

The Environmental Damage (Prevention and Remediation) Regulations 2009

Guidance for England and Wales

2nd Update
November 2009

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www.wales.gov.uk/topics/environmentcountryside/epq/liability/?lang=en

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1. Introduction

About this guidance

- 1.1 This guidance aims to provide help for those seeking to better understand the requirements and practical application of the Environmental Damage (Prevention and Remediation) (England) Regulations 2009 and the Environmental Damage (Prevention and Remediation) (Wales) Regulations 2009. It describes the main provisions of the Regulations and in particular when the Regulations apply and what is required by whom when they do. It sets out the views of the Secretary of State for Environment Food and Rural Affairs and the Welsh Assembly Government on how they should be applied and how particular terms should be interpreted. Guidance will be published separately for Northern Ireland and Scotland. The guidance also explains where to go for further information. **It is not statutory guidance.**
- 1.2 The guidance is aimed at those carrying out activities that may cause imminent threats of 'environmental damage' or actual 'environmental damage', the authorities responsible for enforcing the Regulations and those who are interested more widely in the application of the Regulations. More technical aspects of guidance (such as on determining whether there is 'environmental damage' and how to determine what measures are appropriate as remediation) are contained within the annexes. The guidance supplements the quick guide to the Regulations which is available at:

<http://www.defra.gov.uk/environment/policy/liability/index.htm> www.wales.gov.uk/topics/environmentcountryside/epq/liability/?lang=en

- 1.3 The guidance has been developed in collaboration with representatives of the main users. This has included fifteen meetings with experts from the authorities responsible for enforcing the Regulations and three meetings of experts from within the business and NGO communities. A draft version of guidance was also included in the public consultation in February 2008.
- 1.4 **The guidance is as up-to-date as possible but some aspects such as references and weblinks are likely to change.** It will be kept under review and will be revised from time to time.
- 1.5 The guidance is freely available in Adobe Acrobat format. This can be searched for key terms for ease of navigation. The contents page of this guidance should also help the reader to find guidance on issues covered. A printed copy of the guidance is available on request by writing to:

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Some key terms used in the guidance:

- The **authority** refers to any of the authorities responsible for enforcing the Regulations (the Regulations use the term 'enforcing authority').
- **'Environmental damage'** refers to the specific types of damage to the environment covered by the regulations.
- The **guidance** refers to this guidance document.
- The **operator** refers to those carrying out activities that may cause imminent threats of 'environmental damage' or actual 'environmental damage' under the Regulations.
- The **Regulations** refers collectively to the Environmental Damage (Prevention and Remediation) Regulations 2009 (England) and the Environmental Damage (Prevention and Remediation) (Wales) Regulations 2009.

See glossary of terms at Annex 5 for a more comprehensive list of terms.

What are the Environmental Damage Regulations?

- 1.6 The Regulations transpose the provisions of the EU Environmental Liability Directive into law in England and Wales.
- 1.7 Every year there are many thousands of cases of damage to the environment. The Regulations require action in response to the most significant cases, covering specific types of:
 - damage to species and habitats;
 - damage to water; or
 - risks to human health from contamination of land.
- 1.8 **These specific types of damage are referred to in the Regulations and the guidance as 'environmental damage'**. The Regulations apply to both imminent threats and actual cases of damage. Where these arise, those responsible must take immediate action to prevent damage occurring or remediate damage where it does occur. **The Regulations are expected to cover less than 1% of the total number of cases of damage in England and Wales¹**. Chapter 2 of this guidance details

¹ The Impact Assessment of the Regulations provides further details of the expected impacts of the Regulations: <http://www.defra.gov.uk/environment/policy/liability/index.htm> and www.wales.gov.uk/topics/environmentcountryside/epq/liability/?lang=en

when the Regulations apply and what exclusions there are. Annex 1 sets out in detail what 'environmental damage' is.

- 1.9 The Regulations seek to ensure action is taken to put damage right rather than to penalise those responsible. They are based on the 'polluter pays principle' requiring those responsible to meet the cost of preventive and remedial measures. For the damage to species and habitats and damage to water covered, the Regulations introduce a new approach to remediating damage. They require that, in addition to any measures taken to return the environment to the condition it was in before the damage occurred, measures should also be taken to make amends for where the damaged environment does not completely recover, and for the loss of environmental resources and environmental services pending recovery.
- 1.10 The onus is on the responsible party to take action in the first place and to report relevant details to the enforcing authority. The authorities are responsible for overseeing the effective operation of the Regulations and have powers under the Regulations to take action and recover their costs. Chapter 3 provides a summary of the roles and responsibilities of operators and authorities.
- 1.11 Existing legislation which also addresses damage to the environment remains in place. Those responsible for damage will not be expected to take the same measures under two separate regimes. Therefore, if the Regulations secure the outcomes required by other regimes, those other regimes need not be applied. Where the outcomes required by the Regulations have already been achieved, the Regulations need not be applied. Operators should ensure they are aware of their responsibilities under existing legislation as well as the Regulations. Annex 4 details some of the related regimes that may need to be considered.

Overview of the Regulations

- 1.12 When there is an imminent threat of 'environmental damage' or actual 'environmental damage' the operator responsible is required to take immediate steps to prevent damage or further damage and to notify the authority. Chapter 4 provides guidance on when immediate action is required and what to do.
- 1.13 Once the authority is aware of a potential case of 'environmental damage', either because it has been reported by an operator or an 'interested party'² or through other means, it must determine whether there is 'environmental damage' and advise the operator of its decision. Chapter 5 sets out the procedures for this.
- 1.14 The authority is responsible for deciding what remedial measures will be implemented, taking account of any measures proposed by the operator, and will consult certain specified people before serving a remediation

² See chapter 12.

notice on the operator. Chapter 6 sets out the process for deciding remedial measures and Annex 2 how remedial measures should be identified.

- 1.15 Operators are responsible for carrying out remedial measures. Chapter 7 covers issues relating to the implementation of those measures. The table overleaf summarises these key stages in the operation of the Regulations.
- 1.16 Other chapters of this guidance cover appeals (chapter 8), what happens when damage is caused by more than one operator (chapter 9), provision for cost recovery (chapter 10), offences and penalties (chapter 11), rights of interested parties to request action (chapter 12) and the interface between the Regulations and other related regimes (Annex 4).

Avoiding ‘environmental damage’

- 1.17 An important point to note is that the Regulations are a ‘backstop’, only applying when something has gone wrong and there is an imminent threat or actual ‘environmental damage’ within the scope of the Regulations. The emphasis should be on proactively putting in place appropriate pollution prevention measures to reduce risks to the environment. Those running businesses and other operations can reduce the likelihood of ever being caught by the Regulations’ requirements by minimising risks to the natural resources covered by the Regulations. This means that businesses should be aware, in particular, where they:
 - Operate within or near areas of high biodiversity value, especially Sites of Special Scientific Interest (SSSIs);
 - Operate near water bodies; and/or
 - Carry out activities with potential risks to human health

This is so they can take the necessary steps to manage the relevant risks effectively, including implementing and monitoring appropriate pollution prevention measures.

- 1.18 An important first step to avoiding causing damage is to comply with existing legislation that regulates activities which potentially pose risks to species and habitats, water and human health. Following approved codes of good practice, such as the Code of Good Agricultural Practice to protect water, soil and air quality, will also reduce the likelihood of causing damage within the scope of the Regulations.

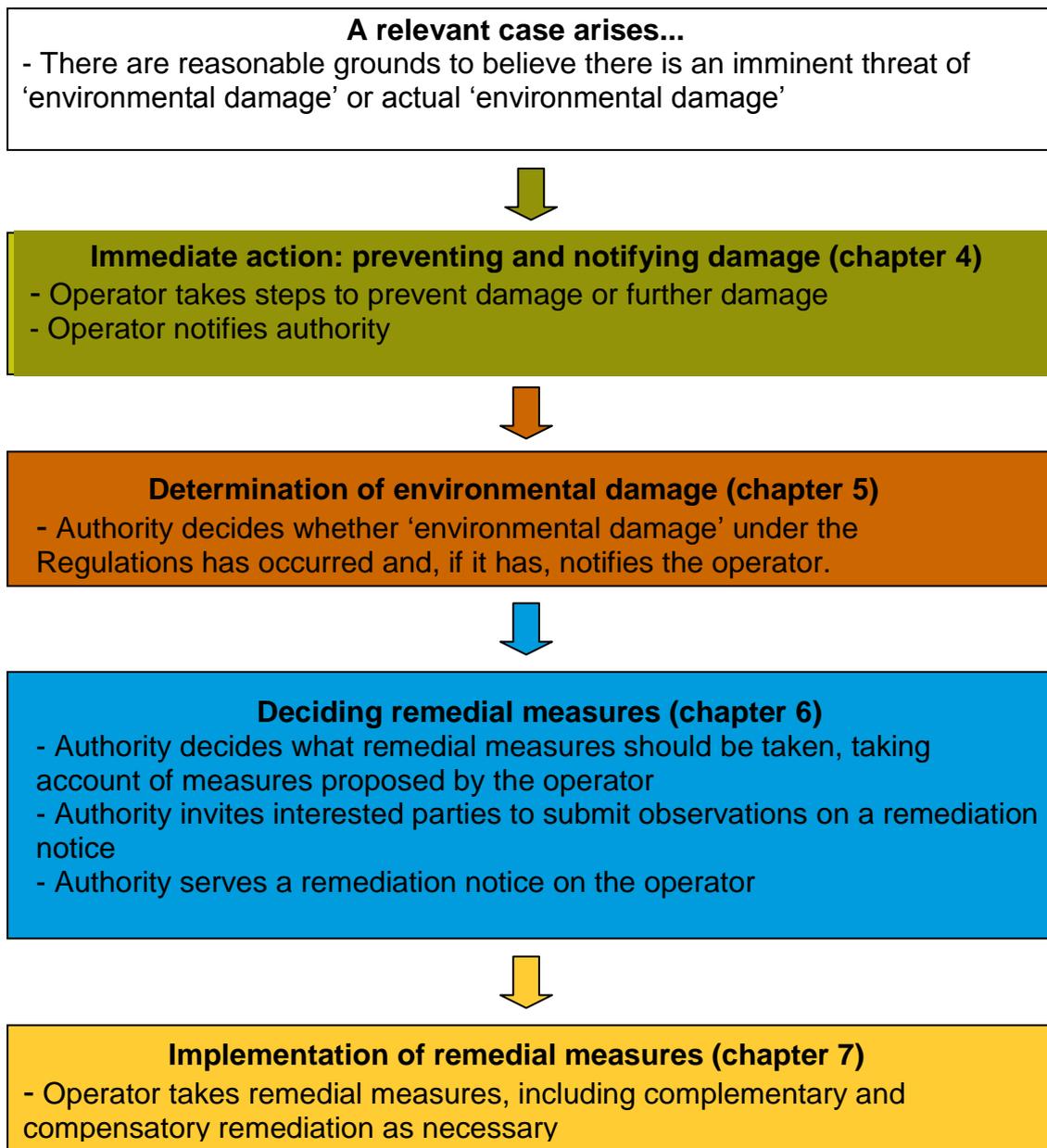
Reviewing the Regulations

- 1.19 The Environmental Liability Directive requires member states to report to the European Commission on the experience gained in the application of the Directive by 30th April 2013. The Government has proposed to use this opportunity to review the application of the regulations to establish

whether they are working effectively and to see whether any amendments are appropriate. Authorities therefore need to report details of all qualifying incidents to the Government. The incident data return is available at:

<http://www.defra.gov.uk/environment/policy/liability/index.htm> and www.wales.gov.uk/topics/environmentcountryside/epq/liability/?lang=en

Figure 1.1: Operation of the regulations



2. When do the Regulations Apply?

Chapter 2 provides guidance on when the Regulations apply, in particular:

- where the Regulations apply
- what 'environmental damage' means
- what activities are covered
- who is liable
- what exemptions there are

Where the Regulations apply

2.1 The Regulations apply in England and in Wales. Regulation 6 provides further details of the areas of application:

- For the purposes of water damage, the Regulations apply to all water up to 1 nautical mile seaward from the baseline in England and Wales. This is consistent with application of the Water Framework Directive in England and Wales;
- For the purposes of protected species and natural habitats, the Regulations apply to the seabed of the continental shelf around the UK, and to the waters in the Renewable Energy Zone, which extends approximately 200 miles out to sea around the UK (see the glossary of terms at Annex 5).

2.2 Scotland, Northern Ireland and Wales are responsible for enforcement of the Regulations in the sea and seabed out to 12 miles from their shores.

What 'environmental damage' means

2.3 The Regulations do not cover all types of damage to the environment. They only cover 'environmental damage' which is one or more of damage to:

- protected species and natural habitats or to a site of special scientific interest (these are referred to collectively in the guidance as **damage to species and habitats**);
- surface water or groundwater (these are referred to collectively in the guidance as **damage to water**); and,
- land.

These three types of damage are defined below. **The guidance in Annex 1 explains more precisely what is meant by these three definitions of damage and how they are to be interpreted and applied.** The Regulations also apply where there are 'imminent threats' of 'environmental damage'.

Damage to species and habitats

2.4 Damage to species and habitats includes:

- i. Damage to protected species and natural habitats
- ii. Damage to a site of special scientific interest (SSSI)

2.5 Damage to protected species and natural habitats is damage that:

has a significant adverse effect on reaching or maintaining the favourable conservation status of the protected species or natural habitat...

(schedule 1.1 (1))

- This only applies to damage outside sites of special scientific interest
- 'Protected species and natural habitats' refers to certain specific species and habitats that are protected under EU legislation. Annex 6 of this guidance provides a more detailed definition and references for the specific species and habitats covered.

2.6 Damage to a site of special scientific interest is damage within a SSSI to:

- (a) the species or habitats notified under section 28 of the Wildlife and Countryside Act 1981; or
- (b) protected species and natural habitats (see paragraph 2.5 above)

The damage must have an adverse effect on the integrity of the site (that is, the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats or the levels of populations of the species affected).

(schedule 1.4(2))

Damage to water

2.7 Damage to water includes:

- i. Damage to surface water
- ii. Damage to groundwater

2.8 Damage to surface water is:

... damage to a surface water body classified as such pursuant to Council Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for Community action in the field of water policy such that —

- a) a biological quality element listed in Annex V to that Directive,
- b) the level of a chemical listed in the legislation in Annex IX or a chemical listed in Annex X to that Directive, or

c) a physicochemical quality element listed in Annex V to that Directive, changes sufficiently to lower the status of the water body in accordance with Directive 2000/60/EC of the European Parliament and of the Council (whether or not the water body is in fact reclassified as being of lower status).
(Regulation 4(3))

2.9 Damage to groundwater is:

any damage to a groundwater body such that its conductivity, level or concentration of pollutants changes sufficiently to lower its status in accordance with Directive 2000/60/EC of the European Parliament and of the Council (and for pollutants Directive 2006/118/EC of the European Parliament and of the Council on the protection of groundwater against pollution and deterioration (whether or not the groundwater body is in fact reclassified as being of lower status).

(Regulation 4(4))

Damage to land

2.10 Damage to land is:

...contamination of land by substances, preparations, organisms or micro-organisms that results in a significant risk of adverse effects on human health.
(Regulation 4(5))

What activities are covered

2.11 Regulation 5 determines that the Regulations apply (for both actual damage or imminent threats of damage):

- **to all types of ‘environmental damage’** if they are **caused by an activity in Schedule 2**, irrespective of whether the operator intended to cause damage or was negligent.
- to damage **caused by any other activity** but only where the operator intended to cause the damage or was negligent as to whether ‘environmental damage’ would be caused, **and only for damage to species and habitats**.

2.12 Schedule 2 lists activities by reference to European legislation. Many of the activities are subject to permits³ but it also includes the ‘manufacture, use, storage, processing, filling, release into the environment and onsite transport’ of various substances⁴. Research undertaken for the Impact

³ This includes: activities that are subject to Environmental Permits, management of extractive waste, discharges to water and groundwater, water abstraction and impoundment and transport of dangerous goods and polluting goods, contained use and deliberate release of Genetically Modified Organisms and transboundary shipment of waste.

⁴ See Annex 6 for further information about the substances covered.

Assessment of the Regulations⁵ showed that these activities cover the vast majority of activities that typically cause serious damage to the water environment and contamination of land, but that it does not cover many of the activities that cause physical damage to habitats and species. Annex 7 of this guidance provides references to the English and Welsh legislation for each of the activities in Schedule 2. Many of the activities listed are those that require some form of permitting or authorisation. The Regulations apply where the relevant permits or authorisations are required irrespective of whether the operator currently has one.

Who is liable

2.13 Regulation 5 refers to the liable parties under the Regulations as 'operators' of 'activities'.

'Operator' is defined as:

the person who operates or controls such an activity, including the holder of a permit or authorisation relating to that activity, or the person registering or notifying such an activity

(Regulation 2)

'Activity' is defined as:

any economic activity, whether public or private and whether or not carried out for profit

(Regulation 2)

2.14 An operator of an activity is taken to include any natural or legal, private or public person. For example, the operator may be a company or an individual. In some cases authorities may enforce the Regulations against more than one operator or there may be more than one person who is capable of being the operator for the purposes of the Regulations and the authority will need to decide who to enforce against (see chapter 9). The liability of the operator cannot revert to the authority in any circumstances, although the authority may take action as a last resort.

2.15 'Economic activity' is a term which covers a variety of activities which take place within an economy. It includes businesses, and will also include many charitable activities and public sector activities. Purely domestic or recreational activities are not covered.

Exemptions

⁵ <http://www.defra.gov.uk/environment/policy/liability/index.htm> and <http://wales.gov.uk/topics/environmentcountryside/epq/liability/?lang=en>

2.16 There are some specific circumstances where the Regulations do not apply. None of them affects the application or otherwise of other legislation. These exemptions are listed below.

Emissions, events or incidents that took place, and activities that ceased, before the coming into force date

2.17 The Regulations come into force on:

- 1 March 2009 (Regulation 1) in England; and,
- 6 May 2009 in Wales.

The dates above are referred to as the **CIF** (coming into force) date hereafter in the guidance.

2.18 Regulation 8(1) states they do not apply in relation to:

- (a) damage that took place before the coming into force of these Regulations;
- (b) damage that takes place after (the CIF date), or is threatened after that date, but is caused by an incident, event or emission that took place before (the CIF date); or,
- (c) damage caused by an incident, event or emission that takes place after (the CIF date) if it derives from an activity that took place and finished before (the CIF date).

2.19 Some points to note:

- 'Activity' has the same meaning as at paragraph 2.13 above.
- An activity is considered to be ongoing where there are still obligations to be satisfied under the conditions of a permit such as in the case of after-care obligations for waste sites.

Acts of terrorism

2.20 Regulation 8(2)(a) states they do not apply where 'environmental damage' or an imminent threat of 'environmental damage' is caused by:

an act of terrorism

Natural Disasters

2.21 Regulation 8(2)(b) states they do not apply where 'environmental damage' or an imminent threat of 'environmental damage' is caused by:

an exceptional natural phenomenon, provided the operator of the activity concerned took all reasonable precautions to protect against damage being caused by such an event

2.22 Some points to note:

- An event that is foreseeable or is likely to happen in a given area every year or every few years is unlikely to be considered exceptional;
- What is reasonable (in terms of precautions) should be considered on a case by case basis.

Protection from natural disasters

2.23 Regulation 8(2)(c) states they do not apply where 'environmental damage' or an imminent threat of 'environmental damage' is caused by:

activities the sole purpose of which is to protect from natural disasters

Marine oil pollution

2.24 Regulation 8(2)(d)⁶ states they do not apply to 'environmental damage' or an imminent threat of 'environmental damage' where there is already liability under:

- (i) the International Convention of 27 November 1992 on Civil Liability for Oil Pollution Damage;
- (ii) the International Convention of 27 November 1992 on the Establishment of an International Fund for Compensation for Oil Pollution Damage;
- (iii) the International Convention of 23 March 2001 on Civil Liability for Bunker Oil Pollution Damage

National defence and international security activities

2.25 Regulation 8(2)(e) states they do not apply where 'environmental damage' or an imminent threat of 'environmental damage' is caused by:

activities the main purpose of which is to serve national defence or international security.

2.26 Point to note:

- This would cover national defence activities undertaken by the armed forces but would not cover, for example, the manufacture of munitions.

Radioactivity and nuclear

⁶ Two other conventions would be added to this list if they come into force in the UK. They are the International Convention of 3 May 1996 on Liability and Compensation for Damage in Connection with the carriage of Hazardous and Noxious Substances by Sea and the Convention of 10 October 1989 on Civil Liability for Damage Caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels.

2.27 Regulation 8(2)(f) states they do not apply where ‘environmental damage’ or an imminent threat of ‘environmental damage’ is caused by:

radioactivity from an activity covered by the Treaty establishing the European Atomic Energy Community; or an incident or activity in respect of which liability or compensation falls within the scope of the Paris Convention of 29 July 1960 on Third Party Liability in the Field of Nuclear Energy and the Brussels Supplementary Convention of 31 January 1963.

Sea fishing

2.28 Regulation 8(2)(g) states they do not apply where ‘environmental damage’ or an imminent threat of ‘environmental damage’ is caused:

in the course of commercial sea fishing if all legislation relating to that fishing was complied with

Diffuse pollution

2.29 Regulation 8(3) states that the Regulations:

only apply to environmental damage caused by pollution of a diffuse character if it is possible to establish a causal link between the damage and specific activities.

See chapter 9 on multi-party causation for guidance on where there is more than one operator.

Emissions, events or incidents that took place 30 years before

2.30 Regulation 33 states:

No enforcement action may be taken under these Regulations 30 years or more after the emission, event or incident concerned.

Authorised damage to species and habitats

2.31 Schedule 1.5 states the Regulations do not apply where damage to species and habitats:

has been caused by an act expressly authorised by the relevant authorities (for example, Natural England) in accordance with the Conservation (Natural Habitats, etc.) Regulations 1994 or Part II of the Wildlife and Countryside Act 1981.

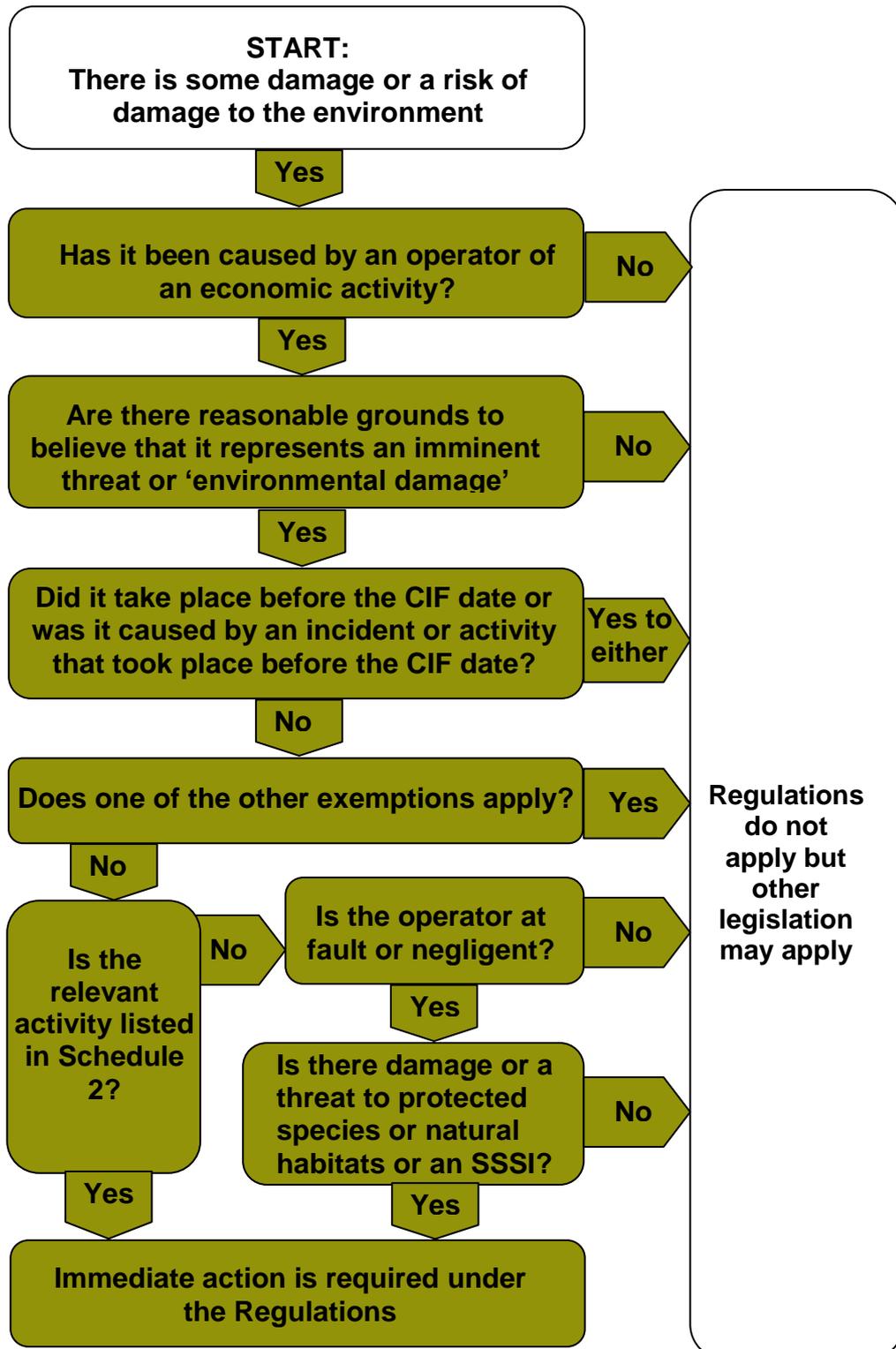
This would include where a competent authority under the Conservation (Natural Habitats, etc.) Regulations 1994 has, after an appropriate assessment, agreed a plan or project on a European site under Regulation 48 (‘having ascertained that it will not adversely affect the

integrity of the European site’) or Regulation 49 (‘the plan or project must be carried out for imperative reasons of over-riding public interest’).

Deciding whether the Regulations apply

2.32 The decision tree below is designed to help decide whether any action under the Regulations is required. Chapters 4, 5, 6 and 7 provide detail on what is required and the necessary processes where the Regulations do apply.

Figure 2.1: decision tree for the application of the regulations



3. Roles and responsibilities

Chapter 3 outlines the roles and responsibilities of the operator and the authority. Subsequent chapters set out the processes for carrying out roles and responsibilities in more detail.

Duties of operators

Take immediate action

- 3.1 Regulation 13 (1) covers the duty on operators to take action where there is an imminent threat:

An operator of an activity that causes an imminent threat of environmental damage, or an imminent threat of damage which there are reasonable grounds to believe will become environmental damage, must immediately –

- (a) take all practicable steps to prevent the damage; and
- (b) (unless the threat has been eliminated) notify all relevant details to the enforcing authority appearing to be the appropriate one.

- 3.2 Regulation 14(1) covers the duty on operators to take action where there are reasonable grounds to believe there may be ‘environmental damage’:

An operator of an activity that has caused environmental damage, or has caused environmental damage where there are reasonable grounds to believe the damage is, or will become environmental damage, must immediately –

- (a) take all practicable steps to prevent further damage; and
- (b) notify all relevant details to the enforcing authority appearing to be the appropriate one.

Provide further information

- 3.3 The operator must provide further information as required by the authority (Regulation 32). This information can be requested at any stage of the investigation or remediation.

Submit proposals

- 3.4 The operator must submit proposals for measures that will achieve the remediation of the ‘environmental damage’ where notified by the authority that it must do so. (Regulation 18(1)(c)).

Undertake preventive and remedial measures

3.5 The operator must carry out preventive and remedial measures in accordance with notices served on them. (Regulation 13(2), 14(2) and 20(2)). Regulations 13(3), 14(3) and 20(3) for England and 20(4) for Wales make it an offence to fail to comply with notices.

3.6 Regulation 30 covers grant of rights for entry and compensation for it:

Any person whose consent is required before any works required by these Regulations may be carried out must grant, or join in granting, such rights in relation to any land or water as will enable the operator, or a person acting on behalf of the operator, to carry out that work.

A person who grants, or joins in granting, any rights (as above) is entitled to compensation from the operator determined in accordance with schedule 6.

Pay costs claimed by authorities

3.7 The operator must pay any reasonable costs that the authority incurs in relation to imminent threat of 'environmental damage' and actual 'environmental damage' (Regulation 24 and 25).

Duties of authorities

Assess damage, identify an operator and require proposals

3.8 Regulation 17 covers the duty to assess damage:

Where damage has been caused, and there are reasonable grounds for believing that it is, or may be, environmental damage, the enforcing authority must establish whether or not it is environmental damage.

3.9 Regulation 18 covers the duty to identify and operator and require proposals:

If the enforcing authority decides that the damage is environmental damage it must identify the operator of any activity that caused the damage [...] and notify that operator that –

- (a) The damage is environmental damage;
- (b) The damage was caused by the activity of the responsible operator;
- (c) The responsible operator must submit proposals, within a time specified by the enforcing authority, for measures that will achieve the remediation of the environmental damage in accordance with Schedule 4; and
- (d) The responsible operator has a right to appeal.

The enforcing authority may withdraw the notification if it is satisfied that the

notification should not have been served or that an appeal against the notification is likely to succeed.

3.10 Regulation 29 covers the duty to consider and consult on requests for action (see chapter 12 for more detail):

the enforcing authority must consider the notification and inform the notifier as to the action, if any, that it intends to take.

Before taking any decision the enforcing authority must, if practicable –

- (a) notify the operator concerned of the notification and the accompanying information; and
- (b) invite that operator to submit comments on them.

Require remediation

3.11 Regulation 20 covers the duty to serve remediation notice:

Once it receives proposals from the responsible operator (or, if a proposal is not received within the specified time limit, at any time after the time limit has expired), the enforcing authority must, so far as is practicable, consult –

- (a) Anyone who has notified an enforcing authority under Regulation 29, and
- (b) Any person on whose land the remedial measures will be carried out,

and may consult any other person appearing to be necessary.

Following consultation the authority must serve a remediation notice on the operator that specifies:

- (a) the damage;
- (b) the measures necessary for remediation of the damage, together with the reasons;
- (c) the period within which those measures must be taken;
- (d) any additional monitoring or investigative measures that the operator must carry out during remediation; and
- (e) the right of appeal against the remediation notice.

In some cases consultation may, for example, take the form of asking consultees for general observations on factors that should inform the choice of remedial measures and in others it may take the form of consultation on specific measures.

Powers of authorities

Take steps to prevent or remedy ‘environmental damage’

3.12 Regulation 15 covers the power of authorities to carry out action to prevent damage or further damage:

Any duty in this Part on the operator of an activity may be carried out by the enforcing authority instead of the operator –

- (a) in an emergency;
- (b) if the operator cannot be ascertained; or
- (c) if the operator fails to comply with a notice.

3.13 Regulation 23 covers the power of authorities to carry out remedial works:

Once it has established that in its opinion damage is environmental damage, the enforcing authority may carry out any reasonable remedial works –

- (a) at any time if a operator cannot be identified;
- (b) if a responsible operator fails to comply with a remediation notice, whether or not an appeal is pending; or
- (c) if the operator is not required to remediate under these Regulations

Require information and action from operators

3.14 Regulation 32 covers the provision of information:

An enforcing authority may require an operator to provide such information as it may reasonably require to enable the enforcing authority to carry out its functions under these Regulations [...]

3.15 The Regulations provide for the authority to serve a notice on the operator requiring measures to prevent damage (Regulation 13) or further damage (Regulation 14) to be taken.

3.16 Regulation 22 covers the service of further remediation notices:

An enforcing authority may serve further remediation notices at any time while remediation is being carried out or, if remediation has not been achieved, at the end of the remediation period, requiring further or different remediation.

Powers of entry

3.17 The authority has certain powers under the Regulations.

3.18 The Regulations provide for the same powers as in section 108 of the Environment Act 1995 which includes, for example, powers to:

- Enter premises
- Take other people and equipment with them
- Make necessary investigations
- Direct that premises remain undisturbed
- Take necessary measurements, recordings, photographs or samples

- Take possession of articles that appear to have caused the damage
- Require questions to be answered

3.19 Regulation 31 provides for specific powers at sea, for example to board, inspect or stop vessels.

Who is the authority?

3.20 Regulation 10 details the enforcement arrangements for activities subject to permit under the Environmental Permitting Regulations (England and Wales) 2007, as follows:

If the Environment Agency is responsible for granting the permit, they are enforced by the Environment Agency in all cases.

If the local authority is responsible for granting the permit:

- (a) Part 2 of the Regulations (“Preventing environmental damage”) is enforced by the local authority;
- (b) Part 3 of the Regulations (“Remediation”) is enforced by -
 - (i) the local authority if the damage is to land;
 - (ii) the Environment Agency if the damage is to water;
 - (iii) Natural England [or the Countryside Council for Wales (CCW)] if the damage is to natural habitats or protected species or to a site of special scientific interest.

3.21 Regulation 11 details the enforcement arrangements in other cases as follows:

- Damage to water is enforced by the Environment Agency
- Damage to a SSSI or to protected species or natural habitats is enforced by:
 - Natural England or CCW if on land
 - The Environment Agency if in water but not in the sea
 - In England by the Secretary of State, and in Wales by Welsh Ministers, if on the continental shelf or in the renewable energy zone.⁷
- Damage to land is enforced by Local Authorities

3.22 Figure 3.1 below outlines the general rule for which authority will be the lead authority for particular types of damage and resulting from particular activities. If there is more than one type of damage, so that there is more than one authority, they are enforced by any or all of the specified authorities. Authorities may agree to transfer responsibility depending on the individual circumstances. Authorities have agreed procedures so that joint working runs as smoothly as possible and to reduce any risk of confusion for operators.

⁷ For these purposes the Secretary of State will act through the Marine and Fisheries Agency (MFA).

Figure 3.1 Authorities for different activities and types of damage

Activity	Water⁸	Species and habitats on land	Species and habitats in water	Marine species and habitats	Land
EA regulated Environmental Permits	EA	EA	EA	EA	EA
LA regulated Environmental Permits for Part 2 of the Regulations	LAs	LAs	LAs	LAs	LAs
LA regulated Environmental Permits for Part 3 of the Regulations	EA	NE/CCW	NE/CCW	NE	LAs
All other activities	EA	NE/CCW	EA	Secretary of State/Welsh Ministers or EA where regulated by them	LAs

⁸ Damage to water applies to inland and estuarine waters and in the sea to 1 nautical mile

4. Immediate action: prevention and notification

The Regulations require action from operators immediately when there is an imminent threat or reasonable grounds to suspect there is a case of 'environmental damage'. Chapter 4 sets out when immediate action is required and what steps are required. Figure 4.1 summarises the process.

Immediate action by the operator

Where the operator becomes aware of an imminent threat

4.1 Regulation 13(1) states:

An operator of an activity that causes an imminent threat of environmental damage, or an imminent threat of damage which there are reasonable grounds to believe will become environmental damage, must immediately –

- (a) take all practicable steps to prevent the damage and
- (b) (unless the threat has been eliminated) notify all relevant details to the enforcing authority appearing to be the appropriate one.

Regulation 13(3) states that failure to comply with these requirements is an offence.

4.2 An 'imminent threat of environmental damage' means that there is a sufficient likelihood that 'environmental damage' will occur in the near future. This may include circumstances where:

- A damaging event has not yet occurred but is sufficiently likely to in the future and lead to 'environmental damage' if action is not taken. For example, where a tank containing dangerous substances, which is situated near an aquifer⁹, is in very poor condition and is likely to leak without action to secure the tank.
- An event has occurred and there is no damage yet but there is a sufficient likelihood that 'environmental damage' will occur in the near future if action is not taken. Extending the tank example above, this is where the tank has already started to leak and the substances have entered the soil and are likely to migrate to the aquifer without action to contain the contamination.

4.3 Some points to note:

- In terms of the order in which operators do things, if it is not possible to provide all relevant details of the incident immediately, priority

⁹ An aquifer is the term for a source of groundwater.

should be given to preventing damage and notifying the authority that the imminent threat exists. Details of the incident and action taken should be provided to the authority as soon as possible afterwards.

- If there is an imminent threat of damage and there are reasonable grounds to suspect that it might be an imminent threat of 'environmental damage', the operator must take the immediate action to prevent it and notify the authority.

Where the operator becomes aware of potential 'environmental damage'

4.4 Regulation 14(1) states:

An operator of an activity that has caused environmental damage, or has caused damage where there are reasonable grounds to believe that the damage is or will become environmental damage, must immediately –

- (a) take all practicable steps to prevent further damage, and
- (b) notify all relevant details to the enforcing authority appearing to be the appropriate one

Regulation 14(3) states that failure to comply with these requirements is an offence.

- 4.5 Chapter 2 and Annex 1 of this guidance should help operators in deciding whether there is, or may be, 'environmental damage' to which the Regulations apply.
- 4.6 Regulation 14 also covers damage that will become 'environmental damage'. This is where damage has occurred which is not yet 'environmental damage' but is sufficiently likely to become 'environmental damage' if no action is taken. To use the example of the tank at 4.2, where the tank has leaked and the contamination has already started to enter the aquifer, the damage does not yet qualify as water damage. However, without action to control further migration of contamination into the aquifer, the damage is likely to become water damage.
- 4.7 There may be some level of uncertainty as to whether 'environmental damage' exists and operators may not immediately have sufficient information to make a definitive judgement. Regulation 14, therefore, specifies that action is required where there are reasonable grounds to believe that an activity has caused 'environmental damage', taking account of the uncertainty. Where operators are in doubt they are advised to take a precautionary approach and take immediate action.
- 4.8 As for imminent threats of 'environmental damage', if it is not possible to provide all details immediately, priority should be given to preventing damage and notifying the authority that the possible 'environmental

damage' exists and details should be provided as soon as possible thereafter.

Notifying authorities

4.9 Guidance on which authority to notify is provided at paragraph 4.15. It would be helpful to the authority if the operator states that they are reporting an imminent threat or damage under the Environmental Damage Regulations; although authorities will consider which legislation is relevant, if any. The operator is required to notify all 'relevant' details; in most cases this will include at least:

- Name and contact details;
- The date and time the threat of damage or damage was discovered or suspected;
- A grid reference or description for the location of the activity responsible for the imminent threat or damage and, if a different location, where the imminent threat or damage is or is likely to arise;
- A description of the activity giving rise to the imminent threat or damage (e.g. petrol station);
- The type of damage there may be, or may be an imminent threat of;
- Description of the circumstances giving rise to the imminent threat or damage
- Further details of the potential impact or damage, e.g. substances potentially released, habitats and species affected;
- An indication of the scale of the potential impact or damage;
- Any useful supporting information (e.g. sketch maps, photographs);
- Health and safety considerations.

4.10 Regulation 32 cover the provision of information to authorities:

An enforcing authority may require an operator to provide such information as it may reasonably require to enable the enforcing authority to carry out its functions under these Regulations, and failure to provide such information is an offence.

What it is reasonable to require will vary depending on the circumstances.

Authorities' powers to serve notices and take action

4.11 Authorities can also serve notices requiring measures to prevent damage (where there is an imminent threat) or further damage (where there is actual damage). This may be where they have been notified by an operator or where they have otherwise become aware of the imminent threat or damage (for example because they have been notified under paragraph 29 (see chapter 12) or through routine monitoring).

4.12 Regulation 13(2) states, for imminent threats:

The enforcing authority may serve a notice on the operator that –

- (a) describes the threat
- (b) specifies the measures required to prevent the damage; and
- (c) requires the operator to take those measures, or measures at least equivalent to them, within the period specified in the notice.

Regulation 13(3) states that failure to comply with such a notice is also an offence.

4.13 Likewise Regulation 14(2) states that, for actual damage:

The enforcing authority may serve a notice on the operator that -

- (a) describes the damage;
- (b) requires the operator to provide additional information on any damage that has occurred;
- (c) specifies the measures required to prevent further damage; and
- (d) requires the responsible person to take those measures, or measures at least equivalent to them, within the period specified in the notice.

Regulation 14(3) states that failure to comply with such a notice is also an offence.

4.14 Regulation 15 empowers authorities to carry out action themselves:

Any duty in this Part (about preventing damage and further damage) on the operator of an activity may be carried out by the enforcing authority instead of the operator –

- (a) In an emergency;
- (b) If the operator cannot be ascertained; or
- (c) If the operator fails to comply with a notice.

Who to notify

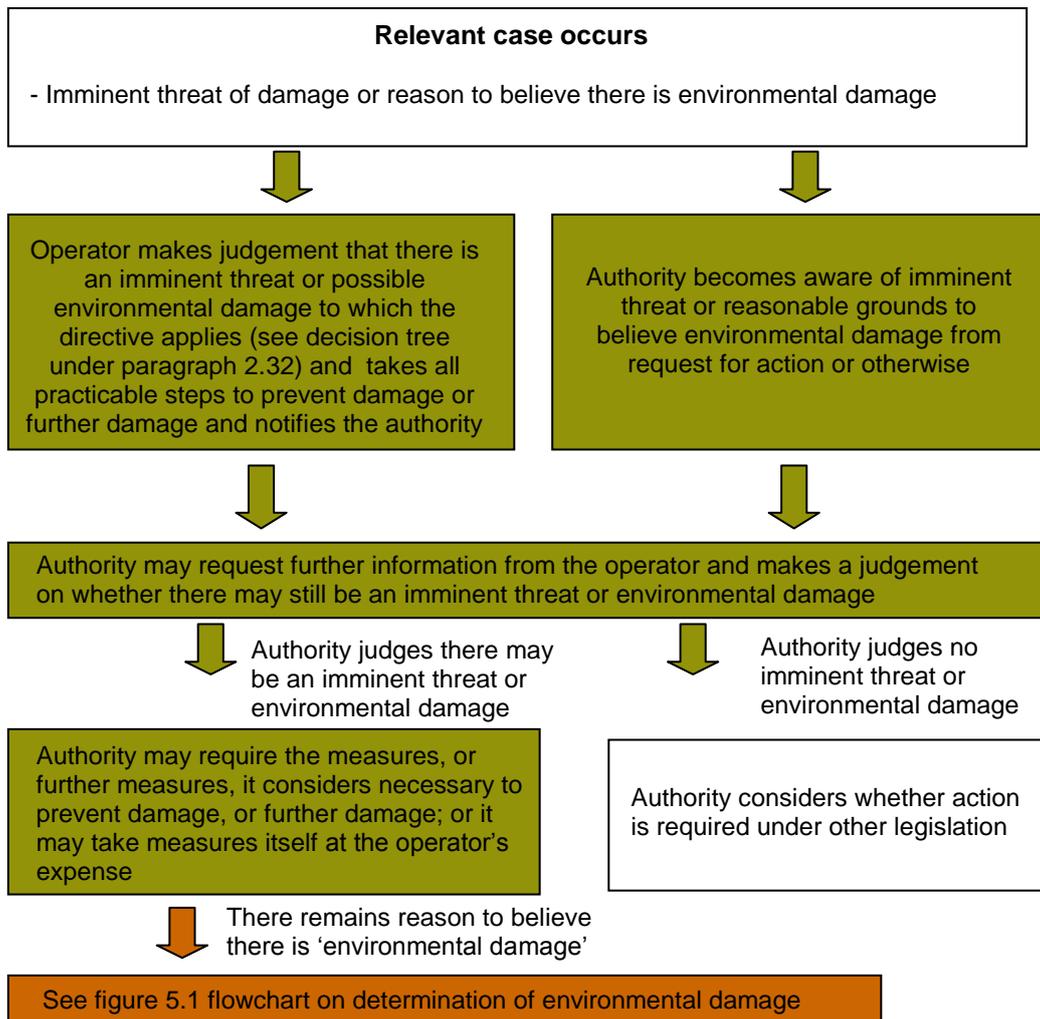
4.15 Imminent threats of 'environmental damage', or suspected 'environmental damage' should be reported to the appropriate authority. Figure 3.1 in the previous chapter summarises who this is depending on the activity causing damage and the type of damage. Contact details for authorities can be found at Annex 11. If there is uncertainty over who to contact, any of the authorities may be contacted. The imperative is not to delay in reporting.

Emergency arrangements

4.16 Some cases requiring immediate action under this chapter will be dealt with initially under existing emergency arrangements. Sometimes the emergency services such as the police, the fire service or the Maritime

and Coastguard Agency will be responsible for responding to the initial stages of an incident and will then pass over to the relevant authority under the Regulations. At other times the authority under the Regulations will deal with the initial stages under their existing arrangements for emergencies. Additionally, an incident under the Regulations may also be an “emergency” under the Civil Contingencies Act 2004, which has its own procedures. Where action that is taken under existing arrangements is provided for under the Regulations, authorities will be able to recover the costs it is eligible to recover under the Regulations from operators.

Figure 4.1: immediate action flowchart



5. Determination of 'environmental damage'

Chapter 5 sets out the process for determining whether damage is 'environmental damage' under the Regulations.

- 5.1 Once the authority is aware of a potential case of 'environmental damage', because it has been notified by an operator, as a result of a request for action or otherwise, it must establish whether or not it is 'environmental damage'. Regulation 17 covers this:

Where damage has been caused, and there are reasonable grounds for believing that it is or may be environmental damage, the enforcing authority must establish whether or not it is environmental damage.

The authority will take account of the guidance in Annex 1 of this guidance in determining whether damage is 'environmental damage'.

- 5.2 To assist its assessment, the authority may require the operator to provide any relevant information. Failure to provide such information is an offence (Regulation 32). The operator may also wish to make further information available to the authority to inform their judgement of whether there is 'environmental damage'. If so, they should liaise with the authority to find out by when information needs to be submitted.
- 5.3 The authority must then identify the operator and request him to submit proposals for remediation. Regulation 18 covers this:

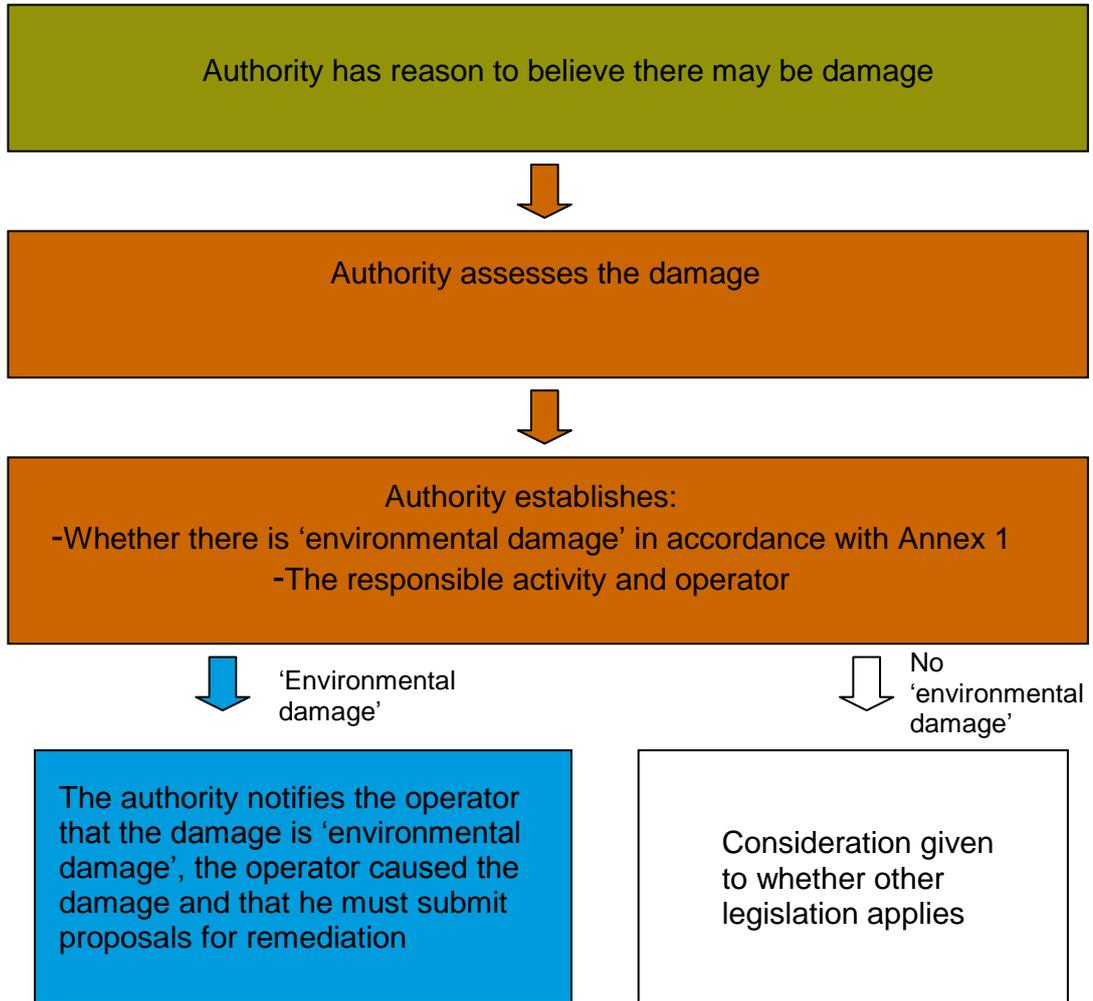
If the enforcing authority decides that the damage is environmental damage, it must identify the operator of any activity that caused the damage [...] and notify the operator that –

- (a) The damage is environmental damage;
- (b) The damage was caused by the activity of the responsible operator;
- (c) The responsible operator must submit proposals, within a time specified by the enforcing authority, for measures that will achieve the remediation of the environmental damage in accordance with Schedule 4; and,
- (d) the responsible operator has a right to appeal.

The enforcing authority may withdraw the notice if it is satisfied that the notice should not have been served or that an appeal against the notice is likely to succeed.

- 5.4 The final paragraph of Regulation 18 provides the operator with the opportunity to provide any additional evidence to the enforcing authority if they believe that the requirements of a remediation notice should not apply to them.

Figure 5.1: determination of damage flowchart



6. Process for deciding remedial measures

Chapter 6 sets out the process for how remedial measures are identified, evaluated and decided on.

Process for identifying remedial measures

- 6.1 Operators are required to submit proposals for remediation and responsibility for deciding the measures to be undertaken rests with the authority. It is envisaged that the process of identifying remedial measures should be a collaborative one whereby the authority and operator co-operate with each other, and with 'interested parties' (see paragraph 12.1), to ensure that the most appropriate measures are identified without undue cost or delay to either party. To facilitate this, the authority will need to communicate clear timescales. This will include informing the operator of the time within which it expects to undertake certain actions and to set time limits within which the operator is to propose measures or provide information. How this is envisaged is set out in the guidance below.
- 6.2 When the operator has been notified that he must submit proposals for remediation, or soon after, the authority will generally give the operator a main point of contact for the case. However, depending on the circumstances, input from several officers within or across authorities may be required.
- 6.3 In practice authorities and operators may not have all the necessary expertise or capacity in house to identify remedial measures and may therefore need to buy in the appropriate expertise. Expertise may also be provided by third parties, particularly where these have specialist information concerning the locality in question. Local authorities, other public authorities and environmental NGOs may all have valuable information.

Developing measures to propose to the authority

- 6.4 The authority will provide a time limit for proposing measures. Proposals will need to be consistent with Schedule 4 of the Regulations (chapter 8 provides guidance on Schedule 4). The operator may wish to consult the authority while developing measures to increase the likelihood that any measures proposed are acceptable to the authority. It should be noted that authorities will recover costs incurred from the operator. The operator should consider consulting with and involving interested parties early on when considering the measures they propose, if only to understand these parties' expectations of the remediation. Where the operator is able to adopt suggestions from interested parties this is likely

to increase the chances of their overall package of measures gaining wider support.

6.5 It is for the operator to decide what information to include in proposing measures and how many options to include. The authority will need sufficient information on any options proposed to be able to take them fully into account in deciding which option should be chosen. Information that may be useful to the authority will include:

- Time and location of damage;
- A description of the resources and services damaged including the nature, severity and extent of damage;
- A description of each option including:
 - Objectives of remediation
 - Actions taken to remediate (including primary, complementary and compensatory measures for damage to species and habitats and damage to water) and their location
 - Results expected
 - Measures to address uncertainty
 - The calculations and workings informing estimates of the scale of any complementary and compensatory measures
 - The cost of measures
- Other information to inform the authority's consideration of the criteria identified at paragraph 6.12;
- Methods statement;
- Project management and monitoring arrangements;
- Identification of data, modelling and expertise used to inform identification of remedial measures.

Where the operator appeals

6.6 If the operator appeals against liability to remediate and the appeal is unsuccessful, or the operator withdraws the appeal, the same processes as above will then apply. The authority will notify the operator that he must submit proposals within a specified time limit.

Where the operator fails to propose measures

6.7 If the authority has not heard anything from the operator within the time limit specified, or if the operator fails to propose measures, the authority will identify remedial measures. The authority may request information from the operator relevant to the damage or to possible remedial measures (Regulation 32). The authority may also wish to consider proposals from other interested parties when determining the appropriate measures. If an operator wishes to influence the final remediation notice, he must take the opportunity to propose a reasonable package of measures. Failure to do so will not prevent the service of a remediation notice which the operator will then be obliged to comply with.

Decisions on remedial measures

6.8 When the operator has submitted its proposals to the authority, the authority must then evaluate the options for remediation including those submitted by the operator and any others it sees fit to consider. The authority should, as a matter of good practice, inform the operator by when it expects to serve a remediation notice and keep the operator informed of any changes to the estimated timescale. The authority may request further information from the operator relevant to the damage, to measures that the operator has proposed or to different measures (this is permitted under the general power to request information in Regulation 32) and should set time limits for this information.

Consultation on proposals

6.9 Regulation 20(1) states:

Once it receives the proposals from the responsible operator (or, if a proposal is not received within the specified time limit, at any time after the time limit has expired), the enforcing authority must, so far as is practicable, consult –

- (a) anyone who has notified an enforcing authority under Regulation 29, and (chapter 12 of this guidance)
- (b) any person on whose land the remedial measures will be carried out, and may consult any other person appearing to be necessary.

6.10 The authority will decide how to consult given the specific circumstances and will give those consulted a reasonable time limit in which to respond. The authority must take account of any comments submitted within the time limit in deciding on the measures included in the remediation notice. The Regulations set out the minimum acceptable requirements and both authorities and operators are encouraged to consider how to constructively involve interested parties in the decision making process on a case by case basis. Effective involvement of interested parties should in most cases involve more than simply the opportunity to react to proposals after they have been agreed between the operator and the authority. Ideally interested parties who wish to be involved in the process of influencing the necessary remediation, should be given opportunities to do so.

6.11 Transparency in the process of decision-making is in the interests of all concerned including the operator, by increasing confidence in the result and ensuring unnecessary appeals and challenges are avoided. The operator and authority may want to consider the establishment of an advisory committee of interested parties as a means of involving them in the development of the proposals.

Evaluation of options for remediating damage to water or to protected species and natural habitats

6.12 In the case of damage to water or to protected species or natural habitats the authority must evaluate the options it considers may be appropriate including any options proposed by the operator on the basis of specific criteria. Schedule 4.6 states:

The remediation options must be evaluated using best available methods, and based on –

- (a) the effect of each option on public health and safety;
- (b) the cost of implementing the option;
- (c) the likelihood of success of each option;
- (d) the extent to which each option will prevent future damage, and avoid collateral damage as a result of implementing the option;
- (e) the extent to which each option benefits each component of the natural resource and/or service;
- (f) the extent to which each option takes account of relevant social, economic and cultural concerns and other relevant factors specific to the locality;
- (g) the length of time it will take for the restoration of the environmental damage to be effective;
- (h) the extent to which each option achieves the restoration of the site of the environmental damage;
- (i) the geographical linkage to the damaged site.

6.13 Evaluating options may for example, include deciding between improving different natural resources or services, between similar resources but at different sites or between restoring the damaged resources and services to different levels or at different speeds. The authority will need to be satisfied that the measures it chooses are sufficient to restore the natural resources or habitats to the state that would have existed before the damage took place, or equivalent, through a combination of primary, complementary and compensatory remediation. It will need to exercise judgement on how to balance the criteria above in any particular case and will need to record the basis on which the decision was made. 'Using best available methods' involves endeavouring to use the best data, models, quantitative methods and expertise appropriate to the nature and scale of the case under consideration. 'Best' in this context also incorporates the most appropriate to the case.

6.14 Schedule 4.8 identifies circumstances where the authority may decide that no further action may be taken:

The authority may decide that no further measures need be taken if:

- (a) The remedial measures already taken have removed any significant threat of adversely affecting human health, water or protected species and natural habitats, and

- (b) The cost of the remedial measures needed for restoration to its state before the incident would be disproportionate to the environmental benefits to be obtained.

Serving a remediation notice

6.15 The level of detail and coverage of a remediation notice will depend on the circumstances of the case. Regulation 20(2) states:

Following consultation the enforcing authority must serve a remediation notice on the responsible operator that specifies –

- (a) The damage;
- (b) The measures necessary for remediation of the damage, together with the reasons;
- (c) The period within which those measures must be taken;
- (d) Any additional monitoring or investigative measures that the responsible operator must carry out during remediation; and
- (e) The right of appeal against the remediation notice.

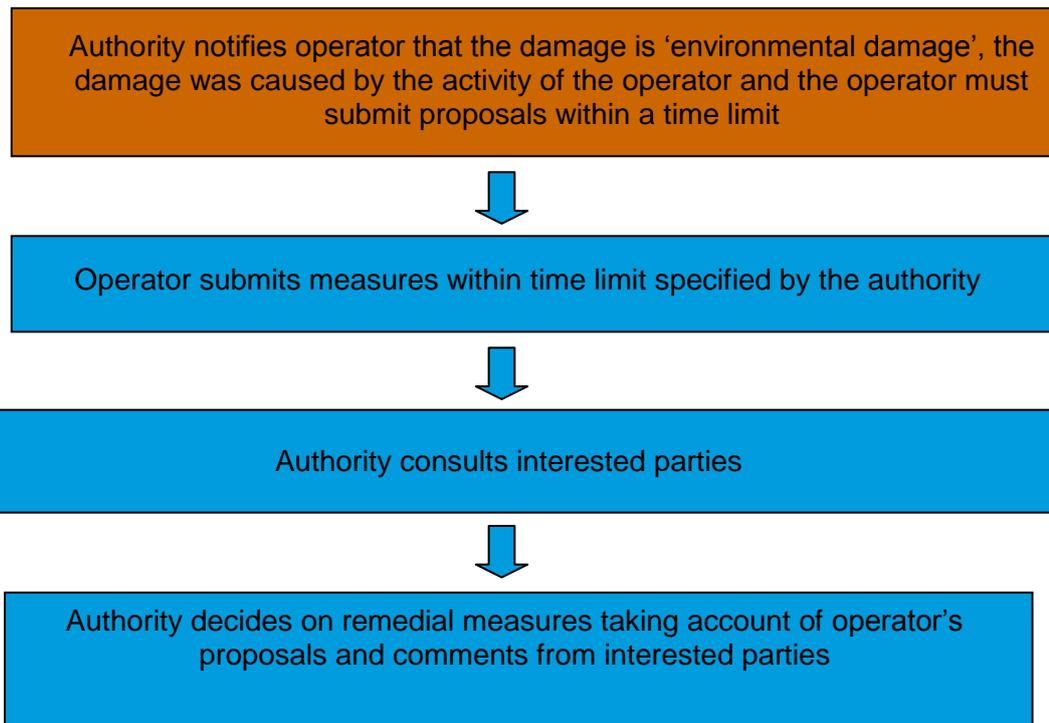
6.16 Authorities may also decide to include other information such as:

- The objectives of remediation;
- Results required;
- Methods statement;
- Required project management and reporting.

6.17 Regulation 22 covers the service of further remediation notices where remediation has not been achieved:

An authority may serve further remediation notices at any time while remediation is being carried out or, if remediation has not been achieved, at the end of the remediation period, requiring further or different remediation.

Figure 6.1: deciding remedial measures flowchart



7. Implementation of remedial measures

Chapter 7 covers issues concerning the implementation of remedial measures.

Carrying out remedial measures

- 7.1 The operator is responsible for carrying out remedial measures in accordance with the remediation notice. In many cases it is envisaged that the operator will engage contractors to implement the required measures.

Achievement of required results

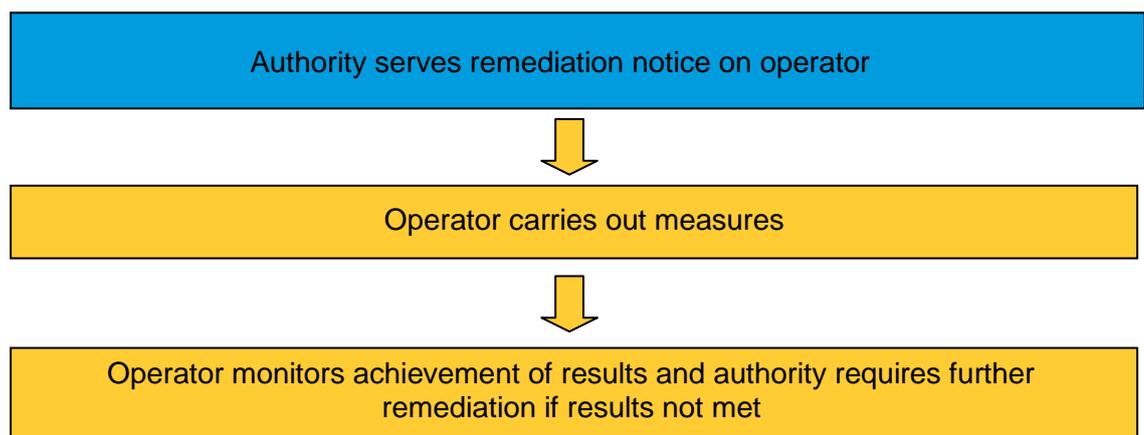
- 7.2 The operator is responsible for monitoring progress and the achievement of results and reporting as specified in the remediation notice.

- 7.3 Regulation 22 covers the service of further remediation notices:

An authority may serve further remediation notices at any time while remediation is being carried out or, if remediation has not been achieved, at the end of the remediation period, requiring further or different remediation.

- 7.4 If it becomes clear to the operator that the required results are unlikely to be achieved, the operator should notify the authority along with any suggestions for additional or alternative measures.

Figure 7.1: implementing remedial measures flowchart



8. Appeals

Chapter 8 sets out the circumstances in which appeals can be made, the grounds on which appeals can be made and the appeal procedures.

Appeals against liability to remediate

8.1 Regulation 19 covers appeals for liability to remediate:

A person served with notification under Regulation 18 [that there is environmental damage, that the operator caused the damage and that they are required to submit proposals for remediation] may notify the Secretary of State [or Welsh Ministers in Wales] that that person intends to appeal against that notification.

Notice of appeal must be within 28 days of service of the notification under Regulation 18 unless the time limit is extended by the Secretary of State or Welsh Ministers.

8.2 Regulation 19(3) sets out the grounds on which the operator may appeal:

- (a) The operator's activity did not cause the damage;
- (b) The enforcing authority has acted unreasonably in deciding that damage is environmental damage;
- (c) The environmental damage resulted from compliance with an instruction from a public authority, (except an instruction relating to an emission or incident caused by the operator's own activities);
(This refers to instructions that operators are required to follow compulsorily.)
- (d) The responsible operator was not at fault or negligent and the environmental damage was caused by an emission or event expressly authorised by, and fully in accordance with the conditions of a permit listed in Schedule 3;
(This ground for appeal is not available in Wales for 'environmental damage' caused by the deliberate release of GMOs. Permits will only expressly authorise and contain conditions for certain events and emissions and not for others. For example, pesticides authorisations do not expressly authorise each application of pesticide; in this case the 'state of knowledge' defence immediately below may be more relevant.)
- (e) The responsible operator was not at fault or negligent and the environmental damage was caused by an emission or event or any manner of using a product in the course of an activity that the operator demonstrates was not considered likely to cause environmental damage according to the state of scientific and technical knowledge at the time when the emission was released or

the activity took place;

(This ground for appeal will not apply in Wales for 'environmental damage' caused by the deliberate release of GMOs.)

- (f) The damage was the result of an act of a third party and occurred despite the fact that the operator took all appropriate safety measures;
(This refers to safety measures to prevent the damage occurring including, for example, measures to prevent third parties from accessing plant or substances that might be the source of damage. What safety measures are 'appropriate' should be considered on a case by case basis.)

8.3 The person deciding the appeal may confirm or quash the notice.

Appeals against remediation notices

8.4 Regulation 21 contains provisions on appeals against remediation notices.

The responsible operator may notify the Secretary of State (or Welsh Ministers in Wales) that that person intends to appeal against the remediation notice on the grounds that its contents are unreasonable.

An appeal may only be brought against those parts of the remediation notice that are different from proposals made by the responsible operator.

Notice of appeal must be served within 28 days of service of the remediation notice unless the time limit is extended by the Secretary of State (or Welsh Ministers in Wales).

Schedule 5 contains procedures for the appeal (see below).

The Secretary of State (or Welsh Ministers in Wales) or the appointed person may confirm, vary or quash the notice, and must give written notification of the final decision and the reasons for it, and may, if appropriate, add further compensatory remediation requirements necessitated by the lapse of time since the remediation notice was served.

A remediation notice need not be complied with pending determination of an appeal unless the person hearing the appeal directs otherwise

8.5 In considering whether to direct that the remediation notice needs to be complied with, the person hearing the appeal may wish to seek advice from the enforcing authority.

8.6 The person deciding the appeal may allow or dismiss the appeal and either confirm, vary or quash the notice.

Annex 9 provides details of the procedures for appeals against liability to remediate and against remediation notices.

Appeals against charging notices

8.7 Regulation 27(6) provides for appeal against charging notices:

A person served with a (charging) notice or copy of a notice [...] (see paragraph 10.10) may appeal against the notice to the county court within the period 21 days beginning with the date of service.

8.8 Regulation 27(7) covers action the court can take in response to such an appeal:

On such an appeal the court may –

- a) confirm the notice without modification
- b) order that the notice is to have effect with the substitution of a different amount for the amount originally specified in it, or
- c) order that the notice is to be of no effect.

9. Multi party causation

Chapter 9 explains what the arrangements are for cost allocation where two or more operators are responsible for 'environmental damage'.

- 9.1 Multi party causation encompasses situations where:
- i) One emission or event leads to 'environmental damage' but two or more operators are responsible for the emission or event, for example where one party has produced the polluting product that another party has used.
 - ii) There are several emissions or events leading to 'environmental damage' for example where two or more operators discharge pollutants into one water body.
- 9.2 The Regulations are intended to apply to both i) and ii) above.
- 9.3 Where more than one activity contributes to an incident, it will not be necessary for the authority to apportion blame. The operator of any of the activities can be required to remediate under the Regulations. Operators in this situation may claim contribution from any other operator who is also to blame for the incident, but this is not a matter for the authority.
- 9.4 The Regulations will not normally be able to be applied to cases where 'environmental damage' results from the cumulative impacts of the actions of several operators, possibly over a period of time. In many such cases it will not be possible to identify the operators concerned. In some cases, enforcement action might still be appropriate under other legislation.
- 9.5 In certain cases, 'environmental damage' may be caused by the actions of a small number of identifiable operators although it may not be possible to show that the actions of any operator alone caused the damage to breach the relevant thresholds. In such a case, the authority may notify more than one operator under Regulation 18 and serve a remediation notice on each one.
- 9.6 Operators in this situation should endeavour to agree between themselves both as to the remedial options which should be proposed, and also as to the shares in which they should bear the costs of the measures to be carried out.
- 9.7 If remedial action is not carried out, the authority may carry out necessary work and reclaim the costs against any or all of the operators concerned. Operators may claim contribution from any other operator who is also responsible for the damage.

9.8 Whether or not more than one operator is responsible for 'environmental damage' will depend on the facts and evidence of the case. Authorities will need to act reasonably.

10. Cost recovery

Chapter 10 sets out the circumstances in which the authority may seek to recover costs incurred in relation to any preventive and remedial actions taken under these Regulations.

Costs

10.1 Regulations 24 to 27 deal with the costs that authorities can recover from operators.

10.2 Regulation 24 covers costs where the authority takes action instead of the operator:

An operator liable to carry out works under Part 2 is liable for any reasonable costs incurred by the enforcing authority in taking any reasonable action under regulation 15.

The responsible operator is liable for the reasonable costs of the enforcing authority for any action taken under regulation 23 unless the responsible operator was not liable for the action taken.

10.3 Regulation 25 covers the costs where the authority takes enforcement action against an operator:

An operator liable to carry out works under Part 2 is liable for the reasonable costs incurred by the enforcing authority in preparing any notice under Part 2 (preventing damage and further damage), or in ensuring compliance with that Part.

The responsible operator is responsible for the costs incurred by the enforcing authority under Part 3 (remediation) of –

- (a) Assessing whether the damage is environmental damage;
- (b) Establishing who is the responsible operator;
- (c) Establishing what remediation is appropriate;
- (d) Carrying out necessary consultation; and
- (e) Monitoring the remediation, both during and after the work.

Costs means costs that are justified by the need to ensure the proper and effective enforcement of these Regulations.

10.4 In essence this means all the costs associated with enforcing the Regulations against a liable operator can be recovered. It includes, for example the costs of undertaking investigative works and collecting data.

10.5 Costs can be recovered irrespective of how many authorities are

involved in a particular case, or whether authorities carry out work themselves or contract agents to work on their behalf for some or all elements of the work. In general, one authority will recover costs from the operator on behalf of all the authorities that have incurred costs.

10.6 In some cases certain costs cannot be recovered by the authority including the costs of:

- Assessing damage where the damage turns out not to be 'environmental damage';
- Remediating damage which results from compliance with an instruction from a public authority (except an instruction relating to an emission or incident caused by the operator's own activities);
- Remediation where an appeal against a remediation notice has been successful;
- Administering appeals.

10.7 Authorities may provide for flat-rate calculation of costs including, for example, hourly charge rates and rates for specific tasks.

10.8 Authorities may choose to recover costs in phases particularly where expenditure is incurred over a long period of time.

Time limit for recovery of costs

10.9 Regulation 26 covers the time limit for the recovery of costs:

No proceedings for the recovery of costs may be commenced after a period of 5 years has elapsed since -

- the completion of the measures to which the proceedings relate, or
- the identification of the operator,

whichever is the later.

Charges on premises

10.10 Regulation 27 provides for an authority to recover its costs by imposing a charge on the operator's premises¹⁰. The authority does so by serving a charging notice. On the same date as it serves a notice, the authority must also serve a copy of the notice to every other person who, to the knowledge of the authority has an interest in the premises capable of being affected by the charge.

10.11 A charging notice served under the Regulation must specify the amount of recoverable costs and the rate of interest the authority has determined as reasonable. The amount plus any interest becomes a charge on the premises either 21 days after the notice is served or, where there is an appeal, once it has been determined or withdrawn. It remains a charge until the costs and interest are recovered.

¹⁰ A charge on a premises enables funds to be recovered when the property is sold.

10.12 An authority acting under this Regulation shall have all the same powers and remedies as a mortgagee of the property. Ultimately if payment is not made, the authority could apply to the Court for their charge to be realised and this could result in the sale of the property.

Recovery of costs by operators

10.13 Regulation 16 permits operators to recover costs from a public authority where they have acted on the specific instruction of that public authority and unless the instruction relates to an emission or incident caused by the operator. It states:

When an operator acts in accordance with the instructions of a public authority, and as a result causes or threatens to cause environmental damage, and accordingly action is taken under Regulations 13, 14 or 15 then, unless the instructions related to an emission or incident caused by the operator's own activities, the operator may recover the costs of actions under those regulations from that public authority.

10.14 Regulation 28 permits operators to recover costs from any other person who also caused the damage. It states:

An operator who incurs liability to the enforcing authority under these Regulations (whether in carrying out work or in payment to the enforcing authority) may recover all or some of those costs from any other person who also caused the damage.

11. Offences and penalties

Chapter 11 sets out the offences and penalties under the Regulations.

11.1 There are offences for:

- Failing immediately to take all practicable steps to prevent damage or notify the authority where there is an imminent threat of 'environmental damage' (or of damage that there are reasonable grounds to believe will become 'environmental damage').
- Failing immediately to prevent further damage or notify the authority where the operator of an activity has caused 'environmental damage' or has caused damage where there are reasonable grounds to believe that the damage is or will become 'environmental damage'.
- Failing to comply with a notice to prevent damage or further damage;
- Failing to comply with a remediation notice;
- Failing to provide information pursuant to these Regulations required by an authority;
- Failing to comply with instructions given under Regulation 31 (powers of entry etc.);
- Providing false or misleading information to an authorised officer.

11.2 A person guilty of an offence under these Regulations is liable:

- on conviction in the Magistrate's Court, to a fine not exceeding the statutory maximum or to imprisonment for a term not exceeding three months or both; or
- on conviction in the Crown Court, to a fine or to imprisonment for a term not exceeding two years, or both.

11.3 Where a company is guilty of an offence, any director, manager, secretary or other person in authority, or purporting to be in authority, in the corporation, may also be guilty of an offence if it is proved that the offence was committed with their consent or they have been negligent.

11.4 There may also be certain aspects of individual cases which make it appropriate to use sanctions under other legislation alongside those in the Regulations. For example, in cases where operators have caused damage intentionally or recklessly, it may be appropriate to prosecute them for criminal behaviour. The worked example after paragraph A2.32 illustrates this.

12. Requests for action

Chapter 12 sets out the procedure for anyone with a sufficient interest to request action from the authority.

12.1 Regulation 29 covers rights to request action, Regulation 29 (1) states:

Any person -

- (a) who is affected or likely to be affected by environmental damage;
- (b) or who otherwise has a sufficient interest

may notify the appropriate enforcing authority of any environmental damage which is being, or has been caused or of which there is an imminent threat.

Those identified at (a) and (b) above are referred to as 'interested parties' in the title of Regulation 29 and in this guidance.

12.2 Those affected by, or likely to be affected by, the 'environmental damage' would depend on the circumstances but could, for example, include:

- Birdwatchers
- Ramblers
- Recreational fishermen
- Residents
- Those whose health may be at risk from contaminants
- Those responsible for children or elderly persons whose health may be at risk

12.3 Those with a 'sufficient interest' for the purposes of the Regulations would also depend on the circumstances but would include charities registered with the Charity Commission whose objects include the conservation of the environment.

12.4 It should be noted that under existing arrangements anyone is already entitled to draw relevant incidents to the attention of public authorities and this will remain the case irrespective of whether individuals qualify specifically to request action under the Regulations.

Who to notify

12.5 Imminent threats of 'environmental damage', or possible 'environmental damage' should be reported to the appropriate authority. Figure 3.1 (in chapter 3) summarises who this is depending on the activity causing damage and the type of damage. Contact details for authorities can be found at Annex 11. If there is uncertainty over who to contact, any of the authorities may be contacted.

Reporting imminent threats or actual damage

12.6 Having identified and contacted the appropriate authority, interested parties should state that they are reporting an imminent threat of damage, or possible 'environmental damage' under these Regulations. They will need to provide:

- (a) a statement explaining the way the person requesting action will be affected by the damage, or the reason that he has a sufficient interest, and
- (b) sufficient information to enable the enforcing authority to identify the location and nature of the incident.

(Regulation 29(2))

12.7 Although the authority will always wish to consider cases which appear to require enforcement action, it will not be under any formal obligation to report back to the notifier if it concludes that:

- he is not likely to be affected; or
- does not have a sufficient interest; or
- if in its opinion the information does not disclose any genuine 'environmental damage' or imminent threat of 'environmental damage'.

12.8 Therefore sufficient information should be provided to show that there is plausibly an imminent threat or 'environmental damage'. The following is likely to be needed as a minimum, where possible:

- name and contact details of person requesting action;
- the date and time the imminent threat or possible 'environmental damage' was discovered;
- a reference or description of the location of the activity giving rise to the imminent threat or possible 'environmental damage';
- a factual description of the activity giving rise to the imminent threat or possible 'environmental damage';
- a description of the location where the imminent threat or possible 'environmental damage' is likely to occur, if different to the location above;
- which type of 'environmental damage' it may be, or the imminent threat may cause;
- further details of the potential impact or 'environmental damage', e.g. substances actually or potentially released and nearby species and habitats;
- an indication of the scale of the potential impact or 'environmental damage';
- any useful supporting information (e.g. sketch maps, photographs) of the imminent threat or 'environmental damage'.

12.9 The authority may ask for further information about the imminent threat of damage, or of the possible 'environmental damage'. This may vary, depending on the circumstances of the imminent threat or the type of damage.

Action by the authority

12.10 Regulation 29(3) states:

The enforcing authority must consider the notification and inform the person requesting action what action, if any, it intends to take

As a matter of good practice the authority should inform the person requesting action of the timescale it expects to inform them of the action it intends to take.

12.11 Regulation 29(4) states:

Before taking any decision, the authority must, if practicable -

- (a) notify the operator concerned of the notification and the accompanying information^[11]; and
- (b) invite that operator to submit his comments on them.

12.12 The authority does not have to satisfy the requirements in paragraphs 12.10 or 12.11 (above) if -

- (a) The notifier is not likely to be affected or does not have a sufficient interest;
- (b) In the opinion of the authority the information provided does not disclose any environmental damage or threat of environmental damage; or
- (c) As a result of the urgency of the situation, it is not practicable for the enforcing authority to comply with those paragraphs

(Regulation 29(5))

¹¹ Subject to applicable data protection rules.

Annex 1: What is 'environmental damage'?

Annex 1 provides guidance on what 'environmental damage' is and how it is to be assessed.

A1.1 The assessment of whether damage is 'environmental damage' is likely to require a certain amount of data collection. **Similar data may be needed later for assessing remedial measures.** In general terms establishing whether there is 'environmental damage' involves assessing whether the damage is above a particular threshold. Where there is 'environmental damage', more precise information may be required on the extent, severity and likely duration of damage to establish the scale of remediation required¹². **It is therefore likely to be advisable to review potential data requirements for the assessment of remedial measures before any data collection is undertaken.** This is so data can be collected and documented in such a way that it can be used subsequently and in case it may be more efficient to collect all data needed at this stage.

Damage to species and habitats

A1.2 Damage to species and habitats includes:

- i. Damage to protected species and natural habitats
- ii. Damage to a site of special scientific interest

A1.3 Damage to protected species and natural habitats is where:

- The Regulations apply if the damage is to certain species and habitats and species protected under EU legislation. See Annex 6
- The damage is severe enough to have:

a significant adverse effect on reaching or maintaining the favourable conservation status of the protected species of natural habitat (referred to in this guidance as **a significant conservation status effect**). (Schedule 1.1)

Paragraphs A1.23 to A1.45 provide guidance on significant conservation status effects.

A1.4 Damage to a site of special scientific interest (SSSI) is where:

- The damage is within, or partly within, a Site of Special Scientific Interest (SSSI)
- the damage is to:
 - species or habitats notified under section 28 of the Wildlife and Countryside Act 1981 (i.e. they are on the citation for the SSSI) or
 - certain habitats and species protected under EU law¹³; and,

¹² This is particularly relevant for damage to water and damage to species and habitats.

¹³ These are listed in Annex 2 of this guidance

- the damage is severe enough to have

an adverse effect on the integrity of the site (referred to in this guidance as a **site integrity effect**). (Schedule 1.4 (2))

Paragraphs A1.7 to A1.21 provide guidance on site integrity effects.

Figure A1.1: decision tree for damage to species and habitats



A1.5 A site integrity effect and a significant conservation status effect differ in that the first involves a judgement as to the scale of damage at the level of the site whereas the second involves a judgement as to the level of damage to an EU species or habitat across its natural range. The latter may be a more difficult and complex judgement to make.

A1.6 A judgement in any particular case will, of course, depend on the circumstances of that case and such judgements must therefore be made on a case-by-case basis. This guidance is intended to provide some principles and a framework for making judgements. The rest of this section comprises guidance on making judgements on:

- Site integrity effects
- Significant conservation status effects

Site integrity effects (i.e. where there is damage to a SSSI)

A1.7 The Regulations state:

In the case of a site of special scientific interest, the damage must be to –

- (a) the species or habitats notified under section 28 of the Wildlife and Countryside Act 1981 or
- (b) EU species and habitats

The damage must have an adverse effect on the integrity of the site (that is the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats or the levels of populations of the species affected).

(Schedule 1.4)

A1.8 Judgements on site integrity effects will therefore be made in relation both to the species or habitats on SSSI citations and to the EU species and habitats.

SSSIs

A1.9 There are over 4000 Sites of Special Scientific Interest (SSSIs) in England and over 1000 SSSIs in Wales. A citation exists for each of these, which explains the reasons they were notified. They can be notified for their flora, fauna, geological or physiographical features, but the Regulations only apply to their flora and fauna (species and habitats). The locations and citations of all SSSIs in England are available by using “Nature on the Map” (<http://www.natureonthemap.co.uk/map.aspx?m=sssi>), or by contacting the local Natural England office (see Annex 11). Details for Wales can be found at <http://www.ccw.gov.uk/landscape--wildlife/protecting-our-landscape/protected-areas-map.aspx> or by contacting the local Countryside Council for Wales office (see Annex 11).

A1.10 The majority of SSSIs have been designated on land above the Mean Low Water mark, although some coastal sites extend to Lowest Astronomical Tide

or beyond to include subtidal areas that are integral to their features of special interest (such as the subtidal channels of estuaries).

Assessing site integrity effects

A1.11 The first step in assessing whether there is a site integrity effect is to determine whether the activity has affected relevant species or habitats, by referring to Annex 6 of this guidance and the relevant citations. It should be noted that species and habitats within a site can be affected by activities that occur outside a site, e.g. pollutant discharge upstream of a protected section of a river. If relevant species or habitats have been affected, the next stage is to determine whether the effect is severe enough to be 'site integrity effect'.

A1.12 The concept of the 'integrity' of sites designated for their nature conservation interest has been the subject of several pieces of guidance¹⁴ for the purposes of making judgements under Article 6.3 of the Habitats Directive. In this context authorities have to be satisfied that a plan or project will not have an adverse effect on site integrity whereas in the context of these Regulations an authority has to judge whether the damage has had (or will have) an adverse effect on site integrity.

A1.13 Previously the concept of the integrity of a site has been relevant to sites designated as Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). The Regulations extend the concept to cover all SSSIs. There is a significant degree of overlap between SSSIs on one hand and SACs and SPAs on the other¹⁵ so the concept was already potentially relevant to the majority of SSSIs.

A1.14 The central question when judging whether there is a site integrity effect is whether 'the coherence of [the site's] ecological structure and function, across its whole area' has been affected such that it is less able 'to sustain the habitat, complex of habitats or levels of populations of the species affected' (see paragraph A1.7)¹⁶.

A1.15 Judgements on site integrity effects can be approached in two stages. First, the questions below may be used to identify if there is a potential mechanism through which an adverse effect on integrity may occur. They relate to the habitats and species covered by the definition of damage.

- Has the area of habitat been reduced?
- Has the structure and function, condition or quality of a habitat been adversely affected?

¹⁴ Such as:

http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/provision_of_art6_en.pdf and <http://www.planninghelp.org.uk/NR/rdonlyres/51E3F3F7-6F17-4E26-A570-87908B964400/0/062005.pdf>

¹⁵ All SACs and SPAs are underpinned by SSSIs and around 75% of SSSIs by area are designated as SACs or SPAs.

¹⁶ This definition comes from paragraph 20 of 'ODPM Circular 06/2005 Biodiversity & Geological Conservation - Statutory Obligations and their Impact within the Planning System'

- Have species been adversely affected directly (e.g. mortality) or indirectly (e.g. disturbance or habitat loss)?
- Has there been any impact on the physical, chemical, hydrological or biological processes that support the habitats or species?

A1.16 If the answer to **all** of the questions is “no” then it is reasonable to conclude that there is not a site integrity effect. If the answer to one or more of the questions is “yes” then the further site specific parameters listed below need to be considered. Those key site specific parameters are:

- timing of impact
- scale of impact
- severity of impact
- recovery potential

Timing of damaging event or emission

A1.17 The timing of an impact will affect the likelihood that site integrity has been affected. For example, an event which increases the turbidity of a pond with important populations of great crested newts would be less likely to affect the site’s objectives and its capacity for self-repair in autumn when the newts are on land.

Scale of impacts

A1.18 Factors considered when making judgements on scale for habitats may include the proportion of habitat lost or otherwise adversely affected. For species it may include the proportion of species directly affected or potentially indirectly affected (e.g. through disturbance or habitat loss). It may be necessary to provide estimates rather than precise measurements or readings, particularly for species proportions. Habitat proportions should be calculated based on the total area of each specific habitat at the site, not the total area of the whole site. Likewise species proportions should be calculated for each individual species at the site. This guidance does not specify fixed proportions in defining whether there is a site integrity effect, as this depends on site specific factors.

Severity of impacts

A1.19 The severity of impacts will vary greatly, depending on the activity that has caused the damage, the resilience of the habitat or species and other factors. Development may completely destroy a habitat, whilst drainage of a wetland would degrade its quality. Shooting or poisoning of a species would cause direct mortality, whilst excessive noise disturbance may potentially reduce feeding opportunities.

Recovery potential

A1.20 Judgements on recovery should take into account whether:

- i) recovery is possible;

- ii) if so, whether natural recovery is possible or whether active intervention would be necessary; and
- iii) the timescale for recovery.

These factors will frequently be influenced by the severity of the impact, but it can also vary with habitat type. For example, Juniper scrub would take much longer to recover from a fire than a dry heathland, as Juniper is a fire sensitive species whilst heather is fire resistant. There may also be factors that prevent recovery such as where the damage involves, for example, contaminants or physical obstructions that need to be removed before recovery is effective.

A1.21 Some more general considerations when making judgements on site integrity are:

- the inherent capacity for meeting any objectives set for a site
- its capacity for self-repair and self-renewal under dynamic conditions
- the level of external management of the site required¹⁷.

A1.22 In some cases species or habitats on a site may already be in a poor condition or severely damaged and an emission, event or incident may further damage them or prevent them from recovering. Such cases should not automatically be excluded. Consideration should be given to the extent to which it affects their recovery potential as well as the timing, scale and severity of the effect.

Significant conservation status effects

A1.23 The term 'significant conservation status effect' is used in this guidance for where there is:

a significant adverse effect on reaching or maintaining the favourable conservation status of protected species and natural habitats.

'Protected species and natural habitats' refers to specific species and habitats protected under the Habitats Directive and the Birds Directive; Annex 6 provides more detail.

A1.24 The definition of conservation status is given in Schedule 1 of the Regulations. It is derived from the Habitats Directive. For habitats, conservation status is:

the sum of the influences acting on that habitat and its typical species that may affect its long-term natural distribution, structure and functions as well as the long-term survival of its typical species.

Its conservation status is favourable if -

¹⁷ These factors are based on the European Commission's document: 'Managing Natura 2000 sites: The provisions of Article 6 of the Habitats Directive 92/43/EEC'.

- (a) the natural range and areas covered within that natural range are stable or increasing;
- (b) the specific structure and functions which are necessary for the long-term maintenance of the natural habitat exist and are likely to continue to exist for the foreseeable future; and
- (c) the conservation status of its typical species is favourable.

(Schedule 1.2)

A1.25 For species:

conservation status is the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations.

The conservation status is favourable if -

- (a) the population dynamics data on the species concerned indicate that it is maintaining itself on a long term basis as a viable component of its natural habitat;
- (b) the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future; and
- (c) there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long term basis.

(Schedule 1.3)

A1.26 The significance of an effect has to be assessed by reference to the factors mentioned at Schedule 1(1) of the Regulations. These are:

- (a) the conservation status at the time of the damage;¹⁸
- (b) the services they provide;¹⁹
- (c) their capacity for natural regeneration;²⁰
- (d) the number of individuals, their density or the area covered;²¹
- (e) the role of the particular individuals or of the damaged area in relation to the species or to the habitat conservation, and the rarity of the species or habitat assessed at the relevant level whether local, regional or Community-wide;²²
- (f) the capacity of the species for propagation, its viability or the capacity of the habitat for natural regeneration;²³
- (g) the capacity of the species or habitat to recover within a short time of the damage being caused to a condition which leads to its state at the time of the damage or better without any intervention other than increased protection measures.²⁴

¹⁸ See paragraphs A1.29 to A1.45

¹⁹ See paragraph A1.42 for habitats and A1.44 for species

²⁰ See paragraph A1.37

²¹ See paragraphs A1.29 and A1.41 for habitats and paragraph A1.44 for species

²² See paragraph A1.36

²³ See paragraphs A1.37 and A1.43

²⁴ See paragraph A1.37

The footnotes provide references for where these factors are incorporated in the guidance below.

Is there a significant conservation status effect?

A1.27 The Regulations will require a qualitative judgement supported by a range of sound information on both the damage incurred and the contextual factors referred to in paragraph A1.26 on the species or habitats affected. This guidance sets out the approach to making such judgements.

A1.28 A 'significant' effect is more than simply a measurable one. As a guide it is helpful to consider that 'significant' has a meaning, comparable to its use in environmental impact legislation, which relates to the importance of the effect rather than its magnitude. For the purpose of the Regulations, a significant conservation status effect is one which is of importance in terms of the effect making it significantly harder to maintain the favourable conservation status of a species or habitat, or making it significantly harder to reach favourable conservation status.

A1.29 The first step will be to identify whether 'protected species and natural habitats' are affected. Annex 6 provides a list of the relevant species and habitats. If they are affected the next stage is to collect both information about the nature and scale of damage and contextual information about the species or habitat to be able to make a judgement on whether the damage is significant in terms of the conservation status of the species or habitat. Judgements should be based on the same parameters EU Member States use for reporting status to the Commission²⁵²⁶²⁷. Where the UK conservation status is unknown this does not mean that no assessment is possible and therefore that the damage does not meet the threshold, but rather that a judgement must be made on the basis of information available.

A1.30 A relevant range needs to be chosen for the purposes of assessing conservation status and impacts on conservation status for the purposes of the Regulations. Reporting under article 17 of the Habitats Directive is at the level of EU member states, and other guidance under that Directive indicates that range should generally be taken at the member state level. A similar approach will be appropriate for the purposes of assessing the impact of incidents, events or emissions for the purposes of the Regulations. This is because it will

²⁵These (Article 17) reports are produced every six years: the report produced in 2007 covered the period until 2006. For most habitats and species this report includes the first detailed identification of 'favourable reference values', which in many cases correspond to the baseline status at 1994 (when the Habitats Directive was not adopted), and are used in assessing whether current status is favourable or not. Current or past trends in each of the parameters are also considered.

²⁶Reports include the habitats and species listed in Annexes I, II and IV of the Habitats Directive. For birds there is currently no equivalent assessment but information is available for many species on some of the parameters of conservation status, including population and range, through other sources (e.g. population status of birds in the UK – see <http://www.jncc.gov.uk/page-2902>). Little information is available on the habitats of birds.

²⁷At the time of writing assessments had only covered the natural range of species and habitats within Member States.

rarely be meaningful in ecological terms to take the entire natural range or biogeographical region as the relevant range.

A1.31 In a few cases, it might be appropriate to take an area greater than the UK as the relevant natural range. This would only normally be in the case of a population which is shared with neighbouring countries. Given the geography of the UK, this is only likely to be the case for certain types of species and habitats such as: marine species (e.g. harbour porpoise in the North Sea) and habitats, those whose populations straddle the border with the Republic of Ireland (e.g. Killarney fern) or for migratory birds which use outside the UK as part of their normal migration (e.g. wintering geese or wading birds).

A1.32 In other cases, however, it will be appropriate for the relevant range to be assessed at the UK level even if the species or habitat in question is also found at other locations within the Community. Depending on the features of the species or habitat, the relevant range may be the whole of the UK (e.g. great crested newt) or it may only be part of the UK (e.g. stag beetle)

A1.33 The parameters for assessing the conservation status of habitats are:

- range
- area covered by habitat type within range
- structure and function, and
- future prospects

A1.34 The parameters for species are:

- range
- population
- habitat for the species and
- future prospects

A1.35 The central question when considering each parameter is whether the effect makes it significantly harder either to reach or maintain the Favourable Conservation Status of relevant species and habitat. A judgement is required for each EU habitat and species affected and for each of the four parameters described above for assessing conservation status. In the context of reporting to the Commission under the Habitats Directive, judgements are made for each parameter as to whether they are favourable, unfavourable bad, unfavourable inadequate or unknown. The overall judgement of status is then determined by the worst evaluation. Likewise, under the Regulations, if the effect is judged significant in terms of any of the parameters the overall judgement should be that there is a significant conservation status effect.

A1.36 For each parameter, judgements should take into account the role of the particular individuals or of the damaged area in relation to the overall species' or habitat's conservation. In doing this judgements should take into account the rarity of the species or habitat throughout the UK or relevant range.

A1.37 The capacity for the natural regeneration of the affected species or habitat should be taken into account for all the parameters. Consideration should be given to whether recovery is possible, whether human intervention is necessary and possible and the timescale for recovery. If, for example, recovery is possible without human intervention within a short period, there is unlikely to be a significant conservation status effect.

Judgements on range (habitats or species)

A1.38 The range of a habitat or species is a measurement of its distribution throughout the UK or relevant area. In making judgements on whether an effect is significant in terms of the range, consideration should be given to whether and by how much the damage reduces the range. Judgements on range should be considered in context: in some cases an effect will be more significant where it reduces the outer limits of the range but in other cases an effect on the middle of range might be more significant if it had previously not been under stress.

A1.39 A favourable reference value for range is the range required to ensure the long-term viability of the habitat or species. Where favourable reference values are provided (see footnote 25) and the damage has a significant bearing on whether favourable reference values are reached or maintained, the judgement should be that there is a significant conservation status effect. Where there is no favourable reference value the latest information on range (including trends) should be considered.

A1.40 If an activity damages a habitat or species that is widely distributed throughout the UK or relevant area, such as a woodland or grassland, it is unlikely to impact on its range. However, if a habitat with a much narrower distribution is damaged, such as a limestone pavement, the likelihood of damage is much greater. Similarly, damage at, for example, the most northern or southern edge of the habitat's range may, all else equal, be more likely to have an impact on the habitat's range.

Judgements on area (habitats)

A1.41 The area of a habitat is a measurement of its current surface area, and any historical trends in this parameter. Judgements on the impact of damage on area should take into account the extent of damage relative to the overall area. The favourable reference value is considered as the minimum area required to ensure the long term viability of the habitat type. Where favourable reference values are provided and the damage has a significant bearing on whether favourable reference values are reached or maintained, the judgement should be that there is a significant conservation status effect. Where there is no favourable reference value the latest information on area (including trends) should be considered.

Judgements on structure and function (habitats)

A1.42 This is a judgement of the effect on the quality of the habitat type. It is relevant to consider the severity of the impact in the same manner as severity was assessed under the impacts on site integrity. Judgements should take into account the extent to which the damage will reduce the quality of the habitat or the functions or services it performs for other environmental resources or the public at the location affected and beyond. They should also take account of the role of the damaged habitat in relation to the overall habitat or species on which it depends and the rarity of the species or habitat over the relevant range.

Judgements on future prospects (habitats and species)

A1.43 This is a judgement of the effect on the conditions needed to reach or maintain the favourable conservation status of species or habitats in the long term, taking into account current or foreseeable threats. Effects for example on a species' potential for genetic exchange or on the capacity of the species for propagation may be relevant.

Judgements on population (species)

A1.44 Population is the number and density of individuals present in the UK or relevant area. Judgements should take account of the scale of loss, damage or deterioration of populations relative to the overall population. Consideration should also be given to the role of the damaged individuals in the overall population and to the effect on services provided by the species. Where favourable reference values are provided and the damage has a significant bearing on whether favourable reference values are reached or maintained, the judgement should be that there is a significant conservation status effect. Where there is no favourable reference value the latest information on population (including trends) should be considered.

Judgements on habitats for species

A1.45 This is a judgement of whether damage to the habitat of a species is likely to lead to a significant adverse effect on reaching or maintaining the conservation status of the species. Judgements should be based on the extent and severity of damage to the habitat and the likelihood of significant indirect effects on the other parameters for species (range, population and future prospects).

Damage to surface water or groundwater

A1.46 Damage to water includes:

- i. Damage to surface water
- ii. Damage to groundwater

A1.47 Damage to surface water means:

... damage to a surface water body classified as such pursuant to Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for Community action in the field of water policy such that

- (a) a biological quality element listed in Annex V to that Directive
- (b) the level of a chemical listed in the legislation in Annex IX or a chemical listed in Annex X to that Directive, or
- (c) a physicochemical quality element listed in Annex V to that Directive,

changes sufficiently to lower the status of the water body in accordance with Directive 2000/60/EC of the European Parliament and of the Council (whether or not the water body is in fact reclassified as being of lower status)

(Regulation 4(3))

A1.48 Damage to groundwater means:

... any damage to a body of groundwater such that its conductivity, level or concentration of pollutants changes sufficiently to lower its status pursuant to Directive 2000/60/EC of the European Parliament and of the Council (and for pollutants Directive 2006/118/EC of the European Parliament and of the Council on the protection of groundwater against pollution and deterioration) (whether or not the body of groundwater is in fact reclassified as being of lower status).

(Regulation 4(4))

Surface water and groundwater covered

A1.49 Damage only constitutes water damage for the purposes of the Regulations if a body of surface water or a body of groundwater is adversely affected. Not all surface water and groundwater is part of a water body.

A1.50 Activities which directly affect surface water or groundwater that is not part of a water body may subsequently indirectly affect a water body and hence cause water damage. For example, pollutants discharged into a small stream may be carried downstream into a water body.

A1.51 Bodies of surface water and bodies of groundwater refer to water bodies identified under Article 5 and Annex II of the Water Framework Directive. Bodies of surface water include river water bodies; lake water bodies; estuarine water bodies and coastal water bodies. Coastal water bodies cover coastal waters up to 1 mile seaward from the baseline from which the breadth of UK territorial waters is measured.

A1.52 Bodies of surface water include artificial water bodies, such as canals, and heavily modified water bodies. Artificial water bodies are bodies of surface water that have been constructed where no water body previously existed. Heavily modified water bodies are bodies of surface water whose physical characteristics have been so substantially altered that they are no longer consistent with the achievement of good ecological status.

A1.53 Further information on the identification of bodies of water can be found at:

<http://www.environment-agency.gov.uk/research/planning/33340.aspx>

http://www.circa.europa.eu/Public/irc/env/wfd/library?!=/framework_directive/guidance_documents/guidancesnos2sidentifica/ EN 1.0 &a=d

http://www.circa.europa.eu/Public/irc/env/wfd/library?!=/framework_directive/guidance_documents/guidancesnos4sheavilysmo/ EN 1.0 &a=d

Changes to values that would result in a lower status

A1.54 Water damage occurs where adverse effects are significant enough to cause a change in status to a lower status. Effects will be regarded as significant enough to qualify as 'environmental damage' if they result in:

- (a) change in status to a lower status; or
- (b) change to a lower 'status' of any quality element for the classification of bodies of surface water or any 'parameter' (conductivity, level or concentration) for the classification of bodies of groundwater; or
- (c) change to a lower 'status' for any 'parameter' (conductivity, level or concentration of pollutants) for the classification of bodies of groundwater provided the criteria in article 4 of the Groundwater Directive are also satisfied.

This applies even if the water body is not in fact reclassified as being of lower status.

A1.55 For each of the quality elements and parameters comprising its status classification schemes (see below), the Water Framework Directive provides definitions from which the values (e.g. environmental quality standards) for the quality elements or parameters in each of the status classes are derived. Strictly speaking, quality elements and parameters do not have a 'status' class. They only have values which are consistent with one or other of the different status classes. Point (b) above refers to any change in the value of a quality element such that its new value is consistent with the values corresponding to a lower status class than was the case prior to the deterioration. For convenience, this can be thought of as a change in the 'status' of the quality element or parameter.

A1.56 Suppose a water body is at good ecological status. An activity (listed in Schedule 2) causes pollution of the water body. The water quality deteriorates such that it is only consistent with moderate status rather than good status. This type of damage falls under point (a) above. The adverse effect has caused a change of the overall ecological status of the water body.

A1.57 Suppose another water body would be at good ecological status but for a dam preventing fish migration. Because of the dam, the water body's status is currently poor. An activity causes pollution of the water body. Water quality deteriorates such that it is now consistent with moderate status rather than

(consistent with) good status. The pollution is therefore significant enough on its own to cause a change of status even though the overall poor status of the water body - as dictated by the impact of the dam - has not changed. This type of damage falls under point (b) above. Water quality has deteriorated to the extent that, in the absence of the effect of the dam, change in ecological status would have occurred.

Status of water bodies

A1.58 The status of bodies of water refers to:

- (a) the ecological status of a body of surface water other than a body of surface water designated as heavily modified or artificial under the Water Framework Directive;
- (b) the ecological potential of a body of surface water designated as heavily modified or artificial under that Directive;
- (c) the surface water chemical status of a body of surface water;
- (d) the groundwater chemical status of a body of groundwater; or
- (e) the quantitative status of a body of groundwater

A. Ecological status

A1.59 The 'ecological status' of a surface water body is a measure of the degree to which the structure and function of the body's aquatic ecosystem have been altered as a result of human activity.

A1.60 There are five ecological status classes; 'high', 'good', 'moderate', 'poor' and 'bad'. Annex V to the Water Framework Directive provides a series of definitions describing the 'values' expected for different groups of aquatic plants and animals and for different chemicals and physicochemical factors (e.g. temperature; pH) in the different ecological status classes.

A1.61 For example, high ecological status means that there are no or only very minor alterations to the different plant and animal groups. Bad ecological status means that there are severe alterations to the plant and animal communities such that large portions of the communities found at high ecological status are absent.

A1.62 The different groups of plants and animals and the different chemicals and physicochemical factors are called 'quality elements'. The overall ecological status of a water body is determined by the value of the quality element most altered by human activity.

A1.63 The technical work to develop methods and schemes for classifying the ecological status of water bodies is coordinated by the UK Technical Advisory Group on the Water Framework Directive (UKTAG). UKTAG is a partnership of the UK environment and conservation agencies.

A1.64 UKTAG has provided recommendations to the UK Government and the devolved administrations on classifying the ecological status of bodies of surface water. It has also made recommendations on the values (i.e. environmental standards) for the chemical and physicochemical quality elements. Ministers intend to use UKTAG's recommendations as the basis for transposing the Directive's status classification schemes, including its ecological status classification schemes.

A1.65 UKTAG's recommendations can be found at:

http://www.wfduk.org/UKCLASSPUB/LibraryPublicDocs/sw_status_classification

http://www.wfduk.org/UK_Environmental_Standards/ES_Phase1_final_report/LibraryPublicDocs/UKTAG%20ReportAug%202006UKEnvironmentalStandardsandConditionsFinalReport

http://www.wfduk.org/stakeholder_reviews/stakeholder_review_1-2007/LibraryPublicDocs/UKTAG_Report_Surface_Water_Standards_and_Conditions

http://www.wfduk.org/stakeholder_reviews/stakeholder_review_1-2007/LibraryPublicDocs/UKTAG_2007_%20Final_Specific_Pollutants_Master

B. Ecological potential

A1.66 'Ecological potential' describes the degree to which the potential ecological quality of a water body's aquatic ecosystem has been realised, given the body's artificial or heavily modified characteristics. It only applies to water bodies that have been designated as heavily modified or artificial.

A1.67 If the maximum potential has been realised, the status of the water body is described as 'maximum ecological potential'. There are five classes of ecological potential; 'maximum', 'good', 'moderate', 'poor' and 'bad'. Good ecological potential describes a condition in which the ecological quality is only slightly less than the maximum that could be achieved.

A1.68 Annex V to the Water Framework Directive provides a series of definitions describing the values for different plant, animal, chemical and physicochemical quality elements that are consistent with the different ecological potential classes.

A1.69 The values (i.e. environmental standards) for the chemical and physicochemical quality elements at maximum and good ecological potential are the same as those for high and good ecological status.

A1.70 UKTAG has made recommendations to the UK Government and devolved administrations on classifying heavily modified water bodies. European Guidance of relevance to the classification of heavily modified and artificial water bodies is available at:

http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/guidance_documents/guidancesnos4sheavilysmo/ EN 1.0 &a=d

http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/thematic_documents/hydromorphology/technical_reportpdf/ EN 1.0 &a=d

C. Surface water chemical status

A1.71 There are two surface water chemical status classes; 'good surface water chemical status' and 'failing to achieve good surface water chemical status'.

A1.72 Good surface water chemical status is the chemical status achieved by a body of surface water in which concentrations of 'priority substances' and certain other dangerous substances do not exceed the environmental quality standards established for them.

A1.73 A list of priority substances has been established by Decision 2455/2001/EC. The Council of Ministers has agreed on environmental quality standards for the priority substances for inclusion in a new Priority Substances Directive. The 'other dangerous substances' are substances identified as List I dangerous substances under Directive 76/464/EEC but which have not been included in the list of priority substances.

A1.74 Further information on the classification of surface water chemical status, including a list of the relevant substances, is included in UKTAG's recommendations on surface water status classification. These recommendations are available at:

http://www.wfduk.org/UKCLASSPUB/LibraryPublicDocs/sw_status_classification

D. Groundwater chemical status

A1.75 Groundwater chemical status is principally a measure of the impact of pollutants in groundwater on associated surface waters; terrestrial ecosystems directly dependent on groundwater; and human uses of groundwater, such as abstraction for human consumption.

A1.76 There are two status classes, 'good groundwater chemical status' and 'poor groundwater chemical status'. The parameters for determining groundwater chemical status are concentration of pollutants and conductivity. The values and conditions required of the parameters at good status are defined under Annex V to the Water Framework Directive and under Directive 2006/118/EC (the new Groundwater Directive).

A1.77 UKTAG has provided recommendations to the UK Government and the devolved administrations on classifying groundwater chemical status. Ministers intend to use these recommendations as the basis for transposing the Directive's classification scheme. UKTAG's recommendations are available at:

http://www.wfduk.org/stakeholder_reviews/stakeholder_review_1-2007/LibraryPublicDocs/final_gw_sr2007

E. Groundwater quantitative status

A1.78 Groundwater quantitative status is principally a measure of the impact of groundwater abstraction on associated surface waters and on terrestrial ecosystems directly dependent on groundwater.

A1.79 There are two status classes, 'good groundwater quantitative status' and 'poor groundwater quantitative status'. The parameter for the classification of groundwater quantitative status is the groundwater level regime. The values and conditions required of the level regime at good status are defined in Annex V to the Water Framework Directive.

A1.80 UKTAG has provided recommendations to the UK Government and the devolved administrations on classifying groundwater quantitative status. Ministers intend to use these recommendations as the basis for transposing the Directive's classification scheme. UKTAG's recommendations are available at:

http://www.wfduk.org/stakeholder_reviews/stakeholder_review_1-2007/LibraryPublicDocs/final_gw_sr2007

Pollution incidents and water damage

A1.81 As confirmed in European guidance²⁸, short-term, transient adverse effects from which the affected water body recovers without the need for remediation measures are not significant enough to cause deterioration of status.

A1.82 Pollution incidents often result in acute but short-lived adverse effects. This is because the pollutants are quickly flushed away and diluted. Subsequent re-colonisation of the affected waters by aquatic plants and animals from unaffected areas can then be quite rapid.

A1.83 Pollution incidents are most likely to lead to water damage where:

- (i) the incident results in serious contamination of sediments in the water body or on the surrounding land and this contamination then acts as a longer-term source of pollution;
- (ii) natural flushing and dilution of the pollutants is very limited; or
- (iii) the incident damages isolated aquatic plant or animal populations which cannot readily re-establish by re-colonisation from other waters.

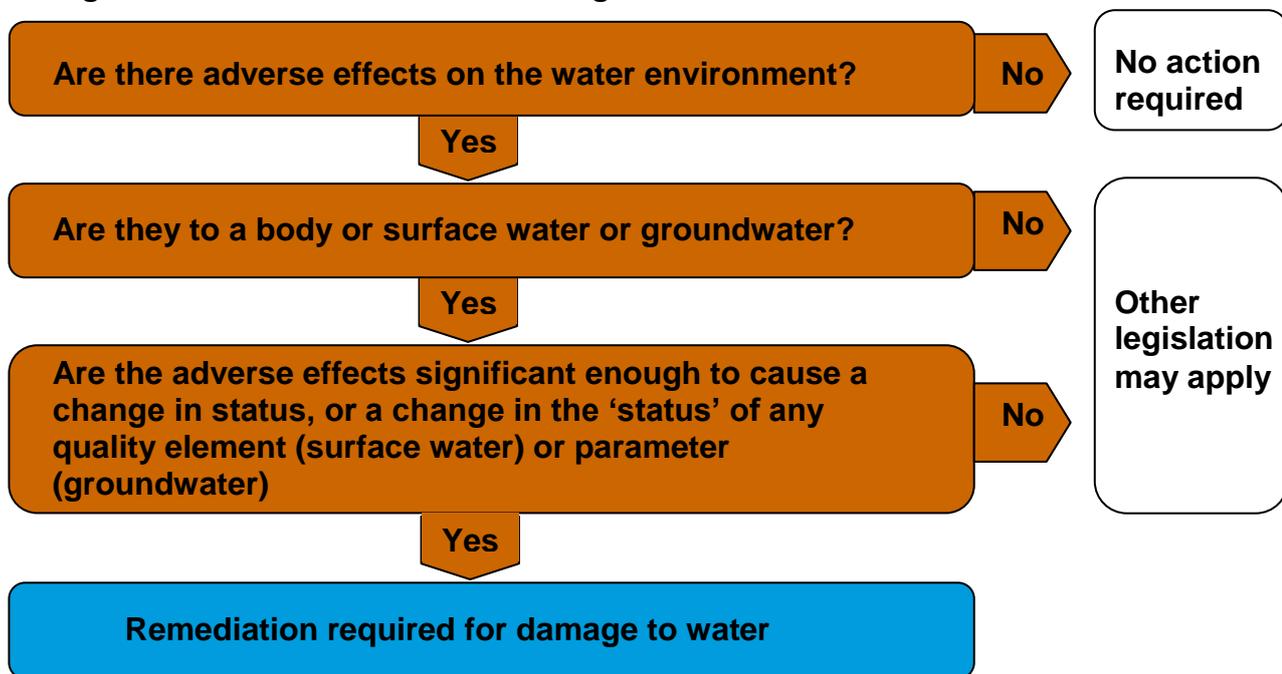
²⁸http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/thematic_documents/environmental_objectives/article_circapdf/ EN 1.0 &a=d

A1.84 However, even where the adverse effects resulting from a pollution incident are not transient, their geographical extent may be too limited to affect the status of a water body. UKTAG's recommendations on spatial scale considerations in assessing the status of surface water bodies are available at:

http://www.wfduk.org/UKCLASSPUB/LibraryPublicDocs/sw_status_classification

A1.85 It will not always be clear at the time of an incident, or immediately afterwards, whether the incident will lead to water damage. However, the preventive action, including the action to immediately control and contain the pollution, which the Environment Agency might require under existing legislation for the protection of the water environment from pollution is similar to that which would apply should the incident fall within the scope of the Regulations.

Figure A1.2: decision tree for damage to water



Exclusion for Article 4.7 of the Water Framework Directive

A1.86 Damage does not constitute water damage under the Regulations if Paragraph 7 of Article 4 of the Water Framework Directive applies.

A1.87 Paragraph 7 of Article 4 of the Water Framework Directive provides a defence to Member States where there is a failure to achieve either that Directive's objective of preventing change in status to a lower status or aiming to achieve good status. The defence allows new modifications to physical characteristics of surface water bodies or alterations to the level of groundwater bodies where the benefits to human health, human safety or sustainable development outweigh the benefits of protecting the water environment; or which are otherwise of overriding public interest.

A1.88 The Water Framework Directive defence is not normally available to the Member State in relation to adverse effects caused by pollution. Under certain conditions, the defence can apply in relation to damage caused by abstractions and impoundments. The applicability of a defence will normally be determined before a permit or other form of authorisation is granted for such activities. If a defence is not applicable, no permit should be granted. European guidance on the application of Paragraph 7 can be found at:

http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/thematic_documents/environmental_objectives/article_circapdf/EN_1.0_&a=d

Land damage

A1.89 Regulation 4 defines damage to land as:

Contamination of land by substances, preparations, organisms or micro organisms that results in a significant risk of adverse effects on human health

A1.90 This is a risk-based definition. It is considered that the definition includes cases where the adverse effects in question are being caused at the time of the introduction of the contaminants, as well as cases where such effects are possible but may not be evident for many years.

A1.91 In determining whether land damage has occurred, consideration must be given both to whether there is:

- a. contamination of land by substances²⁹, preparations³⁰, organisms or micro organisms

And to whether that contamination:

- b. ... results in a significant risk of adverse effects on human health

Consideration of whether there is ‘contamination of land by substances, preparations, organisms or micro organisms’

A1.92 The following points should be noted:

- Exposure to air-borne material from a source other than the land itself is not included.
- Contaminants might move from where they were originally introduced but would still be covered if they pose a significant risk of human health being adversely affected.

²⁹ “Substances” can be taken to mean chemical elements and their compounds as they occur in the natural state or as produced by industry. It is also taken to encompass the definition in Part IIA of the Environmental Protection Act 1990: “any natural or artificial substance whether in solid or liquid form or in the form of gas or vapour”.

³⁰ “Preparations” can be taken to mean mixtures or solutions composed of two or more substances.

- Whether damage happens on or off-site (i.e. the site where the activity (e.g. storage of dangerous substances) is carried out), and whether people are on or off-site when they are at risk, are not material to the judgement of whether there is land damage.
- Risks might result not only from the toxicological properties of contaminants but also from other hazardous properties such as flammability, explosiveness or propensity to asphyxiate.

Consideration of whether contamination ‘results in a significant risk of adverse effects on human health’

A1.93 The following points should be noted:

- “Significant risk” is not defined in the Regulations. It is more than simply a measurable one and an insignificant possibility of an adverse effect would not be covered. Ultimately what is significant is a matter of judgement.
- All of the relevant circumstances have to be considered in assessing risk. This will not only include the hazardous properties of contaminants and their concentrations in soil, but also other factors that determine their risk to health.
- For risk to arise there must be the potential for a pollutant linkage to exist, i.e. a “contaminant”, a “pathway” and a “receptor”³¹.
- ‘The lawful current use or any planning permission in existence at the time of the damage’ is taken into account, rather than some different use to which the land might be put in the future³².
- “Human health” can include the health of any number of people. Risks should be assessed in terms of the sensitivity or vulnerability of individuals that may be present. For example, children and the elderly are normally regarded as particularly vulnerable. The risk assessment for each case must consider if other more sensitive or vulnerable groups might be present.

A1.94 ‘Adverse effects on human health’ includes but is not limited to the following health effects³³:

- Death
- Disease³⁴

³¹ This is an established approach to risk assessment. Defra Circular 01/2006 provides more detail on these terms at paragraphs A.10 to A.17 of Annex 3 (in this and the following footnotes, the same paragraph and table numbers apply for the Welsh Assembly Government’s Statutory Guidance) in the context of Part IIA of the Environmental Protection Act 1990. It should be noted that whereas a contaminant in Part IIA is a “substance”, contaminants in the Regulations include “substances, preparations, organisms or micro-organisms”. Receptors in the Regulations are limited to human beings rather than the wider list of receptors at A.13 of Annex 3 of the Defra Circular.

³² See 9(2) in Schedule 4. This is consistent with the guidance at paragraph A26 of Annex 3 of Defra Circular 01/2006.

³³ This indicative list of health effects is not dissimilar to the descriptions of harm at “1” of table A in Annex 3 of Defra Circular 01/2006, but may cover a wider range of health effects.

³⁴ As in table A of Annex 3 of Defra Circular 01/2006, “disease” is taken to mean ‘an unhealthy condition of the body or a part of it and can include, for example, cancer, liver dysfunction or

- Serious injury
- Genetic mutation
- Birth defects
- Impairment of the reproductive functions
- Gastrointestinal disturbances (nausea, vomiting, diarrhoea, abdominal pain)
- Respiratory tract effects (irritation of the nose, throat and respiratory tract cough, sore throat, dyspnoea)
- Cardiovascular effects (hypotension, hypertension)
- Central nervous system effects (headache, lethargy, drowsiness, decrease in IQ)
- Dermal sensitivity
- Perturbation of liver or kidney enzymes from the normal range

Risk assessment

A1.95 A risk assessment will be required to establish whether there is a significant risk of adverse effects on human health. The manner in which this risk assessment is carried out and the information required will depend on the nature of the case. It may be helpful to use the method set out in CLR 11, *The Model Procedures for the Management of Land Contamination*³⁵ published by the Environment Agency. This provides a framework for assessing risks posed by contamination and deciding on the appropriate course of action under a range of regulatory and non-regulatory scenarios and may be suitable for use in deciding whether there is land damage under the Regulations. In particular, chapter 2 on risk assessment may provide a useful model to follow.

A1.96 Once it has been established that contaminants are present in the soil, a view will need to be taken as to whether these constitute a risk to human health and if so, whether the risk is significant. In reaching this decision, it will be appropriate to take into account relevant, authoritative scientific information. This could come from government agencies such as the Health Protection Agency, or the Food Standards Agency, but could also come from other sources.

A1.97 In addition to scientific information, professional judgement will also play an important role in determining whether cases represent land damage. This is particularly the case when it comes to deciding whether a risk to human health is, in the opinion of the authority, significant. In exercising judgement a range of considerations will be taken into account. Relevant factors include but are not limited to:

- Seriousness of possible or actual health effects;
- Likely duration of possible or actual health effects;
- Whether effects are reversible;
- Level of risk of health effects arising and strength of evidence;

extensive skin ailments. Mental dysfunction is included only insofar as it is attributable to the effects of a pollutant on the body of the person concerned'.

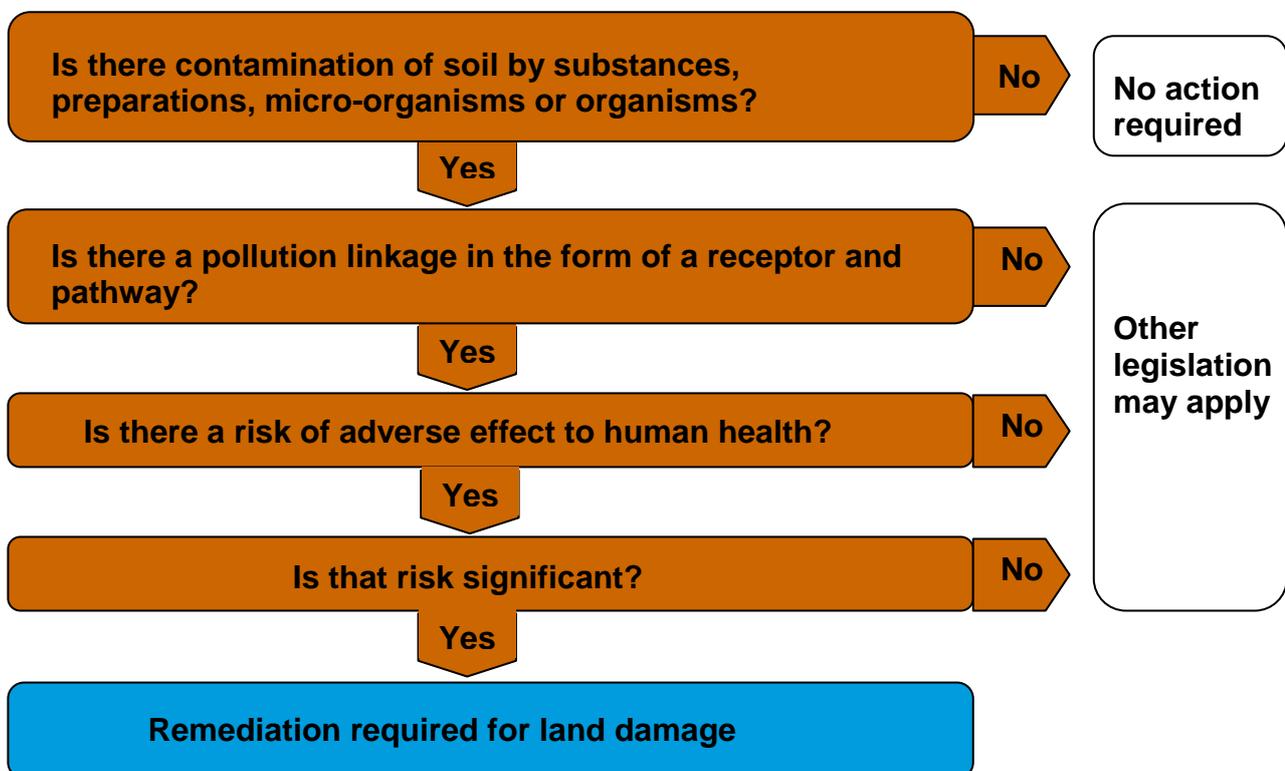
³⁵ Link at time of publication: <http://www.environment-agency.gov.uk/subjects/landquality/113813/881475/?lang=e>

- Level of actual or potential human exposure to contamination;
- Nature of the pathway (ie intake or other bodily exposure);
- Available information to establish a dose-response relationship;
- Number of people likely to be exposed;
- Vulnerability of people likely to be exposed;
- Duration of time and regularity that people are likely to be exposed.

A1.98 Ultimately the authority must decide whether or not there is ‘environmental damage’. In some cases there will be considerable uncertainty for example because of gaps in scientific knowledge or because there is more than one reasonable method for assessing risks and reaching decisions. Therefore, it is possible that different suitably qualified people, each acting reasonably, could make different judgements based on the same evidence. Provided decisions are taken reasonably, informed by risk assessment based on sound science and reasonable consideration of the site and local circumstances, the Regulations leave considerable leeway for judgement. Authorities should therefore be confident in exercising judgement.

A1.99 While considering whether there is land damage under the Regulations, consideration should also be given to whether the condition of the land could also lead to other remedial requirements under other environmental protection legislation. For example, there may be risks to property or ecological systems that may require action in the future under Part IIA. Anticipating any such additional requirements is likely to save cost, inconvenience and other liabilities.

Figure A1.3: decision tree for land damage



Annex 2: Identifying remedial measures

Annex 2 explains how the Regulations' requirements for undertaking remediation for damage to species and habitats and damage to water are to be applied and what approaches are to be used for assessing the amount of remediation to be done. It then includes a step-by-step guide to enable relevant professionals to carry out assessments for the more simple cases of damage³⁶. It also provides general guidance for remediation of land damage.

Damage to species and habitats and damage to water

A2.1 The Regulations require a different and more comprehensive approach for remediation of damage to water or to species and habitats compared to that for land damage. The approach required introduces new terms and concepts, most of these are explained in the text below and are included in the glossary at Annex 5.

Figure A2.1: Meaning of 'natural resources' and 'services'

These two terms are used throughout and are explained briefly now:

- **Natural resources**

This refers to specific natural resources as follows:

- Certain species and habitats protected under EU law (identified in more detail in Annex 6 of this guidance);
- Species and habitats on SSSIs notified under section 28 of the Wildlife and Countryside Act 1981;
- Water.

Schedule 4.1 clarifies that natural resources excludes land in this context.

- **Services**

This refers to the functions performed by a natural resource for the benefit of another natural resource or the public. A forest, for example, might provide services such as habitat, food, canopy or pollination for other natural resources and opportunities for bird-watching, fishing or rambling for the public. The Millennium Ecosystem Assessment identifies four categories of services provided by ecosystems:

- "Provisioning" such as of food, fresh water, wood and fibre;
- "Regulating" such as of climate, flood and disease;
- "Supporting" such as through nutrient cycling, soil formation and

³⁶ More involved cases would require more detailed guidance and specialist expertise. A key source for further information is the *Remede* toolkit and associated documents. Remede is a European funded project to provide information and case studies on using resource equivalency methods in the context of the Environmental Liability Directive and other European directives

- primary production;
- “Cultural” such as aesthetic, spiritual, educational and recreational.

See <http://www.maweb.org> for more information.

Primary, complementary and compensatory remediation

A2.2 The objective of remediation is to provide the **same level of natural resources or services as would have existed if the damage had not occurred** (schedule 4.3). This objective must be achieved using a combination of primary remediation, complementary remediation and compensatory remediation.

A2.3 The Regulations also require that remediation removes any significant risk to human health (schedule 4.2).

Primary remediation

A2.4 Primary remediation consists of those measures which return the damaged resources or impaired services to or towards the state that would have existed if the damage had not occurred³⁷. Restoring damaged resources will be a familiar notion to some readers as several existing regimes already require that the environment is restored to or towards its original condition.

A2.5 Primary remediation encompasses the full range of possibilities for restoring damage and will depend on the natural resources damaged and the circumstances of the case.

A2.6 Possible primary measures include ‘natural recovery’ which entails allowing the natural resources and services to recover naturally. Natural recovery should always be considered and in many cases will be the best option. Natural recovery does not necessarily mean doing nothing as it will often involve some active intervention such as removing the factors or pressures (e.g. chemicals or physical obstructions) that were responsible for the decline of the natural resources or services or containing the area to facilitate recovery. In general natural recovery will be a managed process, with at least some degree of monitoring.

A2.7 Primary measures might also involve a wide range of other actions such as:

³⁷ Note this does not require return to the state the resources and services were in before the damage took place but the state they would have been in ‘had the damage not occurred’. This allows for the fact that in some cases there may be clear evidence to suggest that without the damage the resources and services would have improved or deteriorated from the condition they were in before the damage took place and so the effect of remediation should correspond to the state they would have been in rather than the state they were in before the damage took place.

- Removing and/or treating contaminants to reduce impacts on natural resources;
- Removing or protecting against other pressures on the resources and services (e.g. other obstructions, alien species and/or development-related pressures);
- Re-stocking or re-introductions of damaged species (e.g. fish);
- Seeding, planting or replanting vegetation;
- Engineering works to provide habitats (e.g. riffles and eddies in rivers);
- Removing bottlenecks like impassable weirs and culverts;
- Providing fish passes;
- Providing conservation staff to manage and maintain sites;
- Developing and implementing strategic management plans;
- Implementing restrictions to access;
- Implementing improvements to access (e.g. to increase the capacity for the public to benefit from a service);
- Providing monitoring capacity.

A2.8 In some cases the options for measures that directly improve or recover damaged resources directly may be limited or unreasonably costly. This may be the case especially in the marine environment. In these cases options which contribute to the prevention or mitigation of other pressures may be more appropriate.

Complementary and compensatory remediation

A2.9 The central principle behind requirements for complementary remediation and compensatory remediation in addition to primary remediation is to make those who have caused 'environmental damage' responsible for the full consequences of the damage.

A2.10 **Complementary remediation** consists of measures to compensate for where primary remediation does not fully return the damaged natural resources or services to the condition that would have existed had the damage not occurred. Measures can either be taken at the damaged site or an alternative site but where possible and appropriate the alternative site should be geographically linked to the damaged site taking into account the interests of the damaged natural resources or impaired services.

A2.11 Complementary remediation recognises that in some cases it will not be possible or desirable to restore resources or services to their previous condition or to do so within a reasonable timeframe. Extreme examples of this may be where an incident of damage has removed the last individuals of a particular species or where an ancient woodland has been damaged and it may be better to take measures to improve some other part of the woodland or another woodland than to plant and manage new woodland over a sufficient timescale. It may also be that the authority is satisfied that measures taken at an alternative site are

equally beneficial to measures at the damaged site and, for example, significantly cheaper.

A2.12 Generally where 'environmental damage' arises it will take some time before the resources and services recover to their previous condition. During this time, and as a result of the 'environmental damage', the public or other natural resources will not be able to benefit from them. Examples of this may be where an incident has removed bird populations for a period of time from an area regularly visited by birdwatchers, or where an incident has removed a breeding ground for fish. **Compensatory remediation** recognises this, requiring measures to be taken to compensate for these interim losses. Compensatory remediation can be taken either at the damaged site or an alternative site. It does not consist of financial compensation.

A2.13 Complementary and compensatory measures involve providing, enhancing or improving resources and services either at the site of damage or at an alternative site. In the case of compensatory remediation, measures may be additional improvements to those resources and services that were damaged. The range of actions undertaken as complementary and compensatory remediation is similar to those for primary remediation (see paragraph A2.7), except that:

- Natural recovery does not 'count' as complementary or compensatory remediation unless it results from specific actions taken as complementary and compensatory remediation. This is because complementary and compensatory measures need to provide additional improvements or enhancements to resources and services compared to what would otherwise have happened;
- Complementary and compensatory remediation may involve providing resources and services that were not previously present at a site.

A2.14 The Regulations state a preference for providing natural resources and services as similar as possible to those that have been lost. They require at 7(1) of schedule 4 that:

If possible, complementary and compensatory remedial measures must provide natural resources or services of the same type, quality and quantity as those damaged.

7(2) then specifies:

Where this is not possible, similar but different natural resources must be provided (for example, by offsetting a reduction in the quality of natural resources or services by increasing their quantity).

And 7(3) that:

Where this is not possible, different natural resources or services may be provided [...]

A2.15

- Providing natural resources of the 'same type, quality and quantity' would mean taking measures to restore for example the same type and quality of birds, dolphins, habitat or river in a quantity sufficient to meet the objective at paragraph A2.2. Providing natural resource services of the 'same type, quality and quantity' would mean taking measures to restore, for example, biological productivity, drinking water, recreational opportunities or other 'provisioning', 'regulatory', 'supporting' or 'cultural'³⁸ services sufficient to meet the objective at paragraph A2.2, recognising that a level of natural resources different to those lost may need to be provided to meet this objective.
- Where the relationship between natural resources and their services is not constant then it might mean providing a different level of natural resources (birds, dolphins, river) to provide the same type, quantity and quality of services as have been lost.
- Providing 'similar but different natural resources' would mean providing natural resources that have sufficiently similar functions that a quantitative basis can be found to compare the level of services they provide. It may also be possible to use a habitat 'scalar'³⁹ as a rate of exchange between two habitat types to reflect their relative desirability not only by reference to services (e.g. ecological productivity, ability to provide food, fresh water, wood and fibre or recreational potential) but also other attributes such as their distance from the damage site or to capture factors related to society's preferences for the two habitat types.
- 'Different natural resources or services' include natural resources that are entirely different and provide entirely different services.

Figure A2.2: Remediation in the marine environment

Marine habitats and species will generally be less accessible than land ones and, while there may be some proactive measures that can be taken to restore damage (e.g. dredging, capping and protection of breeding areas) it will often not be possible, for example, to create, manage or maintain habitat or introduce species in the same way that it is on land. Where active restoration actions are possible they will often be expensive and may sometimes cause further damage. Remediation in the marine environment is therefore likely to require a different approach from that on land.

In many cases it is likely to be necessary to rely on natural recovery for primary remediation. Consideration should however be given to whether wider

³⁸ See figure 8.1 for background to these terms.

³⁹ 'Scalar' refers to the rate of exchange between the different habitat types. Experts may, for example, conclude that in a given application 6 hectares of mudflats have the same ecological value to one hectare of sandflats.

pressures on the natural resources can be addressed to promote improved and/or accelerated recovery.

As on land, if full recovery is not achieved complementary remediation will be required and there will normally be some interim loss requiring compensatory remediation. In some cases active measures may sometimes be possible to enhance species and habitats (for example installing artificial reefs). Addressing wider pressures may also provide a means of achieving compensatory and complementary remediation either at the damaged site or elsewhere. In some cases this could take the form of making arrangements to remove the source of the pressure or it could involve, for example, providing information to other users of the sea so as to reduce the impacts they cause.

In some cases there will not be viable options for remediation that are closely linked to the damage. In these cases it is likely to be necessary to exercise the flexibility in Schedule 4 to provide either 'similar but different natural resources' or 'different natural resources'. This may mean providing resources that are, for example, in coastal areas or on land, although the evaluation criteria that the authority will use should be anticipated.

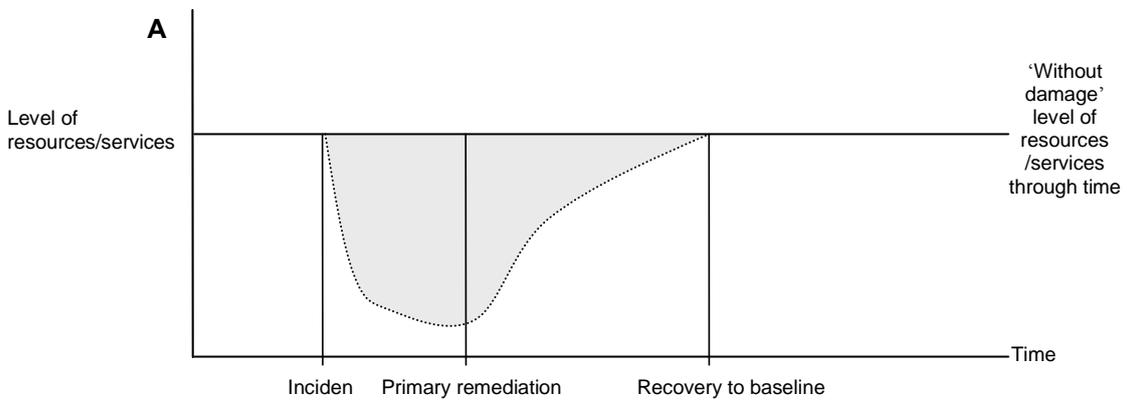
In general terms there is also likely to be greater uncertainty in the marine environment as there may be more constraints on available data and less experience for example of recovery rates and the likelihood of success of options. Furthermore marine data collection is generally expensive. This will inevitably mean that the authority will have to make judgements sometimes with significant uncertainty and to strike a balance between containing the costs to operators of data collection and of reducing uncertainty. Provided decisions are taken reasonably and on the basis of the available evidence authorities should be confident in exercising judgement.

The remediation “package”

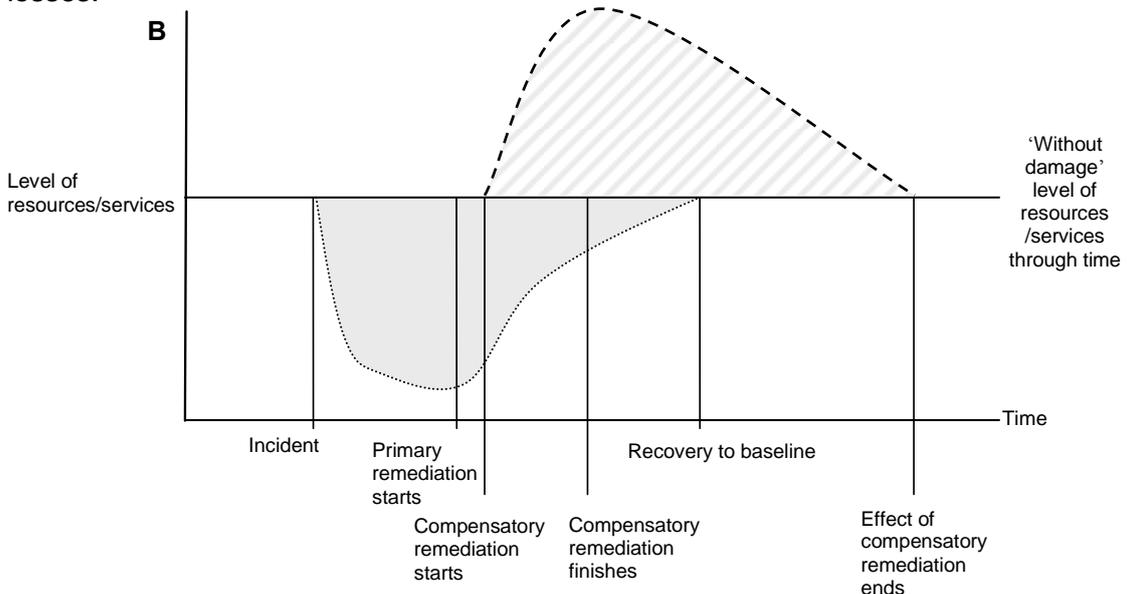
A2.16 There is flexibility in the combination of primary, complementary and compensatory remedial measures that can be proposed by the operator and chosen by the authority. Measures where primary remediation does not fully restore resources or services can be chosen as long as an equivalent level of resources and services is provided as complementary remediation. Likewise measures where primary remediation restores natural resources or services to their previous condition more slowly can be chosen as long as compensatory remediation provides a similar level of resources and services to those lost pending recovery. The extent to which this flexibility is exercised is for the authority's judgement on a case-by-case basis. Paragraph 6.12 sets out the evaluation criteria that authorities are required to use in deciding which measures should be carried out.

Figure A2.3: Graphical illustration of primary and compensatory remediation

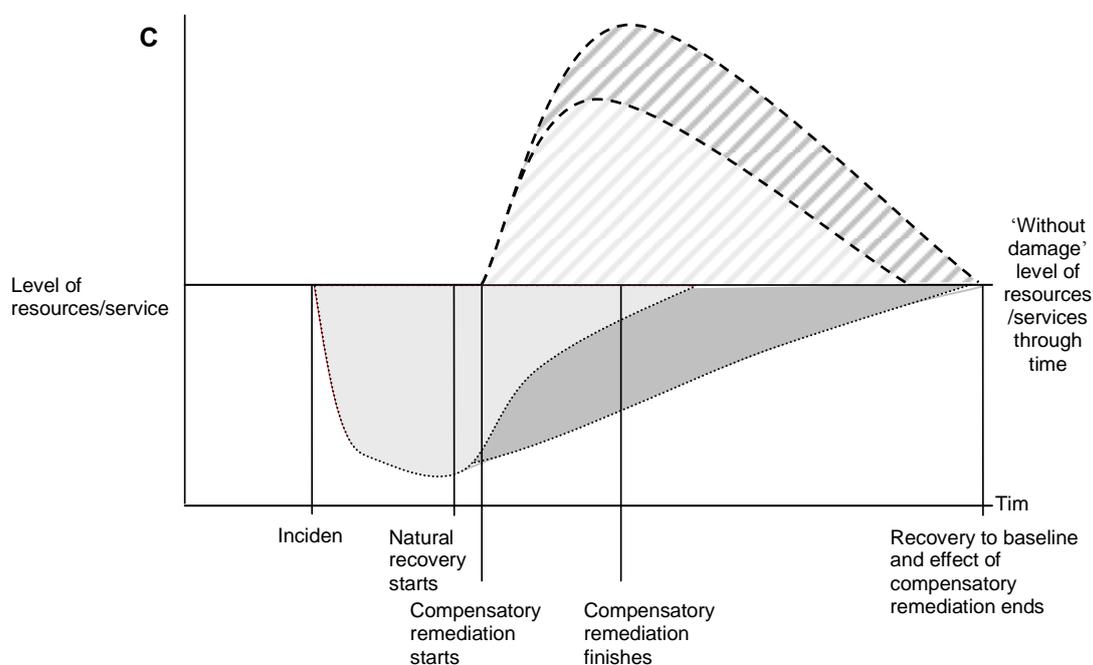
Diagram A below represents an incident of ‘environmental damage’ e.g. where pesticide has been used inappropriately on a hay meadow. The vertical axis represents the level of services provided by the hay meadow. The horizontal line through the middle represents the level of services that would have existed if there had been no damage. The dotted line represents the level of services given the incident. When the incident takes place the level of services provided by the hay meadow (e.g. as habitat for fritillaries) drops. It might be agreed that, as primary remediation, the operator should treat the soil to remove the pollutant. Once this is done recovery will start and, after a time, the level of services will return to the level they would have been in had the damage not happened. The interim loss of services from when the incident took place to when services recovered fully is represented by the area shaded light grey.



An area of hay meadow in poor condition is identified adjacent to the damaged site and it is assessed that an active grazing and hay cutting regime could be implemented there to compensate for this interim loss. The dashed line in diagram B represents the level of services provided by implementing the regime at the adjacent regime. It increases while the regime is in place and then slowly declines. The light grey stripy area represents the total services provided through time as a result of the regime and is equal to the light grey shaded area so fully compensates for the interim losses.



An alternative option may be not to treat the soil. It may for example be established that the hay meadow will recover to the 'without damage' level of services without treating the soil but over a longer period of time. In this case there would be a greater interim loss (the dark grey shaded area in addition to the light grey shaded area) and the compensatory measures would need to be taken over a longer period of time or to a greater area (the dark grey stripy area in addition to the light grey stripy area) to compensate for the additional interim loss as illustrated in diagram C.



Diagrams B&C represent alternative options and the authority will need to apply the criteria listed at paragraph 6.12 to decide which should be implemented.

Note: The diagrams above assume that the level of natural resources and services would be constant in the absence of damage. In many cases this may not be realistic, for example: there may be natural fluctuations or known upward or downward trends in the level or natural resources and services of species and habitats. Where there is clear evidence of these they should be taken into account.

Quantifying complementary and compensatory measures

A2.17 This sub-section introduces the approaches for assessing how much complementary and compensatory remediation needs to be provided.

A2.18 Where it has been possible to identify natural resources or services of the same or similar type as those damaged an approach based on the equivalence of resources and services should be used. Resource Equivalency Analysis (REA) and Habitats Equivalency Analysis (HEA) which are explained below are the main approaches that have been developed.

A2.19 Where it is necessary to provide entirely different natural resources or services, it will not be possible to use REA or HEA and it will be necessary to use monetary valuation. Schedule 4.7 states

(Where possible) remedial measures must have the same monetary valuation as the lost natural resources or services.

If valuation of the lost natural resources or services is practicable, but valuation of the remedial measures cannot be made within a reasonable time or at a reasonable cost, then remedial measures may be provided whose cost (instead of monetary valuation) is equivalent to the value of the lost natural resources or services.

A2.20 Whichever approach is used the basic principle is to find a unit of exchange between the **losses** of natural resources and services in the same units as the **gains** to be provided through complementary and compensatory remediation. This is in order to calculate the scale of (or “to scale”) measures needed to be equivalent to the losses. The basic principles of REA, HEA and monetary valuation are introduced next.

Habitats Equivalency Analysis and Resource Equivalency Analysis

A2.21 These approaches have been developed in recent years to assess remedial measures required under US environmental liability regimes. In essence these two approaches are similar, the main difference is the first measures the area of extent of a type of habitat (e.g. hectares of grassland or kilometres of river) and includes a parameter to measure the change in service level of that area and the second generally measures numbers of a particular resource (e.g. birds, fish or trees).

A2.22 The units of exchange used in HEA consist of three parameters:

change in service level X area X time

So units could be expressed, for example, as “service-hectare-years” or “service-kilometre-years”.

A2.23 The units of exchange used in REA will be case specific. In some cases, the units of exchange may simply be the number, mass or similar measure of a particular resource damaged by the incident (e.g. 125 seabirds or 3,000 kilograms of salmon biomass). In other cases, the loss may be better characterised using units of “resource-time” (similar to those used for HEA), such as fish-months or seabird-years⁴⁰.

A2.24 In practice as the losses and gains occur across time in the past, present and future, and potentially arise at different times from each other, it is necessary to ‘discount’ the units to express them in ‘present value’ terms. The units then become: “discounted fish-months”, “discounted service-hectare-years” and so on.

⁴⁰ In some cases it may be appropriate to include an additional parameter to adjust for quality or service level (as for HEA below). This is where resources are not of a consistent quality or where the quantity of natural resources lost or gained is not proportionate to the quantity of services lost or gained from those natural resources.

Figure A2.4: Discounting

Discounting may be a familiar concept from the financial arena where investments made in different time periods are similarly discounted so that they can be compared on an equal basis. If, for example, an investment is going to pay out £100 for each of the next ten years, we would typically value the £100 we get this year more highly than the one we get next year and so on. A discount rate is therefore applied to reflect the proportion by which today's value of £100 decreases each year the further into the future we expect to receive it. Similarly it is considered that we would assign a higher value to natural resources and services that we enjoy now than those we expect to enjoy in the future, assuming that they otherwise remain the same.

The Treasury's *The Green Book: Appraisal and Evaluation in Central Government* recommends a discount rate of 3.5% to reflect the value society attaches to 'consumption' (i.e. enjoyment of goods and services) at different points in time. The Green Book also suggests a declining long-term discount rate so that 3.5% is the annual rate for the first 30 years, 3.0% is used for the next 45 years and so on. It is suggested that these rates should be used.

See Annex 5 of the Remede toolkit for further information on discounting.

A2.25 Once the appropriate unit of exchange between losses and gains has been established and the amount of loss quantified. HEA calculations determine the amount of the selected remediation approach that must be implemented based on the expected gains per unit of remediation.

Figure A2.5: Simplified examples of how REA and HEA works

REA example⁴¹:

A case of 'environmental damage' involves a kill of 10,000 fish. It is possible to replace the fish through restocking but there is an interim loss as it will be two years before the fish can be replaced. To compensate for the interim loss of fish a nearby river is identified as being under-stocked and can be stocked at the same time as the damaged river. REA is used to work out how many fish should be released into the nearby river and the unit used is discounted fish-years. A discount rate of 3.5% is used. First, the number of lost units is calculated in the table to the right.

Year	Nominal fish-years	Discounted fish-years
1	10,000	10,000
2	10,000	9,662
Total	20,000	19,662

⁴¹ This example is provided to illustrate the calculation of interim losses and discounting. In some REAs damage may be assessed using other units e.g. lost biomass and/or use population models to estimate the amount of the natural resource that is lost (from the incident) or gained (from remediation).

The average lifespan of each replacement fish is estimated to be 6 years. The number of units provided by each fish is calculated in the table to the right:

Year	Nominal fish-years	Discounted fish-years
1	1	1
2	1	0.97
3	1	0.93
4	1	0.90
5	1	0.87
6	1	0.84
Total	6	5.15

The total number of lost units is divided by the number of units provided by each fish to work out how many fish need to be released into the river to provide compensation for interim loss: 3,819 (19,662 ÷ 5.15). (This figure does not include the number of fish needed for primary remediation).

HEA example:

An area of 10 hectares of wetland is damaged leading to an estimated 50% reduction in the services provided by the wetland. Measures are implemented as primary remediation so that the wetland starts to provide 100% of its service again after a period of 10 years. It is identified that the damaged wetland could beneficially be extended to encompass an area of agricultural land. The agricultural land currently provides the equivalent of 20% service and turning it into wetland will increase its services to 100%. For assessment purposes it is assumed this service level will last for 30 years. In this case the service level jumps, after 10 years, from 50% to 100% at the damaged site and at the extension area from 20% to 100%. In other cases the level of service may return gradually to the site. HEA is used to work out how much wetland needs to be created and the unit used is discounted service-hectare-years. A discount rate of 3.5% is used.

Year	Service loss	Area	Discounted service Ha years
1	50%	10	5
2	50%	10	4.8
etc.	etc.	etc.	etc.
10	50%	10	3.7
Total			43.0

First, the number of lost units is calculated in the (shortened) table to the right.

It is assumed that the agricultural land is converted so it starts providing increased services at the same time the damaged wetland reaches its full service level and that the new wetland provides increased services for 30 years.

Year	Service gain	Area	Discounted service Ha years
11	80%	1	0.57
12	80%	1	0.55
etc.	etc.	etc.	etc.
40	80%	1	0.21
Total			10.8

The number of hectares provided by each unit is calculated in the (shortened) table to the right.

The total number of lost units is divided by the number of units provided by each hectare to work out how many hectares of wetland need to be created: 4.0 (43.0 ÷ 10.8)

Monetary valuation

A2.26 Paragraph A2.17 refers to the Regulations' requirement to use monetary valuation where it is necessary to provide different natural resources and services from the damaged ones.

A2.27 Economists have developed methods to measure the value of natural resources and services where they are not otherwise normally assigned a monetary value or where the value assigned to a product (e.g. timber) in the marketplace does not reflect their full value to society (e.g. the value of a tree's timber does not capture the value the tree provides as habitat, sequestering carbon, preventing soil erosion or a variety of other services). Figure 8.6 below provides a brief introduction to monetary valuation.

A2.28 The same broad approach as for REA and HEA can be adopted using monetary valuation, whereby:

- A value (in £s) is established for the lost resources
- Potential projects are identified and a value (or cost if value is not possible) is established for each hectare (or individual etc.) improved or provided
- The value of the lost resources is divided by the value of each hectare provided to determine the number of hectares needed as complementary or compensatory remediation

This is known as Valuation Equivalency Analysis (VEA).

Figure A2.6: Brief introduction to monetary valuation

The Remede toolkit⁴² refers to two general categories for valuing the environment:

“... 1. Those where values can be based on the direct ‘utility’ that environmental goods and services provide to people. For example, the value of forests to deer hunters, or of wilderness protection to mountaineers. Within this approach there are two sub-approaches that are generally recognised:

Revealed preference techniques. These look for functional relationships between people's consumption or enjoyment of an environmental, non-market good, and a good which is traded in markets. Two principle approaches are ‘travel cost’ and ‘hedonic pricing’. The travel cost model uses people's expenditures on travel to measure their demand for outdoor recreational resources such as salmon fisheries or national parks. The hedonic pricing approach seeks statistical relationships between housing or labour markets and environmental variables such as air quality or health risks

⁴² See Annex 6 of the *Remede* toolkit on Economic Valuation Techniques

Stated preference techniques. These use surveys to directly estimate people's willingness to pay (or willingness to accept compensation) for changes in environmental quality. Tools within this approach include 'contingent valuation' and 'choice modelling'.

2. Those where values can be based on the role that ecosystem services play in the production of market-valued goods. An example is the market value approach. This technique discusses the relationship between the environmental good of interest and the production, quality or quantity of a market-valued good. An example would be the value of a wetland in acting as a storm surge barrier and flood mitigation device which reduces damages to commercial or domestic property (houses, offices, shops) from flooding. ...”

Benefits transfer, the practice of adopting value estimates from the literature to the assessment in hand, is increasingly used given the resources and time that is required to undertake primary studies.

A framework which identifies all the relevant services (see figure 8.1) may be an effective starting point for undertaking monetary valuation in this context.

Step-by-step guide to assessing remedial options.

A2.29 This section is a step-by-step guide to provide help in carrying out assessments for the more simple cases of damage and remediation. Depending on the case, assessments are likely to require specialist input, for example from ecologists, economists or lawyers.

A2.30 This step-by-step guide only covers the basic issues that are likely to arise. Some cases will involve additional issues and further guidance or further specialist knowledge may be required. The *Remede*⁴³ toolkit and associated documents is a central source of further information and references to it are provided below.

A2.31 This guide is structured in five phases:

- Project planning
- Identifying damage
- Identifying primary remedial options
- Identifying complementary and compensatory remedial options
- Quantifying remediation

A2.32 The key steps of this step-by-step guide are set out in the green boxes and a working example is used, introduced in the box immediately below, to help illustrate how assessments would work. Annex 3 includes four full case studies of 'environmental damage' including one on damage to a terrestrial habitat, one to a marine species and one on

⁴³ See footnote 36

damage to water which show in more detail how assessments would work.

Figure A2.7: Red kite example: introduction

The red kite was formerly one of the UK's most widespread and familiar birds of prey but became extinct in England and Scotland by the end of the 19th century as a result of human persecution. In 1989 a reintroduction programme was initiated and self-sustaining populations have been reintroduced at several sites across the UK. These populations still face a number of threats and monitoring shows that illegal poison baits are the most serious: red kites are particularly vulnerable to poison baits because of its scavenging habits and its social behaviour so a single bait can often result in the death of more than one bird.

In this hypothetical example, wildlife crime officers in an area of the North-West of England find evidence that a new landowner, keen to develop his game shooting business, gave instructions to his gamekeepers to carry out poisonings that led to the death of five breeding pairs of red kites in the summer months. Red kites are listed in Annex I of the Wild Birds Directive, and the total population of red kites in the area is 25 breeding pairs. Given the particular circumstances at the site it is considered that the damage has had a significant adverse effect on maintaining the favourable conservation status of the red kite. Remediation will therefore be required under the Regulations. At the same time, the Crown Prosecution Service pursues a prosecution for an offence of bird of prey persecution under Part 1 of the Wildlife and Countryside Act.

Project planning

A2.33 Some form of preliminary assessment is likely to be useful during this project planning phase to identify what is already known. Readily available information should be collected and evaluated, and a preliminary estimate of the amount of damage and the type, scale and cost of required remediation developed. For example, the extent of damage may have been well defined in determining that the Regulations apply and the most desirable remedial options may be self-evident. This should help to focus attention during the assessment on key data gaps and information needs.

A2.34 As with any assessment preparation is critical to success. Preparation is likely to involve drawing up a project plan to determine timetables, resource requirements, information needs and stakeholder involvement. A preliminary assessment is likely to be an important part of this phase to identify what the key issues are and to the right data to be collected as early as possible.

Figure A2.8a: project planning

- **Undertake preliminary assessment**
 - What are the key issues likely to be?
 - What is already known for each of the steps outlined in this guide?
 - Are there options for complementary and compensatory remediation that provide resources or services that are sufficiently similar to the lost resources and services to enable REA and HEA?
 - If this is known, is it possible to identify the units of exchange and metrics that will be used? This would enable early collection of data.
 - What information is available about key receptors, likely magnitude of impact, recovery time, reasonable remediation alternatives and costs?

- **Develop a timetable:**
 - What are the key steps (e.g. as detailed at A2.31 above)?
 - What are the inter-linkages between them?
 - When is assessment required by?
 - When are critical inputs needed by?

- **Identify resources:**
 - Who is going to do the assessment?
 - What skills and expertise are needed?
 - What level of input and detail is proportionate to scale of damage and likely remedial options⁴⁴?

- **Identify information needs:**
 - What kind of data will be needed for the damage and remedial options?
 - How much data is available from the assessment of damage and other sources?
 - What models or software are needed to assess damage and remedial measures?

- **Consider stakeholder involvement:**
 - Are there wider stakeholders who may need to be informed or whose input will be useful?
 - What arrangements are needed to co-ordinate their input or communicate with them?

⁴⁴ It is likely that the level of scientific certainty on the precise nature and scale of damage and remediation options will increase with increased input and detailed assessment. Smaller and simpler cases may allow for several simplifying assumptions to be made and for the use of software programmes based on inputting some key parameters. In some larger scale and more complex cases detailed assessment will be desirable; in others it may be disproportionate to the benefits to be gained.

Figure A2.8b: Red kite example: project planning

The landowner has decided to propose remedial measures to the authority and has agreed to submit detailed proposals of the type and level of measures to be taken. The landowner commissions the UK Red Kite Conservation Trust (RKCT) to manage the assessment on his behalf.

Preliminary assessment

- It was established when determining that there was damage that 5 breeding pairs had been killed. It should be possible to release red kite at the site of damage as primary remediation or to release red kite at another site as complementary remediation. Additional red kite could be released either at the damage site or another site to compensate for the interim loss. An alternative approach to remediation which should be considered is to take measures to remove pressures on red kite at other sites. REA should be possible as numbers of birds can be counted and are a good proxy for the level of services provided by the birds. The unit is likely to be a “discounted breeding-pair year”.
- Some key issues that will need to be considered include⁴⁵:
 - where to source birds from and, if chicks are trans-located within the UK, whether the assessment needs to take account of the loss somewhere else
 - that the bird population at the site was increasing before the damage happened
 - that not all chicks introduced will survive to breeding age and so survival rates need to be factored in
 - whether there are practical issues such as access to land to prevent the preferred projects

Timetable

- The authority has requested that proposals be submitted within two months.
- RKCT draws up a timetable which builds in:
 - 1 week for project planning
 - 3 weeks for data collection and developing detailed options
 - 1 week for meeting the authority’s project officer and to take account of initial observations
 - 1 week for quantifying precise options
 - 1 week for submitting proposals

Resources

- RKCT identifies the resource requirements as 10 days for project management, 4 days for a red kite specialist and 3 days for an expert in REA.

Information needs

- A full list of the information needs is compiled

Stakeholder involvement

⁴⁵ There may be other issues to take into account in practice.

- It is decided that local authority wildlife officers should be consulted to ensure that plans are consistent with local Biodiversity Action Plans

Identifying damage

A2.35 This step involves identifying what natural resource and services are damaged and collecting key information about the damage. This may have been done to varying degrees in determining that the Regulations apply but there is likely to be some further information required.

Figure A2.9a: Identifying damage

- **List the damaged natural resources and services**
 - Remember that 'natural resources' has a specific meaning (see figure A2.1)
 - It is important to consider the effects on biological resources other than those within the meaning of natural resources particularly where the natural resources depend on them. For example, where the prey species of EU protected species are affected
 - It is also important to take account of indirect effects such as foregone reproduction when species are lost
 - A Conceptual Site Model may be useful to establish what features are likely to be damaged by the incident
 - An ecosystem services framework may be useful to screen for the natural resource services affected by the damage
 - Where many services are affected to varying degrees, concentrate on the significant losses
- **Collect key information about the damage**
 - Much, if not all, of the information required is likely to be available from the assessment of whether there was 'environmental damage' in the first place and this should as far as possible be made available to assessors.
 - Key information includes when damage started, the extent of damage (e.g. spatial extent or number of individuals damaged), what services have been lost and the damage path (e.g. whether there is a sudden drop in natural resources or services or a gradual decline) Information may be available in a number of forms such as sampling data, surveys, sketch maps, modelling, photographs, witness and professional opinion.
 - Determining the extent of damage will normally require information about the condition of the environment before the damage. In some cases there will be site specific data, for example monitoring data for reporting for the Water Framework Directive or Habitats Directive. In other cases reference sites

might inform the likely condition before the damage. Finally, modelling may be necessary⁴⁶.

- If the preliminary assessment has already identified appropriate remedial options and identified which quantification approach, units of exchange and service metrics should be used it will be possible to collect precisely the information needed about the damage. See figure 8.10a for information about units of exchange and metrics.
- There may be more than one type of natural resource damaged and so these are likely to need separate assessment
- Natural resources may also be damaged to different degrees (for example where a habitat has been damaged some parts may be more damaged than others). In this case it may be appropriate to divide up the natural resources into sections with similar changes in service level.

Figure A2.9b: Red kite example: identifying damage

List the damaged natural resources and services

- Investigations when the damage is determined prove that red kite are the only 'natural resources' damaged. They had been targeted specifically by the poisoned bait and there is no evidence of other dependent species or surrounding habitats having been affected.
- The loss of breeding pairs will also give rise to foregone production which needs to be taken into account
- The main service provided by the birds is the pleasure gained by birdwatchers, other visitors and the local population of seeing the birds and the presence of this population also supports the survival of populations in other areas of the UK.

Collect key information about the damage

- 5 breeding pairs are found to be dead. Surveillance of known nests suggests that there are no further losses.
- The damage occurs on 15 June 2009
- Number of breeding pairs is chosen to measure the loss. This is considered to adequately reflect the main services so it is not necessary to identify an additional service metric. The case studies in Annex 3 illustrate use of service metrics.

Identifying primary remedial options

A2.36 This step involves identifying feasible options for primary remediation.

⁴⁶ Section 2.3.2 of the Remede toolkit provides further information on determining the 'baseline' condition of the environment

Figure A2.10a: Identifying primary remedial options

- **List the most plausible options for primary remediation**
 - Examples of measures that might be taken are listed at paragraph A2.7
 - Natural recovery should be considered
 - The feasibility of options that return natural resources to their pre-incident condition should be considered
 - The evaluation criteria listed at paragraph 6.12 should be taken into account in determining which options are plausible

- **Collect key information about the options for primary remediation**
 - What measures would be taken and when
 - When recovery would be expected to start and be complete
 - What level of recovery would be expected
 - What recovery path would be expected. Sometimes the natural resources will recover gradually over a period of time and start to perform services as they recover and it will be fair to assume a linear path. In other cases natural resources or their services will be expected, for example, to recover sharply after a certain period of time. This could, for example be where species only re-colonise a habitat where it has reached a certain stage of maturity. The recovery path is relevant as the assessment measures the level of natural resources or services throughout recovery
 - The estimated cost of measures which is useful for evaluation purposes

Figure A2.10b: Red kite example: identifying primary remedial options

List the most plausible options for primary remediation

- The landowner co-operated in removing the poisoned baits immediately after the damage was discovered
- Re-introducing species is expected to restore the population to numbers that would have existed if the damage hadn't happened. It would take about two years for introduced chicks to reach breeding age
- Species would recover naturally but, given population growth it is likely to be a considerable time before the recovery path would converge with the no-damage level of species.
- Re-introducing species at the site is likely to be preferable given that it is likely to be cheaper to focus on one site, it would have a high chance of success as it has been done before, can be achieved relatively quickly and it would deprive birdwatchers and others if slow recovery is compensated for elsewhere.

Collect key information about the options for primary remediation

- Red kite chicks would be translocated from an area where populations have reached a stable level and released from pens at the damage site in summer 2010. There are also some ongoing activities to support the survival of the birds and monitor their progress

- They are expected to reach breeding age by summer 2010.
- The population growth rate is estimated at 10% per annum based on historical data. This is needed to account for the reproduction foregone from the lost birds.
- Information from having introduced red kite to the area previously suggests that 52% of birds survive the first year and 67% survive the second so that 35% of chicks released will reach breeding age. This means that approximately 3 chicks will need to be released to provide one adult.
- Translocating birds is not expected to lead to population loss in any other location as the site they come from is considered to have reached maximum sustainable levels. Precautions are also designed to make sure that the necessary activities do not have any adverse impact on the area
- Costs are estimated from previous similar work.

Identifying complementary and compensatory remedial options

A2.37 This involves identifying compensatory remedial measures and, where primary remediation does not return natural resources to their pre-incident condition, complementary remediation.

Figure A2.11a: Identifying complementary and compensatory remedial options

- **List the options for complementary and compensatory remediation to correspond to the plausible options for primary remediation**
 - The extent to which complementary and compensatory remediation are required is determined by whether or not primary remediation returns the environment to its pre-incident condition and the extent of interim losses; therefore these options need to correspond to the plausible options for primary remediation
 - The measures listed at paragraph A2.7 can also be taken as complementary or compensatory measures with the qualification at paragraph A2.13
 - Paragraphs A2.14 and A2.15 provide information about how complementary and compensatory remediation should relate to the damaged natural resources and services
 - There might be several options for complementary and compensatory remediation and each option might involve more than one site. Different options could be entirely different schemes from one another or they could be substantially the same scheme with variations to certain components
 - Complementary and compensatory remediation are in conceptual terms different but they do not necessarily require separate projects as long as the remediation is sufficient to cover both components.
 - Consideration needs to be given to practicalities in identifying

options such as whether the land will be available for undertaking remedial works and whether there are any other factors that may affect the feasibility of undertaking specific measures.

- Measures taken as complementary and compensatory remediation must be clearly additional to measures otherwise planned or required
- Again the evaluation criteria at paragraph 6.12 should be taken into account.

- **Collect key information about the options for complementary and compensatory remediation**

- What measures would be taken and when
- When improvement would be expected to start and be complete
- What level of improvement would be expected
- What improvement path would be expected (as for recovery path for primary remediation)
- The estimated cost of measures which is useful for evaluation purposes and may be necessary for quantifying remediation

Figure A2.11b: Red kite example: identifying complementary and compensatory remedial options

List the options for complementary and compensatory remediation

- One option is to introduce additional birds at the damage site over and above those introduced as primary remediation. Variations are identified in how and where birds are introduced and maintained within the site. These include considering more activities to reduce threats to increase the survival rate and therefore reduce the numbers of birds that need to be introduced
- Another option is to introduce birds at an alternative site
- A third option is to take measures to reduce pressures on populations. RKCT is aware of a number of actions including funding and training of enforcement officers.
- Introducing additional birds at the damage site may be preferable for the same reasons given for primary remediation. The third option is discounted as there is no reliable information or past experience on how effective these measures will be.

Collection of key information about the options

- This is the same information as for primary remediation
- The population growth rate is also relevant to calculating compensatory remediation on the basis that each breeding pair provided will contribute to population growth until the maximum sustainable population for the area is reached. Modelling suggests that this might be at about 110-120 breeding pairs.
- The extra costs of introducing additional birds will be low as most of the costs are fixed.

4. Quantifying remediation

A2.38 This step involves, for each option, working out how much complementary and compensatory remediation needs to be taken given the primary remediation undertaken. It is also referred to as 'scaling' remediation.

Figure A2.12a: Quantifying remediation

- **Identify quantification approach**
 - REA should be possible where the same type of natural resources are provided (or different natural resources that provide comparable services) and they can be expressed in numbers of a particular resource
 - HEA should be possible where the same or similar types of natural resources or different natural resources that provide comparable services are provided and they can be expressed in area or length.
 - Monetary valuation will be necessary where different natural resources are provided with different services.

- **Identify the unit of exchange and service metric**
 - For REA, the extent of losses and gains will be measured by the number of e.g. fish and the unit of exchange will be discounted fish-years. Sometimes resources can be measured in different ways for example young fish, adult fish or kg of fish biota and the one that best represents the full losses and gains should normally be chosen. A service "metric" may also be needed where the natural resource itself is not a good proxy for services
 - For HEA, the extent of losses and gains will be measured by the number of e.g. hectares of habitat or km of river. The unit of exchange will generally include a parameter to represent service level and will be expressed as e.g. discounted service-hectare-years or discounted service-km-years
 - Where a service metric is necessary, consideration should be given to which are the most relevant metrics or indicators of change in services for each natural resource. Available service metrics may for example include:
 - Measures of vegetation density, cover or biomass
 - Percentage cover of an essential vegetation species
 - Above ground biomass of the dominant vegetation
 - Density of seedlings
 - An index of vegetation structural diversity
 - Habitat-quality indices
 - Presence of positive or negative indicator species
 - Habitat-use days (the number of individuals visiting a site over a period of time multiplied by the period of time)
 - Concentrations of contaminants (this could e.g. be a linear scale or based on information about likely effects when the contaminants exceed certain thresholds)

- Choosing appropriate metrics for services is key to a successful assessment and can have a significant influence estimation of losses and gains. Metrics will generally be measured on a numerical scale and will often reflect a percentage service level. Metrics should be chosen that best reflect the change in important services that result from damage or measures taken. Sometimes a single metric will not accurately capture the change in services. In these circumstances it may be appropriate to construct a multi-attribute metric or to use more than one metric. If using more than one metric it is important to determine whether the gains and losses measured by each are independent or additive.⁴⁷
- For monetary valuation money will be the unit of exchange.

- **Identify input information**

- The table below summarises the information required (in addition to the discount rate to be used)

	Damage/primary	Complementary/compensatory
Time	- When damage started - When recovery started - When recovery completed	- When improvement started - When improvement achieved - Duration of improvement
Affected natural resources	- Number of e.g. fish or hectares damage -Number of e.g. fish or hectares that recover	- Potential number of e.g. fish or hectares that can beneficially be provided/improved
Change in services	-Change in service metric when damage takes place and damage path -Change in service metric when recovery takes place and recovery path	- Change in service metric from start of improvement to achievement and while benefit is sustained and improvement path.

- **Work out number of lost units**

- Information should now have been collected to calculate the lost units for REA and HEA
- If monetary valuation is necessary values for the losses will need to be estimated (see paragraph A2.26 onwards)
- While it was assumed in the graphical illustrations after paragraph A2.16 that the condition of natural resources would have stayed constant in the absence of damage, this may not be the case in reality as there will normally be some fluctuations or there may be positive or negative trends. Where there is evidence of such trends and their scale these should be taken into account
- There will be some level of uncertainty. Plausible ranges and a best estimate should be given

- **Work out number of units provided per hectare/individual**

- The same issues largely apply as for working out the lost units

⁴⁷ Chapter 2.3.1 of the Remede toolkit covers quantification metrics.

immediately above: there should be information for REA and HEA; there may be different types of remediation; the condition of the relevant natural resources may not have remained constant in the absence of improvements; and best estimates should be given

- Monetary valuation should be used to value the number of units provided per hectare/individual. If this cannot be done within a reasonable timescale or at reasonable cost then the financial cost of measures should be used instead. This is likely to include the implementation, administration, maintenance and monitoring.

- **Determine how much remediation is needed**
 - The number of lost units should be divided by the number of units provided per hectare/individual to give the number of hectares or individuals needed
 - Plausible ranges and a best estimate should be given identifying what the key uncertainties are
 - It may be helpful to identify what can easily be varied. For example, it may be possible to secure a higher level of improvement to a smaller area
 - Software packages are available to work out how much remediation is needed given the input parameters
- **Determine how much remediation will cost**
 - A key reason for doing this is to help authorities assess measures proposed. It is likely to provide a breakdown of costs.
- **Document remediation packages and relevant issues**
 - This should include the information identified at paragraph 6.5.

Figure A2.12b: Red kite example: quantifying remediation

This only covers a remediation package which involves releasing red kite chicks at the damage site both to fully restore populations to the level they would have been in (as primary remediation) and to compensate for interim losses. It should also be noted that this is a simplified example and that other issues may need to be taken into account, e.g. male-female ratios.

Identify quantification approach and unit of exchange

- As identified during the preliminary assessment REA is appropriate with discounted red kite breeding-pair years as the unit of exchange. It is not necessary to assess services separately as the number of breeding pairs is considered a good proxy for the level of service they provide.

Identify input information

	Damage/primary	Complementary/compensatory
Time	- Damage started: 15 June 2008	- Compensatory started 1 year later

	<ul style="list-style-type: none"> - Primary started 1 year later - Primary completed 3 years later 	- Compensatory takes effect 3 years later
Affected natural resources	<ul style="list-style-type: none"> - 5 breeding pairs are damaged - Given lost population growth 6.7 breeding pairs will be needed by 3 years later to reach the same level as without damage - 35% of chicks will reach breeding age 	<ul style="list-style-type: none"> - The maximum sustainable population is estimated at 110-120 so this imposes a limit on the compensatory remediation that can be done on site. - The growth rate of 10% means that this limit will be reached at some point without remediation so the effect of compensatory remediation is to provide benefits earlier.

Work out number of lost units

- This is calculated in the table to the right

Year	B-P-years lost	Discounted B-P-years lost
2009	5.0	4.8
2010	5.5	5.1
2011	6.1	5.5
Total	16.6	15.4

Work out number of units provided per breeding pair

- This is calculated in the table to the right. This takes account of the progeny of the breeding pairs provided as reflected in the population growth rate and it also takes account of the fact that the gains from remediation will only be additional until 2024

Year	B-P-years gained	Discounted B-P-years gained
2012	1	0.9
2013	1.1	0.9
2014	1.2	1.0
etc.	etc.	etc.
2024	3.1	1.8
Total	24.5	16.8

Determine how much remediation is needed

- 6.7 breeding pairs need to be provided by 2012 as primary remediation.
- 0.9 breeding pairs (15.4/16.8) need to be provided by 2012 as compensatory remediation.
- This gives a total of 7.6 – or 8 breeding pairs.
- Given the survival rate this means introducing 46 individual red kite chicks (8 divided by 35% for the survival rate and multiplied by two).

Determine how much remediation will cost

- The costs of introducing the red kite chicks is estimated to be approximately £120k.
- This comprises £5k set up costs to install the release pens and radio receiver, £30k per year over three years (for staff costs, vet bills, transport and admin costs and radio tags) and £5k per year for the following 5 years to monitor species survival.

Document remediation packages and relevant issues

- The details for this option are presented along with one option where more measures are taken at the site to increase the survival rate and another option where red kite are introduced in another area.

Land damage

A2.39 This section provides guidance on identifying remedial options for damage to land. In some cases of 'environmental damage' there may be damage to land and damage to water or damage to species or habitats, or there may be all three types of damage. In these cases the requirements in the Regulations for both damage to land and for the other type/s of damage need to be met.

A2.40 Part 2 of Schedule 4 to the Regulations deals with remediation of damage to land. It states:

This part applies in relation to damage to land.

The remediation must ensure, as a minimum, that the relevant contaminants are removed, controlled, contained or diminished so that the land, taking account of its lawful current use or any planning permission in existence at the time of the damage, no longer poses any significant risk of adverse affects on human health.

The presence of such risks must be assessed through risk-assessment procedures taking into account the characteristic and function of the soil, the type and concentration of the harmful substances, preparations, organisms or micro-organisms, their risk and the possibility of their dispersion.

Natural recovery is a permitted form of remediation in appropriate cases⁴⁸.

A2.41 Those developing remedial measures may wish to use the Model Procedures for the Management of Contaminated Land, CLR 11⁴⁹ published by the Environment Agency. CLR 11 provides extensive guidance for developing the remedial measures and objectives in a systematic manner, reflecting current best practice in the contaminated land field. It also provides guidance on the actions to assess the effectiveness of remediation actions that have been undertaken, or of natural recovery (monitoring actions).

A2.42 When assessing whether any significant risk remains the lawful current use of land or any planning permission in existence at the time of the damage need to be taken into account⁵⁰. In some circumstances

⁴⁸ As noted in paragraph A2.6, securing natural recovery will normally involve some action.

⁴⁹ http://www.environment-agency.gov.uk/subjects/landquality/113813/881475/?lang=_e

⁵⁰ This is analogous to 'current use' in Part IIA. See paragraph A26 in Annex 3 of Defra Circular 01/2006 which explains that "current use" means any use which is currently being

operators may wish to carry out further remediation, for example, to prepare the land for sale or further development, or to avoid future liabilities.

A2.43 When dealing with cases of 'land damage', it will be advantageous for the authority to consider the requirements of any permits, licences or permissions to which the land or activity is subject, to ensure a coherent approach to remedying the damage. It will also be advantageous to consider the possibility that there may be pre-existing contamination on, or affecting, the site which is presenting risk (for examples to other aspects of the environment as well as to human health) which could also be dealt with at the same time. Similarly, there may be contamination arising from the incident or event being addressed under the Regulations that may have adverse effects **in addition to** human health effects. It will be advantageous to consider these to avoid future liability and legal action.

A2.44 Where land contamination is a feature of cases that are also or may also be water damage or damage to protected species or natural habitats, whether or not human health effects are present, the above guidance may also be useful.

A2.45 Where land use changes following remediation, any risk that might arise in connection with a proposed new use of the land needs to be considered and appropriate action taken, as required for example by the planning process or building control.

A2.46 Operators should also take steps needed to ensure that remedial measures are not prejudiced through subsequent development or other actions on the land (for example, that containment systems for contaminants or monitoring measures are not damaged through ignorance of their existence or function).

made, or is likely to be made, of the land and which is consistent with any existing planning permission (or is otherwise lawful under town and country planning legislation)

Annex 3: Case studies

Case study 1: Damage to species and habitats: manure on calcareous grassland
Background
<p>A farm worker applies manure using a tractor and manure spreader to a 10ha SSSI notified for calcareous grassland. The grassland has been in favourable condition for the last 15 years and is managed by a summer grazing regime.</p>
Immediate action
<p>The operation is observed by a local Wildlife Trust reserve manager who informs the local Natural England office. The Natural England conservation advisor telephones the farm owner, who immediately orders his employee to stop the spreading activity and invites the conservation advisor to discuss the incident on site. The farm owner apologises for the incident and explains that his employee is new to the farm and did not realise that the site was a SSSI. He indicates his willingness to work with Natural England to take the necessary measures.</p> <p>The conservation advisor accurately measures the area of damage with GPS (5ha - 50% of the site), and estimates the % of grassland covered by manure (40%), by placing quadrats at regular intervals throughout the damaged area. Photographs and a sample of manure are taken.</p> <p>The conservation advisor quickly analyses whether there are reasonable grounds to believe that the damage may fall within the Environmental Damage Regulations (hereafter, the Regulations). He is uncertain as to whether the manure spreading is an activity in Schedule 2 of the Regulations that would attract strict liability⁵¹ but believes that either way the farm owner would be liable as he considers that he has been negligent in not adequately supervising his new employee. He also considers that the manure could potentially adversely affect the integrity of the SSSI, although it is difficult to tell how the species will react to elevated nutrients and smothering at this stage. The conservation advisor advises the farm owner that there are reasonable grounds that the damage may fall within the Regulations, and gives a brief overview of the Regulations procedures.</p> <p>The conservation advisor and farm owner discuss the steps that can be taken to prevent the damage from worsening, in particular to ensure that stock do not transfer nutrients from the damaged area to the undamaged area. The farm owner confirms that this can be easily achieved by erecting a small electric fence between the two areas, and that it will be possible to do this within the next week. Natural England then serve a notice requiring these measures to be taken and requiring the manure not to be removed on the basis that this would do more damage than</p>

⁵¹ He is aware that use of manure as a soil fertiliser that is 'part of a lawful practice of spreading' would fall outside the classification of waste and therefore outside Schedule 2, but in this case it is complicated by the damaging nature of the activity.

benefit. The conservation advisor asks the farm owner for permission to return in two months time, when it will be more apparent what impact the manure has had on the grassland. The farm owner agrees to this request.

Determination of 'environmental damage'

The conservation advisor, a Natural England grassland specialist and the farm owner visit the site two months later. They observe that a number of competitive or negative indicator species have become more abundant in the grassland. The grassland specialist makes an expert judgement that with an appropriate stocking rate, the area could return to its baseline condition within 10 years. Back at the office the conservation advisor and grassland specialist conclude that the damage has adversely affected the integrity of the SSSI, as 50% of the site has been affected, and active remediation is needed to return the site to its baseline status, which will take an estimated 10 years.

The conservation advisor telephones the farm owner to confirm that the damage does fall within the Regulations, explaining the reasons for this, and that Natural England must now serve formal notification of this fact, requiring the farm owner to propose measure to remediate the damage and offering the right to appeal against it. The farm worker indicates that he understands the reasons for the decision, and that he does not intend to appeal against it.

Determination of remedial measures

The farmer speaks to the NFU who recommend a consultant to produce the remediation proposals. NFU suggest a consultant ecologist and an economist to undertake the quantitative aspects of the assessment.

Project planning:

A preliminary assessment is undertaken by the consultants which concludes that primary remediation is likely to be preferable to complementary remediation, as the site can be returned to the condition it would have been in fairly cheaply by an appropriate stocking regime and no more addition of nutrients via manure spreading. They also identify that the removal of scrub that has encroached into an area of the site unaffected by the manure, allowing grassland to establish, would be a potential option for compensatory remediation. Habitats Equivalency Analysis is likely to be the appropriate method. A metric will be needed and some initial work is done at this stage to determine what is appropriate. A number of indicators of the grassland's condition are already used by Natural England for their regular assessments of the condition of sites. These are discussed within the project team with the view that "% coverage of negative species" would be a good proxy for the services provided by the site. It was considered that as the coverage of negative species declined the various positive attributes such as sward height within a given range and the presence of positive species would be achieved. It was decided that this should be checked with Natural England specialists.

The consultants expect to be able to complete the assessment within four weeks.

They identify that they will need some additional advice from a grassland specialist

and will need specific information on:

- the coverage of negative species at the damaged part of the site
- how quickly the other part of the site will recover once the scrub is removed.

Identifying damage:

The damaging incident took place in April 2009. By October it was established using quadrats throughout the site that 10% was covered in negative species (mainly nettles). Without action this was likely to get progressively worse.

Identifying primary remedial options:

Further investigation reinforces the view that adjusting the stocking regime at the damaged site is the best option. This would secure recovery to the condition it would have been in after ten years with a gradual improvement over that time (i.e. a linear recovery rate). Whether or not the site would recover naturally is uncertain and there would be no advantage from using complementary remediation instead of primary remediation.

Identifying compensatory remedial options:

Further investigation also confirms that removing the scrub is the best option to take as compensatory remediation. Currently the area is very densely covered by scrub and is considered to be providing 0% services. As a first step a JCB would remove the bulk of the scrub – this would be done as soon as possible in January 2010. It is estimated that after this the site would still be 60% covered by negative species. It would then be necessary to put a stocking regime in place for the grassland to be able to establish itself and that this would happen gradually over 10 years.

Quantifying remediation:

The table below summarises the information required for the assessment.

	Damage/primary	Complementary/compensatory
Time	Damage starts in April 2009 and recovery starts in March 2010 once a stocking regime has been implemented	The scrub is removed in January 2010 and the stocking regime is then implemented in March 2010.
Affected natural resources	5 hectares	There is an area of scrub of 1 hectare that could be improved
Change in services	10% loss recovering over 10 years	The grassland starts with 0% services. Once the scrub is removed this increases to 40% and then the stocking regime increases this to 100% over ten years.

- A total loss of 2.4 discounted service-hectare-years (DSHYs) is calculated for the losses, as in the “losses table” below
- A gain of 6.1 discounted service-hectare-years is calculated for the gains, as in the “gains table” below
- In total it is therefore necessary to improve 0.4 hectares to compensate for the interim loss.

Losses table

Year	Hectares	Service loss	DSHYs
2010	5	10%	0.48
2011	5	9%	0.42
Etc.	Etc.	Etc.	Etc.
2020	5	0%	0
Total			2.4

Gains table

Year	Hectares	Service gain	DSHYs
2010	1	40%	0.39
2011	1	46%	0.43
Etc.	Etc.	Etc.	Etc.
2020	1	100%	0.68
Total			6.1

The farm owner then submits the proposals to Natural England who consult with the Wildlife Trust reserve manager (who informed Natural England of the damage) on the measures who in turn indicates his approval of the package. Natural England also agree with the package and serves a remediation notice detailing amongst other things the measures to be taken and the requirements for monitoring. Natural England also sends the farm owner an invoice for the costs of administering the case which the farm owner pays.

Implementation of remedial measures

The farm owner is responsible for implementing the remedial measures. He employs a contractor with a JCB to remove the scrub and the ecologist consultant to undertake annual monitoring of progress to report back to Natural England. He makes the appropriate adjustments to the stocking regime.

Case study 2: Damage to marine species and habitats

Background

The "MV ABC" is a medium-sized container ship transiting the English Channel in January 2010. It develops a structural failure and is in danger of sinking with significant consequences for ecosystems in the Channel. If it sinks, it will also present a hazard to navigation.

Immediate action

The ship alerts the Maritime and Coastguard Agency (MCA) of the circumstances, who in turn notify the Secretary Of State's Representative for Maritime Salvage and Intervention (SOSREP). After careful consideration of the facts and with due regard to all the circumstances, including ship and crew safety and environmental concerns, it is agreed to beach the ship to minimize potential damage to the environment. Unfortunately the most suitable location for use as a place of refuge is in close proximity to a designated European Marine Site, recognised for its rare flora

and seabirds. Whilst beaching the ship, some of its containers fall overboard where their hazardous contents enter the sea and contaminate fish. The fish are eaten by seabirds. Consuming the contaminated fish kills 10,000 seabirds (out of a population of about 15,000). Eventually the vessel is towed off but this towing causes a certain amount of additional damage.

The MCA is satisfied that the action the ship has taken is consistent with the requirements of Regulations 13 and 14:

- It notified the authority as soon as it reasonably could when the risk arose;
- It followed advice to minimize the level of damage;
- Once the ship was aground it followed further advice to prevent further damage.

The MCA contacts the Marine and Fisheries Agency (MFA) to ask whether the damage should be considered for action under the Regulations. In discussion they establish that:

- There is a possibility of 'damage to protected species and natural habitats' as the habitat and seabirds are protected under relevant EU legislation;
- The ship may be engaged in an activity under Schedule 2 of the Regulations, as it is transporting dangerous or polluting goods by sea, and may therefore be subject to 'strict liability' under the terms of Regulation 4(2)(a). If it is not, it may be possible to establish negligence and so the ship would still fall under the Regulations.

Determination of 'environmental damage'

MFA then collaborates with the Joint Nature Conservation Committee (JNCC) to undertake an assessment of the damage.

There is damage both to the habitats and to the seabirds and both are relevant for consideration because 1) habitats are listed in Annex 1 of the Habitats Directive 2) one of the species of seabirds, *Cormorants*, is listed in Annex 1 of the Birds Directive. The question is then is there a significant conservation status effect on either 1) or 2) or on both. The central question considered is whether the effect makes it significantly harder either to reach or maintain the Favourable Conservation Status of the species or habitat by reference to the parameters for assessing the conservation status (see paragraphs 3.35 and 3.36).

The habitat

The marine habitat is 1 sq km in total. About 10% of it is damaged with 5% completely lost. Given that this a small area relative to similar habitat at national and local level, the damage is not considered to have a significant effect on the conservation status of the feature.

The seabirds:

5,000 seabirds breed locally but are joined by 10,000 in winter. 10,000 are killed in

total of which 2,500 are from local breeders and 7,500 are from further away. The local breeders include 750 pairs of Cormorants. Cormorants are listed in Annex 1 of the Birds Directive. The other seabirds are not covered by the Regulations. The following are taken into account when considering whether the Regulations apply to the seabirds:

- The damage site is on the edge of the UK range and the scale of the damage risks reducing the **range** significantly
- The damage site is the major breeding site for Cormorants in the South of England and a major wintering site. This may also affect migration patterns. The damage is therefore considered significant in terms of **structure and function**
- The damage reduces the UK population of Cormorants by over 6% which is judged to be significant in terms of **population**
- Their **habitat** is unaffected.

On the basis of the above it is judged that there is a significant conservation effect on the Cormorants.

MFA notifies the ship owner that, amongst other things, there is 'environmental damage' and that he must submit proposals to achieve the remediation of the damage.

Determination of remedial measures

The ship owner contracts a company to develop proposals.

Project planning:

A project plan is developed and a team is assembled including a project manager, a Cormorant expert and an economist. The team's initial view is that some natural recovery will be possible but there will also be a need for complementary remediation and compensatory remediation. It is identified that there is an island off the south coast that previously had populations of Cormorants but that they had declined sharply as a result of being over-run by rats. Two other sites in the UK are identified where measures could be taken to better protect the breeding sites of Cormorants which is likely to have a positive effect on their populations. Although there are further sites where measures could be taken to increase populations it is considered that this is not beneficial taking account of the ecosystem more widely. Resource Equivalency Analysis is identified as the likely quantification approach and "discounted Cormorant-pair-years" (dCPYs) as the likely unit of exchange.

Identifying damage:

The damage is to an estimated 750 pairs of Cormorants and only 250 pairs remain. It happens immediately after the ship runs aground in January 2010. The estimates are made on the basis of counting the dead birds, a post-spill survey and monitoring information from before the spill.

Identifying primary remedial measures:

Natural recovery is identified as the best option for primary remediation and the view of the Cormorant expert is that no active measures should be taken. It is very difficult to predict how they will recover but advice from the Cormorant expert suggests that in the circumstances some recovery is likely but that recovery to previous levels is unlikely to occur as other bird species will have been able to compete more effectively. She advises that it is reasonable to assume that the remaining 250 pairs will reproduce at a rate of 8% reaching 750 pairs by 2026 and then remain at the level. Complementary remediation will therefore be necessary to compensate for the fact that original population numbers are not reached and for the interim loss until 2026.

Identifying complementary and compensatory remedial measures:

The best opportunity for promoting restoration of Cormorant levels is the island referred to above. It is estimated that successfully controlling the rat population will increase the Cormorant population from 100 pairs to 500 pairs over 15 years assuming a reproduction rate of 10% and that the higher population level would then sustain itself without further intervention.

In two other sites in the UK public access to Cormorant nesting sites on the coasts is considered to be responsible for restricting population numbers. Proposals are designed to restrict access to these areas and provide better and more visible information to the public about them. It is uncertain precisely what effect this will have but it is thought that a reasonable and cautious estimate is that over ten years it will increase the numbers of Cormorant pairs by 50 across the two sites and these levels should then be sustained assuming the Local Authority agrees to keep the improvements in place after the ten year period.

Quantifying remediation:

A total loss of 11,196 dCPYs is calculated to include both the complementary and compensatory remediation components.

It is then calculated that restoring Cormorant levels in the island would deliver 8,460 dCPYs and that measures at the other two sites deliver 1230 dCPYs.

It is still necessary to achieve 1506 dCPYs and the Cormorant expert advises that there are no further opportunities for improving Cormorant populations without causing risks to other ecosystems. It is identified however that Puffin populations have been in decline at a site in Scotland because of oil deposits along the coastline. The team gather information on the services provided by the Cormorant and Puffin and conclude that the main service is in providing pleasure to members of the public. The team investigate bird-watching visit data and available bird popularity indices and conclude that it is reasonable to use a 1:1 ratio between Cormorants and Puffins. There has been a 40% decline in the numbers of Puffins since the oil was deposited 6 months ago from 2000 pairs to 1200 pairs and it is considered that if the oil were actively removed populations would recover significantly more rapidly. It is estimated that the population growth rate would double from 5% to 10% which would deliver the equivalent of 1801 dCPYs. This provides more than the 1506 dCPYs required but the team advise that this is

sensible given the uncertainty in the estimates.

The ship owner submits the proposals to MFA.

MFA evaluates the proposals using the criteria at paragraph 6.12 of the guidance and with input from JNCC. MFA agrees that the measures are appropriate but consider that the estimate that the Cormorant populations will reach 400 pairs may be too optimistic. MFA incorporates increased monitoring into the scheme so that if it becomes clear that populations will not increase sufficiently a second remediation notice can be served requiring further remediation. MFA serves a remediation notice which, amongst other things, sets out the measures, and monitoring and reporting, required. They then invoice the ship owner for the costs they and MCA have so far incurred in enforcing the case.

Implementation of remedial measures

The ship owner is responsible for implementing the measures and commissions a conservation charity to implement the measures and report back to MFA on its behalf.

Case study 3: Damage to water: groundwater contamination set in 2010

Background

Investigations by the Environment Agency (EA) prove that illegally polluted leachate from landfill sites (former limestone quarries) is seeping into the groundwater known as the Lincolnshire Limestone. The contamination is flowing several miles underground to a point of abstraction by a water company from a well (a groundwater abstraction).

The groundwater contributes part of the East River's flow through springs. The East River is a trout fishery, and of high ecological status under the Water Framework Directive (WFD). The contamination is seeping into the river through the contribution from groundwater.

The landfill is a Special Site under Part IIA of the Environmental Protection Act 1990. The site is subject to an Environmental Permit.

Immediate action

The water company telephones the EA area office (and the Drinking Water Inspectorate) to report that it has discovered contamination by a particular pesticide in one of its groundwater sources during routine chemical monitoring. The EA logs this report on the Common Incident Classification System (CICS) as a Category 1 incident and assigns an incident officer. The incident is logged as potential case of damage to water under the Environmental Damage Regulations (the Regulations) due to the type of chemical and the expectation that the section of groundwater (a water body under the Water Framework Directive) is likely to fail good chemical status under the WFD, for the pesticide in question.

The incident officer liaises with the water company, talks to EA's regional groundwater

team, and sets in hand work to measure the extent of the contamination and find the cause. The groundwater team advises on the direction of flow of the polluted groundwater and confirms that particular rivers are at risk because groundwater forms part of the flow of the rivers.

The water company uses special plant (Granular Activated Carbon) to treat the abstracted water removing the pesticide pollution in order to protect consumers, meet the drinking water quality standards established for the Drinking Water Directive, and comply with the regulatory requirements set by the Drinking Water Inspectorate.

Shortly after this the EA's Area Management Team receives routine monitoring results that indicate a decline in biological quality and fish stocks in the East River. The cause is unknown but after investigation contamination of the East River by the pesticide is confirmed. Advice from EA water quality and chemicals specialists confirms that the potential impact of the pesticide on the ecology and fisheries of the river is such that, subject to finding the operator, there are reasonable grounds to suspect there is water damage under the Regulations.

To identify the source of the contamination the EA initiates further biological and chemical monitoring of the East River. It also undertakes a parallel survey of the nearby West River and the North Brook, a tributary of the East River; these appear from chemical monitoring to be uncontaminated as yet.

Over the next few weeks the chemical monitoring of groundwater traces the plume of contamination as flowing from north west to south east. The monitoring and subsequent calculations eliminates the possibility of diffuse sources as a cause of the pollution. It also indicates that the pollution load is much too large to have been caused by, say, a single farm. The identification of the northern limit of contamination identifies the landfill as a suspect. An inspection of the landfill confirms the source as leaking drums of pesticide.

The EA informs the landfill operator that there is contamination of groundwater that appears to originate from the landfill site, and that it is assessing the damage to determine whether it falls within the Regulations. On the basis that it has reasonable grounds to suspect there is 'environmental damage', the EA serves a notice on the operator requiring measures to prevent further damage. These measures include to deal immediately with the pesticide drums, clean up the immediate area, install a treatment work near the landfill site to pump out and treat contaminated groundwater and create a network of boreholes to monitor progress. The EA also informs the operator that he faces legal action for breach of his Environmental Permit. The water company agrees to keep abstracting in order to keep the plume of contamination moving south and so avoid pollution of those rivers and groundwater that have not yet been contaminated.

The operator, after contacting his insurer, drafts a letter which, without prejudice or admission of culpability, agrees to the measures and offers to cooperate fully with the EA in the next phases of investigation.

Determination of 'environmental damage'

To assess whether the damage represents water damage under the Regulations the EA then sets up sink wells around the landfill and undertakes sampling and analysis of the chemical quality of the rivers and groundwater. The monitoring information collected to identify the operator along with a report compiled on the basis of past data

for all three rivers is used to determine the likely condition of the river before it was contaminated by the pesticide.

The assessment reveals that:

- Ten kilometres of the East River (down to its tributary with the River Ouse) have elevated levels of the pesticide. There is no established environmental quality standard for the pesticide that would lead the river to be classed as bad chemical status under WFD. For invertebrates and fish (which are considered the most relevant parameters in this case), six kilometres of river will be reported with high statistical confidence to drop from high to poor ecological status (hereafter “high” and “poor”) and, downstream of these 6 kilometres, a further 4 kilometres drop with high statistical confidence from “high” to “moderate”. Limited historic information for the East River, and the monitoring of the West River and North Brook indicates with high confidence the previous “high” of the East River.
- The West River and the North Brook are shown with high statistical confidence to be “high”.
- There is no apparent effect on the River Ouse which remains in “good”.

It is therefore concluded that there is damage to water on the basis of failure of ecological status of the East River, of the groundwater chemical status and of the failure of the drinking water objective. The authority notifies the operator, amongst other things that there is ‘environmental damage’ and he must propose measures to achieve remediation of the damage.

Determination of remedial measures

Project Planning:

- A preliminary assessment concludes that primary remediation will be able to return the river to the condition it would have been in. There is a stretch of river upstream and neighbouring rivers whose ecology could be improved through re-engineering works leading to increased levels of fish and invertebrates. It should be possible to use Habitats Equivalency Analysis with a unit of discount service-km-years. The existing Environmental Quality Index (EQI) which is used to assess the condition of rivers for classification under the WFD is identified as an appropriate metric to reflect change in the services provided by the two rivers.
- It is considered that specialist input will be needed in river ecology, biological and chemical monitoring, groundwater, waste management, the application of the Regulations and the quantitative methodologies.
- Most of the data required on the damage has already been collected while assessing whether there is ‘environmental damage’. Additional data will need to be collected on the primary and compensatory measures.

Identification of damaged resources and services:

- The information required was collected while assessing whether there was ‘environmental damage’.
- 6km of river has fallen from “high” to “poor” and a further 4 km from “high” to “moderate”

- The damage occurred in March 2010.

Identification of primary remedial measures:

- For the East River, natural recovery is identified as the best option with restocking of fish after 2 years once invertebrates have recovered.
- It is estimated that it will take 20 years for the 10 km stretch to reach “good” and a further 10 years for it to reach “high”.
- It is also estimated that if additional treatment plant capacity was introduced near the landfill this could be reduced to 12 and 5 years respectively.

Identification of compensatory remedial measures:

- Compensatory remediation is necessary to compensate for the interim loss. There are opportunities for improvements in the East River and neighbouring rivers through providing riffles and eddies, re-engineering the river banks to provide diversity that will support in river wildlife, employment of a conservation officer, and the purchase of riparian land to facilitate this.
- Engineering works will take two years and then invertebrate populations would be expected to increase on a linear pathway over a further five years. The rivers would then be stocked with fish.
- The relevant rivers are all currently in “moderate” and these works would be expected to improve the condition to “high” after seven years.
- It is assumed that in the absence of these measures, a programme of work under the WFD river would have improved the river to good ecological status after ten years but never have secured high status. The works would therefore ensure that the river will be in high rather than good status for some period of time – it is assumed that this might be for a further 25 years.

Quantifying remediation:

The table below summarises the information used for the assessment of the natural recovery option:

	Damage/Primary*	Compensatory
Time	Damage occurs in March 2010. Recovery is complete by March 2040	Engineering works could start in March 2011 and be complete 2 years later. Recovery would then take place over 5 years and last
Affected natural resources	10km of river	
Change in services	6km of river falls to “poor” and 4km to “moderate”. After 20 years both are in “good” and it takes a further 10 years for the full 10km to reach “high”	River would improve from “moderate” after 7 (2+5) years to “high”

- A total loss of 79.0 discounted service-hectare-years (DSHYs) is calculated for the losses, as in the table below left;
- A gain of 4.97 discounted service-hectare-years is calculated for the gains, as in the table below right;
- In total it would therefore be necessary to take measures to improve 15.9km of neighbouring river.

“Losses table”

Year	Service loss for 6km %	Service loss for 4 km %	DSKMYs
2010	70%	50%	6.2
2011	68%	49%	5.8
...			
2030	30%	30%	1.5
...			
2040	0%	0%	0
Total			79.0

“Gains table”

Year	Below 100% without action %	Below 100% with action %	Service gain %	DSKMYs per km
2010	50	50	0	0.00
2011	48	50	-2	-0.02
2012	46	50	-4	-0.04
2013	44	40	4	0.04
2014	42	30	12	0.10
2015	40	20	20	0.17
2016	38	10	28	0.23
2017	36	0	36	0.28
2018	34	0	34	0.26
2019	32	0	32	0.23
2020	30	0	30	0.21
...				
2045	30	0	30	0.09
Total				4.97

A similar calculation is done for the option to install additional treatment plant and therefore accelerate recovery which concludes that there would be 47.9 DSKMYs of losses and a requirement to improve 9.6 KMs of alternative river. The landfill operator submits both options to the EA.

The EA consults the landowners, anglers clubs and the local wildlife trust on these options and they are all in favour of restoring the damaged river as quickly as possible. The EA then applies the evaluation criteria and chooses the option to restore the river on an accelerated timeframe because it is also the cheaper option. The EA then serves a remediation notice including, amongst other things the measures and monitoring required.

Implementation of remedial measures

The landfill operator contracts an engineering company to undertake the works and

monitor the results. The operator reports back to the EA as agreed.

Case study 4: Land damage

Background

In August 2009 a fuel storage tank in the courtyard of a galvanising installation is vandalised leading to a leak of diesel. The householder next door to the installation noticed the diesel leaking and called the council. Emergency response by the fire brigade has taken place which has secured the tank to prevent further leakage.

Immediate action

It is clear that diesel has leaked off the courtyard and may already have reached, or be heading towards, nearby houses and into a river that runs behind the garage. This needs to be investigated and consideration needs to be given to whether the Regulations apply.

- It is established that the galvanising installation is an A2 Pollution Prevention and Control (PPC) site and so falls within Schedule 2.
- There is already damage in that contaminants are in the soil, and there are reasonable grounds that it 'is or will become 'environmental damage' because there are a number of houses adjacent to where the diesel leaked and the diesel may, or may already have, spread into the ground under the houses. This may represent a "significant risk of adverse effects on human health" (Regulation 4(5)) as a result of potential hydrocarbon vapours. The Council will also refer the case to the Environment Agency given that the contaminants may enter or may already be in groundwater.
- The incident took place and was caused after the Regulations came into force.

The council serves a notice on the operator that specifies the measures required to investigate initially that a 'membrane' should be installed to control the spread of contaminants and restrict further damage.

The council liaises with the Environment Agency who advises that given the levels of contaminants and situation of the groundwater the damage is unlikely to represent damage to water under the Regulations but they will consider taking action under section 161 of the Water Resources Act.

Determination of 'environmental damage'

Six months later, and despite the membrane, it has been found that there are hydrocarbon vapours in some of the houses adjacent to the garage. These need to be assessed to establish whether they pose a significant risk of adverse effects on human health (see A1.89 onwards). The council undertakes a risk assessment following the CLR11 procedures. Taking account of a wide range of factors such as the proximity of the contaminants to the living areas of a number of houses, likely long-term exposure and the presence of elderly and children, there is land damage in the council's judgement.

The council notifies the operator that, amongst other things, there is 'environmental

damage' and the operator must submit proposals for remediation. The operator raises the possibility of being able to appeal on the grounds that "the environmental damage was the result of an act of a third party and occurred despite the fact that the operator took all appropriate safety measures" (Regulation 14(4)(g)). The authority provides a view that there should have been better security measures to reduce the risk of such vandalism occurring e.g. a fence around the premises and a bund around the tank) and the operator decides not to appeal.

Determination of remedial measures

The operator submits remediation proposals to the Council which involve containing the contaminants so that they cannot escape. As remediation is likely to be carried out on the land of the adjacent householders, the council consults them. The council then serves a remediation notice specifying the damage, the remediation measures which need to be carried out with reasons for them and the time period in which these must be undertaken.

The council is able to recover costs under Regulations 25. This includes for example the work which the council did in assessing whether there was 'environmental damage' i.e. testing for vapours in the adjacent houses.

Implementation of remedial measures

The operator contracts contaminated land consultants to undertake the work.

Annex 4: Interface with other regimes

Annex 4 sets out the principles of how the Regulations interact with other legislation and key features of some of the other legislation that may be applicable.

Principles

A4.1 Chapter 2 sets out the circumstances in which the Regulations apply and chapters 4, 5, 6 and 7 cover key requirements of the Regulations where they do apply. Other legislation governing damage or imminent threats to the environment is unaffected (Regulation 7(1)) and may apply when cases fall outside the Regulations or, for some cases, apply in addition to or instead of the Regulations.

A4.2 Some principles can be established for when other legislation may apply:

- Part 2 of the Regulations contains powers, rather than duties for authorities to require operators to prevent damage and further damage. Authorities have discretion therefore whether to use these powers or not and may choose to require preventive measures using similar powers in other regulations, for example in the Water Resources Act 1991 or the Environmental Permitting Regulations 2007.
- Part 3 of the Regulations contains a duty for authorities to require remediation where they establish that there is 'environmental damage' and a liable operator. In such cases the Regulations would generally take precedence over other regimes. In cases where the outcomes required by the Regulations have already been fully achieved however, including through other legislation which can be applied more rapidly, the Regulations need not be applied.
- Other legislation remains in place to address any damage that falls outside the scope of the Regulations. If other legislation goes further than the Regulations those aspects that go further may be applied in addition to the Regulations. In cases where authorities have duties to require preventive or remedial measures under other legislation then those aspects that go further than the Regulations must be applied.
- To the extent that the Regulations secure the outcomes required under that other legislation those responsible will not be expected to take preventive or remedial action both under the Regulations and that other legislation.
- Most other legislation contains powers to serve notices requiring prevention and remedying of damage to the environment. Authorities will exercise their judgement to ensure that they do not duplicate the requirements of the Regulations by also exercising their powers under that other legislation to require the same action twice.

- Operators should ensure they are aware of their responsibilities under other legislation as well as the new Regulations.

Interface where there is contamination of land

A4.3 Particular attention is given in this guidance to the interface between the Regulations and other provisions for responding to contamination of land. This is because i) the authority is the local authority of which there are over 300 and ii) there are a number of mechanisms used for responding to contamination of land which have interfaces with the Regulations.

Core principles of which regime to apply are:

A4.4 In accordance with statutory requirements and government policy the three main regimes for dealing with land contamination will have to be considered in the following order:

- The Regulations;
- Remediation under the planning system where appropriate;
- Remediation using Part IIA of the Environmental Protection Act 1990.

Aspects of the Environmental Permitting Regulations 2007 also cover land contamination issues, particularly the permit surrender provisions. These are dealt with separately below. Voluntary agreements to remediate should be considered in all cases.

A4.5 The relevant legislation or guidance provisions are:

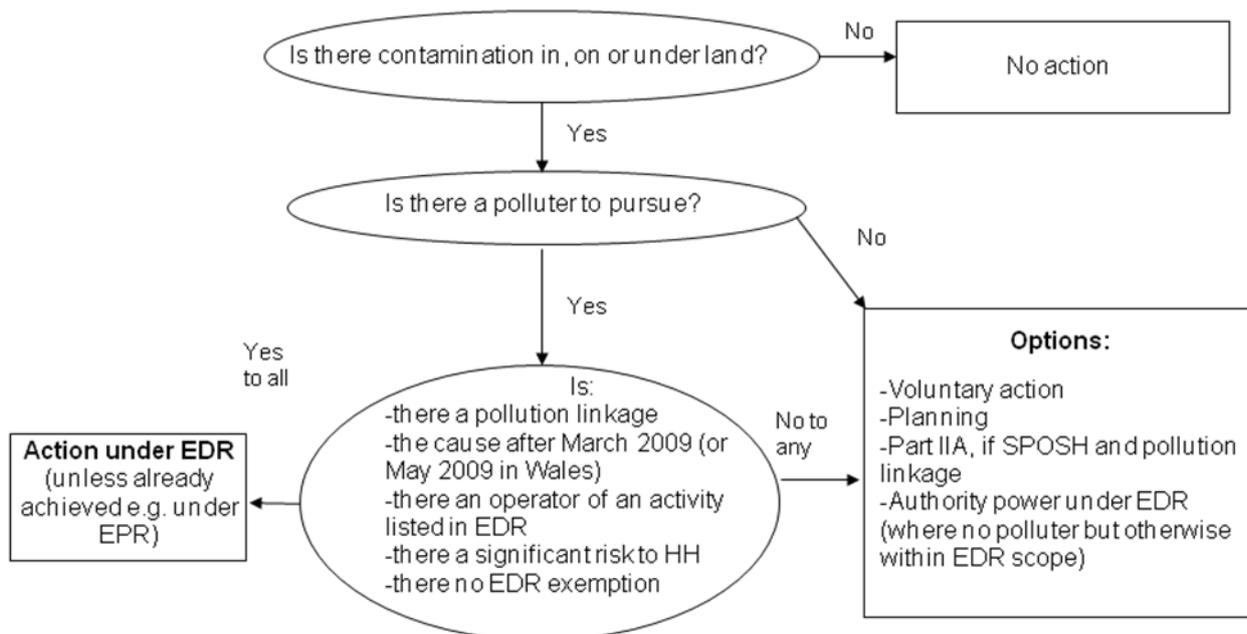
- Regulations 17, 18 and 20 set out the duties to apply the Regulations;
- Annex 2 to Planning Policy Statement 23 (PPS23) sets out the position in relation to remediation through the planning system in relation to England and Planning Policy Wales 2002 in relation to Wales;
- Section 78H(5)(b) (in Part IIA) provides that if the enforcing authority is satisfied that voluntary agreement will achieve remediation an authority shall not serve a remediation notice;
- Section 78YB (in Part IIA) provides that where another regime applies, an authority shall not serve a remediation notice under Part IIA (in particular, if the significant harm, or pollution of waters, results from the final disposal by deposit of controlled waste on land, and enforcement action can be taken in relation to the disposal, Part IIA does not apply).

A4.6 In most cases, it should be clear who the operator is, either because the operator has reported the incident or because of the nature of the incident (e.g. the contamination resulting from a lorry spilling its load). In such cases it should be relatively straightforward to deal with

remediation using the Regulations without having to consider other regimes.

- A4.7 Where the cause, date or potential receptors of contamination are uncertain sites will need to be investigated on the basis that the appropriate regime for fixing liability may be either the Regulations or Part IIA of the Environmental Protection Act, or if there are proposals for development it may be possible to require action through the planning system.
- A4.8 Although sites may be investigated on the basis that they are covered by either or both of the Regulations and Part IIA it will be difficult to apply the formal procedures of those regimes simultaneously. Part IIA's procedures are primarily designed to deal with complex historical contamination whereas the Regulations are designed to provide a quicker response to pollution incidents.
- A4.9 Authorities will need to consider in the particular case whether Part IIA's requirements are more extensive than for the Regulations (for example where there is an ecological system effect⁵²) and exercise judgment on whether to seek remediation to deal with those aspects at the same time as remediation under the Regulations. In many instances it will be the most cost effective and environmentally responsible approach to deal with all aspects of remediation at the same time. Voluntary agreement may be the simplest way of dealing with such arrangements.
- A4.10 Where a site is being investigated under both the Regulations and Part IIA on the basis that it may become a "special site" under Part IIA because of the potential for pollution of controlled waters, the authority for damage to water under the Regulations (the Environment Agency) should be notified as soon as possible as the damage may constitute damage to water. This should be a rare occurrence as damage to water covered by the Regulations should be picked up through other regulatory means.
- A4.11 Where land damage occurs in the vicinity of a SSSI or relevant EU-protected species and habitats the authority for land damage under the Regulations will need to inform the authority for habitats and species (Natural England or the Countryside Council for Wales) as the damage may constitute damage to species and habitats under the Regulations as well as "harm to living organisms" under Part IIA.
- A4.12 The decision tree below is designed to help decide which regime to use where there is contamination of land.

⁵² See table A in annex 3 of Defra circular 01/2006



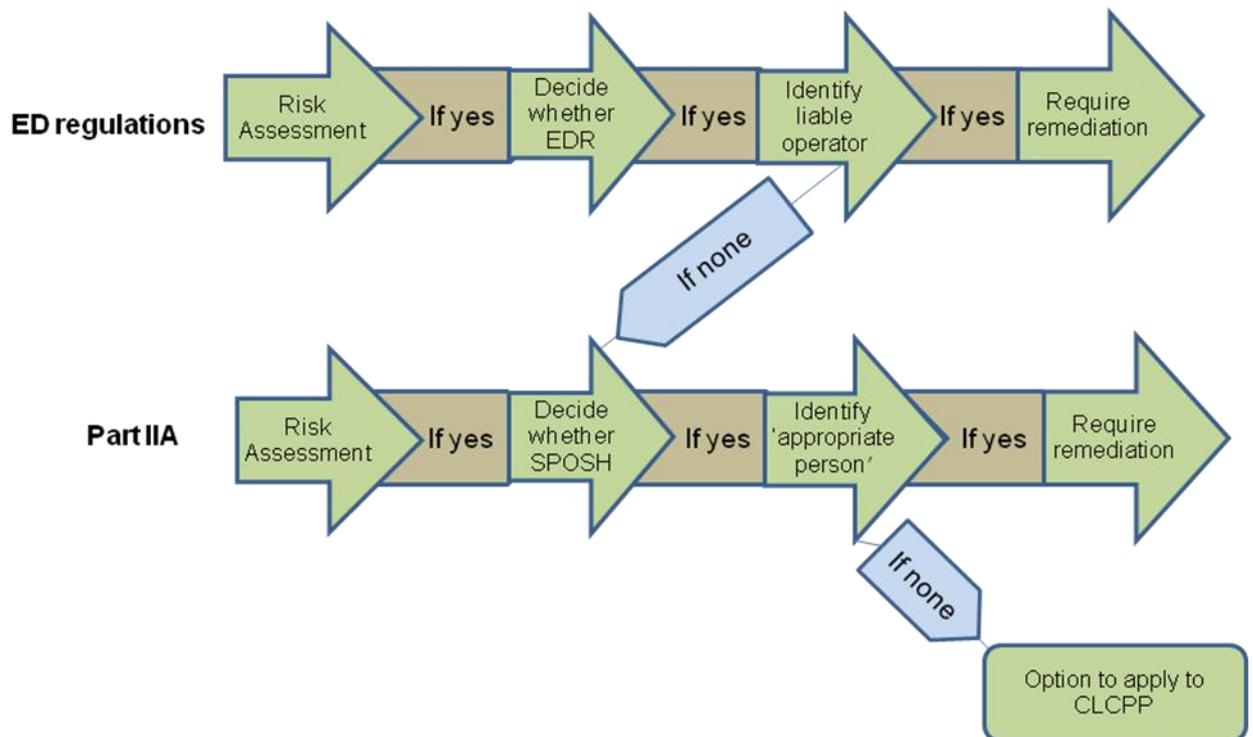
Part IIA and the Contaminated Land Capital Projects Programme

A4.13 Regulation 23 identifies situations in which the authority may carry out reasonable works itself:

- (a) At any time if a responsible operator cannot be identified;
- (b) If a responsible operator fails to comply with a remediation notice, whether or not an appeal is pending; or
- (c) If the responsible operator is not required to remediate under these Regulations

A4.14 There is no obligation on the authority to carry out works itself and it is therefore likely to consider whether it is a priority given competing pressures. Where the authority does decide to take action it may wish to consider applying for a grant under Defra's Contaminated Land Capital Projects Programme (CLCPP) for support or the Welsh Assembly Government's Contaminated Land Capital Fund (CLCF). To do this it would need to determine the site under Part IIA⁵³. The authority will already have done much of what is required to do this and would not have to do the same work twice. The diagram below illustrates how an authority can move from using the Regulations to using Part IIA.

⁵³ See the statutory guidance for Part 2A:
<http://www.defra.gov.uk/environment/quality/land/contaminated/documents/circular01-2006.pdf>



A4.15 If a risk assessment has already been done under the Regulations, it is expected that this information will also support a decision under Part IIA to establish if there is a significant possibility of significant harm (SPOSH). If there is not sufficient information, further work should build upon the existing risk assessment and not duplicate it. Similarly, if it has been established under the Regulations that it is not possible to find the operator responsible for the damage, it will not be necessary to do further investigations; although note that the concept of 'appropriate person' under Part IIA also includes owners and occupiers so it will be necessary to consider whether these may be relevant.

A4.16 Where investigations have started under the Regulations and the authority then switches to using Part IIA, applications to the CLCPP and CLCF will be assessed in the normal way. Where the sums applied for exceed availability of funding, grants will be awarded to the applications assessed as highest priority.

A4.17 There are currently two windows each year within which applications to the CLCPP (for England) must be made. In cases where remediation needs to be done as a matter of urgency outside one of the windows, the authority may enquire with Defra whether funds can be made available outside a window. For Wales, there is currently one bidding round.

Part IIA of the Environmental Protection Act 1990

Summary of Part IIA

A4.18 Table A4.2 sets out some of the key features of Part IIA of the EPA.

Figure A4.2: Key features of Part IIA	
Aspects of regime	Key features
Persons who may be liable	Appropriate persons (a person who “caused or knowingly permitted” the contamination or in specified circumstances “the owner or occupier of the land for the time being”).
Contaminants covered	Substances, defined as “any natural or artificial substance, whether in solid or liquid form or in the form of gas or a vapour”. It is intended that this definition includes the definition of Substances and preparations under the Regulations but not Organisms or Micro-organisms.
Types of harm covered	<p>“Harm means harm to the health of living organisms or other interference with the ecological systems of which they form a part and, in the case of man includes harm to his property”</p> <p>This definition includes harm to Habitats and Species under the Regulations but, in addition to those matters dealt with by the Regulations would include e.g. harm to livestock, pets and crops, which are not necessarily covered by the Regulations.</p>
Date from which harm covered	No time limit, contamination can have occurred at any time.
Maximum age of contamination	No time limit, contamination can be of any age.
Threshold for damage	Significant harm is being caused or there is a significant possibility of significant harm.
Is prevention covered	No.
Apportionment of liability	Liability is proportional.
Notices available	Remediation notice.
Offences	Not complying with a remediation notice (s78M).
Defences	Reasonable excuse; if a notice is required to apportion costs, a person may prove that his failure to comply was due to the failure of another person to comply.
Remediation standard	Suitable for use.

Environmental Permitting (England and Wales) Regulations 2007

Figure A4.3: Key features of the Environmental Permitting (England and Wales) Regulations 2007	
Aspects of regime	Key features
Type of harm covered	Pollution (defined as: 'any emission as a result of human activity which may (a) be harmful to human health or the quality of the environment, (b) cause offence to a human sense, (c) result in damage to material property, or (d) impair or interfere with amenities and other legitimate uses of the environment.' Reg. 2).
Persons who may be liable	Operators of regulated facilities.
How does the regime work?	The Environment Agency and Local Authorities (the 'regulators') grant environmental permits to operators of regulated facilities. Certain remediation obligations arise at the end of the permitted activity (Reg. 23). Other remediation obligations may arise during the course of the permitted activity (Regs 36 and 37).
What is the trigger for remediation?	Reg. 23: At the end of operation of regulated facility, the operator is required, where appropriate, to take certain steps. Reg. 36: An Enforcement Notice may be served on the operator where the operator has contravened, is contravening or is likely to contravene an environmental permit condition. It must specify the steps that must be taken to remedy the contravention or to ensure that the likely contravention does not occur.
What is the standard of remediation?	Reg. 23: To return the site of the regulated facility to a satisfactory state, having regard to the state of the site before the facility was put into operation. Reg. 36: An Enforcement Notice may specify steps to remedy the effects of any pollution caused by the contravention.
Is prevention also covered?	Yes. Reg. 23: The operator may be required to avoid a pollution risk resulting from the operation of the regulated facility. Reg. 37: If the operation of a regulated facility under an environmental permit involves a risk of serious pollution, the regulator may serve a Suspension Notice on the operator. The notice must specify the steps that must be taken to remove the risk of serious pollution.
Powers of authorities to take measures and recover costs	Prevention: If the operation of a regulated facility under an environmental permit involves a risk of serious pollution, the regulator may arrange for steps to be taken to remove that risk. (Reg. 57(1)).

	<p>Remediation: If the commission of an offence under regulation 38(1)(a), (b) or (c) causes pollution, the regulator may arrange for steps to be taken to remedy the effects of that pollution. (Those offences are operating without an environmental permit, operating in breach of a permit condition, or failing to comply with the requirements of an enforcement notice, suspension notice or landfill closure notice). (Reg. 57(2)).</p> <p>The regulator may recover the cost of taking those steps from the operator, unless the operator shows that there was no risk of serious pollution, under paragraph (1), or to the extent that the operator shows that the costs were unnecessarily incurred by the regulator. (Reg. 57(4) and (5)).</p>
<p>Exceptions and defences</p>	<p>Emergency defence (Reg. 40): It is a defence for a person charged with an offence under regulation 38(1)(a), (b) or (c) to prove that the acts alleged to constitute the contravention were done in an emergency in order to avoid danger to human health, and he took all reasonably practicable steps for minimising pollution and furnished particulars to the regulator as soon as reasonably practicable.</p> <p>Exceptions (Reg. 8): Certain activities and operations are not 'regulated facilities', do not require an 'environmental permit, and are therefore not subject to the above prevention and remediation provisions. Those activities and operations are:</p> <ol style="list-style-type: none"> 1) exempt waste operations (which must be registered in accordance with Schedule 2); 2) excluded waste operations, which means: <ol style="list-style-type: none"> (a) waste operations licensed under the Food and Environment Protection Act 1985; (b) the disposal of liquid waste under a consent under the Water Resources Act 1991; (c) the disposal of agricultural waste in or on land under a Groundwater Authorisation; and (d) the disposal or recovery of sludge which is not to be treated as industrial or commercial waste under the Controlled Waste Regulations; and 3) the disposal or recovery of household waste from a domestic property within the curtilage of that property by a person other than an establishment or undertaking.

Water discharges: Water Resources Act 1991

Figure A4.4: Key features of Water Resource Act 1991: water discharges	
Aspects of regime	Key features
Type of harm covered	Entry of poisonous, noxious or polluting matter or any solid waste matter into controlled waters.
Persons who may be liable	Any person who causes or knowingly permits poisonous, noxious or polluting matter or solid waste matter to be present in controlled waters, or to be present at the place from which it is likely to enter any controlled waters.
How does the regime work?	The Environment Agency may service a Works Notice on the person, requiring them to carry out works or operations (s.161A).
What is the trigger for remediation?	Poisonous, noxious or polluting matter or solid waste matter is likely to enter, or to be or to have been present in, any controlled waters.
What is the standard of remediation?	Remove or dispose of the matter; remedy or mitigate any pollution caused by its presence in the waters; and/or restore the waters, including any flora and fauna dependent on the aquatic environment of the waters, to their state immediately before the matter became present in the waters 'so far as is reasonably practicable to do so'.
Is prevention also covered?	Yes. Works Notices can specify works or operations for the purpose of preventing matter from entering controlled waters (s.161A(2)(a)).
Powers of authorities to take measures and recover costs	The Environment Agency may carry out works and operations itself, where it is necessary to do so forthwith or no person can be found, after reasonable inquiry, on whom to serve a Works Notice. It may recover the expenses reasonably incurred in doing so, from the person who caused or knowingly permitted the matter to be present at the relevant place (s. 161).
Exceptions and defences	The Environment Agency may not require the carrying out of any works or operations which would impede or prevent the making of any discharge in pursuance of a water discharge consent (s.161A(7)). No Works Notice can be served on any person requiring him to carry out any works or operations in respect of water from an abandoned mine or an abandoned part of a mine (unless abandoned after 31 December 1999).

Part II of the Environmental Protection Act 1990

Section 59 as amended by the Clean Neighbourhoods and Environment Act 2005 (and the Environmental Permitting Regulations 2007)

Figure A4.2: Key features of Part II	
Aspects of regime	Key features
Type of harm covered	Pollution of the environment or harm to human health.
Persons who may be liable	Any person who deposits or knowingly causes or knowingly permits the deposit of waste on land in contravention of section 33(1) [or Regulation 12 of the Environmental Permitting Regulations 2007].
How does the regime work?	The Environment Agency or local authority may serve a notice on the occupier of the land requiring them to remove the waste and take steps to eliminate or reduce the consequences of the deposit.
What is the trigger for remediation?	Controlled waste has been deposited on land in contravention of section 33(1) [or Regulation 12 of the Environmental Permitting Regulations 2007].
What is the standard of remediation?	Steps to eliminate or reduce the consequences of the deposit.
Is prevention also covered?	Not specifically, but removal of the waste may prevent pollution or harm occurring.
Powers of authorities to take measures and recover costs	<p>The authority may remove the waste from the land or take other steps to eliminate or reduce the consequences of the deposit, if:</p> <ul style="list-style-type: none"> a) in order to remove or prevent pollution of land, water or air or harm to human health it is necessary that the waste be forthwith removed or other steps taken to eliminate or reduce the consequences of the deposit, or b) there is no occupier of the land; or c) the occupier neither made nor knowingly permitted the deposit of the waste. <p>The authority may recover the cost incurred by it in removing the waste and/or taking the steps and disposing of the waste, from the person who deposited or knowingly caused or knowingly permitted the deposit (as long as it was not incurred unnecessarily). S.59(7).</p>
Exceptions and defences	There are certain exceptions and defences to offences under section 33(1), including a defence of due diligence and an emergency defence.

Water Abstraction and Impoundment: Water Resources Act 1991 (as amended by Water Act 2003)

Figure A4.5: Key features of the WRA 1991: water abstraction and impoundment	
Aspects of regime	Key features
Type of harm covered	Significant damage to the environment
Persons who may be liable	Any person who abstracts water from any source of supply without an abstraction licence or in contravention of such a licence (s.24); and any person who impounds water without an impoundment licence or in contravention of such a licence (s.25).
How does the regime work?	The Environment Agency grants abstraction licences and impoundment licences to individuals and organisations. Abstraction licences authorise the abstraction of a given volume of water, with conditions aimed at protecting the environment and other abstractors' needs.
What is the trigger for remediation?	The Environment Agency may serve an Enforcement Notice (s.25A) where a person has failed to obtain an abstraction or impoundment licence, or failed to comply with an abstraction or impoundment licence, and the abstraction or impoundment is causing or is likely to cause significant damage to the environment.
What is the standard of remediation?	Works or operations for the purpose of remedying or mitigating the effects of the breach or failure to comply. This may include works or operations for the purpose of restoring any affected waters, including any flora and fauna dependent on them, to their previous state, if 'reasonably practicable to do so'. It may also include the removal or reversal of any unauthorised impounding works or alterations.
Is prevention also covered?	Yes. Enforcement Notices can be served when the breach or failure to comply is <i>likely</i> to cause significant damage to the environment.
Powers of authorities to take measures and recover costs	If the person on whom the Enforcement Notice is served fails to comply with it, the Environment Agency may do what that person was required to do and may recover from them any costs or expenses reasonably incurred (s. 25C(3)).
Exceptions and defences	No licence is required for: Abstractions of 20 cubic metres per day or less (s.27(1)). Certain abstractions and impoundments by navigation, harbour or conservancy authorities (s.26). Certain abstractions by Internal Drainage Boards (s.29(1)(A)). Abstractions for land drainage purposes (s.29(1)). Abstractions in emergencies (s.29(2-2C)). Abstractions from vessels (s.32(1)). Abstractions for fire-fighting purposes (s.32(2)). Abstractions for investigating presence of water in underground strata (s.32(3)). Abstractions made under exemption Order (s.33A).

Control of Major Accident Hazards Regulations 1999

Figure A4.6: Key features of the Control of Major Hazards Regulations 1999	
Aspects of regime	Key features
Type of harm covered	Harm to people and the environment.
Persons who may be liable	Operators of establishments where a named substance or category of dangerous substance (or preparation) is present in a quantity equal to, or exceeding, a specified quantity.
How does the regime work?	<p>The COMAH regulations apply at two tiers.</p> <p>All operators are required to:</p> <ul style="list-style-type: none"> • take all measures necessary to prevent major accidents and limit their consequences to persons and the environment; • notify specified information to the COMAH competent authority (the Health and Safety Executive and the Environment Agency in England and Wales); • prepare and keep a major accident prevention policy document, setting out their policy with respect to the prevention of major accidents; • prepare onsite emergency plans. <p>Operators subject to the higher tier of requirements must also::</p> <ul style="list-style-type: none"> • prepare a safety report to demonstrate that they have taken all necessary measures to prevent major accidents and mitigate the consequences to people and the environment of any that do occur; • provide information to the local authority so that it can prepare an off-site emergency plan for the premises; and • provide information to the public about the establishment, the hazards that could cause a major accident, and the safety measures that are in place. <p>The objective of emergency plans are:</p> <ul style="list-style-type: none"> • containing and controlling incidents so as to minimise the effects, and to limit damage to people, the environment and property; • implementing the measures necessary to protect people and the environment from the effects of major accidents; • communicating the necessary information to the public and to the emergency services and authorities concerned in the area; • providing for the restoration and clean-up of the environment following a major accident. <p>The regulations also place duties on the competent authority to inspect activities subject to the regulations and prohibit the operation of an establishment if there is evidence that measures taken for prevention and mitigation of major accidents are</p>

	seriously deficient. The competent authority is also required to examine safety reports and inform operators of its conclusions within a reasonable period of time. Associated legislation implementing Directive 96/82/EC also requires a land-use planning policy covering the siting of new major hazard sites and development around existing major hazard sites.
What is the trigger for remediation?	A major accident has occurred.
What is the standard of remediation?	Emergency plans must provide for 'the restoration and clean-up of the environment' following a major accident (Schedule 5, Part 1). The competent authority must 'ensure that any urgent, medium and long-term measures which may prove necessary are taken' and take appropriate action to ensure that the operator 'takes any necessary remedial measures'. Reg. 19(4)).
Is prevention also covered?	Yes. Substantial emphasis of the regulations is on prevention.
Powers of authorities to take measures and recover costs	No powers to take preventive or remedial measures. Only powers for the competent authority to recover from operators a fee to cover the costs incurred by the competent authority in performance of its functions under the regulations.
Exceptions and defences	The regulations do not apply to: <ol style="list-style-type: none"> 1. certain military establishments i.e. those under the control of the Secretary of State for the purposes of the Ministry of Defence; 2. a headquarters or organisation designated for the purposes of the International Headquarters and Defence Organisations Act 1964 or the service authorities of a visiting force within the meaning of Part 1 of the Visiting Forces Act 1952; 3. substances which emit ionising radiation at a site for which a licence is required under the Nuclear Installations Act 1965; 4. the exploration, extraction and processing of minerals in mines, quarries or by means of boreholes, except: <ul style="list-style-type: none"> - chemical and thermal processing operations; and - storage relating to those operations, which involve dangerous substances; and 5. waste land-fill sites, except tailing ponds or dams and other operational tailings disposal facilities containing dangerous substances, in particular when any such facilities are used in connection with the chemical and thermal processing of minerals.

SSSIs: Wildlife and Countryside Act 1981

Figure A4.7: Key features of WCA 1981	
Aspects of regime	Key features
What kind of damage?	Biodiversity damage
Who is liable?	<ul style="list-style-type: none"> • Anyone who intentionally or recklessly destroys or damages any of the flora, fauna, geological or physiographical features for which a SSSI is of special interest. • Anyone who intentionally or recklessly disturbs any of the fauna for which a SSSI is of special interest. • SSSI owners or occupiers who carry out operations listed in the SSSI notification papers without the appropriate authorisation. • Public bodies who carry out or permit operations likely to damage SSSIs without seeking advice from Natural England or the Countryside Council for Wales.
How does the regime work?	Criminal offences (fines and imprisonment) for breaches of the above without appropriate authorisation or advice.
What are the requirements for remediation?	Restoration Orders at the discretion of Natural England or the Countryside Council for Wales.

Annex 5: Glossary of terms

The following list aims to provide brief explanations of many of the words, phrases and acronyms to which particular meaning are attached in Environmental Damage Regulations and this guidance.

Activity	Refers to any economic activity or undertaking (whether or not carried out for profit) to which these Regulations apply.
Appeal	The opportunity provided for the operator to challenge a decision made by the regulator, by appealing to the Secretary of State or the Welsh Ministers – see chapter 9.
Aquifer	The term for a source of groundwater.
Baseline	(When used in the context of defining the area of application) . The baselines from which the breadth of the territorial sea is measured for the purposes of the Territorial Sea Act 1987.
CCW	Countryside Council for Wales.
Codes of Good Practice	Publications by organisations, including Government Departments and Agencies, to promote and encourage good practices within specific sectors, for example, the various Codes of Good Agricultural practice for the farming sector.
Contamination	Substances in, on or under the land which have the potential to cause harm.
Continental shelf	The areas designated by Order in Council under section 1(7) of the Continental Shelf Act 1964.
Dangerous substances	Toxic substances that pose the greatest threat to the environment and human health.
Day	Where this guidance refers to a number of days in specifying timelines, it refers to calendar days.
DECC	Department for Energy and Climate Change.
Directive	European Union Directive.
EA	Environment Agency.

Enforcing Authority	The body responsible for enforcing the Environmental Damage (Prevention and Remediation) Regulations – see chapter 4 for list of enforcing authorities.
‘Environmental Damage’	Damage to the environment as defined in Regulation 4 – see chapter 3 for definitions.
EP	An Environmental Permit granted under the Environmental Permitting Regime.
Environmental Permitting Regime	Regime requiring operators to obtain permits for some facilities, the registration of exemptions for other facilities and ongoing supervision by regulators.
Environmental Permitting Regulations	The legal framework for the Environmental Permitting Regime.
EPA 90	The Environmental Protection Act 1990.
EU/EC	European Union / European Community.
Favourable conservation status	Defined at paragraph A1.24.
Favourable reference value	Defined at footnote 25.
GMOs	Genetically Modified Organisms.
HSE	Health and Safety Executive.
Interested Party	Anyone who is affected, or likely to be affected by ‘environmental damage’, or who otherwise has a sufficient interest. See Regulation 29 and chapter 12.
Local Authority	The relevant District, London or Metropolitan Borough Council in England and the County or Borough Council in Wales.
MFA	Marine and Fisheries Agency.
Natural resources	The protected species and natural habitats, [SSSI species and habitats], water and land covered by the Regulations.
NE	Natural England.

Operator	An operator of an activity including any natural or legal, private or public person who operates or controls the activity. This includes the holder of a permit or authorisation for the activity or the person registering or notifying the activity.
Organisms and micro-organisms	An organism is a living thing. A micro-organism is an organism that cannot be seen by the naked human eye.
Part IIA	The contaminated land regime for the identification and remediation of land where contamination is causing unacceptable risks to human health or the wider environment, assessed in the context of the current use and circumstances of the land.
Permit	A permit granted by the regulator allowing the operation of a regulated facility subject to certain conditions.
PPC	Pollution Prevention and Control – a regime with specific requirements for industrial plants and installations.
Preparations	Mixtures or solutions composed of two or more substances.
Remediation notice	Notification served on the operator by the enforcing authority to remedy the ‘environmental damage’ that has occurred.
Remedial options	Proposals by the operator to the enforcing authority to remedy the ‘environmental damage’ that has occurred.
Renewable Energy Zone	The waters superjacent to the seabed situated within the areas designated by Order in Council under section 84(4) of the Energy Act 2004.
Responsible party	The operator(s) identified as causing the ‘environmental damage’.
Risk assessment	The estimation of risk calculated by the magnitude of the potential risk and the probability that that risk will occur.
Risk management	Strategies to manage risk, and the mitigation of risk using managerial resources.

SACs	Special Areas of Conservation (SACs) are sites protected under the EC Habitats Directive for conserving habitats and species. More detail at: http://www.jncc.gov.uk/page-23
Services	Services or natural resource services refer to the functions performed by a natural resource for the benefit of another natural resource or the public.
Substances	Chemical elements and their compounds as they occur in the natural state or as produced by industry.
The Regulations	The Environmental Damage (Prevention and Remediation) Regulations 2008.
Site integrity	Defined at paragraph A1.7.
SPAs	Special Protected Areas (SPAs) are sites protected under the EC Birds Directive for conserving rare and vulnerable birds and for certain migratory species. More detail at: http://www.jncc.gov.uk/page-162
SSSI	Sites of Special Scientific Interest – areas of natural heritage of wildlife habitats, geological features and landforms. A SSSI is an area that has been notified as being of special interest under the Wildlife and Countryside Act 1981.
Water body	This refers to a body of surface water or of groundwater identified under Article 5 and Annex II of the Water Framework Directive. See paragraph A1.53 for links to further information.

Annex 6: List of protected species and natural habitats

A6.1 'Protected species and natural habitats' in the Regulations covers certain species and habitats protected under EU legislation (the Habitats Directive⁵⁴ and the Birds Directive⁵⁵) as well as species and habitats for which SSSIs are designated. The Regulations refer to the EU-protected species and habitats covered as follows:

“protected species” means the species mentioned in Article 4(2) of Directive 79/409/EEC or listed in Annex I thereto or listed in Annexes II and IV to Directive 92/43/EEC;

“natural habitats” means

- (a) the habitats of species mentioned in Article 4(2) of, or Annex I to Directive 79/409/EEC or listed in Annex II to Directive 92/43/EEC;
- (b) the natural habitats listed in Annex I to Directive 92/43/EEC; and
- (c) the breeding sites or resting places of the species listed in Annex IV of that Directive;

Article 4(2) of Directive 79/409/EEC refers to:

[...] regularly occurring migratory species not listed in Annex I [...].

A6.2 This annex aims to provide references for these species and habitats.

Protected species:

A6.3 The following link provides a list of the bird species for which at least one SPA has been selected in the UK: <http://www.jncc.gov.uk/page-1418>
Links from each species also provide further information such as population data and its distribution in the UK.

A6.4 This link contains information on species in Annex I to Directive 79/409/EEC and regularly occurring migratory bird species for which no SPAs have been selected in the UK: <http://www.jncc.gov.uk/page-1423>.

A6.5 This link lists all birds in Annex I to Directive 79/409/EEC and birds considered to be regular migrants to and from the UK: <http://www.jncc.gov.uk/pdf/UKSPAV1A3.pdf> and their presence within SPA sites.

A6.6 This link lists the UK species in Annex II to Directive 92/43/EEC http://www.jncc.gov.uk/Publications/JNCC312/UK_species_list.asp.
Links from each species provide further information such as its distribution in the UK and where SACs have been designated for it.

⁵⁴ Directive 92/43/EEC

⁵⁵ Directive 79/409/EEC

A6.7 This link lists the UK species in Annex IV to Directive 92/43/EEC:
www.naturalengland.org.uk/ourwork/regulation/wildlife/species/europeanprotectedspecies.aspx

Natural habitats:

A6.8 This link provides a list of the UK habitats in Annex I to Directive 92/43/EEC
http://www.jncc.gov.uk/Publications/JNCC312/UK_habitat_list.asp

A6.9 Links to Annex I to Directive 79/409/EEC and Annexes II and IV to Directive 92/43/EEC are identified under 'protected species' above.

Annex 7: Schedule 2 activities

A7.1. Schedule 2 of the Regulations lists the activities subject to liability irrespective of whether the operator intended to cause damage or was negligent. These activities are listed by reference to EU legislation. This annex provides references to the UK legislation transposing the Directives listed in Schedule 2. While this annex aims to identify the most recent regulations for each directive, regulations will continue to be replaced so it is not guaranteed that the regulations mentioned are the most recent. It should also be noted that the annex does not identify where regulations have been amended since introduction although many of them will have been.

Activity referred to in Schedule 2	English/Welsh legislation transposing EU Directive
Operation of permitted installations	
<p>The operation of installations subject to permit in pursuance of Council Directive 96/61/EC of 24 September 1996 concerning integrated pollution prevention and control. That means all activities listed in Annex 1 of Directive 96/61/EC with the exception of installations or parts of installations used for research, development and testing of new products and processes.</p>	<ul style="list-style-type: none"> • Environmental Permitting (England and Wales) Regulations 2007
Waste Management Operations	
<p>Waste management operations, including the collection, transport, recovery and disposal of waste and hazardous waste, including the supervision of such operations and after-care of disposal sites, subject to permit or registration in pursuance of Council Directive 75/442/EEC on waste and Council Directive 91/689/EEC of 12 December 1991 on hazardous waste.</p> <p>N.B. The spreading of sewage sludge from urban waste water treatment plants is not a 'waste management operation' for the purposes of schedule 2 where treated to an approved standard for agricultural purposes.</p>	<ul style="list-style-type: none"> • Part II of the Environmental Protection Act 1990 • Waste Management Licensing Regulations 1994, as amended • Hazardous Waste (England and Wales) Regulations • Environmental Permitting (England and Wales) Regulations 2007 • The Collection and Disposal of Waste Regulations 1988 • Controlled Waste Regulations 1992 • The Waste Management (Miscellaneous Provisions) (England and Wales) Regulations 2007 • The Producer Responsibility Obligations (Packaging Waste) Regulations 1997 • The Environmental Protection (Duty of Care) Regulations 1991 • The List of Wastes (England) Regulations 2005 • The List of Wastes (Wales) Regulations 2005

Those operations include, inter alia, the operation of landfill sites under Council Directive 1999/31/EC on the landfill of waste and the operation of incineration plants under Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on the incineration of waste	<ul style="list-style-type: none"> • The Landfill (England and Wales) Regulations 2002 • The Waste Incineration (England and Wales) Regulations 2002 • Environmental Permitting (England and Wales) Regulations 2007
The management of extractive waste under Directive 2006/21/EC of the European Parliament and of the Council on the management of waste from extractive industries.	<ul style="list-style-type: none"> • Environmental Permitting (England and Wales) Regulations 2007
Discharges requiring authorisation	
All discharges into the inland surface water, which require prior authorisation in pursuance of Council Directive 76/464/EEC of 4 May 1976 on pollution caused by certain dangerous substances, discharged into the aquatic environment of the Community	<ul style="list-style-type: none"> • Water Resources Act 1991 • Environmental Permitting (England and Wales) Regulations 2007 <p>The Water Framework Directive will gradually take over the requirements of Directive 2006/11/EC, which will be repealed in 2012.</p>
All discharges of substances into groundwater which require prior authorisation in pursuance of Council Directive 80/68/EEC of 17 December 1979 on the protection of groundwater against pollution caused by certain dangerous substances	<ul style="list-style-type: none"> • The Groundwater Regulations 1998 • Environmental Permitting Regulations (England and Wales) 2007 • Water Resources Act 1991
The discharge or injection of pollutants into surface water or groundwater which require a permit, authorisation or registration in pursuance of Directive 2000/60/EC.	<ul style="list-style-type: none"> • Water Resources Act 1991 • Groundwater Regulations 1998
Water abstraction and impoundment	
Water abstraction and impoundment of water subject to prior authorisation in pursuance of Directive 2000/60/EC.	<ul style="list-style-type: none"> • Water Resources Act 1991, as amended by the Water Act 2003
Dangerous substances, preparations, plant protection products and biocidal products	

<p>Manufacture, use, storage, processing, filling, release into the environment and onsite transport of⁵⁶:</p> <ul style="list-style-type: none"> • Dangerous substances as defined in Article 2(2) of Council Directive 67/548/EEC of 27 June 1967 on the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous substances • Dangerous preparations as defined in Article 2(2) of Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations • Plant protection products as defined in Article 2(1) of Council Directive 91/414/EEC of 15 July 1991 concerning the placing of plant protection products on the market • Biocidal products as defined in Article 2(1)(a) of Directive 98/8/EC of the European Parliament and of the Council of 16 February 1998 concerning the placing of biocidal products on the market 	<ul style="list-style-type: none"> • The Chemicals (Hazard Information and Packaging for supply) Regulations 2002 • The Plant Protection Products Regulations 2005
Transport	
<p>Annex A to Council Directive 94/55/EC of 21 November 1994 on the approximation of the laws of the Member States with regard to the transport of dangerous goods by road</p>	<ul style="list-style-type: none"> • The Carriage of Dangerous Goods (Classification, Packaging and Labelling) and Use of Transportable Pressure Receptacles Regulations 1996. • Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009
<p>The Annex to Council Directive 96/49/EC of 23 July 1996 on the approximation of the laws of the Member States with regard to the transport of dangerous goods by rail</p>	<ul style="list-style-type: none"> • The Carriage of Dangerous Goods (Classification, Packaging and Labelling) and Use of Transportable Pressure Receptacles Regulations 1996.
<p>Council Directive 93/75/EEC of 13 September 1993 concerning minimum requirements for vessels bound for or leaving Community ports and carrying dangerous or polluting goods</p>	<ul style="list-style-type: none"> • The Merchant Shipping (Reporting Requirements for Ship Carrying Dangerous or Polluting Goods) Regulations 1995.
GMOs	
<p>Any contained use, including transport,</p>	<ul style="list-style-type: none"> • Genetically Modified Organisms

⁵⁶ Annex 4 of this guidance provides references for the substances, preparations, plant protection products and biocidal products within the scope of the EU Directives.

involving genetically modified micro-organisms as defined by Council Directive 90/219/EEC of 23 April 1990 on the contained use of genetically modified micro-organisms	(Contained Use) Regulations 2000.
Any deliberate release into the environment, transport and placing on the market of genetically modified organisms as defined by Directive 2001/18/EC of the European Parliament and of the Council	<ul style="list-style-type: none"> • The Genetically Modified Organisms (Deliberate Release) Regulations 1992
Transboundary shipment of waste	
Transboundary shipment of waste within, into or out of the European Union, requiring an authorisation or prohibited in the meaning of Council Regulation (EEC) No 259/93 of 1 February 1993 on the supervision and control of shipments of waste within, into and out of the European Community	<ul style="list-style-type: none"> • Transfrontier Shipment of Waste Regulations 2007

Annex 8: List of dangerous substances and preparations, pesticides and biocides

A8.1 There are too many dangerous substances, preparations and products listed in Schedule 2 of the Regulations to list here. This annex aims to provide a generic range of dangerous substances and preparations, and provide links to relevant legislation for further information and investigation. Operators should also contact their trade associations for specific details of the substances, preparations and products relevant to their sector.

A. Dangerous substances

A8.2 The following substances and preparations are "dangerous" within the meaning of Directive 67/548/EEC:

(a) Explosive: substances and preparations which may explode under the effect of flame or which are more sensitive to shocks or friction than dinitrobenzene;

(b) Oxidising: substances and preparations which give rise to highly exothermic reaction when in contact with other substances, particularly flammable substances;

(c) Easily flammable:

- substances and preparations which may become hot and finally catch fire in contact with air at ambient temperature without any application of energy, or
- solid substances and preparations which may readily catch fire after brief contact with a source of ignition and which continue to burn or to be consumed after removal of the source of ignition, or

- liquid substances and preparations having a flash point below 21° C, or

- gaseous substances and preparations which are flammable in air at normal pressure, or

- substances and preparations which, in contact with water or damp air, evolve highly flammable gases in dangerous quantities;

(d) flammable: liquid substances and preparations having a flash point between 21° C and 55° C;

(e) toxic: substances and preparations which, if they are inhaled or taken internally or if they penetrate the skin, may involve serious, acute or chronic health risks and even death;

(f) harmful: substances and preparations which, if they are inhaled or taken internally or if they penetrate the skin, may involve limited health risks;

(g) corrosive: substances and preparations which may, on contact with living tissues, destroy them;

(h) irritant: non-corrosive substances and preparations which, through immediate, prolonged or repeated contact with the skin or mucous membrane, can cause inflammation.

A8.3 Information on the classification and labelling of substances and preparations dangerous for supply is contained in table 3.2 in Part 3 of Annex VI to the Classification, Labelling and Packaging Regulations.

B. Dangerous preparations: Directive 1999/45/EC

A8.4 The following are dangerous within the meaning of this Directive:

- (a) explosive substances and preparations;
- (b) oxidising substances and preparations;
- (c) extremely flammable substances and preparations;
- (d) highly flammable substances and preparations;
- (e) flammable substances and preparations;
- (f) very toxic substances and preparations;
- (g) toxic substances and preparations;
- (h) harmful substances and preparations;
- (i) corrosive substances and preparations;
- (j) irritant substances and preparations;
- (k) sensitising substances and preparations;
- (l) carcinogenic substances and preparations;
- (m) mutagenic substances and preparations;
- (n) substances and preparations which are toxic for reproduction;
- (o) substances and preparations which are dangerous for the environment.

A8.5 For full descriptions of the substances and preparations listed above and further information generally, see Article 2(2) of the Directive (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31999L0045:EN:NOT>).

C. Plant protection products: Directive 91/414/EEC

A8.6 Article 2(1) defines 'plant protection products' as: active substances and preparations containing one or more active substances, put up in the form in which they are supplied to the user, intended to:

- (1) Protect plants or plant products against all harmful organisms or prevent the action of such organisms, in so far as such substances or preparations are not otherwise defined below;
- (2) Influence the life processes of plants, other than as a nutrient, (e.g. growth regulators);
- (3) Preserve plant products, in so far as such substances or products are not subject to special Council of Commission provisions on preservatives;
- (4) Destroy undesired plants; or
- (5) Destroy parts of plants, check or prevent undesired growth of plants

A8.7 The Directive (at Annex 1) provides for the establishment of a positive list of active substances, that have been shown to be without unacceptable risk to people or the environment. Member States can only authorise the marketing and use of plant protection products after an active substance is listed in Annex 1, except where transitional

arrangements apply. Annex II data relate to the active substance and Annex III to the plant protection product.

A8.8 The Pesticides Safety Directorate is the responsible authority in the UK for product authorisations under this Directive. Further details and information about the Directive can be obtained from the PSD website - <http://www.pesticides.gov.uk/approvals.asp?id=623>

D. Biocidal products: Directive 98/8/EC

A8.9 Article 2(1)(a) of the Directive defines biocidal products as: “active substances and preparations containing one or more active substances, put up in the form in which they are supplied to the user, intended to destroy, deter, render harmless, prevent the action of, or otherwise exert a controlling effect on any harmful organism by chemical or biological means”.

A8.10 These product-types exclude products where they are covered by the Directives mentioned in Article 1(2) of this Directive for the purposes of these Directives and their subsequent modifications.

MAIN GROUP 1: Disinfectants and general biocidal products

MAIN GROUP 2: Preservatives

MAIN GROUP 3: Pest control

MAIN GROUP 4: Other biocidal products

A8.11 For a list of the 23 product types, with an indicative set of descriptions within each type, see Annex V of the Directive:

http://ec.europa.eu/environment/biocides/pdf/dir_98_8_biocides.pdf

Annex 9: Appeals procedures

Annex 9 provides guidance on the procedures to be used for appeals against liability to remediate and against remediation notices

A9.1 The Secretary of State and Welsh Ministers in Wales have appointed the Planning Inspectorate to deal with appeals on their behalf. Schedule 5 of the Regulations contains the procedures for appeal which apply only for appeals against liability to remediate and against remediation notices. This section provides more detail on the procedures and has been written with the Planning Inspectorate. Because the Secretary of State and Welsh Ministers in Wales have appointed the Planning Inspectorate to hear appeals on their behalf in all cases, the procedures for appeal are the same irrespective of whether the Secretary of State is (or Welsh Ministers are) the enforcing authority or not⁵⁷.

Before making an appeal

A9.2 Before appealing, operators are advised to try to resolve any difficulties or disagreements with the enforcing authority. The right of appeal should be exercised as a last resort.

Who decides your appeal?

A9.3 An Inspector may write a report with recommendations to the Secretary of State or Welsh Ministers or will make the decision on behalf of the Secretary of State or Welsh Ministers. Most appeals are decided by an Inspector, acting as a delegate of the Secretary of State or Welsh Ministers. However, the Secretary of State for Environment, Food and Rural Affairs or Welsh Ministers may take over and 'recover' a case if it is particularly important or controversial (see paragraphs A9.30 to A9.32). This means that an Inspector conducts a site visit and/or hears the parties and then writes a report which informs the decision which is subsequently made by the Secretary of State. Where the Secretary of State or Welsh Ministers are the enforcing authority there is no provision for recovery and the Inspector will always make the decision. If the decision is going to be made by the Secretary of State or Welsh Ministers the Planning Inspectorate will write to the appellant to explain the decision to recover it.

A9.4 The person deciding the appeal may allow or dismiss the appeal and either confirm, vary or quash the notice.

How to make an appeal

⁵⁷ Although note that the Secretary of State or Welsh Ministers are not able to recover a case where they are the enforcing authority (see paragraph A9.3).

Validity of appeal

A9.5 There is no charge for lodging an appeal. Although there is no statutory requirement to submit an appeal form, an appeal form is available from the address below or it can be downloaded from the Inspectorate's website at:

<http://www.planning-inspectorate.gov.uk/pins/environment/environment/index.htm>

The form helps operators to ensure that they submit all the necessary information required for their appeal to pass the validation checks.

A9.6 Appellants are required under Schedule 5 of the regulations to provide:

- i) notification of appeal;
- ii) statement of the grounds of appeal;
- iii) copy of the liability notification or remediation notice;

A9.7 Schedule 5 of the Regulations provide for appeals to be dealt with either by way of written representations or by way of a hearing. An appellant may indicate whether they consider their appeal should be dealt with by the written representations procedure or otherwise to be heard by an Inspector at a hearing or inquiry. However the Inspectorate (acting on behalf of the Secretary of State or the Welsh Ministers in Wales) will make the final decision upon the procedure and will then specify which procedure must be used when dealing with the appeal.

A9.8 For appeals against a liability to remediate the statement of grounds of appeal should explain, in full, why the appellant is appealing against the notification. For appeals against remediation notices it should describe, in full, those aspects of the notice which the appellant considers should be changed and how they should be changed.

A9.9 The Notice of Appeal should be sent to:

The Planning Inspectorate
Environment Appeals Team
Room 4/04 Kite Wing
Temple Quay House
2 The Square
Temple Quay
Bristol BS1 6PN

Or in Wales:

The Planning Inspectorate
Crown Buildings
Cathay's Park
Cardiff
CF10 3NQ

Tel: 0117 372 8726

Fax: 0117 372 6241

E-mail:

environment.appeals@pins.gsi.gov.uk

Tel: 029 2082 3866

Fax: 029 2082 5250

Email: wales@pins.gsi.gov.uk

Time limit for lodging an appeal

A9.10 The Inspectorate must receive the notice of appeal within the following time-scales:

- i) for appeals against liability to remediate (paragraph 8.1), within 28 days of the date of the liability notice.
- ii) for appeals against a remediation notice (paragraph 8.4), within 28 days of the date of the remediation notice.

Appeals made outside the time limits are only accepted in very exceptional circumstances. A remediation notice need not be complied with pending determination of an appeal unless the person hearing the appeal directs otherwise.

Action on receipt of an appeal

A9.11 When an appeal is received, the Inspectorate will check the validity of the appeal. It may not be possible to validate an appeal against a remediation notice until the Inspectorate has requested and received clarification from the enforcing authority on what was proposed by the operator. If valid, the Inspectorate will send a copy of the notification of appeal to the enforcing authority.

A9.12 The enforcing authority will then send a copy of the notification of appeal to any person who, in its view, appears to have a particular interest in the subject matter of the appeal. It will then tell the Inspectorate of whom it has notified and where the documents to the appeal can be viewed by the public.

A9.13 Once notified of the above details the Inspectorate will notify the appellant of the following:

- i) the chosen procedure; being written representations or by hearing or inquiry;
- ii) where the documents to the appeal can be viewed by the public;
- iii) the start date, and
- iv) the date by which the appellants statement of case and all relevant correspondence should be received by the Inspectorate

A9.14 The Inspectorate will at the same time notify the enforcing authority of the start date and that it has requested the above from the appellant.

A9.15 The Inspectorate will also at this time notify all parties which have been notified of the appeal by the enforcing authority, of the following:

- i) the chosen procedure; being written representations or by hearing or inquiry;
- ii) where the documents to the appeal can be viewed by the public, and

- iii) the date, by which any representations they wish to make must be submitted.

A9.16 Once the appellant's statement of case and relevant documents have been received the Inspectorate will send them to the enforcing authority, giving it a time limit within which it must provide a written response.

Written Representations Procedure

A9.17 The written procedure for dealing with an appeal takes the form of the above exchange of statements between the parties, usually followed by a visit by the Inspector to the relevant location and determination of the appeal or recommendations in a written report to the Secretary of State. This is usually the quickest, simplest and most cost effective way of deciding an appeal and is suitable for cases that do not involve complex issues.

A9.18 The visit to the location would happen at an agreed date and time and after the final deadline for representations has passed. It is normal practice for the Inspector to be accompanied on such visits by the appellant and/or a representative of the appellant and a representative for the enforcing authority. During the visit, the Inspector will not allow any discussion about the merits of the case and any observations will be restricted to those physical features of the relevant location that have already been raised in written evidence.

Hearings

A9.19 A hearing allows the parties to present their case in a more relaxed and less formal atmosphere than at an inquiry (see below). It usually takes the form of a discussion led by the Inspector, followed if appropriate by a visit to the relevant location. Where appropriate the hearing may be adjourned to and continued at the relevant location before being closed there.

A9.20 The Inspectorate may decide a hearing is needed if it considers that the issues raised in evidence merit discussion without the need for cross-examination. Where a hearing is offered as a preferred procedure by one of the parties, the Inspectorate will review the issues in question and decide whether or not a hearing is justified. Where the Inspectorate considers the issues to be straightforward, the Inspectorate may decide that the case would be suitably dealt with by way of the above written exchange followed, where required, by an inspection of the relevant location.

A9.21 A notice scheduling the hearing will be placed by the Inspectorate in a suitable place near the relevant location and other places deemed to be appropriate in the locality normally 21 days before the hearing is due to commence. Local residents and other interested parties will be allowed

to attend the hearing and, subject to obtaining the Inspector's permission, give their views.

Inquiries

A9.22 Although either party may offer their preferred procedure as being a public inquiry, the Inspectorate will decide which procedure is suitable for the appeal. In reaching that decision the Inspectorate will take the appellant's views and those of the enforcing authority into account. An inquiry will usually only be called in cases where particularly complex technical evidence is submitted, where there is a large number of submissions, a considerable amount of public interest, or where unprecedented legal issues are involved.

A9.23 Not later than 4 weeks before the inquiry, the appellant and enforcing authority should submit proofs of evidence and a statement of common ground. The Inspectorate will cross copy these to the appellant and the enforcing authority respectively.

- A proof of evidence is a written statement of the evidence a witness intends to give at the inquiry. If the appellant's proof is more than 1,500 words long, the appellant should also provide a summary that is no more than 10% of the length of the proof.

- A statement of common ground is a list of all the matters upon which the appellant and enforcing authority are agreed and should be signed by the appellant and the enforcing authority.

A9.24 An inquiry is more formal than a hearing and usually begins with brief opening statements from the appellant and the enforcing authority. Both parties can then each call their witnesses to give evidence. Witnesses so called may be cross-examined by the other side. The enforcing authority will normally present its case first. Interested parties may also attend the inquiry and, subject to obtaining the Inspector's permission, will be allowed to give their views. A visit to the relevant location may also be required.

A9.25 The Inspectorate will place a notice detailing the arrangements for the inquiry in a suitable place near the relevant location and other places in the locality 21 days before the inquiry is due to commence.

Venue of hearing or inquiry

A9.26 It is the responsibility of the enforcing authority to arrange a venue for any hearing or inquiry. The Inspectorate will contact the appellant and the enforcing authority to offer appropriate dates.

Decisions on appeals

Inspector's decision

A9.27 The decision will include the important and relevant points which give effect to the Inspector's decision. The Inspector's decision will be sent to the appellant and the enforcing authority at the same time. Copies will be sent to interested parties where one has been requested.

Secretary of State and Welsh Ministers Decision – Recovered Cases

A9.28 In cases where the Secretary of State or Welsh Ministers have recovered a case for their own decision, the Inspector will send a report to the Secretary of State or Welsh Ministers. The report will summarise the arguments and evidence presented, conclude on that evidence, and make a recommendation as to whether or not the appeal should be allowed. The Secretary of State or Welsh Ministers will then consider the report and issue a decision which will be sent to the appellant and the enforcing authority together with a copy of the Inspector's report.

A9.29 Copies of decisions by Inspectors are available to interested persons, depending on the quantities of hard copy, a small charge may be payable. Queries should be directed to:

The Planning Inspectorate
Decision Letter Library
Room G/06
Temple Quay House
2 The Square
Temple Quay
Bristol, BS1 6PN.

Tel: 0117 372 8759
Fax: 0117 372 8372
e-mail: dl.library@pins.gsi.gov.uk

Or in Wales:

The Planning Inspectorate
Crown Buildings
Cathay's Park
Cardiff
CF10 3NQ

Tel: 029 2082 5155
e-mail: wales@pins.gsi.gov.uk

Other points

Recovered cases

A9.30 These are cases which the Secretary of State or Welsh Ministers recover for their own determination in accordance with paragraph 9 of Schedule 5 of the Regulations. In these cases, the Inspector will carry out a site visit, hearing or inquiry in the usual way but then prepare a report to the Secretary of State or Welsh Ministers. The Inspector's written report will include his conclusions, his recommendations or his reasons for not making recommendations. The Secretary of State or Welsh Ministers will then make their decision.

A9.31 It is not possible to anticipate every type of appeal which may be

recovered, as each case will be looked at on an individual basis. However, they may include for example:

- cases that are likely to be high profile or controversial. For example, cases that are likely to attract significant press attention;
- cases that are likely to be determined on the basis of unusual facts or important new issues of law. For example, cases that are likely to be determined on the basis of the definitions of environmental damage;
- cases which can only be decided in conjunction with other cases over which the Inspectors have no jurisdiction;
- other cases which, exceptionally, merit recovery because of particular circumstances.

A9.32 It is also possible that the circumstances of cases which have been recovered may alter during the course of the appeals process, e.g. if an accompanying appeal over which the Inspector has no jurisdiction is withdrawn. In such cases the appeal may be returned to the Inspector for decision.

Further information

A9.33 The Secretary of State/Welsh Ministers or the Inspector may at any time require further information with regard to a party's statement of case or proof of evidence. This further information once received will be copied to the other main party for information or further comment as appropriate. It will also be placed on deposit in the relevant location as mentioned previously.

Withdrawal of appeals

A9.34 An appeal may be withdrawn at any time. To do so the appellant must send written notification to the Planning Inspectorate, and send a copy directly to the enforcing authority. Requirements under the regulations will then recommence. If appropriate the enforcing authority will issue revised timescales.

Assistant Inspector

A9.35 Exceptionally, in some cases an Assistant Inspector may be appointed by the Planning Inspectorate on behalf of the Secretary of State/Welsh Ministers to advise the Inspector on specific legal, scientific or technical issues. The assessor will attend the inquiry with the Inspector and consider the representations made. The assessor will write a report advising the Inspector on specific issues. The report will be made public when the decision is issued.

A9.36 Where an assessor is appointed, everyone entitled to appear at the inquiry will be notified of the assessor's name and the matters upon which he/she will advise the Inspector.

Costs

A9.37 Paragraph 10 in Part 1 of Schedule 5 states:

The person deciding the appeal may make such order as to the costs of the parties (including parties who make representations) as is fit.

A9.38 Generally parties will meet their own costs. Persons deciding appeals will normally only award costs where an application for award of costs is made and on the grounds that the other party's unreasonable behaviour has caused the person applying for costs unreasonable expense.

Complaints about the decision

A9.39 The decision on the appeal is final. After it has been issued, neither the Secretary of State/Welsh Ministers, nor the Inspector can consider further representations or make any comments on the merits or otherwise of the case.

A9.40 The decision can only be challenged in the courts by judicial review. An application to seek permission for judicial review should be made to the Administrative Court of the High Court of Justice. This should be done quickly and in any case not longer than 3 months after the date of the decision. If the appeal is quashed following the proceedings before any court, the main parties will be notified and asked to provide any further representations within 28 days. The Secretary of State/Welsh Ministers may then ask for a hearing to be held or re-opened and the appeal will be re-determined.

Complaints about the Planning Inspectorate

A9.41 The letters acknowledging receipt of appeal will give the name of the Case Officer. If you have any complaints about the handling of your appeal at any stage you should contact the Complaints Officer at the following address:

The Complaints Officer
The Planning Inspectorate
Room 4/11 Eagle Wing
Temple Quay House
2 The Square
Temple Quay
Bristol, BS1 6PN.

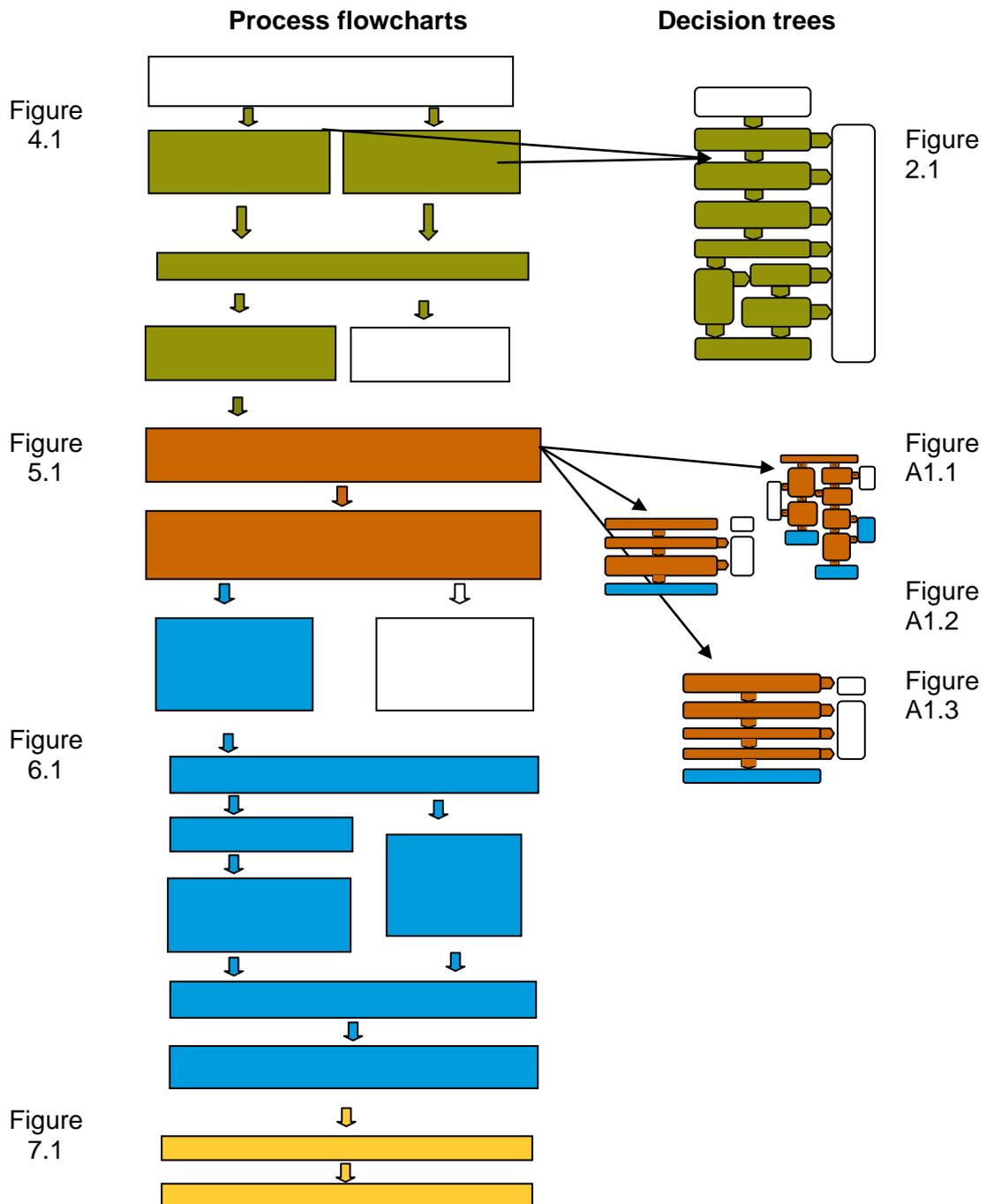
Tel: 0117 372 8935
Fax: 0117 372 8139

Or in Wales:

The Planning Inspectorate
Crown Buildings
Cathay's Park
Cardiff
CF10 3NQ

Tel: 029 2082 3889
Fax: 029 2082 5150
Email: Wales@pins.gsi.gov.uk

Annex 10: Map of diagrams



Annex 11: Contact details for authorities

Environment Agency

General Enquiries: 08708 506 506 (Mon-Fri 8-6)

Incident hotline: 0800 807060 (Freephone* 24 Hour)
(To report an environmental incident)

Regional offices

Anglian

tel: 01733 371811
fax: 01733 231840

North east

tel: 0113 244 0191
fax: 0113 246 1889

North West

tel: 01925 653999
fax: 01925 415961

Midlands

tel: 0121 711 2324
fax: 0121 711 5824

Southern

tel: 01903 832000
fax: 01903 821832

South West

tel: 01392 444000
fax: 01392 444238

Thames

tel: 01189 535000
fax: 01189 500388

Environment Agency Wales

South West area office

tel: 08708 506506

South East area office

tel: 08708 506506

Northern area office

tel: 08708 506506

Natural England

Incidents should be reported to the relevant regional office. Contact details are available at www.naturalengland.org.uk or through the Enquiries Centre on 0845 600 3078 (local rate).

Countryside Council for Wales

General Enquiries: 0845 1306 229

Marine and Fisheries Agency

Office Hours (from 0900 to 1700): Please telephone our dedicated Spill Response number: 0870 785 1050

A member of MFA's Marine Pollution Response Team will give immediate priority to any calls made to this dedicated number.

Outside Office Hours (from 1700 to 0900): Outside office hours callers should call a MFA Duty Officer on: 07770 977825

If there is no reply on either of the above numbers call the 24-hour Defra Duty Room on: 020 7270 8960

The Defra Duty Room should be able to contact an officer in the Marine and Fisheries Agency by home or mobile telephone or pager and will ask them to return your call.

Fax Numbers

Defra Duty Room (provides 24-hour cover for MFA)	020 7270 8125
Marine Fisheries Agency (not 24-hour)	020 7270 8708

If action is required by MFA a telephone call must be made in addition to any message sent by fax as the fax machines are not monitored continuously.

(Non emergency contact address: dispersants@mfa.gsi.gov.uk , Area 4C, Ergon House, Horseferry Road, London, SW1P 2AL)

Welsh Assembly Government (for damage to species and habitats in the marine environment in Wales)

marine@wales.gsi.gov.uk

Local Authority

Operators should contact the relevant local authority. Contact information can be found at Directgov:

<http://www.direct.gov.uk/en/DI1/Directories/Localcouncils/index.htm>

Contact details correct at time of publishing.