

F1 Scoping the environmental impacts of camping and caravan sites

Explanatory note

For projects which require Environmental Impact Assessment (EIA), a scoping exercise should be undertaken early in the planning stages of the project. This enables the project to be designed to avoid or minimise negative environmental impacts and provides an opportunity to incorporate positive environmental enhancements into the project. Early consultation with all interested parties, including the Environment Agency, is an essential part of scoping. Even if a project does not require EIA under EIA legislation, it may be advisable (and in some cases necessary) to undertake a scoping exercise in any case (e.g. to support applications for other relevant consents and authorisations needed to carry out the project).

This guidance note aims to promote a good practice approach to scoping as part of the EIA process which in some respects goes beyond the statutory EIA requirements. When scoping a project, developers, or their consultants, should satisfy themselves that they have addressed all the potential impacts and the concerns of all organisations and individuals with an interest in the project.

This guidance note provides information on the most likely potential environmental impacts of camping and caravan sites. However, each project must be considered on a case-by-case basis as the detailed characteristics of the proposal and the site will determine the potential impacts.

This guidance is based on the main legal requirements on EIA stemming from the EC Directive and the UK Regulations. However, developers should seek independent legal advice to ensure that the proposed development is carried out in compliance with the requirements of this and any other relevant legislation relating to planning as well as to pollution control.

This guidance note must be read in conjunction with the *Scoping Handbook*, which provides general guidance on the EIA process and the scoping of projects.



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In addition, the following scoping guidance notes are relevant to *all* projects concerned with camping and caravan sites:

- A1** Construction work
- A4** Vegetation management and conservation enhancements

The following scoping guidance notes *may* be relevant in certain circumstances:

- B4** Deliberate introduction of non-native and genetically modified species
- F2** Golf courses
- F3** Leisure centres and swimming pools, holiday complexes and hotels
- F6** Water-based recreation

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1 Introduction

- 1.1 This guidance note, in conjunction with the *Scoping Handbook* and the notes listed on the previous page, seeks to help developers and other interested parties identify the potential impacts of camping and caravan sites on the environment as a whole. It should be emphasised that the list of impacts is by no means exhaustive and that a full investigation into positive and negative impacts should be undertaken. Early consultation with the Environment Agency and other relevant organisations will enable the identification of environmental issues and constraints and the avoidance of sensitive areas, thus reducing the need for redesigning and mitigating avoidable impacts at a later stage.
- 1.2 This guidance note examines the potential environmental impacts of camping and caravan sites. Following this brief introduction, an overview of the legal requirements for EIA in relation to these developments is provided. The potential environmental impacts of such activities are identified in Section 3. The text and summary table in this section will enable the reader to begin to identify the likely impacts arising from the particular proposal under consideration. The subsequent sections present the mitigation measures that may be relevant to camping and caravan sites, followed by key references and further reading.
- Background to development type**
- 1.3 All camping and caravan sites must be registered with the local authority. Many touring caravan and camping sites are also registered with an association such as the Caravan Club or the Camping and Caravan Club. To be registered with such an association, sites have to supply at least a certain standard of basic facilities. The Caravan Club, for example, offers CLs (certificated locations) which are small (up to five caravans) and basic. At the other end of the scale, the Caravan Club offers sites with 'full facilities' which generally consist of: an office block and warden's accommodation; toilet/shower blocks; level grass pitches with or without electricity points for caravans, camper vans and recreational vehicles (RVs) and some hard standing pitches; a visitors' car park; access and campsite roads; and fenced-off areas for waste disposal (rubbish, waste water and chemical toilet waste) with points for the collection of drinking water. Some sites will also offer amenities such as a TV room, launderette, games room, a small shop, and may also have a playground, tennis courts and a swimming pool. Static caravans are not usually allowed on these sites.
- 1.4 In addition, there are many private caravan and camping sites in the UK, all of which have to be registered with the local authority. These sites will vary in the level of amenities that they offer.
- 1.5 The UK also has many commercial static caravan sites. In this case static caravans are plumbed into a waste disposal and water system so there is less need for disposal points. There is also less need for toilet/shower blocks because static caravans are usually equipped with such facilities. Otherwise, static caravan sites are likely to have similar amenities, but perhaps on a larger scale. These sites also have to be registered with the local authority and some static caravan sites also allow touring caravans and tents.
- 1.6 Activities which are involved in the daily running of a caravan and camping site include: deliveries; grass cutting; waste collection; and the arrival, pitching and departure of caravans and tents, although there are likely to be fewer movements on a static caravan site.

2 Development control and EIA

Development control

- 2.1 Camping and caravan sites are likely to require planning permission under the town and country planning regime, and as a result developers should contact their local planning authority to confirm whether or not their proposals require planning permission (or are subject to any other form of development control). They should also seek advice on the impact on their proposals of other planning-related legislation, for example the Conservation (Natural Habitats & c.) Regulations 1994 (as amended), SI No. 94/2716.

Environmental Impact Assessment

- 2.2 Camping and caravan sites are included in Schedule 2 of the Town and Country Planning (Environmental Impact Assessment) (England and Wales) (1999 SI 1999 No. 293). The Regulations list applicable thresholds and criteria which apply to Schedule 1 and Schedule 2 developments. If the thresholds are not exceeded, then EIA is not required and so these thresholds and criteria are termed "exclusive criteria". In cases where the thresholds are exceeded, Schedule 1 developments require an EIA (mandatory) but Schedule 2 developments only require an EIA if the development is likely to have significant effects on the environment by virtue of factors such as its nature, size or location. The exclusive criteria for Schedule 1 developments are taken from the EIA Directive, but those for Schedule 2 developments have been laid down in the UK Regulations, as provided for by the Directive. In addition to the specific criteria and thresholds set out in Schedule 2, all developments listed in Schedule 2 may require an EIA if any part of the development is to be carried out in a sensitive area.

- 2.3 The former DETR published guidance (referred to in the *Scoping Handbook*) which helps in the decision on whether, in respect of Schedule 2 projects, impacts are significant and whether EIA should be required. The guidance thus contains "indicative criteria", although area sensitivity and project-specific issues must be taken into account and the decision remains discretionary. The following threshold criteria apply.

- Exclusive criteria

Under Paragraph 12(e), permanent campsites and caravan sites may require EIA if the area of the development exceeds 1 hectare.

- Indicative criteria

Concerning permanent campsites and caravan sites, Paragraph A33 of DETR Circular 02/99 states that "In assessing the significance of tourism development, visual impacts, impacts on ecosystems and traffic generation will be key considerations. EIA is likely to be required for major new tourism and leisure developments which require a site of more than 10 hectares. In particular, EIA is more likely to be required for permanent campsites or caravan sites with more than 200 pitches."

Furthermore, EIA may be required for any change to or extension of such developments already authorised, where the change or extension may have significant adverse effects on the environment. Responsibility for determining whether an EIA is required lies initially with the local planning authority.

2.4 Whether or not formal EIA of a proposed campsite or caravan site is required, the Environment Agency and other statutory consultees and regulators may request environmental information concerning the proposal. An EIA may provide the most appropriate method for a developer to collate the necessary information.

Other licences, consents and authorisations

2.5 Certain aspects of campsite and caravan site developments may require prior permissions from the Environment Agency. These may include, for

example, land drainage consents, abstraction licences, impounding licences and discharge consents. It is recommended that the developer seek independent legal advice and liaise with the Environment Agency during project design and subsequent stages to identify the consents, licences and authorisations that will be required.

3 Potentially significant environmental effects

3.1 The EIA Directive requires the EIA to “identify, describe and assess...the direct and indirect effects of a project on the following factors: human beings, fauna and flora; soil, water, air, climate and the landscape; material assets and cultural heritage; [and] the interaction between the factors.” Socio-economic issues, health and safety in the workplace, material assets and cultural heritage are all considered in EU *Guidance on Scoping* (ERM, 2001a) but are not impact categories for which the Environment Agency is the principal competent authority. Advice on these issues is presented in this guidance note without prejudice to the advice of the relevant competent authority, but the relevant competent authority should be consulted for each of these categories in all cases (further advice on the appropriate competent authority to contact is given in the *Scoping Handbook*).

3.2 An EIA of proposed camping and caravan sites should determine the potential impacts on the environment of each aspect of the project, including location and management. Careful scoping facilitates this process. This section provides a non-exhaustive description of the environmental issues that might arise during the scoping of such a project. The *Scoping Handbook* provides guidance on how to conduct a scoping exercise.

3.3 The issues arising for all environmental receptors will change over time as the project matures. Developers and site operators should, therefore, consider the impacts arising from construction, maintenance and the end state. It is recommended that expert advice on detailed technical issues be obtained.

- 3.4 Potential impacts are discussed here in broad terms only, as their nature and intensity will depend on the physical characteristics of the project and current state of the development site. An EIA of proposed camping and caravan sites should take these factors into account in assessing potential impacts on the environment.
- 3.5 The following paragraphs should be read in conjunction with Table F1. This outlines the main activities associated with camping and caravan sites, and the impacts arising from them.

Water environment

- 3.6 Construction of infrastructure associated with camping and caravan sites in close proximity to a watercourse may cause bank destruction and instability and the water body itself may suffer from increased sediment load and oil and fuel contamination from vehicles and access roads. The use of heavy machinery and vehicles during construction may result in the compaction of topsoil and, therefore, a change in surface water drainage patterns.
- 3.7 The creation of car parking and hard standing areas, roads and buildings may result in compaction of soils and may increase the area of impermeable or slowly permeable surfaces. The subsequent increase in surface runoff may, in turn, increase the risk of flooding and soil erosion. Structures on land may obstruct flood storage capacity and impede the lateral and downward flow of water in the floodplain, further compounding the risk of flooding and soil erosion.
- 3.8 Erosion of the site as a result of the movement of vehicles, caravans and people may lead to the loss of soil and increased sediment in local watercourses. Watercourses may also be at risk from leaks or runoff from waste disposal points.

Land

- 3.9 The construction of camping and caravan sites will require land-take and permanent structures will result in loss of land. This may include agricultural land, natural habitat or sites of environmental or archaeological interest. The use of machinery and vehicles during construction may cause short- and medium-term adverse impacts on landscape character.
- 3.10 The magnitude of such visual impact will depend on the siting and design of the project. Works undertaken in a manner sympathetic to the surrounding area are likely to reduce impact on landscape character.
- 3.11 The use of construction vehicles and machinery may cause compaction of soils and a change in soil structure. Soils may become exposed during construction, leading to increased erosion. Construction may also involve the removal or mixing of soils on site which may have an impact on soil characteristics. During construction and maintenance, soils may become contaminated from spills or leaks of fuel and oil.
- 3.12 Once in operation, a camping and/or caravan site may have significant visual or landscape impacts. Static caravans in particular can be very regular and angular in shape and may occur in large numbers thus introducing rows of artificial structures into what, in most cases, may be a natural landscape. The severity of the impact, however, would depend on the nature of the surrounding landscape; for example, whether it is wooded or open. Siting and design of a project are, therefore, important in determining the magnitude of the impact. Some caravan sites, usually touring sites, are designed to blend with the natural environment.
- 3.13 Pressure from vehicle and caravan movements and large numbers of people may lead to increased soil erosion. If a site suffers from poor

drainage, movement of heavy caravans and RVs can lead to severe damage of topsoil and vegetation. Public footpaths and paths on site may suffer from trampling and erosion as a result of intense use.

Air and climatic factors

- 3.14 During construction works and maintenance, local air quality may decline as a result of gaseous and particulate emissions from vehicle movements on and off site. Dust may also be created by construction works.
- 3.15 Local air quality may be affected by the gaseous and particulate emissions from increased traffic generated by caravaners and campers, visitors, staff and deliveries. The number of vehicles arriving at a large static site may have a considerable impact on local air quality.
- 3.16 At a global level, it is unlikely that this type of development will have an effect on air quality.

Ecology

- 3.17 Construction of camping and caravan sites may involve direct land-take resulting in disturbance or destruction of terrestrial and/or aquatic environments with associated habitat loss. Sensitive species may be displaced leading to a change in the composition of the community.
- 3.18 Aquatic ecology may be at risk from spills or leaks of chemicals, fuels and oils used on the site, as may terrestrial habitats. Both aquatic and terrestrial habitats may suffer from noise and disturbance, resulting in the displacement of more sensitive species and interruption of feeding, roosting and nesting. This change in species composition may reduce ecological diversity, causing a loss of conservation value.

- 3.19 The development of a camping or caravan site may offer opportunities for the creation of new habitats, such as wetlands and local nature conservation areas. Opportunities to raise awareness about the local environment and wildlife may also be provided.

Human environment

- 3.20 Construction of camping and caravan sites may cause temporary disturbance and disruption to local residents, farmers, tourists, businesses and users of the area. This may be due to noise or dust emanating from the development site, or by closure of roads or footpaths whilst construction work is undertaken. Sites of archaeological or historical interest may be disturbed by construction.
- 3.21 The development of a new camping and caravan site will provide new tourist facilities, in the process increasing tourism, creating employment and bringing economic benefits to the local area.
- 3.22 The increase in traffic generated by a caravan or campsite through vehicle journeys made by visitors, staff and delivery companies, however, may result in congestion, noise and an increased number of accidents. Local residents may suffer from nuisance caused by noise and light generation from the caravan or campsite at night.

Table F1

3.23 The impact identification table highlights:

- sources of impact (development activities);
- potential impacts;
- receptors for these impacts.

3.24 It is recommended that the table is annotated and used during consultations with other interested parties. Reference should also be made to the prompt lists detailing impacts and sources of impacts in the *Scoping Handbook*.

Table F1 Summary of key potential impacts of camping and caravan sites

| Potential receptors of impact | | Activities and potential impacts | | |
|-------------------------------|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | Construction phase | Operation phase /ongoing site maintenance | Decommissioning /post-operation |
| WATER | Surface water hydrology and channel morphology | <ul style="list-style-type: none"> • Compaction of topsoil due to use of heavy machinery may lead to a change in surface water drainage • Proximity of construction works to watercourse may lead to bank destruction or instability | <ul style="list-style-type: none"> • New hard surfaces (roads, car parks) may affect surface water drainage and increase run-off rates • Potable water supplies may involve additional abstraction from local sources, reducing flow rates • Structures on land may obstruct flood storage capacity and impede the lateral and downward flow of water in a floodplain | <ul style="list-style-type: none"> • Compaction of soils due to use of machinery during construction • Gradual return to undisturbed surface water drainage patterns |
| | Surface water quality | <ul style="list-style-type: none"> • Oil and suspended solids in run-off from vehicles and access roads may pollute watercourse | <ul style="list-style-type: none"> • Runoff from roads, car parks and hard standing may contain oils which could contaminate local watercourses | |
| LAND | Landscape | <ul style="list-style-type: none"> • Visual impact of works • Change in landscape character | <ul style="list-style-type: none"> • Land may be withdrawn from agricultural and/or forestry use • Change in landscape character with the introduction of buildings and landscaping • Visual impact of artificial structures in natural environment | <ul style="list-style-type: none"> • Visual impact during decommissioning works • If left unused, possible misuse and vandalism of infrastructure may result • Change in character of landscape |
| | Soils | <ul style="list-style-type: none"> • Erosion of exposed soil • Compaction of soil • Removal or alteration of soils on site • Contamination of soils and/or changes in soil structure | <ul style="list-style-type: none"> • Contamination from spills or leaks of fuel, oil and chemicals • Erosion of soils | <ul style="list-style-type: none"> • Erosion of exposed soil during decommissioning • Gradual return of soil to undisturbed state |

| Potential receptors of impact | | Activities and potential impacts | | |
|-------------------------------|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | Construction phase | Operation phase /ongoing site maintenance | Decommissioning /post-operation |
| AIR | Local air quality | <ul style="list-style-type: none"> • Pollution from gaseous exhaust emissions of construction vehicles • Dust from construction works | <ul style="list-style-type: none"> • Gaseous and particulate exhaust emissions from cars, staff transport and delivery vehicles | <ul style="list-style-type: none"> • Dust and pollution during decommissioning works • Reduction in pollution from exhaust emissions once decommissioned |
| | <p>FLORA AND FAUNA</p> <p>Aquatic ecology</p> | <ul style="list-style-type: none"> • Works in proximity to watercourse may result in bank instability and compaction which may disturb/destroy aquatic communities • Direct land-take resulting in disturbance or destruction of riparian and aquatic habitat • Habitat loss • Change in species composition and displacement of sensitive species • Loss of conservation value • Reduction in ecological diversity • Risk of damage from spills or leaks of fuel, oil, and chemicals | <ul style="list-style-type: none"> • Risk of damage from spills or leaks of fuel, oil and chemicals • Opportunities for the creation of new habitats and nature areas • Opportunities to raise awareness about local environment and wildlife • Disturbance may result in displacement of more sensitive species | <ul style="list-style-type: none"> • Gradual return of aquatic community to more stable conditions after decommissioning |
| | Terrestrial ecology | <ul style="list-style-type: none"> • Direct land-take resulting in disturbance or destruction of terrestrial habitat • Change in species composition and displacement of sensitive species • Loss of conservation value • Change in terrestrial community • Felling of trees • Trimming or lopping of tree branches | <ul style="list-style-type: none"> • Noise and disturbance may result in displacement of more sensitive species • Change in terrestrial community • Loss of conservation value • Disturbance to feeding, roosting and nesting • Risk of damage from spills or leaks of fuel, oil and chemicals • Opportunities for the creation of new habitats and nature areas • Opportunities to raise awareness about local environment and wildlife | <ul style="list-style-type: none"> • Gradual return to non-disturbed state after decommissioning works |

| Potential receptors of impact | | Activities and potential impacts | | |
|-------------------------------|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | Construction phase | Operation phase /ongoing site maintenance | Decommissioning /post-operation |
| HUMAN ENVIRONMENT | Socio-economic ¹ | <ul style="list-style-type: none"> • Creation of employment opportunities • Temporary direct land-take | <ul style="list-style-type: none"> • Creation of employment opportunities • Increased tourism • Land may be withdrawn from agricultural/forestry use | <ul style="list-style-type: none"> • Employment opportunities in decommissioning • Possible further employment opportunities in re-use |
| | Health and safety ¹ | <ul style="list-style-type: none"> • Risk of injury | <ul style="list-style-type: none"> • Increased traffic may increase accident potential | <ul style="list-style-type: none"> • Risk of accidents due to site being used for unauthorised purposes |
| | Amenity | <ul style="list-style-type: none"> • Adverse visual impact • Temporary/permanent loss of amenity value • Closure of roads or footpaths | <ul style="list-style-type: none"> • Negative visual impact • Creation of new recreation opportunities | <ul style="list-style-type: none"> • Possible misuse and vandalism if infrastructure left empty in situ • Visual impact • Loss of recreation amenity |
| | Nuisance | <ul style="list-style-type: none"> • Adverse visual impact • Noise • Dust • Closure of roads or footpaths | <ul style="list-style-type: none"> • Artificial light sources may create low-level "glow" at night • Increased traffic generation may increase congestion and accident potential | <ul style="list-style-type: none"> • Possible misuse and vandalism if infrastructure left empty in situ |
| | Architectural and archaeological heritage ¹ | <ul style="list-style-type: none"> • Damage • Direct land-take | <ul style="list-style-type: none"> • Damage to features of archaeological or historical interest | |

¹ The Agency considers that key impacts to be identified and assessed are likely to include the following, but further advice and guidance should be sought from the relevant competent authority, as included in the *Scoping Handbook*.

4 Mitigation measures

- 4.1 Following the scoping exercise and the identification of potential environmental effects, mitigation measures should be proposed to avoid or reduce potential negative impacts to air, water, land, ecology and humans, or to introduce positive aspects to the development.
- 4.2 A primary consideration in impact mitigation must be the design and location of camping and caravan sites. The development site should be selected to avoid damage to important ecological sites and high quality landscapes. Also, it is Environment Agency policy to seek the preferential location of potentially polluting developments in areas which are not vulnerable to groundwater pollution (Environment Agency, 1998). It is strongly recommended, therefore, that developers undertake an assessment of alternative sites.

Mitigating the impacts of construction activities

- 4.3 Construction activities have the potential to affect all environmental receptors. However, the following list summarises the mitigation measures most relevant to camping and caravan sites:
- on-site supervision of working practices should follow appropriate guidelines;
 - sensitive periods, such as the fish spawning and bird breeding seasons, should be avoided;
 - sensitive terrestrial habitats and trees should be avoided during construction work;
 - storage of fuel, equipment and construction materials so as to minimise the risk of soil contamination or water pollution (see Environment Agency 2000a);

- setting the route and timing of construction traffic so as to avoid residential areas or other sensitive human receptors (e.g. schools, hospitals, nursing homes).

Mitigating the impacts of the operational phase

- 4.4 Although sensitive siting and design of camping and caravan sites are the primary means for avoiding or reducing environmental impacts, further measures can be introduced to minimise impacts occurring from such developments. An overall consideration for the proposed scheme is that its design and operation are in accordance with planning conditions and other relevant legislation. Developers should seek independent legal advice to ensure that all legal requirements relating to the proposed development are identified and complied with.
- 4.5 The measures here have been arranged according to their primary receptor. However, it should be noted that many of the following mitigation measures are interrelated.

Protecting the water environment

- 4.6 In order to minimise potential impacts on the water environment in the design and running of camping and caravan sites:
- sustainable drainage systems should be used to alleviate flooding, improve water quality and ensure recharge of groundwater base flows;
 - hazardous or potentially polluting materials such as fuel, oil or wastes must be sited on an impervious base away from water, properly bunded, and kept locked when unattended;

- runoff from car parks and areas of hard standing should be passed through an oil interceptor (in accordance with Environment Agency, 2000b);
- the handling, transportation and disposal of waste should be in accordance with all statutory and local regulations;
- an emergency plan is formulated and tested through exercises to ensure that procedures to prevent or mitigate impacts due to accidents or spillages are in place and operate effectively (some developments may require such plans to be formulated and the Environment Agency should be consulted to identify where this is the case).

Protecting the land environment

- 4.7 Certain measures noted above for protecting the water environment, such as the provision of adequate oil storage, will also reduce the likelihood of soil contamination. Also, impacts on soils and landscape may be mitigated by the following:
- facilities should be designed sympathetically to blend into the surrounding environment. The use of natural materials and non-uniform shapes may help reduce intrusive visual impact, as can planting of trees or other vegetation;
 - habitat creation or enhancement should be incorporated into developments wherever possible;
 - areas with poor drainage should be fenced off to prevent over-use and subsequent erosion.

Protecting the air environment

- 4.8 Developers should consider the aspects of the development that are likely to lead to air emissions, such as the number of vehicle movements.

Suitable mitigation measures may include the use of vegetation screens to act as a barrier to gaseous and particulate emissions.

Protecting ecology

- 4.9 Measures designed to prevent or reduce impacts to water or land will also help to prevent adverse impacts on ecology. The following list identifies further measures to reduce or avoid impacts to terrestrial and aquatic species and their habitats:
- existing habitat features should be incorporated into site design and protected from change;
 - further habitats should be created to compensate for habitat losses and to improve the landscape and ecological potential for the site.

Protecting the human environment

- 4.10 Some of the measures noted above can also reduce possible impacts on humans, such as the use of vegetation screens. Further mitigation measures more specific to the human environment are listed below:
- management operations should aim to minimise disturbance to adjacent residential and recreational uses;
 - where access restrictions result from the development, arrangements for alternative access should be made;
 - planning for access should consider all transport modes including public transport, walking, cycling and private motorised modes;
 - sites of archaeological or cultural interest should be preserved *in situ* where possible. As relocation is rarely possible, thorough archaeological investigations should be carried out where damage is unavoidable.

5 References and further reading

- 1 **Construction Industry Research and Information Association (2001)** *Sustainable Urban Drainage Systems – Best Practice Guide*. C523, CIRIA, London.
- 2 **Construction Industry Research and Information Association (2000)** *Sustainable Urban Drainage Systems – Design Manual for England and Wales*. C522, CIRIA, London.
- 3 **Construction Industry Research and Information Association (1997)** *Review of the Design and Management of Constructed Wetlands*. CIRIA, London.
- 4 **Construction Industry Research and Information Association (1994)** *Environmental Assessment*. Special Publication 96. CIRIA, London.
- 5 **Department of the Environment (1995)** *Preparation of Environmental Statements for Planning Projects that Require Environmental Assessment: A Good Practice Guide*. HMSO, London.
- 6 **Department of the Environment, Transport and the Regions (2001)** *Planning Policy Guidance Note 25: Development and Flood Risk*. Stationery Office, London.
- 7 **Department of the Environment, Transport and the Regions (2000)** *Environmental Impact Assessment: A Guide to the Procedures*. Thomas Telford Publishing, London.
- 8 **Department of the Environment, Transport and the Regions (1997)** *Mitigation Measures in Environmental Statements*. DETR, Rotherham.
- 9 **DTLR Traffic Advisory Unit (April 2000)** *Cycling; Bibliography Traffic Advisory Leaflet 3/02* DTLR, London.
- 10 **Environment Agency (2001)** *Environment Agency Policies: Sustainable Drainage Systems*. Document Ref. EAS/0102/1/1. Environment Agency, Bristol.
- 11 **Environment Agency (2000a)** *General Guide to the Prevention of Water Pollution. Pollution Prevention Guidelines No. 1*. Environment Agency, Bristol.
- 12 **Environment Agency (2000b)** *The Use and Design of Oil Separators. Pollution Prevention Guidelines No. 3*. Environment Agency, Bristol.
- 13 **Environment Agency (2000c)** *Works In, Near or Liable to Affect Watercourses. Pollution Prevention Guidelines No. 5*. Environment Agency, Bristol.
- 14 **Environment Agency (2000d)** *Control of Spillages and Fire Fighting Run-off. Pollution Prevention Guidelines No. 18*. Environment Agency, Bristol.
- 15 **Environment Agency (2000e)** *Pollution Incident Response Planning. Pollution Prevention Guidelines No. 21*. Environment Agency, Bristol.

- 16 **Environment Agency (1999a)** *Above Ground Oil Storage Tanks. Pollution Prevention Guidelines No. 2.* Environment Agency, Bristol.
- 17 **Environment Agency (1999b)** *Disposal of Sewage where no Mains Drainage is Available. Pollution Prevention Guidelines No. 4.* Environment Agency, Bristol.
- 18 **Environment Agency (1998)** *Policy and Practice for the Protection of Groundwater (second edition).* Environment Agency, Bristol.
- 19 **Environment Agency (1996)** *Storage and Disposal of Used Oils. Pollution Prevention Guidelines No. 8.* Environment Agency, Bristol.
- 20 **ERM (2001a)** *Guidance on EIA – Scoping.* Prepared by ERM for the European Commission in June 2001. Available from: <http://europa.eu.int/comm/environment/eia/eia-support.htm>. Commission of the European Communities, Brussels.
- 21 **ERM (2001b)** *Guidance on EIA – Screening.* Prepared by ERM for the European Commission in June 2001. Available from: <http://europa.eu.int/comm/environment/eia/eia-support.htm>. Commission of the European Communities, Brussels.
- 22 **ERM (2001c)** *Guidance on EIA – EIS Review.* Prepared by ERM for the European Commission in June 2001. Available from: <http://europa.eu.int/comm/environment/eia/eia-support.htm>. Commission of the European Communities, Brussels.
- 23 **House of Commons Environment Committee (1995)** *Fourth Report: The Environmental Impact of Leisure Activities. Vol. I.* HMSO, London.