conserve the coast of Northern Ireland; and<br>• ENV 3.3 Conserve the character of cities, towns and villages.<br><br>**Targets:** No formal targets. |

# Submarine Dismantling Project

## SEA Scoping Report Update

## Annex C - Review of Sub-Regional Baseline Information

December 2010

Defence Equipment & Support

MINISTRY OF DEFENCE

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## Document Revisions

| No. | Details | Date |
|---|---|---|
| 1 | Draft | 1.10.10 |
| 2 | Draft for Internal Comment | 11.10.10 |
| 3 | Final Draft | 09.11.10 |
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# Defence Equipment and Support

# Submarine Dismantling Project

Strategic Environmental Assessment – Scoping Report (Annex C)

November 2010

Entec UK Limited

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## Sub-Regional Baselines

Sub-regional baseline information is presented for the following potential dismantling sites:

- C1 Plymouth (for DRDL Devonport)
- C2 Fife (for RRDL Rosyth)

Each sub-regional baseline section contains the following information:

- **Table x.1 – Baseline Information**

  Sub-regional level information is provided for each of the SEA Annex I categories to provide the appropriate context for the assessment for the locational options. The information that has been used to inform the sub-regional baseline has been drawn from the relevant local authority area that covers each potential candidate site.

- **Table x.2 – Evolution of the Baseline (following a 'Business as Usual' Scenario)**

  This table sets out the likely evolution of the sub-regional baseline without the implementation of the SDP programme. It is acknowledged that there are information gaps where trends or targets have not been identified in relation to specific issues.

- **Table x.3 – Current Problems in Sites of Particular Environmental Importance**

  This sets out the current condition and potential problems facing European designated Special Protection Areas (SPA), Special Areas of Conservation (SAC) as well as Ramsar Sites within a 20km radius of each site.

- **Table x.4 – Relevant Plans and Programmes**

  This identifies and reviews other relevant plans, programmes, policies and strategies (herein after referred to as 'plans and programmes') that are applicable to the SDP, and outlines the nature of "relationship with other relevant plans and programmes".

It is noted that there is significant variation in the geographic range of different local authorities and Scottish equivalents. This variation is a product of using the smallest available local authority unit area as a selection criterion.

# C1 Plymouth - Sub Regional Information

## Table C1.1 Baseline Information

### Sub-Regional Baseline - Plymouth

**Biodiversity and Nature Conservation**

Number of SSSIs: nine terrestrial SSSIs covering 55.8ha. [1]

Number of SACs: one covering 6,402.3ha: Plymouth Sound and Estuaries. [2]

Number of SPAs: one covering 1,955ha: Tamar Estuaries Complex. [3]

Other important sites: Plymouth has six designated Local Nature Reserves mostly situated on the eastern side of the city. [1]

Current issues for biodiversity, flora and fauna: Current threats to the designated features of SAC and SPAs are mainly from increased coastal development and increased marine activity causing pollution and disturbance.

**References:**


1. Plymouth City Council, Characteristics of the City of Plymouth http://www.plymouth.gov.uk/homepage/environmentandplanning/environmentalissues/contlandinspectionstrategy/characteristicsplymouth.htm
2. Tamar Estuaries Consultative Forum, Plymouth Sound and Estuaries Coastal Planning Study, Final Report 7 September 2006 http://www.plymouth.gov.uk/coastal_planning_project_report.pdf
3. Plymouth City Council, Characteristics of the City of Plymouth http://www.plymouth.gov.uk/homepage/environmentandplanning/environmentalissues/contlandinspectionstrategy/characteristicsplymouth.htm


**Population**

**Demographics**

Resident population of 256,700. [1]

49.2% male and 50.8% female. [1]

67.2% of population is of working age (68.7% of males and 65.9% of females).[1]

76.7% of working age population is economically active. [1]

70.8% of working age population is in employment. [1]

8.2% of working age population is unemployed. [1]

Of those of working age in Plymouth: 24.2% have NVQ4 and above; 48.6% have NVQ3 and above; 66.7% have NVQ2 and above; 83% have NVQ1 and above; 8.6% have other qualifications; and 8.4% have no qualifications. [1]

There were 67 recorded crime BCS comparator offences per 1,000 population in 2007/08 (54 average for England and Wales).[2]

In 2008, Plymouth had 100 schools: 2 nursery (155 students); 71 primary (18,503 students); 16 secondary (18,097 students); eight special (598 students); and three pupil referral units (164 students).[3]

**References:**


1. NOMIS, official labour market statistics, Plymouth, https://www.nomisweb.co.uk/reports/lmp/la/2038431908/report.aspx
2. Home Office, Crime Statistics, Local Authorities: Recorded crime for seven key offences and BCS comparator 2006/07 to 2007/08 http://www.homeoffice.gov.uk/rds/pdfs08/laa1b.xls
3. Plymouth City Council, website, http://www.plymouth.gov.uk/schoolsfactsandfigures


## Sub-Regional Baseline - Plymouth

**Socio-economics**

In 2006 per capita GVA was £15,989 (£15,098 in 2005).[1]

In 2009 the average full-time gross hourly pay in Plymouth was £11.80 (compared to a national average of £12.46). This compares to £9.75 in 2007 for the area (and a national average of £11.51). [2]

Between January and December 2009, Plymouth had an average unemployment rate of 7.9% compared to a UK average of 7.7%. This compares to January to December 2008, when Plymouth had an average unemployment rate of 5.7% compared to a UK average of 5.7%.[2]

Plymouth has a total of 106,900 jobs with a job density[1] of 0.74 (compared to 0.82 in the South West and 0.79 in Great Britain). [2]

Plymouth has a strong and recognisable industrial and military heritage which has left behind a set of ongoing and evolving specialisms in Advanced Engineering and Maritime and Marine industries.[3] However, in recent years there has been a decline in employment in technology and knowledge based activities in Plymouth.[3] The Economic Strategy identifies that a more diverse business base is important to Plymouth's future economic development. [3]

Plymouth experienced a large loss of high skilled and high paid jobs from the dockyard in the 1970's and 1980's. Although there was some recovery by attracting overseas manufacturing, these jobs were lower skilled and lower paid. [3]

**References:**


1. ONS, Regional, sub-regional and local gross value added (GVA), December 2008, http://www.statistics.gov.uk/pdfdir/gva1208.pdf
2. NOMIS, official labour market statistics, Plymouth, https://www.nomisweb.co.uk/reports/lmp/la/2038431908/report.aspx
3. Plymouth City Council, Plymouth Local Economic Strategy 2006-2021. http://www.plymouth.gov.uk/homepage/business/businessandinvestment/localeconomicstrategy.htm


**Human Health**

Life expectancy at birth for males of 77.22 years (2006 -2008) (compared to 77.93 in England).[1]

Life expectancy at birth for females of 82.04 years (2006 - 2008) (compared to 82.02 in England). [1]

Coronary Heart Disease diagnoses of 5,313 (2007 - 2008) (total of 1,000,332 in England). [1]

Cerebrovascular Disease (including Stroke) diagnoses of 999 (2007 - 2008) (total of 187,962 in England). [1]

Cancer (excluding non-melanoma skin cancer) diagnoses of 6,680 (2007 - 2008) (total of 1,326,050 in England). [1]

In 2001, 66.7% of people in Plymouth rated their health as good; 23.2% rated their health as fair; and 10.1% of people rated their health as not good. [1]

Health in Plymouth has been improving over the last 10 years. Most deaths are caused by heart disease, stroke, and cancer; however rates are falling above the national average. Life expectancy in Plymouth is going up overall; however, some deprived areas have lower than average rates. There is a 13 year difference in life expectancy between the "best" and "worst" neighbourhood in Plymouth. [2]

Plymouth is generally characterised as having large health inequalities, although steps are being taken to target initiatives to deprived areas. [2]

Studies in 2004, 2006 and 2007 report that whilst Plymouth has higher cancer rates than the national average, this is likely to be due to socio-economic deprivation and smoking rather than any other actives in the city.[3]

In 2007, Plymouth ranked 76th out of 354 Districts on the overall rank of deprivation. (1 being

**References:**


1. ONS, Neighbourhood Statistics, http://www.neighbourhood.statistics.gov.uk/dissemination/LeadDatasetList.do?a=3&b=276837&c=plymouth&d=13&g=401185&i=1001x1003&m=0&r=1&s=1250002245939&enc=1&domainId=6
2. Plymouth's Joint Strategic Needs Assessment updated February 2008 http://www.plymouthpct.nhs.uk/healthandwellbeing/publichealth/Pages/healthyplymouth.aspx
3. Plymouth City Council, Cancer Incidence in Plymouth – 2007 follow-up report, http://www.plymouth.gov.uk/homepage/communityandliving/emergencies/regulatedhazardoussites/devonportdockyard.htm
4. Health and Safety Executive, Quarterly Reports, http://www.hse.gov.uk/nuclear/llc/2008/index.htm
5. ONS, Neighbourhood Statistics, **Indices** of Deprivation).


[1] The density figures represent the ratio of total jobs to working-age population. Total jobs includes employees, self-employed, government-supported trainees and HM Forces.

## Sub-Regional Baseline - Plymouth

the most deprived).[5]

- 28.8% of area is within the 5th (most deprived) quintile of the IMD 2007; [6]
- 25.1% of area is within the 4th quintile of the IMD 2007; [6]
- 18.9% of area is within the 3th quintile of the IMD 2007; [6]
- 19.6% of area is within the 2th quintile of the IMD 2007; and [6]
- 7.6% of area is within the 1th (least deprived) quintile of the IMD 2007.[6]

Site specific nuclear safety reports are available quarterly from the Health and Safety Executive.[4]


**6.** Association of Public Health Authorities, Plymouth Health Profile 2009, http://informinghealthierchoices.net/resource/item.aspx?RID=71411


### Human Health (Noise)

Major sources of noise: Plymouth City Airport and Moorcroft Quarry. Both these facilities are on the eastern edge of Plymouth.[1]

Current issues for noise: Traffic noise on major roads in Plymouth has a significant area of affect either side of those roads, particularly where open spaces exist.[2] Large developments in Plymouth are required to adopt and comply with Codes of Practice to manage noise on their sites to within thresholds set by Plymouth City Council.[3]

**References:**


1. Plymouth Sustainable Neighbourhoods Study (2005), http://www.plymouth.gov.uk/homepage/environmentandplanning/planningpolicy/ldf/ldfbackgroundreports/brsustainableneighbourhoodassessments/snamethodology.htm
2. Defra, Noise Mapping, Major Roads, http://www.defra.gov.uk/environment/quality/noise/environment/mapping/roads.htm
3. Plymouth City Council, Website, http://www.plymouth.gov.uk/homepage/environmentandplanning/pollution/noise.htm


### Soil and Geology

**Predominant geology: Upper Devonian slates and shales.1**

Topographic features: A high ridge along the southern waterfront with the land beyond rising gently to the north. The rise is interspersed with several ridges and dips cut by rivers, notably the Tamar and Plym.[2]

Geological designations: Plymouth has four SSSIs designated for their geological importance.[3]

Other important features: A belt of hard grey limestone which runs across its southern edge of Plymouth producing the cliffs overlooking the Sound. [1]

Current issues for soils and geology: Plymouth has a large number of historic waste disposal sites containing a variety of wastes throughout the city. Many of these sites were operated and closed prior to the establishment of legislation specifically controlling and licensing such activities in 1974.[4]

**References:**


1. Plymouth City Council, Characteristics of the City of Plymouth http://www.plymouth.gov.uk/homepage/environmentandplanning/environmentalissues/contlandinspectionstrategy/characteristicsplymouth.htm
2. Plymouth City Council, Devonport conservation area, http://www.plymouth.gov.uk/homepage/creativityandculture/heritageandhistory/historicenvironment/conservationareas/devonportca.htm
3. JNCC, Geological Conservation Review, http://www.jncc.gov.uk/default.aspx?page=4177&authority=UKK41
4. Plymouth City Council, Characteristics of the City of Plymouth http://www.plymouth.gov.uk/homepage/environmentandplanning/environmentali


## Sub-Regional Baseline - Plymouth

| | |
|---|---|
| | ssues/contlandinspectionstrategy/characteristicsplymouth.htm |
| **Water** | |
| Major surface water features: Plymouth Sound (one of the world's great natural harbours); river Tamar; the Tory Brook; Tamerton Foliot stream; and the lower stretch of the River Plym.[1]<br><br>Major ground water features: There are no major aquifers in the southwest.[1] Some minor aquifers are important for local supplies, as is the case in Plymouth. There are 12 licensed private groundwater abstractions within the Plymouth boundaries.[1]<br><br>Water quality: 2006 surveys record the following inland water quality: 65.2% were in good biological condition; 34.8% were in fair biological condition (none in poor or bad condition); 33.2% had high phosphate levels; 100% were in good chemical condition; 0% had high nitrate.[3] Plymouth Sound waters are assessed as having good ecological quality, but poor chemical quality.[4] There are two bathing waters in Plymouth (Hoe West and Hoe East).[5] In 2008 both these waters were rated as 'poor' for bathing water quality (down from Excellent since 2004).[5] 12 licensed private groundwater abstractions within the Plymouth boundaries, four of these are for private drinking supplies.[1]<br><br>Protected water features: Plymouth Sound and Estuaries SAC; and Tamar Estuaries Complex SPA.<br><br>In 2007, radioactive discharge licences to the estuary were issued to Devonport Royal Dockyard Ltd.[6]<br><br>In 2004, a study for Natural England reported that the radiological significance of levels of radionuclides discharged into the Plymouth Sound and Estuaries SAC was considered to be low.[7]<br><br>Plymouth has a long maritime history with naval and defence industries continuing to be important to the local economy. Historic mining and industrial activity has significantly affected land, water quality and estuary sediments over many years.[8] | References:<br><br>1. Plymouth City Council, http://www.plymouth.gov.uk/characteristicsplymouth<br><br>2. Plymouth City Council, Strategic Flood Risk Assessment, R02701R001/Final Draft http://www.plymouth.gov.uk/homepage/environmentandplanning/planning/planningpolicy/ldf/ldfbackgroundreports/bfloodriskassessment.htm<br><br>3. Defra, Inland Water Quality Surveys,http://www.defra.gov.uk/evidence/statistics/environment/inlwater/iwquality.htm<br><br>4. Environment Agency 2009 http://maps.environment-agency.gov.uk/wiyby/wibyController?latest=true&topic=wfd_estuaries&ep=query&lang=_e&x=243933.66666666666&y=54230.083333333336&scale=4&layerGroups=3&queryWindowWidth=25&queryWindowHeight=25<br><br>5. Environment Agency 2009 http://maps.environment-agency.gov.uk/wiyby/wibyController?x=245500.0&y=55500.0&scale=3&layerGroups=default&location=Devonport,%20City%20of%20Plymouth&ep=map&lang=_e&textonly=off&topic=coastalwaters#x=247881&y=53844&lg=1,&scale=5<br><br>6. Environment Agency (2009) Industrial Pollution maps, http://maps.environment-agency.gov.uk/wiyby/wibyController?x=247500.0&y=56500.0&topic=pollution&ep=map&scale=3&location=Plymouth,%20City%20of%20Plymouth&lang=_e&layerGroups=default&textonly=off#x=247500&y=56500&lg=5,4,1,&scale=4<br><br>7. English Nature 2004 The South Western Peninsula Marine Natural Area http://naturalengland.etraderstores.com/NaturalEnglandShop/Product.aspx?ProductID=d92d70ba-37e6-489d-b069-845bd1bb5e13<br><br>8. http://wfdconsultation.environment-agency.gov.uk/wfdcms/en/southwest/Intro.aspx |

## Sub-Regional Baseline - Plymouth

### Air

Air quality: Air quality in Plymouth is generally good.[1] In 2001, annual average NO2 levels in Plymouth were 33 µgm-3 and annual average PM10 levels were 20 µgm-3. [2] The average Combined Air Quality Index for Plymouth from the 2007 Indices of Deprivation was 1.11. This represents the addition of the four indices (Nitrogen Dioxide, Particulates, Sulphur Dioxide and Benzene). A higher value implies poorer overall air quality.[3] (The mean average of all Combined Air Quality Index scores for all Local Authority regions in England is 1.23). [3]

Number of AQMAs: 3 [4]

Major sources of air pollution: traffic.

In 2007 radioactive discharge licences to air were issued to Devonport Royal Dockyard Ltd.[5]

**References:**


1. Plymouth City Council, Air Quality, http://www.plymouth.gov.uk/airquality
2. Defra, Local Air Quality Management – Technical Guidance, http://www.defra.gov.uk/environment/quality/air/airquality/local/guidance/documents/tech-guidance-laqm-tg-09.pdf
3. Indices of Deprivation, 2007, http://www.communities.gov.uk/communities/neighbourhoodrenewal/deprivation/deprivation07/
4. UK Air Quality Archive and South West Observatory http://www.swenvo.org.uk/environment/air_quality.asp#laqm
5. Environment Agency (2009) Industrial Pollution maps, http://maps.environment-agency.gov.uk/wiyby/wiybyController?x=247500.0&y=56500.0&topic=pollution&ep=map&scale=3&location=Plymouth,%20City%20of%20Plymouth&lang=_e&layerGroups=default&textonly=off#x=247500&y=56500&lg=5,4,1,&scale=4


### Climate Change and Energy Use

Total energy consumption: 4,941 GWh in Plymouth (2007). This is comprised of 1,791.9GWh for the industrial/commercial sector, 1,869.9GWh for the domestic sector and 1,246GWh for the transport sector.[1]

Split between energy sources: 42% natural gas; 32.5% petroleum products; 25% electricity; 0.3% coal; 0.2% renewables. [1]

Average commercial and industrial electricity usage per customer: In 2007, Plymouth average commercial and industrial electricity consumption per customer was significantly higher than the South West and national averages (89,440kWh in Plymouth compared to 62,751kWh in the South West and 79,077kWh in Great Britain).[1]

Average commercial and industrial gas usage per customer: In 2007 Plymouth average commercial and industrial gas consumption per customer was significantly higher than the South West and national averages (744,810kWh in Plymouth compared to 556,847kWh in the South West and 633,779kWh in Great Britain). [1]

Total fuel usage: In 2006, road transport in Plymouth used 71,100 tonnes of fuel. Of this, 74% is attributable to movement of people and 26% was attributable to movement of freight.[1]

Total carbon dioxide emissions: In 2008, Plymouth produced a total of 1,401 kt CO2. 41% of CO2 emissions were attributed to commercial and industrial activities.[2]

Total end user CO2 emissions per capita (tonnes CO2 per resident) in 2008 were 5.5 tonnes per resident (compared to a national average of 7.4 tonnes per resident). [2]

Plymouth is in a good geographical position to utilise solar, wave, tidal, biomass and wind energies. However, currently Plymouth's has no significant renewable energy facilities (Plymouths total renewable energy production in 2006 was only 5.8MWe).[4]

The UK's Climate Projections (UKCP09) shows that this region is likely to experience hotter

**References:**


1. Department of Energy and Climate Change (2010) *Total final energy consumption at regional and local authority level (Regional Energy Consumption Statistics 2007)* , http://www.decc.gov.uk/en/content/cms/statistics/regional/regional.aspx; and Department of Business, Enterprise and Regulatory Reform (BERR) Energy Consumption at Regional and Local Authority Level, 2006 http://www.berr.gov.uk/energy/statistics/regional/index.html
2. DECC, NI 186 - Per capita reduction in CO2 emissions in the LA area, 2008, http://www.decc.gov.uk/assets/decc/Statistics/climate_change/localAuthorityCO2/460-ni186-per-capita-co2-emissions.xls
3. Plymouth 2020 Environment & Sustainability Partnership Climate Change Impacts and Implications fro Plymouth, 2004. http://www.plymouth.gov.uk/homepage/environmentandplanning/environmentalissues/climatechange.htm


## Sub-Regional Baseline - Plymouth

drier summers, warmer wetter winters and rising sea levels. This is likely to have a significant effect on environmental conditions and will increase the impact of human activity on the water environment. [5]


4. Plymouth Renewable Energy, Strategic Viability Study 2007 http://www.plymouth.gov.uk/070416,_plymouth_renewables_study_-_final_version_march_2007-2.pdf
5. http://wfdconsultation.environment-agency.gov.uk/wfdcms/en/southwest/Intro.aspx


### Coastal Change and Flood Risk

Major threats from climate change: The biggest direct negative effect on Plymouth from climate change would be rising sea levels and consequent flooding.[1]

Flood risks: main sources of flooding are from: direct flooding caused by tide/waves; and indirect flooding caused by the tide submerging drainage outlets. A significant amount of flooding in Plymouth is caused by ineffective drainage and insufficient sewer capacity. Areas in Flood Zone 3 extend along the western, southern and eastern waterfronts of the city.[2]

After many decades of decline Plymouth is promoting a high profile waterfront regeneration vision to attract inward investment and economic development of the city. Dealing with tidal flood risk is an important consideration.

Catchment Flood Management Plans (prepared by the Environment Agency) and Shoreline Management Plans (prepared by local coastal authorities and the Environment Agency) set out long term policies for flood risk management. The delivery of the policies from these long term plans will help to achieve the objectives of this and subsequent River Basin Management Plans. 3

**References:**


1. Plymouth 2020 Environment & Sustainability Partnership Climate Change Impacts and Implications fro Plymouth, 2004.
2. Plymouth City Council, Strategic Flood Risk Assessment, R02701R001/Final Draft http://www.plymouth.gov.uk/homepage/environmentandplanning/planning/planningpolicy/ldf/ldfbackgroundreports/bflodriskassessment.htm
3. http://wfdconsultation.environment-agency.gov.uk/wfdcms/en/southwest/Intro.aspx


### Material Assets (Transport)

Principal roads: The trunk road network in Plymouth comprises the A38 which aligns east to west and the A386 which aligns north to south and branches from the A38.[1]

Principal rail lines: The principal railway passing through Plymouth is the Exeter - Penzance line. The main stop is Plymouth Station close to the city centre. Other stations are mainly clustered to the west of the city. [1]

Principal air ports: Plymouth City Airport is 5km from the city centre. The airport has both military and civilian applications. [1]

Principal ferry ports: Plymouth has good passenger and fright marine port services. Millbay operates regular international passenger services to Roscoff in northern France and Santander in northern Spain. Almost 2.5 million tonnes of marine freight passes through Plymouth each year. [2]

Capacity or congestion issues: Road traffic delays are associated with peak time usage of the A38 Trunk Road. Delays at the A38's city junctions causes delays across the road network notably in the North and East of Plymouth.[3] There is potential capacity in the **rail freight** network; although this would require investment to realise. Estimated traffic flows for all vehicle types is 1406 million vehicle kms.[4] 35.45% of Plymouth residents think that over the past three years that the level of traffic congestion has got better or stayed the same.[4] Travel to work distance: Average distance travelled to fixed place of work 13.83 km.[5] Plymouth is a highly self-contained community with about 80% of people living and working within the city boundary and a relatively high level of public transport usage. [6]

Current issues for transport: There are plans to expand the airport with new terminal facilities and a longer runway. Currently 7000 homes in Plymouth are affected by noise from the

**References:**


1. Plymouth City Council Transport Facts and Figures http://www.plymouth.gov.uk/homepage/transportandstreets/transportplanning/proltp/proltpfacts.htm
2. Plymouth City Council, Marine Services, http://www.plymouth.gov.uk/landingstagesandslipways
3. Plymouth City Council Transport Plan 2006 -2011 http://www.plymouth.gov.uk/homepage/transportandstreets/transportplanning/ltp2006-2011.htm
4. Audit Commission, Plymouth area profile, http://www.areaprofiles.audit-commission.gov.uk/(bcshuirfoqzyvyycm55fqczn)/DataProfile.aspx?entity=0
5. ONS, Travel to work, 2001, http://www.neighbourhood.statistics.gov.uk/dissemination/LeadTableView.do?a=3&b=276837&c=plymouth&d=13&g=401


## Sub-Regional Baseline - Plymouth

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| airport.[1] | 185&i=1001x1003x1006&k=travel+to+work&m=0&r=1&s=1245239859648&enc=1&domainId=15&dsFamilyId=283<br><br>6. The Draft Regional Spatial Strategy for the South West 2006 -2026 (pg 90) http://www.southwest-ra.gov.uk/nqcontent.cfm?a_id=836 |

### Material Assets (Waste Management)

| | |
|---|---|
| Waste management facilities: 60 'bring' bank sites; 2 Civic Amenity Recycling Centres (CARCs), 1 Materials Recovery Facility (MRF); 1 composting facility.1 The Chelson Meadow landfill site closed in 2008 and operations moved to a seven year licence at Lean Quarry near Liskeard. 1<br><br>Commercial and industrial waste total: Annual commercial waste arisings were estimated at being between 173,000 and 199,000 tonnes in 2005. 2<br><br>Split between waste management routes: In 2001 134,710 tonnes of commercial waste were managed in Plymouth. 39% of commercial and industrial waste underwent biological treatment; 36% was landfilled; 18% underwent materials recovery; and 7% was composted. These values exclude waste handled at waste transfer stations (45,200 tonnes in 2001-01).3 (No later commercial and industrial waste arisings data was not identified, consultee input welcome).<br><br>Current issues for waste management: To respond to the anticipated growth in waste generation and at the same time responding to the requirements of the increasingly stringent targets for recycling and alternatives to landfill. | **References:**<br><br>1. Plymouth City Council, Municipal Waste Management Strategy 2007-2030, Baseline Report - Where we are today, April 2007, http://www.plymouth.gov.uk/supplementary_report_1_-_baseline_report_final.pdf<br><br>2. Entec UK (January 2007). Plymouth Waste Local Development Document: Future Waste Requirements (Update) http://www.plymouth.gov.uk/future_waste_management_requirements_jan_2007.pdf<br><br>3. Entec UK (July 2005) Future Waste Requirements, http://www.plymouth.gov.uk/homepage/environmentandplanning/planning/planningpolicy/ldf/ldfbackgroundreports/brfuturewasterequirementsjuly2005.htm |

### Material Assets (Land Use and Materials)

| | |
|---|---|
| Total area: 83 km² 1<br><br>Major land uses: 6.5km² domestic buildings; 3km² non-domestic buildings; 9.5km² roads; 35km2 greenspace; 4km² water; and 6km² other. 1<br><br>Area of previously developed land available for redevelopment: In 2007, there were a total of 231ha of previously developed land that may be available for redevelopment. (136ha of derelict and vacant land and buildings and 95ha of land currently in use). 2<br><br>Average population density: 3000 per km² in 2002. 3 | **References:**<br><br>1. ONS, Key Figures for Physical Environment, http://www.neighbourhood.statistics.gov.uk/dissemination/LeadKeyFigures.do?a=3&b=276837&c=plymouth&d=13&e=8&g=401185&i=1001x1003x1004&m=0&r=1&s=1249995511942&enc=1<br><br>2. National Land Use Database, Previously-developed land that may be available for Development: England 2007 http://www.communities.gov.uk/publications/corporate/statistics/previouslydevelopedland2007<br><br>3. ONS, http://www.statistics.gov.uk/STATBASE/ssdataset.asp?vlnk=7662 |

## Sub-Regional Baseline - Plymouth

### Cultural Heritage

Number of Scheduled Ancient Monuments: 37 in Plymouth (predominantly connected with military history). [1]

Number of listed building: over 750 in Plymouth.[2]

Number of conservation areas: 14 designated for their special architectural or historic interest. [3]

Sites currently at risk: In 2010, Plymouth had 10 entries on English Heritage's at risk register. six were Grade II*, two were Grade I and two were not listed.[4] Plymouth City Councils own at buildings at risk register (updated 2005) includes 20 scheduled ancient monuments and 124 statutory listed buildings or structures (five Grade I, 15 Grade II* and 104 Grade II listed).[5]

Other important sites: Plymouth has six registered parks and gardens, five are Grade II and one is Grade II*. [6]

Current issues for cultural heritage: Many of Plymouth's most important buildings are associated with the Dockyard, such as the Royal William Yard and Naval Hospitals and are listed as Grade II* or Grade I reflecting their significance. [2]

**References:**


1. Plymouth City Council, Scheduled ancient monuments. http://www.plymouth.gov.uk/homepage/creativityandculture/heritageandhistory/historicenvironment/scheduledancientmonuments.htm
2. Plymouth City Council, Heritage, http://www.plymouth.gov.uk/homepage/creativityandculture/heritageandhistory/historicenvironment/listedbuildings.htm
3. Plymouth City Council, Conservation areas http://www.plymouth.gov.uk/homepage/creativityandculture/heritageandhistory/historicenvironment/conservationareas.htm
4. English Heritage, At Risk Register, http://www.english-heritage.org.uk/server/show/nav.19186
5. Plymouth City Council e. Buildings at Risk Register (reviewed 2005). http://www.plymouth.gov.uk/buildingsatrisk
6. Plymouth City Council, Registered Parks and Gardens. http://www.plymouth.gov.uk/homepage/creativityandculture/heritageandhistory/historicenvironment/registeredparks.htm


### Landscape

Number of AONB: 2 (Tamar Valley AONB and South Devon AONB are in proximity to Plymouth).1

Other areas designated for their landscapes: Dartmoor National Park is to the North East of Plymouth. 2

Other important sites or features: 22.4% of the Plymouth's land area is covered by environment designations (nine SSSIs, nine Local Nature Reserves and nine Community Woodlands). Public parks cover 5.5% of land within the city.3

Current issues for landscapes: Features to be sustained and enhanced in Plymouth's landscape character areas include: Historic waterfronts and dockyards surrounding a vast natural harbour; parkland, hilltop planting, tree features, steep wooded slopes, ridges and valleys; skyline of Dartmoor as a backdrop; variety of ecological habitats; and housing estates.2 South Deven AONB has dominant views of Plymouth Sound with its commercial and naval shipping and busy waterfronts.1 Post WWII reconstruction rebuilt Plymouth with a series of local centres and suburban settlements (the Abercrombie Plan). However suburban settlements now form islands of better planned development in a mass of sprawling, amorphous council estates.4

**References:**


1. South Devon AONB, http://www.southdevonaonb.org.uk/text.asp?PageId=59. And, Tamar Valley AONB, http://www.tamarvalley.org.uk/aboutaonb.asp
2. Devon County Council (2004). Devon Structure Plan 2001 to 2016 (Appendix 1). (http://www.devon.gov.uk/_app1_structure_plan.pdf
3. Plymouth City Council, http://www.plymouth.gov.uk/characteristicsplymouth
4. Plymouth City Council, Plymouth Rapid Urban Characterisation Study 2005, http://www.plymouth.gov.uk/homepage/environmentandplanning/planning/planni


| Sub-Regional Baseline - Plymouth | |
|---|---|
| | ngpolicy/ldf/ldfbackgroundreports/brrapidurbancharacterisation.htm |

## Evolution of the Sub-Regional Baseline

Table C1.2 below sets out the likely evolution of the sub-regional baseline without the implementation of the SDP programme. It is acknowledged that there are information gaps where trends or targets have not been identified in relation to specific issues.

**Table C1.2 Evolution of Baseline Conditions**

| Evolution of the Sub-Regional Baseline - Plymouth | |
|---|---|
| **Biodiversity and Nature Conservation** | |
| **Trends:**<br><br>Biodiversity in Plymouth is generally stable but subject to variations.<br><br>Locally, populations of migrating birds are of particular importance as they frequent the estuaries of the Plym and Tamar but local reporting is not currently undertaken.<br><br>Regionally, the population of all native birds in the South West showed little or no change between 1994 and 2004. This was below the national trend which showed an increase of almost 6% (Defra/RSPB and British Trust for Ornithology 2006). Longer term trends have, however, revealed a considerable decline of 45% in farmland birds, and 32% in woodland birds between 1970 and 1994 (Defra 2003). This is a much faster decline than the national averages of 5% and 15% respectively (although care needs to be taken with survey comparisons). 1<br><br>The South West is one of the most bio-diverse regions in England and has the largest area of semi-natural habitat of any English region. This richness is reflected by the fact that almost 10% of the region by area has been designated as nationally or internationally important sites for wildlife. There have been signs of recovery during the last decade of work for biodiversity, however there is evidence that the region has seen a long term decline in wildlife and that the much less bio-diverse than 50 years ago. Despite this, and due to much conservation effort over the last decade, the region does still retain significant populations of species which are nationally and globally important and notable stretches of habitats.<br><br>**Targets:**<br><br>South West Regional Environment Network aims to: 3<br><br>• meet SSSI target by 2010 and halt the decline in farmland birds;<br><br>• establish a network of MPAs and MCZs by 2015; and<br><br>• increase land from 9%- 20% for resilient habitats and species in urban and rural areas by 2050 through delivery of SW Nature map.<br><br>The Devon Biodiversity Action Plan (BAP) prioritises the following key habitats relevant to the maritime environment in estuaries, rocky foreshores, rocky seabeds, otters and atlantic salmon.4<br><br>Natural England (in its previous role as English Nature) had set conservation targets for large shallow inlets and bays, estuaries, | **References:**<br><br>1. Plymouth's Sustainable Community Strategy 2007-2020, http://www.plymouth.gov.uk/homepage/communityandliving/plymouth2020/lspcurrentdocuments/lspsustainablecommunitystrategy.htm<br><br>2. http://www.swenvo.org.uk/state-of-the-environment-2010/<br><br>3. South West Regional Environment Network's Environmental Priorities 2009, http://www.swenvo.org.uk/swren/work/<br><br>4. Devon Biodiversity Partnership, Devon Biodiversity Action Plan<br><br>5. English Nature, Plymouth Sound and Estuaries European Marine Site Scheme of management (Regulation 34 Habitats Directive) |

## Evolution of the Sub-Regional Baseline - Plymouth

sandbanks slightly covered by sea water at all times and SPA features.5

### Population

**Demographics**

**Trends:**

Plymouth's population has shown some fluctuation over the 1981-2006 period. From a baseline of 253,000 people in 1981, in 2006 Plymouth had witnessed a slight (2.05%) reduction in total population to 248,100. In contrast, the South West had an 15.6% increase in population over the 1981 to 2005 period (4,383,400 in 1981 to 5,067,800 in 2005) and there has also been a 7.7% increase in population nationally (46,820,800 in 1981 to 50,431,700 in 2005). The pattern of male and female populations within Plymouth has fluctuated in line with the city total over the period. 1

Plymouth has an increasing trend in the percentage of students gaining five or more GCSEs (A*-C) from 53% in 2003 to 59.4% in 2006. Plymouth has witnessed a small increase in the percentage of working age population qualified to NVQ level 4 from 18.4% in 1999 to 19.3% in 2006. 1

Plymouth schools are currently facing: a sharp and continuing decline in pupil numbers; an increasing number of surplus places especially in primary schools; and a large proportion of the school building stock, built mostly in the 1950s and 60s, in poor condition, needing replacement or significant refurbishment. 2

Plymouth's population is projected to rise to 263,900 by 2025 which represents a projected increase of 7.2% from 2005. 3

The projected rise in population to 2025 will not be uniform across the age groups. The percentage of the population that is under 14 will fall by 0.4%, those 15-24 will fall by 8.7%, the rise in the 25-64 age band will slow, but the percentage of over 65s will increase by 40%. 3

Plymouth has projected increases in jobs of 42,500 from 135,604 in 2003 to 178,104 by 2026. 4

Crime trends in Plymouth as judged by the rate of BCS comparator crime have fallen slightly from 75.1 per 1,000 in 2003/04 to 74.9 per 1,000 in 2006/07. However, during this period fluctuations have been evident. The rate of recorded burglary in Plymouth fell from 18.0 per 1,000 in 1999/2000 to 11 per 1000 in 2006/07 although it has fluctuated during this period. 5

In 2008-09 local crime mapping figures suggest that the overall crime levels in Plymouth have continued to fall. 6

**Targets:**

South West Regional Development Agency targets Bristol, Plymouth, Swindon, Exeter and the key Cornish towns in terms of improving transport infrastructure, making city centres more attractive, linking deprived areas to the opportunities provided by growth, enhancing the knowledge base of our businesses, building more affordable homes and increasing the skills and knowledge of our people. 7

The Plymouth 2020 Partnership sets floor targets including to substantially reduce mortality rates by 40% from heart disease and 20% from cancer by 2010 and 60% of 16 year olds to achieve 5 GCSE A* - C by 2008. [8]

**References:**


1. Plymouth's Sustainable Community Strategy 2007-2020, http://www.plymouth.gov.uk/homepage/communityandliving/plymouth2020/lspcurrentdocuments/lspsustainablecommunitystrategy.htm
2. Plymouth City Council, http://www.plymouth.gov.uk/homepage/education/schools/schoolimplementationplan.htm
3. Plymouth's Health, Social Care and Well-being Strategy 2008-2020
4. Plymouth Local Economic Strategy 2006 - 2021 & Beyond
5. Plymouth's Sustainable Community Strategy 2007-2020, http://www.plymouth.gov.uk/homepage/communityandliving/plymouth2020/lspcurrentdocuments/lspsustainablecommunitystrategy.htm
6. Devon and Cornwall Constabulary, Local Crime Mapping 2008-09, http://maps.devon-cornwall.police.uk/map/plymouth-1/
7. SWRDA, The Way Ahead Delivering Sustainable Communities in the South West.
8. Plymouth 2020 Partnership, Neighbourhood Renewal Strategy


## Evolution of the Sub-Regional Baseline - Plymouth

**Socio-Economic**

**Trends:**

Plymouth's GVA per head indexed, with UK =100 showed a downward trend between 1999 and 2007 decreasing from 84 to 82[5]

The recent economic downturn has affected Plymouth and a recovery is likely to be in line with national predictions. [2]

Employment rate trend in Plymouth between 1999 and 2005 fluctuated but overall was relatively static. [2]

Unemployment is expected to increase as a result of the recent economic downturn. A recovery is likely to occur in line with national trends. [3]

Plymouth aims to increase its number of available jobs to 178,104 by 2026.[3]

Targets:

Plymouth CC aims that by 2016 GVA per head in Plymouth to be 100% of UK average (from 90% of UK average in 2002).[4]

Plymouth CC aims that by 2016 have an employment rate of 80% (73% in 2004).[4]

Plymouth CC aims that by 2016 to have a VAT registered business stock per 1,000 of 210 (163 in 2004).[4]

Plymouth CC aims that by 2016 to have only 9% of workforce with no qualifications (12.5% in 2004).[4]

Plymouth CC aims that by 2016 to have 35% of workforce with NVQ Level 4 qualifications (21% in 2004).[4]

Plymouth CC targets a 2% increase in employment year on year until 2016 and reduction in the economic inactivity rate to 19% by 2016.[4]

**References:**


1. Plymouth's Sustainable Community Strategy 2007-2020, http://www.plymouth.gov.uk/homepage/communityandliving/plymouth2020/lspcurrentdocuments/lspsustainablecommunitystrategy.htm
2. Plymouth's Sustainable Community Strategy 2007-2020, http://www.plymouth.gov.uk/homepage/communityandliving/plymouth2020/lspcurrentdocuments/lspsustainablecommunitystrategy.htm
3. Plymouth City Council, Employment Land Review, http://www.plymouth.gov.uk/homepage/environmentandplanning/planning/planningpolicy/ldf/ldfbackgroundreports/bremploymentlandreview.htm
4. Plymouth Local Economic Strategy 2006 - 2021 and Beyond
5. Sub Regional skills and employment analysis 2010 Plymouth, http://www.swslim.org.uk/downloads/lesbs/plymouth.pdf


**Human Health**

**Trends:**

Life expectancy in Plymouth is going up overall.

Patterns of illness in Plymouth are changing with an expected increase over the next 20 years of people in the community with common mental illnesses and disability. Such patterns will lead to increased dependence on care services, increased carer burden, increased worklessness due to incapacity and increased costs across all sectors. [1]

In Plymouth, the death rate per 100,000 resident population from circulatory disease (<75s) is decreasing in line with NRF Local Area Agreement (LAA) targets. In 2000 the circulatory disease mortality rate was 132.1 per 100,000 residents, reducing to 94.4 per 100,000 in 2005. [2]

In Plymouth, the death rate per 100,000 resident population from cancers (<75s) is decreasing. In 2000, the cancer mortality rate was 138.9 per 100,000 residents, reducing to 122.5 per 100,000 in 2005. [2]

In Plymouth there is a trend of increasing health and increasing life expectancy. However: [3]

- the prevalence of disability is set to increase over the next two

**References:**


1. Plymouth's Joint Strategic Needs Assessment updated February 2008 http://www.plymouthpct.nhs.uk/healthandwellbeing/publichealth/Pages/healthyplymouth.aspx).
2. Plymouth's Sustainable Community Strategy 2007-2020, http://www.plymouth.gov.uk/homepage/communityandliving/plymouth2020/lspcurrentdocuments/lspsustainablecommunitystrategy.htm
3. Plymouth health Strategy 2008-2020, http://www.plymouthpct.nhs.uk/CorporateInformation/reportsandinquiries/Documents/Healthy%20Plymouth%20main%20web.pdf
4. South West Regional Environment Network's Environmental Priorities 2010, http://www.swenvo.org.uk/swren/work/
5. Plymouth's Health, Social Care and Well-being Strategy 2008-2020


## Evolution of the Sub-Regional Baseline - Plymouth

decades compounded by an ageing population;

- there is a trend of increasing obesity in the younger population accompanied by an Increase in rates of type 2 diabetes;
- the numbers of people quitting smoking is generally increasing, although the trend is not always true of the most deprived areas; and
- numbers of road traffic accidents are declining.

The natural environment is a natural health service with the potential to make a major contribution to the mental and physical health and wellbeing of everyone in the South West. It is free for everyone to use and enjoy, enriches our knowledge, develops skills, supports cultural activities and is crucial for sustainable living.[4]

**Targets:**

Currently there are two government targets around smoking, one to reduce smoking overall from 28% to 24% by 2010 which nationally Plymouth is on course to meet, the other to reduce rates amongst manual groups from 32% to 26% by 2010, however Plymouth is not on target to meet this target, with levels in 2005 still around 31%. [5]

Effective planning and delivery for increased provision of, and appropriate access to, natural spaces can also inspire people to develop productive, healthy and socially just communities.[6]


6. South West Regional Environment Network's Environmental Priorities 2010, http://www.swenvo.org.uk/swren/work/


### Human Health (Noise)

**Trends:**

In Plymouth there is a general decline in noise complaints, although this trend is subject to variation. [1]

The South West Regional Spatial Strategy (RSS) Sustainability Appraisal report identifies a trend of gradual increasing noise pollution within the region. [5]

Research undertaken by the Chartered Institute of Environmental Health and published in 2004 demonstrate that areas of high density housing such as cities and more industrial areas are at most risk of unacceptable noise. The survey revealed that people living in the South Western part of the region are: [3]

- 32% less likely to make a complaint about industrial noise;
- 18% less likely to make a complaint about commercial/leisure noise (although there are 14% more complaints per million population);
- 47% less likely to make a complaint about domestic noise; and
- 35% less likely to make a complaint about construction/demolition noise.

Targets:

Plymouth City Council sets out that development proposals will be refused if they cause unacceptable noise, nuisance or light pollution. [4]

**References:**


1. Plymouth's Sustainable Community Strategy 2007-2020, http://www.plymouth.gov.uk/homepage/communityandliving/plymouth2020/lspcurrentdocuments/lspsustainablecommunitystrategy.htm
2. Habitat Regulations Assessment of the Plymouth City Council, Millbay and Stonehouse Area Action Plan, Screening Report, May 2007, http://www.plymouth.gov.uk/070514,rpt,millbayaap_hra_screening_final.pdf
3. Plymouth's Sustainable Community Strategy 2007-2020, http://www.plymouth.gov.uk/homepage/communityandliving/plymouth2020/lspcurrentdocuments/lspsustainablecommunitystrategy.htm
4. Plymouth CC, Plymouth Core Strategy - Policy CS22
5. The South West Regional Spatial Strategy (RSS) Sustainability Appraisal report, http://www.southwest-ra.gov.uk/nqcontent.cfm?a_id=682&tt=swra


## Evolution of the Sub-Regional Baseline - Plymouth

### Soil and Geology

**Trends:**

*No Plymouth level trend data identified (consultee input welcome).*

The natural environment of the South West provides an immense range of valuable services and benefits for society. These range from the essentials for life, including clean air and water, food and fuel, and essential natural processes, such as climate and flood regulation to things that improve our quality of life and wellbeing, such as recreation and beautiful landscapes.[1]

**Targets:**

Devon County Council set out a number of targets: [2]

- to strike a balance between the demand for all mineral resources and the need to protect the environment and sustainable development principles;
- to maintain stock of permitted reserves for aggregate minerals;
- to encourage the most appropriate use of all mineral resources and re-use of waste minerals and secondary aggregates;
- to protect the quality and diversity of the County's earth science and nature conservation interest, historic environment, water environment and landscape character;
- to identify Mineral Working Areas;
- progressive restoration of mineral sites;
- to prevent sterilisation of proven mineral resources; and
- to identify those mineral sites which the County Council will seek to remove the possibility of their opening by the service of Prohibition Orders.

**References:**


1. South West Regional Environment Network's Environmental Priorities 2010, http://www.swenvo.org.uk/swren/work/
2. Devon CC, Devon County Minerals Local Plan


### Water

**Trends:**

Plymouth has a trend of increasing water consumption.[1]

Bathing waters around Plymouth are generally increasing in water quality (from poor quality in 1988 to excellent quality in 2006). [2]

However in 2008 both bathing waters were rated as 'poor' for water quality (down from Excellent since 2004).[3]

River waters around Plymouth are generally increasing in quality.[4]

The South West Region water quality is improving. However locally there are some areas with no net change in poor water quality. The trend is therefore of ongoing point source and diffuse pollution and disruption of naturally purifying and hydrating hydrological cycles as a result of increasing development and agricultural intensification. [5]

The South West Region water demand is forecast to increase by 20% due to population growth. Local water shortages are expected in places due to over abstraction, summer drought, disruption of naturally hydrating hydrological cycles increasing with development and agricultural

**References:**


1. Plymouth's Sustainable Community Strategy 2007-2020, http://www.plymouth.gov.uk/homepage/communityandliving/plymouth2020/lspcurrentdocuments/lspsustainablecommunitystrategy.htm
2. Plymouth's Sustainable Community Strategy 2007-2020, http://www.plymouth.gov.uk/homepage/communityandliving/plymouth2020/lspcurrentdocuments/lspsustainablecommunitystrategy.htm
3. Environment Agency 2010 http://maps.environment-agency.gov.uk/wiyby/wiybyController?x=245500.0&y=555000.0&scale=3&layerGroups=default&location=Devonport,%20City%20of%20Plymouth&ep=map&lang=_e&textonly=off&topic=coastalwaters#x=247881&y=53844&lg=1,&scale=5
4. Source: Plymouth's Sustainable Community Strategy 2007-2020, http://www.plymouth.gov.uk/homepage/communityandliving/plymouth2020/lspcurrentdocuments/lspsustainablecommu


## Evolution of the Sub-Regional Baseline - Plymouth

intensification. [5]

There have been three pollution inclidents since 2005, two of which were significant and one of which was severe. [6]

By 2015, 24 per cent of surface waters in this catchment will improve for at least one element of good status. Six river water bodies will improve to good ecological status by 2015, including the Tamerton Foliot Stream, where the fish population will improve. One lake will improve to good ecological status, Lower Tamar Lake. As a result of these improvements, 39 per cent of water bodies will achieve good ecological status by 2015.

The population in the river basin district will continue to increase, with further urbanisation. Agriculture will respond to the changing climate both here and abroad, market conditions, financial incentives and regulatory pressures. Technology and other solutions to address the pressures will improve, but the rate at which some new solutions can be introduced will depend on the economic climate. 10

**Targets:**

The South West Region aims to manage demand and supply of water to ensure no net increase in demand with population growth by 2020. [7]

The Lyme Bay and South Devon Coastal Group sets out a number of targets: [8]

- to maintain bathing water quality;
- to maintain or enhance the recreational amenity values of the coastline;
- to maintain the integrity of nationally and internationally designated sites; and
- to protect nationally important archaeological sites, listed building at risk and conservation areas.

Plymouth CC aims to ensure development causes no unacceptable impact on water or air quality. [9]

By 2015, 22 per cent of surface waters in the South West River Basin District will show an improvement by 2015 for one or more of the elements measured. This translates to nearly 2,800 kilometres of river or canal improved 10.

By 2015, 42 per cent of surface waters will be in at least good ecological status/potential and 65 per cent of assessed surface waters will be at least good biological status. 57 per cent of groundwater bodies will be at good or better status overall by 2015. 10


nitystrategy.htm

5. South West Regional Environment Network's Environmental Priorities 2010, http://www.swenvo.org.uk/swren/work/
6. Environment Agency (2009) Current maps, http://maps.environment-agency.gov.uk
7. South West Regional Environment Network's Environmental Priorities 2009, http://www.swenvo.org.uk/swren/work/
8. The Lyme Bay and South Devon Coastal Group, Lyme Bay and South Devon Shoreline Management Plan
9. Plymouth CC, Plymouth City Council - Core Strategy - Policy CS22
10. http://wfdconsultation.environment-agency.gov.uk/wfdcms/en/southwest/Intro.aspx


### Air

**Trends:**

*No Plymouth level trend data identified (consultee input welcome).*

In the South West Region air quality is generally improving, however there is a trend of increasingly poor air quality locally due to increasing traffic emissions, transport growth and congestion. [1]

**References:**


1. South West Regional Environment Network's Environmental Priorities 2009, http://www.swenvo.org.uk/swren/work/
2. Plymouth City Council - Core Strategy - Policy CS22


## Evolution of the Sub-Regional Baseline - Plymouth

**Targets:**

Plymouth CC aims to protect people and the environment from unsafe, unhealthy and polluted environments through ensuring development causes no unacceptable impact on water or air quality. [2]

### Climate Change and Energy Use

**Trends:**

Key findings for South West England, 2080s medium emissions scenario: [2]

- the trend is for an increase in winter mean temperature of 2.8ºC; it is very unlikely to be less than 1.6ºC and is very unlikely to be more than 4.3ºC;
- the trend is for an increase in summer mean temperature of 3.9ºC; it is very unlikely to be less than 2.1ºC and is very unlikely to be more than 6.4ºC;
- the trend is for a change in winter mean precipitation of 23%; it is very unlikely to be less than 6% and is very unlikely to be more than 54%; and
- the trend is for a change in summer mean precipitation of -23%; it is very unlikely to be less than -49% and is very unlikely to be more than 6%.

Between 2005 and 2007 average commercial and industrial gas usage per customer increased from 595,016 KWh to 744,810 KWh.

Between 2005 and 2007 average commercial and industrial electricity usage per customer decreased from 92,370 KWh to 89,440 KWh.

Between 2005 and 2006 total commercial and industrial energy usage decreased from 1,730.9 GWh to 1,701.5 GWh. 5

**Targets:**

Plymouth City Council aim to reduce Plymouth's overall carbon footprint by 20% by 2013, 60% by 2020 and 80% by 2050. [3]

Plymouth CC aims for: [4]

- all proposals for non-residential developments exceeding 1,000 square metres of gross floorspace, and new residential developments comprising 10 or more units (whether new build or conversion) to incorporate onsite renewable energy production equipment to off-set at least 10% of predicted carbon emissions for the period up to 2010, rising to 15% for the period 2010-2016; and
- to ensure building design reduces energy consumption by appropriate methods such as high standards of insulation, avoiding development in areas subject to significant effects from shadow, wind and frost, using natural lighting and ventilation, capturing the sun's heat, where appropriate.

**References:**


1. South West Observatory, State of the South West 2010 http://www.swo.org.uk/sotsw2010-online/
2. Defra, UKCP09, http://ukcp09.defra.gov.uk/content/view/20/6
3. Source: Plymouth City Council, Climate Change Framework 2008-2020 http://www.plymouth.gov.uk/climate_change_strategy.pdf
4. Plymouth CC, Core Strategy Development Plan Document - Policy CS20
5. Department of Energy and Climate Change (2009) *Total final energy consumption at regional and local authority level (Regional Energy Consumption Statistics 2006)* , http://www.decc.gov.uk/en/content/cms/statistics/regional/regional.aspx


### Coastal Change and Flood Risk

**Trends:**

Absolute sea level (i.e. corrected for land movement) around the South West has risen by around 1 mm/yr over the 20th century (Proudman

**References:**


1. South West Observatory, State of the South West 2010


## Evolution of the Sub-Regional Baseline - Plymouth

Oceanographic Laboratory), and there are indications that the increase has been at a faster rate than this in the 1990s and 2000s. The nature of land movement in the South West (where land levels are generally getting lower through time) is likely to enhance the effect of rising sea levels. [1]

**Targets:**

***No Plymouth level targets identified (consultee input welcome).***

http://www.swo.org.uk/sotsw2010-online/

### Material Assets (Transport)

**Trends:**

Bus use trend in Plymouth is relatively static, although there is some fluctuation. [1]

Access to local services is showing an increasing trend from 35.45% of people surveyed in 2003/04 reporting that ease of accessing local services had got better or stayed the same to 59% in 2006. [1]

However there appears to be a declining trend in public perceptions of public transport, with 60% of people surveyed in 2006 Plymouth reporting that public transport had got better or stayed the same compared to 75.89% in 2003/04. [1]

The trend in traffic contention is slightly negative with 32% of people surveyed in 2006 reporting that traffic congestion had got better or stayed the same compared to 35.45% in 2003/04. [1]

**Targets:**

Plymouth CC has set a target of enabling 60% of journeys within the City to be undertaken by foot, bicycle or by public transport by 2010. [2]

**References:**

1. Plymouth's Sustainable Community Strategy 2007-2020, http://www.plymouth.gov.uk/homepage/communityandliving/plymouth2020/lspcurrentdocuments/lspsustainablecommunitystrategy.htm
2. Plymouth CC, Plymouth City Strategy and Action Plan

### Material Assets (Waste Management)

**Trends:**

Commercial and industrial waste arisings are predicted to rise to between 140,000 and 334,000 by 2026 depending on the areas growth rate.1. The Waste Strategy for the South West Region requires that by 2021 Plymouth recycle or recover 83% of industrial and commercial wastes.1 Commercial and industrial waste management will require an additional 55,000 to 120,000 tonnes of recycling and composting capacity by 2021 as well as an additional 65,000 tonnes of recovery capacity. 1

The Waste Strategy for the South West Region requires that by 2021 Plymouth recycle or recover 83% of industrial and commercial wastes: [1]

- By 2021 Plymouth will require between about 65,000 tonnes and 130,000 tonnes of recycling and composting capacity for industrial and commercial waste. This will increase to between 62,000 tonnes and 147,000 tonnes by 2026. This means that an additional 55,000 to 120,000 tonnes of recycling and composting capacity is required by 2021 for commercial and industrial waste.
- By 2021 Plymouth will require between about 57,000 tonnes and 115,000 tonnes of further recovery capacity for industrial and commercial waste will be required in Plymouth. This will change to between 55,000 tonnes and 130,000 tonnes by 2026. This means that an additional 65,000 tonnes of industrial and commercial

**References:**

1. Entec UK (January 2007). Plymouth Waste Local Development Document: Future Waste Requirements (Update) http://www.plymouth.gov.uk/future_waste_management_requirements_jan_2007.pdf
2. Plymouth's Sustainable Community Strategy 2007-2020, http://www.plymouth.gov.uk/homepage/communityandliving/plymouth2020/lspcurrentdocuments/lspsustainablecommunitystrategy.htm
3. Devon CC, Municipal Waste Management Strategy for Devon
4. Plymouth City Council, Plymouth CC Waste Development Plan Document
5. Plymouth City Council, Municipal Waste Management Strategy 2007-2030
6. South West Regional Environment Network's Environmental Priorities 2010, http://www.swenvo.org.uk/swren/work/

## Evolution of the Sub-Regional Baseline - Plymouth

recovery capacity is required in Plymouth over by 2021.

- Between 40 000 and 96 000 tonnes of industrial and commercial waste will be sent to landfill every year by 2026.
- Annual commercial waste arisings were estimated at being between 173,000 and 199,000 tonnes in 2005. Commercial and industrial waste arisings are predicted to rise to between 140,000 and 334,000 by 2026 depending on the areas growth rate.

In Plymouth there is a trend of an increasing percentage of household waste being recycled or composted and a decline in the percentage of waste landfilled. [2]

**Targets:**

Devon County Council set the following targets with respect to municipal waste: [3]

- municipal recycling/ composting rates - 40% by 2009/10;
- reduce the growth of household waste to 1% by 2009/10;
- emphasise waste as a resource; and
- encourage recovery, diversion of biodegradable, recycling and composting waste programs.

Plymouth CC aims to: [4]

- allocate land to enable the delivery of facilities which help Plymouth to meet its recycling and recovery targets;
- allocate land in a subsequent AAP or DPD for a recycling centre facility in the north of the city; and
- establish and implement an effective planning framework for the management of waste facilities .

Plymouth CC targets to recycle or compost 33% of municipal waste by 2014/15. [5]

South West Regional Environment Network's Environmental Priorities states that 'Climate Change is one of the biggest challenges that we face. Reducling damaging climate change and its impact must, therefore, be considered across everything that we do'.[6]

### Material Assets (Land Use and Materials)

**Trends:**

Up to 2016 there are planned to be 13,300 new households in Plymouth. (7,700 from 2016 to and 11,000 from 2021 to 2026). These figures are for Plymouth City only and don't take into account the 5,500 new homes planned (by 2019) for the Sherford New Town, four miles from Plymouth. [1]

Plymouth's LDF Core Strategy aims to deliver 24,500 dwellings between 2006 - 2026 and 130ha of employment land between 2006 - 2026. [2]

In the period to 2016 13,300 new households are planned in Plymouth (with a further 18,700 by 2026). [3]

HM Naval Base Devonport will be the main operating base for Amphibious Shipping, Survey and Hydrographic vessels, for the Type 22 frigates and, for at least the next five years, for seven of the Type 23 frigates. [4]

**References:**


1. Plymouth's Health, Social Care and Well-being Strategy 2008-2020).
2. Habitat Regulations Assessment of the Plymouth City Council, Millbay & Stonehouse Area Action Plan, Screening Report, May 2007, http://www.plymouth.gov.uk/070514,rpt,millbayaap_hra_screening_final.pdf
3. Plymouth's Joint Strategic Needs Assessment updated February 2008 http://www.plymouthpct.nhs.uk/healthandwellbeing/publichealth/Pages/healthyplymouth.aspx


## Evolution of the Sub-Regional Baseline - Plymouth

Devonport will also continue to provide world class sea training through Flag Officer Sea Training and will undertake Fleet Time Engineering support for base-ported ships and for visiting sea training vessels. [4]

Devonport will also retain and, subject to commercial negotiations, enhance its position as the centre of excellence for Surface Ship and Submarine Deep maintenance activity. [4]

Subject to ongoing approvals, Devonport will be developed as the centre of specialisation for Amphibious Operations by moving 1 Assault Group Royal Marines, including the Landing Craft of 10 training Squadron and 539 Assault Squadron currently at Poole and Turnchapel, to Devonport. [4]

**Targets:**

Plymouth City Council's draft Plymouth Housing Strategy (2008 - 2011) aims to: provide 5,000 new homes by 2011; provide 10,000 new homes by 2016; and an aspiration for 29,500 new homes by 2026. [5]

Plymouth CC provides the following objectives with respect to housing: [6]

- the delivery of the strategic housing requirement of 1,000 per annum 2006-16 and 1,450 per annum 2016-21 (equating to the draft RSS allocation of 17,250 new homes by 2021);
- at least 30% of new dwellings on qualifying sites to be affordable (equating to at least 3,300 new affordable homes by 2021);
- 80% of new dwellings to be provided on previously developed land (equating to 13,800 homes by 2021); and
- 20% of new dwellings development to be lifetime homes standard (equating to 3,450 homes by 2021).

4. Maritime Change Program, Minister of Defence Update, May 2009, http://www.theyworkforyou.com/wms/?id=2009-05-06b.16WS.1
5. SWRDA, draft Regional Spatial Strategy for the South West 2006 – 2026
6. Plymouth City Council, Core Strategy Development Plan Document – Strategic Objective 10 (Delivering Adequate Housing Supply)

### Cultural Heritage

**Trends:**

*No Plymouth level trend data identified (consutlee input welcome).*

**Targets:**

Plymouth CC will measure delivery of cultural and leisure sector projects and against targets to be developed in relation to the Council's work on promoting tourism and leisure trips to the city. The estimated number of day visits to the city during 2004 was 2.8 million. [1]

**References:**

1. Plymouth CC, Plymouth Core Strategy

### Landscape

**Trends:**

*No Plymouth level trend data identified (consutlee input welcome).*

**Targets:**

Plymouth CC to protect and support a diverse and multi-functional network of green space and waterscape. [1]

**References:**

1. Plymouth CC, Core Strategy

## Table C.1.3 Current Problems in Sites of Particular Environmental Importance

This section sets out the current condition and potential problems facing SPAs, SACs and Ramsar Sites that could be relevant to the subsequent assessment of the locational options. This is consistent with the requirements of Annex I (d) of the SEA Directive (which requires that existing environmental problems, and in particular, those relating to any areas of particular environmental importance, such as areas designated pursuant to Directive 79/409/EEC and 92/43/EEC are outlined).

SPAs, SACs and Ramsar sites have been selected on the basis of being within 20km of the potential sites for SDP dismantling activities. The selection criterion aims to capture all sites that would be subject to Appropriate Assessment under the Habitat Regulations[2]. Given that effects could be felt downstream of fluvial and tidal zones, a precautionary approach as been taken by adopting a 20km radius rather than the 15km radius usually used in Appropriate Assessment.

Where specific SPA or SAC condition data is not currently available, the aggregate condition of the constituent SSSIs has been used. It is noted that there are limitations to using SSSI condition is a surrogate for SPA condition as conservation and condition indicators vary. However, for the purposes of this assessment SSSI condition is considered to provide an appropriate benchmark of condition.

**Table C1.3 Current Problems in Sites of Particular Environmental Importance**

| Sub-Regional Current Problems in Sites of Particular Environmental Importance - Plymouth | |
|---|---|
| **SPA** | |
| **Tamar Estuaries Complex SPA**<br><br>The Tamar Estuary lies on the border between Devon and Cornwall on the southern coast of England. The estuary system is a large marine inlet on the English Channel coast comprising the estuaries of the rivers Tamar, Lynher and Tavy which collectively drain an extensive part of Devon and Cornwall. The Tamar River and its tributaries provide the main input of fresh water into the estuary complex, and form a ria (drowned river valley) with Plymouth lying on the eastern shore. The broader lower reaches of the rivers form extensive tidal mud-flats bordered by saltmarsh communities. The mud-flats contain extensive and varied infaunal communities rich in bivalves and other invertebrates, and feeding grounds for waterbirds in numbers of European importance. Saltmarshes provide important feeding and roosting areas for large numbers of wintering and passage waterbirds. | **Condition:**<br><br>Tamar Estuaries Complex SPA is predominantly in favourable condition. The only areas of degradation are in the Tamar-Tavy Estuary SSSI. Potential risks to the SPA are development resulting in intertidal habitat damage; pollutant leakage; and dredging. |

[2] Habitat Regulations Assessment is required under Article 6 of the EC Habitats Directive 1992, and under UK law by Regulation 48 of the Conservation (Natural Habitats &c) Regulations 1994 (as amended in 2007).

## Sub-Regional Current Problems in Sites of Particular Environmental Importance - Plymouth

**SAC**

| | |
|---|---|
| **Plymouth Sound and Estuaries SAC**<br><br>Plymouth Sound and Estuaries, on the south-west coast of England, has been selected for a range of habitats and species including: sublittoral sandbanks; ria estuaries (including very well-developed estuarine salinity gradient); rocky reefs in low salinity estuarine conditions (supporting species such as the hydroid Cordylophora caspia); sheltered marine inlets with little freshwater input (including a range of sponge- and worm-dominated communities on lower shore mixed sediments); various intertidal and subtidal reef biotopes; limestone reefs (one of only two coastal areas in south-west Britain with Devonian limestone); Atlantic salt meadow (including reedbeds supporting the only UK population of triangular club-rush Schoenoplectus triqueter); and shore dock Rumex rupestris (in 1999 comprising 15 colonies and 42 plants). | **Condition:**<br><br>Plymouth Sound and Estuaries SAC is predominantly in favourable condition. Areas of minor degradation are in the Tamar-Tavey Estuary SSSI and Wembury Point SSSI. However, the Rame Head and Whitsand Bay SSSI has only 31.67% in favourable condition (although the rest is recovering). Potential risks to the SAC are further port development; recreational mooring; ongoing maintenance dredging; and pollutant leakage.<br><br>Both the geology and geography of Plymouth Sound make it very sensitive to oil pollution. |
| **South Dartmoor Woods SAC**<br><br>This complex is representative of old sessile oak woods in south-west England, with regionally important assemblages of lower plants and dry Lobarion communities that are unique in Western Europe. The woods are notable for the variations in stand type that reflect past management (old coppice and high forest) and also include grazed and ungrazed areas. The woodland is part of a complex mosaic that includes heathland and species associated with open ground, such as the high brown fritillary Argynnis adippe and pearl-bordered fritillary butterfly Boloria euphrosyne. Variations also arise due to geology, resulting in the presence of small-leaved lime Tilia cordata, ash Fraxinus excelsior, wild service tree Sorbus torminalis, and small areas of wet woodland dominated by alder Alnus glutinosa and willow Salix spp. | **Condition:**<br><br>South Dartmoor Woods SAC is predominantly in favourable condition. The only areas of degradation are in the Sampford Spiney SSSI with 10.38% in recovering condition, and 2.28% in declining condition. Potential risks to the SAC are from overgrazing and uncontrolled fires. |
| **Blackstone Point SAC**<br><br>This small site supports the largest known extant population of shore dock Rumex rupestris in Devon, and one of the largest concentrations of this species on rocky sea-cliffs in south-west England. In 1999 there were five discrete colonies totalling at least 29 plants, including one large 'clump' (7 x 4 metres) which could have been made up of several individual plants. | **Condition:**<br><br>Blackstone Point SAC is in favourable condition. There are currently no significant threats to the SAC. |
| **Dartmoor SAC**<br><br>Dartmoor is representative of: upland wet heath; upland heath; the southernmost blanket bog in Europe; and oak woodland (Wistman's Wood is dominated by pedunculate oak Quercus robur rather than sessile oak Q. petraea), (Dendles Wood is dominated by pedunculate oak Q. robur, but with substantial areas of beech Fagus sylvatica )and (Black Tor Copse has similarities to Wistman's Wood but the bryophyte and lichen assemblages are very rich including nationally-rare species). A valley mire at 280m altitude supports a southern damselfly Coenagrion mercuriale population of 20-100 individuals, first discovered on the site in 1998. The stronger population occurs in the northern portion of the mire, where springs feed shallow soakways that flow through wet heath. The southern part of the mire has a higher water table with Sphagnum bog-mosses dominating. | **Condition:**<br><br>Dartmoor SAC has large areas in unfavourable recovering condition and significant areas of further decline. Only 6.53% of the South Darmoor SSSI (one of five SSSIs in the SAC) is in favourable condition. In contrast the smaller SSSIs of Leusdon Common and Hembury Woods are 100% in favourable condition. Potential risks to the SAC are from uncontrolled fires; heavy munitions crater damage; and over grazing. |

| Sub-Regional Current Problems in Sites of Particular Environmental Importance - Plymouth | |
|---|---|
| **Ramsar** | |
| No Ramsar sites within 20km of DRDL/HMNB Devonport | Condition: NA |

(Source: Multi-Agency Geographic Information for the Countryside, www.magic.gov.uk; Joint Nature Conservation Committee, http://www.jncc.gov.uk; The Ramsar Convention website, http://www.ramsar.org; and Natural England www.naturalengland.org.uk).

## Relevant Sub-Regional Plans and Programmes

The SEA scoping process needs to identify and review other relevant plans, programmes, policies and strategies (herein after referred to as 'plans and programmes') that are applicable to the SDP and outline the nature of "relationship with other relevant plans and programmes".

**Table C1.4 Relevant Plans, Programmes and Strategies**

| Sub-Regional Plans and Programmes - Plymouth | |
|---|---|
| **Biodiversity, Flora and Fauna** | |
| **Summary Policy Messages:**<br><br>To conserve: large shallow inlets and bays; estuaries; sandbanks slightly covered by sea water at all times; and SPA features.<br><br>To protect BAP species and habitats including. | |
| **SEA objectives link:**<br><br>Objective A Biodiversity and Nature Conservation<br><br>Objective C Health and Wellbeing | |
| Devon Biodiversity Partnership (1998, revised 2005) Devon Biodiversity Action Plan: http://www.devon.gov.uk/devon_biodiversity_action_plan.htm | Objectives: The Devon BAP is the agreed source of habitat and species conservation priorities. Some of the key habitats relevant to the maritime environment are:<br>• estuaries;<br>• rocky foreshore;<br>• rocky seabed;<br>• otter; and<br>• atlantic salmon.<br>Targets: There are no key targets listed. |
| English Nature (2000) Plymouth Sound and Estuaries European Marine Site Scheme of management (Regulation 34 Habitats Directive): http://www.ukmpas.org/pdf/Plymouth_Sound_reg33.pdf | Objectives: The following habitat groups have had conservation objectives set for them: |

| Sub-Regional Plans and Programmes - Plymouth | |
|---|---|
| | • large shallow inlets and bays;<br>• estuaries;<br>• sandbanks slightly covered by sea water at all times; and<br>• SPA features (nationally important populations of regularly occurring Annex 1 species).<br>Targets: There are no key targets listed. |
| Plymouth City Council (2007) Core Strategy Development Plan Document - Policy CS19 (Wildlife). | Objectives:<br>The Council will promote effective stewardship of the city's wildlife through:<br>• safeguarding national and international protected sites for nature conservation from inappropriate development;<br>• appropriate consideration being given to European and nationally protected and important species;<br>• maintaining a citywide network of local wildlife sites and wildlife corridors, links and stepping stones between areas of natural green space;<br>• ensuring that development retains, protects and enhances features of biological or geological interest, and provides for the appropriate management of these features; and<br>• ensuring development seeks to produce a net gain in biodiversity by designing in wildlife, and ensuring any unavoidable impacts are appropriately mitigated for.<br>Supporting wildlife enhancements which contribute to the habitat restoration targets set out in the South West Nature Map and in National, Regional and Local Biodiversity Action Plans. |
| **Population** | |
| **Summary Policy Messages:**<br>To harness the benefits of population growth, improve economic and employment opportunities, reduce deprivation and ensure full community participation and social justice.<br>To focus on increase entrepreneurship, enhance tourism and achieve unconstrained participation in the labour market. | |
| **SEA objectives link:**<br>Objective B Population<br>Objective C Health and Wellbeing | |
| The Way Ahead Delivering Sustainable Communities in the South West:<br>http://southwest-ra.gov.uk/media/SWRA/RSS%20Documents/Technical%20Documents/078TheWayAheadEKOS.pdf | Objectives: Aims to support existing strategies to bring about acceleration in the provision of housing, improved regional productivity, and to harness the benefits of this growth to address regional inequalities and economic under-performance.<br>Targets: The strategy targeted Bristol, Plymouth, Swindon, Exeter and the key Cornish towns in terms of:<br>• improving transport infrastructure; |

| Sub-Regional Plans and Programmes - Plymouth | |
|---|---|
| | • making city centres more attractive;<br>• linking deprived areas to the opportunities provided by growth;<br>• enhancing the knowledge base of our businesses;<br>• building more affordable homes; and<br>Increasing the skills and knowledge of our people. |
| South West Regional Development Agency (2004) South West Integrated Regional Strategy: Just Connect 2004-2026 | Objectives: To harness the benefits of population growth, enhance the Southwest's distinctive environments, improve economic and employment opportunities, reduce deprivation and ensure full community participation and social justice.<br>Targets: No quantified targets set. |
| Devon Strategic Partnership (2008) Devon's Sustainable Community Strategy 2008-2018: http://www.devonsp.org.uk/sustainablecommunitystrategy/outcomes/draftlaapriorities/index.html | Objectives: The priorities set out in the Community Strategy are to improve aspects of the quality of life for everyone in Devon in the following ways:<br>• a Growing Economy;<br>• a World Class Environment;<br>• health and Wellbeing;<br>• homes and Housing;<br>• a Safer Devon;<br>• strong and Inclusive Communities; and<br>• inspiring Young People.<br>Targets: There are no key targets. |
| South West Sustainability Shaper: http://www.shapersw.net/ | Objectives: The Sustainability Shaper (the Sustainable Development Framework for the South West of England) is an evolving tool for the SW region and includes:<br>• the South West's sustainability Mission and Principles and Action Frameworks setting out our sustainability priorities; and<br>• resources for a range of people and activities (including sustainability guidance for the delivery of the 'Integrated Regional Strategy').<br>Sustainability principles include:<br>• develop sustainability learning and skills;<br>• improve physical and mental well-being;<br>• improve equality in meeting basic needs;<br>• be resource wise;<br>• support thriving low carbon;<br>• reduce high carbon travel;<br>• use local and ethical goods and services;<br>• enhance local distinctiveness and diversity including; |

| Sub-Regional Plans and Programmes - Plymouth | |
|---|---|
| | • help everyone to join in public decision-making; and<br>• take a long term approach.<br><br>Targets: No formal targets. |
| South West Observatory - State of the South West 2010: http://www.swo.org.uk/sotsw2010-online/ | Objectives: A comprehensive report which covers 11 social, economic and environmental topics covering the 2010 state and predicted trends. The document sets the context for policy development in the South West.<br><br>Targets: There are no key targets listed. |
| Plymouth 2020 Partnership (2002) Neighbourhood Renewal Strategy | Objectives: To narrow the gap between the most deprived and best performing neighbourhoods, as part of the Government's aim to ensure people are not seriously disadvantaged where they live within 10-20 years.<br><br>Targets: Floor targets have been established including to substantially reduce mortality rates by 40% from heart disease and 20% from cancer by 2010 and 60% of 16 year olds to achieve 5 GCSE A* - C by 2008. |
| South West of England Regional Development Agency (2006) Regional Economic Strategy for the South West of England 2006 - 2015 | Objectives: Provides a framework for all economic development within the southwest regions up to 2015.<br><br>Targets: No specific targets set, but a list of general indicators is provided including increased start up and survival rates of businesses, increased participation in higher education etc. |
| South West Regional Development Agency (2004) South West Framework for Employment and Skills Action. | Objectives: Identifies the vision of the labour market in the southwest region.<br><br>Targets: Emphasis not on specific targets but on general outcomes such as increased employability. |
| Plymouth City Council (2006) Plymouth Local Economic Strategy 2006 – 2021 and Beyond: http://www.plymouth.gov.uk/localeconomicstrategy | Objectives: Sets out a clear strategy for transforming Plymouth's economy. It aims to focus on the key sectors of which Plymouth has competitive advantage, increase entrepreneurship, enhance tourism and achieve unconstrained participation in the labour market, among other things.<br><br>Targets: A list of specific targets including a 2% increase in employment year on year until 2016 and reduction in the economic inactivity rate to 19% by 2016. |
| **Human Health** | |
| **Summary Policy Messages:**<br><br>To address health and well-being related inequalities in all plans and shift focus to prevention and health promotion, particularly in mental health and access to services. | |
| **SEA objectives link:**<br><br>Objective C Health and Wellbeing<br><br>Objective B Population | |
| Devon, Cornwall, Isles of Scilly Joint Emergency Response Protocol (JERP) (2005): http://www.plymouth.gov.uk/jerp.pdf | Guidance emphasises the necessity to establish liaison between all the responders involved in the response from the onset of an emergency and continually throughout at all levels of command. By its achievement each agency will be able to carry out their roles and responsibilities to maximum efficiency as part of a unified joint strategy. |

| Sub-Regional Plans and Programmes - Plymouth | |
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| | Targets: Guidance document, no formal targets. |
| Plymouth's Health, Social Care and Well-being Strategy 2008-2020: http://www.plymouthpct.nhs.uk/CorporateInformation/reportsandinquiries/Documents/Healthy%20Plymouth%20main%20web.pdf | Objectives:<br>• to explicitly address health and well-being related inequalities in all plans through target setting, re-focusing investment and rigorous use of equality impact assessment;<br>• to shift the focus of investment to address prevention and health promotion, particularly in specified areas;<br>• mental health promotion;<br>• to directly address identified issues of access and take-up of specified services; and<br>• to further develop services to promote independence.<br>Targets: No formal targets. |
| **Human Health (Noise)** | |
| **Summary Policy Messages:**<br>None identified. | |
| **SEA objectives link:**<br>Objective D Noise and Vibration<br>Objective C Health and Wellbeing | |
| None identified. | None identified. |
| **Soil and Geology** | |
| **Summary Policy Messages:**<br>To protect the quality and diversity of Devon's earth science interests. | |
| **SEA objectives link:**<br>Objective E Geology and Soils.<br>Objective C Health and Wellbeing.<br>Objective A Biodiversity and Nature Conservation. | |
| Devon County Council (2004) Devon County Minerals Local Plan: http://www.devon.gov.uk/index/environmentplanning/planning-system/planning_minerals_and_waste/minerals_planning/minerals_local_plan.htm | Objectives: The objectives of the Mineral Plan are:<br>• to strike a balance between the demand for all mineral resources and the need to protect the environment and sustainable development principles;<br>• to maintain stock of permitted reserves for aggregate minerals;<br>• to encourage the most appropriate use of all mineral resources and re-use of waste minerals and secondary aggregates;<br>• to protect the quality and diversity of the County's earth science and nature conservation interest, historic environment, water environment and landscape character; |

## Sub-Regional Plans and Programmes - Plymouth

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| | • to identify Mineral Working Areas;<br>• progressive restoration of mineral sites;<br>• to prevent sterilisation of proven mineral resources; and<br>• to identify those mineral sites which the County Council will seek to remove the possibility of their opening by the service of Prohibition Orders.<br>Targets: There are no key targets listed. |
| **Water** | |
| **Summary Policy Messages:**<br>To not impinge on navigational access in Plymouth Sound.<br>To maintain bathing water quality.<br>To maintain or enhance the recreational amenity values of the coastline.<br>To maintain the integrity of nationally and internationally designated sites.<br>To protect nationally important archaeological sites, listed building at risk and conservation areas. | |
| **SEA objectives link:**<br>Objective F Water<br>Objective C Health and Wellbeing<br>Objective M Cultural Heritage<br>Objective H Energy and Climate Change<br>Objective A Biodiversity and Nature Conservation | |
| Plymouth City Council - Core Strategy - Policy CS22 (Pollution) | Objectives: Policy seeks to protect people and the environment from unsafe, unhealthy and polluted environments through Ensuring development causes no unacceptable impact on water or air quality.<br>Targets: No formal targets. |
| Plymouth City Council - Core Strategy - Policy CS20 (Sustainable Resource Use) | Objectives: Policy states that council will actively promote development which utilises natural resources in as an efficient and sustainable a way as possible. This will include:<br>• meeting high water efficiency standards, and incorporating new technologies to recycle and conserve water resources; and<br>• promoting the use of Sustainable Urban Drainage Schemes.<br>Targets: No formal targets. |
| South West River Basin Management Plan | Objectives: This plan focuses on the protection, improvement and sustainable use of the water environment. Many organisations and individuals help to protect and improve the water environment for the benefit of people and wildlife. River basin management is the approach the Environment Agency is using to ensure our combined efforts achieve the improvement needed in the South West River Basin District.<br>Targets: No formal targets. |

## Sub-Regional Plans and Programmes - Plymouth

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| **Air** | |
| **Summary Policy Messages:**<br><br>To protect people and the environment from unsafe, unhealthy and polluted environments by ensuring development causes no unacceptable impact on air quality. | |
| **SEA objectives link:**<br><br>Objective G Air Quality<br><br>Objective C Health and Wellbeing<br><br>Objective J Transport<br><br>Objective A Biodiversity and Nature Conservation | |
| Plymouth City Council - Core Strategy - Policy CS22 (Pollution). | Objectives: Policy seeks to protect people and the environment from unsafe, unhealthy and polluted environments through Ensuring development causes no unacceptable impact on water or air quality.<br><br>Targets: No formal targets. |
| Plymouth City Council (2004) Detailed Assessment of Air Quality in Plymouth: http://www.plymouth.gov.uk/airquality. | Objectives: Detailed assessment, which aims to assess the likelihood of the Environment Act's objectives being exceeded for the date specified in the Technical Guidance document.<br><br>Targets: Targets fall in line with National Air Quality Strategy. |
| **Climate Change and Energy Use** | |
| **Summary Policy Messages**:<br><br>To incorporate renewable energy generation into new large non-residential developments.<br><br>To achieve national and regional CO2 emission cuts. | |
| **SEA objectives link:**<br><br>Objective H Energy and Climate Change<br><br>Objective G Air<br><br>Objective B Population<br><br>Objective F Water<br><br>Objective A Biodiversity and Nature Conservation | |
| Plymouth City Council (2004 and 2006) Climate Change: the Impacts and Implication for Plymouth: http://www.plymouth.gov.uk/climate_change.pdf | Objectives: The report and updates provide an overview of the threats, causes and reality of climate change. There are also a set of recommendations based on both the UK and the South West.<br><br>Targets: Notes reductions in CO2 targets from national and regional government. |
| Plymouth City Council (2007) Core Strategy Development Plan Document - Policy CS20 Sustainable Resource Use. | Objectives: actively promote development which utilises natural resources in as an efficient and sustainable a way as possible. This will include:<br><br>• Requiring all proposals for non-residential developments exceeding 1,000 square metres of gross floorspace, and new residential developments comprising 10 or more units (whether new build or conversion) to incorporate onsite renewable energy production |

## Sub-Regional Plans and Programmes - Plymouth

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| | equipment to off-set at least 10% of predicted carbon emissions for the period up to 2010, rising to 15% for the period 2010-2016.<br>• Ensuring building design reduces energy consumption by appropriate methods such as high standards of insulation, avoiding development in areas subject to significant effects from shadow, wind and frost, using natural lighting and ventilation, capturing the sun's heat, where appropriate.<br>Targets: No formal targets. |
| Climate Change Working Group - Climate Change The Impacts and Implications for Plymouth: http://www.plymouth.gov.uk/climate_change_strategy.pdf | Objectives: The following recommendations are made in the report:<br>• The responsibility of 'lead organisation' in climate change and sustainable energy matters should remain with the City Council until such time as a more appropriate, alternative, multi-agency organisation can be established to take on this role. It would be logical for Plymouth 2020's Environment and Sustainability Partnership to develop and eventually, undertake this role as it is named as the 'lead organisation' for the achievement of Target 13 (Climate Change) in the City Strategy.<br>• The Nottingham Declaration on Climate Change (a public statement of commitment) should be signed by Plymouth City Council on behalf of the wider Plymouth 2020 Partnership.<br>• The elements of the Cities for Climate Change Protection programme should be adopted by both Plymouth City Council and the Plymouth 2020 Partnership. The milestones set out in this programme and, where possible, regional or national UK Climate Change protocols should be the key elements of Plymouth's Climate Change Action Plan.<br>Targets: No formal targets. |
| **Coastal Change and Flood Risk** | |
| **Summary Policy Messages:**<br>To protect Plymouth from coastal erosion and associated effects, whilst maintaining water quality, amenity value and biodiversity. | |
| **SEA objectives link:**<br>Objective I Coastal Change and Flood Risk<br>Objective H Energy and Climate Change<br>Objective G Air<br>Objective B Population<br>Objective F Water<br>Objective A Biodiversity and Nature Conservation | |
| Lyme Bay and South Devon Coastal Group (1998) Lyme Bay and South Devon Shoreline Management Plan. | Objectives: The shoreline management plan set objectives for the area surrounding Devonport (Mount Battern Point to Cremyll and sets the following objectives for the sustainable management of the shoreline. Specific objectives include:<br>• to protect Plymouth;<br>• to not impinge on navigational access in Plymouth Sound; |

| Sub-Regional Plans and Programmes - Plymouth | |
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| | • to maintain bathing water quality;<br>• to maintain or enhance the recreational amenity values of the coastline;<br>• to maintain the integrity of nationally and internationally designated sites; and<br>• to protect nationally important archaeological sites, listed building at risk and conservation areas.<br>Targets: No specific targets have been set. |
| Plymouth City Council (2006) Strategic Flood Risk Assessment: http://www.plymouth.gov.uk/homepage/environmentandplanning/planning/planningpolicy/ldf/ldfbackgroundreports/bfloodriskassessment.htm. | Objectives:<br>• ensure that Plymouth City Council meet its obligations under current planning guidance; and<br>• provide a reference and policy document to inform local planning policy.<br>Targets: No formal targets. |
| Plymouth City Council - Core Strategy - Policy CS21 (Flood Risk). | Objectives: The Council will support development proposals that avoid areas of current or future flood risk, and which do not increase the risk of flooding elsewhere. This will involve a risk based sequential approach to determining the suitability of land for development. Development in high risk flood areas will only be permitted where it meets the certain prerequisites.<br>Targets: No formal targets. |
| Durlston Head to Rame Head Shoreline management Plan. | Objectives: The assessment (Plan) aims to manage risks by using a range of methods which reflect both national and local priorities, in order to:<br>• reduce the threat of flooding and erosion to people and their property; and<br>• Benefit the environment, society and economy, in line with the Government's 'sustainable development principles.'<br>Targets: No formal targets. |
| Tamar Catchment Flood management Plan | Objectives: The role of CFMPs is to establish flood risk management policies which will deliver sustainable flood risk management for the long term. This CFMP identifies flood risk management policies to assist all key decision makers in the catchment. Flooding within the Tamar catchment can be attributed to flooding from the rivers, estuaries, surface-water runoff and drainage systems.<br>Targets: No formal targets. |
| **Material Assets (Transport)** | |
| **Summary Policy Messages:**<br>To reduce the rate of growth of traffic congestion; improve road safety; improve air quality; and support and sustainable growth. | |

## Sub-Regional Plans and Programmes - Plymouth

**SEA objectives link:**

Objective J Transport

Objective C Health and Wellbeing

Objective A Biodiversity and Nature Conservation

Objective B Population

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| Plymouth City Council (2006) Local Transport Plan 2006 to 2011: http://www.plymouth.gov.uk/ltp2006-2011 | Objectives:<br>• to improve accessibility and social inclusion;<br>• to reduce the rate of growth of traffic congestion;<br>• to improve road safety;<br>• to improve air quality and the environment;<br>• to support Plymouth's urban renaissance and sustainable growth;<br>• to improve quality of life; and<br>• to make maintenance more efficient and effective.<br>Targets: Plan has a number of targets designed to meet the above objectives. However a key target is:<br>• The Plymouth City Strategy and Action Plan have set a target of enabling 60% of journeys within the City to be undertaken by foot, bicycle or by public transport by 2010. |

**Material Assets (Waste Management)**

**Summary Policy Messages:**

To ensure sufficient wastes management capacity to meet Plymouths needs.

**SEA objectives link:**

Objective K Waste

Objective C Health and Wellbeing

Objective A Biodiversity and Nature

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| Devon County Council (2005) Municipal Waste Management Strategy for Devon. | Objectives: The waste management strategy (which includes the Waste Local Plan adopted in June 2006) key objective is to achieve the targets set out below.<br>Targets: The strategy sets waste reduction targets to be reviewed every 5 years including:<br>• municipal recycling/ composting rates – 40% by 2009/10;<br>• reduce the growth of household waste to 1% by 2009/10;<br>• emphasise waste as a resource; and<br>• encourage recovery, diversion of biodegradable, recycling and composting waste programs. |
| Plymouth City Council (2008) Plymouth's Waste Development Plan Document: | Objective: This document provides a part of Plymouth's |

## Sub-Regional Plans and Programmes - Plymouth

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| http://www.plymouth.gov.uk/waste_dpd_council_version1-2.pdf. | Local.Development Framework. It sets out to provide the following:<br>• Allocating sufficient and appropriate land within the city that is capable of accommodating a range of strategic waste management and treatment facilities. Providing sufficient capacity to meet Plymouth's needs and, if possible, additional capacity to manage and treat waste from adjoining areas.<br>• Providing a positive planning framework to support the accommodation of sustainable commercial and industrial waste management facilities. Providing local waste management facilities, either on strategic waste management sites or at a range of other smaller sites.<br>• Providing a positive planning policy framework that enables sustainable waste-related development, this will have an acceptable impact on local and global environmental quality.<br>Target:<br>• the allocation of land to enable the delivery of facilities which help Plymouth to meet its recycling and recovery targets;<br>• the allocation of land in a subsequent AAP or DPD for a recycling centre facility in the north of the city; and<br>• establishing and implementing an effective planning framework for the management of waste facilities. |
| Plymouth City Council (2007) Municipal Waste Management Strategy 2007-2030: http://www.plymouth.gov.uk/waste_management_strategy_2007-2030.pdf | Objective: Strategy is intended as a guiding document for the future management of waste within Plymouth, and sets out 'how' waste will be managed over the period 2007 - 2030. The guidance outlined in this document is at a strategic level.<br>Targets:<br>The Strategy provides for a number how future waste provision in Plymouth is to be managed and uses targets to outline how this is to be achieved. For instance the Plymouth Council targets to recycle or compost 33% of municipal waste by 2014/15. |
| **Material Assets (Land Use and Materials)** | |
| **Summary Policy Messages:**<br>To ensure all communities enjoy the benefits of further development, including rural parts of the region.<br>For Plymouth to continues its renaissance and becomes the economic hub of the far South West;<br>To develop necessary infrastructure to support growth. | |
| **SEA objectives link:**<br>Objective L Land Use and Materials<br>Objective B Population<br>Objective A Biodiversity and Nature | |
| Government Office for the South West (2001) Regional Planning Guidance 10: Regional Planning Guidance for the South West (to be replaced by the Regional Spatial Strategy) | Objectives: The regional planning guidance covers the following topics:<br>• the Natural and Built Environment;<br>• the Economy; |

| Sub-Regional Plans and Programmes - Plymouth | |
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| | • tourism, Culture, Leisure and Sport;<br>• housing;<br>• transport; and<br>• infrastructure and Resources.<br>Targets: Specific targets for region's districts are contained within the respective topic sections. |
| Plymouth City Council (1993)<br>Plymouth's Local Agenda 21 Plan:<br>http://www.plymouth.gov.uk/localagenda21 | Objectives: The plan sets out sustainability principles for Plymouth and is used to advise on the balance between environmental, economic and social priorities in Plymouth. It includes a number of objectives under these headings.<br>Targets: There are no key targets listed although there are 39 indicators. |
| Plymouth City Council - Plymouth Housing Strategy 2008 – 2011.<br>http://www.plymouth.gov.uk/housingstrategy | Objectives: The Housing Strategy is based upon the following strategic housing principles:<br>• places and communities;<br>• affordable housing and housing needs;<br>• housing choice;<br>• housing conditions in the private sector; and<br>• landlord role and stock transfer.<br>Targets: The following targets are provided in the Strategy coming out of the Core Strategy:<br>• 5,000 new homes by 2011;<br>• 10,000 new homes by 2016;<br>• 17,250 new homes by 2021; and<br>• 29,500 new homes by 2026. |
| Plymouth City Council (2007) Core Strategy Development Plan Document - Strategic Objective 10 (Delivering Adequate Housing Supply) | Objectives:<br>• the delivery of the strategic housing requirement of 1,000 per annum 2006-16 and 1,450 per annum 2016-21 (equating to the draft RSS allocation of 17,250 new homes by 2021);<br>• at least 30% of new dwellings on qualifying sites to be affordable (equating to at least 3,300 new affordable homes by 2021);<br>• 80% of new dwellings to be provided on previously developed land (equating to 13,800 homes by 2021); and<br>• 20% of new dwellings development to be lifetime homes standard (equating to 3,450 homes by 2021). |
| Plymouth City Council (2007) Core Strategy Development Plan Document:<br>http://www.plymouth.gov.uk/homepage/environmentandplanning/planning/planningpolicy/ldf/ldfcorestrategy.htm | Objective: The Core Strategy sets out a spatial planning framework for the long term development of the city, ensuring that investment decisions are not made in isolation, but are properly co-ordinated, with a focus on promoting the principles of sustainable development. It has been prepared taking into account the views of all sections of the community and stakeholders, as well as maintaining consistency with national and regional guidance. This constitutes part of the Plymouth Local |

## Sub-Regional Plans and Programmes - Plymouth

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| | Development Framework.<br><br>Targets: Numerous targets are included in the respective topic sections of the Strategy, key ones including housing allocations and area visions. |
| **Cultural Heritage** | |
| **Summary Policy Messages:**<br><br>To improve knowledge of the historic environment and place conservation at the heart of urban renewal.<br><br>To increase understanding of coastal and maritime historic environment.<br><br>To remove physical, cultural and social barriers which inhibit access, understanding or enjoyment of the South West's historic environment.<br><br>To improve management of the historic environment across the South West. | |
| **SEA objectives link:**<br><br>Objective M Cultural Heritage | |
| English Heritage (2004) A Strategy for the Historic Environment in the South West | Objectives: The strategy aims to promote the importance of the Historic Environment on the success of the region, and has the following objectives:<br><br>• continue to improve our knowledge of the historic environment;<br><br>• put conservation at the heart of urban renewal, and improve appreciation of rural heritage resources;<br><br>• increase understanding of coastal and maritime historic environment and wetland landscapes as a matter of urgency;<br><br>• promote landscape sensitive design;<br><br>• promote the use of traditional conservation and management skills;<br><br>• ensure that the education sector in the South West takes full account of the value of the historic environment;<br><br>• remove physical, cultural and social barriers which inhibit access, understanding or enjoyment of the South West's historic environment; and<br><br>• tackle the legacy created by poor management of the historic environment across the South West.<br><br>Targets: There are no key targets listed. |
| Plymouth Core Strategy (2007) – Strategic Objective 8 (Delivering Cultural / Leisure Facilities and the evening /night-time economy) | Objectives: To facilitate the creation of Plymouth as a vibrant waterfront city with a thriving cultural and leisure sector and a diverse, safe, balanced and socially inclusive evening/night economy. This will be achieved by:<br><br>• establishing and promoting one or more sustainable cultural quarters as centres for arts, culture and entertainment for the city;<br><br>• promoting the waterfront regeneration areas as locations for leisure, culture and entertainment amenities;<br><br>• promoting the development of the Life Centre at Central Park;<br><br>• promoting local culture and leisure venues in other parts of the city to |

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| | enhance local provision; and<br><br>• promoting the development of a balanced evening/night-time economy within the City Centre and waterfront regeneration areas.<br><br>Targets: Progress towards achieving this objective will be measured against delivery of cultural and leisure sector projects and against targets to be developed in relation to the Council's work on promoting tourism and leisure trips to the city. The estimated number of day visits to the city during 2004 was 2.8 million. |
| **Landscape** | |
| **Summary Policy Messages:**<br><br>To protect and support a diverse and multi-functional network of green space and waterscape.<br><br>To provide sustainable management of the Tamar Area of Outstanding Natural Beauty. | |
| **SEA objectives link:**<br><br>Objective N Landscape and Townscape<br><br>Objective A Biodiversity and Nature Conservation<br><br>Objective B Population | |
| South West Regional Assembly. Regional Strategy for the South West Environment 2004-2014. | Objectives: The strategy sets out a vision of a region where people benefit from an excellent environment now and in the future. The strategy sets out a number of environmental topics and objectives and is supported by the annual document 'The State of the Environment 2006'.<br><br>Targets: There are no key targets listed. |
| Tamar Valley AONB Partnership (2009) Tamar AONB Management Plan 2009-2014: http://www.tamarvalley.org.uk/themesec.asp?pid=1&sid=36 | Objectives: The plan outlines the management objectives for Tamar Area of Outstanding Natural Beauty, including landscape management, AONB proofing, improving understanding and awareness, and sustainable management.<br><br>Targets: There are no key targets listed. |
| Plymouth City Council (2007) Core Strategy - Policy CS18 (Plymouth's Green Space) | Objectives: Sets out criteria and a methodology for how the Council will protect and support a diverse and multi-functional network of green space and waterscape.<br><br>Targets: No formal targets. |

# C2 Fife - Sub Regional Information

## Table C2.1 Baseline Information

### Sub-Regional Baseline - Fife

**Biodiversity and Nature Conservation**

Number of SSSIs: 48 SSSIs covering around 7,715ha (approximately 5.62% of Fife). [1]

Number of SACs: two SACs covering around 3,244ha (approximately 2.36% of Fife). [1]

Number of SPAs: two SPAs covering around 4,342ha (approximately 3.16% of Fife). [1]

Other important sites: one RAMSAR site (4,270ha); three country parks (489ha); 31 gardens and designated landscapes (4,179ha); seven local nature reserve (1,650ha); and one regional park (6,058ha). [1]

Current issues for biodiversity, flora and fauna: Fife's coastland and wetlands are important sites for migrating wildfowl and breeding seabird populations. The environmental problems and threats affecting biodiversity in Fife include; fragmentation of habitats due to development pressures; non native invasive species; climate change and alteration of phenology (timing of flowering, breeding, migration); agricultural practices; and land and freshwater pollution (including nutrient enrichment). [2]

**References:**


1. Scottish Natural Heritage, Areas of Protected Sites by Local Authority, July 2009, http://gateway.snh.gov.uk/discoverer/viewer?cn=cf_a102&nlsl=en-gb&pg=1&qp_As~20at=31-JUL-2009&wbk=PROTECTED_AREAS_AND_SITES_SUMMARY_V3&wsk=140 And: Scottish Natural Heritage, Number of Protected Sites by Local Authority, July 2009 http://gateway.snh.gov.uk/discoverer/viewer?cn=cf_a102&nlsl=en-gb&pg=1&qp_As~20at=31-JUL-2009&wbk=PROTECTED_AREAS_AND_SITES_SUMMARY_V3&wsk=57
2. Fife Council, State of the Environment Report, 2007, http://fifedirect.org.uk/publications/index.cfm?fuseaction=publication.pop&pubid=1155288E-DA38-0392-2D23E6CA90FF3AD1


**Population**

**Demographics**

Resident population of 363,500. [1]

48.3% male and 51.7% female. [1]

64.8% of population is of working age. (65.8% of males and 63.9% of females).[1]

78.4% of working age population is economically active. [1]

71% of working age population is in employment. [1]

8% of working age population is unemployed. [1]

Of those of working age: 34.2% have NVQ4 and above; 55.1% have NVQ3 and above; 71.2% have NVQ2 and above; 82.2% have NVQ1 and above; 7.8% have other qualifications; and 10% have no qualifications. [1]

The crime rate is not significantly different to the Scottish average. [3]

Total crime per 10,000 population in 2005-06 was 850. [4]

Fife Council's education services provide for over 55,000 pupils in 142 primary schools, 19

**References:**


1. NOMIS, official labour market statistics, Fife, https://www.nomisweb.co.uk/reports/lmp/la/2038432135/report.aspx?town=fife
2. Audit Scotland, Fife Council, Audit of Best Value and Community Planning, March 2009, http://www.audit-scotland.gov.uk/docs/local/2009/bv_090312_fife_em.pdf
3. Scotland Public Health Observatory, Health and Wellbeing Profile 2008, http://www.scotpho.org.uk/home/Comparativehealth/Profiles/chp_profiles.asp
4. Scottish National Statistics, http://www.sns.gov.uk


## Sub-Regional Baseline - Fife

secondary schools, 16 stand-alone nurseries and six special schools. [2]

**Socio-economics**

In 2007 per capita GVA[3] was £14,346 (£13,653 in 2006)[1]

In 2009 the median full-time gross hourly pay in Fife was £11.89 (compared to a national median of £12.47). This compares to £11.67 in 2008 for the area (and a national median of £12.01). [3]

In January - December 2009 Fife had an average unemployment rate of 8% compared to a Great British rate of 7.7%. This compares to January - December 2008, when Fife had an unemployment rate of 5.7% compared to a British rate of 5.7%.[3]

Fife is more dependent on manufacturing-intensive occupations for employment than Scotland as a whole but is seeing a shift to a more modern service economy. Specialist manufacturing in defence, marine engineering and electronics remain important. But the legacy of vacant industrial property is giving way to modern offices, financial services and call centres.[2]

Fife has a total of 130,300 jobs with a job density[4] of 0.61 (compared to 0.8 in Scotland and 0.79 in Great Britain). [3]

In 2009 Fife had a lower percentage of the workforce employed in: transport, communications, finance and IT than either Scotland or Great Britain. Fife had a high percentage of the workforce employed in public administration, education, health, manufacturing and other services compared to Scotland or Great Britain. [3]

**References:**


1. ONS, Regional, sub-regional and local gross value added (GVA), December 2009, http://www.statistics.gov.uk/pdfdir/gva1209.pdf
2. Fife Council, Single Outcome Agreement, 2009-2012, Fife Council, Single Outcome Agreement
3. NOMIS, official labour market statistics, Fife, https://www.nomisweb.co.uk/reports/lmp/la/2038432135/report.aspx


**Human Health**

Life expectancy at birth for males of 76.1 years (2007 -2009) (compared to 75.4 in Scotland). [1]

Life expectancy at birth for females of 80.4 years (2007 - 2009) (compared to 80.1 in Scotland).[1]

554 coronary heart disease admissions rate/100,000: 2008 (556 in Scotland). [2]

279 cerebrovascular disease admissions rate/100,000: 2008 (277 in Scotland). [2]

3,178 all cancer rate/100,000 population: 2008 (2,729 in Scotland) [2]

Health hazard to the general public from monitored levels of radionuclides in Fife is considered very small. [3]

All-cause mortality (all ages), and mortality rates from heart disease, stroke and cancer (under-75s), are all significantly better than, or not significantly different to, the Scotland average. [4]

In 2009 3.8% of the local area was in the 15% most health deprived data zones.

In the same period, 1.55% of deprivation measured data zones were in the 10% most health deprived data zones.

**References:**


1. Life Expectancy for Administrative Areas within Scotland 2007 – 2009, General Register Office for Scotland; http://www.gro-scotland.gov.uk/files2/stats/life-expectancy-admin-areas/07-09/le-admin-areas-07-09.pdf
2. Scottish Neighbourhood Statistics, Health, http://www.sns.gov.uk/Downloads/AdHocChoose.aspx
3. Standing Conference of Local Authorities in the Forth Estuary, Radioactivity Monitoring April 2007 - March 2008, http://www.fife.gov.uk/publications/index.cfm?fuseaction=publication.pop&pubid=E9CB64D2-E118-36FC-


[3] This is the GVA per capita figure for the NUTS 3 geography of Clackmannanshire and Fife; the smallest geography for which such data are available.

[4] The density figures represent the ratio of total jobs to working-age population. Total jobs includes employees, self-employed, government-supported trainees and HM Forces.

## Sub-Regional Baseline - Fife

In the same period, 3.97% of deprivation measured data zones were in the 15% most health deprived data zones.

In the same period, 7.73% of deprivation measured data zones were in the 20% most health deprived data zones. [6]

Health in Fife is improving. Average life expectancy in Fife is above average; however there is a high degree of health inequality across Fife. In 2008 the total mortality rates per 100,000 head of population under 75 years old was 362.3. However, in the least deprived 20% of areas the rate was 230, whilst in the most deprived 20% of areas, the rate was 566. [4] In Fife, in 2005, the top three causes of death were: diseases of the circulatory system, neoplasms (tumours or abnormal growth of tissue) and diseases of the respiratory system. Fife had 57 GP practices in 2008 (1,397 patients per GP). [5]

Over one-third of people (35.6%) live within 500m of a derelict site (Scotland 27.3%). Compared to the Scotland average of 15.0%, 10.3% of the population live in the 15% 'most access deprived' areas in Scotland.[4]

Site specific nuclear safety reports are available quarterly from the Health and Safety Executive.[7]


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4. Scotland Public Health Observatory, Health and Wellbeing Profile 2008, http://www.scotpho.org.uk/home/Comparativehealth/Profiles/chp_profiles.asp
5. Fife Council, Know Fife, http://knowfife.fife.gov.uk
6. Scottish Index of Multiple Deprivation 2009, http://www.scotland.gov.uk/Publications/2009/10/28104046/0
7. Health and Safety Executive, Quarterly Reports, http://www.hse.gov.uk/nuclear/llc/2008/index.htm


### Human Health (Noise)

Major sources of noise: A90 north of the Forth Bridge [1]

Current issues for noise: Noise pollution caused by the growth in road transport, congestion is a key issue for Fife. In Fife in 2006, the road with the highest traffic flow was the A90 north of the Forth Road Bridge. In 2007-08 Fife Council received 325 non-domestic noise complaints, one of which resulted in formal action being taken. [2]

Total non-domestic noise complaints: 325 in 2008/09 (compared to 305 in 2007/08)[3].

**References:**


1. Fife Council, State of the Environment Report, 2007, http://fifedirect.org.uk/publications/index.cfm?fuseaction=publication.pop&pubid=1155288E-DA38-0392-2D23E6CA90FF3AD1
2. Fife Council, Statutory Performance Indicators, 2008-09, http://www.fife.gov.uk/uploadfiles/publications/c64_SPIBOOKLETFINAL2008-091.pdf
3. Audit Scotland, Statutory Performance Indicators, http://www.audit-scotland.gov.uk/performance/docs/2008/council/comp/ProtSFf08.xls


### Soil and Geology

Predominant geology: The area is dominated by rocks of the Devonian and Carboniferous periods, with approximately 75% of the area underlain with sedimentary rocks and 20% of the area underlain with igneous rocks of these periods. [1]

Topographic features: Geologically, the area is defined by two parallel fault lines, approximately 50 miles apart, between which land has subsided, creating an ancient rift valley (the Midland Valley). The Midland Valley is, however, quite diverse in character ranging from low lying arable farmland to large areas of upland pasture and moorland. [1]

Geological designations: The area of Clackmannanshire and Fife have 24 SSSIs designated for their geology.[2]

Other important features: Notable features occur where the underlying igneous rock protrudes through the sedimentary layers. Around much of the eastern and southern coast of Fife there is an almost continuous terrace of flat land raised above current sea level. Alluvial deposits

**References:**


1. SNH, Fife Landscape Character Assessment, David Tyldesley and Associates (1999), http://www.snh.org.uk/pdfs/publications/review/113.pdf
2. JNCC, Geological Conservation Review, http://www.jncc.gov.uk/default.aspx?page=4177&authority=UKM22
3. Fife Council, State of the Environment Report, 2007, http://fifedirect.org.uk/publications/index.


## Sub-Regional Baseline - Fife

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| and soils occur along the valley floors and lock basins, with occasional areas of peat. [1]<br><br>Current issues for soils and geology: Fife has approximately 7,000 sites potentially affected with contamination, mainly as a result of its industrial heritage. [3] | cfm?fuseaction=publication.pop&pubid=1155288E-DA38-0392-2D23E6CA90FF3AD1 |
| **Water** | |
| Major surface water features: River Ore, the River Eden and the River Leven. [1]<br><br>Major ground water features: major aquifers including the Knox Pulpit Formation and other associated Devonian aquifers. [1]<br><br>Water quality: Water quality in Fife is relatively good. In 2007, the 80% of bathing waters in Fife meet quality standards. In 2006 609km of rivers were sampled for quality. 62% were rated excellent; 42% were rated as good; 26% were rated fair; and 0% were rated seriously polluted. [2]<br><br>Protected water features: Isle of May SAC; Firth of Tay and Eden Estuary SAC; Firth of Tay and Eden Estuary SPA; Firth of Forth SPA; Cameron Reservoir SPA; Forth Islands SPA; South Tayside Goose Roosts SPA; and Loch Leven SPA.<br><br>In 2007, radioactive discharge licences to water were issued to Rosyth Royal Dockyard Ltd. [3] General problems affecting the water environment include; point source pollution, diffuse pollution, changes to water bodies resulting from engineering works, and building on flood plains. [1] | **References:**<br><br>1. Fife Council, State of the Environment Report, 2007, http://fifedirect.org.uk/publications/index.cfm?fuseaction=publication.pop&pubid=1155288E-DA38-0392-2D23E6CA90FF3AD1<br><br>2. Fife Council, Know Fife, http://knowfife.fife.gov.uk<br><br>3. SEPA, Scottish Pollutant Release Inventory, http://apps.sepa.org.uk/SPRIPA/Search/ByLocalAuthority/Criteria.aspx |
| **Air** | |
| Air quality: Air quality in Fife is generally good.[1] In 2005 annual average background levels were: PM10: 11.8 µgm-3; Carbon monoxide (CO): 0.12mgm-3; Benzene: 0.15µgm-3; 1, 3-butadiene: 0.03 µgm-3; Nitrogen dioxide (NO2): 5.69µgm-3; Annual average total NOX: 7.25 µgm-3. [2] No equivalent Combined Air Quality Index data is available for Scotland.<br><br>Number of AQMAs: 1 [3]<br><br>Major sources of air pollution: Fife has localised areas of elevated air quality pollutants associated with road transport. Longannet Power Station in Fife is also a major source of air pollution.[4]<br><br>In 2007, radioactive discharge licences to air were issued to Rosyth Royal Dockyard Ltd. [5] Industrial emissions have diminished significantly in Fife as a result of the reduction in heavy industry. The decrease in coal use in Fife, and across Scotland, has lead to a corresponding decrease in sulphur dioxide emissions, and lessened the acidification of natural systems.[2] | **References:**<br><br>1. Fife Council, Air Quality Strategy, http://www.fifedirect.org.uk/atoz/index.cfm?fuseaction=service.display&objectid=9BEA61F5-84B3-4566-A6306430709B15B7<br><br>2. Fife Council, State of the Environment Report, 2007, http://fifedirect.org.uk/publications/index.cfm?fuseaction=publication.pop&pubid=1155288E-DA38-0392-2D23E6CA90FF3AD1<br><br>3. Fife Council, Bonnygate AQMA order, http://www.fife.gov.uk/publications/index.cfm?fuseaction=publication.pop&pubid=9BC9C454-D24F-006A-2D604662DA3FA429<br><br>4. SEPA Air Quality Report, 2007, http://209.85.229.132/search?q=cache:fOcuu5BxlkIJ:www.sepa.org.uk/air/idoc.ashx%3Fdocid%3D5813436f-75a4-44c4-b8e1-98a5b4eef486%26version%3D-1+defra+days+of+moderate+or+high+AEA+Energy+and+Environment+fife&cd=9&hl=en&ct=clnk&gl=uk<br><br>5. SEPA, Scottish Pollutant Release |

| Sub-Regional Baseline - Fife | |
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| | Inventory, http://apps.sepa.org.uk/SPRIPA/Search/ByLocalAuthority/Criteria.aspx |
| **Climate Change and Energy Use** | |
| Total energy consumption: 13,397.4 GWh in Fife (2007). This is comprised of 7,110.3 GWh for the industrial/commercial sector, 3779.7 GWh for the domestic sector and 2507.4 GWh for the transport sector.[1]<br><br>Split between energy sources: 50% natural gas; 32% petroleum products; 13% electricity; 5% coal; and 0.22% renewables and waste. [1]<br><br>Total commercial and industrial electricity usage per customer: In 2007 Fife total energy consumption per capita was higher than the Scottish average, but lower than the national totals (37,300 kWh in Fife compared to 30,900 kWh in the Scotland and 28,000 kWh in Great Britain).[1]<br><br>Total commercial and industrial gas usage per employee: In 2007, Fife Total commercial and industrial gas consumption per employee was significantly higher than the Scottish and national totals (28,300 kWh in Fife compared to 10,600 kWh in Scotland and 8,945 kWh in Great Britain). [1]<br><br>Total fuel usage: In 2008 road transport in Fife used 182,000 tonnes of fuel. Of this 67.91% was attributable to movement of people and 32.09% was attributable to movement of freight. [1]<br><br>Total carbon dioxide emissions: In 2007, Fife produced a total of 3,587 kt CO2. 50.2% of CO2 emissions were attributed to commercial and industrial activities (45.4% nationally). [2]<br><br>Total end user CO2 emissions per capita (tonnes CO2 per resident) in 2007 were 9.9 tonnes per capita (compared to a national average of 8.4 tonnes per resident). [2] | **References:**<br><br>1. Department of Energy and Climate Change (2010) *Total final energy consumption at regional and local authority level (Regional Energy Consumption Statistics 2007)* , http://www.decc.gov.uk/en/content/cms/statistics/regional/regional.aspx; and Department of Business, Enterprise and Regulatory Reform (BERR) Energy Consumption at Regional and Local Authority Level, 2008 http://www.berr.gov.uk/energy/statistics/regional/index.html<br><br>2. Local and Regional CO2 Emissions Estimates for 2005-2007 http://www.decc.gov.uk/en/content/cms/statistics/climate_change/gg_emissions/uk_emissions/2007_local/2007_local.aspx |
| **Coastal Change and Flood Risk** | |
| Flood risks: In 2006, 0.8% of dwellings were within a coastal flood risk area. [1]<br><br>Major threats from climate change: Fife has a relatively long coastline and therefore many areas are at risk from rising sea levels and increased storm surges. [2]<br><br>3% of dwellings were within a fluvial flood risk area. [4]<br><br>In Fife, most watercourses are small and fast flowing and flooding is usually caused by short duration intense rainfall. Of the two larger rivers in Fife, the Leven and Eden, the latter is historically subject to significant flooding from long duration rainfall, however, the Leven shows little tendency to flood. Tidal flooding is an issue along Fife's coastline. [3] | **References:**<br><br>1. Scottish Neighbourhood Statistics, Fife, http://www.sns.gov.uk/AnRep/AreaTree.asp<br><br>2. Fife Council, State of the Environment Report, 2007, http://fifedirect.org.uk/publications/index.cfm?fuseaction=publication.pop&pubid=1155288E-DA38-0392-2D23E6CA90FF3AD1<br><br>3. Fife Council, Flood Alleviation Report, 2007, http://www.fifedirect.org.uk/uploadfiles/publications/c64_FifeFloodAlleviationReport2007.pdf<br><br>4. Scottish Neighbourhood Statistics, Fife, http://www.sns.gov.uk/AnRep/AreaTree.asp |
| **Material Assets (Transport)** | |
| Principal roads: The trunk road network in Fife comprises the M90 and A90 which align north to south, and the A985 which aligns east to west along the firth of forth. The vast majority of | References: |

## Sub-Regional Baseline - Fife

freight transported in Fife is over short distances by road with an average journey distance of 84km.[1]

Principal rail lines: North of Scotland rail line and East of Scotland rail line. In addition to the main rail routes there is a local 'Fife Circle' route, but while the south and central areas of Fife are well connected by rail, the west of Fife, Levenmouth and the East Neuk area are not.[2]

Principal air ports: Fife has a small airport at Glenrothes (Fife airport). Good transport links are also available to airports located at Edinburgh and Glasgow.

Principal ferry ports: Fife has 13 harbours and piers. The Port of Rosyth is the base for daily ferry sailing to Zeebrugge and is also visited by a number of cruise ships each year. [3]

Capacity or congestion issues: 2007/08; 10% of driver journeys delayed due to traffic congestion.[4] Significant areas of congestion are clustered around Dunfermline Town and Rosyth, mainly associated with traffic over the Forth Bridge.[4, 1]

Travel to work distance: Average distance travelled to place of work or place of study in Fife was 13.00km (2001 Census data).[5]

Current issues for transport: Overall in Fife, traffic and congestion are on the rise, while public transport usage is decreasing.[1] 32.8 % of roads needed maintenance (red and amber classification) in 2008.[4]


1. Fife Council, State of the Environment Report, 2007, http://fifedirect.org.uk/publications/index.cfm?fuseaction=publication.pop&pubid=1155288E-DA38-0392-2D23E6CA90FF3AD1
2. Audit Scotland, Fife Council, Audit of Best Value and Community Planning, March 2009, http://www.audit-scotland.gov.uk/docs/local/2009/bv_090312_fife_em.pdf
3. Fife Council, Local Transport Strategy for Fife 2006 – 2026, http://www.fife.gov.uk/news/index.cfm?fuseaction=feature.display&objectid=EDFE41B3-E7FE-C7EA-05E36A05EA6F61FE
4. Scottish National Statistics, http://www.sns.gov.uk
5. General Register Office for Scotland, Scotland's Census Results, Key Statistics Settlements and Localities Scotland - 25 March 2003 http://www.gro-scotland.gov.uk/files/key_stats_chareas.pdf


### Material Assets (Waste Management)

Waste management facilities: two landfill sites; 11 recycling centres; around 350 recycling points; one main composting site; two private company composting sites, one biomass incinerator; and one co-incineration plant.[1]

Commercial and industrial waste total: 422,919 tonnes in 2006-07.[2]

Split between waste management routes: Of the municipal fraction (28,117 tonnes), 12% was recycled, 0% was composted and 88% was landfilled).[2] *No data identified for the non-municipal fraction (consultee input welcome).*

There were 52 waste management sites in Fife that were actively receiving waste in 2006. The total annual capacity of all licensed/permitted sites (except incinerators and other thermal treatment plants) operational in 2006 was 2,968,730 tonnes.[2]

Current issues for waste management: *No data has been identified in relation to future capacity requirements (consultee input welcome).*

**References:**


1. Fife Council, State of the Environment Report, 2007, http://fifedirect.org.uk/publications/index.cfm?fuseaction=publication.pop&pubid=1155288E-DA38-0392-2D23E6CA90FF3AD1. And SEPA, Fife Strategic Waste Management Review, 2008, www.sepa.org.uk/waste/waste_data/waste_data_reports/idoc.ashx?docid=502f5d8e-599a-4924-87cb-d3c6f9d96af1&version=-1 - 30 Nov 2008 - 1255k – Preview
2. SEPA, 2006-07 waste data, http://www.sepa.org.uk/waste/waste_data/waste_data_reports/waste_management_reviews.aspx


### Material Assets ( Land Use and Materials)

Total area: 1,325 km$^2$ [1]

Major land uses: Fife is comprised mainly of open countryside, and the built up area accounts

**References:**


1. ONS,


## Sub-Regional Baseline - Fife

| | |
|---|---|
| for 11% of total land surface.[2] The predominant land uses are agriculture, urban development, mineral working, industry and forestry.[3]<br><br>Area of previously developed land available for redevelopment: In 2008 Fife had 725.64ha of derelict land and 98.7ha of vacant urban land.[4]<br><br>Average population density: 265 per km$^2$ in 2002. [1] | http://www.statistics.gov.uk/STATBASE/ssdataset.asp?vlnk=7662<br><br>2. Fife Council, Single Outcome Agreement, 2008-2011, http://www.improvementservice.org.uk/library/577-single-outcome-agreements/666-single-outcome-agreements-2008-2011/view-category/-1/<br><br>3. Scottish Natural Heritage, Fife Landscape Character Assessment, 1999, http://www.snh.org.uk/publications/on-line/LCA/fife.asp<br><br>4. Enviroline, derelict and vacant land, www.scotland.gov.uk/stats/envonline/_data/LANDderelictandvacant.xls |
| **Cultural Heritage** | |
| Number of Scheduled Ancient Monuments: 260 [1]<br><br>Number of listed building: 4,910 [1]<br><br>Number of conservation areas: 48 [1]<br><br>Sites currently at risk: 179 buildings on the buildings at risk register of Scotland.[2]<br><br>Other important sites: two designated wreck sites; 25 archaeological areas of regional importance; and 31 garden and designed landscapes sites. [1]<br><br>Current issues for cultural heritage: There is prolific evidence of early settlement throughout the entire area and Fife. Threats to cultural heritage in Fife include: permanent setting change from mineral extraction and further urban development.[3] | **References:**<br><br>1. Fife Council, State of the Environment Report, 2007, http://fifedirect.org.uk/publications/index.cfm?fuseaction=publication.pop&pubid=1155288E-DA38-0392-2D23E6CA90FF3AD1<br><br>2. Buildings at Risk Register for Scotland, Fife, http://www.buildingsatrisk.org.uk/BAR/returnsearch.aspx?region=Fife&div=&class=ALL&category=AT%20RISK&Page=1&NumImg=20<br><br>3. Scottish Natural Heritage, Fife Landscape Character Assessment, 1999, http://www.snh.org.uk/publications/on-line/LCA/fife.asp |
| **Landscape** | |
| Number of AONB: Fife has no national scenic areas.[1]<br><br>Other areas designated for their landscapes: six Areas of Great Landscape Value (AGLV) (covering 70,640ha) and six Regionally Important Geological Sites (RIGS) (covering 186ha) .[2]<br><br>Other important sites or features: Fife is comprised mainly of open countryside, and the built up area accounts for 11% of total land surface.[2] | **References:**<br><br>1. Scottish Natural Heritage, map of national scenic areas, http://www.snh.org.uk/pdfs/nsa/NSAspecialqualityproject.pdf<br><br>2. Fife Council, State of the Environment Report, 2007, http://fifedirect.org.uk/publications/index.cfm?fuseaction=publication.pop&pubid=1155288E-DA38-0392-2D23E6CA90FF3AD1 |

## Evolution of the Sub-Regional Baseline

Table C2.2 below sets out the likely evolution of the sub-regional baseline without the implementation of the SDP programme. It is acknowledged that there are information gaps where trends or targets have not been identified in relation to specific issues.

### Table C2.2 Evolution of Baseline Conditions

| Evolution of the Sub-Regional Baseline - Fife | |
|---|---|
| **Biodiversity and Nature Conservation** | |
| **Trends:**<br><br>There is a trend of increasing fragmentation of habitats due to development pressures. This trend is likely to be somewhat less pronounced in the future, due to a range of biodiversity initiatives and projects within the area, however such actions are unlikely to halt or reverse the trend. [1]<br><br>There is a trend of increasing proliferation of non native invasive species. This trend may be exacerbated by climate change. [1]<br><br>There is likely to be a long term trend of biodiversity change as a result of climate change. Changes in environmental conditions are likely to cause some species to increase in prominence at the expense of species less suited to the environmental changes. It is likely that sea level rise and changing climatic conditions will result in the loss of some habitats from the area. [1]<br><br>There is a trend of declining biodiversity as a result of some agricultural practices. Such changes are likely to be less pronounced in the long term due to a growing emphasis on environmental stewardship promoted by the Scottish Government.<br><br>There is likely to be a trend of improved condition of designated sites and European Protected Species as a result of management strategies. [1]<br><br>**Targets:**<br><br>The Fife Local Biodiversity Partnership provides specific targets and objectives with reference to different forms of biodiversity. These largely involve their protection and expansion.[2] | **References:**<br><br>1. Fife Structure Plan - Strategic Environmental Assessment Environmental Report - December 2008 (incorporating February 2009 updates), http://www.scotland.gov.uk/Topics/Built-Environment/planning/National-Planning-Policy/themes/dev-plan/FifeSP/FifeSEAreport<br><br>2. Fife Local Biodiversity Partnership, Fife Local Biodiversity Action Plan |
| **Population** | |
| **Demographics**<br><br>**Trends:**<br><br>Fife is an area with a growing population which has reached at least 375,000 and is still expanding (Fife Council, Fife Structure Plan 2006-2026).<br><br>The General Register Office for Scotland (GROS) predicts that Fife's population will grow by 10.1% to 398,608 in 2033.against a growth of 7.3% for Scotland. [4]<br><br>Total crime rates per 10,000 population have gradually increased from 660 in 1997-08 to peak in 2004-05 at 983 before starting a declining trend to 665 in 2008-09. [3] | **References:**<br><br>1. A Stronger future for Fife, Fife's Community Plan<br><br>2. Audit Scotland, Fife Council, Audit of Best Value and Community Planning, March 2009, http://www.audit-scotland.gov.uk/docs/local/2009/bv_090312_fife_em.pdf<br><br>3. Scottish National Statistics, http://www.sns.gov.uk<br><br>4. General Register Office for Scotland, 2008-based Population Projections. |

## Evolution of the Sub-Regional Baseline - Fife

**Targets:**

*No relevant targets identified (consultee input welcome).*

**Socio-economics**

**Trends:**

In Fife, there is a trend of the legacy of vacant industrial property is giving way to modern offices, financial services and call centres.[1] Between 1998 and 2008 employment sectors have shifted away from manufacturing towards increased employment in the service industries and public administration, education and health.[3]

Between 2001 and 2008, the employment rate has fluctuated but shows a gradually increasing rate. The rate was 72.4 in 2001 (with a peak of 77.9 in 2004) and ending on 76.5 in 2008.[3] This is unlikely to continue under recession conditions.

**Targets:**

Fife Council sets out the following key economic targets:

- increase the number of employees in medium and large enterprises by 10% (6,000 jobs);
- 80% of the working age population in employment;
- attract private sector investment through Invest in Fife of £550m;
- double the amount of business expenditure in research and development to £36m;
- grow Fife's tourism sector revenue by 20% (£51m); and
- increase the number of people employed in green jobs by 2,000. [2]

**References:**


1. Fife Council, Single Outcome Agreement, 2008-2011, http://www.improvementservice.org.uk/library/577-single-outcome-agreements/666-single-outcome-agreements-2008-2011/view-category/-1/
2. Fife Council, Growing Fife's Future - Fife's Economic Strategy 2009-20
3. Scottish National Statistics, http://www.sns.gov.uk


**Human Health**

**Trends:**

The trend in Fife is gradually improving health. Between 1995 and 2004, death rates for the four main causes of death in Fife (cancer, heart disease, cerebrovascular disease and respiratory disease) decreased. Deaths from heart disease fell by 36%. Deaths from cerebrovascular disease and respiratory disease fell by 25%. [1]

There is a trend of increasing life expectancy. [1]

There is a trend of a slight increasing cancer registrations in the Fife population (from 503 per 100,000 in 2000-2004 to 515 per 100,000 in 2001-2005). [1]

There is a trend of improved perceptions of community safety. Between 2000 and 2006 fear of crime across the whole of Fife fell from 58% to 45.9%.[2]

There is a trend of falling crime rates in Fife. Crime fell in Fife in almost all categories for five successive years .[3]

Between 2002 and 2008 coronary heart disease hospital admissions have declined from 652 per 100,000 population to 554.

Between 2002 and 2008 cerebrovascular disease hospital admissions have declined from 292 per 100,000 population to 279. (However there was a small increase in rates between 2006 and 2007; the trend is downwards, however the trend is not statistically significant).

**References:**


1. Fife Council, Single Outcome Agreement, 2009-2012, http://www.cvsfife.org/publications/draftsoa.pdf
2. Fife Council, Single Outcome Agreement, 2009-2012 (draft), http://www.cvsfife.org/publications/draftsoa.pdf
3. Fife Constabulary, Annual Report 2009-10, http://www.fife.police.uk/PDF/annualreport2009_10.pdf
4. Scottish National Statistics, http://www.sns.gov.uk


## Evolution of the Sub-Regional Baseline - Fife

Between 2002 and 2008 cancer hospital admissions have increased from 2,842 per 100,000 population to 3.171.

Between 2002 and 2008 respiratory disease hospital admissions have increased from 1,343 per 100,000 population to 1,473.

Between 2002 and 2008 digestive system disease hospital admissions have remained generally declined (following periods of increase) with 2,808 per 100,000 population in 2002 and 2,115 in 2008.

Between 2004 and 2009 the number of GP practices has remained relatively constant (57 in 2009). [4]

**Targets:**

Reduce the percentage of the adult population who smoke to 22% of adults by 2010.[2]

### Human Health (Noise)

**Trends:**

*No relevant noise trend data identified (consultee input welcome).*

**Targets:**

*No relevant targets identified (consultee input welcome).*

**References:**

N/A

### Soil and Geology

**Trends:**

Soil erosion and loss of organic matter are established trends that are likely to continue. However prioritisation of developments onto brownfield sites could slow the trend. [1]

**Targets:**

Safeguard soil quality, quantity and function.

Reduce levels of brownfield, derelict and contaminated land in the plan area [1]

Fife Council aims for mineral excavation to take place in the most sustainable locations in a sustainable manner.[2]

**References:**

1. Fife Council, Fife Structure Plan 2006 - 2026 Post Adoption SEA 2010, http://www.fifedirect.org.uk/uploadfiles/publications/c64_PostAdoption-FinalisedPostAdoptionSEAStatement-January20101.pdf
2. Fife Council, Fife Minerals Local Plan

### Water

**Trends:**

Between 1950 and 1970 there was 57% reduction in ponds in Fife. However between 1990 and 1998 there was no significant change in pond numbers.[1]

There is a general trend of increasing freshwater quality due to reduced agricultural and point source pollution of freshwater as a result of river basin management plans.[2]

**Targets:**

- limit water pollution to levels that do not damage natural systems;
- maintain water abstraction, run-off and recharge within carrying capacity (including future capacity) maintain and restore key ecological processes ( e.g. hydrology, water quality, coastal processes);

**References:**

1. Fife Council, State of the Environment Report, 2007, http://fifedirect.org.uk/publications/index.cfm?fuseaction=publication.pop&pubid=1155288E-DA38-0392-2D23E6CA90FF3AD1
2. Fife Council, Fife Structure Plan SEA 2008, http://www.scotland.gov.uk/Topics/Built-Environment/planning/National-Planning-Policy/themes/dev-plan/FifeSP/FifeSEAreport
3. Fife Council, Fife Structure Plan 2006 - 2026 Post Adoption SEA 2010, http://www.fifedirect.org.uk/uploadfiles/publication

## Evolution of the Sub-Regional Baseline - Fife

| | |
|---|---|
| • protect and, where necessary, enhance waterbody status; and<br>• reduce/manage flood risk. [3] | s/c64_PostAdoption-FinalisedPostAdoptionSEAStatement-January20101.pdf |
| **Air** | |
| **Trends:**<br>Air pollution is expected to increase as a result of industry growth, energy generation and road traffic growth.[1]<br>Overall improved public transport should mitigate negative effects. [2]<br>**Targets:**<br>• to maintain and improve air quality;<br>• limit air pollution to levels that do not damage natural systems 50; and<br>• limit air emissions to comply with air quality standards [2] | **References:**<br>1. Fife Council, Fife Structure Plan SEA 2008, http://www.scotland.gov.uk/Topics/Built-Environment/planning/National-Planning-Policy/themes/dev-plan/FifeSP/FifeSEAreport<br>1. Fife Council, Fife Structure Plan 2006 - 2026 Post Adoption SEA 2010, http://www.fifedirect.org.uk/uploadfiles/publications/c64_PostAdoption-FinalisedPostAdoptionSEAStatement-January20101.pdf |
| **Climate Change and Energy Use** | |
| **Trends:**<br>Key findings for Scotland East, 2080s medium emissions scenario: [4]<br>• the trend is for an increase in winter mean temperature of 2.2ºC; it is very unlikely to be less than 1.0ºC and is very unlikely to be more than 3.7ºC;<br>• the trend is for an increase in summer mean temperature of 3.5ºC; it is very unlikely to be less than 1.8ºC and is very unlikely to be more than 5.7ºC;<br>• the trend is for a change in winter mean precipitation of 0%; it is very unlikely to be less than -6% and is very unlikely to be more than 6%;<br>• the trend is for a change in summer mean precipitation of -17%; it is very unlikely to be less than –33% and is very unlikely to be more than 0%;<br>• between 2005 and 2007 average commercial and industrial gas usage per customer increased from 1,439,961 KWh to 1,845,037 KWh;<br>• between 2005 and 2007 average commercial and industrial electricity usage per customer decreased from 88,409 KWh to 78,124 KWh; and<br>• between 2005 and 200 total commercial and industrial energy usage increased from 5,910.6 GWh to 7,110.3 GWh. [3]<br>There is likely to be a trend of increasing energy demand. However, an increasing proportion of energy is likely to be generated from renewable sources.[1]<br>Fife is expected to become warmer and wetter in the winter, with hotter and drier summers. Though difficult to predict, extreme weather events such as localised heavy rainfall are likely. This will mean more:<br>• flooding;<br>• mudslides;<br>• land subsidence;<br>• infrastructure damage; and | **References:**<br>1. Fife Council, Fife Structure Plan SEA 2008, http://www.scotland.gov.uk/Topics/Built-Environment/planning/National-Planning-Policy/themes/dev-plan/FifeSP/FifeSEAreport<br>2. Fife Council, Climate Change, Carbon and Energy, http://www.fife.gov.uk/topics/index.cfm?fuseaction=page.display&pageid=E2A8E526-65BF-00F7-DA6238F1EB3894F6&subjectid=430EB347-005B-8681-1629D8206303D4C8<br>3. Department of Business, Enterprise and Regulatory Reform (BERR) Energy Consumption at Regional and Local Authority Level, 2007 http://www.berr.gov.uk/energy/statistics/regional/index.html<br>4. Defra, UKCP09, http://ukcp09.defra.gov.uk/content/view/20/6<br>5. Fife Council, Fife Structure Plan 2006 - 2026 Post Adoption SEA 2010, http://www.fifedirect.org.uk/uploadfiles/publications/c64_PostAdoption-FinalisedPostAdoptionSEAStatement-January20101.pdf |

## Evolution of the Sub-Regional Baseline - Fife

- pests like midges surviving through milder winters.[2]

**Targets:**

- to reduce the cause and effects of climate change;
- reduce greenhouse gas emissions; and
- reduce vulnerability to the effects of climate change e.g. flooding, disruption to travel by extreme weather, etc. [5]

### Coastal Change and Flood Risk

**Trends:**

Sea level change central projection between 1990 and 2080 medium emissions scenario:24.2cm [4]

There is likely to be a general trend of increasing coastal water quality due the requirements of the WFD. However, shipping, particularly in the inner Forth Estuary will continue to pose a risk of point source pollution.[1] Concerns have also been raised about an increase in flood risk with development in the east and north of the area potentially affecting the River Eden catchment. [2]

Climate change is likely to result in a trend of increasing flood risk throughout Fife. This trend is likely to be exacerbated by development on flood planes and low lying coastal regions. [1]

**Targets:**

- limit water pollution to levels that do not damage natural systems;
- maintain water abstraction, run-off and recharge within carrying capacity (including future capacity) maintain and restore key ecological processes ( e.g. hydrology, water quality, coastal processes);
- protect and, where necessary, enhance waterbody status; and
- reduce/manage flood risk. [3]

**References:**


1. Fife Council, Fife Structure Plan SEA 2008, http://www.scotland.gov.uk/Topics/Built-Environment/planning/National-Planning-Policy/themes/dev-plan/FifeSP/FifeSEAreport
2. Fife Council, Fife Structure Plan 2006 - 2026 Post Adoption SEA 2010, http://www.fifedirect.org.uk/uploadfiles/publications/c64_PostAdoption-FinalisedPostAdoptionSEAStatement-January20101.pdf
3. Fife Council, Fife Structure Plan 2006 - 2026 Post Adoption SEA 2010, http://www.fifedirect.org.uk/uploadfiles/publications/c64_PostAdoption-FinalisedPostAdoptionSEAStatement-January20101.pdf
4. Defra, UKCP09, http://ukcp09.defra.gov.uk/content/view/20/6


### Material Assets (Transport)

**Trends:**

Car ownership, use and the distances travelled by cars each year is increasing.[1]

There is likely to be a trend of increasing road transport journeys and increased congestion on Fife's roads.[2]

**Targets:**

Fife Council set the following targets:

- a 40% reduction in the number of people killed or seriously injured (KSI);
- a 50% reduction in the number of children killed or seriously injured;
- a 10% reduction in the slight injury casualty rate;
- halt the decline in walking;

**References:**


1. Fife Council, State of the Environment Report, 2007, http://fifedirect.org.uk/publications/index.cfm?fuseaction=publication.pop&pubid=1155288E-DA38-0392-2D23E6CA90FF3AD1
2. Fife Council, Fife Structure Plan SEA 2008, http://www.scotland.gov.uk/Topics/Built-Environment/planning/National-Planning-Policy/themes/dev-plan/FifeSP/FifeSEAreport
3. Fife Council, Local Transport Strategy for Fife 2006-2026


## Evolution of the Sub-Regional Baseline - Fife

- maintain the percentage of walk trips to work at 15%; and
- increase cycling to key Public Transport Interchanges by 10% by 2011.[3]

### Material Assets (Waste Management)

**Trends:**

There is a trend towards more sustainable waste management. It is likely that policy requirements will drive greater proportions of waste management towards reuse and recycling and away from landfill. [1]

As of 2008 Fife had four active landfills, Lochhead landfill, Valley Ash Lagoons, Longannet Point Ash Lagoons and Lower Melville Wood. The remaining capacities were 2,920,702, 7,528,000, 100,000 and 265,875 tonnes respectively (Valley Ash and Longannet are not included in the report due to being for in-house waste only)..[2]

**Targets:**

Targets are to conform to the objectives of Scotland's National Waste Plan:

- provide widespread segregated kerbside waste collections across Scotland (to over 90% of households by 2020);
- aim to stop growth in the amount of municipal waste produced by 2010;
- achieve 25% recycling and composting of municipal waste by 2006, and 55% by 2020 (35% recycling and 20% composting);
- recover energy from 14% of municipal waste; and
- reduce landfilling of municipal waste from around 90% to 30%.[3]

**References:**


1. Fife Council, Fife Structure Plan SEA 2008, http://www.scotland.gov.uk/Topics/Built-Environment/planning/National-Planning-Policy/themes/dev-plan/FifeSP/FifeSEAreport
2. SEPA, Landfill Capacity Report for Scotland, 2008
3. Scottish Government, Scotland National Waste Plan


### Material Assets (Land Use and Materials)

**Trends:**

An area with a growing population which has reached at least 375,000 and is still expanding. The General Register Office for Scotland (GROS) predicts that Fife's population will grow by 10.1% to 398,608 in 2033.[2]

The situation in Fife reflects the overall Scottish trend which is one of increasing urbanisation with 1,403 hectares of agricultural land given over to roads, housing or industry in 2002–2003 (a 140% increase since 1989-1990); [3]

The area of derelict and vacant land in Fife has fluctuated between 1999 to 2007. Overall, the area of derelict land has changed little from 772ha to 757ha between 1999 and 2007. However, the number of derelict sites has increased from 96 to 159 from 1999 to 2006. The area of vacant land has decreased more significantly, from 203ha to 114ha between 1999 and 2006. The number of vacant sites also decreased from 80 to 68 in the same time period.[3]

Between 2002 and 2009, the area of vacant land increased from 80ha to 83ha, however this has declined following greater increases over the years between 2002 and 2008.

Between 2002 and 2009, the area of derelict land increased from 528ha to 731ha.[4]

**Targets:**

Fife Council indicates the district is to provide 35,200 new homes between 2006 and 2026 [1].

**References:**


1. Fife Council, Fife Structure Plan 2006-2026
2. General Register Office for Scotland, 2008-based Population Projections.
3. Fife Council, Single Outcome Agreement, 2008-2011, http://www.improvementservice.org.uk/library/577-single-outcome-agreements/666-single-outcome-agreements-2008-2011/view-category/-1/
4. Scottish National Statistics, http://www.sns.gov.uk


| Evolution of the Sub-Regional Baseline - Fife | |
|---|---|
| **Cultural Heritage** | |
| **Trends:**<br><br>*No relevant cultural heritage trend data identified (consultee input welcome).*<br><br>**Targets:**<br><br>• protect and, where appropriate, enhance or restore the historic environment;<br><br>• preserve historic buildings, archaeological sites and other culturally important features;<br><br>• promote access to the historic environment; and<br><br>• improve the enjoyment and understanding of the historic environment. | **References:**<br><br>1. Fife Council, Fife Structure Plan 2006 - 2026 Post Adoption SEA 2010, http://www.fifedirect.org.uk/uploadfiles/publications/c64_PostAdoption-FinalisedPostAdoptionSEAStatement-January20101.pdf |
| **Landscape** | |
| **Trends:**<br><br>Fife's Wetlands appear to be declining due to changes in habitat distribution and land use (based on Phase I survey data from Fife Council for 1995 and 2003).[1]<br><br>There is a trend of increasing development pressure on landscapes. However effects are likely to be minimised by strategic location of developments away from sensitive landscapes.[2]<br><br>**Targets:**<br><br>• to conserve and enhance landscape character and scenic value of the area;<br><br>• protect and enhance the landscape everywhere and particularly in designated areas;<br><br>• value and protect diversity and local distinctiveness; and<br><br>• improve the quantity and quality of publicly accessible open space. | **References:**<br><br>1. Fife Council, State of the Environment Report, 2007, http://fifedirect.org.uk/publications/index.cfm?fuseaction=publication.pop&pubid=1155288E-DA38-0392-2D23E6CA90FF3AD1<br><br>2. Fife Council, Fife Structure Plan 2006 - 2026 Post Adoption SEA 2010, http://www.fifedirect.org.uk/uploadfiles/publications/c64_PostAdoption-FinalisedPostAdoptionSEAStatement-January20101.pdf |

## Current Problems in Sites of Particular Environmental Importance

This section sets out the current condition and potential problems facing European designated Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar Sites, that could be relevant to the subsequent assessment of the locational options. This is consistent with the requirements of Annex I (d) of the SEA Directive (which requires that existing environmental problems, and in particular, those relating to any areas of particular environmental importance, such as areas designated pursuant to Directive 79/409/EEC and 92/43/EEC are outlined).

SPAs, SACs and Ramsar sites have been selected on the basis of being within 20km of the potential sites for SDP dismantling and interim storage activities. The selection criterion aims to capture all sites

that would be subject to Appropriate Assessment under the Habitat Regulations[5]. In recognition that effects could have effects downstream of fluvial and tidal zones, a precautionary approach as been taken by adopting a 20km radius rather than the 15km radius usually used in Appropriate Assessment.

Where specific SPA or SAC condition data is not currently available, the aggregate condition of the constituent SSSIs has been used. It is noted that there are limitations to using SSSI condition is a surrogate for SPA condition as conservation and condition indicators vary. However, for the purposes of this assessment SSSI condition is considered to provide an appropriate benchmark of condition.

### Table C2.3 Current Problems in Sites of Particular Environmental Importance

| Sub-Regional Current Problems in Sites of Particular Environmental Importance - Fife | |
|---|---|
| **SPA** | |
| **Loch Leven SPA**<br><br>Loch Leven lies midway between the Forth and Tay estuaries in east-central Scotland. It is about 15km² in extent and is the largest naturally eutrophic loch in Britain and Ireland. It is relatively shallow and is surrounded by farmland, with a diverse aquatic flora and shoreline vegetation. The loch contains several islands, the largest of which, St Serf's Island, has an area of about 46ha. The site supports internationally important wintering populations of water birds (swans, geese and ducks). | **Condition:**<br><br>Loch Leven SPA is in favourable condition with the exception of Whooping Swan populations which are in decline. Potential risks to the SPA are from visitors and runoff from surrounding farm land. |
| **Forth Islands SPA**<br><br>The Firth of Forth Islands are located in or near to the Firth of Forth on the east coast of central Scotland. The SPA comprises a number of separate islands or island groups, principally Inchmickery (together with the nearby Cow and Calves) off Edinburgh, Fidra, Lamb and Craigleith together with the Bass Rock off North Berwick, and the much larger Isle of May in the outer part of the Firth. The site also includes additional other small islands. The inner islands are very low lying whilst those in the outer Firth are higher, steeper and rockier. This applies especially to the Bass Rock which is a volcanic plug rising to over 100m, and to the Isle of May, which is surrounded by cliffs up to 50m. The islands support important numbers of a range of breeding seabirds, in particular terns, auks and gulls. The colony of Gannets Morus bassanus is the largest on the east coast of the UK. The seabirds feed outside the SPA in nearby waters, as well as more distantly in the North Sea. | **Condition:**<br><br>Forth Islands SPA is in favourable condition, although two breeding bird populations are in decline (Kittiwake and Shag). Potential risks to the SPA are from visitors and pollutant leakage from the mainland or shipping affecting the surrounding waters. |
| **Firth of Forth SPA**<br><br>The Firth of Forth is located on the east coast of central Scotland. It is a complex estuarine site, stretching for over 100km from the River Forth at Stirling eastwards past Edinburgh and along the coasts of Fife and East Lothian to a wide estuary mouth. A wide range of coastal and intertidal habitats is found within the site, including saltmarshes, dune systems, maritime grasslands, heath and fen, cliff slopes, shingle and brackish lagoons. Extensive mud-flats occur particularly in the Inner Firth, notably at Kinneil Kerse and Skinflats on the south shore and Torry Bay on the north shore. Typically, the flats support a rich invertebrate fauna, with Eelgrass Zostera spp. growing on the main mud-flats, both features providing important food sources for the large numbers of | **Condition:**<br><br>Firth of Forth SPA is in favourable condition. Potential risks to the SPA are from coastal industrial development; localised tipping; pollutant leakage; and sea level rise. Shoreline industrial development is subject to rigorous planning control and demonstration of appropriate emergency contingency |

[5] Habitat Regulations Assessment is required under Article 6 of the EC Habitats Directive 1992, and under UK law by Regulation 48 of the Conservation (Natural Habitats &c) Regulations 1994 (as amended in 2007).

## Sub-Regional Current Problems in Sites of Particular Environmental Importance - Fife

| | |
|---|---|
| migrating and wintering water birds that depend on the estuary. In the Outer Firth, the shoreline diversifies, with sandy shores, some rocky outcrops, mussel beds and some artificial sea walls. The North Berwick coast includes cliffs and dune grassland, with extensive dune systems at Aberlady. The Firth is of major importance for a rich assemblage of water birds in the migration periods and through the winter, including divers, sea-ducks, geese, other ducks, waders and terns. Some of these species, notably the sea-ducks and divers, also feed, loaf and roost outside the SPA in the open waters of the estuary. | planning. |
| **Imperial Dock Lock, Leith SPA**<br><br>Site designated for breeding Common Tern Sterna hirundo.<br><br>No JNCC description (designated following review process). | **Condition:**<br><br>Imperial Dock Lock, Leith SPA is in favourable maintained condition.<br><br>As an entirely man-made structure with little vegetation this site is at low risk from any degradation of habitat. However as it is in the centre of an active industrial area (Leith Docks) it is at great risk of disturbance.<br><br>Although terns are generally sensitive to disturbance this colony appears to be resiliant to disturbance from port activities and has been steadily increasing in size. A few years ago a gantry crane was built on the quayside adjacent to the colony and although it has not been operated regularly, use of the crane seems to be increasing. Regular monitoring of the colony during the breeding season should highlight any increased disturbance from this source. |
| **SAC** | |
| No SAC sites within 20km of RRDL Rosyth. | **Condition:**<br><br>**N/A** |
| **Ramsar** | |
| **Firth of Forth**<br><br>A large coastal area comprising a complex of estuaries, mudflats, rocky shorelines, beaches and saltmarshes, including many fragmentary bits of shoreline considered to act as a single ecological unit. Several large urban areas, including Edinburgh, are adjacent to the site and include areas of heavy industry and well-used maritime shipping lanes. The site provides habitat for large numbers of wintering waders and wildfowl, many in nationally and internationally important numbers, and a number of aesthetic, archaeological, sporting and recreational interests lend added value. Coastal industrial development is seen as a source of pressure but is subject to detailed planning control, and the potential for rising sea levels are foreseen in "planned retreat" coastal realignment schemes. | **Condition:**<br><br>The site is not currently subject to adverse ecological change<br><br>No factors (past, present or potential) identified which adversely affect the site's ecological character. |
| **Loch Leven**<br><br>The site, the largest nutrient-rich lake in Britain, is an excellent example of a wetland with multiple uses in balance with its natural heritage interest. Consisting of several islands surrounded by damp pasture, the site is of national entomological importance and includes several nationally rare species of aquatic flora. The loch provides feeding, roosting and wintering sites for internationally important numbers (averaging 18,463 individuals in winter) of swans, geese and ducks. Human activities include intensive trout fishing, bird hunting, and general recreation. | **Condition:**<br><br>The site is not currently subject to adverse ecological change<br><br>No factors (past, present or potential) identified which adversely affect the site's ecological character. |

(Source: Multi-Agency Geographic Information for the Countryside, www.magic.gov.uk; Joint Nature Conservation Committee, http://www.jncc.gov.uk; The Ramsar Convention website, http://www.ramsar.org; and Scottish Natural Heritage www.snh.gov.uk).

## Relevant Sub-Regional Plans and Programmes

The SEA scoping process needs to identify and review other relevant plans, programmes, policies and strategies (herein after referred to as 'plans and programmes') that are applicable to the SDP and outline the nature of "relationship with other relevant plans and programmes".

### Table C2.4 Relevant Plans, Programmes and Strategies

| Sub-Regional Plans and Programmes - Fife | |
|---|---|
| **Biodiversity and Nature Conservation** | |
| **Summary Policy Messages:**<br>To protect BAP species and habitats. | |
| **SEA objectives link:**<br>Objective A Biodiversity and Nature Conservation<br>Objective C Health and Wellbeing | |
| Fife Local Biodiversity Action Plan (2009-2011) | Objectives:<br>• translate national targets for species and habitats, as specified in the UK Action Plan, into effective action at the local level;<br>• stimulate effective local working partnerships to ensure that programmes for biodiversity conservation are developed and maintained;<br>• raise awareness of the need and responsibilities for biodiversity conservation and enhancement in the local context;<br>• identify biodiversity resources and priorities in the local area;<br>• identify targets for species and habitats important to the local area, including both the rare and the common, according to local circumstances;<br>• ensure that delivery mechanisms for conservation and enhancement of biodiversity resources are promoted and understood at the local level; and<br>• provide a local basis for monitoring progress in biodiversity conservation.<br>**Targets:** Specific targets and objectives are made with reference to different forms of biodiversity. |
| **Population** | |
| **Summary Policy Messages:**<br>To make Fife a stronger, more flexible and diverse economy, with improved skills, education, and safety.<br>To provide an entrepreneurial environment that promotes innovative companies. | |

## Sub-Regional Plans and Programmes - Fife

To develop physical and electronic infrastructure to ensure Fife's businesses are connected to the global economy.

**SEA objectives link:**

Objective B Population

Objective C Health and Wellbeing

| | |
|---|---|
| Fife Community Plan 'A Stronger Future for Fife' 2004. | Objectives:<br>We plan to deliver our shared vision of a Stronger Future for Fife by:<br>• building a stronger, more flexible and diverse economy;<br>• improving health and wellbeing in Fife;<br>• creating a well-educated and skilled Fife;<br>• sustaining and improving our environment; and<br>• making Fife's communities safer.<br>**Targets**: No formal targets. |
| Growing Fife's Future - An Economic Development Strategy for Fife 2005-15 | Objectives: The Strategy will contribute to improved growth and productivity in Fife by focussing on three broad strategic objectives:<br>• growing businesses - providing an entrepreneurial environment which delivers innovative companies growing in scale;<br>• learning and skills - developing skills to make best use of human capital and prepare Fife's residents for tomorrow's labour market; and<br>• global connections - focusing on physical/electronic infrastructure to create world class locations and ensuring Fife's businesses are connected to the global economy.<br>**Targets:** Sub targets are included within the above objectives. |

**Human Health**

**Summary Policy Messages:**

To improve health and wellbeing across the population and over the whole of a person's life, including by empower individuals and communities to make healthy choices.

To improve housing conditions, recognising the significant impact this can have on an individual's health.

**SEA objectives link:**

Objective C Health and Wellbeing

Objective B Population

| | |
|---|---|
| Fife Emergency Planning Unit | Objectives: The Unit is required:<br>• to co-ordinate, advise and implement Fife Council's Integrated Emergency Management policy in response to any emergency that may require the mobilisation of Fife Council's staff or resources;<br>• to provide information, advice and assistance on all aspects of emergency management;<br>• to deliver integrated emergency management training to Council Services employees and the Voluntary Sector;<br>• to plan and organise emergency exercises both in-house and in partnership with other |

## Sub-Regional Plans and Programmes - Fife

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|---|---|
| | agencies;<br>• to preserve life and property;<br>• to mitigate the harmful effects of the emergency on the environment;<br>• to bring about a swift return to normal life for the communities and environment affected; and<br>• to encourage all agencies and organisations to prepare for their role.<br>**Targets:** No formal targets. |
| A Healthier Future for Fife (2007-2010) | Objectives:<br>• improve health and wellbeing across the whole population and over the whole of a person's life;<br>• reduce the gap in health between people living in different parts of Fife and between different groups of people within Fife - focusing on improving the health and wellbeing of individuals and groups who face the greatest health inequalities and barriers to inclusion;<br>• empower individuals and communities to make healthy choices;<br>• reduce the number of people who develop long-term conditions such as diabetes, stroke, coronary heart disease, cancer and respiratory disease - in order to ensure the people of Fife live longer and healthier lives; and<br>• continue to improve housing conditions, recognising the significant impact this can have on an individual's health.<br>**Targets:** No formal targets. |
| **Human Health - Noise** | |
| **Summary Policy Messages:**<br>*No noise plans or programmes identified (consultee input welcome).* | |
| **SEA objectives link:**<br>Objective D Noise and Vibration<br>Objective C Health and Wellbeing | |
| *No noise plans or programmes identified (consultee input welcome).* | *No noise plans or programmes identified (consultee input welcome).* |
| **Soil and Geology** | |
| **Summary Policy Messages:**<br>To prevent further land contamination.<br>To encourage voluntary remediation.<br>To encourage the development of "brownfield" sites. | |
| **SEA objectives link:**<br>Objective E Geology and Soils.<br>Objective C Health and Wellbeing.<br>Objective A Biodiversity and Nature Conservation. | |

## Sub-Regional Plans and Programmes - Fife

| | |
|---|---|
| Fife Minerals Local Plan (2004) | Objective: Plan seeks to achieve a balance between meeting the requirement for minerals and environmental protection thereby ensuring that any development takes place in the most sustainable locations and in a more sustainable way.<br><br>**Targets:** No formal targets |
| Fife Contaminated Land Inspection Strategy, review 2010 | Objective: In accordance with the statutory regime, Fife Council seeks:<br>• to protect human health;<br>• to protect the water environment.<br>• to protect designated ecosystems;<br>• to prevent damage to property;<br>• to prevent further land contamination;<br>• to encourage voluntary remediation;<br>• to encourage the development of "brown-field" sites, and<br><br>**Targets:** No formal targets. |

**Water**

**Summary Policy Messages:**

To have regard to a development's anticipated demand for water and drainage (including the need for Sustainable Urban Drainage Systems (SUDS)).

**SEA objectives link:**

Objective F Water

Objective C Health and Wellbeing

Objective M Cultural Heritage

Objective H Energy and Climate Change

Objective A Biodiversity and Nature Conservation

| | |
|---|---|
| Fife Structure Plan - Policy SS1: Settlement Development Strategy | Objectives: Policy sets out that the Council will have regard to the anticipated demand for water and drainage and the need for Sustainable Urban Drainage Systems (SUDS) to address surface water run-off and to contribute to sustainable development and nature conservation and enhancement.<br><br>Targets: No formal targets. |

**Air**

**Summary Policy Messages:**

To meet air quality objectives included in the Air Quality Regulations.

**SEA objectives link:**

Objective G Air

Objective C Health and Wellbeing

## Sub-Regional Plans and Programmes - Fife

Objective J Transport

Objective A Biodiversity and Nature Conservation

| | |
|---|---|
| Fife Council - Air Quality Review And Assessment Progress Report for Fife Council 2009 | Objectives: The fourth round of air quality review and assessment, in which sources of air pollutant emissions are reassessed to identify whether the situation has changed since the previous round, and if so, what impact this may have on the likelihood of compliance with Air Quality Strategy objectives.<br><br>**Targets:** Report reviews Fife against a number of air quality strategy objectives. |

### Climate Change and Energy Use

**Summary Policy Messages:**

To achieve national CO2 emission cuts.

To minimise the environmental impact of energy supply.

To encourage low carbon and energy efficient new developments and renewable energy use.

**SEA objectives link:**

Objective H Energy and Climate Change

Objective G Air

Objective B Population

Objective F Water and Drainage

Objective A Biodiversity and Nature Conservation

| | |
|---|---|
| Fife Structure Plan 2006-2026 - Policy R1: Wind Turbines | Objectives: Policy grants preference to commercial wind farms within an identified broad area of search. Within such areas, proposals are most likely to be supported where:<br><br>• the landscape is capable of accommodating them;<br><br>• through careful siting within the landform and high quality of design and materials, they respect the key features and character of the landscape and minimise their impact on the landscape and wider environment;<br><br>• they do not have a significant detrimental effect on the amenity of nearby residents;<br><br>• they do not have a detrimental impact on groundwater resources or private water supplies; and,<br><br>• they are not located on migratory flight paths of birds nor located on flight paths between breeding and feeding areas or on the breeding areas themselves.<br><br>**Targets:** No formal targets. |
| Fife Council Environmental Policy 2009 | Objectives:<br><br>• respond to the national aim of reducing CO2 emissions to combat global climate change by integrating carbon management into Council business and implementing action to reduce emissions;<br><br>• lead the development and implementation of an effective Fife-wide sustainable energy strategy that will minimise the environmental impact of energy supply and use and ensure |

## Sub-Regional Plans and Programmes - Fife

| | |
|---|---|
| | affordable and secure energy supplies are available to Fife's communities;<br>• encourage low carbon and energy efficient new developments and renewable energy use through appropriate land use policy and planning; and<br>• recover heat and energy from municipal waste.<br>**Targets:** No formal targets. |
| **Coastal Change and Flood Risk** | |
| **Summary Policy Messages:**<br>To direct development type within the coastal area of Fife. | |
| **SEA Objectives Link:**<br>Objective I Coastal Change and Flood Risk<br>Objective F Water<br>Objective H Energy and Climate Change | |
| Fife Structure Plan 2006-2026. | Objective:<br>The relative prosperity and environmental quality of East Fife's coastal communities has not been matched in other Fife coastal stretches. From Leven to Rosyth, many of the communities have significant regeneration needs. There are a range of major development opportunities within this area for housing, employment, leisure and retail.<br>**Targets:** No formal targets. |
| **Material Assets (Transport)** | |
| **Summary Policy Messages:**<br>To improve access to all key services; limit the growth in the use of driver only car trips; encourage more sustainable travel for new and existing developments; promote efficient movement of freight; and encourage transfer of freight goods from road to rail, sea and pipeline. | |
| **SEA objectives link:**<br>Objective J Transport<br>Objective C Health and Wellbeing<br>Objective A Biodiversity and Nature Conservation<br>Objective B Population | |
| Fife Structure Plan 2006-2026 - Proposal PT1: Transport Proposals. | Objectives: This Proposal sets out a number of transport proposals for the region. Of particular note are the following national/international proposals:<br>• new multi-modal cross-Forth bridge and associated approach networks at Queensferry - initial feasibility study with potential for a new bridge within the Plan period;<br>• segregated public transport corridor through the Forth Bridgehead Area, including the existing Dunfermline Eastern Expansion area, with potential to link to a further Forth crossing; and<br>• passenger rail on Dunfermline-Kincardine-Alloa-Stirling line.<br>**Targets:** No formal targets. |

## Sub-Regional Plans and Programmes - Fife

| | |
|---|---|
| Local Transport Strategy for Fife 2006-2026 | Objectives:<br>• to improve access to all key needs and services for all. ( including employment, education, health and leisure opportunities).<br>• to improve safety for all forms of transport;<br>• to limit the growth in the use of driver only car trips, especially for commuting, by encouraging more use of public transport, and car sharing;<br>• to manage and maintain road networks in an acceptable, safe and sustainable condition;<br>• to encourage more sustainable travel for new and existing developments;<br>• to widen travel choice through the provision of integrated transport networks;<br>• to encourage walking and cycling for short trips and as part of an integrated journey to promote a healthier lifestyle;<br>• to work with passenger transport operators to develop an integrated public transport system;<br>• to promote efficient movement of freight and encourage transfer of goods from road to rail, sea and pipeline; and<br>• to maintain access for essential private vehicle users, whilst restraining the capacity for driver only car commuting in congested locations.<br>**Targets:**<br>Plan includes a number of targets to achieve above objectives including funding and outcomes. |

**Material Assets (Waste Management)**

**Summary Policy Messages:**

To ensure that waste management systems are developed in accordance with the best practicable environmental option (BPEO), which includes the principles of sustainable development and integrated waste management.

**SEA objectives link:**

Objective K Waste

Objective C Health and Wellbeing

Objective A Biodiversity and Nature

| | |
|---|---|
| Fife Area Waste Plan (2006) | Objectives: Key aims are:<br>• set out in detail the existing waste management infrastructure and arrangements, develop the principles and plan or progress in waste management in the medium and long terms to meet current and future legislative requirements and the objectives of the National Waste Strategy: Scotland;<br>• ensure that the waste management system developed is in accordance with the best practicable environmental option (BPEO), which includes the principles of sustainable development and integrated waste management, and makes the maximum possible contribution to reducing society's environmental impact at an acceptable cost;<br>• provide a clear framework for stakeholders to judge the future development of waste management services in Fife, and to guide both local authority Integrated waste management plans and private investment decisions;<br>• ensure that development planning policy in Fife is consistent with, and contributes to, the |

## Sub-Regional Plans and Programmes - Fife

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|---|---|
| | overall aims of the National Waste Strategy and the Fife AWP;<br>• maximise the opportunities for Fife businesses arising from sustainable waste management, including the not-for-profit sector;<br>• enable all key stakeholders the opportunity to input to the area waste planning process;<br>• ensure that the area waste planning process offers a clear, transparent and informative approach that is demonstrable to local stakeholders;<br>• raise public awareness of the future challenges in implementing the AWP and promote active participation by all stakeholders in meeting the objectives; and<br>• maintain regular review of new waste management technologies to ensure the continued BPEO for Fife in the longer term.<br>**Targets:** Objectives are in keeping with wider national waste management targets. |
| **Material Assets (Land Use and Materials)** | |
| **Summary Policy Messages:**<br>To promote development consistent with achieving thriving and sustainable communities. | |
| **SEA objectives link:**<br>Objective K Land Use and Materials<br>Objective B Population<br>Objective A Biodiversity and Nature | |
| Fife Structure Plan 2006-2026 | Objective: The Plan sets out the following vision for Fife:<br>A location of first choice in east central Scotland to live, work, play, learn and invest. An attractive place, with thriving and sustainable communities and a diverse environment. An area with a growing population which has reached at least 375,000 and is still expanding. A place where people can achieve their full potential through education, skills and career development.<br>Targets: Fife district itself is to provide 35,200 new homes between 2006 and 2026. |
| **Cultural Heritage** | |
| **Summary Policy Messages:**<br>To protect heritage features during development. | |
| **SEA objectives link:**<br>Objective M Cultural Heritage | |
| Fife Structure Plan - Policy SS1 (Settlement Development Strategy). | Policy SS1 sets out the Council will have regard to the protection of built heritage or natural environment features.<br>Targets: No formal targets. |
| **Landscape** | |
| **Summary Policy Messages:**<br>To safeguard and improve the character and distinctiveness of Fife's landscapes and coastline. | |

## Sub-Regional Plans and Programmes - Fife

To improve and restore degraded landscapes in Fife.

**SEA objectives link:**

Objective N Landscape and Townscape

Objective A Biodiversity and Nature Conservation

Objective B Population

| | |
|---|---|
| Fife Structure Plan - Chapter 4 (Safeguarding and Improving Fife's Environment). | Objectives: Policy objectives are as follows.<br>• safeguarding and improving the character and distinctiveness of Fife's landscapes and coastline, including the landscape setting of towns and villages;<br>• improving and restoring degraded landscapes;<br>• protecting and enhancing the natural environment including Fife's biodiversity and geological heritage;<br>• encouraging woodland planting in appropriate locations;<br>• protecting and enhancing the historic and built environments which give Fife its sense of place; and<br>• ensuring development positively contributes to Fife's sense of place.<br>**Target:** No formal targets. |

# Submarine Dismantling Project

## SEA Scoping Report Update

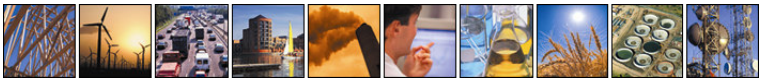
## Annex D - Abbreviations and Glossary

December 2010

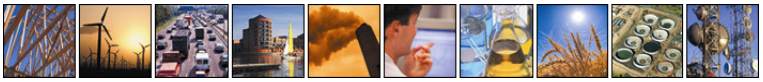
Defence Equipment & Support

MINISTRY OF DEFENCE

| | |
|---|---|
| ALARP | As Low As Reasonably Practicable |
| AONB | Area of Outstanding Natural Beauty |
| AQMA | Air Quality Management Area |
| BAP | Biodiversity Action Plan |
| BPEO | Best Practicable Environmental Option |
| CADMID | Concept, Assessment, Development, Manufacture, In-service Disposal |
| CAMS | Catchment Abstraction Management Strategies |
| CCL | Climate Change Levy |
| CIOP | Consultation on ISOLUS Outline Proposals |
| CLG | Department for Communities and Local Government |
| CoRWM | Committee on Radioactive Waste Management |
| DBERR | Department of Business, Enterprise and Regulatory Reform (formerly DTI) |
| DCLG | Department for Communities and Local Government (formerly ODPM) |
| DDLP | De-Equip, De-fuel and Lay-Up Preparations |
| DE | Defence Estates |
| DECC | Department of Energy and Climate Change |
| DE&S | Defence Equipment and Support |
| Defra | Department for Environment, Farming and Rural Affairs |
| ISM | In-Service Submarines |
| DfT | Department for Transport |
| DISM | Director In-Service Submarines |
| DNEB | Defence Nuclear Executive Board |
| DNSR | Defence Nuclear Safety Regulator |
| DoENI | Department of Environment Northern Ireland |
| DWS | Drinking Water Standards |
| DWSP | Drinking Water Safety Plans |
| EA | Environment Agency |
| EIA | Environmental Impact Assessment |
| ETS | Emission Trading Scheme |
| EU | European Union |
| FEC | Isolus Front End Consultation |
| GHG | Greenhouse Gas |
| HRA | Habitats Regulation Assessment |



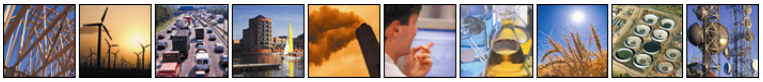
| | |
|---|---|
| HSE | Health and Safety Executive |
| HLW | Higher-Level Waste |
| IAB | Investment Approval Board |
| IAG | Isolus Advisory Group (now the SDP Advisory Group) |
| IEEM | Institute of Ecology and Environmental Management |
| ILW | Intermediate Level Waste |
| IPT | Integrated Project Team |
| ISOLUS | Interim Storage of Laid-Up Submarines |
| KUR | Key User requirement |
| LDD | Local Development Document |
| LLW | Low Level Waste |
| LNR | Local Nature Reserve |
| LUSM | Laid-Up Submarine |
| MGBC | Main Gate Business Case |
| MISG | MOD Isolus Steering Group (now the SDP Steering Group) |
| MNR | Marine Nature Reserves |
| NBC | Naval Base Commander |
| NDA | Nuclear Decommissioning Authority |
| NGO | Non-Governmental Organisations |
| NII | Nuclear Installations Inspectorate of the Health and Safety Executive |
| NNR | National Nature Reserves |
| NPS | National Policy Statement |
| NVZ | Nitrate Vulnerable Zone |
| ODPM | Office of the Deputy Prime Minister (now CLG) |
| OGC | Office of Government Commerce |
| OGD | Other Government Departments |
| OJEU | Official Journal of European Union |
| ONS | Office of National Statistics |
| OSPAR | Oslo-Paris Agreement on the Protection of the North-East Atlantic |
| PMP | Project Management Plan |
| PPG | Planning Policy Guidance |
| PPS | Planning Policy Statement |
| RN | Royal Navy |



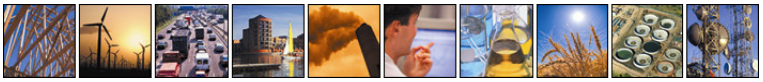
| | |
|---|---|
| RSS | Regional Spatial Strategy |
| SAC | Special Area of Conservation |
| SAM | Scheduled Ancient Monument |
| SDP | Submarine Dismantling Project |
| SE | Scottish Executive |
| SEA | Strategic Environmental Assessment |
| SEPA | Scottish Environmental Protection Agency |
| SOGE | Sustainable Operations on the Government Estate (govt-wide sustainable devt. targets) |
| SPA | Special Protection Area |
| SSSI | Site of Special Scientific Interest |
| ToR | Terms of Reference |
| UK | United Kingdom |
| UKCIP | UK Climate Impacts Programme |
| UNFCCC | United Nations Framework Convention on Climate Change |
| WCA | Wildlife and Countryside Act |
| WFD | Water Framework Directive |

## Glossary of Relevant Terms

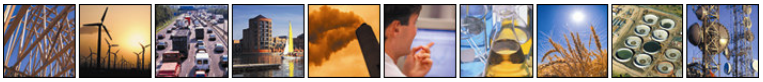
| Term | Description |
|---|---|
| Authorisation | Authorisations allow specific defence-related nuclear activity to take place at a specific site. Such 'Authorised' sites are not subject to the Nuclear Installations Act (unlike civil nuclear sites) and so activities are not formally 'Licensed.' Instead, Authorisations are granted by the Defence Nuclear Safety Regulator. |
| 'Brownfield' land | This term refers to land which is, or has, been previously been built upon or otherwise developed. |
| CoRWM | Committee on Radioactive Waste Management)<br><br>This independent committee provides scrutiny and advice to Government on the long term management of radioactive waste, including storage and disposal. See http://www.corwm.org.uk/default.aspx |
| Cut out | This term has previously been used to refer to the option of cutting out the complete Reactor Compartment, thus separating it from the rest of the submarine. The RC is then stored intact. |



| | |
|---|---|
| Cut up | This term has previously been used to refer to the option of cutting up the Reactor Compartment and the items within it to reduce their size, so that the radioactive waste can be packaged in appropriate containers for storage and transport. . |
| DDLP | De-fuel, de-equip and lay-up preparation - this is the process for preparing redundant submarines for storage. The high-level radioactive waste fuel is removed; security and re-usable equipment is then removed, and the submarine prepared for safe afloat storage. |
| GDF | Geological Disposal Facility<br><br>This is the government's proposed long-term, below-ground facility for disposing of the UK's higher-level nuclear waste. The GDF has yet to be built. See http://mrws.decc.gov.uk/en/mrws/cms/home/What_is_geolog/What_is_geolog.aspx for more details. |
| 'Greenfield' land | This term refers to land that has not previously been developed (such as farmland), or which has been used but has reverted back to a largely 'natural' state (such as disused quarries). On such land, there would be no suitable infrastructure or other resources needed to undertake submarine dismantling or store ILW. |
| HLW | High-Level Waste - this is radioactive waste with a radiological activity above 4 Giga Becquerels (GBq) per tonne of alpha or 12 GBq/tonne of beta-gamma decay, which generates heat and needs to be cooled. Note that this does not include spent nuclear fuel, which is stored at Sellafield but is not classified as waste. There is no HLW on laid-up submarines. |
| ILW | Intermediate Level Waste – this is radioactive waste with a radiological activity above 4 Giga Becquerels (GBq) per tonne of alpha or 12 GBq/tonne of beta-gamma decay, but which does not generate sufficient levels of heat to require it to be cooled. |
| ISOLUS | Interim Storage of Laid-Up Submarines.<br><br>This is the former name of the Submarine Dismantling Project. |
| Licence | A nuclear Licence allows specific nuclear activities to take place at a specific site. Such 'Licensed' sites are subject to the Nuclear Installations Act (1965), with Authorisations being granted by the Nuclear Installations Inspectorate. Nuclear power stations and other civil activities are Licensed in this way. |
| LLW | Low Level Waste - defined as radioactive waste that has below 4 Gbq/ tonne of alpha activity and below 12 GBq/ tonne of beta-gamma activity. It covers a variety of materials which arise principally as lightly contaminated miscellaneous scrap and redundant equipment. |
| MRWS | Managing Radioactive Waste Safely<br><br>This is the UK Government's published approach to managing the nation's radioactive wastes, irrespective of where they come from and their level of activity. The SDP will adhere to this approach. |



| | |
|---|---|
| NDA | Nuclear Decommissioning Authority.<br><br>This government agency is responsible for (among others) developing the UK's nuclear low-level waste strategy and plans, and managing the long-term arrangements for the UK's higher-level radioactive wastes including ILW and HLW. |
| Ramsar Sites | The Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention), adopted in 1971, entered into force in 1975. The Convention provides a framework for international co-operation for the conservation and wise use of wetlands. Parties are to designate suitable wetlands for inclusion in the List of Wetlands of International Importance, to formulate and implement their planning so as to promote the conservation of wetlands included in the List and the wise use of all wetlands in their territory. |
| RC | Reactor Compartment - the central 'slice' of the submarine which contains the nuclear reactor and associated pipework. |
| RPV | Reactor Pressure Vessel - this contains the nuclear reactor and is located within the Reactor Compartment. |
| SDP | Submarine Dismantling Project www.submarinedismantling.co.uk |
| SEA | Strategic Environmental Assessment.<br><br>An assessment undertaken on certain public plans and programmes to ascertain the potential environmental effects that it may have, to identify ways in which damaging effects can be avoided and benefits can be enhanced. SEA also gives the public the opportunity to see what impacts a strategic plan might have on them and to shape the approach taken. |
| VLLW | Very low level waste - this is radioactive waste with very low levels of radioactivity, which can be disposed of to an ordinary landfill site. |



# Submarine Dismantling Project
# SEA Scoping Report Update

## Annex E - Quality Assurance

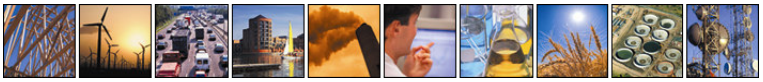
December 2010

Defence Equipment & Support

The Government's Guidance on SEA[1] contains a quality assurance checklist to help ensure that the requirements of the SEA Directive are met. Those relevant to this stage have been highlighted below.

| Quality Assurance Checklist | |
|---|---|
| **Objectives and Context** | |
| The plan's purpose and objectives are made clear. | **Section 2.1**. |
| Sustainability issues, including international and EC objectives, are considered in developing objectives and targets. | **Section 3, Annex A, B and C** identifies the sustainability baseline issues. **Section 4** sets out the environmental protection objectives and targets and how these are linked to the emerging SEA objectives. These are also identified in **Annex B and C**. |
| SEA objectives are clearly set out and linked to indicators and targets where appropriate. | **Section 6.1** presents the SEA objectives and guide questions. |
| Links to other related plans, programmes and policies are identified and explained. | **Annex B and C** identifies relevant plans and programmes. |
| **Scoping** | |
| The environmental consultation bodies are consulted in appropriate ways and at appropriate times on the content and scope of the Scoping Report. | This is the consultation on the scope of the SEA. It is anticipated that workshops will be held during the scoping stage, where all the consultation bodies will be invited. |
| The SEA focuses on significant issues. | Significant issues have been identified in this Scoping Report (see **Section 5**). |
| Technical, procedural and other difficulties encountered are discussed; assumptions and uncertainties are made explicit. | These are stated throughout the report where appropriate. |
| Reasons are given for eliminating issues from further consideration. | These are stated in **Section 5**, as appropriate. |
| **Baseline Information** | |
| Relevant aspects of the current state of the environment and their likely evolution without the plan are described. | Refer to Section 3 and **Annex A and C**. |
| Characteristics of areas likely to be significantly affected are described, including areas wider than the physical boundary of the plan area where it is likely to be affected by the plan (where practical to do so). | Refer to **Annex A and C**. |
| Difficulties such as deficiencies in information or methods are explained. | These are stated throughout the report where appropriate. |

[1] ODPM, Scottish Executive, Welsh Assembly Government, DoENI (2005) *A Practical Guide to the Strategic Environmental Assessment Directive*, ODPM, London.



# Submarine Dismantling Project

# SEA Scoping Report Update

## Annex F - Stage A1 Generic Scoping Report Consultation Responses

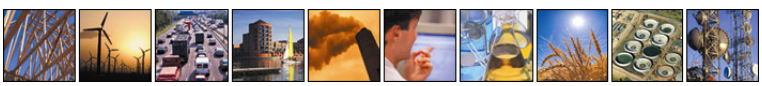
December 2010

Defence Equipment & Support

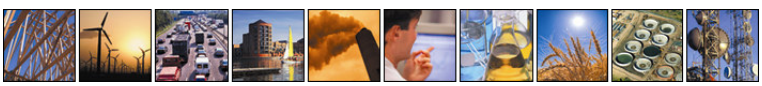
MINISTRY OF DEFENCE

Feedback received from UK Statutory Bodies on the Stage 'A1' SEA Scoping Report

| Ref | Consultation Response | Commentary/ action taken |
|---|---|---|
| 1. Environment Agency | | |
| General Comments | Overall, we have found the document clear and easy to follow.<br><br>Within the constraints of a generic scoping report, and subject to specific comments below, we are content that the MoD has identified the issues which will need to be addressed once a list of potential sites for both initial dismantling (removal of radioactive components) and for intermediate storage of Intermediate Level Waste (ILW) is notified. | Noted, with thanks. |
| General Comments | The impact of all phases of SDP will ultimately be dependent on site selection. We have previously recommended that MoD should minimise environmental impact by using an existing nuclear licensed site, with an experienced work force used to managing, storing and disposing of radioactive waste. We see this as an essential step, preferable to developing (and eventually decommissioning) a green-field or brown-field site. | Noted. |
| General Comments | Progress of the SDP will rely on a number of activities (e.g. radioactive waste discharges and disposals, conventional and hazardous waste disposals etc), which will require permits issued by an environmental regulator. We would expect MoD to demonstrate, through an SEA and subsequent permit applications, that the impact of these activities on the environment has been addressed and minimised using Best Available Techniques (BAT). | Noted.<br><br>The SDP Sustainable Development and Regulatory Strategies confirm that the MOD will act in accordance with all Regulatory requirements, including the need to adopt BAT principles. |
| General Comments | MoD should address the assessment of ship-breaking alternatives and final vessel dismantling issues as part of the SEA, in particular with regards cumulative impacts with other SDP stages, and transport and location impacts. Final dismantling is a clear step in the SDP process. We appreciate MoD's view that this is an activity with which they are widely engaged, but even a hull with all the radioactivity removed may present a challenge environmentally as well as from a public relations perspective. | Noted.<br><br>The potential impacts of 'ship-breaking' and management of waste streams will be assessed at a generic level, under Stage IV of the SDP process (see Figure 1.1, p6 and Section 2.2, p20). This will highlight any significant differences between ship-breaking at the initial dismantling site and a generic commercial UK site. Issues such as transport distance and the proximity principle will be included. Cumulative effects will be considered using the approach set out in Section 6.3 of the generic Scoping Report.<br><br>The scope of the SEA does not extend to include comparative assessment of individual commercial ship-breaking sites, as these are established facilities whose activities are licensed under the same regulatory requirements, to ensure appropriate environmental standards are met. Moreover, it is proposed that the selection of the ship-breaking site(s) will be resolved by competition, and it is not possible to identify compliant bidders or conduct this competition until the strategic decisions (that are the focus of the SEA) have been taken. The assessment of site-specific environmental impacts will be undertaken during this commercial process. |



| Ref | Consultation Response | Commentary/ action taken |
|---|---|---|
| General Comments | It is unclear from the Scoping Report whether the SEA will review or assess the technical options for processing the submarines, as described in Section 2.2.2. The text suggests that the decision will be based on practicability and best value criteria, suggesting environmental considerations will not be included. An explanation for this would be useful. | Accepted.<br><br>The generic environmental impacts associated with the three technical options will be addressed and form part of the consultation, alongside the other factors such as practicability and safety. The MOD does intend to present a proposed technical solution, based on the results of these assessments, but will not exclude the other two options from consideration. It is to be noted that technical options will need to be presented and considered in conjunction with the site options, in effect as scenarios comprising initial dismantling site, storage site type and technical methodology.<br><br>The text (and Table 2.1) will be revised accordingly. |
| General Comments | Statements about water quality in the baseline, plans and programmes review, and assessment portions of the Scoping Report should be in line with River Basin Management Plans issued in Dec 2009. Currently references are to earlier Defra studies and data, which are now superseded. | Accepted.<br><br>The baseline data and plans/programmes review will be updated in the scoping report update. |
| General Comments | We welcome the inclusion of coastal change (erosion and land instability) as an issue in the report. For consistency with other national planning documentation, MoD should link this issue with flood risk, and a Section on flood and coastal change risk should be considered. | Accepted.<br><br>A separate category entitled '*Coastal change and flood risk*' will be introduced into the Scoping Report update. Relevant information will be presented in baseline information, the plans and programmes, the scoping of potential effects and the assessment framework.<br><br>Section 6.3 (cumulative effects) will be revised to make clear that effects impacting across more than one environmental category (such as the impact of sea level rise on erosion rates, and erosion on subsequent flood risk) are properly considered. |
| General Comments | Given the link of the SDP to the Geological Disposal Facility (GDF) programme, we recommend that reference is made to the ongoing SEA programme for the GDF, and that the information is consistent in the two SEAs. | Accepted.<br><br>Explicit reference will be made to the GDF and the ongoing SEA process using information from the NDA RWMD that is in the public domain. |
| General Comments | Reference should be made in the plans and programmes review to the Ports National Policy Statement and to the Marine Policy Statement to be issued shortly, as these may influence location/cumulative impacts of development with other infrastructure and coastal or marine projects. | Partially Accepted.<br><br>The National Policy Statements (NPS) and Marine Policy Statements (MPS) are not finalised and their content is anticipated to be subject to further amendments prior to designation. The plans and programmes review will be updated to include reference to the draft NPSs and MPSs in the Scoping Report update. |
| NTS | Section G on Air Quality is missing. | Accepted.<br><br>This was a formatting error and will be corrected in the Scoping Report update. |
| 3.3.1 – Biodiversity issues | The report seems to separate out biodiversity and nature conservation, as reflected in Natura 2000, from the remainder of aquatic ecology. GES/GEP under WFD require all biological elements to meet the requirements set across the aquatic landscape, this should be reflected | Accepted.<br><br>Section 3.3.1 on biodiversity will be revised to include reference to all biological elements in the Scoping Report update. |



| Ref | Consultation Response | Commentary/ action taken |
|---|---|---|
| | in the discussion on biodiversity. | |
| 3.3.6 - Water issues | The figures quoted for Water Framework Directive compliance are too high for England and Wales. We recommend a check on Scoping Report statements about water quality and the condition of water bodies, which come from earlier Defra publications. They are not in line with River Basin Management Plans issued in Dec 2009. In particular, the Plans suggest that compliance with Good Ecological Status/Good Ecological Potential (GES/GEP) (as appropriate) are lower than the 94%, 72% and 76% figures quoted, and that measures are needed for improvement. This is important in terms of scaling the true pressures prevailing today on the majority of aquatic ecosystems. | Noted, with thanks.<br><br>This information will be reviewed in the Scoping Report update. |
| 3.3.6 - Water issues | The scoping report should clarify that impacts are likely on estuary/coastal waters. | Noted<br><br>A separate category entitled '*Coastal change and flood risk*' will be introduced into the Scoping Report update. Relevant information will be presented in baseline information, the plans and programmes, the scoping of potential effects and the assessment framework. |
| 3.3.6 - Water issues | We would not expect radiological discharges during any dismantling phase to have any significant impact on water bodies. We expect the use of Best Available Techniques to minimise discharges to water. | Noted.<br><br>Section 3.3 presents a summary of key baseline issues. This comment concerns the potential scoping of potential effects considered in Section 5. The introduction to Section 3.3 and all subsequent sub Section headings will be revised to make clear that it refers to baseline issues only. The comment is dealt with in Section 5. |
| 3.3.6 - Water issues | The impact of climate change and in particular rising sea level for any coastal/estuarine site undertaking such work over a 60 year period will need to be assessed for the dismantling phase and for the intermediate storage of radioactive wastes pending permanent disposal. | Noted<br><br>As above - The comment is dealt with in Section 5. |
| 3.3.7 - Air issues | We would not expect to see gaseous radiological emissions figure as a significant contribution to reduced air quality. We expect the use of Best Available Techniques to minimise discharges to air. | Noted<br><br>As above - The comment is dealt with in Section 5. |
| 3.3.9 - Transport issues | Use of the Waste Management Hierarchy should address many of the issues regarding use of transport. Disposal of "lower level" (Very Low Level and Low Level) radioactive wastes should take account of the proximity principle when the SEA addresses transportation. | Noted<br><br>As above - The comment is dealt with in Section 5. |
| 3.3.10 – Waste issues | MoD, in planning for SDP, takes account of the plans to develop a national Geological Disposal Facility (GDF) for the disposal of SDP Intermediate Level Waste (ILW). In doing so, MoD understands that such a facility will not be available for several decades. | Noted.<br><br>Section 3.3.10 will acknowledge the uncertainties surrounding the timeframe for delivery of the GDF. The interim storage facility will have a design life of 100 years; the SDP will however retain a working assumption that the ILW will be disposed of to the GDF after 2040. |
| 3.3.10 - Waste issues | MoD needs to assess the impact of lengthy intermediate storage of ILW as well as the impact of temporary storage at the dismantling site. | Noted<br><br>As above - The comment is dealt with in Section 5. |

| Ref | Consultation Response | Commentary/ action taken |
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| | | |
| 3.3.10 - Waste issues | For materials which are lightly contaminated with radioactivity, MoD should fully explore the routes which are now available for recycling these materials rather than disposing of them as waste. | Noted.<br><br>Section 3.3.10 will be updated to include a bullet point on the management of VLLW. |
| Section 4 - Plans and Programmes | We expect that all processes used to manage radioactive wastes will use the Best Available Techniques. SDP will be a permitted activity under the Environmental Permitting Regulations (EPR) 2010 and we expect discharges to air and water to be as low as reasonably achievable through application of most up to date techniques. | Noted.<br><br>The SDP Sustainable Development and Regulatory Strategies confirm that the MOD will act in accordance with all Regulatory requirements, including the need to adopt BAT principles.<br><br>EPR 2007/ 2010 will be included in the relevant parts of Annex B (note that we intend to remove specific references from Section 4). |
| Section 4 - Plans and Programmes | The SDP will manage the disposal of several types of radioactive waste, with ILW presenting the biggest challenge. We expect MoD (and their contractor(s)) to use the waste management hierarchy to minimise disposal of Low Level Waste (LLW) and Very Low Level Waste (VLLW) and to use existing facilities for recycling lightly contaminated materials such as steel. | Noted.<br><br>The waste hierarchy principle is contained within the EU Thematic Strategy on Waste, which is included in Section 4.<br><br>The comment regarding the application of the waste hierarchy is more relevant to Section 5. It has therefore been addressed in that Section. |
| Section 5 - Potential Effects | This Section outlines the key issues by which the SDP could affect the environment. Through our regulatory engagement with MoD (jointly with SEPA, Nuclear Installations Inspectorate, MoD's own regulator (Defence Nuclear Safety Regulator) and DfT we have established a strategy that identifies lead regulators for the different stages of SDP. MoD has scoped the regulatory requirements into the strategy and we are content that they are addressing these in the forthcoming SEA. | Noted, with thanks. |
| 5.1.2 - Biodiversity | Radioactive operational discharges are expected to be low from de-fuelled submarines, although if cut-up as opposed to cut-out is selected, appropriate controls will need to be in place to minimise airborne activity. Permitting by itself does not provide these controls - the use of the best available techniques will minimise emissions at source and prevent the entry of airborne activity into the environment. | Accepted.<br><br>5.1.2 will be amended to reflect the need for BAT to be used. |
| 5.1.3 - Biodiversity | Regardless of the type of site selected (existing nuclear licensed, green-field or brown-field), its physical status needs to be investigated before any dismantling activity. This will provide a baseline for decommissioning. | Noted.<br><br>The individual site(s) finally chosen for dismantling and/or interim storage will be subject to baseline assessments for environmental; quality as part of ND(EIA) and T&CP (EIA) assessment. As a result, it is felt that no change to the current text is needed in this regard. |
| 5.5, 5.6 and 5.7 | Sections on 'soil and geology', 'water' and 'climate change' need to consider (i) whether facilities associated with the SDP process will be at risk from flooding and coastal change, and (ii) whether they will cause or exacerbate flood and coastal change risk. | Accepted.<br><br>A separate category entitled '*Coastal change and flood risk*' will be introduced into the Scoping Report update. |
| 5.5, 5.6 and 5.7 | Sites should be preferred where there is no increase in | Noted. |

| Ref | Consultation Response | Commentary/ action taken |
|---|---|---|
| | flood and coastal change risk. This includes the effects that works may have on flood and coastal defence infrastructure. | The SEA objectives in Table 6.1 (p68) outline the preferred sustainable outcomes based on the evaluation of the appropriate contextual information. Sites will be assessed against this framework to identify preferable locations, taking into account all aspects of sustainability. |
| 5.6 - Water | The discussion should make it clear that the Scoping Report has already identified the type of location that may be affected, i.e. estuary or coastal etc that can accommodate submarine access. | Accepted.<br><br>This will be included in the preamble to Section 5.6. |
| 5.6 - Water (repeated from 3.3) | We would not expect radiological discharges during any dismantling phase to have any significant impact on water bodies. We expect the use of Best Available Techniques to minimise discharges to water. | Noted.<br><br>The potential effects on water bodies have been scoped into the assessment due to the perceived risks and associated public anxiety about any radiological discharge (whether scheduled or accidental).<br><br>BAT will be included in the text, alongside Environmental Permitting, throughout Section 5.5. |
| 5.6 - Water (repeated from 3.3) | The impact of climate change and in particular rising sea level for any coastal/estuarine site undertaking such work over a 60 year period will need to be assessed for the dismantling phase and for the intermediate storage of radioactive wastes pending permanent disposal. | Agreed.<br><br>A separate category entitled '*Coastal change and flood risk*' will be introduced into the Scoping Report update. Relevant information will be presented for this issue in the scoping of potential effects in a revised Section 5. This will draw on information in ections 5.5 (soil and geology), 5.6 (water) and 5.8 (climate change). |
| 5.7 - Air (repeated from 3.3) | We would not expect to see gaseous radiological emissions figure as a significant contribution to reduced air quality. We expect the use of Best Available Techniques to minimise discharges to air. | Noted.<br><br>The potential effects on air have been scoped into the assessment due to the perceived risks and associated public anxiety about any radiological discharge (whether scheduled or accidental).<br><br>BAT will be included in the text, alongside Environmental Permitting, throughout Section 5.7. |
| 5.9 - Transport (repeated from 3.3) | Disposal of "lower level" (Very Low Level and Low Level) radioactive wastes should take account of the proximity principle when the SEA addresses transportation. | Noted.<br><br>The need to consider the proximity principle will be included in Section 5.9.<br><br>LLW is constrained to the established disposal mechanism of the National LLW repository. The transport distance from the proposed initial dismantling facility/ies to the LLW repository will be included in the assessment. |
| 5.10 - Waste (repeated from 3.3) | MoD needs to assess the impact of lengthy intermediate storage of ILW as well as the impact of temporary storage at the dismantling site. | Accepted.<br><br>The length of interim storage will be included as a factor in the operation phase (Section 5.10.2).<br><br>The potential for 'buffer' storage at the dismantling site will be included in the health Section. |
| 5.10 - Waste | We expect MoD (and their contractor(s)) to use the waste management hierarchy to minimise disposal of Low Level Waste (LLW) and Very Low Level Waste (VLLW) and to | Noted.<br><br>The SEA objective on waste in Table 6.1 (p68) is based |

| Ref | Consultation Response | Commentary/ action taken |
|---|---|---|
| | use existing facilities for recycling lightly contaminated materials such as steel. | on the application of the waste hierarchy. Every opportunity will be taken to avoid the disposal (and maximise the recycling) of LLW and VLLW, as this makes both environmental and economic sense. |
| Question 1 response | *Do you have any comments on the proposed alternative options outlined for the SDP?*<br><br>We understand the MoD's need to consult on all options, and site specific assessment will be an important step in identifying the best location for the project. However, the selection of an existing nuclear licensed site for initial dismantling has the potential to significantly reduce the overall environmental impact of the SDP. Similarly, for interim storage of ILW, using an existing site may provide tangible benefits to MoD's longer term aim of safely disposing of ILW at the planned GDF. | Noted, with thanks. |
| Question 1 response | Considerations of alternatives for an appropriate dismantling site could include, in addition to green/brown/existing sites: selection of alternatives between east coast and west coast; freshwater or marine; and proximity to infrastructure. Such considerations may be more important than green/brown/existing sites. The options should be revisited when site selection criteria are available. | Noted.<br><br>Whilst we note the EAs earlier recommendation that the 'MoD should minimise environmental impact by using an existing nuclear licensed site', we have proposed an approach to developing the strategic alternatives that enables a balanced consideration of all three land use categories (without pre-empting the outcome). The approach also provides a framework for the more detailed assessment of identified sites. The additional alternative factors proposed for locating a dismantling site will then be captured when assessing the performance of individual candidate sites. In such circumstances, proximity to infrastructure, potential effects on the aquatic environment and coastal location can be meaningfully assessed by reference to local baseline information. |
| Question 1 response | With regards technical options, we have been engaged with MoD on the selection for the SDP for some time. We understand that the option of cut-out versus cut-up is under evaluation, and that MoD will have selected a preferred approach with which to progress through to an in-service date of ~ 2020. Whichever options MoD select, we will expect the highest environmental standards to be used to minimise the impact on the environment. | Noted.<br><br>The publicly-stated aim of the SDP is that "we are committed to disposing of our nuclear submarines in a way that is safe, environmentally responsible, secure and cost-effective."<br><br>By undertaking the SEA, the project is addressing environmental impacts at the formative stages of the project. This will be translated through to the site-specific solution(s) through (as a minimum) the Decommissioning EIA, Town and Country Planning EIA and Habitats Regulations Assessment. Activities will be subject to EPR 2007/ 2010, and BAT principles will be adopted. |
| Question 1 response | Detailed environmental impacts should be constructed within a reasonable timeframe to allow for discussion with the regulators. MoD needs to take account of various ship dismantling conventions and Defra's Ship Dismantling Strategy when planning this work, as well as when planning for the dismantling of the non-radiological hull. | Noted.<br><br>The ship recycling conventions are referenced in the SEA; detailed environmental assessments will be undertaken once the public consultation has completed and site decisions have been made. |
| Question 1 response | We do however question why MoD does not propose to include any assessment of commercial ship-breaking sites as part of the SDP SEA, since this is a clearly identifiable | Noted.<br><br>The potential impacts of ship-breaking will be assessed, under Stage IV of the SDP process (see Figure 1.1, p6 |

| Ref | Consultation Response | Commentary/ action taken |
|---|---|---|
| | component of SDP - Stage III and/or IV. | and Section 2.2, p20). This will include the generic effects of transporting materials from the dismantling site(s) and of ship-breaking at the initial dismantling site vs. an established UK commercial ship-breaking facility. The cumulative effects will be considered using the approach set out in Section 6.3 of the generic Scoping Report.<br><br>The scope of the SEA does not extend to include comparative assessment of individual commercial ship-breaking facilities as these are established facilities whose activities are licensed to ensure appropriate environmental standards are achieved. |
| Question 2 response | *Do you agree with the main environmental issues identified?*<br><br>Section 3.3.6 - Key Water Issues:<br><br>We agree with the issues identified, with the additions below. However, we re-iterate that the information needs to be updated to reflect River Basin Management Plans content. For example, the statement that 72% of UK waters meet good biological quality and 76% good chemical quality is based on the 2008 General Quality Assessment (GQA) for England only. The Environment Agency would prefer that WFD classification system is used. The statement that 94% of UK coastal waters meet WFD standards is misleading as this is based on classification of Scottish coastal waters only. | Noted, with thanks.<br><br>This information will be reviewed in the Scoping Report update. |
| | | Note: Section 3.3 details key baseline issues. The EA comments below are relevant to Section 5, where the potentially significant environmental effects of the SDP are scoped. The MOD responses are relevant to Section 5. |
| Question 2 response | Section 3.3.6 - Key Water Issues:<br><br>There might be the need to dredge to move the vessels, this could have serious impacts on the water environment, including on the geomorphology. | Partially accepted.<br><br>The potential for dredging impacts on water quality (from accidental discharges) are noted in Section 5.6. The project assumptions are that additional dredging will not be required; however this cannot be ruled out. The potential impacts of any dredging on geomorphology and hence on biodiversity will also need to be included. Sections 5.1 and 5.6 of the Scoping Report update will be revised accordingly. |
| Question 2 response | Section 3.3.6 - Key Water Issues:<br><br>Some clarification is needed as to exactly what constitute 'key water issues'. Specifically, in the non technical summary table of key issues, flood risk is included under 'Water' but this is not the case in this part of the scoping report. | Accepted<br><br>The Scoping Report will be revised to provide clarity.<br><br>A separate category entitled '*Coastal change and flood risk*' will be introduced into the Scoping Report update. |
| Question 2 response | Section 3.3.6 - Key Water Issues:<br><br>During construction, operational and decommissioning phases, the effects of flooding should be considered in relation to safety of users/workers on the site, and in relation to the environment. E.g. will site flooding cause | Accepted.<br><br>The potential impacts of flooding on worker safety are currently inferred, rather than explicit. Section 5.6 will be updated accordingly. |

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| | environmental damage by disrupting processes for pollution control and management? In addition, due to the coastal location there is potential for disruption to flood/coastal defences. | Section 5.6 does already address the environmental impacts of flooding, e.g. "…this may result in flood damage to facilities, disruption of activity or the potential mobilisation of hazardous material both on and off site." The reference to interference with pollution control measures will be made explicit in the above text.<br><br>The impacts that the SDP infrastructure may have on coastal and flood defences is already captured at paragraph 2 of Section 5.6.1 (construction phase). However, reference will be added to potential impacts on coastal flood defences for clarity. |
| Question 2 response | Section 3.3.6 - Key Water Issues:<br><br>Increases in hard standing can create an increased potential for surface water flooding both on and off site. Flood risk elsewhere should not be made worse as a result of this development. | Noted.<br><br>This is already captured in Section 5.6.1. |
| Question 2 response | Section 3.3.1 - Key Biodiversity issues:<br><br>Non-native invasive species are also a key concern for our wildlife. We need to be careful when vessels are moved to different waters that certain species are not spread. | Accepted.<br><br>The Scoping Report update will be amended to include reference, where relevant to non-native invasive species. |
| Question 2 response | Section 3.3.1 - Key Biodiversity issues: Noise impacts should also be considered as part of the Marine Strategy Framework Directive. | Noted.<br><br>Noise impacts on biodiversity are already covered in Section 5.1.<br><br>Section 4/Annex B (review of plans, programmes and environmental protection objectives) will be updated to include the objectives of the Marine Strategy Framework Directive. |
| Question 2 response | Section 3.3.1 - Key Biodiversity issues:<br><br>With regards to biodiversity, protected habitats and designated sites should be considered as well as protected species. | Not accepted.<br><br>In both Sections 5.1 and 3.3.1, reference is made to protected habitats (including sites designated at UK and EU level). |
| Question 2 response | Section 3.3.1 - Key Biodiversity issues:<br><br>Aquatic ecosystems are under pressure from anthropogenic sources as described. Climate change compounds these pressures, particularly through rising temperatures. Changes in marine fish ecology are happening now. Migratory fish species are likely to be adversely affected in the near future. | Accepted.<br><br>Section 3.1.1 of the Scoping Report update will be revised to include these additional issues identified. |
| Question 2 response | Section 3.3.8, Key climate change and energy issues<br><br>This section does not include any reference to increased risks from flooding and coastal change, despite the fact that these points were touched upon in the key issues table in the Non Technical Summary. The effects of climate change will include sea level rise and increased storminess, which will impact upon the risks from flooding and coastal change. The extent of the change in risk will become increasingly important when considering specific | Accepted.<br><br>A separate category entitled '*Coastal change and flood risk*' will be introduced into the Scoping Report update. Relevant information will be presented in baseline information, the plans and programmes, the scoping of potential effects and the assessment framework. |

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| | sites. | |
| Question 2 response | Section 3.3.11 Key Land Use and Materials Issues<br><br>The regional strategies have been revoked so there are no longer regional housing targets. We assume the 3m new houses by 2020 are also now revoked. Reference to 'green belt' is inaccurate - it should probably be 'green-field'. The new Government have given strong backing to protecting the Green Belt. | Accepted<br><br>The Scoping Report update will be revised to include Coalition Government changes to the planning system.<br><br>. |
| Question 2 response | Section 3.3.11 Key Land Use and Materials Issues<br><br>Construction, Operation and Decommissioning phases should consider potential secondary effects such as use of land for housing and other services as a result of an influx of workers. | Noted.<br><br>Section 5.2.1 (population) already considers the impacts of worker influx. We do not expect that there will be a significant enough influx of workers in any scenario that will warranty additional land being developed for worker housing. |
| Question 2 response | Section 3.3.5 Key Soils and Geology issues<br><br>This should consider the risk of release of sequestered carbon from organic soils such as peat. This can happen if the soil is excavated or if construction work alters the hydrology of the site. | Accepted.<br><br>The Scoping Report update will include reference to the potential for sequestered carbon release from organic soils as a result of the SDP proposals in geology and soils (Section 5.5) |
| Question 3 response | *Are there additional plans, programmes and strategies which should be considered in the SEA?*<br><br>Annex B Material Assets (Waste Mgmt)<br><br>International/European: include Basel Convention on ship dismantling and possibly to the as yet un-ratified Hong Kong Convention 2008.<br><br>Reference to Radioactive Substances Act 1993 should be replaced with Environmental Permitting Regulations 2010. | Noted, with thanks.<br><br>We do not propose to include un-ratified conventions; however the other suggestions will be included in the update. |
| Question 3 response | Non-Technical Summary; Annex B p 96; and Scoping Rpt Section 4.2<br><br>The summary of the review in the non technical summary appears only to consider plans and policies applying to England. For example on page 41 PPS 25 Development and Flood risk is cited, but there is no mention of its equivalent in Wales, TAN15. The full review in Annex B corrects this by including documents under separate headings for Wales and Scotland (but not Northern Ireland). However, many of the plans and policies listed under 'National (UK)' in fact only apply to England e.g. on Annex B, page 96 "A Strategy for England's Trees, Woodlands and Forests (2007)" is listed under 'UK' documents. This will need to be corrected or it may cause confusion when evaluating sites in the devolved administrations' areas.<br><br>The table of Policies, Plans and Programmes in Section 4.2 should refer to Scottish and Welsh planning policy (in Wales - Planning Policy Wales (200)) | Accepted.<br><br>The Scoping Report update will be updated to include provision of appropriate policies, plans and programmes for the devolved administrations. |
| Question 3 | Scoping Report, Section 4 - Water | Accepted. |

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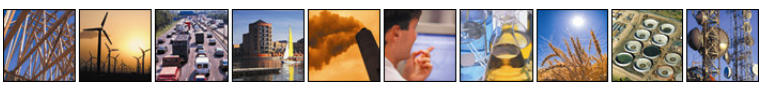
| response | We recommend adding reference to River Basin Management Plans (RBMPs): These plans have now been issued and should be consulted. | This will be included in the update. |
| Question 3 response | Scoping Report, Section 4 - Water<br><br>The table should also refer to Planning Policy Statement PPS23 Pollution Control, which refers to discharges to water. | Accepted.<br><br>This will be included in the update. |
| Question 3 response | Scoping Report, Section 4 - Water<br><br>The table should include reference to the Marine and Coastal Access Act 2009, which introduces radical new measures to manage the marine environment in a more sustainable manner, including the development of Marine Spatial Plans and Marine Conservation Zones. It also includes important amendments to the Salmon and Freshwater Fisheries Act, 1975. Reference should also be made to the Eel Regulations 2010. All of these regulations may impact upon SDP proposals, depending upon location and methodologies adopted. | Accepted.<br><br>This will be included in the update. |
| Question 3 response | Scoping Report, Section 4 - Water<br><br>We welcome the inclusion of PPS 25 on development and flood risk, and its supplement on development and coastal change in the 'Water' section. However, clarity is needed between the sections on 'soils and geology', 'water' and 'climate change' as to where plans and programmes on flood and coastal erosion risk management are to be included. | Agreed.<br><br>A separate category entitled '*Coastal change and flood risk*' will be introduced into the Scoping Report update. Relevant information will be presented in baseline information, the plans and programmes, the scoping of potential effects and the assessment framework. |
| Question 3 response | Scoping Report, Section 4 - Water<br><br>Given the point above, Catchment Flood Management Plans (CFMPs) and Shoreline Management Plans (SMPs) should be included in the list of plans and programmes under 'water' , as these provide information on flood and coastal erosion risk over the next 100 years, and present preferred policy options for managing those risks | Accepted.<br><br>This will be included in the update. |
| Question 3 response | Scoping Report, Section 4 - Water<br><br>Regional coastal monitoring programmes (EA and Local Authority) study a number of data streams, e.g. bathymetry and sediment transfer, which may be relevant at a site-specific level. | Noted.<br><br>The Scoping Report update will be updated to include information where appropriate and in the public domain. |
| Question 3 response | Scoping Report, Section 4 - Water<br><br>The Marine Strategy Framework Directive will bring new descriptors and standards for underwater noise, which may be relevant to the SDP proposals, depending on location. | Noted.<br><br>The Scoping Report update will be updated to include this, as appropriate. |
| Question 4 response | *Do you know of any additional baseline evidence which will help to inform the SEA process?*<br><br>Annex A is weak on sources of baseline data for the environment in Wales. In particular, we would recommend you consider: | Noted, with thanks.<br><br>The Scoping Report update will be updated to include appropriate Welsh information. |



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| | Biodiversity and Nature Conservation<br><br>Wales Biodiversity Action Plan (http://www.biodiversitywales.org.uk/)<br><br>Human Health (Noise)<br><br>See mapping prepared under the directive on Assessment and Management of Environmental Noise 2002/49/EC (http://wales.gov.uk/topics/environmentcountryside/epq/noiseandnuisance/environmentalnoise/)<br><br>Water<br><br>The baseline information on water quality appears to be based on a 2007 report "Recommendations on Surface Water Classification Schemes for the purposes of the Water Framework Directive".<br><br>Since this report was written River Basin Management Plans produced under the Water Framework Directive have been published (at http://www.environment-agency.gov.uk/research/planning/33106.aspx).<br><br>We recommend these plans are used to identify issues and to establish baseline water quality as this is the system under which monitoring and reporting will be undertaken in the future.<br><br>The assessment needs to consider quantity as well as quality of water. | |
| Question 4 response | Environment Agency Water Resources Strategies and Action Plans (http://www.environment-agency.gov.uk/research/library/publications/40731.aspx)<br><br>River Basin Management Plans (http://www.environment-agency.gov.uk/research/planning/33106.aspx)<br><br>Material Assets (Waste Management)<br><br>Towards Zero Waste - the waste strategy for Wales (http://wales.gov.uk/topics/environmentcountryside/epq/waste_recycling/publication/towardszero/)<br><br>WasteDataFlow (England and Wales) (http://www.wastedataflow.org/)<br><br>Various<br><br>The Wales State of the Environment Report and Stats Wales site (http://wales.gov.uk/topics/statistics/headlines/env2009/hdw20090723/?lang=en) | Noted, with thanks.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |
| Question 4 response | Annex A, pages 2 and 11; Annex page 76; main report 3.3.1 page 29.<br><br>There is not much marine baseline data here, e.g. marine designations such as the marine nature reserves which are now becoming Marine Conservation Zones. The new legislation introduced by the Marine and Coastal Access Act 2009 is looking to reverse the decline in marine species and habitats. | Noted, with thanks.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |

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| Question 4 response | Annex B, p23<br><br>The biodiversity section should include the Water Framework Directive and the Marine Strategy Framework Directive in the international section; and the Marine Nature Reserves and Marine Conservation Zone legislation. Note that Lundy is the first Marine conservation zone to be established. The Marine Strategy Directive also amongst other things introduced noise as an element of consideration and the delivery of a network of Marine Protected Areas. | Noted, with thanks.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |
| Question 4 response | Annex B, p83<br><br>We would look for more recent data than 2007. Also note that link to ONS ref 1 is broken. | Noted, with thanks.<br><br>The Scoping Report update will be updated to include more recent information, where available and current hyperlinks, as appropriate. |
| Question 4 response | Annex B p92<br><br>Link to CLG ref 4 is broken. National Target - recommend check that 2007 Housing Green Paper is still relevant. | Noted, with thanks.<br><br>The Scoping Report update will be updated to include more recent information, where available and current hyperlinks, as appropriate. |
| Question 4 response | Annex B p155-158<br><br>Given recent change in government, we recommend that all references to National policy documents are checked (apart from PPGs and PPSs which Government has confirmed are in force). | Accepted<br><br>The Scoping Report update will be revised to include Coalition Government changes to the planning system. |
| Question 4 response | Annex B p159<br><br>Recommend inserting reference to Planning Policy Wales (2010). | Noted, with thanks.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |
| Question 5 response | *Do you agree that the proposed SEA objectives cover the breadth of issues appropriate for assessing the SDP?*<br><br>Scoping Report, Section 6, Table 6.1.<br><br>In general we agree with the objectives (although see the comments below), as far as is possible when the Scoping Report is for generic sites. When specific sites are known for dismantling, ILW storage and (if MoD undertake) for the final ship dismantling site(s), the full breadth can be covered. As mentioned earlier, the full scope of SDP includes final dismantling of the hull, and this is not clearly addressed in the Scoping Report. | Noted.<br><br>The potential impacts of ship-breaking will be assessed, under Stage IV of the SDP process (see Figure 1.1, p6 and Section 2.2, p20). This will include consideration of generic effects associated with dismantling the submarines at the initial dismantling site, as opposed to an established UK commercial ship-breaking facility. The cumulative effects will be considered using the approach set out in Section 6.3 of the generic Scoping Report.<br><br>The scope of the SEA does not extend to include comparative assessment of individual ship-breaking facilities as these are established facilities whose activities are licensed to ensure appropriate environmental standards are achieved. |
| Question 5 response | Scoping Report, Section 6, Table 6.1<br><br>In Row A, we support the objective to look to enhance the environment and at the least protect what we have. | Noted, with thanks. |
| Question 5 response | Scoping Report, Section 6, Table 6.1. | Accepted. |

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| | In row E, we welcome the inclusion of the question 'will the proposals affect coastal processes and/or erosion'. The question needs to be amended to ask whether it will 'affect or *be affected by'* | This wording will be updated. |
| Question 5 response | Scoping Report, Section 6, Table 6.1<br><br>In row F, we welcome the inclusion of the question 'will the proposals affect flood risks'. The question needs to be amended to ask whether it will *'affect or be affected by'.* | Not accepted.<br><br>Both are already included in F: "will the proposals affect existing flood risks?" and "will the proposals be significantly affected by flooding from any source?" |
| Question 5 response | Scoping Report, Section 6, Table 6.1<br><br>In row H, we need to ask whether the proposals will be safe from flood and coastal erosion risk for the duration of their life, including any decommissioning period. | Not accepted.<br><br>The current question covering this is "will the proposals be significantly affected by climate change?" We intend to amend this to "will the proposals be likely to be affected by climate change" to reflect the inherent uncertainties of predicting the future. |
| Question 6 response | *When and how should we be seeking your opinions on site-specific information?*<br><br>The Environment Agency has a programme lead officer for the SDP, with remit to cover both conventional and radiological activities and using the expertise available nationally and locally. The lead will be continuing interface with MoD, and as Agency representative will need to be informed as soon as possible of MoD's proposed sites, with as much information as possible, especially where planning and permitting activities are likely to impact on MoD's programme.<br><br>Our lead will provide input to the next stage(s) of consultation as required. Early detailed local consultation is a pre-requisite of sustainable development solutions. | Noted, with thanks. |
| Question 6 response | With regards to site selection, sites should be thoroughly assed for flood and coastal erosion risk for the lifetime of the project, including any decommissioning period. In particular, the choice of an existing nuclear site should not extend the life of the site beyond what is currently anticipated, without thorough checks as to flood and coastal change risk for the entirety of the proposed period of use, including any decommissioning period. | Noted.<br><br>All proposed sites will be assessed for flood and erosion risks, from the SEA onwards. |
| Question 6 response | The number of dismantling and storage sites expected to be operational at any time needs to be clarified - It is unclear whether MoD is considering one of each, or whether several of each will be required. | Noted.<br><br>At the current time, the number of dismantling/interim storage sites has not been decided upon; the feasible options will form part of the public consultation in due course.<br><br>The Scoping Report update will be amended to make this clear. |
| Question 7 response | *Do you have any further suggestions regarding the proposed approach to SEA?*<br><br>The SDP is a far-reaching and lengthy programme. Over | Noted.<br><br>It accepted that many parameters (particularly in terms of legislation and conventions) will change, both during |

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| | the length of the SDP, many parameters may change. Because of this, MoD needs to maintain a proactive position regarding national and international initiatives surrounding ship dismantling, climate change and the evolution of regulation that impacts on SDP. | the SEA time-frame, and beyond, into the operational phase. We will take account of any relevant changes during the SEA assessment - noting that any changes that significantly affect the scope or nature of the SDP may necessitate re-running of the SEA process. |
| 2. English Heritage | | |
| | Do you agree with the main environmental issues identified?<br><br>Yes. However, cultural heritage might also include identifying and perhaps retaining artefacts from the submarines | Accepted.<br><br>The potential for retaining elements of the nuclear fleet will be included in Section 5.12.2 as a potential opportunity. |
| | Are there additional plans, programmes and strategies which should be considered in the SEA?<br><br>PPG 15 and 16 have been replaced by PPS5 Planning for the Historic Environment and the associated Practice Guide. | Noted, with thanks.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |
| | Do you know of any additional baseline evidence which will help to inform the SEA process?<br><br>Full advice on baseline evidence relating to the historic environment is set out in Strategic Environmental Assessment, Sustainability Appraisal and The Historic Environment (http://www.helm.org.uk/upload/pdf/Strat-env-ass.pdf?1279196907) | Noted, with thanks.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |
| | Do you agree that the proposed SEA objectives (Section 6.1) cover the breadth of issues appropriate for assessing the SDP?<br><br>The impact on the historic environment is not included. | Accepted.<br><br>Cultural Heritage (theme L) is missing from Table 6.1, along with theme M (landscape and townscape) due a formatting error. This will be corrected in the Scoping Report update. |
| 3. Natural England | | |
| Question 1 response | Do you have any comments on the proposed alternative outlined for the SDP?<br><br>The proposed alternative options for Stage 1 (Assessment (s) of credible sites (expected to fall within the 'existing' Licensed/Authorised site category)), does not identify why Greenfield or brownfield (or existing licensed sites) have been identified as the main location selection criteria. | Noted.<br><br>The three generic site types are not, in fact, location selection criteria - they are merely the generic categories of land upon which the facilities could be developed. They evolved from the basic categorisation of using an existing licensed/authorised site vs. using a new site. The new site category intuitively divided itself into building on undeveloped land and building on previously-developed land. This will be clarified in the Scoping Report. |
| Question 1 response | Whilst the loss of Greenfield land is an important consideration (as referenced from PPS 3), the importance of the land in terms of its contribution to the natural environment should be considered in parallel. This is particularly important where the land involved is covered by a national or European designation for the importance of the habitat, biodiversity, geodiversity or landscape value. As the location is likely to be coastal, the | Noted.<br><br>The Scoping Report update will include revised definitions of undeveloped and previously-developed land as relevant to the SDP, to clarify and to minimise any overlaps between them. The generic assessment of the three land types will of course need to be qualified that individual sites may have unique characteristics |

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| | importance of access designations, such as National Trails, and landscape designations such as Heritage Coasts should also be considered. | (such as biodiversity value) that would need to be taken into account. |
| Question 2 response | *Do you agree with the main environmental issues identified?*<br><br>3.3.1 Biodiversity<br><br>Natural England agrees with the assessment provided. We would also like to see reference made to the importance of European designations for habitat conservation, and the additional requirements for the presumption against harming the integrity of a designated site. | Partially accepted.<br><br>Reference is made to European designated sites in 3.3.1. The presumption against harming the integrity of such sites will be included in the Scoping Report update. |
| Question 2 response | 3.3.3 Human Health<br><br>Natural England would welcome reference to the importance of recreation on Human Health and the recognition that coastal access provides significant recreation opportunities that can benefit human health. Of particular importance is the Government's programme for enhancing coastal access contained within the Marine and Coastal Access Act 2009, for which Natural England will be the co-ordinating body for England. | Noted.<br><br>The importance of coastal access is detailed in Section 4 and Annex B.<br><br>The potential for access to be affected will be included in revisions to Section 5, principally in Section 5.3 (health) and 5.13 (landscape and townscape). |
| Question 2 response | 3.3.5 Soils and Geology<br><br>Natural England would welcome recognition of the importance of SSSI designation for geological sites.<br><br>Additionally, the preservation of Best and Most Versatile Land (BMVL) should be recognised, in accordance with PPS7. | Noted.<br><br>Section 4 and Annex B do include reference to PPS9. Revisions will include reference to the Wildlife and Countryside Act 1981 (as amended), as this is the source of SSSI designation.<br><br>The potential effects on geological SSSIs and RIGS is included in Section 5.5 (soil and geology). The proposed SEA objectives (Table 6.1) include the need to protect geological resources.<br><br>BMVL is not currently included in Section 4 or Annex B; this will be included at the update. |
| Question 2 response | 3.3.9 Transport<br><br>Natural England would welcome recognition of the importance of linking a chosen site to the transport network and the cumulative environmental impacts that this may have, should any infrastructure associated with the development need to be upgraded. | Noted.<br><br>The potential effects of transport are included Section 5.9 (transport). The proposed SEA objectives (Table 6.1) also include the need to minimise the detrimental effects of transport. |
| Question 2 response | 3.3.13 Landscape<br><br>The issues identified within this section appear to be of less importance than the potential impact of a site on a designated landscape (National Park, AONB), Heritage Coast, scenic area or seascape. We would also welcome a redrafting of this section to recognise the importance of landscape character in identifying a chosen site, and | Noted.<br><br>The potential effects on landscape and townscape and the importance of landscape character are included Section 5.13 (landscape and townscape). The proposed SEA objectives (Table 6.1) also include the need to protect and enhance landscape and townscape quality. |

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| | identifying the protection that should be afforded to nationally-designated landscapes. | |
| Question 3 response | *Are there additional plans, programmes and strategies which should be considered in the SEA?*<br><br>In addition to the reference to PPS9, we would welcome specific reference to the accompanying Good Practice Guide (Annex A). | Noted, with thanks.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |
| Question 3 response | Biodiversity - reference should be made to Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and their Impact Within the Planning System. | Noted, with thanks.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |
| Question 3 response | Climate Change - reference should be made to PPS1 Sustainable Development and Climate Change. | Not accepted.<br><br>This reference is already included in Annex B. |
| Question 3 response | Transport - reference should be made to the forthcoming National Policy Statement (and accompanying Assessment of Sustainability) for National networks | Noted, with thanks.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |
| Question 3 response | Material Assets - reference should be made to the 'State of the Countryside Report,' published by Natural England annually. | Noted, with thanks.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |
| Question 3 response | Landscape - Reference should be made to the following:-<br><br>PPS 7 - Sustainable Development in Rural Areas.<br><br>CRoW Act 2000.<br><br>Marine and Coastal Access Act 2009.<br><br>Landscape Character Assessment Guidance (NE and SNH). | Noted, with thanks.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |
| Question 3 response | Where the text states that "in respect of landscape designations, reasonable measures should be undertaken to mitigate the impacts of any development proposals on landscape character," this should be amended to reflect that development should respect the character of all landscapes, that nationally designated landscapes should be afforded the highest level of protection and that impacts on nationally designated landscapes should be avoided and only if the development is unavoidable (see tests in PPS7) should mitigation be considered. | Partially accepted.<br><br>This text is taken from published MOD policy guidance, so cannot be changed.<br><br>However, we note that PPS7 is not included in either Section 4 or Annex B. This reference (and its' requirements) will be included in the update. |
| Question 4 response | *Do you know of any additional baseline evidence which will help to inform the SEA process?*<br><br>Baseline evidence for the Natural Environment is available from the following sources:<br><br>State of the Countryside Report, Natural England;<br><br>MAGIC database, Defra;<br><br>Countryside Quality Counts, Natural England; | Noted, with thanks. |

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| | Natural England SSSI Condition Survey Reports. | |
| Question 5 response | *Do you agree that the proposed SEA objectives (Section 6.1) cover the breadth of issues appropriate for assessing the SDP?*<br><br>NE would like to see the inclusion of an SEA objective for landscape (Townscape, Historic Landscape Character) with guide questions that seek to identify the impact on landscape character and specifically on designated landscapes and Heritage Coasts. | Accepted.<br><br>The omission of this section from Table 6.1 was a formatting error. It will be included in the Scoping Report update. |
| Question 5 response | Natural England would welcome a guide question that identified if best use was being made of existing infrastructure and resources, through the location and siting of the SDP. | Accepted.<br><br>This guide question will be included in Table 6.1. |
| Question 6 response | *When and how should we be seeking your opinions on site-specific information?*<br><br>NE is a Statutory Consultee for SEA, HRA, EIA, Nationally-significant infrastructure projects and for development management consultations where the proposal impacts on nationally designated sites or species. We are happy to engage through these processes or through pre-application discussions at all stages of the development of the strategy and implementation of the project. | Noted, with thanks. |
| Question 7 response | *Do you have any further suggestions regarding the proposed approach to SEA?*<br><br>5.1.1states that "land-take effects on localised biodiversity, flora and fauna are likely to be permanent; whilst construction disturbance effects are likely to be of short duration and can be mitigated." We believe that this text should be amended to reflect that construction disturbance effects may be mitigated (depending upon appropriate identification of issues through relevant surveys). | Accepted.<br><br>This clarification will be included in the update. |
| 4. Cadw | | |
| | Cadw welcomes the opportunity but does not have any comments to make at this stage. | Noted, with thanks. |
| 5. Countryside Council for Wales | | |
| NTS - Table 1: | Clarification would be welcomed as to what is understood by 'generic site category' in respect of Stage 1 (initial dismantling) and stage II (ILW storage). Given that both activities effectively require coastal/near coastal locations, CCW would welcome clarification as to whether 'generic site categories effectively comprise strategic site criteria. | Noted.<br><br>The three generic site types are not location selection criteria - they are merely the generic categories of land upon which the facilities could be developed. They evolved from the basic categorisation of using an existing licensed/authorised site vs. using a new site. The new site category intuitively divided itself into building on undeveloped land and building on previously-developed land.<br><br>This distinction will be clarified in the updated report. |
| NTS - Table 2 (Biodiversity) | Consideration should also be given to potential effects on natural processes, functions and ecological services. | Not accepted.<br><br>This terminology is not appropriate to a non-technical |

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| | | summary, which has been designed to give the general public a clear understanding of the SDP and the issues we propose to include in the SEA. |
| NTS- Table 2 (Soil and Geology) | Consideration should also be given to soil function and soil processes. | Not accepted.<br><br>As described above, 'extent, variety and quality' of soils is sufficient for the NTS. |
| NTS - Table 2 (Air) | Consideration should also be given in respect of air quality issues related to construction of facilities and transportation of waste in facility operational phases. | Accepted.<br><br>The Scoping Report update will be revised to include a specific additional reference to construction and transport. |
| NTS - Table 3 (Geology and Soils) | CCW would suggest an additional guide question be inserted regarding effects on soil function and process. | Accepted.<br><br>This guide question will be included in Table 6.1 in the Scoping Report update. |
| NTS - Table 3 (Water) | Guide questions on water resources need to be cross referenced to Objectives A and E to enable consideration of interrelationships between environmental topics. | Noted.<br><br>Inter-relationships between potential effects are considered in Section 5; these will be consolidated in the update. The proposed approach to assessing indirect, cumulative and synergistic effects is detailed in Section 6.3. |
| NTS - Table 3 (Transport) | CCW would welcome clarification as to what is understood by 'sensitive receptors. Guide questions should also be cross referenced to Objectives A, E and F to enable consideration of the interrelationships between environmental topics. | Partially accepted.<br><br>The term 'sensitive receptors' will be clarified in the Scoping Report update.<br><br>The interrelationships between potential effects will be considered through the assessment of cumulative effects (Section 6.3). |
| NTS - Table 3 (Cultural Heritage) | An additional guide question should be inserted in respect of culturally significant and historical landscapes. | Not accepted.<br><br>The current guide questions in both L and M are considered sufficiently comprehensive to include both culturally significant and historical landscapes. |
| NTS - Table 3 (Landscape and Townscape) | Consideration should also be given to Areas of Outstanding Natural Beauty. | Not accepted.<br><br>SEA objective M (landscape and townscape) will enable the assessment of potential effects of the SDP on 'protected/ designated landscapes' which will include, where relevant, AONBs. |
| NTS | Consideration should be given within this non-technical summary to the assessment of cumulative effects. | Not accepted.<br><br>The description of Stage B of the SEA process in (Section 1, p2) highlights the types of impacts that will be assessed; this specifically includes cumulative impacts.<br><br>The Generic Scoping Report and its update include specific reference to cumulative effects (Section 6.3). |
| Section 1.1 | Clarification is required as to whether Stages 1 and II of the SDP will be subject to assessment under Article 6 of the Habitats Directive and, if so, how such a process will inform decisions on existing SDP sites and spatial | Noted.<br><br>A separate screening of the SDP proposals will be undertaken against the requirements of Article 6 of the Habitats Directive. The MOD will contact all relevant |

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| | selection of identified (potential) SDP sites. | statutory bodies in due course. |
| Table 1.1 (4) | See comments above. Whilst this section makes reference to the Habitats and Birds Directive (although reference to the Birds Directive should be amended to reflect the 2009 version 2009/147/EC), no reference has been made to Ramsar Sites. As a matter of policy in the UK, Ramsar Sites are afforded the same degree of protection as designated European Sites (SACs, SPAs, cSACs, pSPAs). | Noted.<br><br>Although already covered by SPAs and SACs, Ramsar sites will be specifically referenced in the Scoping Report update. |
| Section 2.1.2 | CCW notes that, at present, the only licensed site for fuel removal is Devonport and that high level waste is removed for storage at Sellafield. Clarification would be welcomed as to whether transport routes between these sites and between any new proposed sites and Sellafield, will be considered as part of this assessment process. | Noted.<br><br>Transport between the defueling facility at Devonport Royal Dockyard and the Repository at Sellafield will not be included in the assessment, as the scope of the SDP is limited to defueled boats and so does not extend to any nuclear fuel (see Section 2.1.2 for details). The scoping report will be updated to make this clear. |
| Section 2 | CCW notes the requirement for a suitable dockyard, appropriately dismantling licensed site and the creation of new ILW facilities within this Plan. | Noted. |
| Section 2.2.1 | Reference should be made not only to relevant planning policies in England but also those in devolved administration e.g. the Welsh Assembly Government's Planning Policy Wales 2010. | Accepted.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |
| Section 2 | CCW welcomes and supports the intention to provide a list of 'credible' sites. However, it would be useful for relevant consultation bodies to have the opportunity to comment on the credible site selection criteria before the production of the indicative list. | Noted.<br><br>A site selection report will be published for consultation at the same time as the Scoping Report update to show how the indicative site list was generated (and why certain existing licensed or authorised sites are not being considered further). The selection criteria used are based on operational factors such as practicality and availability. This report will also be open to comment. |
| Section 2 | CCW notes that this assessment process will not consider assessment of commercial ship breaking sites however, Section 2.1.2 of this scoping report suggests that the waste hierarchy would apply. Clarification would be welcomed that distance and transport related issues and effects between dismantling and potential breaking yards will be considered within this assessment process. | Noted.<br><br>Section 5.9 (potential transport effects) confirms that transport from the initial dismantling site(s) to a ship breaking facility/ies will be considered. This will include consideration of the proximity principle. |
| Section 2.2.3 | Stage V. CCW notes and, in principle, supports the decision to consider feasible transport links within this assessment process however, in respect to transport from dismantling to braking yards, see comments above | Noted.<br><br>See comments above. |
| Section 2 - Table 2.1 | Clarification would be welcomed as to what is understood by 'generic site category' in this instance and whether these criteria effectively comprise strategic site criteria. | Noted.<br><br>The three generic site types are not location selection criteria - they are merely the generic categories of land upon which the facilities could be developed. They evolved from the basic categorisation of using an existing licensed/authorised site vs. using a new site. The new site category intuitively divided itself into building on undeveloped land and building on previously- |

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| | | developed land.<br><br>This distinction will be clarified in the updated report. |
| Section 3.2 | CCW has no record of data being sought from our own sources for this assessment processes. Clarification would be welcomed as to whether this assessment intends to consider any sites within Wales or whether the lack of baseline information from Wales is an oversight. | Noted.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |
| Section 3.3.1 | Clarification is required as to whether Ramsar Sites have been included within this assessment and whether consideration has been given to offshore protected sites and areas. Consideration should also be given to potential effects on ecological processes, goods and services. | Noted.<br><br>Ramsar sites and offshore protected habitats and species will be specifically referenced in the Scoping Report update. The potential effects on ecological processes, goods and services will also be noted. |
| Section 4.2 (Biodiversity and Nature Conservation) | Reference to the Birds Directive should be amended to reflect the 2009 version (2009/147/EC). The reference to the Habitats Regulations should be amended to refer to the Conservation of Habitats and Species Regulations 2010. Reference should be made to the following key plans and programmes, including:<br><br>Bern Convention of European Wildlife and Natural Habitats 1979.<br><br>European Union (2005) European Community Biodiversity Strategy.<br><br>United Nations- Bonn Convention on Migratory Species 1979.<br><br>Environmental Protection Act 1990.<br><br>Natural Environment and Rural Communities Act 2006.<br><br>The UK Biodiversity Action Plan 1994.<br><br>Water Framework Directive 2000.<br><br>Freshwater Fish Directive.<br><br>In addition, in the event that proposed or potential sites affect areas within Wales, consideration should be given to relevant Welsh Assembly Government key plans, programmes and strategies including TAN 5 (2009), the Wales Environment Strategy etc. | Accepted.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |
| Section 4.2 (Soil) | In the event that proposed or potential sites affect areas within Wales, consideration should be given to relevant Welsh Assembly Government key plans, programmes and strategies including TAN 5 (2009), the Wales Environment Strategy etc | Accepted.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |
| Section 4.2 (Water) | Plans and policies relating to water issues should also be considered in conjunction with those identified in respect of biodiversity and natural heritage. | Noted.<br><br>The interrelationships between potential effects will be considered through the assessment of cumulative effects (Section 6.3). |
| Section 4.2 (Water) | In the event that proposed or potential sites affect areas within Wales, consideration should be given to relevant Welsh Assembly Government key plans, programmes and | Accepted.<br><br>The Scoping Report update will be updated to include |

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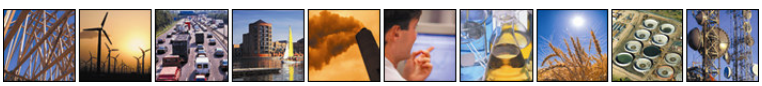
| | strategies including TAN 15 (2009), the Wales Environment Strategy etc. | this information, as appropriate. |
| Section 4.2 (Material Assets); | In the event that proposed or potential sites affect areas within Wales, consideration should be given to relevant Welsh Assembly Government key plans, programmes and strategies including the Wales Transport Plan and Wales Transport Strategy, the Wales Spatial Plan, the Wales Environment Strategy, the Wales Waste Plan etc. | Accepted.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |
| Section 4.2 (Cultural Heritage and Landscape/ Townscape) | In the event that proposed or potential sites affect areas within Wales, consideration should be given to relevant Welsh Assembly Government key plans, programmes and strategies. | Accepted.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |
| Section 5.1. | Clarification is required as to what is meant by the first statement of the first bullet point namely '…sites are only likely to be significantly affected if there are adverse effects to conservation features that underpin the reasons for the designation'. Significant adverse effects may be indirect and/or 'in combination' effects and consideration must also be given to impacts on 'mobile' species' i.e. where species features of European Sites move out with designated sites.. | Accepted.<br><br>The Scoping Report update will be revised to clarify Section 5.1. |
| Section 5.1 | Clarification is required as to whether this plan will be subject to assessment under Regulation 102 of the Conservation of Habitats and Species Regulations 2010. | Noted.<br><br>A separate screening of the SDP proposals will be undertaken against the requirements of Article 6 of the Habitats Directive. The MOD will contact all relevant statutory bodies in due course. |
| Section 5.1 | Consideration should be given to potential adverse effects on biodiversity from construction transport needs, sourcing of natural resources and ancillary developments e.g. water resource needs. | Noted.<br><br>The potential effects of the SDP on the issues identified are already outlined in Section 5. |
| Section 5.6 | This section appears to only consider effect on water in terms of water quality and discharges. Additional consideration should be given (at all phases) on potential effects on water resources and should also be considered in the context of other environmental topics including biodiversity. | Noted.<br><br>The scope of the potential effects of the SDP on the issues identified is outlined throughout Section 5. The Scoping Report update will be revised to ensure that the consideration of the potential interrelationships is also clear. |
| Section 5.9 and 5.11.2 | Consideration needs to be given to potential effects on natural resources used in the construction phase (including those with spatially distant source). | Noted.<br><br>Section 5 of the generic Scoping Report scopes the potential effects to be included in the assessment. The potential effects on natural resources are included in this section; e.g. Section 5.11 (land use and materials), the impacts on material resources are highlighted in the construction phase (5.11.1). |
| Section 5.9 and 5.11.2 | CCW is disappointed to note that no specific reference has been made to the need to consider not only effects on identified environmental topics, but also the interrelationships between those environmental topics and interrelationships in effects. Although topic based assessment is a tried and tested methodology, there is a risk that the assessment process could become over 'compartmentalised' and the interrelationships between | Noted.<br><br>The interrelationships between potential effects will be considered through the assessment of cumulative effects (Section 6.3). The Scoping Report update will be revised to ensure that the consideration of potential interrelationships is made clear. |



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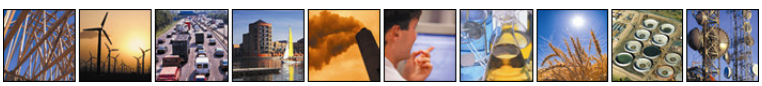
| | environmental topics could be lost. | |
| Table 6.1 | Clarification is required as to what is meant by 'important conservation sites' and 'fishery resources'. | Accepted.<br><br>Both terms will be clarified in the Scoping Report update. |
| 6. Scottish Environmental Protection Agency | | |
| General Comments | Generally, the scoping report provides clear and detailed information on the proposed scope and level of detail of the assessment and covers most of the aspects that we would wish to see addressed at this stage.<br><br>The scoping report understandably focuses on radioactive waste issues. However, we consider that environmental issues relevant to the management of other controlled wastes arising from the Submarine Dismantling Project (SDP) have been downplayed and potentially excluded from the assessment. We feel that there are also potentially significant environmental effects arising from management of these wastes and that these should also be considered. We comment in more detail on this below.<br><br>Subject to this and to the other detailed comments below, we are generally content with the scope and level of detail proposed for the Environmental Report. | Noted, with thanks.<br><br>Noted and agreed. |
| Question 1 response | *Do you have any comments on the proposed alternative options outlined for the SDP?*<br><br>Figure 1.1 very clearly sets out the key stages and activities of the SDP, while Section 2.2 goes on to set out the technical and locational options that will be considered in the assessment. We also note that the proposed site level assessment is expected to fall within the existing licensed site category. The project and the extent to which it will be subject to assessment is all very clear and logical and we do not have any comments to add. | Noted, with thanks. |
| Question 2 response | *Do you agree with the main environmental issues identified?*<br><br>Chapter 5 helpfully sets out the potentially significant environmental effects in relation to construction, operation and decommissioning of facilities. We note that the summary is indicative so as to explain the prospective scope of the assessment and that more detailed consideration will be provided in the Environmental Report. Generally, we find this covers the key issues, but we do have the following comments: | Noted, with thanks. |
| Question 2 response | Climate Change and Energy<br><br>Given the very long term nature of the facilities that will be developed under the SDP, it is very important that full cogniscence of projected climate change is factored into site choice and site design. Potential factors such as flood risk, coastal erosion, drought and increased storm intensity will all require to be considered as part of the site selection and design process in order to ensure that the facilities are resilient throughout their operational period. We note and welcome that the section on water scopes flood risk into the assessment and that the proposed SEA objective for | Agreed.<br><br>A separate category entitled '*Coastal change and flood risk*' will be introduced into the Scoping Report update. Relevant information will be presented for this issue in the scoping of potential effects in a revised Section 5. |



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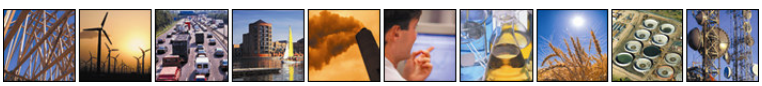
| | climate change explicitly incorporates resilience. | |
| Question 2 response | Material Assets (Waste Management)<br><br>The scoping report focuses almost entirely on radioactive waste, but makes no reference to management of controlled wastes more generally. Dismantling of the non radiological sections of the boats will generate significant waste streams and may also include contaminants and hazardous substances typically associated with ship-breaking that have the potential to have significant environmental effects. | Noted.<br><br>The scoping document does make substantial reference to the management of non-RA wastes throughout, especially regarding hazardous waste streams and their management. |
| Question 2 response | Material Assets (Waste Management)<br><br>We note from the paragraph at the bottom of page 23 that it is intended to scope such effects out of the assessment. We consider that assessment of non radiological waste should form part of the assessment as these aspects of the work also have potential to have significant environmental effects. We would also suggest that this includes some evaluation of the facilities/capacity available in the UK (or elsewhere if trans-frontier shipment is being considered as an option) to deal with the waste streams that are likely to arise. It is our view that these should be factored into the assessment. | Noted.<br><br>The proposed scope of the assessment will include consideration of the generic issues associated with managing controlled wastes arising from dismantling (Section 5.10). The Scoping Report will be updated revised to ensure clarity.<br><br>Stage IV of the SDP process (see Figure 1.1, p6 and Section 2.2, p20) covers the potential impacts of ship-breaking. The cumulative effects will be considered using the approach set out in Section 6.3.<br><br>We do not propose to extend the scope of the SEA to include comparative assessment of individual commercial ship-breaking facilities, as these are established facilities whose activities are licensed to ensure appropriate environmental standards are met. Moreover, it is proposed that the selection of the ship-breaking site(s) will be resolved by competition and it is not possible to identify compliant bidders or conduct this competition until the strategic decisions (that are the focus of the SEA) have been taken. It will be more appropriate for the assessment and comparison of site specific environmental impacts to be considered during this commercial process. |
| Question 3 response | *Are there additional plans, programmes and strategies which should be considered in the SEA?*<br><br>From a Scottish perspective, the list of relevant plans and programmes is rather out of date and, in many places, incomplete or English focused. Some of the key documents in SEPA's areas of competence are described below: | Accepted.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |
| Question 3 response | Water - River Basin Management Plans<br><br>The Scotland and Solway Tweed River Basin Management Plans were published in December 2009. These set out a framework for the protection and enhancement of Scotland's water bodies. The RBMPs contain information about the current quality of water bodies and the objectives that have been set for them and any measures that apply in order to meet these objectives. This information may be particularly useful when undertaking assessments of potential sites in Scotland.<br><br>*RBMP homepage* - www.sepa.org.uk/water/river_basin_planning.aspx | Noted, with thanks.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |



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| | *Interactive Map* - http://213.120.228.231/rbmp/ (allows information about the status, pressures and objectives for every water body to be searched. Includes operating instructions). | |
| Question 3 response | Climatic Factors<br><br>The Climate Change (Scotland) Act 2009 sets ambitious targets for reducing greenhouse gas emissions and establishes a statutory framework for adapting to future climate change. The Act is the key driver for climate change policy in Scotland and is supported by the Climate Change Delivery Plan, a range of public sector duties and the Scottish Climate Change Adaptation Framework. All of these documents are important in helping you understand how the SDP needs to be taken forward in a way that helps Scotland to achieve the targets set and in a way that takes full cogniscence of the need to make decisions that are resilient in the context of projected future climate change. The need for resilience is particularly relevant given the long term nature of the project.<br><br>These documents are available at:<br><br>Climate Change (Scotland) Act 2009 - www.scotland.gov.uk/Topics/Environment/climatechange/scotlands-action/climatechangeact<br><br>Climate Change Delivery Plan - www.scotland.gov.uk/Topics/Environment/climatechange/scotlands-action/EmissionsReductions<br><br>Public Bodies Duties - www.scotland.gov.uk/Topics/Environment/climatechange/scotlands-action/climatechangeact/publicsector<br><br>Climate Change Adaptation Framework - www.scotland.gov.uk/Topics/Environment/climatechange/scotlands-action/adaptation/AdaptaitonFramework<br><br>Land Use Strategy - draft available soon on Scottish Government climate change website: http://www.scotland.gov.uk/Topics/Environment/climatechange/scotlands-action/climatechangeact/other<br><br>Further advice on relevant Scottish plans and programmes for climatic factors and advice on how to consider climate change in SEA is available in recently published Scottish Government guidance on this topic: www.scotland.gov.uk/Publications/2010/03/18102927/0 | Noted, with thanks.<br><br>The Scoping Report update will be updated to include this information, as appropriate. . |
| Question 3 response | Soils<br><br>The Scottish Soils Framework sets out the Scottish Government's policy for the protection and enhancement of Scotland's soil resource.<br><br>www.scotland.gov.uk/Publications/2009/05/20145602/0<br><br>Further advice on relevant Scottish plans and programmes for soils can be found at www.seaguidance.org.uk . | Noted, with thanks.<br><br>The Scoping Report update will be updated to include this information, as appropriate. . |
| Question 3 | Material Assets (Waste). | Noted, with thanks. |

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| response | The 2010 Zero Waste Plan replaces the previous National Waste Strategy (1999) and National Waste Plan (2003). This sets out the Scottish Government's ambitious targets for sustainable waste management and is directly relevant for consideration of wastes generated by the SDP.<br><br>http://www.scotland.gov.uk/Topics/Environment/waste-and-pollution/Waste-1/wastestrategy | The Scoping Report update will be updated to include this information, as appropriate. |
| Question 3 response | Radioactive Waste<br><br>You should be aware that the Scottish Government's policy on managing higher activity radioactive wastes is not to support disposal in a deep geological repository, but rather to "support long-term "near surface, near site" storage facilities so that the waste is monitorable and retrievable and the need for transporting it over long distances is minimal". This policy is directly relevant for your consideration of long term options for the SDP, which assumes ultimate disposal to a geological disposal facility. Further details are available on the Scottish Government's website at: www.scotland.gov.uk/Topics/Environment/waste-and-pollution/Waste-1/16293/higheractivitywastepolicy | Noted, with thanks.<br><br>The Scoping Report update will be updated to include this information, as appropriate. . |
| Question 4 response | Do you know of any additional baseline evidence which will help to inform the SEA process?<br><br>The environmental baseline as set out in Appendix A and summarised in the scoping report provides a very strategic overview of trends across the SEA topics being considered. There are very few Scottish data, but this reflects the fact that the project covers the UK as a whole and accordingly, we are broadly content that the baseline information is adequate.<br><br>However, as the project moves to the site identification and assessment stage we would anticipate that the data needs for the environmental baseline will significantly change to require more detailed, local information about environmental trends and constraints relevant to each potential site.<br><br>SEPA may hold information about some of the sites you may identify in Scotland. Please contact us at that stage and we will advise.<br><br>When considering the summary baseline information you may wish to refer to the data collected by the NDA in its SEA work which may contain useful baseline information that can be readily referred to.<br><br>Potential information sources to help you with your more detailed consideration of Scottish sites includes:<br><br>Flood Risk Maps - www.sepa.org.uk/flooding/flood_map.aspx<br><br>Waterbody Classification - www.sepa.org.uk/water/monitoring_and_classification.aspx<br><br>Climate Change Projections / Adaptation for Scotland - | Agreed.<br><br>The Scoping Report update will include baseline data for those existing nuclear Licensed or Authorised sites which have been assessed (for operational and other reasons of practicality) as being potentially suitable for initial dismantling (note that, at this stage, the ILW storage sites will be considered on a generic basis).<br><br>The NDA work and the accompanying SEA will be referenced and reported on in the Scoping Report update. |

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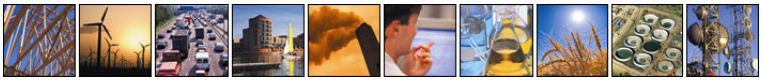
| | www.sccip.org.uk<br><br>Handbook of Recorded Climate Trends in Scotland - http://climatetrendshandbook.sccip.org.uk/<br><br>Waste Data - www.sepa.org.uk/waste/waste_data/waste_data_digest.aspx<br><br>Baseline data for air, water and soil - http://www.seaguidance.org.uk/4/Baseline-Information.aspx<br><br>Bathing Waters - www.sepa.org.uk/water/bathing_waters.aspx<br><br>State of the Environment Scotland Report - www.sepa.org.uk/science_and_research/data_and_reports/state_of_the_environment.aspx | |
| Question 5 response | *Do you agree that the proposed SEA objectives (Section 6.1) cover the breadth of issues appropriate for assessing the SDP?*<br><br>We are content that the SEA objectives cover all of the issues. We welcome the inclusion of objectives to consider wider controlled wastes as well as radioactive waste. | Noted, with thanks. |
| Question 6 response | *When and how should we be seeking your opinions on site-specific information?*<br><br>We welcome your proposal to conduct a two stage scoping process where this "national level" scoping report is amended, when the credible sites have been identified, to include further baseline information, other plans and programmes and a more specific scope of assessment. We also welcome the proposal to undertake further consultation on the revised scoping report. We are content with the planned period of five weeks for this.<br><br>Please note, at the next scoping stage, we will comment on the environmental aspects of the SDP and specific sites that have been identified, however we will not provide a view on whether we favour one site over another. | Noted, with thanks. |
| Question 6 response | As noted elsewhere in this response, we consider that the site selection process should also take account of the location, suitability and licensing of treatment/disposal facilities for controlled waste and not just radioactive waste. | Noted.<br><br>The proposed scope of the assessment will include consideration of the generic issues associated with the management of controlled wastes arising from dismantling (Section 5.10). However, the scope of the SEA does not extend to include comparative assessment of individual ship-breaking facilities as these are established facilities whose activities are licensed to ensure appropriate environmental standards are met. |
| Question 7 response | *Do you have any further suggestions regarding the proposed approach to SEA?*<br><br>Section 2.2.1 - Stages I and II<br><br>The first bullet point makes reference to Planning Policy Statement 3. Please note that this does not apply in | Noted.<br><br>The Scoping Report update will be amended accordingly. |



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| | Scotland, where the Scottish Planning Policy provides policy direction. www.scotland.gov.uk/Publications/2010/02/03132605/0 . | |
| Question 7 response | Section 2.2.1 - Stages I and II<br><br>The final paragraph notes that the environmental impacts associated with depositing LLW or ILW in national repositories will not be assessed as this has or will be subject to SEA by the NDA. We are content that you scope this element out of the SEA of the SDP, but please refer to our previous comments about taking the NDA SEA work into account in your assessment. | Noted. |
| Question 7 response | Section 2.2.2 - Stage III<br><br>This section usefully sets out the three main alternatives for processing the submarines, although we recognise that these options are largely ones of timing as ultimately complete dismantling of the reactor compartment is required. | Noted. |
| Question 7 response | Section 2.2.2 - Stage III<br><br>We note the intention to scope out any assessment of options for dismantling the non radiological sections via commercial ship breaking sites. As noted above, we are of the view that there are potentially significant issues relating to the management, treatment and disposal of hazardous materials that may be present in these sections and that these should be factored in to the assessment. | Noted.<br><br>The proposed scope of the assessment will include consideration of the generic issues associated with the management of controlled wastes arising from dismantling (Section 5.10). The Scoping Report update will be revised to ensure clarity.<br><br>Under Stage IV of the SDP process (see Figure 1.1, p6 and Section 2.2, p20) the potential impacts of ship-breaking will be assessed. This will include the generic effects of transporting materials from the initial dismantling site(s). The cumulative effects will be considered using the approach set out in Section 6.3 of the generic Scoping Report. However, the scope of the SEA does not extend to include comparative assessment of individual ship-breaking facilities as these are established facilities whose activities are licensed to ensure appropriate environmental standards are met. |
| Question 7 response | Sections 2.2.1 - 2.2.3<br><br>Generally, the stages do not refer to the preference for waste avoidance in the waste hierarchy. | Not accepted.<br><br>The SDP is a project which will necessarily create waste where none existed before, since the submarines are beyond practical use and must be safely dismantled. Therefore, unfortunately, there is little opportunity to avoid the creation of this waste. However, the principles of following the waste hierarchy and reusing or at least recycling as much of the boats as possible will be adopted to minimise the environmental impacts of the project.<br><br>The principle of waste avoidance and waste hierarchy are reflected within the SEA objectives (Table 6.1). |
| Question 7 response | Main Report - Table 2.1 and Section 6.2 (Assessment Method). | Noted, with thanks. |

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| | As we understand, Stages I and II will be assessed at two levels, a generic assessment based on the three locational choices and a site level assessment of credible option sites. We understand that impacts will be considered in relation to construction, operation and decommissioning phases. This level of assessment is broadly welcomed. | |
| Question 7 response | With respect to Stages III - VII, these will be considered only in respect of generic impacts and again we are content with such an approach as the impacts from these stages are non site specific. | Noted, with thanks. |
| Question 7 response | Section 6.2 sets out the assessment frameworks to be used for both the generic and site specific assessments. We are content with your intended approach to identifying potential significant effects. Box 6.1 is especially helpful in clarifying how significance will be determined. | Noted, with thanks. |
| Question 7 response | We welcome the early inclusion of consideration of mitigation options. We generally support all of the types of measures described, in box 6.2, but we would suggest that in the Environmental Report, a clear framework for implementing the mitigation measures is put into place. We would suggest that this should set out (1) the measures required, (2) when they would be required and (3) who will be required to implement them. A summary table could be included as part of the preparation of the ER. | Noted.<br><br>A clear plan for mitigations will be included in the Environmental Report. |
| 7. Historic Scotland | | |
| Question 1 response | *Do you have any comments on the proposed alternative options outlined for the SDP?*<br><br>No, the alternatives presented in Section 2 are clear and reasonable. | Noted, with thanks. |
| Question 2 response | *Do you agree with the main environmental issues identified?*<br><br>I agree with the environmental issues identified for the historic environment. As you have noted elsewhere in the report, the assessment should focus on the implications on features such as scheduled monuments, listed buildings and archaeological sites. This will be particularly important when considering the candidate locations for dismantling and storage facilities. | Noted, with thanks. |
| Question 3 response | *Are there additional plans, programmes and strategies which should be considered in the SEA?*<br><br>While the environmental objectives for the English plans provided in this section are broadly very similar to those in Scotland, it would be useful to consider Scottish environmental plans and programmes, including:<br><br>The Scottish Historic Environmental Policy (SHEP)<br><br>The SHEP outlines Scottish Minister's policies on the historic environment.<br><br>Scottish Planning Policy | Noted, with thanks.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |

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| | Sets out National policy for the historic environment, and indicates how the planning system will contribute towards the delivery of Scottish Ministers' policies as set out in the current SHEP.<br><br>PAN 42 Archaeology - The Planning Process and Scheduled Monuments Procedures<br><br>This note provides advice on the handling of archaeological matters within the planning process and on the separate controls over scheduled monuments under the Ancient Monuments and Archaeological Areas Act 1979 which may be of relevance if any candidate locations are likely to affect archaeological remains. | |
| Question 4 response | *Do you know of any additional baseline evidence which will help to inform the SEA process?*<br><br>Historic Scotland can provide GIS datasets under license for scheduled monuments, listed buildings, and gardens and designated landscapes. This information can be downloaded from Historic Scotland's spatial data warehouse. | Noted, with thanks. |
| Question 5 response | *Do you agree that the proposed SEA objectives (Section 6.1) cover the breadth of issues appropriate for assessing the SDP?*<br><br>The methodology to be used for the assessment is clear and easy to follow. While specific SEA objectives are not included in section 6 of the scoping report, I understand that this is an error and that the historic environment topic will be scoped into the assessment. Given the potential for significant effects on the historic environment, particularly through any proposals for new facilities in brown of green-field sites, I agree that any implications for heritage assets should be considered through the assessment. As you have highlighted, impacts may relate both to direct impacts as well as indirect effects upon their setting. I am content with the SEA objective and proposed assessment questions for the historic environment, as outlined in the non-technical summary. | Noted, with thanks. |
| Question 6 response | *When and how should we be seeking your opinions on site-specific information?*<br><br>I agree with the proposed approach of further consideration once the generic proposals/options have been considered and candidate sites have been identified. At this point you will be able to focus on more detailed baseline information and environmental issues for each area. A five-week consultation period for this is fine. We would also be happy to provide a view on locations identified within Scotland at any point during the assessment process. | Noted, with thanks. |
| 8. Scottish Natural Heritage | | |
| Question 1 response | *Do you have any comments on the proposed alternative options outlined for the SDP?*<br><br>The methodology for the assessment of the proposed alternatives is a reasonable approach. In particular, your | Noted, with thanks.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |

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| | identification of a list of specific credible sites as a follow-up on the assessment of the more generic alternatives of undeveloped, developed or existing sites is very much welcomed. This will allow for a more meaningful assessment of the environmental impacts arising from the Project. We note that the references in Section 2.2.1 relate to Planning Policy Statement. It might be helpful to ensure that the definitions are the same in related Scottish Planning Policy. | |
| Question 2 response | *Do you agree with the main environmental issues identified?*<br><br>We agree with the main issues identified in Section 3 at a UK level. Given the nature of the plan, it is understandable that these are very strategic and general references. However, in Annex A, the main environmental issues are very much focussed on national baseline data for England. It would be helpful in respect of those potential impacts in Scotland; that Scottish data sources are also identified and issues relevant to Scotland are explored more fully, particularly in respect of Biodiversity and Nature Conservation and Landscape and Townscape topics. Please see question 4 below. | Response as above.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |
| Question 3 response | *Are there additional plans, programmes and strategies which should be considered in the SEA?*<br><br>In Section 4, to improve the consideration of Scottish environmental data, it would also be useful to consider the following:<br><br>Natural Heritage Futures (Scottish Natural Heritage (SNH)) - An overview - this considers a suite of publications aimed to guide the future management of the natural heritage towards 2025, within the wider context of sustainable development.<br><br>Scottish Soils Framework - describes key pressures on soils, particularly climate change, relevant policies to combat those threats, and identifies the future focus for soil protection, key soil outcomes, and actions across a range of sectors.<br><br>Climate Change (Scotland) Act 2009 including the Climate Change Delivery Plan: meeting Scotland's climate change targets, 2009.<br><br>SNH's National Landscape Assessment which provides an overview of Scotland's landscape resource: http://www.snh.gov.uk/docs/B464892.pdf<br><br>Marine (Scotland) Act 2010. | Noted, with thanks.<br><br>The Scoping Report update will be updated to include this information, as appropriate. . |
| Question 4 response | *Do you know of any additional baseline evidence which will help to inform the SEA process?*<br><br>As mentioned in question 2 above, there is little reference in Annex A to Scottish baseline data sources. This is particularly important in respect of marine and coastal environmental data. The links below will hopefully help address the gaps in the Scottish environmental issues. | Noted, with thanks.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |

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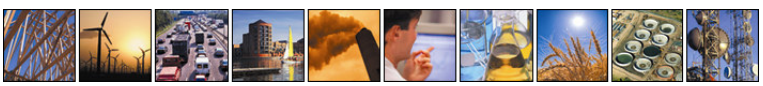
| | SNH's web page on environmental data and research (including Natural Spaces) can be found at: http://www.snh.org.uk/snhi/<br><br>Natural Heritage Futures which can be found at: http://www.snh.gov.uk/about-snh/what-we-do/nhf/nhf-downloads/ in particular the prospectus for coasts and seas can be found at: http://www.snh.gov.uk/docs/A306270.pdf<br><br>Scottish Soils Framework - http://www.scotland.gov.uk/Publications/2009/05/20145602/0<br><br>Landscape Character Network - http://www.landscapecharacter.org.uk/<br><br>A review of marine and coastal recreation in Scotland. Commissioned Report No 247 (2007): http://www.snh.org.uk/pubs/detail.asp?id=930 | |
| Question 4 response | In Annex A the section on Landscape refers to Natural Heritage Areas (Scotland). There are no Natural Heritage Areas in Scotland and the legislation which allowed for their designation has subsequently been repealed. Instead, the legislative basis for National Scenic Areas has been strengthened. There is a number of Local Landscape Designation of which Areas of Great Landscape Value are included. | Noted, with thanks.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |
| Question 5 response | *Do you agree that the proposed SEA objectives cover the breadth of issues appropriate for assessing the SDP?*<br><br>Table 6.1 seems to have omitted sections on Cultural Heritage and Landscape and Townscape. This is presumably an error as both topics are clearly scoped in, in Section 5. | Accepted.<br><br>The omissions of themes L and M were due to a formatting error. They will be included in the Scoping Report update. |
| Question 5 response | A possible SEA objective relating to landscape might be: 'to protect and enhance the landscape and particularly in designated sites.' | Not accepted.<br><br>The current objective for landscape and townscape is to "protect and enhance landscape and townscape quality and visual amenity." Given comments from other consultees on the wider need to protect not just protected/designated features in the environment, it not proposed to include specific reference to designated sites in the overall objective. |
| Question 5 response | The proposed assessment question in Table 1 A, Biodiversity, relating to the potential for the Project to affect public access to areas of wildlife interest, is very welcome and we recommend that a similar question be asked in respect of the Landscape and Townscape questions, i.e. will the proposals affect public access to important landscape areas. | Not accepted.<br><br>Note that Table 1 in the NTS is included in the main report as Table 6.1 (p69).<br><br>Public access is already included as an assessment question in Section M - Landscape and townscape: "Will the SDP proposals affect public access to open spaces or the countryside?" The potential impacts on any sensitive environments will be considered under the category during the assessment, on a site-by-site basis as required. |
| Question 5 | Other possible questions might include: | Not accepted. |



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| response | Will the proposals affect the landscape character and scenic value of the area?<br><br>Will the proposals affect landscape diversity and local distinctiveness?<br><br>Will the proposals affect the quantity and quality of publicly accessible open space, coastal areas or other important recreational resources? | The current suite of questions under SEA objective M - Landscape and townscape provide an adequate basis to assess the potential effects of the SDP proposals on landscape. e.g. public access is already included as an assessment question in Section M - Landscape and townscape: "Will the SDP proposals affect public access to open spaces or the countryside?" The potential impacts on any sensitive environments will be considered under the category during the assessment, on a site-by-site basis as required. |
| Question 5 response | With the exception of A, B and C, many of the overall objectives are aimed at minimising the impacts from the proposal. Can you consider options to enhance the effects on geology and soils, water and landscape, for example, to enhance landscapes/soils/watercourses degraded as a consequence of past industrial action? This is particularly pertinent in considering brown-field sites. | Noted. The majority of objectives do include the potential for enhancement. It is accepted that the objectives for D (noise) and E (geology and soils), which are taken from the MOD's published approach to SEA, are targeted solely at minimising negative impacts.<br><br>The assessment questions are generally couched intentionally to allow for both positive *and* negative effects. The potential for such enhancements (including remediation) will be assessed in the SEA. |
| Question 5 response | The omission of the Sections on cultural heritage and landscape/townscape could be addressed when consulting on the specific sites scoping report. | Accepted.<br><br>This was a formatting error; the full question set will be included in the Scoping Report update. |
| Question 6 response | *When and how should we be seeking your opinions on site-specific information?*<br><br>Your proposal for a further five week consultation period following the selection of credible 'existing' Licensed or authorised sites is acceptable. This will allow for more targeted comments on the baseline information to inform a more rigorous assessment at this more detailed level. | Noted, with thanks. |
| Question 6 response | It would be helpful if the scoping report indicated the proposed consultation period for comments on the Environmental report stage. We would recommend a minimum of 10 weeks for this. | Accepted.<br><br>The consultation on the Environmental Report will form part of the wider public consultation on the SDP proposals. MOD will follow the Cabinet Office Code of Conduct on public consultations, and will be at least 12 weeks long. This will be stated in the updated scoping report and NTS. |
| Question 7 response | *Do you have any further suggestions regarding the proposed approach to SEA?*<br><br>It would be helpful if you would clarify in Section 5.5.2, (first bullet point) why the issue of impacts on soils from operational discharges of radioactive and no-radioactive liquids, gases and or solid waste have been scoped out. This issue has been scoped in, in the case of biodiversity and water issues on precautionary grounds and it is not entirely clear why this is not the case in respect of soils. | Accepted.<br><br>The Scoping Report update will include the potential effects on soils from operational discharges of radioactive and no-radioactive liquids, gases and or solid waste. |
| 9. Scottish Government | | |
| General comments | We have no specific comments on the report. However, you should be aware that the Scottish Government's policy for higher activity radioactive waste is to support long-term, | Noted, with thanks.<br><br>The Scoping Report update will be updated to include |

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| | near site storage or disposal facilities so that the waste is monitorable and retrievable and the need for transporting it over long distances is minimal.<br><br>In January 2010 the Scottish Government consulted on a Detailed Statement of Policy and a copy of the consultation can be found on the Scottish Government's website at: http://www.scotland.gov.uk/Publications/2010/01/14151207/0. Section 6.04 sets out the scope of the Policy and you should note that it does not cover waste arising form the decommissioning and dismantling of redundant nuclear submarines including those berthed at the former Defence Establishment at Rosyth.<br><br>You might find it useful to refer to the Environmental Report which was published to accompany the consultation and it can be found at:- http://www.scotland.gov.uk/Publications/2010/01/14151255/0. A copy of the Scoping Report for the policy that was prepared in accordance with the Environmental Assessment (Scotland) Act 2005 can also be found at:-<br><br>http://www.scotland.gov.uk/Topics/Environment/waste-and-pollution/Waste-1/16293/higheractivitywastepolicy/SEA | this information, as appropriate. |
| 10. Northern Ireland Environment Agency | | |
| General comment | We note that the Scoping Document at this stage covers the whole of the UK. However, many of the baseline data sets in Annex 1 do not include data from Northern Ireland. If it is likely that specific sites are likely to be considered in Northern Ireland, and further information about Northern Ireland is required, we would be happy to advise regarding the potential scope and source of the information. | Noted. |
| General comment | Generic environmental baseline data and information are also available from 'Our Environment, Our Heritage, Our Future - State of the Environment Report for Northern Ireland' published in March 2008. Updated information is available from the Northern Ireland Statistics Report, published in January 2010. Both documents are available on the NIEA website www.ni-environment.gov.uk | Noted, with thanks.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |
| Question 2 response | Do you agree with the main environmental issues identified?<br><br>In relation to potential environmental effects of the SDP is may be worthwhile considering the likely potential for the spread of invasive species due to the movement of submarines which are currently stored afloat (Biodiversity and Nature Conservation topic). If invasive species are present on the hulls of submarines which are currently stored afloat and the submarines are subsequently moved to another dock for dismantling this may facilitate the spread of the invasive species and affect the structure and function of natural systems. | Accepted.<br><br>The Scoping Report update will be amended to include reference, where relevant to non-native invasive species. |
| Question 2 response | We agree that the main environmental issues have been identified, although at a site specific level the issue of previously unknown or recorded archaeological features | Noted.<br><br>Section 5.12 (cultural heritage) of the generic Scoping Report notes that potential effects are likely to be |

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| | may become relevant. | localised, depending on the size of the land take, the historic context of the site the density of the previous finds. The Scoping Report update will be amended to include reference to previously unrecorded archaeological features. |
| Question 3 response | Are there additional plans, programmes and strategies which should be considered in the SEA?<br><br>We note that in Annex B 'Relevant Plans, Programmes and Environmental Protection Objectives' there is no national Northern Ireland section. If further information about Northern Ireland is required we would be happy to advise regarding the potential scope and source of the information. It is likely that the Northern Ireland national objectives would be captured by other plans, programmes and strategies already reviewed.<br><br>No additional plans, programmes or strategies to note if the focus of the document is on Great Britain and therefore does not involve Northern Ireland. | Accepted.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |
| Question 4 response | Do you know of any additional baseline evidence which will help to inform the SEA process?<br><br>We note that there are requests in Annex A 'Review of National Baseline Conditions' for additional baseline data relating to Scotland and Wales. We also note that, under several topic areas, there is sparse baseline data for Northern Ireland. If further information about Northern Ireland is required we would be happy to advise regarding the potential scope and source of the information.<br><br>It is also possible some other categories such as archaeological or industrial sites, not listed or scheduled but recorded, are on databases held by the relevant heritage bodies. | Noted, with thanks.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |
| Question 6 response | When and how should we be seeking your opinions on site-specific information?<br><br>Similar to our responses to questions 4 and 5, if additional information relevant to individual areas/sites is required for the scoping report update we would be happy to advise further regarding the potential scope and source of the information.<br><br>We are content with the proposed approach relating to an updated scoping report with relevant information relating to individual sites/areas. | Noted, with thanks. |
| Question 7 response | Do you have any further suggestions regarding the proposed approach to SEA?.<br><br>As the report makes clear, cultural heritage factors will become more relevant when specific sites are being considered, but it does outline both potential direct impacts and those on setting. We assume that the reason cultural heritage is not included in 6.1 is for similar reasons and that it will be included when this is reviewed when site specifics are added.<br><br>Should it be decided to include NI in the data list on p24, | Noted, with thanks.<br><br>The omission of theme L (cultural heritage) and theme M (landscape and townscape) in Table 6.1 is due to a formatting error.<br><br>The Scoping Report update will be updated to include this information, as appropriate. |

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| | then we can provide figures for listed buildings, scheduled monuments etc.<br><br>Northern Ireland's particular environmental protection legislative framework and River Basin Management Plans should be fully considered if Northern Ireland is considered as a location for a dismantling site.<br><br>If this is the case, the report therefore should as a minimum list the relevant legislation that transposes the 11 EC Directives as listed in Annex VI of The Water Framework Directive (2000/60/EC) into Northern Ireland statute. It is recommended that the Report should also list all relevant legislation which transposes all EC Directives relevant to water quality protection. Once all water quality legislation has been identified it should be assessed for relevance and applicability to the plan in question. Those pieces of legislation identified as relevant should be assessed in relation to how they may impact upon the project. | |

## Feedback received from UK Government Departments/ Agencies on the Stage 'A1' SEA Scoping Report

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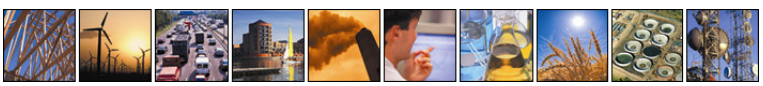
| 1a. DEFRA Air Quality Team | | |
| General comment | We have nothing further to add to the scoping report, which adequately addresses air quality issues that are essentially the same for any construction/deconstruction scenario. | Noted, with thanks. |
| 1b. DEFRA Hazardous Waste Team | | |
| General comment | My initial thoughts had been to wonder how much my team could usefully input to this Scoping exercise on the basis that the focus of the work seemed to be on a facility that could deal with the radioactive parts of the submarines. Indeed you are not proposing to look at the impacts of sending the non-radioactive parts of submarines to commercially operated ship recycling facilities. This makes sense because, where those commercially operated facilities are already in place, the impacts of their ship recycling work should have assessed at the time the facility was established. However, having finally found a small amount of time to think about this a bit more carefully, I think that we may well want to offer comment on the Scoping work.<br><br>I note that an alternative proposal for the non-radioactive parts of the submarine is to dismantle these at the same facility that handles the radioactive elements. Since this facility is almost certainly not going to be a ship recycling facility now, I think that some assessment would be needed of the impacts of dismantling the non-radioactive part.<br><br>In addition, the facility will produce waste, some of which may be hazardous, during the other stages of its life right through from construction, to operation and finally to the decommissioning of the facility. | No response required. |



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| Question 1 response | *Do you have any comments on the proposed alternatives outlined for the SDP?*<br><br>As far as alternatives are concerned, the alternatives from our perspective are that the non-radioactive part of the submarine is dismantled:<br><br>At the site that dismantles the radioactive element;<br><br>Is sent to a commercial ship recycling facility.<br><br>While it is reasonable for this SEA not to look at specific alternative commercial sites, the impacts of dismantling at the site dealing with the radioactive element versus the impacts of moving the vessel to a commercial site do need some sort of assessment. For example would the submarine only then contain similar material to that found on a ship or would there be additional risks? Would these be better managed at a specialist submarine facility? Are there any additional risks posed be physically moving the non-radioactive part of the submarine to another location? | Noted.<br><br>The potential impacts of 'ship-breaking' and management of the resulting waste streams will be assessed at a generic level, under Stage IV of the SDP process (see Figure 1.1, p6 and Section 2.2, p20). This will highlight any significant differences between ship-breaking at the initial dismantling site and a generic commercial UK site. Issues such as transport distance and the proximity principle will be included. Cumulative effects will be considered using the approach set out in Section 6.3 of the generic Scoping Report.<br><br>The scope of the SEA does not extend to include comparative assessment of individual commercial ship-breaking sites, as these are established facilities whose activities are licensed under the same regulatory requirements, to ensure appropriate environmental standards are met. Moreover, it is proposed that the selection of the ship-breaking site(s) will be resolved by competition, and it is not possible to identify compliant bidders or conduct this competition until the strategic decisions (that are the focus of the SEA) have been taken. The assessment of |
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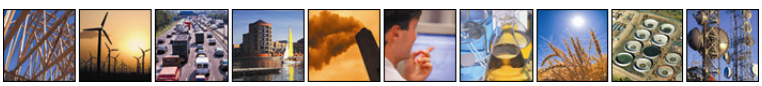
| | | site-specific environmental impacts will be undertaken during this commercial process. |
| Question 2 response | *Do you agree with the environmental issues identified?*<br><br>In Section 3 the text under the heading "Key Material Assets (Waste Management) does make reference to options for waste such as reuse and recycling and suggests that most hazardous waste is still sent for disposal rather than recycling/reuse. This is fine in so far as it goes. However, I think that there needs to be some sort of consideration to the types of non-radioactive waste that will arise from this process and whether or not these are suitable for re-use and recycling. Also, while hazardous waste is mentioned, some of the waste produced will not be hazardous and while that waste will generally pose less risk than hazardous waste, it will still have associated environmental issues that will need consideration. It is not clear from the wording in the scoping report to what extent non-hazardous waste is being considered. | Noted.<br><br>Section 3 presents a summary of key baseline issues; however, this comment concerns the potential scoping of potential effects considered in Section 5. The introduction to Section 3.3 and all subsequent sub section headings will be revised to make clear that it refers to baseline issues only.<br><br>Non-radiological waste arisings (both hazardous and controlled) are already scoped into the SEA for assessment in Section 5.10.<br><br>The relevant text in Section 5 will be revised to include reference to different non-hazardous waste arisings and the potential for reuse and recycling. |
| Question 3 response | *Are there additional plans, programmes and strategies which should be considered in the SEA?*<br><br>The following should also be considered:<br><br>Waste Strategy for England 2007 (published by Defra); (Please note, however, that Defra is currently starting a wide review of waste policies. This is not expected to cover hazardous waste, but will have implications for non-hazardous waste.)<br><br>UK Ship Recycling Strategy 2007 (published by Defra).<br><br>Strategy for Hazardous Waste Management in England (published by Defra, March 2010). | Partially accepted.<br><br>The Waste Strategy for England 2007 is already included in Annex B (p149); the forthcoming review will be noted in the text.<br><br>The other two suggestions are not currently included; they will be added to the Scoping Report update. |



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| Question 5 response | *Do you agree that the proposed SEA objectives (Section 6.1) cover the breadth of issues appropriate for assessing the SDP?*<br><br>The assessment category and overall objective for Material Assets (Waste Management) currently refers to minimizing waste arisings, promoting reuse, recovery and recycling and minimizing the impact of wastes on the environment and on communities. I am happy with this since it reflects the waste hierarchy. | Noted, with thanks. |
| Question 5 response | In column two (proposed guide questions), to the questions that ask whether the SDP will affect the amounts of hazardous and non-hazardous waste produced, I think the answer must be "yes". The SEA should be looking at the likely amounts, the waste materials involved and assessing whether the programme will encourage the environmentally sound management of waste arisings in accordance with the waste hierarchy and so drive towards prevention, reduction , reuse and recycling , with disposal only being used where there is no alternative for the waste. | Noted.<br><br>The guide questions (table 6.1) are used to provide the framework against which the SDP proposals can be assessed. However, the proposals will also be assessed against the SEA objectives, which require the SDP to minimise waste arisings. The assessment questions are worded such that the relative amounts and nature of the radioactive, hazardous and controlled wastes likely to be created with each option can be compared. The SEA objective J (material assets - waste) reflects the need to apply the waste hierarchy and has been developed to address the points made. |
| Question 6 response | When and how should we be seeking your opinions on all site-specific information?<br><br>If you decide to go ahead with the option of dismantling the non-radioactive elements at the same site used for the radioactive elements, we would like to know as soon as possible. While the site would be authorised to manage the activity involving the radioactive material, an environmental permit to carry out the rest of the dismantling is likely to be needed. The relevant competent authority would need to be involved (so Environment Agency for England and Wales and SEPA for Scotland). If the facility is in Scotland, you would need to consult Scottish Government.<br><br>Even if you decide to go for the commercial ship recycling facility option, we would still like to know. | Noted.<br><br>Defra and other relevant government departments will be kept informed of progress and have the opportunity to feed into both the SEA and wider SDP process as it develops. |
| 1c. DEFRA Biodiversity Team | | |
| General comment | References to the Conservation (Natural Habitats, &c.) Regulations 1994 as amended need to be updated to the Conservation of Habitats and Species Regulations 2010. | Accepted.<br><br>The Scoping Report update will be updated to include this reference. |
| General comment | In order to comply with the requirements of Article 6 of the Habitats Directive on the assessment of plans and projects, a high level Habitats Regulation Assessment of the strategic plan for the submarine dismantling 'project' will be needed as well as the site specific project HRA mentioned on page 6. This would be able to draw on the information gathered for the SEA and could form a part of that assessment.<br><br>I would envisage the plan level HRA would be along the lines of:<br><br>Generic impacts on biodiversity interests have been identified but given that it's not possible at this high level to be more specific given that the plan is has, as yet, no | Noted.<br><br>A separate screening of the SDP proposals will be undertaken against the requirements of Article 6 of the Habitats Directive. The MOD will contact all relevant statutory bodies in due course. |

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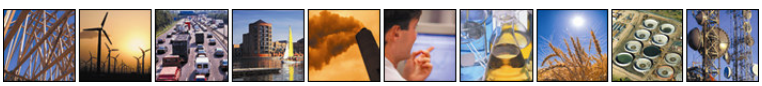
| | location specific proposals, thus significant impacts, either alone or in combination with other plans or projects, on Natura 2000 sites cannot be ruled out.<br><br>Similarly, at this high level, adverse impacts on the integrity of one or more Natura 2000 sites cannot be ruled out therefore the plan assessment needs to consider alternatives and Imperative Reasons for Overriding Public Interest (IROPI) before the plan can proceed.<br><br>Alternatives, including the do nothing option are not feasible or do not adequately deal with the risks associated with the decommissioning of redundant nuclear submarines.<br><br>That the plan can be justified on IROPI grounds of human health and public safety in that it provides the most practical and suitable means of negating risk or pollution from irradiated material in the redundant vessels. | |
| General comment | The need to do an HRA at the Plan level would not negate the need to do project level HRAs as site specific proposals came forward for authorisation at a later date. | Noted. |
| 1d. DEFRA Noise Team | | |
| Table 3.1 | Categories considered by SDP Scoping heading has just one reference to noise under human health, noise and vibration would also have an impact on Nature Conservation and vibration as well as architectural and archaeological heritage. | Noted.<br><br>Noise and vibration are not included in the potential effects identified in Annex I of the SEA Directive. However, as acknowledged in the Scoping Report (Section 5.4), there is potential for noise to have a significant effect on human health depending on the site location, background noise levels and the frequency, duration and timing of activities. The potential effects on biodiversity are noted in Section 5.1.1 and on archaeology in Section 5.12.1. Both are scoped in for further consideration in the assessment. |
| Section 3.3.4 | I think the wording should be amended as Noise nuisance i.e. to become a statutory nuisance is measured against objective qualitative measures and is not highly subjective, the following sentence could be amended as; *"The cumulative impacts of noise on sensitive groups in local communities may create or exacerbate existing health issues."* | Partially accepted.<br><br>The Scoping Report update will be updated to include this amendment. |
| Section 3.3.4 | The sentence could be strengthened to include the Noise Policy Statement for England (NPSE) 2010. | Noted.<br><br>The Scoping Report update will be updated to include this reference in Annex B. |
| Section 4.2 – Noise | You should include under the International/European heading the WHO Night noise guidelines for Europe 2009 which is the latest report produced by WHO on this subject matter, this is also relevant if operation activity occurs during night.<br><br>Under the National heading please include the NPSE, we can provide some text if you prefer? | Accepted.<br><br>The Scoping Report update will be updated to include this reference in Annex B. |
| Section 5.1.2 - Biodiversity | Regarding the statement below:<br><br>"*Operational activities resulting in elevated disturbance* | Noted.<br><br>Section 5.1 states that the significance of any local construction |



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| | *levels (such as noise or vibration) are likely to be sustained throughout the submarine dismantling process, but are unlikely to have a large radius of effect. Such disturbance is likely to be associated with the operation of plant and power tools, and will be similar in nature to current refit and repair activities. Although environmental measures would necessarily be in place to manage disturbance, potentially significant effects are scoped in on a precautionary basis."*<br><br>We think this statement is highly dependent on the location and surroundings of the dismantling facility, have there been any qualification of the noise/vibration radius? I have the same question for statements made on Page 53. 5.2.2 Operation Phase (4th bullet point) and 5.2.3 Decommissioning Phase (2nd bullet point). | effects to biodiversity, flora and fauna will depend on site location relative to site receptors. No amendments are proposed. |
| Section 5.9.2 (Transport) | Regarding the statement below:<br><br>"*Increased traffic during the operational phase may affect noise levels felt by communities and wildlife close to the affected transport networks. Such noise effects are likely to be small in magnitude relative to existing traffic noise levels, but sustained throughout the operational phase. In consequence, noise effects on the local community are unlikely to be significant, but are scoped in on a precautionary basis.*"<br><br>Could you also include what is going to be done about noise affects on wildlife in the second sentence as it has been mentioned in the first sentence just like communities? | Noted.<br><br>The Scoping Report update will be updated to include this reference to wildlife within the scope of the assessment. |
| Section 6.3 | Page 74. Table 6.5 Example of a Cumulative Assessment Matrix (illustrative purposes only).<br><br>I know it states illustrative purposes only but could you include Noise and Vibration to be included in stage 3 as well? | Accepted.<br><br>The Scoping Report update will be updated to ensure Stage III issues match those in Stages I and II. |
| Annex A | p87 - National trends reference does not specify the source, we would be able to provide more information on this. | Noted, with thanks.<br><br>The Scoping Report update will be updated to include this information in Annex A. |
| Annex B | P113 to 115 - please include WHO Night Noise Guidelines and the NPSE. | Accepted.<br><br>The Scoping Report update will be updated to include this reference in Annex B. |
| 1e. DEFRA Soils Team | | |
| General comment | We strongly support the commitment to further scope the impacts of the development of dismantling and storage sites on geological features, and would seek to ensure that this includes the impacts on soil functions as required under the SEA Directive, and also ensure that in individual development proposals the impacts on Best and Most Versatile agricultural land are appropriately considered. | Accepted.<br><br>The Scoping Report update will be updated to include soil function within the SEA objective E. Any potential effects on Best and Most Versatile agricultural land will include the assessment, if required.<br><br>The Scoping Report update will be updated to include this reference to BMVL will be included in Annex B. |

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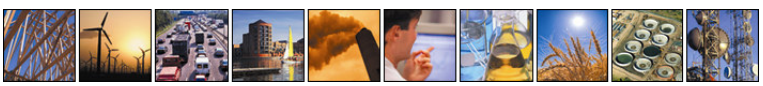
| General comment | The document refers in several places to "Planning Policy Statement: Planning for a Natural and Healthy Environment". It should be noted that it has been confirmed that this will not now be implemented, and that under the new Coalition Government there will be a whole-scale review of national planning policy, and that the Environmental Impact Assessment should reflect the latest position on the Government's plans for planning policy. | Accepted<br><br>The Scoping Report update will be revised to include Coalition Government changes to the planning system. |
| General comment | In several places in the Scoping Report refers to the EU Soil Framework Directive. It should however be noted that the EU Soil Framework Directive has not yet come into existence as legislation, and is still under negotiation in Europe (Defra leads on behalf of the Government). The UK has significant concerns about the content of the Directive, and is concerned that until/if it is agreed there should be no reference to the EU Soil Framework Directive as an element in the current policy framework. It is recommended that these references are removed, and that where a reference is needed to EU policy/legislation this is based on the EU Thematic Strategy on Soil Protection which was published in 2006. | Accepted.<br><br>The Scoping Report update will be updated to include this information in Annex B. |
| General comment | A useful reference guide to soil management during construction and development is the "Code of Practice on the Sustainable Management of Soils in Construction and Development (Defra, 2009) - any construction and development should be carried out in line with the guidance which this offers on sustainable management of soils. | Noted.<br><br>The Scoping Report update will be updated to include this information in Annex B. |
| General comment | (We) want to be assured that Devolved Administrations have been involved and consulted over the Scoping Report, as there is DA specific material which they will need to have the opportunity to comment upon. | Noted.<br><br>Regulation 4 of the SEA regulations 2004 (SI 1633) require that the devolved administrations are consulted over the proposed scope of an assessment where the proposed plan relates to the relevant country. The Generic Scoping Report has complied with these requirements and the UK's Devolved Administrations have been invited to take part in this scoping exercise, through their representative Statutory Bodies and (for Wales and Scotland), directly. |
| 2. Department for Transport | | |
| General comment | When ship recycling facilities are mentioned, it should also be mentioned that they should hold the relevant legal permits to carry out this work. | Noted.<br><br>The Scoping Report update will be updated to include this information, where appropriate. |
| 3. Health Protection Agency | | |
| General comment | The SEA should consider existing best practice guidance and should identify and assess all of the potential public health impacts of the activities that it covers (and their associated emissions). The HPA strongly recommends that a separate section be included in the SEA summarising the impact of the proposed development on public health: summarising risk assessments, proposed mitigation measures, and residual impacts. This section should include any information relating to health contained in other sections of the application (e.g. air quality, emissions to water, etc). Compliance with relevant guidance and | Noted.<br><br>Human health is included in Section 3 (baseline information), Section 4 (plans and programmes) and Section 5 (potential effects), with additional information contained in Annex A and B. The potential effects on human health to be included in the scope of the assessment are included in Section 5.3. The potential effects on community infrastructure are included in Section 5.2. The importance of this issue is then included in the |



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| | standards should be highlighted. | SEA objective C. |
| General comment | The SEA should give consideration to best practice guidance such as the ODPM Good Practice Guide for SEA and Local Development Framework Monitoring: Good Practice Guide. The Health Impact Assessment (HIA) gateway, which is administered by the West Midlands Public Health Observatory is also a good source of SEA information. Draft guidance on health in Strategic Environmental Assessment has been issued by the Department of health and is currently being updated. | Noted, with thanks.<br><br>Our approach to SEA is in line with published MOD guidance which itself is based on the ODPM document, the ODPM approach itself, and good practice gained from experience of SEA in the UK. |
| General comment | When considering chemicals or radiation, the HPA recommends monitoring of environmental exposures. This allows comparison of environmental levels with health-based standards. The HPA does not support the use of health indicators in SEA monitoring, where these are based on surveillance of multi-factoral health endpoints, where causality cannot be established. That is, where it is not possibly to definitely link health endpoints to the plan or programme subject to SEA, or to separate the impacts arising from the plan or programme from the impacts arising external to the plan or programme. | Noted. |
| General comment | It is good practice to explain abbreviations or acronyms at first use and this has not always been done, for example in Figure 1 on page 6, and again on page 19, 'RC' and 'RPV' are mentioned without explanation of what they mean. | Noted.<br><br>The Scoping Report update will be amended to address this point. |
| NTS | This is a useful and clearly-written document. | Noted, with thanks. |
| Section 2.2 | It is stated that "continued access [to Drigg Low Level Waste (LLW) Site] for SDP materials via the National Decommissioning Authority (NDA) is assumed." How well founded is this assumption? The House of Lords Select Committee Report states that it is expected that Drigg LLW site will be full by 2050. Will all the LLW be able to go to the Drigg repository before it is full, especially if the Reactor Compartment is stored intact until it is dismantled when the Geological Disposal Facility is available, and is this not expected to happen until at least 2040? | The project scope does not include the identification or development of future Low Level Waste disposal facilities which is a matter for the NDA. As there will be an enduring and much wider requirement for such facilities across the nuclear industry beyond 2050, the project must assume that alternative facilities will be made available. |
| Section 3.3.5 | Bullet 1, sentence 1 and 2 suggested alternative: "A significant number of sites in the UK are burdened by contaminated land, from our industrial past. Whilst contamination is remediated during redevelopment, the process can be expensive." | Accepted.<br><br>The Scoping Report update will be updated to include this amendment. |
| Section 3.3.7 | Contains several errors. Suggested amendment to sentence 1: " Air quality has improved in the UK over the last sixty years as a result of the switch from coal to gas and electricity for heating of domestic and industrial premises, stricter controls on industrial emissions, higher standards for the composition of fuel and tighter regulations on emissions from motor vehicles." | Accepted.<br><br>The Scoping Report update will be updated to include this amendment. |
| Section 3.3.7 | Suggested amendment to sentence 3: "Air pollution continues to damage health in the UK; levels of air pollution tend to be higher in urban areas than in rural areas and | Accepted.<br><br>The Scoping Report update will be updated to include this |

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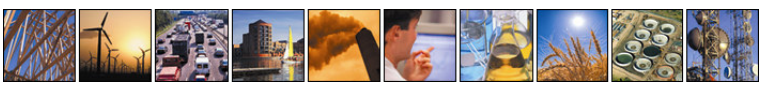
| | effects are thus greater in the former rather than the latter." | amendment. . |
| Section 3.3.7 | The statement "Air pollution is a significant cause of decline in the condition of 55 of the UK SSSIs" should be checked (by Defra). | Accepted.<br><br>This figure will be double-checked. |
| Section 5.3.2 (Dismantling) | The first paragraph states that the doses received by workers will be less than those received in day-to-day operations on in-service submarines. This is attributed to radioactive decay in the laid-up submarines. Although radioactive decay will have reduced the levels of radioactivity in the reactor compartment, a greater reduction will have occurred due to the fact that the nuclear fuel has been removed from the laid-up submarines; this should be mentioned. | Accepted.<br><br>The Scoping Report update will be updated to include this revision. |
| Section 5.3.2, 5.6.2 and 5.7.2 | There is no reference to the need to optimise doses, or to make doses or discharges ALAPR, etc. While doses may well be lower than in day-to-day operations, and discharges may be controlled by legislation, etc. there is still a need to reduce doses and discharges where practicable. This should be remembered when completing the (assessment) tables such as 6.2 and 6.3. | Noted. |
| Section 5.5.1, 5.5.2, 5.6.1, 5.7.1 and | Mention of specific contaminants should be provided (in all the above).<br><br>5.7.1 - 1st bullet- typographical error: "previously developed sites where contamination could be expected."<br><br>5.7.1 3rd bullet - discharges to air should be specified. | Partially accepted.<br><br>At this generic scoping stage, it would be premature to provide specific contaminant or discharge information at this stage, as the likely contaminants have yet to be scoped.<br><br>Missing word noted. |
| 5.7.2 | We note the frequently recurring phrase "However, the potential for significant effects is scoped in for further consideration on a precautionary basis." Please provide details of this "scoping." | Noted.<br><br>Regulation 12 (5) the SEA Regulations 2004 (SI 1633) requires that the responsible authority shall consult when deciding on the scope and level of detail of the information that must be included in the Environmental Report. Section 5 of the Scoping Report sets out the anticipated scope of these potential effects. The Scoping Report and process of scoping consultation allows the Statutory SEA Bodies to comment and provide advice on this provisional view. Further details can be found at http://www.communities.gov.uk/documents/planningandbuilding/pdf/practicalguidesea.pdf. |
| Table 6.1 | Questions about potential flooding of waste stores, coastal erosion or terrorist activity should be added. | Partially accepted.<br><br>The SEA objectives and guide questions are considered adequate to cover the points raised regarding flooding and the potential risks to local communities and the environment from potential deliberate action. A separate objective and guide question will be introduced for coastal change. |
| Section 6.2 | Reference timescales - to avoid misunderstandings it is important to explain that "long-term" can mean VERY long term when considering radioactive materials. | Noted.<br><br>The Scoping Report update will be updated to include this revision. |
| Annex A | The final paragraph on p79 describes protected water features and refers to the HPA 2005 Population Exposure Review. This is obviously an error. | Accepted.<br><br>The Scoping Report update will be updated to include this |



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| | | revision. |
| Annex A | The second para on p80 also references the HPA review. Whilst this is true for the first part of the paragraph…the final part, "in the UK between 1985 and 2005 radioactive emissions to water fell by 87%" does not come from this review. The equivalent phrase in the Air section is referenced to Defra, so perhaps (this) should also be referenced to Defra? | Accepted.<br><br>The Scoping Report update will be updated to include consideration of this revision. |
| Annex A | When per-capita doses are quoted from the Population Exposure Review in the Water and Air sections, no indication is given of the year for which these doses apply. | Accepted.<br><br>The Scoping Report update will be updated to include consideration of this revision.. |
| Annex B | p150 - the Carriage of Dangerous Goods Regulations 2009 should be the relevant legislation for transport, not the Radioactive Materials (Road Transport) Regulations. | Accepted.<br><br>The Scoping Report update will be updated to include this revision. |
| Annex B | The Ionising Radiation Regulations (IRR99) should be listed under the human health section, as they limit the exposure of workers to ionising radiation in order to protect their health. | Accepted.<br><br>The Scoping Report update will be updated to include this revision. |
| Annex B | p80 - how particles are monitored should be specified. Do the authors mean particles monitored as PM10? | Noted.<br><br>The Scoping Report update will be updated to include this clarification. |
| Annex B | Ozone concentrations are unlikely to be relevant, but concentrations of nitrogen dioxide might be. No reference to $NO_2$ is made. Meeting the European Commission Limit Value for nitrogen dioxide is providing very difficult at road-side sites in the UK. | Not accepted.<br><br>It is too early to exclude consideration of ozone concentrations from the dismantling process.<br><br>Reference to $NO_2$ as a significant air pollutant is made throughout this section. |
| Annex B | p80 - the statement about days of moderate (given as moderator) and high air pollution shows that conditions are worse in rural than in urban areas. This is driven by ozone concentrations: these are unlikely to be relevant to decommissioning processes. | Partially accepted.<br><br>The Scoping Report update will be updated to include this clarification. |
| Annex B | p80 - We are surprised that any mention of 'deprived' and 'average' communities appear in the Air Quality Archives. We suggest that this reference is checked. | Accepted.<br><br>The reference will be checked and the Scoping Report updated , as necessary |
| Annex B | p89 (Air) - This should be referenced to Defra for checking. There is a danger here in taking material from official sources and quoting it (if the text represents quotations) out of context. | Noted.<br><br>The Defra Air Quality Team has commented upon the document and their recommendations are included in this document. |

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| 4. Nuclear Decommissioning Authority | | |
| Question 1 response | *Do you have any comments on the proposed alternative options outlined for the SDP?*<br><br>The NDA would like to see the MOD make a firm statement indicating that they will ensure that the waste generated by the submarine dismantling project will be packaged in containers that comply with the acceptance criteria for interim storage site(s) and the ultimate waste disposal facility/facilities. | Accepted.<br><br>The Scoping Report update will be updated to include this revision.<br><br>Note that the option to store the Reactor Compartments intact will be taken forward alongside that of fully-packaged waste. |
| Question 2 response | *Do you agree with the main environmental issues identified?*<br><br>p32 - top bullet point. Please use the term 'Geological Disposal Facility'. The NDA point out that the choice of location for the future Geological Disposal Facility is subject to extensive current and future consideration. | Accepted.<br><br>This bullet will be annotated accordingly. Reference will also be added to the potential for the GDF not to be delivered in 2040.<br><br>Note that we also intend to include reference to the Scottish Government position in the update. |
| Question 3 response | *Do you agree that the proposed SEA objectives cover the breadth of issues appropriate for assessing the SDP?*<br><br>Section J on Table 6.1. A good question would be "will the SDP proposals increase the likelihood that all waste streams arising from submarine dismantling will be managed in a controlled manner." The key issue here is integrated waste management and the necessity to discharge the duty of care that MOD has in respect of waste management. The better the management arrangements, the lower the impact upon the environment and communities is likely to be. | Partially accepted.<br><br>The duty of care regarding both radiological and conventional waste management is Statutory and non-negotiable. The Environment Agency has clearly signalled that it expects BAT to be applied throughout the project, in addition to the need to obtain appropriate Environmental Permits.<br><br>Given that they are mandatory, we have not included any assessment questions about whether the SDP will be able to meet statutory standards.<br><br>The suggested question is in fact more suited as an SEA objective (e.g. what we want to achieve). We feel that the current wording of the objective ('minimising the impact of wastes on the environment and communities') addresses this point. |
| Question 6 response | *When and how should we be seeking your opinions on site-specific information?*<br><br>NDA sites could not be deemed credible for either dismantling or interim storage of ILW without the agreement of DECC and Scottish Government (for sites located in Scotland). The NDA suggests that this agreement is reached prior to the update of the generic scoping report. | Not directly relevant to SEA<br><br>MOD agrees that the update will not include named NDA sites., but will discuss the generic options of adopting a pan-government solution with DECC and the NDA. |
| Question 7 response | *Do you have any further suggestions regarding the proposed approach to SEA?*<br><br>The NDA suggests that the MOD continues the current working arrangements between the two organisations as the development of the SEA continues.<br><br>The NDA also suggests that the Other Government Department meetings are continued to support the development and delivery of the SDP across government. | Not directly relevant to SEA.<br><br>The MOD does intends to continue with the current working arrangements. |