

Managing our approach to environmental performance

Supporting our Environment Strategy

An Executive Agency of the Department for **Transport**



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Background

The Highways Agency is an executive agency of the Department for Transport (DfT) and is responsible for operating, maintaining and improving the strategic road network (the network) in England, on behalf of the Secretary of State for Transport.

Our Environment Strategy sets out our wider environmental priorities in relation to our activities on the network. This document, Managing our Approach to Environmental Performance, provides a more detailed explanation of our Environment Strategy and our Environment Action Plan.

Climate Change resulting from global warming is one of the most important challenges facing the Highways Agency, and as such deserves a focused approach distinct from wider environment issues. Information on the our strategy in response to climate change can be found on our **Climate Change Webpage.**

Our strategy supports the vision and goals identified in the **Highways Agency Strategic Plan – 'The world's leading road operator'.**

These goals are:

- We provide a service that our customers trust
- We set the standard for delivery
- We deliver sustainable solutions
- Our roads are the safest in the world
- Our network is a dynamic and resilient asset

Our strategy recognises the national economic pressures resulting from the worldwide recession – and the need to deliver more for less. In delivering the strategy we will seek to identify actions that increase the efficiency of our operations, and deliver multiple benefits for their cost.

Our strategy will support the Government's initiative "Building the Big Society" and the new Decentralisation and Localism Bill, increasing local community participation

in decision making where this can be achieved.

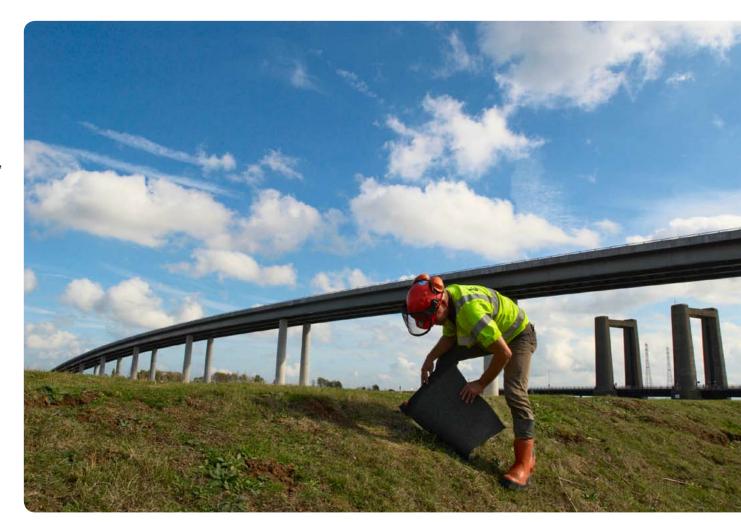
In delivering our Environment Strategy we will contribute towards achieving other Government objectives. These are:

- Government sustainable development priorities of 'Natural Resource Protection and Environment Enhancement' and 'Building Sustainable Communities'.
- The **DfT's business plan priority** 'to tackle carbon and congestion on our roads'.
- The Department of Environment, Food and Rural Affairs (Defra) business plan priorities 'to help to enhance the environment and biodiversity to improve quality of life' and 'to support a strong and sustainable green economy, resilient to climate change'.

Background

The production of our new strategy marks the closing of our previous environment strategy 'Towards a Balance with Nature'. Published in 1999, this strategy delivered many success stories and demonstrated our commitment to achieving better environment standards and protection through all our activities. A report on the success of 'Towards a Balance with Nature' is provided in Appendix 1.

Our new Environment Strategy will guide our actions up to the end of March 2015. Our rolling Environment Action Plan, set in place under this Environment Strategy, is used to monitor our performance. Details of our performance will be contained within our **Business Plan and Annual Report.**



Environment Vision and Objectives

The Highways Agency Environment Vision:

"To lead the world in the environmental performance of roads" The ability to move around in private vehicles is an important personal freedom that enhances our quality of life. However that same freedom can impose costs on people and have an adverse impact on the environment.

As the operator of the England's motorways and trunk roads we have a responsibility to road users and to those affected by the operation of our network. We work to minimise and mitigate the negative impacts of our roads and enhance the quality of the surrounding environment where possible.

We cannot achieve our Environment Vision and objectives alone and so we will work with the Department for Transport, our stakeholders, and our supply chain to identify ways we can improve our environmental performance.

We have developed our Environment Strategy to set out the path we will take in meeting our Environment Vision and also meeting the vision and goals within the Highways Agency Strategic Plan. We will achieve the aspirations of the Environment Strategy through the development and delivery of our Environment Action Plan.

Environment Vision and Objectives

To achieve our Environment Vision we will deliver actions which meet one of more of the following objectives:

Effective Outcomes

Ensure the best practicable environmental outcomes across all our activities, while working in the context of sustainable development and delivering value for money.

Wellbeing

Contribute to human wellbeing and a better quality of life through the protection and enhancement of our environment.

Communication

Provide open communication of how our activities impact on the environment in order to improve the transparency of our environmental performance. We will listen to others when identifying our environmental priorities.

Holistic Approach

Consider the cumulative environmental impact of our activities and identify holistic approaches to mitigate such impacts and improve our environmental performance.

Continuous Improvement and Knowledge

Improve the understanding and knowledge of all aspects of our environmental performance. Identify ways to continuously improve this performance and provide best practice approaches to our activities.

Collaboration

Engage with others to develop solutions that can provide increased environmental benefits over those we can achieve alone.

Capability and Capacity

Source, develop and allocate the appropriate skills and resources from within the Highways Agency, Department for Transport, our supply chain and stakeholders to deliver the Environment Strategy.



Strategic Priorities

Our environment remit is extensive and covers a full range of topics, within which we have developed priorities. In the following pages we have described what each of these topics means to us and how our activities impact upon that topic. We also assess the cumulative effects of our transport system on people and resources. Our aim is to improve the quality of life for those using and affected by our network.

Much of our work is in response to legislation and government guidance. The breadth of this legislation is shown in Appendix 2.

Although we have considered the impacts on a topic by topic basis we understand these can act in combination with a resultant range of impacts on the environment and human health. Issues such as tranquillity and human health are relevant to a number of environment topic areas.

We give our environmental protection responsibilities a high priority. We will ensure that we do not cause damage through any of our activities to protected species and habitats; Sites of Special Scientific Interest (SSSI), and archaeological and cultural heritage assets. We will prevent water and land contamination that adversely affects human health. We already follow and adhere to all relevant legislation and work closely with the Statutory Bodies who enforce the **Environmental Damage (Prevention and Remediation) Regulations 2009.**

Our Environment Strategy is intrinsically linked with our work on sustainable development and climate change. The operation and management of the network contributes to climate change through the use of energy and materials. In turn the network is affected by a changing climate such as the increased frequency of extreme weather events. Some environmental improvements may reduce our contribution to climate change through

reduced energy, fuel and materials use. Other improvements contribute to the resilience of our network to climate change. Our response to climate change is broader than our environmental remit. Further information can be found on our **Climate Change Webpage**.



Air Quality

We recognise that vehicles using our network are a source of air pollution which will have an impact on air quality and human health. We also appreciate that the construction of schemes can lead to air quality impacts which need to be managed.

Our work on air quality is driven by the EU Directive on ambient air quality and cleaner air for Europe. This sets limit values for certain pollutants which must not be exceeded in the UK. We are working with DfT and Defra in developing an action plan toward compliance with these limit values.

The UK Air Quality Strategy sets air quality objectives, and if these are expected to be breached a Local Authority is required to declare an Air Quality Management Area (AQMA). We will work in partnership with local authorities to explore how we can contribute to delivering air quality improvements in these management areas.

We are committed to investigating and delivering the most effective solutions to minimise the air quality impacts from traffic using our network. We will help to deliver this commitment through a range of activities including:

- Understanding exposure to air pollution along our network.
- Working with our partners including local authorities, DfT and Defra to protect air quality
- Active participation in air quality discussions in the UK and internationally
- Research into viable and effective mitigation solutions
- Updating the air quality assessment method to reflect the latest technical knowledge

Our priority for air quality is to operate and develop our network in a way that is compatible with working toward compliance with statutory air quality limits. Further information can be found on our **Air Quality Webpage.**

Case study

Research into air quality mitigation

In examining methods to improve air quality, we have commissioned a number of research projects. One of these examined the effectiveness of the NOxer environmental barrier. This is a noise barrier coated with titanium dioxide designed to remove oxides of nitrogen from the air. A trial section of the barrier has been installed alongside the M60 between J13 and J14, in the region of a priority AQMA. The conclusions of the study will determine if the application of titanium oxide to existing and future structures could be used to improve air quality near the network.

Noise and Vibration

Noise and vibration is generated by the construction, maintenance and operation of the network. Traffic noise has the potential to cause nuisance to those living alongside our network. It also has the potential to adversely affect health. Traffic induced vibration has the potential to cause damage to buildings.

Road traffic noise from new and improved roads is regulated by the **Noise Insulation Regulations 1975 (amended 1988).** These Regulations require us to assess the noise impact from new and improved roads and to provide compensation if certain criteria are met.

We have been working closely with **Defra** to produce maps and action plans for major noise sources such as road traffic, as required by the **Environmental Noise (England) regulations 2006 (as amended).**

The action plans have set out thresholds to identify important areas and first priority locations at which measures to manage noise need to be considered further, including those on our network.

We will continue to work with other Government departments to deliver the requirements of the Environmental Noise Directive. Managing noise levels at priority locations and working towards meeting the requirements of the Government's noise action plans will be given a high priority over the coming years.

Case study

Hansard sites

We are committed to reducing the level of noise experienced by those living alongside the network. In 1999, we identified 79 locations at which there were known serious and pressing road traffic noise problems. These locations ('Hansard Sites'_[m]) were listed in an answer to a 1999 Parliamentary Question. An annual £5m ring fenced budget has been used to fund the installation of noise barriers at those 'Hansard sites' where they were identified as the most effective means of addressing the noise problem. To date, 69 of the 'Hansard sites' have been addressed, approximately half of which through the installation of noise barriers. This has resulted in a quieter environment for many people living alongside our network.

While we have some control over the traffic noise arising from the use of our network, we have no control over the noise from individual vehicles. Restrictions on the noise from vehicles and tyres are controlled by limits set within European Directives relating to the manufacture and use of vehicles.

Further information can be found on our **Noise Webpage.**

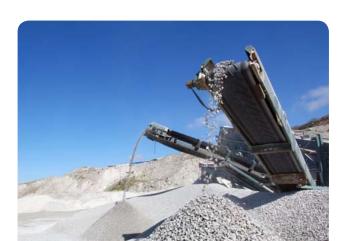


Material Resources and Waste

We use material resources and produce waste during the management, maintenance and improvement of the network.

Through innovative design the use of material resources can be minimised and managed in a way to reduce their impacts on the environment and the volume and types of waste produced.

We are committed to ensuring that a legal and responsible approach to materials and waste management is adopted in all our activities. We will work towards meeting the Defra waste strategy target of halving waste to landfill by 2012.



We will aim to operate in accordance with the aims and objectives of the **Defra Waste Strategy for England 2007.**

We will seek out new ways to use materials efficiently through reuse, recycling and designing out waste and adopt initiatives such as our Lean Improvement Programme. Lean is a systematic approach to reducing waste in all our processes, especially those in our supply chain.

This will enable us to respond to the revised **Council Directive 2008/98/EC** on waste, which introduces a new recycling target to achieve 70% recycling of construction waste by 2020.

Further information can be found on our **Waste** and **Sustainable Construction Webpage**.

Case study

A30 Bodmin to Indian Queens

During the construction of the A30 Bodmin to Indian Queens Improvement scheme, over 800,000 tonnes of secondary aggregates were sourced from overburden generated by the china clay industry in nearby St.

Austell. This amounted to about 90% of the total aggregates required for the new road and asphalt layers, and provided localised environment and energy benefits such as the use of local haulers and reduced raw material extraction, processing, and transport.

Soil and Geology

Soil is a vital natural resource that consists of broken particles of rock and decaying organic matter.

Soils and the underlying geology influence the nature of landscape and land use. This is evident in the types of vegetation that occur and the form of agricultural activities that can be supported. Soil and geology also underpin the range of natural habitats and have a role in protecting archaeology and water resources. They also provide the engineering foundation for our built environment.

Our activities can result in a range of impacts on soils. There can be physical removal or import of soils and rocks for road construction, and deterioration in soil quality, for example by construction processes. Soils next to our roads can be subject to road spray or airborne pollutants. Previously contaminated soil must be managed to ensure appropriate handling and pollution prevention.

The strategic agenda is being set by the EU's Thematic Strategy on Soil Protection and the Defra Soil Strategy – Safeguarding our soils, and so our priority is to recognise and respond to the challenges presented by the EU and Defra soil strategies. By doing so, we will minimise the impact of our activities on soils and vulnerable geological features.

Further information can be found on our **Soils** and **Geology Webpage**.



Case study

In-situ soil stabilisation

We pay careful attention to road design and location to ensure that the disruption caused by development on the geology and soil of an area is minimised. For example; we positively encourage the use of soil stabilisation, where possible, to convert areas of soft unsuitable soils into suitable construction materials by the addition of additives (i.e. quick lime, cement). Our use of soil stabilisation techniques ensures that we maximise the use of site won materials, minimise landfilling of soil, and reduce the need to quarry new materials.

Nature Conservation

Our network includes a range of nature conservation resources such as habitats, plants and animals. Some of these resources are rare or threatened and may be on sites designated for protection. Other resources are given consideration because they have a social value for example species which are valued by the public. These resources may also require consideration for reasons other than conservation such as noxious weeds and legally controlled species, which must be managed to control their spread.

We continue to recognise and respond to our legal responsibilities as well as relevant nature conservation or biodiversity policies, strategies, plans and frameworks. In particular:

- Our duty to conserve biodiversity.
- Our duty to further the conservation and enhancement of Sites of Special Scientific Interest (SSSIs).
- Our responsibility to ensure that we understand the implications of our activities on European Sites where such sites are designated for their nature conservation interests.
- Supporting the development, delivery and promotion of relevant cross-Government biodiversity targets.

In 2002 we produced a **Highways Agency Biodiversity Action Plan (HABAP).** One function of this plan was to contribute to actions that had been highlighted within the **UK Biodiversity Action Plan.** The HABAP identified 238 actions and targets within it that ensured practical work on the network was undertaken.

Our aim will be to maximise opportunities for protecting and enhancing our diverse natural environment and supporting its ability to adapt to the likely effects of climate change. We will continually update and implement our Biodiversity Action Plan, ensuring it is well embedded within our work.

Further information can be found on our **Nature Conservation Webpage**.



Case study

M40 Kestrel boxes

When our bridge inspectors identified Kestrels nesting in a dangerous location alongside the M40 we were keen to provide more opportunities for these birds to nest in safety alongside our network. A number of nest boxes were subsequently erected alongside the M40 in a variety of locations. These include being on mature trees, backs of large road signs, free standing poles and one on the gable of a salt barn. Since these have been installed, all boxes have been utilised by breeding Kestrels at least once.

Drainage and Water Quality

We have a responsibility for the management of the quantity and quality of water runoff that is collected from our network.

A key legislative driver for us is the **Water Environment (Water Framework Directive) (England and Wales) Regulations 2003.**

This will impose more stringent water quality controls that must be met from 2015. We have a responsibility not to pollute surrounding water courses and therefore need to ensure runoff from our operations is appropriately managed. Our main priority for water quality is to meet the more stringent quality controls by 2015.

Flooding and flood risk is a major operational and environmental issue for the network and our customers. Working with our service providers and stakeholders we will continue to implement the cross-Government policy on 'Making Space for Water'. We will also operate within the requirements of the **Flood** and Water Management Act which aims to provide better, more sustainable management of flood risk for people, homes and businesses. The Act identifies Flood Risk Authorities, and introduces new requirements for the inclusion of Sustainable Drainage Systems (SUDS) in all new developments, including national standards for the selection and design of SUDS. We are working alongside Defra to ensure that our guidance fully reflects this.

We are responding to the requirements of recent legislation and also the flooding events that have occurred over the last few years. Our priority here will be to continue to review and assess the network's resilience to flooding and develop contingency plans accordingly.

Further information can be found on our Water Quality and Drainage webpage.



Case study

Drainage Data Management Systems

We are committed to ensuring that our road projects do not increase flood risk and that our highway discharges do not pollute receiving water bodies. To achieve this it is essential to have accurate data on the location and condition of highway drainage assets in order to prioritise cost effective maintenance that minimises whole life costs. We have recently started to develop and populate our drainage database system which is a comprehensive Geographical Information System inventory of our drainage assets and conditions. We are also in the process of developing a Whole Life Cost model for our drainage assets to ensure that maintenance happens, at the right time and in the right place.

Landscape

Landscape is an important part of quality of life for people everywhere. Our activities have an impact on rural and urban landscape during construction of new road schemes through to ongoing maintenance and operation. Effective integration of roads into the landscape is key to the successful design of a road. Where a road is intrusive in the landscape, measures such as planting, the use of barriers and earth shaping can help reduce possible adverse visual impacts.

We will continue to give a high priority to our work on developing ways to enhance the integration of our network into the landscape and to protect the landscape quality. We will focus on reviewing our assessment and design advice and to ensure that landscape design objectives are included in all future road improvement projects.

All landscapes are potentially important, irrespective of location or condition.

However, some landscapes are protected by international, national, regional and local 'designations' such as National Parks, World Heritage Sites and Areas of Outstanding Natural Beauty. Our work is also influenced by the aspirations of the **European Landscape**Convention.

Case study

A3 Hindhead Improvement

The A3 provides an important link between London and Portsmouth, but also passes through the Surrey Hills Area of Outstanding Natural Beauty at Hindhead. When we decided to improve the existing single carriageway route through Hindhead, the potential impact on the Site of Special Scientific Interest at the Devil's Punch Bowl was of paramount concern. The choice to build a tunnel through the hill will enable us to restore the landscape of the Devil's Punch Bowl to its original condition and also relieve the severance in the village of Hindhead.

The way the network and the surrounding areas are developed and managed affects how well it integrates with the surrounding landscape. Possible adverse impacts include:

- The use of features such as gantries, variable message signs and hardened central reserves with continuous concrete barriers.
- Changes in adjoining land use particularly the development of new housing.
- Improvement work limited to changes within the road network boundaries such as walls and fencing.
- Lighting along sections of our network.

Further information can be found on our **Landscape Webpage**.



Cultural Heritage

Cultural heritage describes the historic elements of our environment, including buried archaeology; the historic built environment; and historic landscape. The network and our activities can have an influence on a range of cultural heritage features, including ancient landscapes and land features, vulnerable buildings of historical or cultural merit, and industrial heritage such as bridges and culverts. Our activities can also introduce potential future icons of cultural heritage interest such as landmark bridges and other structures.

Our work on cultural heritage is driven by a range of UK legislation and policies including: the Department for Culture, Media and Sport (DCMS) Protocol for the Care of the Government Historic Estate, which requires an inventory of assets and plans for their management; the Draft Heritage Protection Bill which is currently under consideration, and the aspirations of the European Landscape Convention.

Our priorities here are to preserve and manage our cultural heritage assets in a proactive manner. We will also respond to increasing Government and general public recognition of the historical significance of 20th century transport features.

We will produce a Heritage 'at risk' Register every year which will confirm the condition of our cultural heritage assets and future management proposals

We will continue to provide training in the new cultural heritage assessment method and we have a memorandum of understanding with **English Heritage** to ensure co-operation and compliance with statutory requirements.

We will ensure that we minimise the impact of the network on the cultural heritage resource and where possible provide enhancement.

Further information can be found on our **Cultural Heritage Webpage.**

Case study

M62 Junction 6 Archaeology

We undertake an archaeological review before any major works are conducted, and where possible any remains identified are left undisturbed. During work on the M62 in Merseyside to build new slip roads at junction 6, it was not possible to leave all of the archaeology safely in the ground. Careful excavation of the site was undertaken by professional Archaeologists to record and preserve the evidence. In addition, we held an open day for local people to see the finds from the site dating from 7000 years ago to the 19th Century. We created a website to showcase the archaeology uncovered.



Accessibility

Accessibility addresses the needs of pedestrians, cyclists, horse riders and people with disabilities, collectively known as 'vulnerable users'. Walking and cycling are important modes of transport for commuting and leisure. As well as providing health benefits for those who walk and cycle, these journeys help to promote the shift from short and medium length car journeys to other modes.

We have a duty to improve links along and across our network for vulnerable users and to improve access to public transport for disabled users by 2016, in line with the Disability Discrimination Act 2005. Our priorities in this area will be to consider the needs of vulnerable users at all stages of developing and improving the network; and to work in partnership with other organisations to promote accessibility.

Further information can be found on our **Accessibility Webpage**.



Case study

A26 Bridge Crossing (South Downs Way)

A steady increase in traffic on the A26 in East Sussex meant that users of the South Downs Way were finding it increasingly difficult to safely cross the trunk road as it passes through the Area of Outstanding Natural Beauty. Following a successful consultation with stakeholders and east Sussex County Council, a bridge over the busy A26 was installed in 2006. This provided a safe crossing for all users of the South Downs Way.



Society and Community

Roads impact on people and communities that use and live near them. Impacts can affect how, and in what way, local people travel, and can alter access to local amenities and both introduce and alleviate severance. Severance is the separation of residents from facilities and services in their community.

Roads can also impact on the health and quality of life of people that live near them through changes in local air quality, noise impacts and disturbance to the landscape. This can change the sense of place and overall well-being. Positive impacts include taking road traffic away from communities or providing access to the wider transport network.

We have a responsibility to protect and enhance the quality of life of people living alongside the network. Our aim is to consider community and social issues at all stages of developing and improving the network and to improve the assessment methodology for social and community issues.

We are committed to the guiding principles **UK Sustainable Development Strategy,** ensuring a strong, healthy and just society, and the priority area of sustainable communities. The increasing importance of this subject area is reflected by a new section in the Scheme Appraisal Process, soon to be introduced. This will cover the social and distributional (i.e. effects on different sections of the population) impacts of transport.



Spatial Planning

Patterns of development, which are managed through the spatial planning process, influence where people live, work and spend their leisure time. In turn, this influences patterns of travel behaviour which impact on the network. There is pressure on roadspace from the increasing demand to use the network and increased density of development alongside the network. Such pressure can raise the potential for congestion.

We recognise the importance of working closely with stakeholders within the land use planning process to help manage the potential impacts of planning decisions on the network.

We will focus our efforts on reducing demand for road use by encouraging the adoption of sustainable locations for development and by supporting more sustainable travel choices.

We will achieve this by adopting the approach set out in Circular 02/2007: Planning and the Strategic Road Network. We will engage developers and Local Authorities at an early stage and adopt a policy that promotes demand management and sustainable travel alternatives rather than increased road capacity. By reducing the likely future demands on our network we will in turn minimise impacts on the environment. For existing developments we will also work in partnership with other organisations and road users to help reduce the need to travel and promote more sustainable travel choices.

The Planning Act 2008 changes the way we will be involved in the approvals process for projects that are considered to be nationally significant.

For projects that might affect the network, the Highways Agency will be a statutory consultee, and must be consulted by the promoter. For all other development we will continue to influence planning decisions that affect the network by the provision of advice and, where necessary, the application of our powers to direct a Local Authority decision. We will work closely with stakeholders to help manage the social impacts of planning decisions, and with users to help reduce the need to travel.

Case study

Blythe Valley Park Solihull

A new business park with over two million sq ft of office space was proposed next to J4 of the M42 in Birmingham. As part of the planning process we requested conditions to manage the additional traffic. We required that no more than 1,740 extra vehicles per hour could be generated by the site. In addition we required that the developer produce a travel plan to manage demand. This included the future provision of traffic lights to protect the M42 from traffic if it rises over the limit set. The developer's travel plan provided for bus routes into the park; instigated a site-wide car share scheme; and provided new crossings of the A34 to encourage cycling and pedestrian access to the site to help reduce the need for car access.

Environment Action Plan – Putting the objectives into action

Our Environment Action Plan is available on the Environment Strategy webpage. It contains a series of actions that will be undertaken in order to deliver our Environment Strategy and work towards achieving our vision.

All actions will contribute to improvements under one or more of our objectives:

- Effective Outcomes
- Wellbeing
- Holistic Approach
- Communication
- Continuous Improvement and Knowledge
- Collaboration
- Capability and Capacity

Our Environment Action Plan is a web based document that will be regularly monitored and maintained.

Progress against the Action Plan is monitored by an Environment Strategy Steering Group. The Highways Agency Board and DfT is informed of progress against the Environment Action Plan each quarter, and performance is reported in our Annual Report.



Managing our impact on the environment

To achieve our vision and meet our objectives it is important to manage the activities of our staff and our supply chain. Some of the main means to control and influence these activities are:

Scheme Appraisal Process

The **appraisal process** is used at key stages to evaluate the financial worth of projects, such as a new road. All of our major projects are required to go through this process to examine the cost effectiveness of the activity. These requirements are integrated within our major project management process. The appraisal process considers how the project performs against government indicators for transport, which include environment aspects.

Design Standards and Written Guidance

The Design Manual for Roads and Bridges (DMRB) provides a comprehensive manual which accommodates all current standards. advice notes and other published documents relating to the assessment, design and operation of trunk roads. This manual is controlled and, when required, updated by the Highways Agency. We manage the DMRB on behalf of the Department for Transport and the UK devolved administrations. The DMRB is also used widely outside of the Highways Agency by other road authorities both national and international. These standards contain our requirements for the assessment of environmental impacts and environmental design.

The Manual of Contract Document for Highways Works supplements DMRB with specific model contract specifications and details.

We also use **Interim Advice Notes (IAN)** to advise our staff and the supply chain of changes to technical documents such as the DMRB. IANs are used to address matters that require early and urgent action.

Our environment advisors provide advice on best practice, and the scope of environmental activities undertaken by all business areas.

Managing our impact on the environment

Technical Advisory Service

This includes input into the development of legislation and guidance, advice on assessment methods, and responding to requests for information.

Procedures

Our management procedures steer the activities of our staff and supply chain. This includes our **quality management system** which guides staff on their roles and responsibilities. One such procedure is our value management and risk management workshops which provide a mechanism to review all aspects of a project including the environmental issues.

Procurement

How we procure goods, materials and services is key to ensuring effective environmental performance. This includes the identification of suppliers; the assessment of their contract tenders; and monitoring their contract performance. Follow this link for our current **Procurement Strategy.**

Network Monitoring

Monitoring the state of environmental assets on the network enables us to understand what we have and its condition. Our Environment Information System and our Drainage Data Management System help us to manage our environmental assets, measure performance and improvements. We take an integrated approach to managing assets and our environmental systems will be incorporated into our planned Integrated Asset Management System.

Ownership

In order for our Environment Vision to be realised, our Environment Strategy and associated Environment Action Plan have clear lines of ownership, management and responsibility.

The Strategy and Action Plan is owned by a member of the Highways Agency Board and they will be responsible for its delivery and reporting performance to the Department for Transport.

Actions will be identified within the Highways Agency and from consultations with stakeholders.

An Environment Strategy and Action Plan Management Group is used to monitor and support the development of actions. This group will also be responsible for the reporting of progress to the Highways Agency Board.



Engagement with stakeholders

We will seek to communicate our strategy and Action Plan to our stakeholders. This is essential, as it allows us to obtain feedback that can be used for continuous improvement and potentially to identify collaborative projects and future environmental actions with stakeholders.

We will engage with all our stakeholders, encourage feedback and ensure we act on it.

Collaboration

Environmental issues can have implications at international, national, regional and local levels. We will continue to investigate how to collaborate with others on a wide range of projects where it is possible to deliver greater environmental benefits. A joint project that we have undertaken with the **Environment Agency** has investigated the quality of water drainage, and allowed both parties to reduce costs and obtain the necessary information.

We will continue to invite other stakeholders into our projects, and so generate increased environmental benefits.

Communication

We report the outcomes of our activities in many ways. These include project reports, articles on our website, and corporate documentation. This reporting means that the public and our stakeholders will have reduced need to seek information under the **Freedom of Information Act 2000.** This Act allows private individuals, organisations and groups access to certain information held by us. Provision of environmental information is also covered by the **Environmental Information Regulations 2004.**



Engagement with stakeholders

We interact and work with many stakeholders in order to seek continuous improvement. The nature of our engagement with these groups is described as follows.

Our staff

Our staff are the first line in delivering our Environment Vision. We encourage all our staff to contribute ideas to improving the environmental performance of the Highways Agency, and delivering our vision.

Members of the public

We consult with and listen to the public at a range of levels. For example, regionally we develop initiatives to inform how the public can help to minimise their environmental impact, such as using alternative transport in congested road corridor locations. Locally we consult on the possible environmental impacts of road schemes.

Other Government Departments

Our work with other Government Departments

is essential in ensuring we are delivering a service aligned with wider government policy. This work includes the development of standards and the implementation of new legislation that applies to our network.

Non-Government Organisations

Working with non-Government Organisations enables us to combine initiatives that can bring improvements to the natural and built environment. They also bring a range of ideas for minimising our impact on the environment.

Statutory Environmental Bodies

The statutory environmental bodies (Environment Agency, Natural England, English Heritage) provide a legislative compliance role for some of our activities. Good working relations are essential and through our memoranda of understanding with each body we can work collaboratively to minimise our impact on the environment and develop ideas for further improvement.

Supply chain

Our supply chain is extensive and delivers many of our functions, under our guidance. This supply chain is a significant resource of ideas for developing activities that can assist us in achieving our strategy. The extensive skills within our supply chain can then help in delivering environmental improvements.



Appendix 1: Towards a balance with nature closeout report

Towards a Balance with Nature – review of actions

In 1996 we published the first Environment Strategy Plan "Living with Roads". Following the Government's Integrated Transport Policy White Paper and "A new Deal for Trunk Roads in England", the plan was revisited and consideration given to how the activities of the Highways Agency support the delivery of environment aims of integration.

"Towards and Balance with Nature" was then published in 1999 and was developed within the framework of the Government's Integrated Transport Policy as set out in the White Paper "A New Deal for Transport: Better for Everyone".

The strategic aim of the document was "To contribute to sustainable development by maintaining, operating and improving the trunk road network in support of the Government's integrated transport and land use planning policies".

Contained within the plan were general environmental issues facing the Highways Agency; specific issues for each environment topic area; the objectives of where we wanted to be; and a set of actions that would be followed in achieving these objectives.

This review considers each action from the various sections and briefly reports how it has been addressed. It is acknowledged that some actions from the plan have not been possible due to shifts in other Government policies or changes within the Highways Agency.

Monitoring our performance

Action 1: Formulating our environmental objectives into plans and decision making processes in a systematic way.

Achievement: An increased input into
Highways Agency Business Plans and
other corporate documents has enabled
environmental issues to take a prominent place
in such documents. Revisions to the Design
Manual for Road and Bridges (DMRB) and
the publication of Interim Advice Notes (IANs)
has enabled the latest policies and objectives
to be considered in the decision making
process of new schemes. The development of
the Sustainability Checklist has ensured that
the environment is considered for all papers
submitted to the Highways Agency board.

Action 2: Reviewing all our activities so we have a better understanding of the impact of our work on the environment.

Achievement: The Post Opening Project Evaluation (POPE) project is designed to evaluate whether a scheme has delivered the anticipated environmental benefits, and whether the other impacts of the scheme were as predicted. Another initiative has been developed where environmental appraisals and assessments are reviewed before publication to determine whether they are fit for purpose. Assessment methods have been reviewed and updated in line with modern practices.

Action 3: Developing robust action programmes to deliver genuine environmental protection and enhancement, ensuring that we have the commitment to deliver them.

Achievement: A programme of research has been developed that will ensure the most pressing environmental issues are examined and understood and the results implemented into current guidance designed to achieve environmental protection. Specific programmes have also been developed for individual topic areas, for example the Highways Agency Biodiversity Action Plan (HABAP), Hansard Sites (see Noise Management) and the Priorities Outfalls Programme.

Action 4: Monitoring our performance, rigorously establishing meaningful goals and measuring performance towards these through performance indicators.

Achievement: Four Environmental
Performance Indicators were set out in our
Business Plan 2001/02. These have been
changed or revised in subsequent Business
Plans. Key Performance Indicators (KPIs)
covering most environmental topics are used
to evaluate the progress and quality of all
projects.

Action 5: Striving for continuous improvement.

Achievement: Guidance documents and specifications are reviewed and if necessary updated regularly. The monitoring of and involvement in the implementation of new legislation and guidance ensures continuous improvements. Regular training days have ensured that staff are kept up to date with all aspects associated with assessment, design and management for environmental topics.

Procurement

Action 1: Drawing up specifications aiming to reduce the impact of our activities on the environment, whilst achieving value for money at all times.

Achievement: Changes to some design specifications have included an increase in recycled, reused and sustainable materials being used. The Sustainable Development Action Plan (SDAP) sets out our strategy for delivering a better quality of life through sustainable development. A New Procurement Strategy was published in 2009 which emphasises care for the environment and adoption of sustainable development principles.

Action 2: Making contractors aware that they must comply as far as possible with our environmental policy written into their conditions of contract.

Achievement: All contracts between the Highways Agency and contracting parties are based on a series of model contracts, based on the ICE NEC (New Engineering Contract) suite of contracts. We are a regular client of the Considerate Constructors Scheme, which ensures certain environmental standards are reached within construction sites.

Action 3: Formulating contracts which strike a balance between costs to the taxpayer and environmental benefits.

Achievement: The Continuous Value
Management (CVM) procedure for contracts
has been adopted, that includes the
consideration of environmental aspects.
Revisions to the procedures for letting projects
has resulted in a process where the costs and
benefits of a project are considered, along with
the risks.

Action 4: Undertaking a study of our materials specification with a view towards sustainability and the environment.

Achievement: Various projects have been undertaken that examine general sustainability issues and also the sustainability of certain materials used for road construction and maintenance, along with the recycling and re-using possibilities. The Manual of Contract **Documents for Highway Works (MCHW)** has been revised to permit the use of a wide range of recycled and secondary materials, subject to requirements for quality control and endproduct performance. A number of in situ and ex situ recycling techniques for pavements have also been incorporated. Guidance to provide advice on assessing a scheme for its impact on materials and waste is due to be published in the DMRB.

Working with people

Action 1: Increasing environmental awareness among our staff and contractors.

Achievement: Environmental achievements and articles have been published on the our intranet, in the Department for Transport magazines and on our website. Internal and external training has also taken place to increase environmental knowledge and awareness within the Highways Agency and among its contractors.

Action 2: Seeking to facilitate partnerships to bring about environmental improvement and community ownership.

Achievement: An increase in the involvement of local groups and communities in the design and opening of major schemes has helped with community relations. Representatives from the Highways Agency regularly attend meetings of the National Environment Committee and also Regional Environment Committees. Several Memorandum of Understanding have been drawn up with statutory bodies.

Action 3: Continuing to develop better relationships with other transport operators, Government and Non-Governmental organisations and above all with the general public.

Achievement: Memorandums of
Understanding have been drawn up with
English Heritage, Environment Agency,
and Natural England. Work has also
started with organisations such as CIRIA
and WRAP. Regular meetings are held with
other Government departments when new
legislation is being introduced. An increase
in the involvement of local groups, such as
schools, in the design and opening of major
schemes has helped with community relations.
Representatives from the Highways Agency
regularly attend meetings of the National
Environment Committee and also Regional
Environment Committees

Biodiversity

Action 1: Developing a biodiversity action plan for the management of our soft estate - the land surrounding our network - founded on the Government's action plans to protect species and habitats.

Achievement: The Highways Agency Biodiversity Action Plan (HABAP) was developed in 2002 and it is currently being revised / reviewed.

Action 2: Working with English Nature and other partners on a programme of research to develop understanding of biodiversity in the context of highways management.

Achievement: A Memorandum of Understanding with Natural England (formally English Nature) has been agreed. Natural England have advised on the development of advice in DMRB Volume 10 and 11 and are consulted on all such advice notes and their agreement is required in advance of authorisation to publish.

Action 3: Implementing a programme of engineering measures to protect wildlife from road traffic where highways cross their habitats e.g. otters.

Achievement: The assessment and design advice has focussed on minimising the impacts of roads on the surrounding environment, which has included specific focus on measures to reduce fragmentation effects, through the provision of appropriate protection measures.

Air emissions management

Action 1: Working in partnership with Local Authorities towards the delivery of the National Air Quality Strategy.

Achievement: We are responding to the Local Authorities consultation documents and working with them on the preparation of their air quality action plans. Mitigation measures have been implemented at a number of Air Quality Management Areas (AQMAs).

Action 2: Maintaining and supporting our guidance on air quality assessment, making available our air quality monitoring data via the internet.

Achievement: The **DMRB** has been regularly updated to reflect best practice. Research publications, which include monitoring data, are regularly published on the internet.

Action 3: Working to develop and evaluate traffic control systems which reduce vehicle emissions.

Achievement: Traffic control systems (e.g. controlled motorway, ramp metering, active traffic management) have been evaluated to determine the impact on emissions. It is intended that these will be developed further to reduce emissions.

Action 4: Working towards improved performance in emissions control during construction/maintenance activities.

Achievement: We are a founder client partner of the Considerate Constructors Scheme and have won the award for the most committed client and many awards for road projects. The scheme aims to minimise emissions to air and to encourage the use of local materials and reducing/recycling waste.

Noise management

Action 1: Ensuring that the most appropriate noise reducing surfaces are used where noise is a particular concern whenever a road needs to be resurfaced.

Achievement: It is now our policy to always use a low-noise surface when an existing section of road is re-surfaced or a new section of road is constructed. In order to be used on the network a new surface must first meet a certain level of noise reduction.

Action 2: Specifying quieter surfaces as a matter of course where new roads are to be built or existing roads improved.

Achievement: It is now our policy to always use a low-noise surface when an existing section of road is re-surfaced or a new section of road is constructed.

Action 3: Identifying sites for the provision of noise mitigation on existing roads.

Achievement: Assessment of noise nuisance have been undertaken at 79 locations across the network. These are known as **Hansard**

Sites as they were listed in the answer to a Parliamentary question in November 1999. These sites were subject to individual studies to determine the most practical and cost effective means of noise mitigation. Where the most effective means of mitigation was concluded to be the provision of noise barriers, the installation of these has been funded from an annual £5m ring-fenced budget. As of early 2009, 69 of these sites had received noise mitigation measures. It is expected that most of the remaining sites will be completed by March 2011.

Action 4: Researching tyre/road noise in partnership with vehicle standard authorities and the tyre industry.

Achievement: We have part funded a **research programme** that examined the causes of tyre/road noise across different tyre types and sizes. More recently we have been involved in discussions between the tyre industry and other Government departments with regard to policy changes.

Action 5: Working towards improved performance in noise control during construction/maintenance activities.

Achievement: Since 1999, new standards and procedures have been introduced outside the Highways Agency that has addressed this action. We have raised the awareness of construction noise through its **revision of the Noise chapter in DMRB.**

Waste management

Action 1: Identifying where waste is being generated; to establish benchmarks for the quantity of waste produced in trunk road management.

Achievement: We have funded a research programme which seeks to examine the recording mechanisms available for waste production on the network. Key Performance Indicators have also been examined which will aid this task.

Action 2: Conserving existing resources and reducing quantities of waste.

Achievement: An examination of a selected sample of major projects has been undertaken which has focussed upon the management of material resources to facilitate a reduction in waste produced at construction sites. We will be introducing guidance relating to the Environmental Impact Assessment of materials use for its projects for the first time, a key step in ensuring materials resource efficiency is considered throughout a scheme life cycle.

Action 3: Commissioning research aimed at prolonging the life of roads and other structures.

Achievement: A large amount of research has been commissioned into the durability and sustainability of modern road surfacings. Some research has been commissioned into the durability of structures, including bridges and barriers.

Action 4: Cooperating more closely with industry to identify barriers to the reuse or recycling of highway materials and to encourage the use of secondary and waste materials where practical.

Achievement: A portfolio of work has been completed which has involved liaison with the Waste Resource Action Programme (WRAP) and the Construction Industry Research and Information Association (CIRIA). Through this involvement with industry, the use of secondary and waste materials has been examined. We have also developed a Memorandum of

Understanding with the **Environment Agency** with a specific view to managing down regulatory barriers to encourage reuse and recycling of materials in highway construction and maintenance.

Action 5: Amending technical specifications to encourage use of local and lower grade materials in highway construction as a means of reducing demand for new materials.

Achievement: We have published guidance relating to the use of recycled materials in a number of areas, notably structural concrete (BA 92/07: the use of recycled concrete aggregate in structural concrete) and pavement (HD 35/04: Conservation and the Use of Secondary and Recycled Materials) as well modifications to MCHW.

Water management

Action 1: Organising a research programme to develop understanding of highway runoff and its environmental impacts both on our own behalf and partnership with the Environment Agency.

Achievement: We have successfully completed a £2.5m programme of Research and Development that will be translated into new policy guidance in late 2009. The new guidance will ensure that the requirements of the Water Framework Directive will be met on road projects. The research has also helped to foster better relationships with the Environment Agency through the creation of a Memorandum of Understanding.

Action 2: Developing new drainage systems to reduce the impact of highway runoff on the environment.

Achievement: New guidance has been developed and published in the **DMRB** on the **use of Sustainable Drainage Systems** (SUDS). Drainage design standards have also been updated to accommodate climate

change and to align with the Government's **Planning Policy Statement PPS 25.**

Action 3: Getting improved performance from contractors in pollution control during construction.

Achievement: We have contributed to **CIRIA** work on pollution during construction and new guidance has been published that is supported in the **DMRB**.

Action 4: Providing better information for the handling of road spillages to ensure that when they do occur drainage facilities are managed in the most effective way.

Achievement: New guidance and assessment techniques relating to the handling of road spillages has been published in the DMRB.

Landscape and townscape

Action 1: Including landscape management of the soft estate along our network in our route strategies to help achieve our landscape objectives.

Achievement: Some strategies were developed under the Route Management Strategies programme to include landscape specific requirements. EnvIS, the Highways Agency's environmental database, is at an advanced stage of development and includes details of soft estate on our routes together with landscape objectives and condition information all of which will aid future maintenance of these assets.

Action 2: Reviewing landscape assessment and design practice together with the Countryside Commission and other interested organisations to ensure that future projects meet the above objectives.

Achievement: A Research and Development project concerning landscape assessment is currently underway, which is expected to culminate in an Interim Advice Note on Landscape Assessment, followed by

full advice in the **DMRB.** This project has involved extensive consultation with **Natural England** (formerly English Nature), with other Government bodies and also Non-Government Organisations. The Landscape Design guidance contained in the **DMRB** Volume 10 is to be reviewed as part of a programme to modernise the volume.

Action 3: Undertaking research on developing new advice about good practice in assessing the need for lighting. We will aim for better lighting design in sensitive areas.

Achievement: Progress has been made in this area, most notably by publication of TA 49/07 Appraisal of New and Replacement Lighting in August 2007, which is likely to lead to less street lighting being installed. A code of practice has also been published which includes the necessary landscape and other environmental considerations. Research is ongoing that is aimed at reducing the duration of lighting on the network.

Action 4: Reviewing landscaping guidelines and planting types so they are consistent and appropriate to the locality for use across the network.

Achievement: Guidance covering Landscape and Ecology was revised in the MCHW and published in 2001. In 2004, the Landscape Management Handbook was published in the DMRB.

Heritage

Action 1: Reviewing with English Heritage and English Nature and other interested parties the Highways Agency's guidance on the treatment of heritage issues, (including geological heritage), within our network management activities.

Achievement: We have reviewed and revised guidance on cultural heritage assessment and design. Three of these are within the DMRB: Cultural Heritage (Environmental Assessment), Cultural Heritage (Asset Management Plan Guidance), and Cultural Heritage (Environmental Design). We worked with English Heritage and Natural England (formally English Nature) to produce the guidance 'Assessing the Effect of Road Schemes on Historic Landscape Character'.

Action 2: Establishing a database of our current and previous cultural heritage studies.

Achievement: A database of current and previous cultural heritage studies, containing over 860 archaeology and cultural heritage

reports since 1993, has been developed. A project is currently underway to create an inventory of cultural heritage assets within and adjacent to the Highways Agency estate.

Action 3: Working with English Heritage and others in considering joint initiatives to protect and enhance the historic environment.

Achievement: A new Memorandum of Understanding between the Highways Agency and English Heritage was signed in 2006, which follows the previous Memorandum of Agreement signed in 1993. Meetings are held twice a year between the Highways Agency and English Heritage in order to keep up to date and informed on new legislation, new publications and research, and to discuss activates involving both organisations.

Appendix 2: Environmental legislation

The following is a limited, and non-exhaustive, list of the legislative framework that we operate within.

Environmental Assessment and Appraisal

Council Directive 85/337/EEC (as amended) on the assessment of the effects of certain public and private projects on the Environment The Highways (Assessment of Environmental Effects) Regulations 1999

Air Quality

- Air Quality (England) Regulation 2000
- The Air Quality Limit Values Regulations 2001 (as amended)
- The Air Quality Limit Values 2003 (as amended)
- The Air Quality Standards Regulations 2007
- Council Directive 96/62/EC on ambient air quality assessment and management
- Council Directive 2008/50/EC on ambient air quality and cleaner air for Europe
- Council Directive 2001/81/EC on national emission ceilings for certain atmospheric pollutants

Noise and Vibration

- Land Compensation Act 1972
- Noise Insulation Regulations 1975 (amended 1988).
- Council Directive 2002/49/EC relating to the assessment and management of environmental noise
- The Environmental Noise (England)
 Regulations 2006 (as amended)
- Control of Pollution Act 1974

Material Resources and Waste

- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (1989)
- Council Directive 2008/98/EC on waste
- Council Directive 99/31/EC on the landfill of waste
- Council Directive 91/689/EEC on hazardous waste
- Council Regulation (EEC) 259/93 on the supervision and control of shipments of

- waste within, into and out of the European Community (1993)
- The Landfill Regulations (England and Wales) 2002
- The Hazardous Waste Regulations (England and Wales) 2005
- The List of Waste (England) Regulations 2005
- Environmental Protection Act 1990
- Environment Act 1995
- The Animal By-Products Regulations 2005
- The Waste Management Transfer Licensing Regulations 1994
- Clean Neighbourhoods Act 2005
- The Site Waste Management Plans Regulations 2008
- The Transfrontier Shipment of Waste Regulations (2007) Statutory Instrument 2007 No. 1711

Appendix 2: Environmental legislation

Soil and Geology

- Council Directive 91/414/EEC concerning the placing of plant protection products on the market
- Council Directive 91/676/EEC on nitrates from agricultural sources
- Council Directive 89/106/EEC on the approximation of laws, regulations and administrative provisions of the Member States relating to construction products
- Council Directive 2004/35/EC on environmental liability with regard to the prevention and remedying of environmental damage
- Agricultural Land (Removal of Surface Soil) Act 1953
- The Water Environment (Water Framework Directive) (Eng & Wales) Regulations 2003
- Countryside and Rights of Way Act 2000
- The Landfill Regulations (Eng & Wales) 2002
- The Hazardous Waste Regulations (Eng & Wales) 2005
- The List of Waste (Eng) Regulations 2005

- Environmental Protection Act 1990
- Environment Act 1995
- The Action Programme for Nitrate Vulnerable Zones (Eng & Wales) Regulations 1998
- The Contaminated Land (England)
 Regulations 2006
- Pesticides Act 1998

Nature Conservation

- Council Directive 79/409/EEC on the conservation of wild birds
- Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora
- Council Directive 2000/60/EC on establishing a framework for Community action in the field of water policy (Water Framework Directive)
- Council Directive 2004/35/EC on environmental liability with regard to the prevention and remedying of environmental damage
- The Highways (Environmental Impact Assessment) Regulations 1999

- The Natural Environment and Rural Communities Act 2006
- Countryside and Rights of Way Act 2000
- The Hedgerow Regulations 1997
- The Conservation (Natural Habitats, & c.)
 Regulations 1994 (as amended)
- Protection of Badgers Act 1992
- Wildlife and Countryside Act 1981 (as amended)
- Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979)
- Bonn Convention on the Conservation of Migratory Species of Wild Animals (1979)
- Convention on Biological Diversity, Rio de Janeiro (1992)
- Ramsar Convention on wetlands of international importance especially as waterfowl habitat (1971)
- The Conservation (Natural Habitats & c)
 Regulations (1994) + Amendment (2007)
- The Conservation of Habitats and Species Regulations 2010

Appendix 2: Environmental legislation

Drainage and Water Quality

- Council Directive 2000/60/EC establishing a framework for the Community action in the field of water policy (Water Framework Directive)
- EU Directive 2007/60/EC on the Assessment and Management of Flood Risks
- EU Directive 76/160/EEC The Bathing Water Directive
- EU Directive 78/659/EEC The Freshwater Directive
- Water Environment (Water Framework Directive) (England and Wales) Regulations 2003

Landscape

- European Landscape Convention (Council of Europe)
- Countryside and Rights of Way Act 2000
- The Commons (Registration of Town or Village Greens) (Interim Arrangements) (England) Regulations 2007
- Commons Act 2006.
- National Parks and Access to the Countryside Act 1949
- Town and Country Planning Act 1990

Cultural Heritage

- UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention) (1972)
- Ancient Monuments and Archaeological Areas Act 1979
- Planning (Listed Buildings and Conservation Areas) Act 1990
- Planning (Listed Buildings and Conservation Areas) Act 2008
- Treasure Act 1996

Accessibility

- Highways Act 1835 (as amended)
- Disability Discrimination Act 1995 (as amended)
- Countryside and Rights of Way Act 2000

Social and Community

Sustainable Communities Act 2007

Spatial Planning

Planning Act 2008

Highways Agency Publications Code PR136/10

