iema INSTITUTE OF ENVIRONMENTAL MANAGEMENT & ASSESSMENT

Guidelines for Environmental Impact Assessment

The Institute of Environmental Management & Assessment is a non-profit making organisation established to promote best practice standards in environmental management, auditng and assessment. Its independence is maintained by a growing membership drawn from industry, environmental consultancies, local and national government and educational establishments.

The IEMA is the Competent Body in the UK for EMAS, the European Union's Eco Management and Audit Scheme.
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Foreword

It is with pleasure that I write the foreword for these comprehensive Guidelines for Environmental Impact Assessment. In particular, because they are, in my view, a robust, authoritative guide on EIA good practice that aims to assist all participants in the development process.

There have always been competing interests in new development and in particular land use projects. Development has, for too long, been driven by economic benefit alone and often to the detriment of the environment and society as a whole. All too frequently, decisions have been taken that are inadequately informed or debated. In my view, EIA can, when effective, go some way to tackle many of the imbalances that arise. It is now recognised as an invaluable tool for many involved in decision-making, and even a passing glance at development guidance of just 30 years ago shows how far EIA has matured in such a short time. Yet these guidelines do not rest on the efforts to date but see the scope for improvement in the preparation of EIAs.

I am encouraged that there has been a year on year increase in the number of environmental statements being prepared and firmly believe that they should be used far more frequently still. Concerns that the cost of an EIA could make some development prohibitively expensive must be countered by the fact that conducting an assessment is simply helping to ensure that the real cost, including the environmental and social cost, is brought into the project proposal. Development on the cheap is no longer an option.

EIA is vital in ensuring that the broad adverse effects of development are understood; it can also help to ensure that all interested parties are given a voice to highlight what they believe are the potential impacts of a proposal. Further, it can help them to make more informed representations in the decision making process itself.

I recommend these guidelines for all environmental practitioners involved in development projects but also to all other parties such as the lawyers, planners, decision makers and, importantly, local stakeholders who will, ultimately, be the ones left to live and work with any development long after the project team have moved on.

Paul Stookes
Chief Executive of the Environmental Law Foundation

Preface

Environmental Impact Assessment (EIA) has become the most important environmental management tool for controlling the environmental effects of new development. Since the implementation of the first Regulations in the UK in 1988 it has become increasingly accepted as a tool that can contribute to informed decision making and the planning of more environmentally appropriate development. From an inauspicious start, the practice of EIA has improved over time with the experience of those that participate in the process. Whilst EIA can and does make a significant contribution to protecting the environment there is considerable scope for improving its performance in this area:

- EIA needs to start early in order to affect some of the early development planning decisions
- Improved integration of EIA with the project planning process does result in projects that perform better environmentally and can perform better economically
- Limited budgets for EIA can be a significant constraint and yet can often prove to be a false economy when considered in the wider context of the planning and decision making for a project
- To date, EIA has not adequately addressed the cumulative effects of development
- There is much work to be done to integrate the sustainability agenda with EIA

These guidelines are aimed at contributing to the improvement of EIA practice by setting out the requirements and the expectations relating to good practice. They are designed to complement other guidelines that focus on the assessment of specific impacts or particular aspects of the EIA process whether produced by the IEMA or other organisations.

EIA is also notable for the extent to which it has been the focus for legal challenges to development. Such challenges may result from dissatisfaction with the EIA process or it may simply be a 'hook' on which to hang the arguments to oppose a development. Whatever the reasons, compliance with the EIA Regulations has now become an important issue for anyone participating in or embarking on an EIA.

Good practice and the legal context are continually changing. New techniques and approaches are developed, or we learn more about how best to apply some of the traditional approaches. Court judgements are also a significant influence on how EIAs are conducted. To address this, these guidelines are provided in loose leaf format to enable updates to be added at a later date. These will be produced on a 6 monthly basis and will be available on the IEMA web site for downloading for those that have subscribed.

Acknowledgements

These guidelines for Environmental Impact Assessment were prepared by the Institute of Environmental Management & Assessment (Karl Fuller) with contributions from Berwin Leighton Paisner (Tim Smith), The RPS Group plc (Christopher LeCointe and Ken Trew), and the Argent Group plc (Robert Evans). The guidelines drafted in liaison with a working party that comprised representatives from environmental consultancies, academia, local authorities and industry.

The members of the Working Party were:

David Aspinwall	*European Commission*
Helen Byron	*RSPB*
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Topsy Rudd	*Cascade Consulting*
Gerard Stewart	*Environment Agency*
Ken Trew	*RPS Group plc*
Trevor Turpin	*Nicholas Pearson Associates*

The guidelines represent the concensus view of the members of the Working Party, but not necessarily the views of the organisations that they represent.

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Part One

Introduction and setting EIA in context

1.0 Introduction

1.1 Scope of the guidelines

These guidelines are one of a series of guidelines that are designed to assist those involved in the Environmental Impact Assessment (EIA) process. Other guidelines have focused on the assessment of specific types of impact, e.g. landscape and visual impacts, and road traffic. These guidelines provide an umbrella for these, and other guidance on more specific issues, by focusing on the EIA process itself. This document does not provide information on the assessment of specific impacts, but will indicate potential sources for this, where available.

The guidelines are only designed to provide advice on project EIA. The focus of the document is principally on statutory EIA as undertaken within the town and country planning system in the UK. Approximately 75% of projects to which EIA applies fall under these Regulations. Other EIA Regulations have much in common with those that apply to town and country planning. Given the application of a similar process, regardless of the Regulation under which an EIA is undertaken, it is anticipated that these guidelines will be of benefit to all those involved in EIA. Finally, the guidelines should be helpful to those who wish to adopt EIA as a project planning tool to improve the environmental performance of their proposals, regardless of whether an EIA is required by Regulations.

The guidance is aimed at all participants in the EIA process:

- Developers
- Decision makers including those in local planning authorities
- Consultants
- Statutory and non-statutory-consultees
- Project managers and engineers
- Non-Governmental organisations
- Local community groups and members of the public

In order to provide substantive advice to those with some experience of EIA, the guidelines do assume some previous knowledge, but have been written with the intention of being understandable to the non-specialist.

1.2 What is EIA?

Environmental Impact Assessment (EIA) has now been established in the UK since 1988. It is defined as "a systematic process to identify, predict and evaluate the environmental effects of proposed actions and projects. This process is applied prior to major decisions and commitments being made." [1]

EIA was first established as a direct response to the increasing concern regarding the environmental effects of major development projects. Traditional forms of project appraisal did not consider environmental factors and EIA was developed as a means to address this imbalance. More recently, the emphasis on sustainable development which recognises the interrelationships of social, economic and environmental systems has seen the importance of EIA grow. This role is formally recognised in Principle 17 of the Rio Declaration on Environment and Development:

> *"Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority."* [2]

[1] Sadler B & K Fuller et al (2002), UNEP Environmental Impact Assessment Training Resource Manual, 2nd Edition, UNEP, Geneva.

[2] Report of the United Nations Conference on Environment and Development (Rio de Janeiro, 3-14 June 1992), Annex 1, Rio Declaration on Environment and Development.

EIA can be regarded as having objectives that relate to a particular project proposal and, in the bigger picture, to the management and sustainability of the environment (See Box 1.1). For a particular project proposal, an EIA informs the decision maker of the likely environmental consequences of granting consent. More strategically, EIA helps to ensure that project proposals do not undermine critical environmental systems or the well being of communities and by so doing contributes to sustainable development.

Box 1.1
Objectives of EIA

Immediate objectives of EIA are to:

- improve the environmental design of the proposal;
- check the environmental acceptability of the proposals / the capacity of the site and the receiving environment
- ensure that resources are used appropriately and efficiently;
- identify appropriate measures for mitigating the potential impacts of the proposal; and
- facilitate informed decision making, including setting the environmental terms and conditions for implementing the proposal.

Long term objectives of EIA are to:

- avoid irreversible changes and serious damage to the environment;
- safeguard valued resources, natural areas and ecosystem components;
- enhance the social aspects of a proposals.
- protect human health and safety;

Source: Based on Sadler & Fuller et al (2002)

Figure 1.1
One of the long term objectives of EIA is to safeguard valued resources, natural areas and ecosystem components.

EIA is an interdisciplinary process that provides an umbrella under which a range of specialist environmental studies are gathered to form an holistic picture of the impact of a proposal on the environment. In the UK, Regulations define the environmental factors to be considered in an EIA, and this has been interpreted such that the range of issues addressed in EIAs has been increasing in recent years. For example, effects on humans (or human populations) are now frequently defined to incorporate social or health effects, rather than exclusively effects relating to the natural environment and the consequences for humans. This trend is likely to continue in line with international practice of EIA and with the increasing emphasis on EIA being used as a tool to contribute to sustainable development.

An EIA is not undertaken in isolation. The context in which EIA operates can be defined by:

- The project planning context – a project proposal may be developed within the context of local development plans, waste strategies, strategic environmental assessments or Best Practical Environmental Option studies which set the framework for, or help to define, the project. Or they may be part of a much larger strategic development strategy. For example, the policy to develop the east Thames corridor will be likely to give rise to several developments that will require EIA.
- The decision making context – In most cases, EIA Regulations add EIA requirements on to existing consent processes, but other Regulations and procedures define the decision making context within which EIA is used. However, there are aspects of development that did not have a consent system to which EIA could be applied and therefore a new consent system had to be established [3]
- Relationship to other environmental management tools – From time to time EIA may use other environmental management tools in undertaking the assessment (e.g. Life Cycle Analysis*) or may provide a framework for other tools which will be used when the project is operational (e.g. Environmental Management Systems*). It may also occur as a result of a corporate environmental strategy that requires the environmental implications of all activities and projects to be assessed before a decision is taken to proceed.

These guidelines highlight the relationship of EIA to these matters, but do not provide specific guidance on them. So, for example, Strategic Environmental Assessment is outside the scope of these guidelines. Figure 1.1 sets out the relationship of other environmental management tools to EIA.

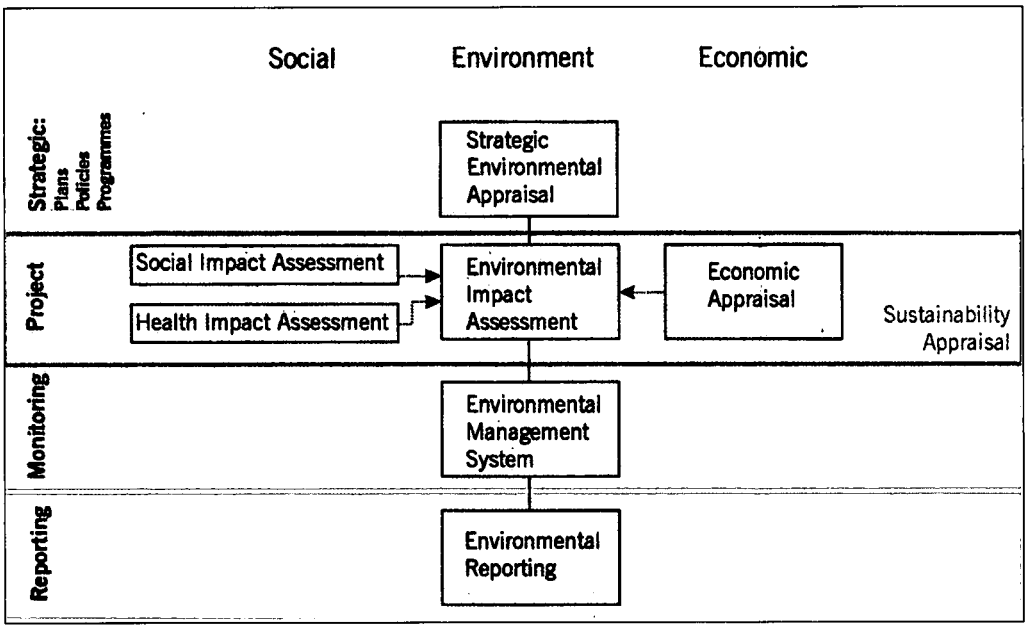

Figure 1.2 Relationship of Environmental Impact Assessment to other environmental management tools.

[3] For example see: The Environmental Impact Assessment (Uncultivated Land and Semi-natural Areas) (England) Regulations 2001

* See Glossary for definition

1.3 Why undertake EIA?

In addition to the environmental and associated benefits of undertaking EIA there is a legal requirement in UK law. The legal basis for EIA in the UK lies in a European Community Directive (85/337/EEC as amended by 97/11/EC) 'on the assessment of the effects of certain public and private projects on the environment'. The requirements of these Directives have been transposed into UK law by an extensive list of Statutory Instruments (see Appendix 1). For projects defined within the Directive and which satisfy other criteria, EIA is therefore a legal requirement.

These guidelines are written to help people to comply with UK legal requirements and elaborate on these by addressing the implications of Court judgments relating to EIA. In addition, the guidelines go beyond this by outlining issues and practices which comply with good practice in a UK and international context. Each chapter of the guidelines provides a clear indication of the legal requirements relevant to the component of the process being addressed.

1.4 Why do we need EIA guidelines?

Considerable experience in EIA in the UK has been gained since 1988. While the quality of EIA work has generally improved, standards remain variable and some of the failings are repeated on a frequent basis.

A characteristic of EIA is that many of those that participate in the process do so on an infrequent basis. For example, a business may only build a new facility once in a fifteen year period, and it has been shown in the past that the average local authority is only asked to consider an EIA as part of a planning application once in every eighteen months. This has reduced to an average of once every 12 months, due to new Regulations. As a result, many of the participants in the process are not familiar with good practice standards and the requirements of the Regulations.

The quality of the work may be hampered by those who do not understand the reasons for or the benefits of undertaking an EIA that is consistent with good practice. Alternatively, parties involved in EIA, unfamiliar with its purpose, may set requirements that are in excess of what can be considered to be reasonable in the context of the project, current good practice standards of EIA and the state of the art of an environmental science discipline.

It is hoped that the provision of these guidelines will:

- set a benchmark for EIA practice.
- familiarise those who only participate in EIA on an occasional basis with good practice
- provide those who are seeking to comply with current good practice with support when negotiating with other parties on the scope and depth of an EIA.
- encourage EIA specific to the project and the associated important issues.
- address issues important to the practitioner that are not well covered in other guidelines

Above all else, the guidelines are intended to be practical.

1.5 Structure of the Guidelines

Part One of the guidelines set the context for EIA. Some of the experience to date with EIA is briefly described and an indication of the likely costs in undertaking an EIA is provided. The relationship of EIA to other environmental management tools is briefly discussed. Part One concludes by setting out good practice principles that should underpin all EIAs.

Part Two of the guidelines are structured in accordance with the steps one would take when carrying out an EIA, from understanding the legal context, through planning and undertaking the EIA. The latter chapters of this Part deal with the decision making context

and the activities that, consistent with good practice, should continue once a project has received consent. Part Two includes a range of brief case studies which are used to illustrate the advice provided in the text.

An annotated list of references, a glossary and appendices containing information that it is hoped will prove to be useful are provided at the end of the document.

Summary

- The guidelines:
  - focus on the EIA process and not on the assessment of specific impacts
  - primarily address EIA undertaken within the context of the town and country planning system
  - are aimed at all participants in the EIA process
- In the short term EIA informs decision makers of the likely environmental consequences of development proposals
- In the longer term EIA contributes to the maintenance of critical environmental systems and the well being of communities
- A wide definition of the environment is used within EIA to incorporate the social and health effects of a proposal
- EIA is undertaken within a context that influences its effectiveness and its outcomes, these include the project planning context, the decision making context and the relationship to other environmental management tools.
- EIA is undertaken to comply with regulations, but can also improve the environmental performance of a project and in so doing enhance the possibility of receiving consent for a proposal
- Whilst the quality of EIA work has improved since the introduction of the regulations there are inherent characteristics of the system that can still limit the standard of work

References

Department of the Environment Transport & the Regions (2000), Environmental Impact Assessment: A guide to the procedures, Thomas Telford, London.

Report of the United Nations Conference on Environment and Development (Rio de Janeiro, 3-14 June 1992), Annex 1, Rio Declaration on Environment and Development.

Sadler B & K Fuller et al (2002), UNEP Environmental Impact Assessment Training Resource Manual, 2nd Edition, UNEP, Geneva.

The Environmental Impact Assessment (Uncultivated Land and Semi-natural Areas) (England) Regulations 2001.

2.0 EIA in Context

The law and procedure on EIA in the UK is derived from the EC Council Directive on Environmental Assessment.[4] The Directive uses the term "development consent",[5] meaning *"the decision of the competent authority which entitles the developer to proceed with the project"*.[6] It states that any application for "development consent" for a project listed in the Directive must be subject to an EIA consistent with the terms of the Directive. The term "development consent" has been interpreted by the range of Regulations to include the various types of application described in more detail below (Section 5.0 – Understanding the legal context), but it includes consents such as a planning permission, a Transport and Works Order, a pipe-line construction authorisation, an Electricity Act consent, and similar approvals under related legislation.

2.1 EIA activity in the UK

The full text of the Regulations (No. 293 of 1999) is available on the Internet from the HMSO website: www.legislation.hmso.gov.uk/stat.htm

Reliable records of the number of ESs that have been produced in the UK are limited. Regional Government Offices should receive a copy of every ES that is submitted alongside a planning application to a Local Authority. However, it is not always clear that this process is carried out and as a consequence records of this data cannot be considered to be completely accurate.

Statistics on the number of environmental statements that have been received under the consents systems that transpose the amended Council Directive 85/337/EEC have been produced (data provided by ODPM). The data for ESs received under the Town and Country Planning Regulations, from 1991, is reproduced in Table 2.1.

Table 2.1: ESs received under the Town and Country Planning (Assessment of Environmental Effects) Regulations 1988, Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999, Environmental Assessment (Scotland) Regulations 1988 and Environmental Impact Assessment (Scotland) Regulations 1999 (not including figures for trunk roads and land drainage)

Year	ESs received			Total
	England	Wales	Scotland	
1991	158	17	39	214
1992	168	21	36	225
1993	186	18	22	226
1994	155	26	48	229
1995	135	19	54	208
1996	128	17	29	174
1997	120	24	41	185
1998	138	20	32	190
1999	236	33	34	303
2000	367	32	60	459
2001	356	35	57	448
2002	363	53	69	485

* Source: Data provided by ODPM, 2003

* Whilst every effort has been made to provide as accurate data as possible it cannot be guaranteed that all ESs produced have been recorded. The new database created for the 1999 Regulations was not available to all regional Government Office's collection points from day one of the new Regulations coming into force. Consequently it is likely that the figures for 1998 and 1999 may fall short of the actual final total.

[4] Directive 85/337/EEC as amended by Directive 97/11/EC

[5] Article 2(1)

[6] Article 1(2)

The figures for the number of ESs being produced has increased considerably since the amended Regulations came into force in 1999. The precise reasons for this increase are unclear, but they may be one, or a combination of, the following:

1) a greater number of projects proposed that require EIA
2) a more stringent system of screening for EIA applied by determining authorities
3) LPAs taking a more precautionary approach when considering the need for an EIA
4) increased sense of environmental responsibility by developers
5) increase in information and guidance on EIA, resulting in greater awareness

EIA Consent Procedure	Number of ESs produced in 2002
Town & Country Planning (Environmental Impact Assessment) (England & Wales) Regulations 1999	416
Transport & Works (Applications & Objections Procedures) 2000	7
Pipeline Works (Environmental Impact Assessment) Regulations 2000	0
Electricity Works (Environmental Impact Assessment) Regulations 2000	6
Offshore Petroleum Production and Pipelines (Assessment of Environmental Effects) Regulations 1999	9
Environmental Impact Assessment (Public Gas Transporter Pipeline Works) Regulations 1999	5
The Electricity Act 1989 (Requirement of Consent for Offshore Wind and Water Driven Generating Stations) (England and Wales) Order 2001	7
Harbour Works (Environmental Impact Assessment) Regulations 1999	4
Environmental Impact Assessment (Forestry) (England & Wales) Regulations 1999	1
Environmental Impact Assessment (Land Drainage Improvement Works) Regulations 1999	34
Environmental Impact Assessment (Fish Farming in Marine Waters) Regulations 1999	32
Highways (Assessment of Environmental Effects) Regulations 1999	18
Nuclear Reactors (Environmental Impact Assessment) Regulations 1999	2
The Environmental Impact Assessment (Uncultivated Land and Semi-natural Areas) (England) Regulations 2001, the Environmental Impact Assessment (Uncultivated Land and Semi-Natural Areas) Regulations (Wales) 2002.	0
	541

Table 2.2
The number of Environmental Statements produced in England & Wales in 2002 according to individual EIA consent procedures

The DETR statistics show that a total of 541 ES's were received under the 15 different consents systems for EIA in England & Wales, Table 2.2 (NB, ES's were not received under the Channel Tunnel Rail Link (Assessment of Environmental Effects) Regulations 1999). The majority of ES's (approximately 77%) were submitted for applications under the Town and Country Planning Regulations.

2.2 The reasons why EIAs fail

The review of EIAs and high profile legal challenges to EIA development highlight a number of areas within the EIA process that continually fail to be carried out sufficiently. These common failures are presented in Box 2.1.

Box 2.1
Common Failures in EIA

- **Inadequate project definition**
  EIAs need to be specific in their identification of what the project will entail as project descriptions are often only presented in vague terms. Clear descriptions of all elements of the project that could influence the nature of the environmental effects is required in order to identify the possible impacts and gain a preliminary understanding of their possible extent.

- **EIA treated as a regulatory hurdle**
  EIA is most successful as an aid to project planning and design. However, it is often treated as a legal hurdle that must be overcome in order to gain planning permission, rather than a process by which to reduce the environmental impacts of a project. Such projects often lack a coherent approach to managing their environmental effects and this can lead to subsequent delays in receiving consent for the project.

- **Lack of public involvement**
  Developers are, in the majority of cases, reluctant to involve the public at an early stage in the process. However, the EIA and design of the project could be out of touch with the local communities' concerns, if no attempt is made to involve those whose environment is likely to be affected. EIA has now become a common target for groups that wish to prevent or delay projects.

- **ESs too long**
  ESs of significant length swamp decision makers and the public with information. In the majority of cases, long ESs reiterate points and fail to focus on the key issues. Producing a single report of a concise nature that draws on all the relevant information from the various specialist reports will avoid the inundation of information to the reader and reduce the time required to review an ES during the planning decision stage.

- **ESs used as a promotional tool**
  An ES should present an objective assessment of the environmental effects that a project may cause. However, many statements are used as a basis for promoting the scheme and minimise the adverse effects of the proposal. When this approach is identified by the reader the credibility of the ES is undermined.

2.3 EIA and other environmental management tools

EIA does not exist in isolation, but has a relationship with other environmental management tools and procedures of which the practitioner should be aware. These relationships fall into three categories:

- Regulatory and process overlap – where the requirements of other environmental Regulations can be at least partly addressed by EIA
- Tools used within EIA – where the EIA process uses other environmental management tools to produce the required information
- 'Joined up' environmental management – where tools used prior to and after a project EIA can be used to provide an holistic approach to environmental management within the context of the project proposal

The overlap between EIA and other regulatory processes are discussed in Part Two, Chapter 5, in which the need to determine the legal context, with regard to EIA and other environmental Regulations, is discussed. This section will therefore focus on the tools that are used within EIA and approaches to 'joined up' environmental management.

2.3.1 Tools used within EIA

There are very few tools and techniques that are exclusive to, or have been created to undertake, EIA. Rather EIA tends to borrow tools and techniques from other environmental science disciplines. It provides a framework in which information on the existing environment and the predicted environmental effects of the project can be gathered, interrelated and presented to the decision making body. It also provides a conduit through which technical information can be communicated to a largely non-technical audience. A substantial element of EIA is therefore a series of specialist studies into the impacts of a proposal on biodiversity, the landscape, noise levels, air quality, water quality, etc. Such studies into the effects on the natural environment have had a long association with EIA and warrant no further discussion within these guidelines.

Whilst EIA tends to incorporate the types of studies referred to above, specific projects may require the integration of other types of study, for example:

- Social impact assessment
- Environmental health impact assessment
- Risk assessment
- Flood risk assessment

Further reading:

Assessing environmental impacts:

Morris P & R Therivel (Eds) (1995), Methods of Environmental Assessment, UCL Press, London.

Canter L (1996), Environmental Impact Assessment, McGraw Hill, Columbus, OH.

Impact specific guidance is listed in the annotated reference list at the end of this publication

Social Impact Assessment:

Vanclay, F (1999), Social Impact Assessment, in Petts J (Ed) (1999), Handbook of Environmental Impact Assessment Volume 1, Blackwell, London.

Barrow C J (1997), Environmental and Social Impact Assessment: An Introduction, Arnold, Loncon.

Environmental Health Impact Assessment:

British Medical Association (1998), Health & Environmental Impact Assessment: An Integrated Approach, Earthscan, London.

Risk Assessment:

DETR, Environment Agency, Institute for Environment and Health, (2000), Guidelines for Environmental Risk Assessment and Management. TSO.

Planning Policy Guidance 25: Development and flood risk

Those undertaking EIA should be willing to examine the need for studies outside of the usual list of issues and recognise when such studies may be required. For example, there is a trend toward a greater inclusion of social and economic issues within EIA. This is partly influenced by the recognition that environmental impacts often have social outcomes, but also by the need to consider the relationship of a project to sustainable development. Further advice is provided in Chapter 9 in Part Two which discusses scoping an EIA.

The influence of the sustainable development agenda has begun to emerge as a separate study to assess the project proposal in terms of its contribution to sustainability or its effect upon it. However, there have been few successful attempts at this type of analysis. In most cases it has been used as an attempt to emphasise the positive aspects of a proposal or to 'repackage' what would otherwise be considered to be standard mitigation measures. Box 2.2 provides examples from Environmental Statements of misleading sustainability claims for projects.

An assessment of the sustainability of a project should not be confused with sustainability appraisal. This is an analysis of plans and programmes generally undertaken at a regional or local authority level. Given that these strategic plans often set the framework for future development, the appraisal attempts to ensure that the proposed strategy is sustainable and thereby provides an adequate framework for more sustainable projects. Guidance on sustainability appraisal at the strategic level is provided by the Government (DETR, 2000).

Box 2.2
Misleading claims of sustainability in Environmental Statements

- The mixed use development located close to a motorway junction in order to take advantage of car based travel may include a 'green transport plan' and package this as a sustainable element of a project. Nevertheless, it is likely to result in an increase in traffic, associated emissions and use of non-renewable fossil fuels. Such a proposal is less likely to pass stringent sustainability criteria.

- A proposal for an opencast coal mine includes substantial tree planting in order to screen activities and as part of the restoration of the site. Given these elements of the proposal the ES claims that the project is in accordance with the principles of sustainable development. However, given that the project is based on the extraction of a non-renewable resource for combustion claims regarding the sustainability of the project would appear to hold little credibility.

An assessment of the sustainability of a project addresses issues such as:

- The emission of greenhouse gases
- Contributions to and the maintenance of biodiversity
- The use of renewable and non-renewable resources
- Contribution to economic well being of a community
- Contribution to social well being of a community
- Effects on critical resources
- Waste generated by a proposal

An assessment of the sustainability of a project is different from an EIA for a number of reasons:

- It is more concerned with environmental capacity and thresholds – rather than simply providing information on the environmental effect of a project it implies that the project should perform to a standard that can be considered sustainable, i.e. the impacts should be within critical thresholds or the capacity of the environment to assimilate the impacts.
- It addresses impacts that would not normally be considered relevant to the decision; these may occur 'upstream' or 'downstream' of the actual proposed development. For example, the source of valuable non-renewable resources may be important.
- It is concerned with effects that within an EIA would not be considered to be significant in the context of a single project, e.g. emission of greenhouse gases – recognising that the global significance of these effects results from their cumulative nature, an examination of the sustainability of a project can look at the contribution to this type of impact and compare the performance with other existing projects of a similar nature.
- It considers the economic and social impact of a project – but it should not be considered appropriate to trade these off against the adverse effects on environmental sustainability. To do so would imply that adverse environmental effects can always be substituted by economic benefits.

Sustainability implies performance criteria for a project. These should help to define the level of impact that can be assimilated by the environment and/or the corrective action that should be taken in the event that an unsustainable impact is likely to result. A sustainable project should achieve the contribution to the economic and social well being of a community whilst avoiding environmental effects that will contribute to the undermining of environmental systems. Criteria that could be used to assess the environmental sustainability of a proposal could include: [7]

[7] Based on: Sadler B & R Verheem (1996), Strategic Environmental Assessment, Status, Challenges and Future Directions, Ministry of Housing, Spatial Planning and the Environment, International Study of Effectiveness of Environmental Assessment and The EIA Commission of the Netherlands.

- The project should avoid all impacts on critical ecological resources and processes
- Impacts on other resources should occur within the assimilative capacity of the environment and without degradation of its future absorptive capacity
- Residual impacts should be fully compensated for in kind
- The rate of depletion of non-renewable resources should not be increased or if so, only while renewable substitutes are being developed.
- Renewable resource inputs should be within the regenerative capacity of the natural system that generates them
- Irreversible adverse changes should be avoided

Source: National Wind Power

Figure 2.1
Wind farms may perform well, even against a stringent sustainability assessment

(Carno Wind Farm in Powys, Wales)

Some projects may perform quite well, even against these criteria, for example wind farm proposals. However, unless those undertaking the EIA are willing to subject the proposal to an analysis which tests the performance of a project against stringent sustainability criteria, then claims as to the sustainability of a proposal are likely to be, at best, ambitious. An honest, balanced assessment of the result of a sustainability analysis is likely to hold more credibility than one which 'cherry picks' the positive aspects of a proposal.

The requirement for an analysis of the sustainability of a proposal is likely to increase, particularly in the light of the Government's encouragement for local planning authorities to undertake sustainability appraisals of their development plans. Options for the delivery of a sustainability analysis are:

- To integrate the analysis with the EIA
- To treat the sustainability analysis as a separate exercise that uses information provided by the EIA.

Integration with the EIA could be a cause for confusion in the event that the EIA attempts to provide two sets of conclusions, one based on the traditional EIA approach and assessment of the significance of impacts and the other based on an analysis of the sustainability of the proposal. Integration is best achieved if sustainability criteria are adopted as the significance criteria for the assessment of the impacts of the proposal.

Where sustainability criteria are not adopted as the significance criteria in an EIA, an assessment of the sustainability of a project is best provided as a separate report. This helps to avoid any confusion between the conclusions that may be drawn regarding the assessment of the significance of environmental effects and any claims regarding their sustainability. It also provides an opportunity to take a more holistic view of the proposal and its contribution to sustainability.

One of the key differences between EIA and an assessment of the sustainability of a project is the extent to which 'upstream' and 'downstream' effects are considered. This reflects the trend towards assessing and managing environmental effects throughout the life cycle of a project, including those factors which influence its nature and location. The following section outlines those environmental tools which may be applied prior to a project proposal being made and after a project has received consent and is being implemented.

2.4 'Joined up' environmental management

2.4.1 Strategic Environmental Assessment

Opportunities to avoid or reduce some of the environmental effects of a project can be limited as a result of the framework set by earlier, more strategic, decisions, e.g. allocation of land for a particular use. In recognition of this limitation of project EIA, Strategic Environmental Assessment (SEA) is increasingly being employed to ensure that environmental factors are taken into consideration when these strategic decisions are made. SEA is a process intended to identify and assess the likely significant effects of a policy, plan or programme on the environment, the results of which are then taken into account in the decision-making process.[8]

In July 2001 the EC Directive on Strategic Environmental Assessments[9] was passed. The Directive will require that, the environmental consequences of certain plans and other projects will need to be assessed prior to their adoption or implementation. Those "plans and projects" will be subject to an assessment to ensure that they:

> *"... provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development"* [10]

The purpose of SEA is to ensure that any plans are subject to the same environmental scrutiny to which the projects are also subjected. For example, development, or land use, plans which allocate areas of land for industrial development would be subjected to an assessment of the environmental effects of these decisions. It could be said that a type of SEA has been part of Government advice in the UK since 1992 when Government guidance indicated that local planning authorities should be undertaking environmental appraisals of development plans.[11] The implementation of the Directive will place new obligations on local planning authorities that should result in an enhanced form of assessment that is added to and refined in subsequent years. In addition, there is some encouragement from the Government for local planning authorities to adopt a sustainability analysis that incorporates the requirements of the Directive, rather than just assess the environmental effects of a plan in isolation.

The information required of a report that results from an SEA includes:

- the likely significant effects on the environment;
- an assessment of the measures to prevent or off-set those effects; and
- a description of measures to monitor the environmental effects and any mitigation measures[12]

Member States of the European Community have until 21 July 2004 to enact the Directive into domestic legislation. The UK Government published draft guidance for consultation in

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[8] Sheate W & S Dagg, et al. (2001), SEA and Integration of the Environment into Strategic Decision-Making, European Commission, Brussels.

[9] This is a convenient short-hand title used by practitioners. The Directive is actually entitled the European Council Directive on the Assessment of the Effects of Certain Plans and Programmes on the Environment (2001/42/EC).

[10] Article 1

[11] Department of the Environment (1992), Planning Policy Guidance (PPG 12): Development Plans and Regional Planning Guidance, HMSO, London

[12] See generally Annex 1

October 2002. A final version of the guidance was published in October 2003. Becoming familiar with the requirements of the Directive will assist in understanding the environmental work that has underpinned future plans. The plans and programmes which are covered include those which are *"prepared at national, regional or local level through a legislative procedure ... or which are required by legislative, regulatory or administrative provisions"*.[13] Although the detailed implementation of the Directive has yet to be determined, obvious candidates for coverage include:

- any local authority Development Plan which proposes an allocation for a specific development; and
- any "fast-track" Parliamentary proceedings such as those contemplated by the Government for considering whether to give approval in principle to major infrastructure projects like Heathrow Terminal 5

In cases where an EIA is preceded by an SEA, a more efficient process should result. The SEA should deal with some of the locational decisions relating to the project and may even identify some of the significant issues to be dealt with by the project EIA. This should reduce the range of alternatives that may need to be considered and make the scoping process more efficient. Draft guidance on the implementation of the Directive within the planning system suggests that there should be other advantages by including in the SEA [14]:

- requirements and terms of reference for environmental impact assessment (EIA) of certain types of projects, or sub-components of EIA such as landscape or traffic assessments. This can increase certainty and speed up scoping of EIA;
- justified statements of why EIA (or lower-level SEA/SA) might not be needed, or why some environmental/sustainability concerns do not need to be addressed in an EIA (or lower-level SEA/SA);
- development of Supplementary Planning Guidance;

2.4.2 Best Practicable Environmental Option Studies

Best Practicable Environmental Option (BPEO) studies are essentially an assessment of alternatives to a project proposal. The concept derives from the selection of processes in the context of pollution control legislation. However, used as a forerunner to a project EIA, BPEO has some similarities to SEA in that it is oriented toward meeting particular objectives or developing solutions to a particular problem, rather than being focused on a particular development type. Therefore, a BPEO study provides an opportunity to examine strategic alternatives rather than variations on the location of a project, or minor changes in the type technology used, or the layout of a site.

BPEO studies are typically used within the utility and waste sectors to examine different strategies for meeting demand or supply problems. For example, dealing with the need to deal with waste could involve consideration of an expansion of landfill capacity, building conventional or waste to energy incinerators, and expanding or establishing a waste reduction and recycling programme. A BPEO study would examine all of these options and determine the best solution (or solutions) in terms of meeting the required objectives and minimising the impact on the environment. Proposed development projects which form all or part of the solution may then be the subject of a detailed project EIA.

2.4.3 Environmental Management Systems

Environmental Management Systems (EMS) are used as a basis for controlling the environmental effects of existing businesses and facilities. They have been formalised by the development of an international standard (ISO 14001) and a European Union Regulation (the Eco-Management and Audit Scheme). The poor or non-existent implementation of mitigation and other follow up measures identified in an Environmental

[13] Article 2(a)

[14] Levitt – Therivel Sustainability Consultants (2002), Draft Guidance on the Strategic Environmental Assessment Directive, ODPM, London.

Statement (ES) is regarded as a weakness of the EIA process and building links between the EIA and the EMS is regarded as a means of addressing this in terms of the long term environmental management of a project. EMSs, particularly those that are certified to a standard, can take time to establish and therefore are more appropriate for the long term environmental management of an organisation or site. In the short term, tools such as Environmental Management Plans are used to assist in the delivery of objectives and measures contained within the ES. Establishing the links between the EIA, the environmental management plan and the EMS are discussed in more detail in Chapter 15 of these guidelines.

Summary

- The law and procedure on EIA in the UK is derived from the EC Council Directive on Environmental Assessment
- The number of EIAs carried out each year is increasing and most of them are undertaken as part of the town and country planning system
- Whilst many of the environmental factors to be addressed are laid down in legislation it is important for stakeholders to consider whether additional issues should be addressed by EIA, e.g. social impacts
- To be credible, a sustainability assessment of a project should include stringent sustainability tests rather than repackage mitigation measures or 'cherry pick' the positive aspects of a development
- Unless sustainability criteria are adopted as the means of assessing significance in an EIA, a report on the sustainability of a project should be separate from an Environmental Statement
- Linking EIA to other environmental management tools can help to establish an holistic approach to the environmental management of a project, from the setting of the policy and plan framework with which the project will have to comply to the operation and possible decommissioning of the project
- SEA assists in improving the environmental probity of decisions that set a framework for project proposals
- SEA can contribute to improving the efficiency of project EIA
- BPEO studies can be used to assess strategic options before settling on a project that will be subject to a detailed EIA
- EMS can be used to manage the environmental effects of a project while in operation and can carry forward the mitigation measures identified during the EIA

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3.0 Principles of EIA

These guidelines provide detailed advice for those undertaking or participating in EIA. Much of the guidance relates to specific aspects of the EIA process or particular methods, techniques or approaches that are employed. Underpinning this is a set of principles which apply to all stages of the EIA process and, if adhered to, should go some way to ensuring compliance with good practice standards and approaches to EIA.

The basic principles outlined below are primarily drawn from work undertaken by the Institute of Environmental Assessment on behalf of and in association with the International Association for Impact Assessment [15] (IAIA, 1999). The principles are independent of each other and in some cases may appear to conflict or overlap. For example, time and resource constraints (see cost effectiveness) principle may appear to conflict with the need to inform and involve the affected public (see inclusive principle). However, a balanced approach is required to ensure that EIA fulfils its purpose.

Box 3.1
Basic Principles of Impact Assessment

Environmental Impact Assessment should be:

Purposive – the process should inform decision making and result in appropriate levels of environmental protection and community well being.

Rigorous – the process should apply the "best practicable" science, employing methodologies and techniques appropriate to address the problems being investigated.

Practical – the process should result in information and outputs which assist in problem solving and are acceptable to and able to be implemented by proponents.

Relevant – the process should prove sufficient, reliable and usable information for development planning and decision making.

Cost effective – the process should achieve the objectives of EIA within the limits of available information, time, resources and methodology.

Efficient – the process should impose the minimum cost burdens in terms of time and finance on proponents and participants consistent with meeting accepted requirements and objectives of EIA.

Focused – the process should concentrate on significant environmental effects and key issues; i.e. the matters that need to be taken into account in making decisions.

Adaptive – the process should be adjusted to the realities, issues and circumstances of the proposals under review without compromising the integrity of the process, and be iterative, incorporating lessons learned throughout the proposal's life cycle.

Inclusive – the process should provide appropriate opportunities to inform and involve the interested and affected publics, and their inputs and concerns should be addressed explicitly in the documentation and decision making.

Interdisciplinary – the process should ensure that the appropriate techniques and experts in the relevant bio-physical and socio-economic disciplines are employed, including use of local knowledge where relevant.

Credible – the process should be carried out with professionalism, rigour, fairness, objectivity, impartiality and balance, and be subject to independent checks and verification.

Integrated – the process should address the interrelationships of social, economic and biophysical aspects.

Transparent – the process should have clear, easily understood requirements for EIA content; ensure public access to information; identify the factors that are to be taken into account in decision making; and acknowledge limitations and difficulties.

Systematic – the process should result in full consideration of all relevant information on the affected environment, of proposed alternatives and their impacts, and of the measures necessary to monitor and investigate residual effects.

Source: Institute of Environmental Assessment & International Association for Impact Assessment (1999).

[15] Institute of Environmental Assessment & International Association for Impact Assessment (1999), Principles of Environmental Impact Assessment Best Practice, IAIA, Fargo, North Dakota.

These basic principles can be added to by 'operating principles' which more specifically define some of the principles of EIA practice and the deliverables that should derive from the EIA process. The operating principles set out below are drawn from those developed as part of international study into the effectiveness of EIA [16] (Sadler, B, 1996). Application of the principles in the UK will need to be consistent with the legislative requirements.

Box 3.2
EIA operating principles

EIA should be applied:

- to all proposals likely to cause potentially significant adverse impacts or add to actual or potentially foreseeable significant cumulative effects
- so that the scope of assessment is consistent with the size of the proposal and commensurate with the likely issues and impacts
- to provide timely and appropriate opportunities for public and stakeholder involvement
- in accordance with the legislation, procedure and guidance in force and with reference to international standards of EIA good practice
- with regard to other environmental Regulations and consent regimes that are in force.

EIA should be undertaken:

- throughout the project cycle, beginning as early as possible and contributing to the assessment of feasibility and to the design
- with explicit reference to the requirements for decision-making and project approval and authorisation
- consistent with the application of 'best practicable' science and mitigation techniques
- in accordance with proposal-specific terms of reference, which should include clearly defined tasks, responsibilities, requirements for information and agreed timelines for their completion
- to gain the inputs and views of all those affected by or interested in the proposal and/or its environmental impacts.

EIA should address, as necessary and appropriate:

- all relevant environmental impacts
- significant cumulative effects and area-wide, ecosystem-level and global changes that may occur as a result of the interaction of the proposal with other past, current or foreseeable activities
- alternatives to the proposal, including design, location, demand, processes and technologies
- mitigation measures for each of the main impacts identified
- sustainability considerations, including the effects of depletion of non-renewable resources, of exceeding the regenerative and assimilative capacity of renewable resources and of reduction of biological diversity, taking account of relevant international agreements and commitments.

EIA should result in:

- systematic identification of the views and inputs of those consulted, including the balance of opinion on major issues and areas of agreement and disagreement
- comparison of the impacts of the main alternatives considered with a justification for the preferred option
- best-estimate prediction and evaluation of the potentially significant residual effects that cannot be reasonably mitigated
- feasible, cost-effective measures to mitigate the main impacts identified (often called an environmental management plan)
- preparation of an EIA report that presents this information in a form that is clear, understandable and relevant for decision-making, noting any important qualifications for the predictions made and mitigation measures proposed
- resolution of problems and conflicts during the EIA process to the extent this is possible.

EIA should provide the basis for:

- informed decision-making and project approvals, in which the terms and conditions are clearly specified and implemented
- design of environmentally sound and acceptable projects that meet health and environmental standards and resource management objectives
- enhancement of the environment through positive planning where appropriate
- appropriate follow-up, including monitoring, management and auditing, to check for unforeseen impacts or mitigation measures that do not work as intended
- future improvements in EIA process and practice, drawing on the information from follow up activities.

Source: Sadler & Fuller et al (2002) with minor amendments.

[16] Sadler B (1996), International Study of the Effectiveness of Environmental Assessment, Environmental Assessment in a Changing World, Evaluating Practice to Improve Performance, International Association for Impact Assessment and Canadian Environmental Assessment Agency. Minister of Supply and Services, Ottawa.

Summary

- Basic principles of EIA can be identified that provide a benchmark for EIA practice.
- Operating principles can be identified that set out the components of a good practice EIA.

References

Institute of Environmental Assessment & International Association for Impact Assessment (1999), Principles of Environmental Impact Assessment Best Practice, IAIA, Fargo, North Dakota.

Sadler B & K Fuller et al (2002), UNEP Environmental Impact Assessment Training Resource Manual, 2nd Edition, UNEP, Geneva.

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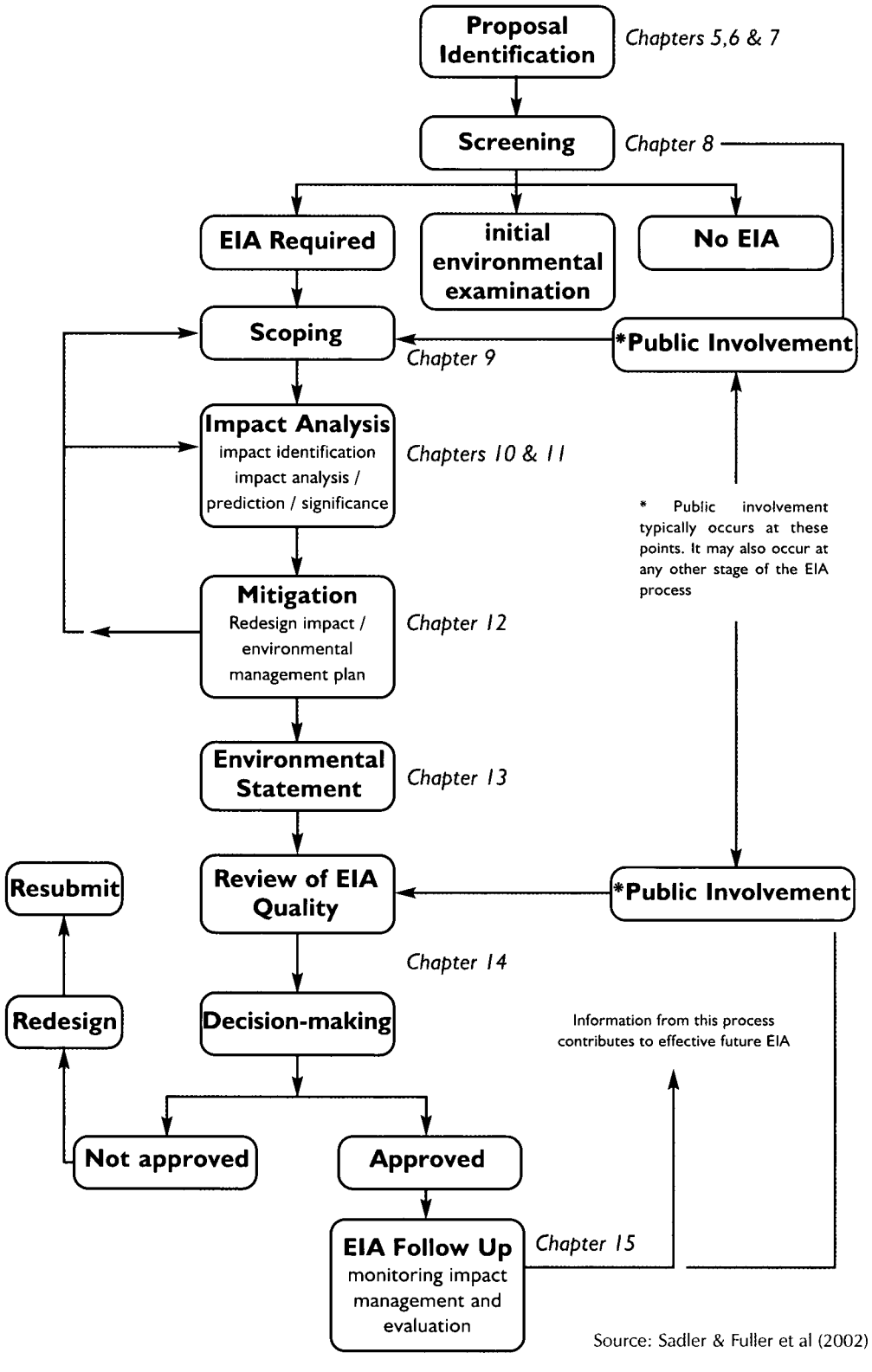
Part Two

The EIA Process

4.0 The Process in Brief

Figure 4.1 is an illustration of the EIA process. It progresses from the identification of the proposal to the environmental activities that would be undertaken as part of the implementation of a project. This reflects the structure of the second part of these guidelines. Information is provided in (approximately) the chronological order in which activities would be undertaken within the process. However, it is important to note that many of the activities will overlap with others and feedback loops may require some of the stages in the process to be revisited. The figure reflects a generic process rather than one undertaken in accordance with any one of the many EIA Regulations implemented in the UK.



Source: Sadler & Fuller et al (2002)

Figure 4.1
Generalised EIA Process Flowchart

EIA is often described as an iterative process. This indicates the manner in which information is acted upon by revisting stages of the EIA process to constantly adapt and take into account new information and opinions. For example, the key environmental impacts associated with a power station would be identified during scoping. On undertaking the assessment the visual impact of the cooling towers may be considered to be unacceptable and, as a result, the power station is redesigned to incorporate water cooling instead of air cooling. This in turn may alter the scope of the EIA to include the impacts on water resources. The significant feedback loops within the process are illustrated on figure 4.1, but there can be others. The advantage of the iterative process is that EIA can be adapted to the needs and requirements of a particular proposal and the stakeholders involved within the process. Nevertheless, a point will come where the developer will wish to move forward with the proposal and progress to the latter stages of the process.

Figure 4.1 illustrates the EIA process in isolation, but it is worth noting that most of those involved will consider the EIA to be part of wider activity. For example, the developer may regard the EIA as part of the project planning and management for a new development. For the local planning authority, EIA is part of the wider development control system. Therefore, EIA rarely dictates, but does influence, the timescales and agendas to which a development is planned or considered. EIA is an important part of the process and the attention given to it can make or break the chances of a proposal receiving consent. Time should be allocated within the project planning process to ensure that a reasonable assessment of the environmental impacts can be undertaken.

5.0 Understanding the Legal Context

When contemplating embarking on a new development it is important that the developer and his advisers understand the legal context with regard to the EIA Regulations. The view that significant environmental effects only result from major industrial and infrastructure development is no longer regarded as valid and a wide range of project types can be caught by the Regulations (e.g. camp sites and agricultural projects). The following sets out the main requirements of the Regulations that a developer should understand before moving forward with a proposal.

5.1 The European Context

5.1.1 European or Domestic Law – Which Prevails?

The UK Government was under a duty (by virtue of its obligations under Article 10 of the Treaty of Rome) to implement the Environmental Assessment Directive into domestic legislation. This has been done through a series of Statutory Instruments relating to different consent procedures. Even if the UK Government had not implemented the Environmental Assessment Directive via the Regulations, its provisions would have been "directly effective". This means that individuals could rely directly on its provisions against public authorities of the Member State, such as local planning authorities, in the UK Courts. As a matter of legal principle this means that it is important to consider whether the provisions of the Directive have properly been implemented into domestic law or not, since if they have not then potentially an individual can take legal action based solely on the Directive. Much EIA based litigation has featured arguments of this nature.

The Courts have established that where domestic Regulations fully implement an EC Directive then the Directive no longer provides an independent source of rights and duties.[17] This means that it is sufficient to look only at the implementing Regulations, except to the extent that reference to the Directive is necessary in order to understand them.[18] The only exception would be where it is argued successfully that the Regulations implement the provisions of the Directive incorrectly or incompletely. The statutory provisions on "revival" of old minerals permissions (see Box 5.1) provide one example of where the UK Courts have taken the view that domestic Regulations have not adequately implemented the provisions of the Directive, and therefore the Directive itself could be relied upon by a challenger.

Box 5.1
Old Minerals Planning Permissions

The incorrect implementation of the Directive was the key issue in relation to the "deemed consent" provisions of the Environment Act 1995 in relation to old minerals planning permissions. New statutory provisions required beneficiaries of extant minerals permissions to apply to the minerals planning authority, with suggested conditions, in order to keep the permissions "alive". The notice procedures under the 1995 Act allowed for a period within which the authority could respond with comments, but it was provided that if they did not respond then permission was deemed to be granted subject to the suggested conditions. In the *Huddleston* case [19] the Court of Appeal concluded that this was tantamount to granting development consent and, there being no requirement under the Regulations to consider whether an EIA should be requested as part of the 1995 Act procedure, the Regulations were deficient to this extent in implementing the Directive. The Regulations had to be amended swiftly to overcome this problem.

[17] See, for example, Marks & Spencer plc –v– Commissioners of Customs and Excise (2000) in relation to the VAT Directive.

[18] see Circular 2/99 paragraph 12 in the context of the Regulations and the Environmental Assessment Directive

[19] R –v– Durham County Council, ex parte Huddleson (2000)

5.2 Planning Applications – the 1999 Regulations

EIA is most commonly encountered in the context of planning applications. The governing statutory provisions in England and Wales are now the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 (as amended[20]). They are referred to in these guidelines as "the Regulations". As the title suggests the Regulations apply only to England and Wales, although there are similar provisions for both Scotland[21] and Northern Ireland[22]. Applications for development which are covered by the Regulations are referred to as "EIA applications". The requirement for an EIA will either be mandatory or conditional. This depends on whether the proposal is listed in Schedule 1 or Schedule 2 to the Regulations. The 1999 Regulations govern all planning applications submitted on or after 14 March 1999. The previous 1988 Regulations[23] apply to the (increasingly) limited number of applications submitted before that date which remain to be determined.

Government guidance on the application of the Regulations is provided by the ODPM Circular 2/99. The purpose of the Circular is to assist in interpreting the Regulations, but it cannot vary the clear terms of the Regulations as it has no legal effect. Nevertheless, as a matter of practice, the Circular is the first point of reference for most local planning authorities when queries about interpreting the Regulations arise.

5.3 Type of Applicants and Applications

5.3.1 Types of Applicant

The Regulations clearly apply to private developers and the planning applications which they submit. However, other classes of developer are also caught in specific circumstances.

Local Authority Development
The Regulations apply to local authority development as they do to private developers, with only limited exceptions.[24]

Crown Development
The Regulations are stated not to apply to the Crown. However, the Circular states that:

> *"When any such development is proposed, the Crown body concerned will submit an Environmental Statement to the local planning authority when consulting them under the arrangements set out in Part IV of the Memorandum to Circular 18/84"* [25]

It is not clear what sanctions apply if an Environmental Statement is not submitted in connection with what would otherwise be qualifying development. It is at least arguable that the provisions of the Directive would be "directly effective" against Crown development as there is nothing in the Directive to suggest that development by a Member State itself should be exempt and the Regulations do not cover it.[26] An exception is projects undertaken for national defence purposes that are not covered by the Directive by virtue of Article 1.4.

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[20] SI 1999 No. 293. The Regulations have been amended by the Town and Country Planning (Environmental Impact Assessment) (Amendment) Regulations 2000 where the amendments were to take account of the Court of Appeal judgment in R –v– Durham County Council, ex parte Huddleston (2000) on the applicability of the Regulations to "deemed consents" for renewed minerals planning permissions (see above)

[21] The Environmental Impact Assessment (Scotland) Regulations 1999, SSI 1999/1

[22] The Planning (Environmental Impact Assessment) Regulations (Northern Ireland) 1999, SR 1999/73

[23] Town & Country Planning (Assessment of Environmental Effects) Regulations 1988 (SI 1988 No 1199)

[24] See Regulation 22 and paragraphs 128-131 of Circular 2/99

[25] Circular 2/99 paragraph 157

[26] See the discussion in Section 5.1.1 above as to the enforceability of provisions in the Directive

In practice the Crown complies with the Regulations as if it were a private developer, and in any event there are proposals as part of the Planning and Compulsory Purchase Bill 2002 to remove Crown exemption from planning such that the Crown will be broadly in the same position as a private developer.

5.3.2 Types of Application

The Directive uses the term "development consent", but the Regulations instead apply the term "application for planning permission".[27] Thus the following applications are clearly within the terms of the Regulations:

- applications for detailed planning permission
- applications for outline planning permission
- applications for permission to carry out development without complying with a condition[28]
- appeals against enforcement notices where the grounds include the deemed application for planning permission[29]
- in the rare cases where the exercise of permitted development rights could bring about what would otherwise potentially be EIA development, the rights are lost if the development qualifies as either Schedule 1 development or meets the Schedule 2 criteria and has significant effects

Whether applications for approvals of reserved matters are "development consents" is not entirely clear. Applying the traditional understanding of the term "application for planning permission", it would not cover such applications. The Circular says as much[30] and there is also lower Court authority that supports the view that applications for approval of reserved matters do not require an EIA[31]. This has given rise to litigation in the UK Courts, some of which remains unresolved at the time of writing, and also to a complaint from the EC to the UK Government of non-compliance with the Directive through incomplete transposition into domestic Regulations. However, in the Crystal Palace case[32] in July 2003 the House of Lords referred to the European Court of Justice as a preliminary issue the question as to whether an EIA can be required for applications for reserved matters approvals. The ECJ's ruling is still awaited at the time of writing.

5.4 Mandatory Cases - "Schedule 1 Development"

It is mandatory to carry out an EIA in relation to an application for any type of development listed in Schedule 1 to the Regulations, regardless of the location of the development or the likely environmental effects. Schedule 1 developments are those which are most obviously likely to have adverse environmental effects. The description of the development in the Regulations is specific and usually refers to a minimum size or production output, for example:

- "Crude oil refineries (excluding undertakings manufacturing only lubricants from crude oil) and installations for the gasification and liquefaction of 500 tonnes or more of coal or bituminous shale per day" [33]

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[27] Regulation 3

[28] i.e. applications under section 73 of the Town and Country Planning Act 1990

[29] Regulation 25(1)

[30] Circular 2/99 paragraph 48

[31] For example, R -v- London Borough of Hammersmith & Fulham, ex parte CPRE (No.2) (1999), albeit this was a judgment on an interlocutory hearing and so is not a binding precedent

[32] R –v– London Borough of Bromley, ex parte Barker (2003)

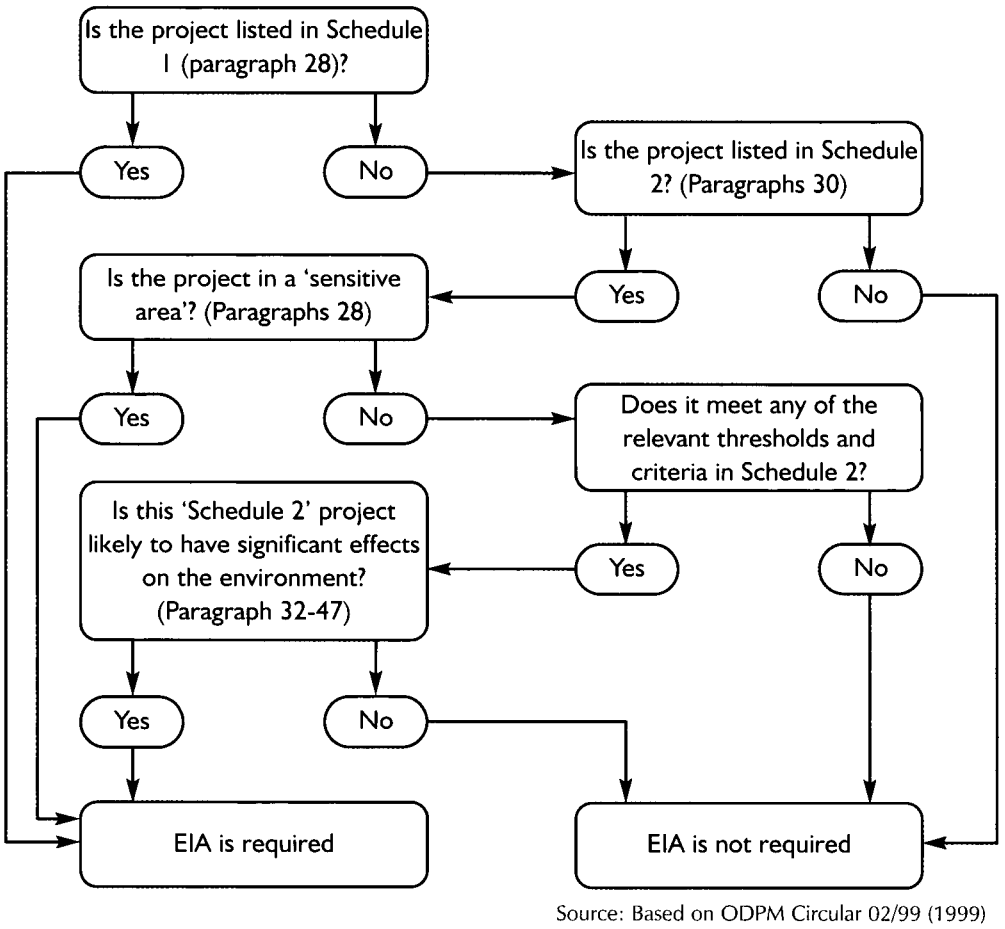
[33] Schedule 1 paragraph 1

[33] Schedule 1 paragraph 7(a)

- "Construction of lines for long-distance railway traffic and of airports with a basic runway length of 2,100 metres or more" [34] and
- "Pipelines for the transport of gas, oil or chemicals with a diameter of more than 800 millimetres and a length of more than 40 kilometres"[35]

5.5 Conditional Cases - "Schedule 2 Development"

For the types of development found in Schedule 2 of the Regulations, a judgement as to whether significant environmental effects are likely to arise is required. Following through the different stages of consideration as to whether "Schedule 2" developments require EIA is best illustrated in a diagram (see Figure 5.1 based on Figure 1 from Circular 2/99).



Source: Based on ODPM Circular 02/99 (1999)

Figure 5.1
Establishing whether development requires EIA

Depending on the size, location and likely environmental effects of these developments an application may require an EIA. An EIA will be required if:

(1) it is within one of the classes of development stated in Schedule 2;

AND

(2) ***EITHER*** it exceeds the size thresholds for that class of development in Schedule 2
OR it is in a "sensitive area";

AND

(3) it is likely to have significant effects on the environment

(In exceptional cases the Secretary of State has a residual power to direct that development of a project that is included in Schedule 2, but which neither exceeds the size thresholds nor is in a "sensitive area" is treated as being EIA development[36]).

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[34] Schedule 1 paragraph 16

[35] Schedule 1 paragraph 16

[36] Regulation 4(7)

5.6 Development Description, Thresholds, Extensions & Sensitive Areas

Schedule 2 is in the form of a table with two columns (see Table 5.2). In the left-hand column (column 1) is the type of development, and in the right-hand column (column 2) is the applicable threshold.

Table 5.2: An extract from Schedule 2 of the EIA Regulations

Column 1	**Column 2**
Description of development	**Applicable threshold**
Urban development projects, including the construction of shopping centres and car parks, sports stadiums (sic.), leisure centres and multiplex cinemas[37]	The area of development exceeds 0.5 hectares
Motorway service areas[38]	The area of development exceeds 0.5 hectares
Waste-water treatment plants (unless included in Schedule 1)[39]	The area of development exceeds 1,000 square metres

The applicable threshold is an 'exclusive threshold', meaning that development that is below the stated criteria will normally be excluded from a requirement for EIA. The thresholds are strict, and it is not possible to circumvent them by splitting up a single development into a number of separate parts so as to bring each component element below the minimum threshold.[40]

Extensions to existing EIA developments are also potentially caught. Paragraph 13 of Schedule 2 applies size thresholds to any extensions to the types of development found in both Schedule 1 and Schedule 2, and if those extensions are in 'sensitive areas' or exceed the threshold, and would be likely to have significant effects on the environment, then they become EIA development requiring EIA in their own right. An extension that meets the definition of Schedule 1 development is to be treated as a Schedule 1 project.

For the purposes of the Regulations "sensitive areas" are defined in Regulation 2. The definition comprises:

- Sites of Special Scientific Interest
- areas in respect of which nature conservation orders have been made[41]
- any area which has to be notified under article 10 of the Town and Country Planning (General Development Procedure) Order 1995 as being notified to the Council by English Nature and which is within 2 km of a SSSI
- a National Park
- the Broads
- a World Heritage Site
- a scheduled ancient monument
- Areas of Outstanding Natural Beauty
- a designated European site under the Habitats Regulations[42]

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[37] Schedule 2 paragraph 10(b)

[38] Schedule 2 paragraph 10(p)

[39] Schedule 2 paragraph 11(c)

[40] This was an approach ruled to be inadmissible in the case of R –v– Swale Borough Council, ex parte RSPB [1991]. See also Circular 2/99 paragraph 46

[41] Under section 28 of the Wildlife and Countryside Act 1981

[42] Conservation (Natural Habitats etc.) Regulations 1994

An applicant can prompt a judgement as to whether an EIA is required by requesting a screening opinion from the local planning authority or Secretary of State (See Chapter 8.0 – Screening). Whether development may have significant effects on the environment is a matter of planning judgment for the decision-maker in which the Courts are loathe to interfere, but it has been established that the question of whether a development falls within Schedule 2 to the Regulations in the first place is a question of law which the Courts are quite prepared to review.[43]

5.7 Statutory Provisions – Other Applications

There are in fact many other Regulations that require a form of EIA for projects outside of the normal planning system. These include the following:[44]

- Pipe-line Works (Environmental Impact Assessment) Regulations 2000
- Electricity Works (Assessment of Environmental Effects) Regulations 2000
- Harbour Works (Environmental Impact Assessment) Regulations 1999
- Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999
- Environmental Impact Assessment (Forestry) (England and Wales) Regulations 1999
- Environmental Impact Assessment (Land Drainage Improvement Works) Regulations 1999
- Public Gas Transporter Pipeline Works (Environmental Impact Assessment) Regulations 1999
- Environmental Impact Assessment (Fish Farming in Marine Waters) Regulations 1999
- Highways (Assessment of Environmental Effects) Regulations 1999
- Off-shore Petroleum Production and Pipelines (Assessment of Environmental Effects) Regulations 1999
- Channel Tunnel Rail Link (Assessment of Environmental Effects) Regulations 1999
- Environmental Assessment (Salmon Fishing in Marine Waters) (Assessment of Environmental Effects) Regulations 1988
- Ministry of Defence Circular 12/96

Given that the EIA Directive is the root of all of these Regulations, the provisions from one to the other are similar. However, attention should be given to the different approaches to screening, the identification of the statutory consultees and timing and nature of public involvement.

A detailed consideration of the different Regulations is beyond the scope of this guide, but in operation they are all broadly similar to the equivalent Regulations relating to applications for planning permission. Briefly by way of example:

- In the case of pipe-lines[45] the Secretary of State must require an EIA before granting a pipe-line authorisation for any oil or gas pipe-line, or any other pipe-line for the transfer of chemicals which is more than 40km in length and with a diameter of 800mm. In view of the greater likelihood of cross-border effects the consultation requirements are extended to include consultation with any other Member State which has signed up to the Oporto Agreement on the European Economic Area.[46] The Secretary of State has the power to direct that an environmental statement is not needed if he is satisfied that the works are not likely to have a significant effect on the environment.

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[43] For an example of a case where the Court held that an LPA wrongly concluded that a development did not fall within Schedule 2 see R (on the application of Goodman) –v– LB Lewisham (2003)

[44] A full list of regulations is provided in Appendix A

[45] The Pipe-line Works (Environmental Impact Assessment) Regulations 2000

[46] 2 May 1992

- In the case of works for the construction of electricity generating stations or for the installation of electricity lines above ground the Secretary of State is precluded from granting the relevant consents[47] without having considered whether an EIA is required. There is also a procedure for the Secretary of State to be asked to screen applications for consent, and for him to provide a scoping opinion to assist in the preparation of any environmental statement. Again, the cross-border effects of the relevant works must be considered following consultation with Member States who may be affected.

- In relation to highway construction projects the relevant Regulations[48] have inserted three new sections into the Highways Act 1980.[49] These require that the Secretary of State must publish an environmental statement by the time details of the project are published if he is proposing to carry out works for the construction or improvement of a highway, and the area of highway (including accommodation land) exceeds 1 hectare or is within a sensitive area.

(NB: the above are intended only as a broad illustration of the different treatment of environmental impact assessments in relation to other procedures and not as a definitive summary of the relevant provisions).

5.8 Other Related Procedures

There are other statutory procedures which may be relevant to the planning application process for a particular development and which are akin to EIA. A detailed consideration of such procedures is beyond the scope of these guidelines but their existence is worth bearing in mind, for example:

- "appropriate assessments" under the Habitats Directive[50] and the related Habitats Regulations[51]
- Pollution Prevention & Control Permits

Of these perhaps the closest to EIA is the requirement for appropriate assessments where development is likely to affect sites protected by the Habitats Regulations.

5.8.1 Habitats Regulations

Protected sites under the Habitats Regulations are classified as "Special Areas of Conservation" (SAC), and are given dual protection under English law by being classified also as Sites of Special Scientific Interest (SSSI). Any development which may have a significant effect on the integrity of an SAC must first be subjected to an "appropriate assessment" under Regulation 48 of the Habitats Regulations.[52] The appropriate assessment is undertaken by the competent authority taking into account "such information as the competent authority may reasonably require for the purposes of the assessment".[53] The competent authority then must consult with the appropriate nature conservation body (for example English Nature), and may also consult with the public if it is felt to be appropriate.

Except in limited circumstances permission to proceed with the project will only be granted if the appropriate assessment demonstrates that the integrity of the SAC will not be adversely affected.[54]

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[47] Under sections 36 and 37 (respectively) of the Electricity Act 1989

[48] The Highways (Assessment of Environmental Effects) Regulations 1999

[49] Sections 105A-105C

[50] The full title of the Directive is "Council Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora", 92/43/EEC

[51] The Conservation (Natural Habitats, &c) Regulations 1994, SI 1994/2716

[52] This relates to the likely effects of development. The likely effects of management operations on the site are dealt with separately under Regulation 19

[53] Regulation 48(2)

[54] Regulation 48(5)

There are some significant differences between EIA and an appropriate assessment. For example with an appropriate assessment:

- the assessment is the responsibility of the competent authority
- there is no absolute requirement to engage with the public
- if the conclusion from the assessment is that there will be an adverse effect on the integrity of the SAC then, other than in limited circumstances, permission is to be refused (compare this with EIA where, as is noted in the sections below, a conclusion that there will be an adverse environmental effect which cannot be mitigated against does not necessarily mean that planning permission must be refused)

In the context of different regulatory regimes the Courts have taken the view that a decision maker is not entitled to rely on the fact that those regimes will require an assessment of some environmental effects as being a reason why EIA should not be required. That was the conclusion of the High Court in the *Gloucester City Council* case[55] in the context of the regimes for applying for listed building and conservation area consents, but by analogy it follows that a decision-maker is not entitled to direct that no EIA be required simply because there will have to be an appropriate assessment of the planning application under the Habitats Regulations. Moreover the fact that sites designated as SSSIs are "sensitive areas" for the purposes of the EIA Regulations[56] means that developments of a class listed in Schedule 2 to the EIA Regulations will always require EIA if they are likely to have significant effects on the environment, regardless of whether they exceed the size thresholds in Schedule 2 (see Figure 5.1 above).

Whilst the appropriate assessment is the responsibility of the competent authority, in practice, where an EIA is being undertaken, the authorities often ask for this to incorporate an appropriate assessment. The result of this may be integrated into the Environmental Statement or provided as a separate report.

5.8.2 Pollution Prevention & Control (PPC)

Pollution Prevention and Control is an environmental permitting system that aims to prevent, reduce and eliminate pollution at source. The regulations that set the legal context for PPC[57], implement the EC Directive 96/61/EC on Integrated Pollution Prevention & Control (IPPC). The Regulations include a list of prescribed activities to which the permitting regime applies. These are split into two lists; Part A activities are larger and are subject to IPPC which conditions all potentially polluting emissions from an installation to air, land and water. Part A activities are further split into part A(1) processes that are regulated by the Environment Agency and part A(2) processes which are regulated by the Local Authority. Part B processes are smaller and are only conditioned on emissions to air, due to their lesser potential to pollute. Part B processes are also regulated by the Local Authority.

The list of prescribed activities overlaps with, but is not the same as, the lists of development types in the EIA Regulations. The link between the EIA and the PPC Regulations occurs for a new development for which both a planning application and a PPC application must be made. Fundamentally, the scheme proponent is responsible for both the EIA and PPC application. The two decision making regimes are separate (although the local authority and the Environment Agency are statutory consultees for each other's regime), but there are considerable overlaps in the information required. Guidance from the Department for the Environment, Food and Rural Affairs indicates that the following issues should be covered in a PPC application:[58]

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[55] British Telecom –v– Gloucester City Council and Arrowcroft plc (2001)

[56] Regulation 2 of the EIA Regulations

[57] For England and Wales the appropriate regulations are the Pollution Prevention and Control (England and Wales) Regulations 2000, SI 2000/1973 as amended ("the PPC Regulations") and the Landfill (England and Wales) Regulations 2002, SI 2002/1559 ("the Landfill Regulations")

[58] DEFRA (2002), Integrated Pollution Prevention and Control: A Practical Guide, Edition 2, DEFRA

- satisfactory environmental management of the installation
- adequate compliance monitoring
- assessment of polluting releases and the identification of Best Available Techniques (BAT)
- compliance with environmental quality standards (EQSs), other EU Directives and domestic regulations
- energy efficiency, waste minimisation and management
- the prevention of accidents

Figure 5.2
Projects that require an EIA may also require a PPC application.

A PPC application is primarily focused on releases to air, water and land and includes noise emissions. An holistic approach is taken that considers the energy and resource efficiency of a process or installation as well as the direct releases. The direct releases are also covered in the scope of an EIA, but the energy or resource efficiency of a facility have traditionally not been addressed. However, EIA does address other issues that would not be considered part of a PPC application, e.g. landscape and visual impacts and social impacts.

Typically, a PPC application would be more detailed, in terms of describing the process, than would be covered in an ES. For this reason, many developers prefer to gain a planning permission first before identifying the detail of their process and making a PPC application. However, where the two regimes do overlap this can lead to duplication of effort. DEFRA recommend in their 'IPPC: a practical guide' that in this situation the scheme proponent should make both applications in parallel wherever possible. The same documentation may be used for both applications and it may be easier to resolve any conflicts between the two regimes (e.g. minimising the landscape impact of facility whilst trying to maximise the dispersion of the releases to air).

Summary

- When contemplating embarking on a new development it is important that the developer and his advisers understand the legal context with regard to the EIA Regulations.
- EIA can apply to project other than major industrial or infrastructure development
- If the EIA Directive has been incorrectly implemented in domestic law then, potentially, an individual can take legal action based solely on the Directive. But where domestic Regulations fully implement an EC Directive then the Directive no longer provides an independent source of rights and duties
- EIA is most commonly encountered in the context of planning applications.
- The Directive applies to all types of developer with the exception of the Crown, although there is a commitment, by the Crown, to complying with the requirements.
- The EIA Regulations cover a range of different types of planning application, although whether it applies to the approval of reserved matters is not entirely clear
- It is mandatory to carry out an EIA in relation to an application for any type of development listed in Schedule 1 to the Regulations
- Schedule 2 developments may require an EIA, depending on the size, location and likely environmental effects
- There are many other Regulations that require EIA for projects outside of the normal planning system.
- There are other statutory procedures which may be relevant to a planning application process for a particular development and which are akin to EIA, e.g. appropriate assessments under the Habitats Directive and Pollution Prevention and Control Permits

References

Conservation (Natural Habitats etc.) Regulations 1994 (SI 1994, 2716)

Council Directive 97/11/EC of 3 March 1997 amending Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment

DEFRA (2002), Integrated Pollution Prevention and Control: A Practical Guide, Edition 2, DEFRA

DETR Circular 02/99 Environmental Impact Assessment

Pollution Prevention and Control (England and Wales) Regulations 2000, SI 2000/1973

The Environmental Impact Assessment (Scotland) Regulations 1999, SSI 1999/1

The Highways (Assessment of Environmental Effects) Regulations 1999 (SI No 369)

The Pipe-line Works (Environmental Impact Assessment) Regulations 2000 (SI 2000 No 1928)

The Planning (Environmental Impact Assessment) Regulations (Northern Ireland) 1999, SR 1999/73

Town & Country Planning (Assessment of Environmental Effects) Regulations 1988 (SI 1988 No 1199)

6.0 Developing the Project Proposal and Managing the EIA

6.1 Introduction

EIA provides a means of systematically incorporating environmental considerations into the planning of a project with the objective of minimising the adverse environmental effects of a proposal. The early consideration of environmental effects can result in a development that is more cost effective as it is usually cheaper to design in environmental measures than to add them to a predetermined design. Taking a participative approach to the EIA also provides the opportunity to develop a project that is more acceptable to the local community, statutory consultees and decision makers as their concerns can be taken into account in the design. With an increasing emphasis on incorporating sustainability into project design, EIA can have an important role to play in the early identification of environmental problems and opportunities.

The benefits outlined above provide an incetive for adopting EIA as one of the tools used for project planning, but other drivers exist. Legal requirements underpin the EIA system in the UK and failure to comply with these can provide an opportunity for objectors to delay or prevent a proposal from proceeding. A good practice approach provides an opportunity to enhance the environmental peformance of a project, but also to minimise the opportunities for legal challenge. Recent legal cases have highlighted the importance of EIA to objectors and have raised awareness among developers and planning authorities about the need to undertake a robust EIA. Time spent in the preparatory stages of the planning application (including the EIA) will reduce the risk of legal challenge and help to smooth the passage through the consents procedure. In particular it should be noted that in cases where a permission is granted by the planning authority, it, and not the developer, would be the subject of a potential judicial review; the planning authority need to have confidence that the EIA process has been followed correctly and that they may safely give consent. The applicant also needs to have confidence that the planning authority has followed the correct procedures and that there will not be potential for subsequent challenge that would threaten or delay the implementation of a permission, should it be granted.

This chapter explores the relationship between development proposals requiring EIA and the EIA process itself, and recommends ways in which this relationship should be managed.

6.2 Begin Early

6.2.1 Developing the Proposal - alternatives

When it has been determined that an EIA is to be undertaken for a particular development proposal then an understanding of the process and procedures that follow should be developed. Without this understanding of the process the developer may subsequently be faced with unexpected delays and costs, and may miss an opportunity to 'improve' the proposal, and the final ES itself may be found wanting.

Often EIAs begin too late in the scheme development process and in some cases an EIA may be undertaken after the planning application has been submitted. In these situations there is a tendency for the process to become one of retrospective justification of the proposal rather than an objective assessment of the effects of the project on the environment.

One of the main reasons why the Directive and consequent Regulations were devised was to ensure that decisions about development projects were taken in the prior knowledge of the likely effects of the scheme on the environment. This objective is best achieved by harnessing expert opinion at an early stage and using that advice and knowledge to inform where and how the development should evolve.

When developing a project proposal in almost every case the developer has choices: choices over the scale, design, land use mix, processes, mitigation measures and, sometimes, the location of the development. In practice these choices are often made unconsciously or using commercial, marketing and operational criteria.

The choices that are made by a developer may be described as 'alternatives'. With the recent changes introduced in the 1999 Regulations there is now a clear expectation for 'alternatives' to be reported having regard to their environmental effects, although strictly speaking they only need to be reported where they have been 'studied by the developer'.[59] At present 'alternatives' are not defined in either the Directive or the Regulations and there is considerable scope for this to be interpreted in a variety of different ways. Alternatives may mean alternative methods of developing the site (i.e. different layouts), alternative land uses for the same site, alternative processes (particularly relevant for waste related projects) or it may be interpreted as meaning alternative sites.

Given the vagaries around the definition of alternatives, there is an opportunity to agree with the authority at scoping stage how the issue should be dealt with for any particular development project, and it is recommended that this opportunity be taken. If it is likely that 'alternatives' is to incorporate alternative sites, then it is vital that this is addressed right at the beginning of the development proposal in order to avoid disagreement and abortive time and cost later on. In some cases to properly identify and report on alternative sites can be a lengthy process and is another reason why the EIA process should begin as early as possible.

Chapter 7 provides further guidance on the assessment of alternatives.

6.2.2 Defining the Development

It is important to clearly define the development in order that the authority can be satisfied that it has sufficient and accurate environmental information about the project so that it can be adequately assessed. In particular, the aspects of the development that will or could result in significant environmental effects need to be clearly understood and taken into account in the assessment.[60]

Developments in the design of the project, together with environmental and other considerations, mean that the detailed design of the project is likely to change while the EIA is being conducted. It is important to have a clear and shared (amongst the project team) understanding of the starting point for the design and to establish a process by which:

- Environmental factors that arise from the EIA can influence the nature of the design;
- All members of the project team are updated as the design develops so that they are working from the same information and can identify the implications of the changes for the issue for which they are responsible
- The design is frozen at a particular point in time to give a clear description of the development that will be included in the ES and will form the basis for the predictions that this document will contain.

Where the developer wishes to retain some flexibility over the development for which he is seeking permission, as is often the case for large and/or long term developments, there is no reason in principle why an application for outline planning permission is not capable of being environmentally assessed.[61] There must always be sufficient definition to the proposals such that they can properly be assessed.[62] It is unlikely that "bare outline"

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[59] Article 5, 3, CD97/11/EC

[60] For example, in British Telecom –v– Gloucester City Council and Arrowcroft plc (2001) Elias J. held that for development in a conservation area an LPA should "take care" before concluding that, absent proposed details as to the design of the scheme, an adequate assessment of the effect of the development on the built heritage could be undertaken

[61] This fact was confirmed in both of the Rochdale cases (R –v– Rochdale MBC ex parte Tew (1999) and R –v– Rochdale MBC ex parte Milne (2000)), and by a number of subsequent cases

[62] See, for example, the guidance in paragraph 48 of Circular 2/99

applications (i.e. those seeking permission for a broadly-phrased development but without any detail as to how the development is to be constructed) are capable of an adequate assessment, but the fact that there are future matters reserved for later consideration does not in itself mean that the proposals cannot be environmentally assessed.

One way of addressing the issue of how to assess outline applications is to prescribe a framework within which reserved matters have to be applied for. For example, a Masterplan produced for prescriptive (rather than illustrative) purposes and to which future applications for reserved matters must be related is a method that has been tested in Court[63] (See box 6.1). The mechanism by which future reserved matters submissions can be tied to the Masterplan may involve either planning conditions[64] or obligations in a Section 106 Agreement.[65]

Box 6.1
EIA and outline planning applications

"Recognising, as I do, the utility of the outline application procedure for projects such as this, I would not wish to rule out the adoption of a masterplan approach, provided the masterplan was tied, for example by the imposition of conditions, to the description of the development permitted. If illustrative floorspace or hectarage figures are given, it may be appropriate for an environmental assessment to assess the impact of a range of possible figures before describing the likely significant effects. Conditions may therefore be imposed to ensure that any permitted development keeps within those ranges"

Sullivan J
(R –v– Rochdale MBC ex parte Tew (1999))

The key principle is that it is for the decision-maker (whether the local planning authority or the Secretary of State at inquiry) to determine whether what has been provided is sufficient, or whether it preserves too much flexibility.

For an application subject to EIA a Masterplan is more than a one-dimensional layout plan in the conventional architectural sense. It is becoming more common practice to produce three-dimensional diagrams to provide key information such as:

- the maximum height and massing of buildings
- the relationship of the development to existing and new public rights of way
- the relationship of proposed buildings to one another
- the phasing of development over time

The reasoning behind this approach goes back to the Directive and the requirement that an assessment takes place prior to the grant of "development consent". If too much detail is left to a later stage of the process then it becomes more difficult to justify the assertion that an assessment has been carried out prior to the substantive decision allowing the project to proceed (see Box 6.2).

Where there is uncertainty then appropriate parameters will need to be determined to provide a basis for the assessment of impacts. This might comprise of ranges, e.g. the possible size of the footprint of the development, or identifying parts of the site that are not subject to development to avoid associated environmental effects. The use of a 'worst case' scenario can also help to demonstrate the worst impact that could be expected from a development. Assuming that some attempt is to be made to avoid the worst case then the determining authority and the public can be assured that the effects are likely to be less severe than those predicted. These approaches will help to ensure that every reasonable attempt has been made to assess the environmental effects of the scheme.

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63 Ex parte Tew (1999)

64 Confirmed by the two Rochdale cases

65 R (on the application of Portland Port Limited and Portland Harbour Limited) –v– Weymouth and Portland Borough Council (2001)

Where the framework within which an outline application has been assessed is subsequently approved, but then changes, it is within the powers of the LPA to decide whether the change needs to be the subject of a fresh application and ES, or whether the change and its effects have been adequately addressed in the ES and can be dealt with as a reserved matters application.

"If a particular kind of project … is, by its very nature, not fixed at the outset, but is expected to evolve over a number of years depending on market demand, there is no reason why "a description of the project" for the purposes of the Directive should not recognise that reality. What is important is that the environmental assessment process should then take full account at the outset of the implications for the environment of this need for an element of flexibility. The assessment process may well be easier in the case of projects which are "fixed" in every detail from the outset, but the difficulty of assessing projects which do require a degree of flexibility is not a reason for frustrating their implementation …

… This does not give developers an excuse to provide inadequate descriptions of their projects. It will be for the authority responsible for issuing the development consent to decide whether it is satisfied, given the nature of the project in question, that it has "full knowledge" of its likely significant effects on the environment. If it considers that an unnecessary degree of flexibility, and hence uncertainty as to the likely significant environmental effects, has been incorporated into the description of the development, then it can require more detail, or refuse consent"

"If one asks the question "how much information about the site, design, size or scale of the development is required to fall within 'a description of the development proposed' for the purposes of [the Regulations]?", the answer must be: sufficient information to enable "the main", or "the likely significant" effects on the environment to be assessed under [the Regulations], and the mitigation measures to be described …"

Sullivan J
R –v– Rochdale MBC ex parte Milne (2000)

Box 6.2
Adequate information in ESs for outline planning applications

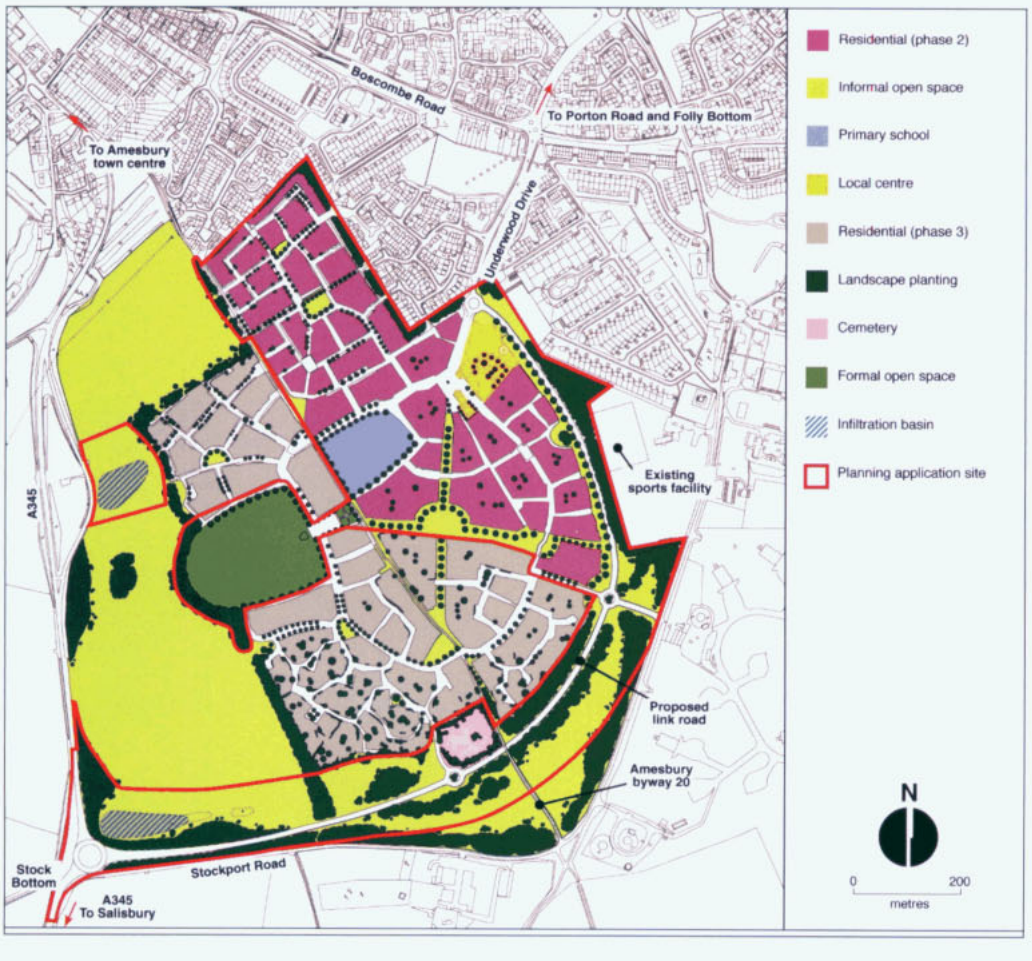


Figure 6.1a

Masterplans
A masterplan can define the components of a development that will determine the significance of environmental effects. The figure shows three plans for the same site that illustrate the land uses **(a)**, density of residential development **(b)** and the height of buildings **(c)**. Other illustrations not shown set out the landscape, movement and drainage strategies for the site.

Source: Terence O'Rourke (2002), *Land South of Boscombe Road, Amesbury, Environmental Statement*, Terence O'Rourke plc.

Figure 6.1b

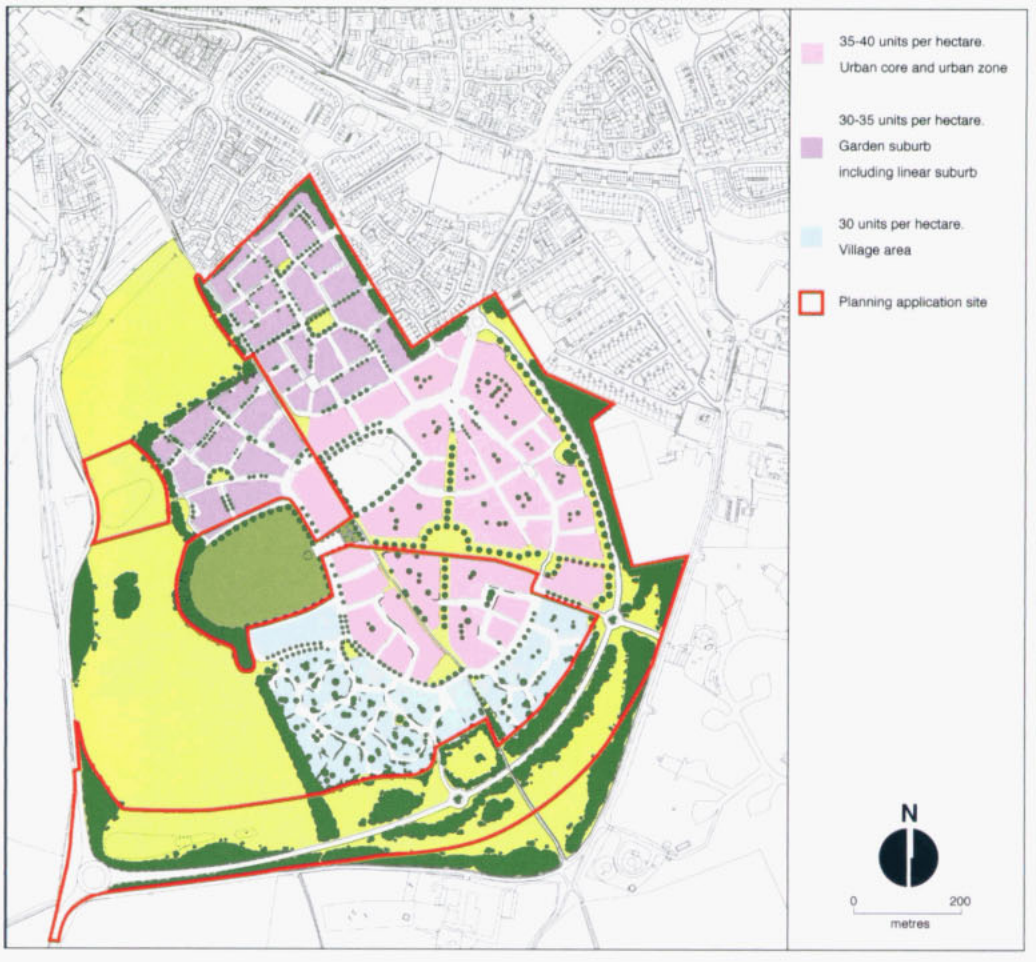
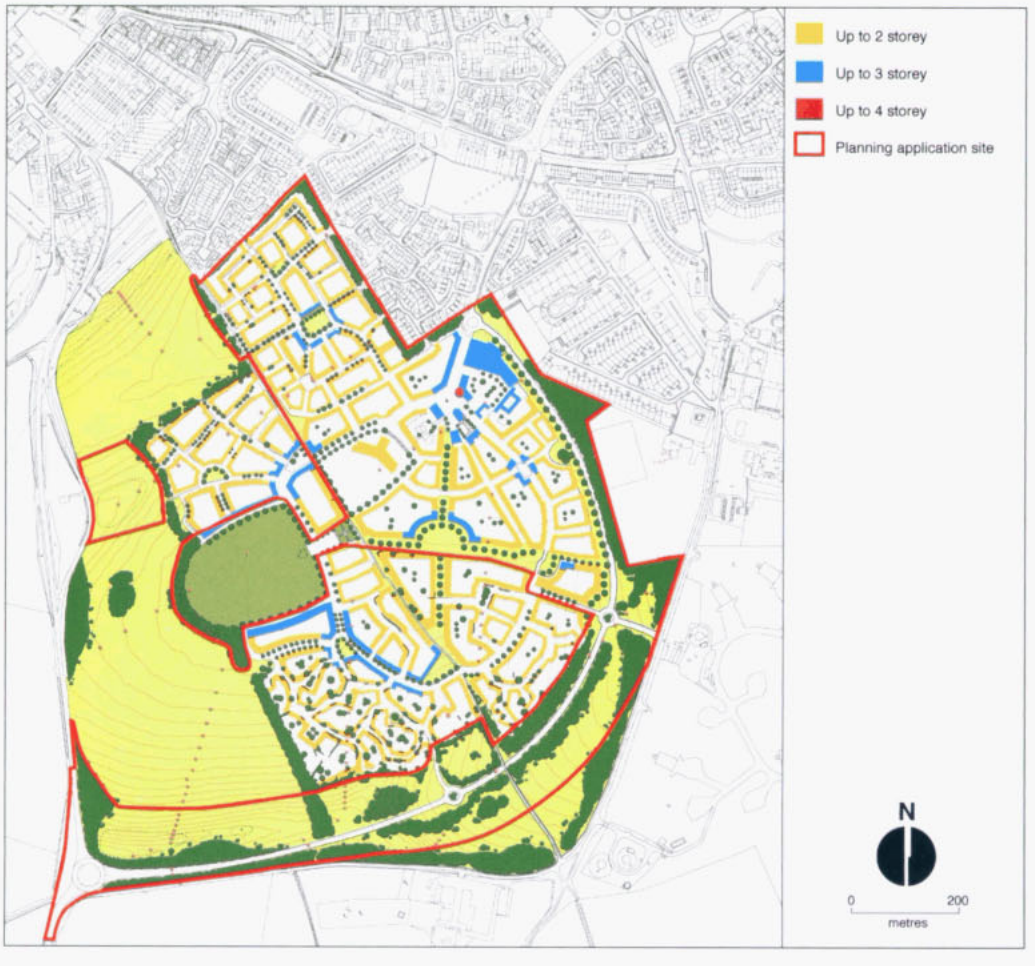


Figure 6.1c



6.2.3 Surveys

An early start allows greater time to undertake any surveys that may be necessary and to identify the environmental effects that need to be taken into account in developing the proposals. Some forms of survey, particularly ecology, may need a full year to provide the background information needed for an EIA. It is important that requirements for surveys are understood at an early stage in order to plan sufficient time to incorporate them into the project planning process. Time and budget constraints can limit the amount of survey work that is undertaken. In these circumstances the following approach should be taken:

- Be transparent about the limitations of data
- Estimate the effect this is likely to have on the understanding of the existing condition on the site and surroundings and the predictions that are to be made
- Develop a strategy for dealing with impacts that may not be anticipated as a result of limited surveys

Survey work that is limited by time and budget constraints is only likely to be acceptable where the predicted impacts of the proposal are not likely to be significant. Where more significant impacts are likely to occur or for developments that affect a sensitive site (e.g. Special Area of Conservation (SAC)) then it is likely that only the appropriate level of surveys, undertaken in accordance with recognised methodologies, will be acceptable. It is likely to be more cost effective to plan these surveys into the project planning process at an early stage than to become involved in a protracted decision making process resulting from the inadequacy of data. In the event that the site includes or could affect an SAC then it is likely that the surveys will need to 'double up' to provide the basis for an Appropriate Assessment under the requirements of the 'Habitats Directive'. This reinforces the requirement for rigorous information to assess the effect of the proposal on the integrity of the designated site.

Other time consuming surveys arise when examining cultural heritage issues, in particular underground archaeology. It often becomes clear early on in the assessment phase that it will be necessary to undertake trial trenching in order to establish the significance of any archaeology before the planning application can be determined. Depending on the size of the site and time of year, this may add weeks or even months to the assessment phase. Again, if the need for such surveys is considered at an early stage then this need not significantly affect the schedule for planning the project. If there is a need for but an absence of background air quality data for a project, then long term monitoring may need to be undertaken and may last up to 6 months before suitable data is obtained.

6.3 Select an Experienced Project Manager

The selection of the right team of specialists and ensuring that their contributions are balanced is an important contributory factor to a successful EIA. An experienced professional in EIA work should take on the role of ensuring that this is achieved. Ideally that project manager should be experienced in a wide variety of ES's and should have at least a working understanding of the various specialist topics that arise in ES's e.g. noise, air quality, etc

A common approach to project management is to use a consultant, employed by the developer, to advise upon the selection of the specialist team and coordinate the production of the EIA. For development companies that have EIA expertise in-house, they will sometimes take over the role of managing the EIA process, or choose to share the responsibility with an external consultant. Whichever management structure is adopted it is important that the roles and responsibilities are clear at the outset. Local planning authorities too, find it easier to deal with a project manager(s) rather than half a dozen specialists should they have any queries relating to the ES once it has been submitted with the planning application.

The appointment of a project manager at the beginning of the project should serve to make the whole EIA process much more efficient, timely and cost effective. They often have a

key ongoing role once the application and ES are submitted so that they can co-ordinate any responses raised by the planning authority or any consultees whilst the application is under consideration.

6.3.1. The role of the project manager

The project manager's role is vital in terms of the delivery of an ES that will properly contribute to the decision making process and in ensuring that the EIA is effective in delivering an improvement to the environmental performance of the project. All this must be achieved within reasonable time and budgetry constraints. Key responsibilities of the project manager include:

- understanding the issues involved and the affected environment
- defining tasks and developing an appropriate work programme
- setting time lines for delivery
- estimating and managing a budget
- establishing an organisational structure
- putting together an interdisciplinary EIA team
- establishing standards and maintaining quality of work
- managing and co-ordinating the information generated by the study
- preparing the ES
- ensuring that 'inter-relationships' between topic areas are identified and significant impacts reported
- preparing the Non Technical Summary.

One of the key responsibilities is to communicate with the different participants in the EIA process:

- The developer
- Project engineers and/or designers
- Environmental specialists
- The determining authority
- Other consultees (statutory and non-statutory)
- The public

The relationship with the developer is particularly important. In many cases, the project manager will need to advise the developer (and possibly the engineers and designers) on the requirements for environmental work and the potential impacts of the project. For example, the setting of an inadequate timescale and budget may have resulted from the lack of understanding by the developer of the EIA process. The project manager that simply takes the timescales and budget as 'non negotiable' is likely to undertake an EIA that is vulnerable to criticism and consequent delay. Negotiating a more realistic timescale and cost, consistent with the potential environmental effects of the proposal, may result in additional early costs, but these will be outweighed by the consequent savings if the EIA can contribute to an improved (and therefore more acceptable) project and reduce the time required to make a decision. An investment in the early stages of an EIA can also make a significant contribution to the avoidance of a public inquiry. The savings (timescale and costs), if an inquiry can be avoided, are likely to far outweigh any additional costs associated with the EIA.

6.4 Select an Appropriate Team

It will always be desirable to select specialists that have previous experience in putting together topics in Environmental Statements. They will be familiar with the EIA process and have a clear understanding of the appropriate methods to select to assess the impacts. If the consultant is not sufficiently experienced, then the project manager has an even more important role in terms of making sure that the output is up to the required standard.

The team members may also be required to have experience as expert witnesses at public inquiries. If there is a risk that the proposal will only be decided by appeal, then it will be important to select the individuals who are capable of articulating and defending their method of assessment and any judgements made under cross examination.

The EIA team will usually include a specialist in each of the topics identified in the EIA Regulations unless the scoping stage is able to demonstrate that the effects on a particular topic e.g. archaeology, are not sufficiently significant to warrant detailed study. For major projects EIA teams may also include a planning solicitor (with access to Counsel) to advise on compliance with the Regulations and the relationship between the EIA and the planning application.

It is often the case that the EIA team is appointed after the design team has started work on the project. Where design and environmental impacts are closely linked e.g. for landscape, noise and traffic, there are advantages in the design specialist also taking on the EIA role providing they are sufficiently experienced. This will save time in disseminating information and providing advice on mitigation measures. However some authorities have concerns about the ability of 'designers' to objectively assess their own schemes and, for large or potentially controversial projects, many prefer to see a separate and independent EIA team. Nevertheless, a close association of the EIA and design team is desirable to secure the benefits of the EIA improving the environmental performance of the project.

Even where an independent EIA team assesses the work of the design team there may be concerns, often expressed by members of the public, about the objectivity of the assessment because the developer is paying for the EIA consultants. Ultimately it is the responsibility of the determining authority, and their consultees, to test the degree of objectivity at the time of submission and to reach their own conclusions about the potential impact of the proposals. However the developer may seek to give greater confidence in the EIA by commissioning an 'external' audit of the ES at the draft stage, either using the IEMA, other consultants or a specialist University EIA unit. Local planning authorities may also employ similar organisations to audit the EIA in order to check for compliance with the Regulations and demonstrate their own objectivity.

In some cases the developer may choose to use one multidisciplinary firm of consultants to undertake the assessment and write the Environmental Statement, alternatively they may select different firms for different specialist disciplines, or a combination of both. There is no one preferred or best route to selecting the consultancy team. It is often more important to ensure that each of the individual specialists are competent to perform the tasks required, and that their contributions are balanced.

6.5 Adopt Good Working Practices

6.5.1 Working within the EIA team

The EIA specialists will need to develop methods of working together as a team and also techniques for working with the client, the design team, and the planning authority and their consultees. The method of working will vary with the scale of the project and the time and budget available to undertake the EIA.

The different contributors to the EIA process will be linked together by the project programme. This provides the main tool for ensuring that the parallel process of consultation, design development and EIA are co-ordinated to ensure that environmental effects and the concerns of the planning authority (and its consultees) are taken into account at the appropriate stage in the design of the project.

The programme will need to identify the key dates leading up to submission: -

- surveys
- initial design and consideration of alternatives
- assessment of alternatives and selection of the preferred scheme

- assessment of impacts
- production of draft ES
- amendments and final ES

Consultation will take place throughout the process in one form or another and is not usually identified as a single event. If there is an external review it would occur between draft and final ES or after submission.

The EIA team will influence the programme by advising on the timing of surveys (both obtaining information from external sources and undertaking specific site surveys (e.g. for different species of fauna and flora), the time required to assess alternatives and advise on mitigation and the time required to complete the draft and final ESs once the scheme has been 'frozen'.

The EIA team may produce a number of 'internal' drafts but it is customary to only plan for one draft prior to submission. This is largely due to time and cost constraints but it also allows the client and any external auditors to have sight of a comprehensive assessment of the project before the ES is finalised.

Once the initial programme has been established the EIA team will need to be briefed. The briefing note should provide information on the following matters.

1. Management hierarchy and reporting procedures
2. Application site boundary
3. Clear description of the development proposals and processes (where relevant), including construction
4. Guidance on the content and format of individual chapters
5. Guidance on dealing with the definition of 'significance' and how to describe impacts
6. Information and guidance on plan production
7. Report formatting, including font type and size
8. Information on draft planning conditions and/or legal agreements that may have a bearing on the form or delivery of mitigation e.g. contributions to public transport
9. Timetable for reporting
10. Costs and budgeting

Even with clear briefing it can be anticipated that the work of the team will need to be collated and co-ordinated throughout the EIA process. One of the main tasks for the EIA co-ordinator is to track changes in text and plans received from the specialists and to ensure that they have access to the most up-to-date information.
For large projects it is advisable to allow for a number of progress meetings to identify inter-relationships between effects, inconsistencies in approach or any misunderstandings about the definition of the scheme. The aim is to minimise the amount of collation needed at the end of the ES stage to produce a consistent and integrated document. Where the project does not justify meetings of the EIA team it will be the responsibility of the EIA co-ordinator to deal with these issues and, where appropriate, organise smaller meetings with the key specialists.

6.5.2 Working with the Design Team

There tends to be considerable variation in the extent to which the EIA team is integrated, or interacts with, the team responsible for the design of the project. A characteristic of the most successful EIAs is that the EIA team has been able to influence the design of the project to remove or reduce many of the potential adverse effects on the environment and capitalise on any potential environmental enhancements to the project, often at no extra cost if identified at an early stage. The main factor in achieving this success is the availability of environmental advice at an early stage in the process, before site selection and/or the design is too advanced, and for that information to form the basis of discussion between the

team to agree how or if it can be used to improve the environmental performance of the project proposal.

6.5.3 Working with the Client

The client will require the EIA team to advise on the budget and timetable and to assess the impacts of the scheme in an objective manner. Where the client considers the impacts to be overstated he may ask the team to reconsider its judgement or he may seek a second opinion from other consultants. Whilst the significance of some environmental effects can be open to judgement and interpretation, it is important that the integrity of the practitioners is maintained. In practice most experienced clients accept the value to the project of a credible and objective assessment and will only intervene in the EIA process in exceptional circumstances.

The EIA team will require guidance and approval from the client with regard to the provision and delivery of mitigation measures. Where there is uncertainty that mitigation will be provided or will be effective then this will need to be taken into account in the assessment of residual impacts. The degree to which the developer is committed to mitigation measures described in the ES will also have to be made clear. The ES should ideally provide a preliminary summary of proposed mitigation measures and invite a legal agreement or conditions, or suggest other ways in which the determining authority can assure they will be implemented.

6.5.4 Working with the planning authority and their consultees

The extent of consultation with the planning authority and their consultees prior to submission is often dictated by the time available rather than any specific strategy related to the application.

There can be advantages to early consultation, particularly where the developer is not familiar with the area and could therefore use such consultation as a familiarisation exercise and to understand any key environmental sensitivities that may exist in the area. The scoping stage is the obvious focus for this form of consultation; it introduces the scheme to the consultees and establishes the issues to be considered in the EIA and the methodology to be employed in their assessment. Scoping is dealt with in Chapter 9.

Beyond scoping, ordinarily, no further consultation tends to be undertaken until the draft ES has been prepared. During this period the project is being refined and amended in response to consultation and technical and economic factors. However, the following factors may benefit from continued consultation:

- Project details change and could affect the consultees' view of the significant environmental effects
- Additional impacts are identified and agreement on the methods to be adopted to assess them would be helpful
- Potential impacts identified during scoping have been assessed and are unlikely to be significant, but agreement with the consultees is required to limit the depth of study on these issues
- The participation of consultees in the design and assessment of the project is important to its acceptability

Where time permits it may be beneficial to consult on the draft ES. This may help to 'short cut' to issues that may otherwise arise during the decision making process. Alternatively, it may be regarded as adequate to address the issue during the post-submission stage on the assumption that any adjustments – in the scheme and/or EIA - can be dealt with as supplementary information.[66]

[66] Town and Country Planning (General Development Procedure) Order 1995 (SI1995/419), art.3 or Paragraph 19 of the EIA Regulations

After submission there may be requests from the planning authority and consultees for additional information or clarification. A competent approach to screening and scoping should be able to restrict these requests to fairly minor levels of detail. However, in some circumstances the planning authority and /or their consultees may request additional information beyond that agreed during scoping. They have the power to do this, but some may take a view that the request is unreasonable. There is little guidance on this issue in the Regulations to resolve any disputes that may result, although if the request was made using the General Development Procedure Order there is a right of an appeal within 6 months. Many developers decide that it is quicker to provide the information than face further delay and the possibility of a later judicial review of a decision.

In order to make the additional information accessible for consultation, as part of the overall EIA process, there is considerable merit in responding to all points raised in a single document. By supplying the information in this way in response to a formal request from the LPA pursuant to Regulation 19 there is little doubt that it forms part of the EIA in legal terms (although it is always worth clarifying this point in a covering letter and in the absence of a Regulation 19 request the point becomes more arguable); it also enables revisions to impacts and mitigation to be recorded in a clear and logical manner which updates or supersedes the original EIA. For more substantive information, or where the ES is a considerable size, it may be more beneficial to edit and reissue the ES, as the former approach may make it difficult for the reader to assimilate the information.

It is worth noting two points of good practice in supplementing or amending an ES:

- First, the ES as supplemented or amended must remain reasonably intelligible to the reader. This may mean producing a "red-line" version of the relevant section making it clear what has been changed.
- Secondly, an amendment to the ES may well require an amendment to the non-technical summary as well, and given that the non-technical summary is the document which the public are likely to be focusing on the first point above is especially pertinent.

The fact that the legislators did not provide any mechanism whereby the ES can be supplemented voluntarily is regrettable and can give rise to uncertainty and confusion. As has been noted above there is always the ability for the LPA to request further information under Regulation 19, but this in itself can give rise to presentational problems. Regulation 19(1) allows the LPA to make a request for further information "if ... it is of the opinion that the statement should contain additional information *in order to be an environmental statement*", which suggests that the power to make a request should only be exercised if the original statement were in some way inadequate. As will be appreciated this may well not be the case.

As will be seen from the comments in section 14.2.3 below the Courts are thankfully tending to take a more pragmatic view of voluntary supplementing of an ES so long as adequate publicity is given to supplementary material, and LPAs are to be encouraged to do likewise.

6.6 Allow Time for Collation and Review

Once each of the specialist consultants have written their respective final draft chapters it is common to find that insufficient time is allocated for the collation and review of the document. Both are extremely desirable.

Collation not only covers the physical bringing together of the specialist chapters and other text (e.g. description of the development proposals and the alternatives examined), but also allowing the interrelationships between the chapters to be addressed if relevant.

It is likely that having defined the development at the outset of the assessment work, the development proposal under consideration may have changed. If this has been the case then all of the consultancy team must be made aware of the changes and given further time,

where relevant, to reassess the development and its environmental impacts. This in practice can be a continuous process, but it is important for the project manager to undertake a final check. For example, it may be the case that a last minute change involving off site highway improvements e.g. widening of a road, agreed between the highway consultant and highway authority, may have impacts on sensitive receptors such as an adjacent ancient hedgerow. This may alter the reported impacts in the ecology and landscape chapters.

6.7 The Non-Technical Summary

Sometimes treated as an afterthought, the non-technical summary forms an integral part of the Environmental Statement and should be drawn up accurately and concisely. There have been recent cases where third parties have brought about a judicial review of an Environmental Statement partly based on the point that the non-technical summary has not accurately reported the impacts or the mitigation measures. Care should be taken to ensure that the NTS adequately covers these issues as well as other aspects of the EIA and is an adequate summary of the ES.

For more advice on the non-technical summary see Section 13.2.4 below.

6.8 Timescale and cost

Having set out the above guidance it is worth outlining some issues relating to timescale, costs, and post submission matters. All have a bearing on the project proposal and management.

The time taken to undertake an EIA can vary from a few weeks to several years for complex or major projects. As a general 'rule of thumb' there appears to be a correlation between the quality of an ES and the time available in which to carry out the EIA. The shorter timescales are generally indicative of a lack of integration of the environmental considerations with the development of the project concept. On average the time taken to undertake an EIA appears to fall between 6 and 12 months (according to figures provided in a European Commission study).

In terms of a typical EIA programme the following chart identifies the tasks, the timing of those tasks and the interrelationship of the tasks, to allow a fuller understanding of what is involved.

The costs of EIA's are generally commensurate with the complexity and significance of the project and level of detail likely to be required in terms of assessment of impact.

Based on a recent review prepared by one consultant 50% of all ES's produced fall within the £20,000 - £35,000 price band, 20% fall within the £35,000 - £60,000 price bracket, and 30% fall within the £60,000 + band.[67]

These costs are simply the consultancy costs for the project management of the EIA and the fees of the individual specialists who have contributed. The figures do not include any costs the development company may incur in terms of man-hours, nor does it include consequential costs arising as a result of changes to the design of the project.

The costs and expenses associated with the ES can be considerable, especially the production of the ES, and may be several thousand pounds. To reduce costs and increase the accessibility of the ES this information is now being provided in CD format and on developer and/or LPA web sites.

For most projects the cost of the EIA is less than 0.5% of the capital cost of the project. This proportion tends to decrease with the increase in the capital value of the project. Costs in excess of 1% are considered to be an exception, but can occur with controversial projects

[67] RPS Group plc, internal survey.

in sensitive locations.[68] They can also occur with some low cost projects that can be subject to EIA, for example some agricultural projects and caravan and camping sites.

Figure 6.3
Example of Timetable for EA

Task	Project Month											
	1	2	3	4	5	6	7	8	9	10	11	12
Appointment and team briefing												
Agree description of development to be assessed												
Baseline surveys												
Scoping report												
Assessment of impacts												
Review/refine description of development												
Further baseline studies if relevant plus further assessment												
Draft ES												
Final ES												
Non Technical Summary												

The costs of EIA should not be considered in isolation of the benefits to the environment, though the avoidance of significant adverse impacts are difficult to assign monetary values to. Many of the environmental assets that would otherwise have been degraded or destroyed as a result of the development arguably may far outweigh the EIA costs. Whilst these benefits may be intangible, real monetary savings may also result from the EIA through:

- An improved / quicker decision making process if the environmental issues are adequately addressed by the EIA. This could include the avoidance of a public inquiry and the associated costs.
- Reduced public opposition if the EIA has allowed them to influence the nature of the design of the project
- An improved design that not only results in improved environmental performance, but also better economic performance (see box 6.3).

[68] Data taken from: Land Use Consultants et al (1996), Environmental Impact Assessment in Europe: a study on costs and benefits, Volume 1, European Commission, Directorate General Environment

Box 6.3
EIA for Billund Airport

Billund Airport has more than two million passengers a year and more than 1,300 homes in Billund are exposed to noise levels above the current recommended thresholds . In order to reduce the number of homes exposed to noise, the airport proposed the construction of a new runway to the north of the existing runway amongst other measures.

The EIA

As a result of the work undertaken as part of the EIA for the new runway, it became clear that the same reduction in noise levels could be obtained by changes in the take-off procedure. All aeroplanes that take-off from east to west could leave the runway as quickly as possible and turn 30 degrees to the right (away from Billund) when they are at 150 meters height. As a result, the construction of a new runway was not necessary.

The Value of the EIA

According to the airport's Director of Construction, Anders Nielsen, the EIA has identified a saving of 300 million Kroner (€40.4 million) (the cost of the new runway), a saving on approximately 350 hectares of farm land, the preservation of an old Danish forest and a reduction of the number of homes exposed to noise from 1,290 to 328 at full utilisation of the extended capacity of the airport.

Facts

The outcome of the EIA:

- A reduction of 1000 homes exposed to noise above the recommended thresholds
- A doubling of the flying capacity
- A saving of 350 ha. of farm land
- The preservation of an old Danish forest
- A saving of 300 million Kroner (€40.4 million) in the cost of construction
- Less environmental impact from the airport's operations
- Environmental approval of the airport - without complaints

Source:
Based on case study from EC web site: http://europa.eu.int/comm/environment/eia/eia-billund-airport.htm

Summary

- The early consideration of environmental effects can result in a development that is more cost effective as it is usually cheaper to design in environmental measures than to add them to a predetermined design
- It is important to clearly define the development in order that the authority can be satisfied that it has sufficient and accurate environmental information about the project so that it can be adequately assessed.
- There must always be sufficient definition to the proposals such that they can properly be assessed
- One way of addressing the assessment of outline applications is to prescribe a framework within which reserved matters have to be applied for. For example, a Masterplan produced for prescriptive (rather than illustrative) purposes and to which future applications for reserved matters must be related.
- Some forms of survey, particularly ecology, may need a full year to provide the background information needed for an EIA.
- The selection of the right team of specialists and ensuring that their contributions are balanced is an important contributory factor to a successful EIA.
- The project manager may need to advise the developer (and possibly the engineers and designers) on the requirements for environmental work and the potential impacts of the project.
- It will always be desirable to select specialists that have previous experience in putting together topics in Environmental Statements.
- A project programme should be developed that provides the main tool for ensuring that the parallel process of consultation, design development and EIA are co-ordinated.
- Once the initial programme has been established the EIA team will need to be briefed.
- A characteristic of the most successful EIAs is that the EIA team has been able to influence the design of the project to remove or reduce many of the potential adverse effects on the environment and capitalise on any potential environmental enhancements to the project, often at no extra cost if identified at an early stage.
- The integrity of the EIA team should be maintained in the face of any pressure from the developer to revise some of the findings of the EIA
- Supplementary information can be provided following the submission of an ES, but should remain intelligible to the reader.
- Time should be allowed for the collation and review of the ES.
- EIAs typically take between 6 and 12 months
- The cost of an EIA can appear to be high, but is usually below 1% of the capital cost of the project. Considerable savings in project costs can be achieved if the EIA contributes to improving the passage of the document throught the decision making process and the avoidance of a public inquiry.

References

Council Directive 97/11/EC of 3 March 1997 amending Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment

Land Use Consultants et al (1996), Environmental Impact Assessment in Europe: a study on costs and benefits, Volume 1, European Commission, Directorate General Environment, Terence O'Rourke Ltd (2002), Land South of Boscombe Road Environmental Statement.

Town and Country Planning (General Development Procedure) Order 1995 (SI1995/419), art.3, Terence O'Rourke Ltd (2002), Land South of Boscombe Road Environmental Statement.

7.0 Assessing Alternatives

The consideration of alternatives is one of the key ways in which the impact of a project can be reduced. The preferred mitigation strategy within an EIA is to avoid impacts, failing that to reduce impacts and, only after these options have been pursued, to remedy and / or compensate for them.

Examining alternatives is often considered only within the context of identifying alternative sites for a project, where this is possible. Whilst this is important, there are many other alternatives available to the developer to minimise the environmental impact of a project. This requires the consideration of key environmental factors at a very early stage of planning a project.

7.1 The legal context

The EIA Directive and the associated Regulations in the UK do not specifically require the assessment of alternatives. The Directive requires "An outline of the main alternatives studied by the developer and an indication of the main reasons for his choice, taking into account the environmental effects." Thus, in the event that the developer has studied no alternatives to the proposal, then no information on alternatives needs to be contained within the Environmental Statement. However, where the ultimate conclusion of the ES is that there will remain significant environmental effects the failure to consider alternatives weakens the argument that all avenues have been satisfactorily explored for reducing the environmental impact of the proposal. In addition, planning committees will frequently debate alternative sites and ask for information on them – which can delay the project if they have not already been examined. Therefore, as a matter of good practice, and in the interests of enhancing the probability of the proposal receiving consent, alternatives and their environmental advantages and disadvantages should be assessed.

The consideration of alternatives can be considered to be daunting by some developers. In reality it is an extension of a process they are likely to go through anyway when examining the financial implications and feasibility of various development options for achieving their stated objectives (which could include improving the profit made by the company).

7.2 Which alternatives should be examined?

Figure 7.1 sets out a strategy proposed by the World Bank for examining alternatives. It proposes a stepwise approach to considering alternatives, from the strategic level to the detail of particular mitigation measures that might be employed to reduce the impact of a project.

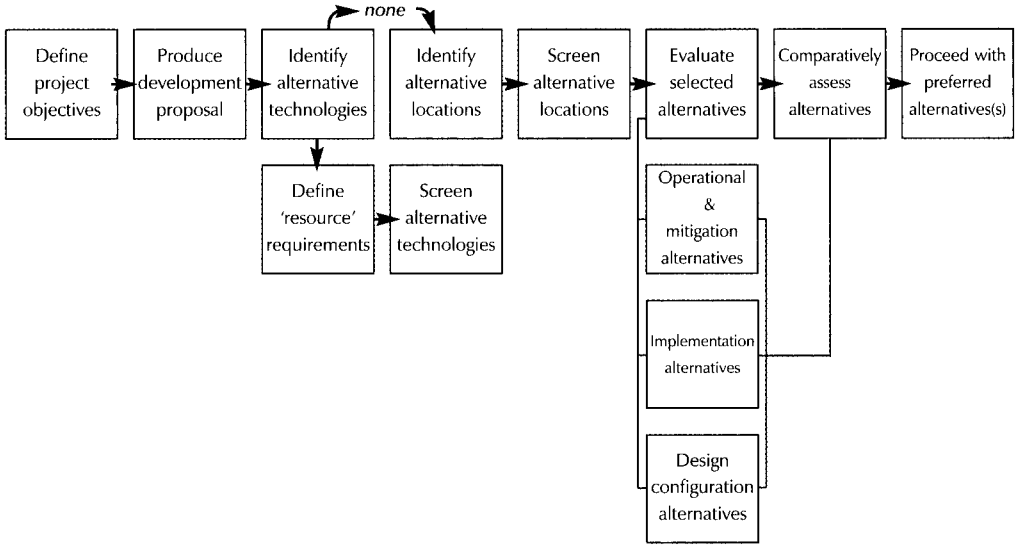


Figure 7.1
Stages in the analysis of alternatives
Adapted from World Bank (1996)

7.2.1 Strategic alternatives

The inclusion of an assessment of alternatives at the earliest stages of project planning requires a clear understanding of the underlying objectives of a proposal. This allows the consideration of alternative strategies for achieving these objectives. For example, a proposal to build a new manufacturing site is likely to have the underlying objective of increasing the output for a particular product. Strategic alternatives available may include methods of increasing productivity at existing sites and thereby avoiding the environmental impact of the new facility. Such an option is also likely to have financial advantages. Box 6.3 in the previous chapter consisted of a case study where the objective of the development was to reduce the number of households subject to significant noise impacts from an airport. The examination of operational alternatives identified a solution that satisfied the objectives and was financially advantageous.

For utility projects, such as water supply, a range of different technologies and strategies may exist for satisfying projected demand for water. The financial implications of these strategies may be as important (or more important) than the environmental considerations (see Box 7.1).

Box 7.1
Thames Water's Strategic Water Resources Planning Study

Thames Water has been undertaking a major strategic water resources planning study over the last 6 years. This aims to balance the need to satisfy customers' requirements for high quality water at reasonable price, with environmental protection and the conservation of resources, while minimising leakage and other forms of wastage. A BPEO study of over 50 demand management and supply options has been undertaken for Thames Water, by Cascade Consulting, based on a multi-criteria analysis of financial, environmental and social factors and using environmental economics to evaluate impacts where possible. The objective of this strategic analysis is to identify the most sustainable and cost-effective options that are available to Thames Water to manage or meet the likely future demand for water.

At this stage it can be helpful to consider the 'no action' alternative to provide some indication of the implications of not proceeding with the proposal. The presentation of this information in the ES should also be accompanied by a justification for the project.

Box 7.2
Options for Change – Alternative Training Strategies

The review of the UK armed forces in the early 1990s resulted in the need to accommodate additional army training in the UK. Proposed significant changes to the training regime at the Otterburn Training Area resulted in an EIA being produced. The need for the proposals was based on the accommodation for training on new weapons systems. The EIA produced for the proposals considered several different options including:

- Simulation training
- Purchase of new training lands
- Moving the required training overseas
- Options within the existing training estate – this included a consideration of the impact of activities at other potential locations.

Having identified the Otterburn Training Area as the most suitable site, a number of development options within the site were considered. This involved setting out the training requirements and identifying locations within the training area that would meet these. The options selected were then primarily based on those that required least additional development (e.g. creation of access tracks). This minimised the disturbance to an area that is located in the Northumberland National Park.

Source: RPS Clouston (1995), Otterburn Training Area Options for Change Proposals Environmental Statement, Ministry of Defence.

7.2.2 Alternative technologies, processes or techniques

After determining the type of proposal that satisfies the underlying objectives it might be possible to consider alternative technologies, processes or techniques (see Box 7.2). This could be assessed at a fundamental scale (e.g. different fuel types for a power station) or at a smaller scale for technologies which are only part of a project (e.g. different modes of transport for transporting waste to disposal or recycling facility). Alternative processes may be used to produce the same product, but each is likely to have different environmental effects. For example, the production of paper can use a chemical or a mechanical process. A consideration of their respective environmental effects may give a clear indication of which would be preferable.

For construction activities which are likely to result in significant environmental effects alternative techniques may need to be considered. For example, some piling techniques will have reduced noise and vibration effects.

7.2.3 Alternative locations

Alternative locations for a project are an important consideration. Given that the environmental impact of a project is determined, at least in part, by the sensitivity of the location, identifying less environmentally sensitive sites can be a significant factor in reducing the overall environmental impact of a project.

Before undertaking an assessment of alternative sites, the proponent should have a clear understanding of the requirements of a site, e.g. its size, services and associated infrastructure. This will provide a clear basis for screening available sites and eliminating those that are unlikely to be suitable. For example, one site may be preferable in terms of the 'footprint' of the proposal, but may be unacceptable when the infrastructure requirements are considered.

The consideration of alternative sites will not always be available to the developer, for example, the developer may own the site and the proposal may be a means of satisfying the objective of maximising the asset of the land. Similarly, if the proposal is an extension to an existing facility then an alternative location is not a reasonable option. In other cases, alternative sites may be determined, at least in part, by allocations in the local development plan. It is important to note that such allocations will not always have been subject to an environmental appraisal and therefore significant impacts could result from what has been considered the preferred site. Under such circumstances it might be appropriate to determine whether less sensitive sites are available that may, or may not, also be allocated in the local plan. However, this situation should occur less frequently as the SEA Directive is implemented.

Other factors may also limit the range of alternative locations that are available. For example, some industrial facilities need to be in close proximity to cooling waters and quarries need to be located where the minerals can be found.

Alternative technologies can have a bearing on the range of alternative sites available. For example, the use of directional drilling in the oil industry enables the drilling facility to be located at some distance from the well. Similarly, the selection of a site of a particular size may be the determining factor for the type of technology that can be used on the site.

The consideration of alternative sites raises the potential problem of the extent to which the public should be involved or informed. When it is known that a particular site is being considered for development there is the potential that this will cause planning blight. Concern and stress within a community may also be generated. This can be particularly pronounced if the selection of the preferred option is subject to factors other than the environmental analysis, e.g. political considerations. The concerns or blight could all prove to be unnecessary if the site is rejected at an early stage after a preliminary analysis identifies it as being unsuitable. These arguments imply that it is better to ensure that this stage of the project remains confidential. Set against this is the requirement in the 'Aarhus Convention' for "for early public participation, when all options are open and effective public

participation can take place"[69]. Understandably, people can become frustrated when decisions that affect their environment and quality of life are taken in secret and there may be advantages in sharing information with them. In addition, a confidential approach will not enable the proponent to take advantage of local knowledge on the merits or disadvantages of alternative sites.

The approach adopted is best selected on a case by case basis. However, where the above difficulties can be avoided, an open and transparent approach is recommended.

Box 7.3
Proposed Composting Plant: Assessing Alternative Locations

An assessment of alternatives was undertaken by LUC/Cascade Consulting for a proposed composting plant as part of a wider Sludge Strategy Study for the Thames Water region. Additional enhanced sludge treatment capacity was required within the region in order to comply with the revised Sludge (Use in Agriculture) Regulations.

The proximity principle states that waste should be generally disposed of as near to its place of production as possible. However, it is recognised transport over longer distances may be justified for other wastes for which specialised facilities are required and where it would not be economical for every region to have one. This principle was an important factor guiding the selection of alternative sites.

A sub-region was defined to include the majority of Thames Water's sewage treatment works (STW) that produce raw sludge cake (suitable for composting) for which a new treatment solution was required. All of these STWs were reviewed for their suitability for siting a composting plant during the original site selection exercise, but only the final shortlisted sites were presented as the "main alternatives" specified by the EIA regulations. The area of land required to treat 20,000 wet tonnes of sewage sludge was determined taking into account the different sizes of plants that could be used. For example, 1 x 20,000 tonne plant or 2 x 10,000 tonne plants. A BPEO analysis was undertaken that included consideration of technical practicability, cost and environmental impact. It was determined that the increased costs, reduced operational efficiency and potential cumulative environmental impacts associated with smaller plants would mean that multiple site development would have been unlikely to be practicable and would not therefore have been pursued by the company.

A search was therefore carried out for a potential single site of approximately 5ha in an area of relatively low environmental sensitivity. A desktop analysis of planning and environmental designations affecting sites and Thames Water's own environmental databases were used.

The review concluded that nine STW sites had sufficient available land area for the composting plant. Six of these were in the Green Belt and as there were alternative sites available outside the Green Belt, these were not favoured.

Of the remaining three sites:

- Site A was on the boundary of the sub-region and was remote from other sites where raw sludge is produced. Approximately one third of the site lies within the 1 in 100 year floodplain defined by the Environment Agency, and this and other site characteristics would constrain the layout of the plant on the remaining land.
- Whilst there was sufficient land at Site B, the boundary is relatively close to a large residential estate. The STW has a history of odour problems and is sensitive in terms of its proximity to designated areas. Lime treatment facilities at this site would also exclude the use of any indigenous sludge for composting.
- Site C had vacant land which had no specific planning designations and is over 250m from the nearest residential property. The site suffered from complaints of odour, but the majority of these were lodged during a period when the works were being upgraded.

From the review of sites, it was concluded that Site C was the most suitable in terms of its location within the sub-region, land availability, and planning and environmental considerations and therefore was investigated further as a potential single site for a composting plant.

[69] Article 6(4)

7.2.4 Alternative designs and mitigation

Having determined the nature of the development and identified a site that minimises the environmental effects of siting, a range of alternatives are still available to the developer. For example, design of the facilities and site layout offers a means of reducing the environmental impact of the proposal.

Different mitigation strategies are likely to differ in their effectiveness in reducing the environmental impact of the proposal. For example, different designs for a building are likely to have a significant influence on the visual and landscape impact of the building (see Figure 7.2).

For extensive sites that include an ecologically sensitive area it may be possible to design the layout of the buildings to avoid damaging the valuable aspects of the site or possibly to enhance them. Even if there are few environmental sensitivies on the site, it is worth looking beyond the site to determine whether decisions taken on the site design are likely to result in significant off site impacts. For example, the selection of the location for the access to the site may determine whether traffic will need to go through a sensitive village or sensitive natural environmental features may be damaged by the construction of the access road. The mapping of 'sensitive receptors' is often a useful way to determine how these should influence the design or layout of a project.

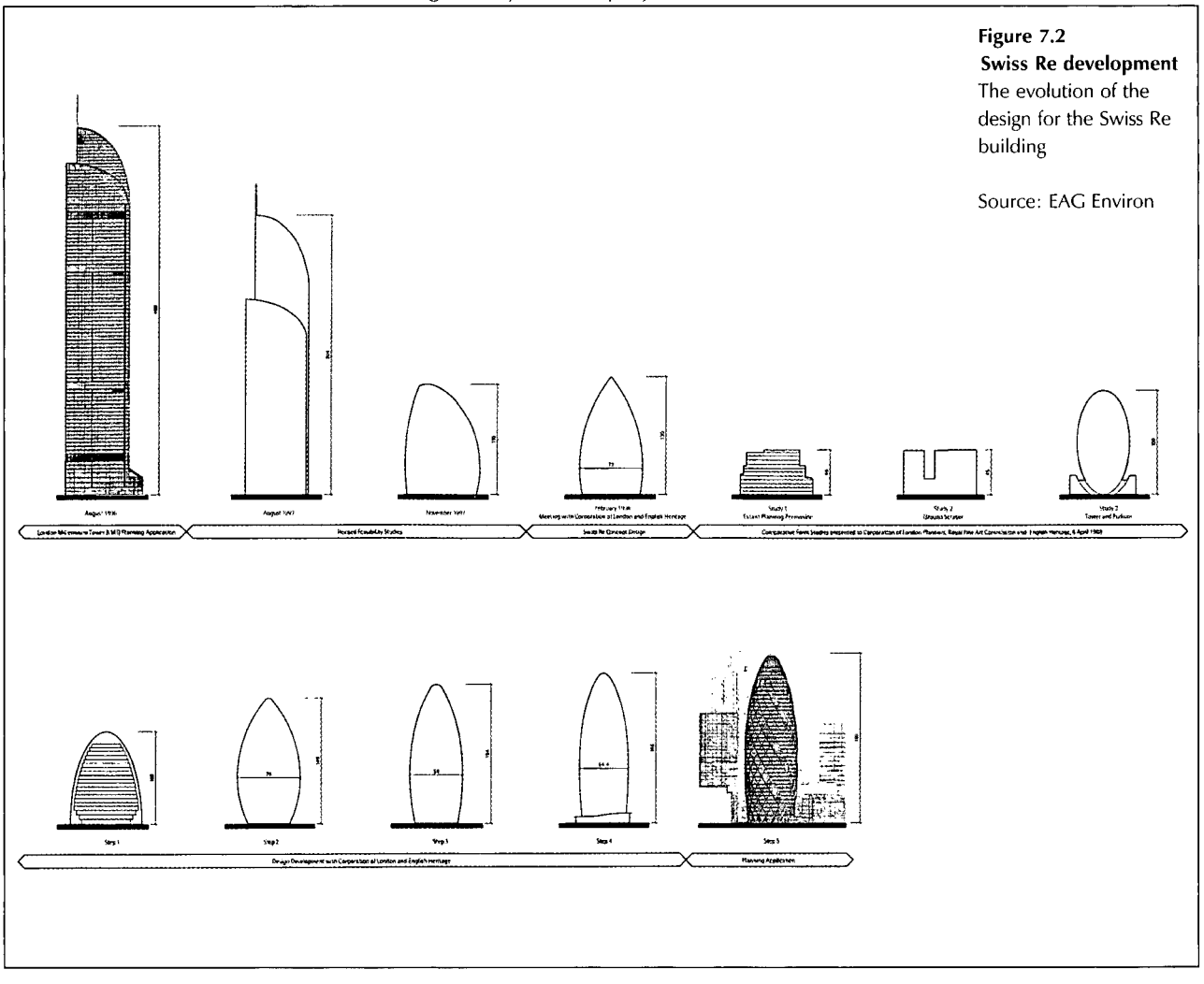


Figure 7.2
Swiss Re development
The evolution of the design for the Swiss Re building

Source: EAG Environ

7.3 Which methods should be employed?

When assessing alternatives, there may be a suspicion, from members of the public or other organisations, that the exercise is being undertaken to justify the original proposal of the developer. To combat this view, these guidelines recommend that a consensus building exercise that allows other organisations and individuals to contribute to the selection of the alternatives should be considered (See box 7.3). Nevertheless, it is recognised that the involvement of the public and other organisations may not be appropriate in all

circumstances, e.g. where resources are limited, where the consideration of alternative sites could cause planning blight or where commercial confidentiality issues are paramount.

Box 7.4
Community Planning
– New Community, St Crispin, Northampton

The proposal was for the redevelopment of the former St Crispin Hospital site in Northampton for housing, employment and leisure uses. A community planning exercise was undertaken and included a Planning Weekend to enable all key stakeholders, especially the local communities, to develop ideas about the future use of the site. The weekend provided a 'wish list' of physical and social aims for the site and some indications of how these could be achieved. These outputs, together with the local plan and a development brief for the site, were used to draw up a masterplan.

Following the weekend a community forum was established to identify the way forward and initiate a series of focus Groups to address specific elements of the development. These groups were used to further develop the masterplan that was used as the basis for the planning application.

Source: FPD Savills incorporating Shaw Crammond (2000), A Proposal for a New Community St Crispin, Northampton Environmental Statement, NHS & Wilcon Homes.

Even when the public is involved, it is appropriate to undertake a technical analysis of alternatives. This will usually comprise a rapid assessment that is of sufficient detail to determine the preference for the various options, rather than to provide detailed quantified information on environmental impacts. In exceptional circumstances, where two or three (rarely is it more) options are closely matched on environmental, financial and engineering grounds, a detailed assessment of the two or three proposals might be required.

When comparing alternatives, simple techniques tend to work well, only moving on to a more complex analysis where the simple approaches do not provide a clear answer. Simply listing the environmental advantages and disadvantages of the options may be sufficient to identify the most appropriate. An alternative is to use a matrix. This would have environmental factors on one axis and the options on the other. The environmental impacts can be summarised or symbolised in each cell of the matrix. Using this method, the preferred option will often become clear, or as a minimum, the unacceptable options are quickly identified, so that only two or three require a more detailed analysis. It is possible to include financial and technical feasibility factors on the matrix so that all of the issues can be seen together. An example of a matrix is shown in figure 7.3. The process can be repeated for the different types of alternatives that can be considered. However, where there is a relationship between the site and the technology to be used this may be difficult to accommodate within this type of analysis.

A rating system can be used within the matrix to score the environmental effects. Whilst this can add clarity to the comparison there are some inherent problems with using this approach:

- Scoring can be subjective and is likely to be based on a range of assumptions and the values of those undertaking the assessment. Unless the matrix is accompanied by text describing the reasons for the scores awarded, the assumptions and value judgements remain hidden and would not be open to challenge.

- The lack of transparency of the reasons underlying the scoring might lead others to think that the consideration of alternatives is designed to support a decision that has already been made.

Further reading:

Environment Department, The World Bank (1996), *Analysis of Alternatives in Environmental Assessment*, The World Bank, Washington, http://wbln0018.worldbank.org/essd/essd.nsf/65ff65933c537f62852567eb00663455/88ea207ffa800d27852567f5005b37ae?OpenDocument

Jones, C E (1999), *Screening, Scoping and Consideration of Alternatives*, in Petts J (Ed.) (1999), *Handbook of Environmental Impact Assessment*, Volume 1, Blackwell, London

- The use of numerical scores can tempt the user to add the numbers to arrive at a score for the total impact of the project. However, this contains an assumption that different types of environmental impact can be traded off against each other and are of equal value, which is rarely the case. This can be overcome by incorporating weighting into the scoring system, but this again incorporates another set of assumptions and values into the calculation. As a result the quantitative system is no more objective than a more qualitative analysis.

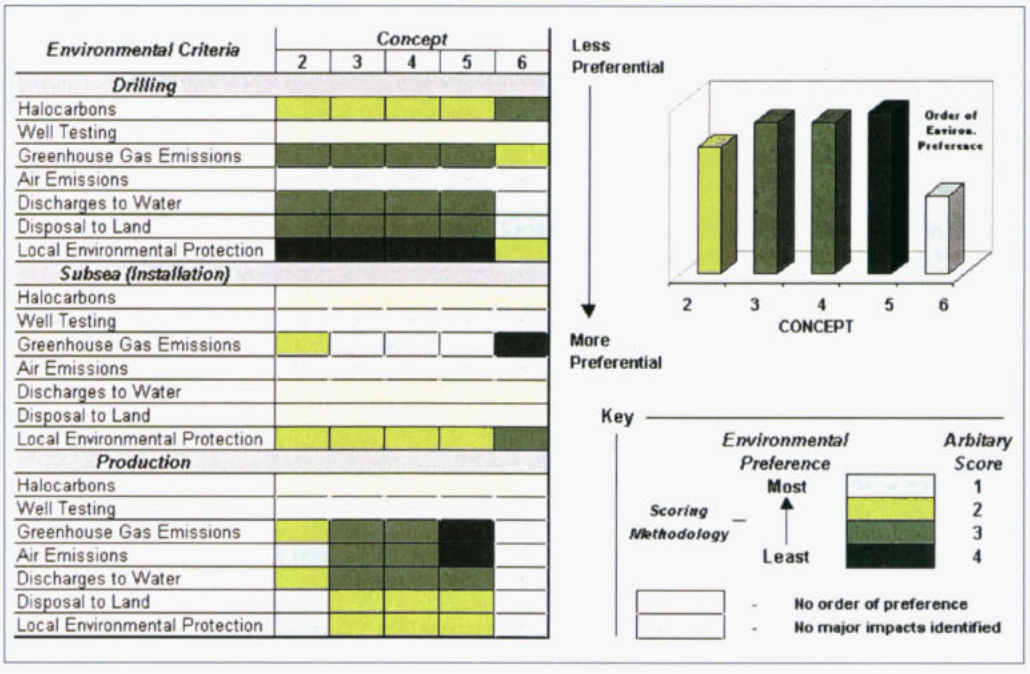


Fig 7.3
Alternatives matrix
The matrix compares the environmental effects of different technical solutions for developing the Atlantic and Cromarty gas fields

Source: Atlantic & Cromarty Field Owners (2002), Atlantic & Cromarty Landfall Application Environmental Statement, Atlantic & Cromarty Field Owners

An alternative is to use a ranking system that compares each of the options against the environmental factors / criteria selected. This helps to demonstrate the option that performs best against a range of environmental criteria. However, this might only be the appropriate choice if the environmental criteria are considered to be of equal weighting. Again, as with the rating system, it will be necessary to make any assumption explicit when ranking the options.

Other tools can be useful for assessing alternatives. Geographical Information Systems can help to clarify the location of sensitive sites and receptors and therefore assist in the selection of an appropriate site or corridor for a proposal.

Regardless of the approach or the method adopted to assess alternatives, it is important to ensure that the process is a transparent one. Any assumptions or values that underlie the analysis should be made explicit. In the event that other parties disagree with the conclusions, this approach should help to clarify where the root of the disagreement lies.

The consideration of alternatives occurs at the beginning of the process as this is when the most significant decisions concerning the nature of the project are made. However, when the results of any analysis are recorded in the Environmental Statement these may be distributed throughout the document. For example, major decisions concerning the nature of the development may form part of the description of the proposal, whereas information on alternative construction techniques may be referred to in a section regarding the mitigation of noise impacts. Therefore a summary of the various alternatives considered is useful for ease of reference.

Summary

- A thorough consideration of alternatives is important to minimise the environmental impact of a proposal, and to the credibility of an application for development.
- To be most effective, alternatives need to be considered from the outset of planning a project
- For most projects, a range of alternatives are available, from strategic alternatives to alternatives for detailed mitigation measures
- Adopting a systematic framework for considering alternatives will help to ensure that all of the opportunities for examining options are taken
- Establishing an understanding of the underlying objectives of a proposal is critical to the creative process of developing strategic alternatives
- Alternative sites should generally be considered, but there are some circumstances where it might not be appropriate, or the scope to search for alternative sites is limited.
- Considering alternatives with the participation of other organisations and members of the potentially affected communities, will help to demonstrate that the exercise is not designed to support a preconceived proposal
- Where possible, use simple techniques to compare alternatives, only moving on to a more complex analysis where a clear answer is not provided.
- Make all assumptions and values, on which the comparison of alternatives is based, explicit
- Be aware of, and make explicit, any trade offs between different types of environmental impact if using rating or ranking approaches.

References

Council Directive 97/11/EC of 3 March 1997 amending Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment.

Environment Department, World Bank (1996), Environmental Assessment Sourcebook Update: Analysis of Alternatives in Environmental Assessment, No. 17, World Bank.

UNECE, Convention On Access to Information, Public Participation in Decision-Making and Access to Justice In Environmental Matters Done at Aarhus, Denmark, on 25 June 1998, Atlantic & Cromarty Field Owners (2002), Atlantic & Cromarty Landfall Application Environmental Statement, Atlantic & Cromarty Field Owners

EAG Environ (2000), Swiss Re Environmental Statement Part 1.

8.0 Screening

8.1 The Purpose of Screening

Development proposals undergo the process of screening in order to determine whether or not they require Environmental Impact Assessment (EIA). The aim of screening is to ensure that those projects, which are likely to have a significant impact on the environment, undergo a formal assessment of their environmental effects.

8.2 The Legal Context

In the UK there is no formal requirement for the Developer to make an application to the LPA for a screening opinion prior to submitting an application, and screening therefore presents something of a dichotomy – how does one know whether the proposal is likely to have significant effects on the environment without carrying out the assessment itself? [70] However, a screening mechanism is provided in the EIA Regulations for Planning in England and Wales. This prescribes the process that should be followed in order to reach a screening decision (see section 8.3). Two documents, Circular 02/99 'Environmental Impact Assessment' and 'EIA: A Guide to Procedures' both contain specific information and guidance relating to the elements of the screening process contained in the Regulations. More information on the Circular 02/99 is provided in section 8.4 – Determining Significance.

8.3 The Screening Process

8.3.1 Screening by Local Planning Authorities

On receipt of an application which a local planning authority believes may constitute an application for EIA development it is under a duty to screen it to see whether an EIA is required unless there is already a screening opinion to the effect that it is not.[71] It should give its view to the applicant within 3 weeks after receipt of the application.[72] This is known as a "screening opinion". The pre-application request procedure is illustrated in Figure 8.1.

Where an applicant wishes to prompt the local planning authority to address the question then there is now a procedure whereby a screening opinion can be requested. This request can be made before or after the application has been submitted. The procedure is governed by Regulation 5 and may be summarised as follows:

- a request must be in writing accompanied by a plan, and a description of the proposed development, and of its possible effects on the environment.[73] This requirement is considered in more detail in 8.3.4 below

- the local planning authority may conclude that it has insufficient information to respond to the request, in which case it may ask for further information to be

[70] This being said it was accepted by the Court in R (on the application of Jones) –v- Mansfield District Council (2003) that a lesser degree of information was required when making a screening decision than when carrying out a full EIA

[71] Regulation 7(1)

[72] Regulation 7(3) , although it was held in British Telecom –v- Gloucester City Council and Arrowcroft plc (2001) that failure to require an EIA within this 3-week period did not alter the fact that the LPA can still require an EIA at any time prior to the grant of permission

[73] Regulation 5(2)

supplied.[74] Otherwise it must respond to the request within 3 weeks after receiving it, or such longer period as may be allowed by the applicant;[75]

- if the local planning authority has not responded within the period allowed, or have responded that an EIA is required, then an appeal may be made to the Secretary of State for him to determine whether an EIA is required[76] (the latter applies whether or not the screening opinion was requested).

In practice it will usually be the planning case officer who determines whether an EIA is necessary. If his view is that it is not then care must be taken to ensure that he has properly delegated authority to make this determination on behalf of the local planning authority.[77]

Many local planning authorities have articles of delegation for officers which refer to certain Acts of Parliament and any Regulations passed under them, allowing decisions to be taken by the officer where they derive from those Acts or Regulations. If this is the case then it should be noted that, technically, the Regulations are passed under the European Communities Act 1972 (as they implement an EC Directive), and not the Town and Country Planning Act 1990. Articles of delegation referring solely to certain Acts of Parliament but which do not include the European Communities Act 1972 technically may not allow planning officers to take decisions based on the Regulations.

If there is any doubt as to whether the officer has delegated authority then the relevant Committee should be asked to ratify the decision.[78]

8.3.2 Screening by the Secretary of State

The Secretary of State may make a screening direction at any time prior to the grant of planning permission, regardless of whether he has been asked for his opinion or not.[79] Opinions of the Secretary of State are known as "screening directions". The process of this is summarised in Figure 8.2. In the same way as for local planning authorities the Secretary of State is under a duty to screen any application put before him (whether following a call-in or an appeal) if there is a chance that it may be an application for EIA development.[80] Regardless of the determination of the local planning authority at application stage the question of whether an EIA is required is considered afresh by the Secretary of State whenever an application is put before him through an appeal or a call-in [81], and either he or his Inspector can require an EIA whether or not the local planning authority did at application stage.

As has been noted above an applicant is entitled to appeal to the Secretary of State if the local planning authority has either:

- not determined its request for a screening opinion within the requisite time; or
- has determined that it is an application for EIA development and the applicant disputes this determination.

An appeal must be accompanied by any information relevant to the request made of the local planning authority, plus such additional representations as the applicant wishes to make.[82] The appeal must be copied by the applicant to the local planning authority.[83]

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74 Regulation 5(3)

75 Regulation 5(4)

76 Regulation 5(6)

77 For a case where there was no adequate delegated authority see R -v- St Edmundsbury Borough Council, ex parte Walton (1999)

78 For more discussion on this point see Chapter 14.0 – Review and Decision-Making

79 Regulation 4(7)

80 Regulation 8(1)

81 Regulation 8

82 Regulation 6(1)

83 Regulation 6(2)

The Secretary of State may also request additional information from the applicant in order to determine the question for himself.[84] Otherwise he has 3 weeks, or such longer period as he may require, to determine the question for himself following receipt of the appeal.[85]

8.3.3 Voluntary "Screening"

Whilst the developer can apply to the LPA for an opinion on whether EIA is needed for a particular development, it is also possible for the developer to conduct its own screening exercise and decide whether an ES should accompany their planning application. Applicants who decide to undertake their own preliminary surveys should ensure that they are familiar with EIA and planning law as submission of an application without an ES is automatically assessed by the LPA as a request for a screening opinion. If they make the wrong decision and do not carry out an EIA when one is required, they will still be asked to carry one out when the planning application is submitted. Carrying out screening in conjunction with the authority would ensure that the developer avoids any delay in their application in the event that an ES is actually required.

Alternatively, the developer may consider it to be within its own best interests to submit an ES of its own free will. This would act as a vehicle by which to demonstrate the incorporation of environmental concerns at the outset of a project. However, the submission of an ES would only make the application one for EIA development once it has been established that the ES is one that is intended to be submitted under the Regulations.

It is possible for developers and LPAs to seek advice from independent third parties when determining their opinions in difficult cases. This may be undertaken if they wish to use the expertise of those that have a wider experience of EIA, or, in the case of LPAs, may wish to demonstrate objectivity and transparency in the screening of their own developments.

8.3.4 Information Required for Screening

Certain information should be submitted to the determining authority when requesting a screening opinion (see section 8.6). This may take the form of a screening report, that includes the required information and suggests a conclusion based on the developers own evaluation. Box 8.1 illustrates the basic information that should be submitted. The determining authority may contact other statutory authorities for advice concerning the proposed development in order to assist with the making of their decision. If there is

Box 8.1
Basic information to be included when submitting a request for a screening opinion

- **A plan sufficient to identify the land:**
  Required for the authority to understand the relationship between the site and any surrounding features of interest. Ideally the plan should identify adjacent land uses, potential environmental receptors, relevant transport links, proximity of residential and commercial properties, and the topography of the area.
- **A brief description of the nature and purpose of the development and of its possible effects on the environment:**
  The fundamental features of a development should be identified. It is also important to discuss a development's purpose and objectives. An indication of the environmental effects that are likely to result from the proposal should be given. This information should be as clear as possible in order for the determining authority to make an appropriate decision. Where any uncertainties exist it is advised to consider a worst case environmental impact and state that this is the case. It is unlikely that the predicted environmental effects will be quantifiable at this stage.
- **Such other information or representations as the person making the request may wish to provide or make:**
  Ideally, this should provide the LPA with any other relevant information associated with the environmental effects of a development. This could include details of other consents that will be required/have been granted.

Source:Based on Circular 02/99

[84] Regulation 6(3)

[85] Regulation 6(4)

incomplete or unavailable information, or alternatively uncertainty regarding the potential environmental consequences of the project, a worst-case approach should be adopted. It is important that all the necessary information is provided to the determining authority in order for them to make an informed decision. In the circumstances where full information is not provided, the LPA should seek further information or direct that an EIA is required. It is important that the outcome of the process is determined based on the likely significant environmental impacts and not the controversy or profile of the development.

8.3.5 Keeping Screening Under Review

It is possible that there will be new information coming to light during the course of the application process which was not known of when a screening opinion or direction was issued. In those circumstances there is a questions as to whether there is a duty to review the continuing appropriateness of the screening opinion or direction.

The answer was provided by the Court in the Fernback case.[86] In that case the local planning authority had screened an application and concluded that EIA was not required. Subsequently new information on traffic impacts came to light, and it was alleged by the challengers that the local planning authority were under a duty to reconsider their negative screening opinion. The Court rejected this submission, holding that whilst the local planning authority is entitled to review a screening opinion it is under no duty to do so. Part of the rationale applied by the Court for this approach relied on the residual power of the Secretary of State under Regulation 4(7) to issue a screening direction at any time before planning permission were granted. In similar fashion, in an inquiry context the Court of Appeal[87] rejected the suggestion that having regard to the Secretary of State's residual power under Regulation 4(7) an Inspector must refer any negatively-screened case to the Secretary of State on the off-chance that he may choose to exercise this power.

8.3.6 Publicity for Screening Opinions and Directions

Copies of any screening opinions or directions must be placed on the public register by the local planning authority.[88]

8.3.7 Failure to Comply with a Screening Opinion/Direction

Failure to provide an ES following a positive screening opinion or direction does not mean that the application is invalid, or that it should not be registered. However, it does mean that planning permission cannot lawfully be granted, and in practice the application is unlikely to be progressed. An appeal on the basis of non-determination of the application would be fruitless if the Secretary of State took the same view on the need for the EIA. If the local planning authority notifies the applicant that it believes that the application requires an EIA then regulation 7(4) provides that, within a period of 3 weeks from the notification, the applicant must either (a) confirm that it accepts this determination and that it will be providing an ES, or (b) provide notification that it has appealed to the Secretary of State against the determination. Failure to do one of these within the 3-week period means that the planning application is refused, with no right of appeal (regulation 7(5)).

8.4 Determining Significance

The assessment of whether the proposal will lead to significant effects is one for the determining authority, not the consultant or developer. They can suggest a conclusion based on the factors to be considered, such as relationship to indicative thresholds, but the final opinion rests with the determining authority.

It is important to note that "significant environmental effects" are not limited to negative effects. It has been established[89] that an assessment which ignores what may be significant positive effects is flawed.

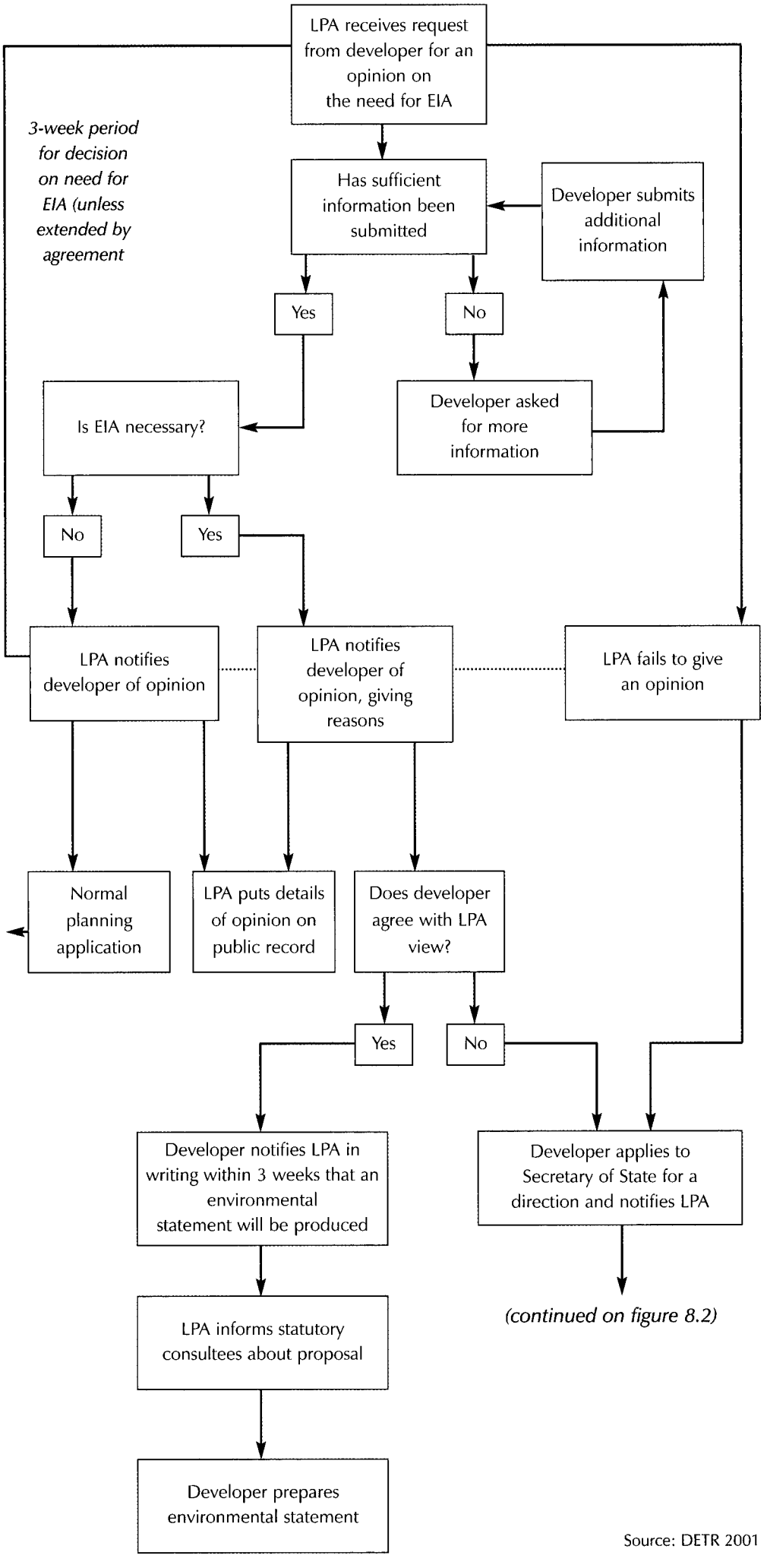
[86] R –v– Harrow LBC ex parte Fernback and others (2001)

[87] Berkeley –v– Secretary of State, LB Richmond and Berkeley Homes (West London) Limited (2001)

[88] Regulation 20(1)

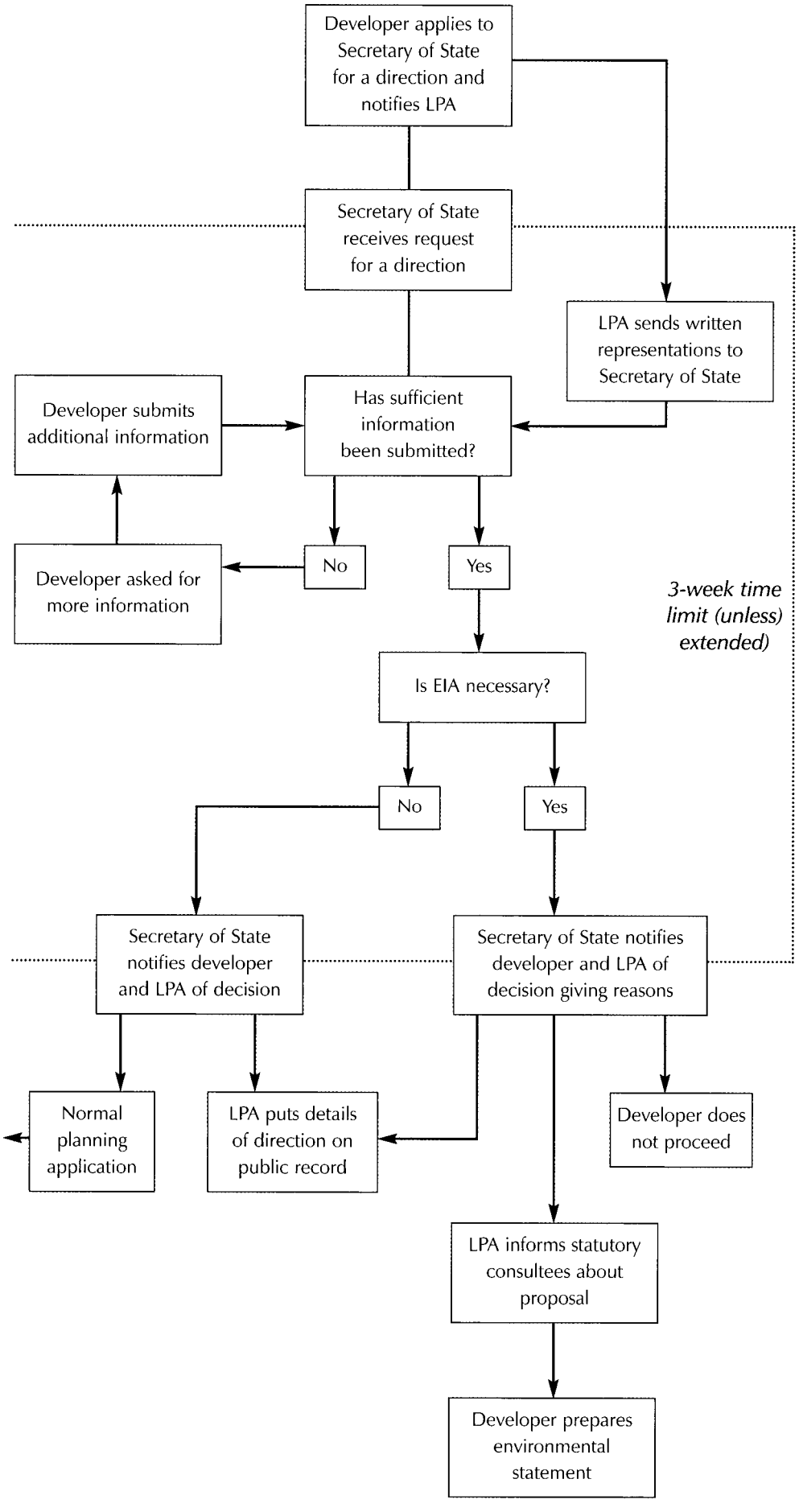
[89] British Telecommunications plc –v– Gloucester City Council and Arrowcroft plc (2001)

Figure 8.1a
Screening flow chart
Pre-application request by developer to local planning authority for screening opinion



Source: DETR 2001

Figure 8.1b
Screening flow chart
Pre-application request to Secretary of State for screening direction



Source: DETR 2001

Box 8.2
Schedule 3 –
Screening Criteria

1. Characteristics of development

The characteristics of development must be considered having regard, in particular, to -

(a) the size of the development;
(b) the cumulation with other development;
(c) the use of natural resources;
(d) the production of waste;
(e) pollution and nuisances;
(f) the risk of accidents, having regard in particular to substances or technologies used.

2. Location of development

The environmental sensitivity of geographical areas likely to be affected by development must be considered, having regard, in particular, to -

(a) the existing land use;
(b) the relative abundance, quality and regenerative capacity of natural resources in the area;
(c) the absorption capacity of the natural environment, paying particular attention to the following areas -
  (i) wetlands;
  (ii) coastal zones;
  (iii) mountain and forest areas;
  (iv) nature reserves and parks;
  (v) areas classified or protected under Member States' legislation; areas designated by Member States pursuant to Council Directive 79/409/EEC on the conservation of wild birds and Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora;
  (vi) areas in which the environmental quality standards laid down in Community legislation have already been exceeded;
  (vii) densely populated areas;
  (viii) landscapes of historical, cultural or archaeological significance.

3. Characteristics of the potential impact

The potential significant effects of development must be considered in relation to criteria set out under paragraphs 1 and 2 above, and having regard in particular to -

(a) the extent of the impact (geographical area and size of the affected population);
(b) the transfrontier nature of the impact;
(c) the magnitude and complexity of the impact;
(d) the probability of the impact;
(e) the duration, frequency and reversibility of the impact.

Source: Statutory Instrument 1999 No. 293 The Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999

Schedule 3 of the Regulations provides evaluation criteria that decision makers must use for screening Schedule 2 developments. Developers can also use these when screening their own projects. They are divided into three broad headings:

- characteristics of development
- location of development
- characteristics of the potential impact

These selection criteria are designed to identify the key issues for determining the possible effects the development might have on the environment and are reproduced in Box 8.2.

Circular 02/99 identifies that EIA will generally be needed for Schedule 2 developments in three main types of case:

(i) major developments which are of more than local importance;
(ii) developments which are proposed for particularly environmentally sensitive or vulnerable locations; (Those areas that are deemed to be "sensitive" are listed in Regulation 2(1)).
(iii) developments with unusually complex and potentially hazardous environmental effects

Annex A of Circular 02/99 introduces a further measure that can be used to indicate the type or scale of development, which is likely to require EIA. Indicative thresholds and/or criteria have been included for each category in Schedule 2. These are not to be treated as strict rules as there may be circumstances where a significant impact may be caused by a development which falls below the threshold level. For example, a sewage treatment works that takes up a small area of land may located on a site that is important for ecological, geological or cultural heritage reasons. Annex A of the Circular also gives suggestions of the types of impact that are most likely to be significant for particular types of development.

EC Screening Guidance
The screening guidance is available from the European Commission or can be downloaded from their website: http://europa.eu.int/comm/environment/eia/eia-support.htm

None of these methods can absolutely determine that a particular type of development would never give rise to significant effects. The guidance is designed to inform a case-by-case judgement. It is therefore important to focus on the location, scale and nature of the development when determining whether significant effects on the environment are possible. If there is uncertainty regarding the significance of effects the screening decision should encourage EIA, as this process will help to clarify the uncertainty.

1. Will there be a large change in environmental conditions?
2. Will new features be out-of-scale with the existing environment?
3. Will the effect be unusual in the area or particularly complex?
4. Will the effect extend over a large area?
5. Will there be any potential for transfrontier impact?
6. Will many people be affected?
7. Will many receptors of other types (fauna and flora, businesses, facilities) be affected?
8. Will valuable or scarce features or resources be affected?
9. Is there a risk that environmental standards will be breached?
10. Is there a risk that protected sites, areas, features will be affected?
11. Is there a high probability of the effect occurring?
12. Will the effect continue for a long time?
13. Will the effect be permanent rather than temporary?
14. Will the impact be continuous rather than intermittent?
15. If it is intermittent will it be frequent rather than rare?
16. Will the impact be irreversible?
17. Will it be difficult to avoid, or reduce or repair or compensate for the effect?

Source: ERM, 2001.

Box 8.3
European Commission Checklist of Criteria for Evaluating the Significance of Effects

Additional guidance is available from the European Commission (ERM, 2001). The guidance covers much the same ground as the UK specific guidance referred to above. However, it does also include additional tools to assist those that are screening projects. These include:

- A checklist of information required for screening, designed to assist determining authorities to check that they have sufficient information on which to base a screening decision
- A screening checklist that assists the user to think systematically about the project and its potential environmental effects
- A checklist for evaluating effects, designed to assist the user to take an overview of the potential environmental effects (Box 8.3)

It is important to note that none of these tools will provide the answer to whether an EIA should be required. They are designed to help the user to undertake a systematic analysis that results in a rational decision.

8.5 How can LPAs incorporate Screening into their Procedures?

The screening process is vulnerable to legal challenge in two key areas. The first is that a project that should have been considered for EIA is not formally screened at all. The second is that a decision is taken not to require an EIA, when most reasonable people would have required one. The first is more likely to lead to a challenge than is the second. The defence against either of these is to have a robust systematic procedure that ensures that the need for an EIA is appropriately considered.

In cases where there is a judgement that could have gone either way, the Courts will not interfere with the judgement of the local planning authority unless the decision were taken unreasonably. It is therefore more likely that difficulties could be experienced if a project is not subjected to a formal screening procedure when it does fall within the scope of the Regulations. This is only likely to occur when a planning application is submitted without an ES, rather than when the local planning authority is asked for a screening opinion.

The most robust way of ensuring that all projects that could be subject to an EIA are screened is for the LPA to insert an additional step in the practice of registering planning applications. This need not be onerous. For the majority of applications, it will simply be a case of determining whether the project is one that is listed within the Regulations. Only if the answer is 'yes' to this questions will a more detailed analysis be required. An internal procedure can reflect the screening procedure that is illustrated in Circular 02/99 and shown as Figure 8.1. Simplified, the requirements of screening indicate that there should be a three step process:

- **Step 1:** Is the project listed in (Schedule 1 or Schedule 2 of the Regulations). If so:
- **Step 2:** Is the project on a mandatory list requiring EIA? If not:
- **Step 3:** Case by case screening – is the project likely to have significant effects on the environment?

Case by case screening is likely to require the application of some of the tools referred to earlier. Those provided in the European Commission guidance provide a good starting point. It should be recognised that this guidance has been drawn up to be applicable across the member states of the European Union and users of the guidance are encouraged to add to it and adapt it to make it more relevant to their local circumstances.

Whilst an LPA is not obliged to give reasons for its screening opinion, if it does so then the Courts are entitled to explore those reasons.[90]

8.6 Legal challenges based on screening: some practical points

8.6.1 Timing of a challenge?

In at least one case[91] it was held that, where the only complaint was that a negative screening opinion had been issued by the LPA and it was alleged that an EIA should have been required, the challenge ought to be to the screening opinion itself and not to the eventual grant of planning permission.

The significance of this rests with the timing requirements for such a challenge. Challenges by way of judicial review must be commenced "promptly and in any event within 3 months after *the date on which the grounds of challenge first arose*"[92] (emphasis supplied). If in truth the grounds first arose when the screening opinion was issued then it is likely that more than 3 months will have expired by the time the permission is granted, and so any judicial review complaining only about the screening opinion would arguably be too late.

[90] R (on the application of Lebus) –v– South Cambridgeshire District Council (2002)

[91] R (on application of Malster) –v– Ipswich Borough Council (2001)

[92] Civil Procedure Rules, Part 54

It is unlikely that this rule will be applied strictly in all cases[93], not least because judicial guidance on the timing for commencing judicial review proceedings has since been clarified[94], but it should be borne in mind.

8.6.2 Mitigation measures and the screening process

The extent to which the LPA (or the Secretary of State at inquiry) are entitled to have regard to the effects of proposed mitigation measures has been questioned. If they were to be taken into account an authority could screen an application negatively on the basis that, with the proposed mitigation measures, there will be no significant environmental effects.

Challenges on this point issue have gone both ways.[95] As at July 2003 the definitive statement is found in the Court of Appeal judgment in the case of *Gillespie*[96] and may be summarised as follows:

- the decision-maker is not obliged to ignore remedial measures which form part of the proposals;
- the complexity of remedial measures will differ. Some will be standard (e.g. as found in model planning conditions), others will be more complex; and
- where remedial measures are "modest in scope ... or plainly and easily achievable", or where their "nature, availability and effectiveness are already plainly established and plainly uncontroversial" then it is permissible to have regard to them when assessing the resultant environmental effects of a development.[97]

8.6.3 Information necessary to screen an application

As has been noted above, the Courts have accepted that the level of information required at the screening stage is less than that which would be required as part of an EIA.[98]

To the extent that there is consistency in judicial decisions it can be seen that there is a difference between cases where there was no relevant information available about certain environmental effects, and cases where there was some limited information. In the former cases the challenges were more likely to be successful; in the latter cases the Courts have usually found a way of holding that there was sufficient information available for the LPA to reach a judgment, and that that judgment had not been arrived at unreasonably.

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93 It was expressly distinguished on the facts in a subsequent case, R (on the application of Lebus) –v- South Cambridgeshire District Council (2002)

94 House of Lords judgment in R –v– LB Hammersmith & Fulham, ex parte Burkett (2002)

95 A useful summary of the relevant judgments, and the reasons for them, is to be found in the case of R (on the application of PPG11 Ltd) –v– Dorset County Council and Viridor Waste Management (2003)

96 Gillespie –v– First Secretary of State and Bellway Urban Renewal (2003)

97 On the facts of the case the Court was not satisfied that the Secretary of State had complied with these principles, and so the challenge succeeded

98 R (on the application of Jones) –v- Mansfield District Council (2003)

Summary

- Screening aims to ensure projects likely to have a significant impact on the environment, undergo a formal assessment of their environmental effects.
- Screening can be performed by the developer, the LPA or the Secretary of State (SoS), although the assessment of whether the proposal will lead to significant effects is for the determining authority. Screening in conjunction with the authority prevents later delays in the event that an ES is actually required.
- Screening should focus on the location, scale and nature of the development when determining whether significant effects on the environment are possible.
- If there is uncertainty regarding the significance of effects the screening decision should encourage EIA.

References

ERM (2001), Guidance on EIA: Screening, European Commission, Luxembourg.

DETR (1999) Circular 02/99: Environmental Impact Assessment

DETR (2000) Environmental Impact Assessment: A Guide to Procedures, Thomas Telford Publishing, Kent.

ERM (2001) Guidance on EIA: Screening, European Commission, Brussels.

HMSO (1999), Statutory Instrument 1999 No. 293, The Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999, HMSO, London

Weston, J (2000) Screening, Scoping and ES Review under the 1999 EIA Regulations, Working Paper No. 184, Oxford Brookes University School of Planning, Oxford.

9.0 Scoping

9.1 What is scoping?

Scoping is the process of identifying the issues to be addressed by an EIA. It is a method of ensuring that an EIA focuses on the important issues and avoids those that are considered to be less significant. This helps to ensure that EIA is a cost efficient process.

Scoping can, given the appropriate time and resources, help to ensure that the Environmental Statement that is submitted to the approving authority is of sufficient quality. This will have the benefit of minimising the need to gather additional information after the ES has been submitted, and should speed up the decision making process.

If the scoping process is a participative one, as recommended by these guidelines, then it can also help to build confidence among concerned organisations and the public that the environmental issues are being dealt with in a fair and comprehensive fashion. Scoping also provides an opportunity for these parties to provide additional information relating to the proposal; this may include additional alternatives that should be considered as part of the EIA.

9.2 The legal context

In the UK there is no formal requirement for scoping to be undertaken, although provision for it is made in the legislation. Nevertheless, it is a matter of good practice in terms of the protection of the environment and in terms of the cost efficiency and effectiveness of the EIA. Scoping is also encouraged by the Directive by making provision for the determining authority to provide a scoping opinion to the developer.

9.2.1 Scoping by Local Planning Authorities

Schedule 4 to the Regulations contains a list of matters that should be considered when undertaking an EIA. With the exception of the minimum requirements set out in Part 2, the information need only be provided if it is reasonably required to assess the effects of the proposal. Therefore, if the development will not affect some of these factors then there is no need to incorporate them into the scope of the EIA. If a formal view on the matters to be included within an Environmental Statement is sought then an application to the local planning authority for a "scoping opinion" can be made. The procedure is found in Regulation 10 and may be summarised as follows:

- a request must be made in writing and be accompanied by the same information as is required to accompany a request for a screening opinion (see above)[99]
- before responding the local planning authority must consult with the "consultation bodies" specified in Regulation 2(1);[100]
- the local planning authority have 5 weeks after receipt of a request, or such longer period as may be agreed, within which to rule on the scope required for the Environmental Statement.[101]

If the local planning authority wish to see additional information to that provided then they may request it. The applicant is not under any obligation to respond to this, but it may later hamper the application if the ES does not address the issues that are considered to be important by the authority.

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99 Regulation 10(2)

100 These include any other local planning authority, English Nature and the Environment Agency

101 Regulation 10(4)

9.2.2 Scoping by the Secretary of State

An applicant may appeal to the Secretary of State against a failure to give a scoping opinion within the time allowed[102], but there is no appeal against an opinion which is disputed. Determinations by the Secretary of State are known as "scoping directions".

Appeals to the Secretary of State are dealt with under Regulation 11. The procedure is similar to that for appeals against screening opinions, and the applicant must provide a copy of any material relevant to the request made of the local planning authority. The Secretary of State has 5 weeks from the date of receipt of the appeal to determine the scoping, or such longer period as he may require.[103] As with screening, the Secretary of State may determine the question of scoping afresh when an application is put before him on a call-in or appeal.

9.2.3 Publicity for Scoping Opinions and Directions

As with screening opinions and directions, copies of any scoping opinions and directions must be placed on the public register by the local planning authority.[104]

9.2.4 Failure to Comply with a Scoping Opinion/Direction

Non-compliance with a scoping opinion or direction does not mean that the Environmental Statement is invalid, but it may lead to a refusal of planning permission or a request for additional information under Regulation 19.[105]

9.2.5 Consultations

Consultations with statutory consultees (e.g. English Nature or Scottish Natural Heritage) normally take place after the application for a scoping opinion has been submitted. The approving authority provides a letter outlining the impacts that are considered to be important, or suggests changes to the draft received from the developer or their advisers. The establishment of a formal system for seeking a scoping opinion does not preclude the developer from having more informal discussions with the approving authority or statutory consultees.

9.3 Methods of scoping

Scoping is the basis for an efficient EIA process by identifying the key impacts to be addressed and setting the boundaries of the EIA. Scoping can be characterised as a process of communication, analysis and negotiation:

Box 9.1
Scoping: Current Practice in the UK

A scoping report may be drafted by the developer, commented on by the approving authority and statutory consultees (who tend to add rather than take away issues to be addressed) and then agreed. The result of this is that many ESs cover a range of impacts, many of which are considered not to be significant. The result is large ESs which, whilst comprehensive, arguably add as much confusion as clarity to the decision making process and waste money.

Scoping was first developed to reduce the number of impacts that are addressed by an EIA rather than as a means for people to add more impacts requiring a detailed assessment. All practitioners, but especially approving authorities, have an important role to play in ensuring that the scope of an EIA is focused only on key impacts.

102 Regulation 10(7)

103 Regulation 11(4)

104 Regulation 20(1)

105 See paragraphs 95-96 of Circular 2/99

Communication:
An EIA should not just focus on the issues that are considered to be important by those undertaking the study. The concerns of those that are likely to experience the environmental effects are important as are the views of the statutory authorities that have a role in protection of the environment. Scoping should be an open and participative process, but this should complement, not replace the application of technical analysis and professional judgement.

Analysis:
Inviting the participation of a range of organisations and individuals will inevitably result in an increase in the number of issues to be assessed. Added to this, there can be a desire among Government authorities and organisations to use an EIA as an opportunity to gather information about a site and the surrounding area that is not directly related to the potential impact of the project. Therefore, the wide range of issues that may be identified during consultation and participation should then be subject to a process of analysis which determines whether they are likely to be significant and whether they can be considered to be key issues on which the EIA should focus.

Negotiation:
Negotiations with approving authorities and other interested parties should further refine the scope of the EIA to focus on those issues that are the most important. Such negotiations should focus on the basis on which the participants in the process consider the issues raised to be important. The involvement of a range of participants in one meeting may help to achieve a concensus on the important issues.

While this may appear to be a time consuming process, it need not take an inordinate amount of time and is likely to result in time and resource savings later in the process. However, it should be recognised that it does require the co-operation of all those participating in this stage of the process. It can be helpful to ask the approving authority to coordinate the scoping responses. This enables them to determine a consensus on what is considered to be important.

The process recommended above should not imply that the issues raised that do not make it into the final scope of the EIA should be ignored. Part of the process of analysis and negotiation should be setting out clearly the reasons why a particular issue is not considered to be significant and therefore warranting a detailed assessment. It is worth including this analysis in the final version of the scoping document. Similarly, these arguments should also be contained in the ES. These steps will add transparency to the process and will demonstrate that the developer has not attempted to ignore potentially important issues.

A range of methods can be adopted for identifying the key issues to be covered in an EIA. In the UK, the focus is on the professional judgement of those undertaking the EIA and stakeholders. Formal methods are less frequently used, but nevertheless can prove useful to check that no issues have been overlooked and as a means of presenting the issues that are considered to be the most important in the ES.

Scoping should commence once there is enough information on the project, the proposed site and potential alternatives to draw up an initial list of issues that will need to be addressed. This information will need to be included in a draft scoping report or some other form of documentation to enable those who wish to participate in the process to do so with a reasonable understanding of the proposal. The information required will be similar to that referred to for screening, but additional detail is likely to be available when scoping the EIA. The developer should provide as much information as is available when the scoping of the EIA commences. If additional information becomes available during the process, this should also be included. This is consistent with the concept of the scoping report being a working document.

9.3.1 Professional judgement

In setting the initial scope of the EIA, prior to any consultation, the prime method employed will be the use of the professional judgement of the EIA team or those responsible for the

scoping process. This may be applied in a structured fashion, such as a structured workshop or 'brainstorming' session. The opinions that result from this should be regarded as ideas on which to seek the views of others, rather than a position that needs to be defended. It should be remembered that the views expressed are only one perspective on the project and its associated impacts.

Fig 9.1
Workshops or brainstorming sessions can be used to initially scope an EIA

Photo:
Terence O'Rourke Ltd

In the application of professional judgement, other sources of information can offer assistance. For example:

- Environmental Statements for similar types of project or for projects that are in close proximity to the proposed site
- Planning policy guidance that may be relevant to issues associated with the proposal (e.g. PPG 9 should be consulted for projects that are close to sites of nature conservation interest)
- Guidance documents for the particular type of project being proposed (roads, flood defence, waste, etc)
- Environment Agency Scoping Guidance notes (which cover 76 different types of development)

9.3.2 Seeking the opinions of others

Consultation over the scope of an EIA, since the implementation of the 1997 amending Directive, has concentrated on the opinions of the approving authority, advised by statutory consultees. It is recommended that the consultation net should be spread wider than this to include non-Governmental organisations and the affected public. Box 9.2 provides a list of the types of organisation that should be contacted. This is essential in order to gain a range of different perspectives on what is considered to be significant. A developer or author of an ES can not claim that an EIA has addressed all of the key issues if no effort has been made to consider the perspective of the affected community.

The form of consultation can draw on a range of methods and should be suited to the particular proposal. Therefore, the opinions of other organisations can be gathered by telephone, letter or face to face meetings, as is appropriate. The selection of methods for gathering the views of the public are particularly important. Other publications provide detailed information on the methods available, their uses and advantages and disadvantages[106] (eg IEMA, 2002). Nevertheless, the following should be borne in mind:

[106] IEMA (2002), Guidelines on participation in environmental decision-making, Perspectives Series, IEMA, Lincoln

- A reasonable amount of time for public participation should be provided. Rushing out information and hastily arranged meetings may give the impression that the developer is not genuinely interested in gathering the views of the affected community
- A more substantive input may be received by adopting methods that require personal contact with the public. Public meetings tend to only benefit those that are confident at public speaking or those that are vociferously opposed to the project. Others may be more inclined to offer their views at exhibitions or workshops where small groups discuss the EIA.
- Using smaller focus groups or community liaison groups may provide more detailed input into the scoping exercise; however, it is important to ensure that the group is representative of the affected community.
- In the event that a public meeting is held it might be appropriate to appoint an independent chair for the meeting. This will help to avoid confrontation between objectors to the project and the developer and will facilitate the meeting concentrating on identifying the issues of concern.
- The emphasis of any participation programme should be on listening to and gathering the views of the public, rather than promoting the project or indeed listening to objections to the project that do not relate to the environmental effects. This should be explained at the outset.
- A participation programme will only retain its credibility if the information gathered is seen to affect decisions, e.g. the scope of the EIA changes or specific comments are addressed when explaining why an issue is not to be addressed in detail by the EIA.

Box 9.2 Checklist of organisations to contact for scoping an EIA

1. Environmental Authorities
- regional and local authorities
- authorities responsible for pollution control including water, waste, soil, noise and air pollution
- authorities responsible for protection of nature, cultural heritage and the landscape
- health and safety authorities
- land use control, spatial planning and zoning authorities
- authorities in neighbouring countries where transfrontier impacts may be an issue

2. Other Interested Parties
- local, national and international environmental and social interest groups
- sectoral government departments responsible for agriculture, energy, forestry, fisheries, transport etc whose interests may be affected
- international and transfrontier agencies whose interests may be affected e.g. cross-border river basin commissions
- local employers' and business associations such as Chambers of Commerce, trade associations, etc
- employees' organisations such as trades unions
- groups representing users of the environment, e.g. farmers, fishermen, walkers, anglers, tourists,
- local wildlife groups
- research institutes, universities and other centres of expertise

3. The General Public
- affected communities
- landowners and residents
- general members of the local and wider public
- elected representatives and community figures such as religious leaders or teachers;
- local community groups, residents groups, etc;

Source: Based on Environmental Resources Management, 2001

There can be a range of potential difficulties associated with public involvement and it is important that those undertaking a programme are aware of these:

- Identifying the public – projects rarely have a clearly identifiable community associated with them. Identifying those who should be consulted can be problematic. Clearly the

wider the public considered, the more expensive the consultation programme is likely to be.

- As a general rule of thumb, the greater the number of people involved in a participation programme the less depth there will be to the comments and opinions provided.
- Using proxy groups may not be representative – a potential short cut to consulting with the wider public may be to consult groups which might be considered to be representative, e.g. parish council or residential groups. However, it should be remembered that these may not be representative of the wider community. For example, the more affluent members of the community may be more likely to be involved in local politics than the less affluent members.
- Consultee overload – consultation with the public and other organisations is on the increase across a range of disciplines, and there is the potential that these groups may be less responsive to requests for information or opinions than would be preferred.
- The value of public input can be proportional to the information with which they have been provided. A decision to consult with the public places an obligation on the developer to provide good quality information on which the public can base their opinions.

9.3.3 Formal methods

The use of formal methods in scoping is covered extensively in the EIA literature (eg Canter, 1996). They comprise of, but are not limited to:

- Checklists
- Matrices
- Networks
- Overlays - largely superseded by the use of Geographical Information Systems

In practice their use is limited in EIA in the UK, with the exception of matrices which are often used in a scoping report or ES as a tool to illustrate the issues that are considered to be significant. Nevertheless, formal methods can be a useful check on the conclusions reached following the application of professional judgement and communication with other parties. For example, a checklist of issues to be included in an ES can be found in 'Environmental Impact Assessment: A Guide to the Procedures (DETR, 2000)' and the Environment Agency scoping guidance will also provide a useful check. In scoping guidance recently published by the European Commission a scoping checklist is provided to assist practitioners in identifying the key issues. It may also be helpful to consult the review checklist also published by the European Commission. This is a tool that may be used by some approving authorities to review an ES and therefore will give some indication of the anticipated requirements.

9.4 Outputs of the scoping process

Given the formal provision for a scoping opinion to be provided, it is common practice for a scoping report to be produced by the developer, his advisers or the approving authority. This should be a working document that alters as additional information, opinions and the results of analysis and negotiation are incorporated. When the ES is produced the scoping report should be included as an appendix. This enables the reader of the ES to verify whether the issues identified at the outset have been adequately addressed. The ES should also include a list of the organisations that were consulted, their views and concerns and how these have been addressed in the ES, or if they haven't, an explanation of the reasons for this.

As a minimum, the scoping report will include an outline of the proposal and of the site, and should identify the issues to be addressed by the EIA in sufficient detail so that the environmental factors to be investigated are unambiguous. It should be possible to use the information provided in the Environmental Statement to verify whether the issues set out in the scoping document have been addressed or not.

For example, it would be inappropriate to simply state that the EIA will assess the impacts of the project on the ecology of the site and the surrounding area. This statement lacks precision and gives no indication of the precise nature of the ecological interest on the site that should be investigated. Only on rare occasions would it be necessary for the impacts on all ecological groups to be assessed. Limiting the scoping report to a statement of this nature runs the risk of misallocating resources, as issues may be investigated that are actually considered to be insignificant. Also, the ES that results from the EIA may provide inappropriate information, as it has not concentrated on the issues that are important for that particular site. A more precise indication of issues to be addressed should be given, for example, stating that the EIA will assess the impacts on higher plants and breeding birds. This should be accompanied by an explanation of why these features are important.

Scoping should have a positive influence on the quality of the Environmental Statement. In addition, it should build the confidence of approving authorities, statutory consultees, non-Governmental organisations and the public that their concerns are going to be addressed by the EIA in a fair, objective and credible fashion. This can be achieved by identifying some or all of the following as deliverable aspects of the scoping process:

- details of the alternatives to be assessed
- the methods to be used to gather baseline data
- the methods to be used to predict impacts
- a significance framework and the significance criteria to be used for specific impacts. This could include details of legislative limits or standards to be used.
- the types of mitigation that will be under consideration
- details of consultation and participation programmes that are to be undertaken during the EIA

Used in this way the scoping not only identifies the significant issues to be assessed, but is a clear pointer to the nature of the information that is to be provided in the ES. In some cases sufficient information may not be available to provide the detail on all of these issues, but this should not preclude the information that is available from being provided. For outstanding issues, the scoping process could set out when and how a decision will be taken on additional items. For example, additional consultation with the Environment Agency may be the basis on which the need for soil samples to test for contaminated land might be decided.

An example of a scoping document that contains some of the attributes listed above is shown in Box 9.1. The objective should be to agree a document with the approving authority and other relevant parties that can then function as a terms of reference for the EIA.

9.4.1 Alternatives

Some of the more strategic alternatives are likely to have been examined by the time sufficient detail is known about the project to undertake a detailed EIA. Nevertheless, information provided during scoping could set out that the ES would include information on these alternatives, the process by which they were considered and the reasons for the selection of the preferred option and the rejection of the others, taking into account their environmental impact.

Other alternatives will still be open to consideration (e.g. alternative layouts and mitigation measures) and a scoping report could set out the nature of the alternatives to be considered and the methods to be adopted to evaluate them.

9.4.2 Methods for baseline studies

The provision of this information helps other stakeholders to understand how the environment is going to be characterised and indicates the depth of study proposed. Any comments they may have on the methods can still be incorporated at a time when it is relatively easy and inexpensive to change. The following information could be provided:

- The anticipated study areas for the different types of impact to be assessed
- The specific parameters to be studied - for example, ecological groups and air pollutants
- Sensitive receptors for which monitoring will be undertaken - for example, specific noise monitoring locations might not be known, but there will be sufficient information to know that the potential impact on a particular community will need to be assessed
- Timing of surveys - this may be in seasonal terms which can be important for impacts on biodiversity and the landscape, or in terms of the time of day, which can be important for noise and traffic.
- Methods to be used - where standard methods are to be used these can be stated (e.g. extended Phase 1 Habitat Survey to initially assess the biodiversity value of the site). Where the methods are more specific to the particular project these can be described.
- Sources of information - where the baseline information relies on obtaining secondary data, e.g. river habitat surveys from the Environment Agency.

4.0 Scoping Report Structure

4.1 Section 5 provides an outline of the current scheme proposals, presented as the Preferred Route.

4.2 Section 6 indicates the overall Environmental Impact Assessment methodology, and identifies the key issues that will be addressed, including the assessment of alternative options. An outline is given of the format of the ES.

4.3 The following sections, Section 7 to Section 17, provide greater detail on the key issues. Each section includes a brief summary of background documents and the Stage 1 subjectrelated studies. It is followed by an appraisal of further surveys which are proposed to be undertaken in order to provide a comprehensive data base, thereby enabling the refinement of the scheme design, the assessment of the environmental impacts (both adverse and beneficial) and, thereby, ultimately leading to the preparation of the Environmental Statement. Outline methodologies for these further surveys are set out, together with outline methods of identifying potential adverse and beneficial impacts, and the working definitions of significance criteria which will be used to determine the significance of identified impacts. These criteria may be updated for the final Environmental Statement to reflect recent changes in government guidance such as the 'Guidance on the Methodology for Multi-Modal Studies' (GOMMMS), which is explained more fully in section 6.4.

4.4 For each subject area the following format generally is observed, wherever appropriate:

INTRODUCTION:
- Purpose of the assessment
- Study Area
- Identification of potential impacts, effects and receptors
- Legislative framework, where appropriate

EXISTING CONDITIONS:
- Summary of previous work undertaken
- Statement describing additional surveys/data collection to be undertaken

METHOD OF ASSESSMENT:
- Outline assessment methodology
- Significance criteria

Source: Mott MacDonald, Nicholas Pearson Associates, Wessex Archaeology (2001), A303 STONEHENGE (incorporating the Winterbourne Stoke ByPass) SCOPING REPORT, Highways Agency.

Box 9.3
Extract from the scoping report for the A303 Stonehenge describing the format of the report.

9.4.3 Prediction methods

Describing the prediction methods indicates to stakeholders the type of information they can expect to see in the ES. This can include models or methods to be used and the

information to be provided in the ES (ie the outputs of the assessment stage). For example, scoping could address the following questions:

- will night time noise levels be predicted?
- will traffic predictions cover times outside of the peak hour when the environmental effects of the generated traffic may be greater?
- will the indirect effects of changes in water quality on aquatic ecology be predicted?
- will photomontages be provided to illustrate the landscape and visual impact of the proposal? If so, what are the proposed viewpoints?
- what time scales are to be considered in the assessment?
- are the cumulative effects of the proposal with past, existing and reasonably foreseeable projects to be addressed and if so how? E.g. through looking at local plans for future development proposals and ESs for past and existing developments.

9.4.4 Significance criteria

What is considered to be a significant impact can be different from one person to the next, depending on such factors as whether they are experiencing the impact, or whether they have a stake in the project. When assessing significance it is important to know who is making the judgement and the basis on which they are doing so. The approach to assessing significance is likely to be perceived as more balanced if significance criteria are agreed before the results of the assessment are known. This avoids criteria being set or selected according to the likelihood of them showing an impact to be insignificant or of a lower order of significance. It will be necessary to agree criteria for each of the different environmental issues to be investigated. These should reference relevant legislation and standards, e.g. water quality standards.

9.4.5 Mitigation

At this stage in the EIA process it is unlikely that many final decisions will have been taken regarding mitigation of environmental impacts. However, if some of the mitigation measures are already known or under consideration then it may be appropriate to seek the views of stakeholders. Involving stakeholders at scoping stage can also identify mitigation measures or approaches to the project that will avoid adverse impacts.

9.4.6 Consultation & participation

The process of scoping should be a participative one. Moreover, the scoping stage of an EIA is also a good opportunity to establish and set out any further consultation that the developer, or his advisers, intends to undertake. This could be in the form of a communication plan. Additional consultation and participation may relate to the assessment of a particular impact or may more generally be associated with the EIA and/or the design of the project. Details of this nature will provide an indication to stakeholders of the further scope for influencing the nature of the project and some of the outcomes of the EIA. For example, if it is intended to hold a comprehensive programme of consultation and participation, then it might not be necessary for organisations and individuals to have a detailed discussion on the nature of the mitigation measures at the scoping stage. Conversely, if the consultation over the scoping report is the only opportunity for a wide ranging discussion prior to the submission of the ES then consultees may wish to have an input into the type of mitigation they would expect to see associated with the project.

Whatever approach is taken it is useful, if possible, to meet with the consultees collectively. This means that the consultees will have the chance to hear each other's opinions and may be able to develop solutions or at least agree a collective position on particular issues.

9.5 Continuing the scoping process

The scoping process will reach a point where reasonable agreement can be gained on the issues to be covered and the methods to be used to cover them. This will form the

substantial basis for the EIA. Nevertheless, those undertaking the EIA should bear in mind that the scope of the EIA may need to alter while studies are being undertaken. The following factors can be important:

- the baseline environment may change
- information gathered during the EIA may increase the importance of an issue previously thought to be insignificant
- information gathered during the EIA may show an issue, initially considered to be important, to be insignificant
- the design of the project may alter
- mitigation measures designed to reduce one type of impact may cause an impact of a different type

If the scoping document is to operate as terms of reference for the EIA, then it will be necessary to retain sufficient flexibility to deal with the above issues.

Summary

- A good practice scoping exercise identifies the key impacts to be addressed, indicates the nature of the information that is to be provided in the ES, and sets the boundaries for an efficient EIA.
- Confidence among concerned organisations and the public can be built through an open and participative scoping process. Consultation should go further than statutory consultees and include non-Governmental organisations and the affected public.
- Scoping should commence once there is enough information on the project, the proposed site and potential alternatives to draw up an initial list of issues.
- Confidence in the assessment of significance will be improved if significance criteria are agreed before the results of the assessment are known.
- A scoping document should be produced that includes an outline of the proposal and of the site, and should identify the issues to be addressed by the EIA. This should be a working document that alters as additional information, opinions and the results of analysis and negotiation are incorporated.

References

DETR (2000), Environmental Impact Assessment: A Guide to the Procedures, Thomas Telford.

Environmental Resources Management (2001), Guidance on EIS Review, European Commission, Brussels.

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Environment Agency (2002), EIA Scoping Guidelines, Environment Agency, Bristol

IEMA (2002), Guidelines on participation in environmental decision-making, Perspectives Series, IEMA, Lincoln

10.0 Baseline Studies

10.1 What are baseline studies?

The purpose of baseline studies is to determine and describe the environmental conditions against which any future changes - in particular the proposed development that is the subject of EIA - can be measured or predicted and assessed.

10.2 The legal context

The establishment of an environmental baseline is an essential part of EIA. Yet reference to the EIA Regulations indicates that the "baseline" is not identified as "specified information" which must be provided as part of an Environmental Statement. Neither is it listed as information that may be included by way of explanation or amplification.

The EIA Directive concentrates on the main or likely significant effects of a proposed development. These effects have to be measured or predicted against something, however, i.e. some kind of benchmark. Baseline studies are a critical component to EIA, because they provide the means to determine and describe this benchmark, so that the effects of a proposed development may then be judged against it.

In short, baseline studies are the necessary foundation for the assessment part of EIA. They are likely to provide at least some of the data that is:

> *"necessary to identify and assess the main effects which the development is likely to have on the environment"* [107]

Environmental studies will ultimately underpin the quality and validity of an EIA. If the environmental baseline is poorly or inadequately considered, the EIA findings may lack robustness and be open to challenge, however well the potential impacts and mitigation measures have been researched. In some cases, poor understanding or appraisal of the baseline position could make an ES invalid.

10.3 Baseline Studies and the Status Quo

It is often assumed that the environmental baseline for a proposed development is necessarily the status quo, i.e. environmental conditions as they are today. Indeed, many, perhaps even the vast majority of ESs prepared, report the results of ecological, noise and other surveys – measuring conditions as they are today – and use this as the baseline for assessment without any apparent consideration of whether this is wholly correct.

In most cases, the assumption that "baseline = status quo" is valid and correct, but not always. The environmental baseline is constantly changing, irrespective of the development under consideration. Natural processes, such as river siltation, may mean that the environmental baseline is different from the status quo, particularly if the proposed development has a long lead-in time, and will not begin for many years.

Other, human activities can similarly affect the baseline position. For example:

- The proposed development (which is the subject of EIA) may rely on other changes taking place first. For example, a development may be proposed on the premise that a new road has already been approved and will be constructed (as part of an earlier project), providing access to the site. In this case, the baseline position is effectively in the future, with the new road in place;

[107] Schedule 4, Part 2, paragraph 3 of the Regulations

- There may be other, consented development underway, within the project area. This may alter the site's characteristics and environmental conditions in the absence of the proposed development that is the subject of EIA taking place. For example, a quarry operator may seek an extension to ongoing mineral extraction operations, which would otherwise be worked out and restored;
- There may be other development either consented or proposed in the vicinity that will change environmental conditions, e.g. traffic levels.

It is because of these complications that it is important to establish a 'do nothing', future scenario as the environmental baseline. The 'do nothing' scenario comprises the predicted environmental conditions that would exist, in the absence of the particular development under consideration.

Establishing the 'do nothing' scenario raises the issue of making a choice as to what changes should be included or excluded from the future baseline. These guidelines suggest that, in addition to natural changes, development which is in progress on the ground together with those that are part way into a development process (eg contracts with a construction company have been signed) should be included in the 'do nothing' scenario. Other developments that are planned or have received permission should be included in a separate cumulative effects assessment (CEA) that takes account of reasonably foreseeable actions.

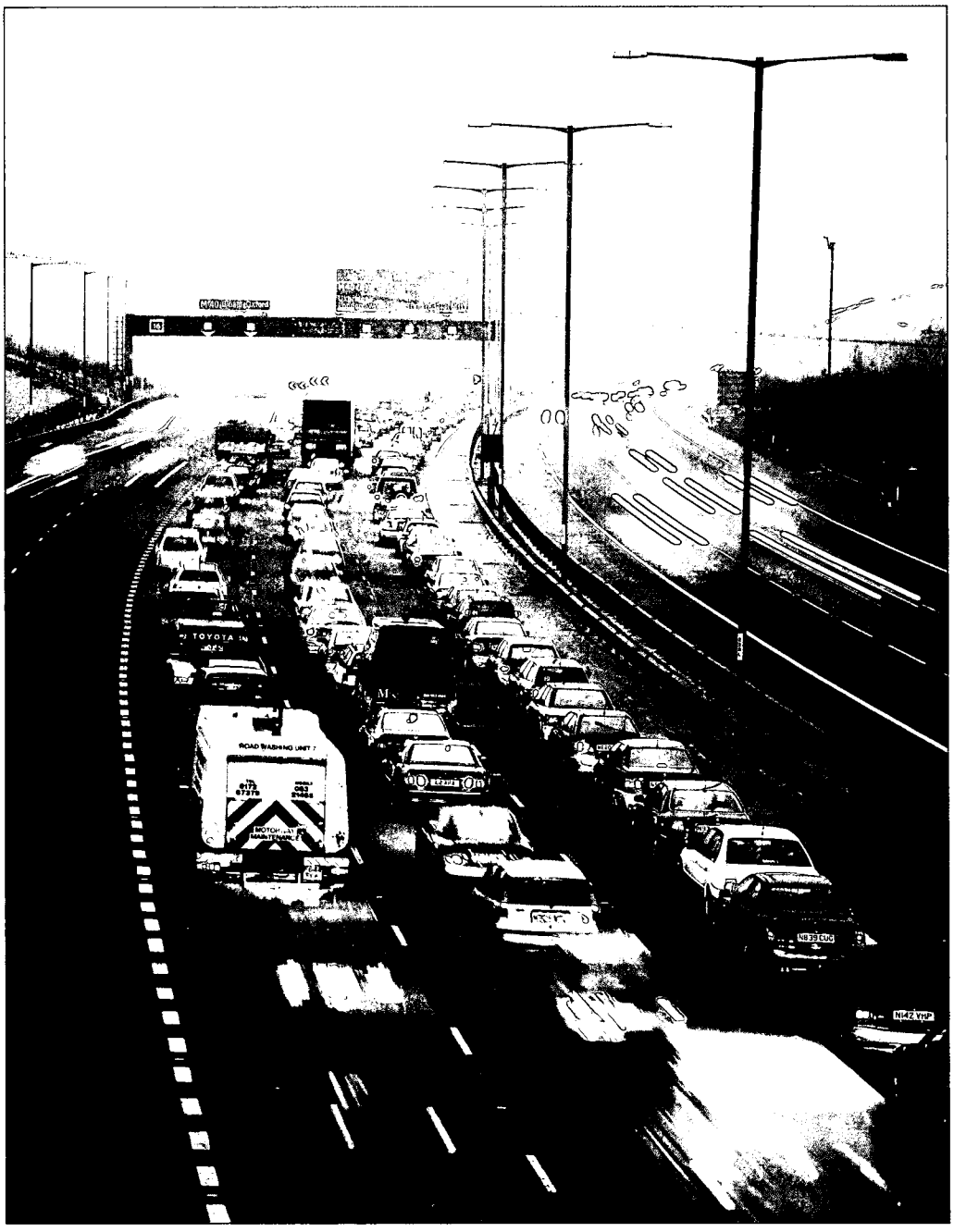

Figure 10.1
Where a project has a long lead in time, future rather than current traffic flows may need to be taken as the baseline.

10.3.1 Uncertainty and Disagreement

The determination of a future 'do nothing' scenario will rarely be an entirely objective, straightforward process. There may be uncertainty as to what future conditions, in the absence of the development, would be. Inevitably, judgements may have to be made based on certain assumptions. This creates room for disagreement about the starting point for the whole assessment process.

The only way to address this is to explain clearly, within the Environmental Statement, how the baseline has been derived, including any assumptions made and any uncertainties that arise as a result (see section 13.0 'The Environmental Statement' below).

10.3.2 Other Proposed Developments

These problems are perhaps particularly acute when other proposed developments are involved in the surrounding area. The basis for predicting the environmental effects of another development needs to be considered. If the proposed development is controversial, there may be at least two sets of competing and contrasting assessments of the project.

A common-sense approach is the only realistic way forward. If the other proposed development is progressing or is likely to go ahead and could realistically make a major difference to the assessment of 'your' EIA project, then it should be included or referred to, in some way, perhaps as an alternative assumption. If this is the case, then it will usually be sufficient to make reference to the promoter's environmental assessment, in compiling your 'do nothing' or baseline scenario.

10.4 Scoping

Resolving these issues is part and parcel of scoping an EIA. As explained in detail in Chapter 9, it is good practice for the EIA team to prepare a scoping report and this should explain what the assumed baseline is and how it will be derived.

In practice, some baseline work is likely to be undertaken before or parallel to the scoping of the EIA. For example, in almost every case, some initial baseline studies (e.g. desktop research) will be required before or as part of the scoping exercise, in order to highlight the main or likely significant effects (the prime purpose of scoping). These findings are important, not least because they will then have a major influence on the next phase of baseline studies. Where there is the potential for significant effects, this will usually point to the need for fairly detailed baseline studies. Conversely, where there is a Finding of No Significant Impact (FONSI), the requirement for baseline studies will usually be lower (or potentially zero).

Of course, these judgements need to be kept under review as the project design and the EIA move forward (see 'Timing Issues', below).

10.5 The Role of Consultees

Consultees may be able to supply baseline data/information to the EIA team. Indeed, the statutory environmental agencies – for example English Nature, English Heritage, the Countryside Agency, Scottish Natural Heritage and the Countryside Council for Wales – are under an obligation to provide such information in their possession, if requested to do so for the purposes of preparing an EIA. The agencies may make a charge for supplying their data/information, though this charge must be "reasonable". [108]

Consultees may also have a view on what further primary research or secondary data analysis should be carried out as part of the EIA methodology, as discussed above. The

[108] Regulation 12 of the EIA Regulations

statutory environmental agencies have published a number of their own 'good practice' guides to EIA and these address matters such as recording baseline conditions and overall methodology. The EIA project team should be aware of the various 'good practice' guides available and take them into account, e.g. at the scoping stage.

Ultimately, however, the developer and his/her EIA team must make their own decisions about how to address baseline conditions, which surveys to do and so on: it is their responsibility to prepare an adequate EIA. Of course, it is highly desirable to reach agreement with statutory environmental agencies, but such agreement does not automatically make the approach correct or even satisfactory. When it comes to making a decision, it is for the determining authority – and nobody else – to judge the adequacy of information provided in the ES pursuant to the EIA Regulations. That said, they can be tested in the Courts and they are under an obligation to take account of views given to them by the public.

The case of R v Cornwall County Council ex parte Hardy (see Box 10.2) provides useful reminders of these principles, and the potential pitfalls for those involved in EIA. In this case, the developer, the local planning authority, English Nature and local Wildlife Trust agreed that bat surveys would not be required before any grant of planning permission for landfill development at former mine workings (i.e. as part of the EIA). It was recognised that bat surveys would raise technical difficulties and agreed that they should take place post-permission, under planning conditions, and be used to inform the design of detailed mitigation measures. The local planning authority granted planning permission, subject to conditions, and this decision became the subject of legal challenge. The Court quashed the planning permission and indicated that bat surveys should have been undertaken as part of the EIA process and their results taken into account before making a planning decision.

10.6 The Nature of Baseline Studies

It is not the purpose or intention of these guidelines to provide detailed technical advice on how baseline studies should be undertaken for each environmental topic. There is already a wealth of guidance and 'best practice' guides dealing with these matters, published by the Highways Agency, the IEMA, statutory environmental agencies and others. A summary of the main sources of technical guidance can be found in the reference section at the end of this publication.

Most baseline studies start with the status quo. Even if the status quo is not the project baseline (see above) it does provide a logical starting point and one that the general and specialist reader alike can relate to and, if necessary and appropriate, study for themselves to check and test the EIA.

10.6.1 Surveys

In most cases, studying and recording the 'existing conditions' will mean employing a range of survey techniques. The first essential is to undertake a desk study for each topic which entails a search of sources for available information and data. Much of this information is commercially available, but does not always cover some of the specialist issues that may be of concern, e.g. bat records. This is important since such information provides the context for field survey results and can serve to identify trends. This is particularly important for issues such as water quality. A "one off" sample for chemical water quality is relatively meaningless by itself and so, without records of, for example, a year or more, an extensive sampling programme over such a time span may be necessary.

Desk studies typically require contact with, for example, the Environment Agency, English Nature, local Wildlife Trusts, environmental health officers and County Records Offices. Surveys, for example of fauna and flora or water quality, are the most common form of baseline study and its importance cannot be underestimated. Good surveys can provide solid, factual data upon which the EIA can rely, thereby affording the assessment credibility and giving others confidence in both the process and its findings.

Box 10.1
R v Cornwall County Council ex parte Hardy

In this case, Cornwall County Council granted planning permission, in October 1999, for an extension to a landfill site. That permission was challenged in the High Court, before Harrison J.

The facts were that an ES had accompanied a planning application, made in May 1999. The ES volume on ecology referred to a number of site surveys undertaken in 1995, 1996 and 1997, including preliminary surveys of mine shafts for roosting bats undertaken in September 1995. No bats were found, but the survey report stated that it was possible that open shafts in a certain wood could support protected bat species and that more detailed underground surveys were required.

Overall, the ES reported that "there will be no significant adverse effects..." and the LPA concluded that the application "raises no significant nature conservation issues".

The principal ground of challenge was that there were bats (and other species). It was submitted that, until the surveys were carried out, there was not the necessary data required by Schedule 4 to the Regulations, nor was it possible to say what measures should be taken to avoid or reduce significant adverse effects, as also required. All of these matters, it was argued, had to be contained in the environmental information considered by the LPA *before* it could grant planning permission.

The Court held that should these later surveys discover the existence of bats which were likely to be affected by the development then this would constitute a 'significant adverse effect' and a 'main effect' within the meaning of the Regulations, with the result that the information required by Schedule 4 would have to be contained in the ES and taken into account before deciding whether to grant planning permission.

The Court quashed the planning permission. Had the ES or local planning authority identified at least the potential for significant adverse effects on bats, set out measures to deal with that eventuality, and then taken these into account in reaching a decision, then the Court might not have quashed the planning permission. But the decision also underlines the need to undertake surveys and gather relevant baseline information, in order to satisfy the legal EIA requirements, particularly where there is the potential for a 'main effect' or 'significant adverse effect'. Harrison J. concluded that:

"In my judgment, the grant of planning permission in this case was not lawful because the [local planning authority] could not rationally conclude that there were no significant nature conservation effects until they had the data from the surveys. They were not in a position to know whether they had the full information required by [the Regulations] before granting planning permission." (emphasis added)

Many otherwise high-quality EIAs are let down by the quality, quantity and/or geographical coverage of the base survey data. EIA teams should avoid and resist undertaking extensive surveys simply for their own sake, i.e. without any clear relevance to the project or its potential significant effects. That caveat aside, every pound expended on environmental surveys is usually money well-spent. Without an adequate baseline there is an insufficient basis on which to predict the impacts of a proposal. and (as the case of *Hardy* demonstrates) that insufficiency could form the basis of a challenge.

10.6.2 Other techniques

There are, of course, a range of baseline study techniques. They include future modelling (e.g. of future traffic conditions on the highways, in a projected baseline year) and past (trend) analysis. The latter can be used to evaluate past cause and effect relationships as a guide to future changes. Trend analysis can be particularly useful if baseline conditions are highly dynamic; for example, the analysis may reveal that the EIA should consider a particular range of likely baseline conditions, rather than just one.

10.6.3 Evaluation

An evaluation or subjective interpretation of the baseline data will almost always be required to put the findings into context and determine, for example, how rare, important, sensitive or valuable each recorded environmental feature or receptor may be.

For example, a survey may reveal a particular species to be present. That is objective fact and undisputable, provided the competence of the surveyors is accepted (see below). The evaluation as to the importance or sensitivity of that species, on the other hand, is likely to involve subjective judgements about which different experts may disagree.

Some topics rely on subjective evaluation more than others. For example, landscape assessment, typically involving the stages of description, characterisation and evaluation, tends to be highly subjective (although the term 'subjective' should not be interpreted to mean that the judgements are not consistent from one practitioner to another). Other topics are more objective. Soil survey and land quality assessment, for example, is relatively objective, although it still requires surveyors to make judgements "in the field". On complex sites one might expect different soil surveyors to give slightly different results.

The evaluation may need to take into account the context of the environmental sensitivities on the site. For example, a species protected by legislation that is found on the site may at first appear to be an insurmountable problem for the development, but may not be if it can be demonstrated that it is abundant within the locality.

EIA authors and project managers need to be aware of these issues. They should, for example, ensure that surveys are carried out, and their results evaluated, by properly qualified people with relevant experience. They may also wish to consider the potential benefits of third party verification to establish/reinforce the reliability of the survey results. This is increasingly common within ecological surveys in particular: samples can be sent away to the relevant independent institute to have the survey results checked. Of course, this has timing implications for the EIA process that would have to be factored in.

The 'shelf life' of study results is another important consideration. At one end of the spectrum, the geology of an area will remain constant. At the other, fauna and flora can change significantly from season to season and from year to year. If there is any doubt as to the validity of baseline data it is recommended that consultation is undertaken with the planning authority and with the appropriate environmental authority. Informal consultations with local people or organisations may also be a means of determining whether conditions have significantly altered (see comments referring to desk study above).

Those charged with preparing and project managing EIAs should consider how these factors might influence:

- the type and range of baseline studies required
- the extent to which study results should be used as the basis for decision-making, e.g. about the layout or design of a scheme.

It may be necessary or at least advisable to repeat certain surveys one or more times, to get some idea of 'natural' variations.

A good ES will reflect a thoughtful appraisal of these issues. As far as possible, the ES should distinguish between that which is fact (objective) and that which is evaluation (subjective) and make this clear in their text. Similarly, if survey data effectively represents a "snapshot" of dynamic conditions, this should be made clear and the survey results put into their proper context.

A good practice EIA will also include some consideration of interactions between environmental topics and resources and the functional relationships involved (e.g. there are interactions between fauna, flora and water quality). Such consideration should be directly related to the potential impact of the proposal. For example, if an impact on water quality is likely to result in a significant indirect impact on ecology then a study of the relationship,

consistent with the current environmental scientific knowledge, would be appropriate. However, it is not the purpose of EIA to generate groundbreaking research on the relationships between different environmental factors.

10.7 Timing Issues

Baseline studies should be carried out early in the EIA process so that the results can be used to:

- influence scheme design
- inform the scoping process

The case of *Hardy*, discussed above, illustrates the potential problems with deferring studies altogether, i.e. until the reserved matters stage.

The EIA process is iterative and this also applies to baseline studies. Establishing the baseline is not a "one off" activity. For example, baseline studies will shift from the general and "broad-brush" to more detailed research and analysis as the scheme design and EIA process progresses. As decisions are made, e.g. to choose a particular design or layout to avoid or otherwise mitigate a potentially significant effect, some areas of work will become redundant. On the other hand, the discovery of "new" potential impacts – either because of scheme changes or because new/different information comes to light – will alter the focus of baseline studies and point to new requirements for environmental study.

Seasonal requirements can have a major impact on this iterative process. Many baseline surveys, in particular ecological surveys, are seasonally dependent. These constraints need to be signalled early and programmed in. If necessary, it may mean undertaking surveys that may not appear to be required to cover for some future eventuality, such as modifications to the scheme design.

Seasonal issues also arise with landscape and visual assessment. For example, an appraisal of views in the middle of summer will tend to underestimate the likely visual impact of new development in the winter months when deciduous trees have lost their leaves. The same criticism has frequently been made of photomontages prepared for "summer" conditions only.

It is important to recognise that EIA baseline studies are a means to an end, not an end in their own right. They should be thorough and comprehensive, but they should also be targeted and proportionate to the significant environmental effects. It is not necessary to have every conceivable scrap of environmental information to prepare an EIA.

10.8 Baseline Information in the Environmental Statement

The author of an ES should seek to avoid overbalancing the ES with information about the baseline conditions. Just because information exists it does not mean that it needs to be presented in the ES. The main purpose of an ES is to describe the main and likely significant adverse effects. That should be its key focus. The Government's "good practice" advice stresses the need for ESs to be short, concise, readable and accessible. This must apply particularly to the description of baseline conditions. An over-long document, filled with baseline information, should be avoided.

Wherever possible, detailed information should be included within appendices, rather than the main text. Where secondary sources have been used these should be referenced and 'signposted', but it will not always be necessary to include a copy, or even an extract, within the ES itself.

Summary

- Baseline studies describe the benchmark against which the effects of a proposed development may be assessed. Without an adequate baseline there is an insufficient basis on which to predict the impacts of a proposal.
- Environmental studies underpin the quality and validity of an EIA. If the environmental baseline is poorly or inadequately considered, the EIA findings may lack robustness and be open to challenge.
- In most cases, the assumption that "baseline = status quo" is valid and correct, but not always as the environmental baseline can change either as a result of natural or human processes. For these projects it is important to establish a 'do nothing', future scenario as the environmental baseline.
- The 'do nothing' scenario comprises the predicted environmental conditions that would exist, in the absence of the particular development under consideration. In addition to natural changes, development that is in progress on the ground together with those that are part way into a development process should be included in the 'do nothing' scenario.
- Other developments that are planned or have received permission should be included in a separate cumulative effects assessment (CEA).
- Establishing baseline data is an iterative process that develops as the scheme design and EIA process progresses. Where baseline studies are carried out early in the EIA process the results can be used to influence scheme design and inform the scoping process.
- Seasonal requirements can have a major impact on this iterative process
- The determination of the sensitivity or value of environmental features places the baseline information into context. An evaluation or subjective interpretation of the baseline data will be required to provide this.
- An ES should distinguish between facts (objective) and evaluation which is more likely to be subjective
- It may be necessary to consider the interactions between environmental topics and resources and the functional relationships involved e.g. hydrology and ecology.
- Baseline studies should be thorough and comprehensive, but should be targeted and proportionate to the significant environmental effects.

11.0 Assessment of Impacts

The prediction and evaluation of the impacts ('the assessment') of a project are the main focus of the EIA. The credibility and trust that can be placed in an EIA are largely dependant on the way this information is dealt with and presented in the ES. Therefore it is essential that the assessment process is set out in a clear and structured manner in order to clarify how judgements have been reached about the effects of the proposals.

11.1 The legal context

The environmental information to which regard must be had is widely expressed within the Regulations. It is set out within Schedule 4 of the Regulations, Part I and Part II. Part II contains a list of minimum requirements for inclusion within an ES. Part I contains the Part II information as well as further requirements. The information in Part I need only be provided if it is "reasonably required to assess the environmental effects of the development and which the applicant can, having regard in particular to current knowledge and methods of assessment, reasonably be required to compile".[109] The information in Part II which must be provided is:

"1. A description of the development comprising information on the site, design and size of the development.

2. *A description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects.*
3. *The data required to identify and assess the main effects which the development is likely to have on the environment.*
4. *An outline of the main alternatives studied by the applicant or appellant and an indication of the main reasons for his choice, taking into account the environmental effects.*
5. *A non technical summary of the information provided under paragraphs 1 to 4 of this Part".*

"... the environmental statement does not have to describe every environmental effect, however minor, but only the "main effects" or "likely significant effects". It is not difficult to see why this should be so. An environmental statement that attempted to describe every environmental effect of the kind of major projects where assessment is required would be so voluminous that there would be a real danger of the public during consultation, and the local planning authority in determining the application, "losing the wood for the trees". What is "significant" has to be considered in the context of the kinds of development that are included in Schedules 1 and 2"

Sullivan J

Part I expands on the nature of the effects that can be investigated by making reference to:

"... the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects resulting from:

(a) the existence of the development;
(b) the use of natural resources;
(c) the emission of pollutants, the creation of nuisances and the elimination of waste [110]*"*

It is clear from the second *Rochdale* case that there does not have to be exhaustive assessment of all possible environmental effects.

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[109] Regulation 2 (1)

[110] Schedule 4 Part 1, paragraph 4. See also paragraph 84 of Circular 2/99

11.2 What the assessment stage involves

The assessment stage of the EIA should follow a clear progression; from the characterisation of 'impact' to the assessment of the significance of the effects taking into account the evaluation of the sensitivity and value of the receptors.

To assist in the understanding of the ES it is important to ensure that terms that are used to describe and assess the proposals are used in a consistent fashion. It is therefore advisable to establish a Glossary at the earliest opportunity.

Within the Glossary many EIA practitioners distinguish 'impact' from 'effect' in order to demonstrate the difference between the 'characteristics' of the impact and the 'significance' of the effect. For example the 'impact' of a quarrying operation may be the loss of a large conifer plantation, but this may have no significant 'effect' on the environment if it has little ecological or landscape value. Conversely one mature oak tree in a conservation area may have a significant 'effect' on the character and appearance of the area. The distinction between 'impact' and 'effect' is helpful but may not necessarily be appreciated by public; it also requires more rigour in the editing and presentation of the ES in order to ensure that the two terms are used in a consistent fashion. Provided that it is clear that the assessment of significance is based on the scale and nature of the impact/ effect and the sensitivity of the receptor there would be little loss of understanding if 'impact' and 'effect' were to be interchanged within the text of the ES. Whatever approach is taken it is important that terms such as 'impact' and 'effect' are clearly defined in a Glossary from the outset.

Understanding the nature of the receptors, characterising the impact, a clear approach to 'significance' and dealing with uncertainty are all critical components to the assessment process.

11.2.1 Receptors and the Receiving Environment

Receptors in the context of EIA are often human beings. However, receptors may also be resources, such as archaeology or flora, and the intrinsic value or worth attached to these resources as defined by legislation or public perception. The sensitivity of these receptors or receiving environments must be clearly identified.

In identifying both the receptor / receiving environment and its sensitivity, consideration should also be paid to the existence of complex or 'inter-related' environments. Part I, 3 of Schedule 4 of the Regulations requires a description of those aspects of the environment likely to be significantly affected by the development e.g. ecology, water, but it also requires an understanding of "the inter-relationship of the above factors" (e.g. ecology and water). When reporting on an EIA, particularly if the ES is structured in a topic by topic basis, it is easy to overlook the inter-relationships between different receptors or receiving environments.

For example it may be prudent to combine in whole or in part the description of receptors/receiving environment from the chapter on hydrology and the chapter on ecology into a separate chapter. This is particularly the case if there is a strong overlap between the two e.g. a wetland area, which may be both an important component in the hydrological resource for the area as well as an important ecological resource. By combining the two it should become much clearer as to what the effect of any impact will be as well as what mitigation measures should be put in place to complement both hydrology and ecology.

The scoping and baseline stages will have identified the context for the proposals. Ideally they should also have set out the area of study for each of the EIA topics and the sensitivity of the receptors or receiving environment. Wherever possible the receptors/receiving environment and their sensitivity should be agreed with the appropriate authority in order to arrive at a level of consensus on what is important and why. Where there are differences of opinion these should be set out and explained.

The baseline and receptors may need to make allowance for features which are not physically present but which have planning approval or could reasonably be expected to be affected by the proposals. Typically this sort of development would need to be taken into account for traffic and air quality predictions and an assessment of the available capacity of infrastructure such as roads, drainage and services. Where there is uncertainty about the new works in the vicinity of the proposed development it may be necessary to include a 'with' and 'without' prediction within the EIA.

The issue of related or nearby development may also need to be addressed as part of any cumulative effects assessment.

11.2.2 Characterising the impact

The characterisation of the impacts of the proposals should comprise a description of the changes that would be brought about by the proposals. Characterisation is intended to produce a statement that is as objective as possible and can then be used to determine the significance of the effects that are likely to result from the proposed development.

Depending on the topic area being assessed, conclusions on significance of effects are often a matter of judgement on the part of the professional, and it is open to the planning authority and other stakeholders to agree or disagree. It is important that the ES provides all of the data necessary to allow such a decision to be reached.

The process of characterising the impacts (and the assessment of significance) will vary from topic to topic and this makes it particularly important that the methodology employed is set out clearly and simply. The Institute of Environmental Assessment (now the Institute of Environmental Management and Assessment) have published best practice guidelines for traffic[111] and landscape and visual assessment[112] and other guidelines exist. The aim of these guidelines is to focus on the specific techniques of impact prediction and assessment for each discipline taking into account the balance between objectivity and the level of subjectivity introduced by professional judgement and the opinions of consultees and the public.

The following points are considered to be good practice:

- Impacts should be quantified where possible, but in terms that can be understood by the public (e.g. 10 dB = doubling in noise levels)
- Describe the characteristics of the impact – e.g. frequency, duration (in terms of years and/or during the day), reversibility, and probability of the impact occurring
- Impacts should take account of changes over time, particularly where it may take some years for a project to reach maturity
- Where judgements or estimates are made these should be fully justified and the confidence that can be placed in them explicitly stated
- As a minimum, impacts should be predicted with the mitigation measures taken into account - predictions before mitigation do not convey the nature of the impacts that will be experienced. However, where mitigation measures are only expressed in terms of recommendations, predictions in the absence of the mitigation measures should form the basis of the assessment
- Where there is uncertainty over the effectiveness of the proposed mitigation measures the 'worst-case' approach should be taken and a prediction assuming the lower end of the range of effectiveness is achieved should be provided
- Predictions should include the reasonable worst case for sensitive receptors - e.g. noise levels with the wind blowing toward the receptor
- Do not use averages as a mechanism for avoiding providing information on the worst case impacts (e.g. long averaging times for noise predictions)

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111 Institute of Environmental Assessment (1993), Guidelines for the Environmental Assessment of Road Traffic, IEA.

112 The Landscape Institute and The Institute of Environmental Management & Assessment (2002), Guidelines for Landscape and Visual Impact Assessment (2nd Edition), Spon Press

- Qualitative terms that refer to quantitative scales should be defined - e.g. long term, short term, temporary, occasional, intermittent, frequent, etc.
- Using euphemisms to describe impacts should be avoided
- It may be appropriate to consider the impact of accidents or other non-routine operations
- Consider whether any impacts will occur off site (traffic, borrow pits, etc). Where these impacts may be significant decisions may need to be taken that the proponent would ordinarily leave until later, e.g. location of construction sites/storage areas; locations for construction of passing places on rural roads to be used by heavy vehicles; location, rate and quality of discharge into water courses.
- Consider whether mitigation measures are likely to have any significant impacts and if so include them in the predictions
- Consider whether there are likely to be interactions between issues that could result in a significant impact
- Consider the potential for indirect impacts and predict them if they are likely to be significant
- If indirect impacts are not likely to be significant briefly explain why

11.3 Cumulative Impacts

There is no explicit requirement under the Directive to refer to cumulative effects of the development. The Regulations only require it if *"...it is reasonably required to assess the environmental effects of the development ..."*[113]. For example the University of Brighton were asked to prepare an Environmental Statement for the part redevelopment of their Falmer campus and within it to consider the cumulative impacts and effects of the proposed Brighton and Hove Albion Football Stadium immediately adjacent.

These guidelines recommend that an EIA should assess the effects of the development cumulatively with other developments where there are likely to be significant effects. In the Schedule 3 criteria to be applied when screening an application the term "the cumulation with other development" is referred to specifically[114], and it would be curious if "cumulation with other development" were relevant to the screening of an application but did not form a requirement when actually undertaking an assessment. The Circular unfortunately provides no worthwhile guidance on the point[115] and the Directive is no more explicit than the Regulations.

It is worth noting that the Habitats Directive[116] requires that "Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives".

The slight complication relates to how the baseline position for the assessment has been established. Even if the baseline already takes into account the environmental effects of other developments then there is still a need to account for the cumulative effects of all of the developments under consideration. This is in order to assess the significance of the combined effects of the developments rather than just the proposal under consideration with the others incorporated into the baseline.

11.3.1 Defining cumulative effects

There is a broad range of opinion on the definition of cumulative effects. One of the more helpful definitions originates from the United States Council on Environmental Quality that in 1978 proposed that cumulative impact should be defined as follows:

[113] Regulation 2, 1

[114] paragraph 1(b) of Schedule 3

[115] paragraph 84 of the Circular simply recites, from Schedule 4 Part I paragraph 4, the fact that "significant effects" includes "cumulative ..."

[116] See 5.8 above

"the impacts on the environment which result from incremental impacts of the action when added to other past, present and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time".

Photograph: Andy Holt

Figure 11.1
The cumulative effect of changes in agricultural practices have contributed to a rapid decline in the population of tree sparrows

All the definitions illustrate that cumulative impacts relate to 'other' projects and plans and not different aspects of the proposals. For example where there may be a number of relatively small impacts on a single receptor (which together represent a significant effect) these should be included in a section dealing with the inter-relationship between impacts in order to demonstrate the overall effect.

An understanding of cumulative effects is better gained by considering examples of when and how they might occur[117]:

Physical-chemical transport:	A physical or chemical emission is transported away from a proposed project where it then interacts with another pollutant (e.g., air emissions, waste water effluent, sediment). Several entirely separate developments can therefore have a cumulative impact at a location some distance away from the project location.
Nibbling loss:	Occurring as a result of the gradual disturbance and loss of land and habitat (e.g., clearing of land for new housing and roads.)
Spatial and temporal crowding	Cumulative effects can occur when too much is happening within too small an area and in too brief a period of time. Spatial crowding results in an overlap of effects (e.g., noise from a road adjacent to an industrial site, confluence of stack emission plumes). Temporal crowding may occur if effects from different actions overlap or occur before the receptor has had time to recover.
Growth-inducing potential	A project can induce further projects to occur. (e.g., bypass for a town creating new development opportunities)
Combined effects	These occur when different types of effects all affect the same receptor. Assessed individually they may be considered to be insignificant, but when combined result in a significant effect on the receptor (e.g. perceived change in the quality of life of a household or community).

[117] Based on Cumulative Effects Assessment Working Group (1999) and Hyder (1999).

However one addresses cumulative effects it is important to be clear on the definition that is being used and ideally agree this definition with the determining authority. In particular, it is desirable to agree the geographical scope within which a cumulative impact assessment is to be undertaken.

11.3.2 Assessing cumulative effects

Cumulative effects are not easy to deal with, but many environmental problems exist because cumulative effects have been ignored. Cumulative effects require some attempt to gain an understanding about the capacity of the receiving environment and whether critical thresholds have been or are likely to be breached.

The introduction of Strategic Environmental Assessment (SEA) may enable the cumulative effects and interactions between projects to be considered at a much earlier stage in the planning process. Nevertheless, this will not eliminate the need to address them at the project level as not all projects can be anticipated by a development plan or SEA.

The assessment of cumulative effects is a similar process to routine EIA, however there are some key differences:

- Cumulative effects assessment (CEA) examines the cumulative impact of all past, present and reasonably foreseeable future actions and assesses their significance. It does not therefore concentrate on the share of the cumulative effect that the project that is being prepared for has.
- CEA is focused on the receptor, rather than the environmental effect of the particular proposal. Hence, the focus on critical thresholds and environmental capacity. Therefore impacts that have been scoped out of an EIA might be included in a CEA if the cumulative effect is considered to be significant
- The geographical and time boundaries of a CEA are likely to be greater than an EIA in order to facilitate a receptor based assessment. For example, a cumulative impact on a particular species might focus on the ecosystem of which the species is a component in order to identify the full range of cumulative effects.
- Administrative boundaries are less important in CEA than boundaries relating to the natural environment (eg watersheds, etc)
- CEA focuses on the ability of a receptor to accommodate additional change

For project-based EIA the following guidelines are recommended:

- Avoid blaming other projects for changes which may adversely affect the baseline for the proposals
- Avoid simply highlighting something that is going to have a worse impact than the proposal
- Describe the nature of cumulative effects
  - from previous and reasonably foreseeable projects
  - from different types of impact which all affect a single receptor
- As with other impacts, identify any source of uncertainty in the characterisation of the impact or sensitivity of the receptor/receiving environment.

11.4 Significance

The assessment of significance is based on the characteristics of the impact and the sensitivity of the receptor. To provide transparency and clarity it is often helpful to set out the stages of the assessment in the form of a framework identifying the individual impacts, their characteristics and the sensitivity of the receptors.

The techniques for weighting and balancing the relative influence of impact magnitude and sensitivity on significance will vary from topic to topic. The evaluation of significance for any specific impact may be based upon one or more of the following:

- Comparison with Regulations or standards
- Reference to criteria such as protected species, protected sites, landscapes etc
- Consultation with consultees and decision makers
- Compliance with policy (or plan) objectives
- Comparison with experience on similar projects elsewhere
- Experience and professional judgement of the specialist assessor

There is often not a single, definitive, correct answer as to whether an impact is significant or not. Significance is influenced by the values of the individual, how the changes to the environment affect them and whether they have a stake in the project or not.

As a consequence of the above, a participative approach to assessing significance is desirable (i.e. including the opinions of those with different perspectives on the project other than the developer and his advisers), particularly where the assessment of significance is a matter of judgement. Care therefore has to be taken when attributing 'significant beneficial' or 'significant adverse' statements to particular impacts.

The following guidance is recommended:

- Explicitly describe the basis for any judgements on significance, taking into account the magnitude of the impact, the sensitivity of the receiving environment to that impact and any criteria that can help to form a basis for the assessment of the changes. This is critical to the credibility of the ES and can help to build trust, even where there is disagreement on conclusions
- Use criteria where available and explain their basis and provide the source
- Describe the original purpose of the development of the criteria, if not originally designed for use in EIA (e.g. BS 4142 used for assessing likelihood of noise complaints, not the significance of any noise increase; 68 dB (A) L10 used for assessing entitlement to compensation for road traffic noise, not assessing significance of road traffic noise). Any implications this may have for using it for the assessment of significance should be described.
- Avoid using false frameworks for significance. For example, where one qualitative term is substituted for another in an attempt to define significance (e.g. a highly significant impact may be described as one where there will be a 'material change' to the environment - but what does "material" mean?). These provide a scale on which significance is assessed but usually fail to define the terms.
- Use multiple methods where they may be available - e.g. the simple use of thresholds (e.g. air quality) avoids the issue of assessing the significance of the change from the baseline conditions.
- Criteria which are easy to use and understand tend to work well
- Tabular approaches can help to clarify issues showing the issue, magnitude of change, probability of the impact occurring, and significance of the impact.

11.5 Uncertainty

Any uncertainties associated with impact prediction or the sensitivity of receptors due to absence of data or other limitations, will also give rise to uncertainty about the significance of the effects on the environment. In these cases this should be explicitly stated within the ES[118] and it is also recommended that measures should be put in place to deal with the uncertainty through conditions dealing with monitoring and/or environmental management plans.

[118] Schedule 4 Part 1 paragraph 7 of the Regulations requires that the ES state whether any "difficulties (technical deficiencies or lack of know-how)" were experienced by the compiler of the ES

Summary

- The prediction and evaluation of the impacts of a project are the main focus of the EIA.
- The assessment stage of the EIA should follow a clear progression; from the characterisation of 'impact' to the assessment of the significance of the effects taking into account the evaluation of the sensitivity and value of the receptors
- The characterisation of the impacts of the proposals should be an objective as possible description of the changes that would be brought about by the proposals.
- Many environmental problems exist because cumulative effects have been ignored. It is generally accepted that it is good practice to address cumulative impacts of a development project.
- Cumulative effects require some attempt to gain an understanding of the capacity of the receiving environment and whether critical thresholds have been or are likely to be breached.
- The techniques for weighting and balancing the relative influence of impact magnitude and sensitivity on significance will vary from topic to topic. Whatever techniques are chosen the approach taken should be transparent and a participative approach will help to account for the different opinions.
- Any uncertainties associated with impact prediction or the sensitivity of receptors due to absence of data or other limitations, will give rise to uncertainty about the significance of the effects on the environment. In these cases this should be explicitly stated within the ES.
- Depending on the topic area being assessed, conclusions on significance of effects are often a matter of judgement on the part of the professional, and it is open to the planning authority and other stakeholders to agree or disagree. It is important that the ES provides all of the data necessary to allow such a decision to be reached.

References

Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora

Council on Environmental Quality (1997), Considering Cumulative Effects Under the National Environmental Policy Act, CEQ, Washington.

The Cumulative Effects Assessment Working Group and AXYS Environmental Consulting Ltd. (1999), Cumulative Effects Assessment Practitioners Guide, Canadian Environmental Assessment Agency.

Walker L J & J Johnston (Hyder) (1999), Guidelines for the Assessment of Indirect And Cumulative Impacts As Well As Impact Interactions EC, DG XI, Environment, Nuclear Safety & Civil Protection

12.0 Mitigation

12.1 A General Approach to Mitigation

The prevention or reduction of environmental impacts of a project is regarded as one of the major benefits of EIA. This not only benefits the environment, but due to the enhanced environmental acceptability of a proposal, can improve the chances of receiving consent for the project. These benefits tend to be realised to their maximum when the EIA is integrated with the design of the project. This enables environmental problems to be identified at an early stage and for the design to be modified to eliminate or reduce the environmental effect. This approach tends to be cheaper than retrofitting 'end of pipe' mitigation measures at a later stage. Even after many of the environmental issues have been dealt with during the design of the project there may still be scope for adding mitigation measures which help to reduce any residual impacts. For example, bunds or barriers may be added to reduce the effects of noise or further tree planting may be proposed to add to the screening of the development.

Therefore, mitigation is as much about including the environment as one of the factors that determines the design of the project, as it is about finding solutions to identified environmental problems. So, while mitigation appears in the EIA process diagram (see figure 4.1) as something that occurs after the impacts have been assessed, it is actually considered from the earliest stages of an EIA and will continue to be important even after the submission of the ES, when negotiations regarding conditions take place. (For an explanation of the extent to which mitigation measures are relevant when screening an application, see 8.6.2 above). A widely accepted strategy for mitigation exists and should be followed when considering the methods of dealing with the environmental effects of a project. The strategy comprises of the following components:

Avoidance This implies the need for some level of redesign of the project. Avoidance is usually best achieved by the consideration of alternatives (see chapter 7) and is likely to be more successful the earlier consideration is given to it.

Reduction Reduction should only be considered when all options for the avoidance of impacts have been exhausted or have been deemed to be impracticable. This may be achieved by examining alternatives (e.g. alternative equipment may be quieter) or by the addition of mitigation measures to the existing proposal (e.g. bunds, odour abatement technology and tree planting).

Compensation When the potential for avoiding and reducing impacts has been exhausted then consideration may need to be given to compensating for the residual impacts to make the proposal environmentally acceptable. Where possible, it is preferable to provide compensation in a form that is related to the environmental impact of the proposal rather than simply in monetary terms. This is because the benefit of financial compensation may only be realised in the short term whereas the adverse impacts of a proposal may be experienced for a much longer term. In addition appropriate methods and techniques may not exist to adequately determine the true monetary value of the adverse effect.

Remediation When adverse effects are unavoidable, it may be possible to limit the duration of an effect by undertaking remedial works. For example, the impact on the landscape of mineral extraction is largely unavoidable, but the land can be restored following the completion of extraction to complement or enhance the character of the landscape.

Enhancement In addition to reducing the adverse impacts of a project, many proposals provide the opportunity for environmental improvement. This is particularly true for projects that may be located on brown field or contaminated sites.

12.2 The legal context

A description of mitigation measures is one of the requirements of the EIA Regulations. Part 2 of Schedule 4 to the Regulations sets out the information that must be included in an ES and this includes:

> *"A description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects."*

The inclusion of mitigation measures in an ES does not itself oblige the developer to apply them when the project is implemented. To invoke this obligation, the determining authority must include the measures as conditions on the permission, or establish legal agreements.

A public statement of the mitigation measures that are to be included as conditions is one of the focuses for the public involvement requirements within the Regulations. Regulation 21 sets out the information that must be made available to the public following a decision to give permission to a proposal. The duties of a local planning authority include:

c) make available for public inspection at the place where the appropriate register (or relevant section of that register) is kept a statement containing -

(i) the content of the decision and any conditions attached thereto;

(ii) the main reasons and considerations on which the decision is based; and

(iii) a description, where necessary, of the main measures to avoid, reduce and, if possible, offset the major adverse effects of the development.

The making available of this information to the public can facilitate some public pressure to ensure that the mitigation measures are implemented as part of the project.

The purpose of mitigation measures is to limit, not necessarily to eliminate, the environmental effects of the development.[119] It follows from the requirement to assess the likely environmental effects prior to the grant of the "development consent" that investigation and matters of agreement on works of mitigation cannot be left until after the planning permission has been granted. This was the principle confirmed in the case of Hardy[120] where the High Court quashed a planning permission which left investigation of the habitats of bats and badgers, and the agreement of any necessary mitigation measures for protecting such habitats as were discovered, as a matter for a condition imposed on the grant of the planning permission (see Box 10.1). In those circumstances, the Court said, the effects of the development on the habitats and of any proposed mitigation measures were not being considered until after the development consent had been granted, and this would be contrary to both the Regulations and the Directive. The principles set out by the Court in Hardy are broadly stated and could in principle apply to the assessment of many other possible environmental effects. They are not confined to the effect on habitats of protected species.

The Courts have taken the view that where mitigation measures allow for flexibility and the exercise of discretion it is appropriate to assume that such discretion will be exercised reasonably. In one case[121] planning permission had been granted on appeal subject to conditions which included the requirement for landscaping and filling works to be carried out "unless otherwise agreed with the LPA". The Court rejected a challenge which was based on the argument that the LPA therefore had discretion not to insist on these mitigation measures, and consequently the existence of the measures could not be assumed as part of the assessment. The judgment of the Court was that, notwithstanding the proviso in the condition, it was reasonable to assume that the LPA would only exercise its discretion if the overall effect on the environment of any change would be benign.

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119 Circular 2/99 paragraph 120

120 R –v- Cornwall County Council ex parte Hardy (2000)

121 Smith –v- Secretary of State (2003)

12.3 Developing and describing the measures

As a first step, mitigation measures will usually be proposed by the specialist undertaking the assessment of a particular type of impact. It is important the measures proposed have a clear relationship with the impact of the proposal. For example, construction works may be timed to avoid disturbance of breeding birds. Measures which are not directly related to an environmental effect of the proposal are better classified as compensation (or in some cases enhancement). It is helpful if this distinction is made to clarify the environmental effects of the development. For example, for a proposal that destroys a heathland habitat, a wetland may be created off site. This measure will not reduce the effect of the proposal, but seeks to provide compensation for that effect.

The project manager of an EIA should consider the proposed mitigation measures from each specialist and consider if there are any overlaps or conflicts between them. For example, a noise consultant may propose the use of a noise barrier, but this could result in a significant visual impact. Conversely, a proposed noise barrier, if replaced by a well designed noise bund, may also serve as mitigation for the visual impact of the proposal. Any potential environmental effects of adopted mitigation measures should be assessed and considered to be part of the impact of the proposal.

The magnitude and significance of environmental effects will often rely on the adequacy and effectiveness of the mitigation measures. It is therefore important that they are clearly described in the ES. The what, when, who and how of mitigation should be considered and provided in the ES:

- What is going to be done?
- When will it be done?
- Who will be responsible for implementation and management?
- How effective is it going to be?
- How long is it going to take to become this effective?

The mitigation measures described should be realistic. For example, where the implementation of measures are not entirely within the control of the developer (e.g. public transport provision) consideration should be given to the extent to which the proposed measures could be delivered in practice. Where any uncertainty exists this should be clearly stated in the ES and the impact of the proposal in the absence of the mitigation measure should be given.

There are likely to be cases where a significant environmental impact is not subject to any mitigation measures. This may be for a variety of justifiable reasons, but these should be explained in the ES.

12.3.1 Dealing with uncertainty

Mitigation measures are not always certain to be successful. Some measures have an inherent degree of uncertainty of success (e.g. translocation of species). Alternatively, innovative techniques may be developed to deal with a specific issue. However, given that they have not been used before the likelihood of success may be unknown. Where there is uncertainty associated with the success of the mitigation measures, this should be clearly stated in the ES. It may be appropriate to propose monitoring to measure the success of such measures and to facilitate remedial action should they fail (see chapter 15). In the absence of this it may be necessary to develop alternative proposals to deal with the impact should the mitigation measures not be successful.

In some cases it may not be possible to provide the detail of mitigation measures. For example, this may apply to outline planning permissions, or developments where the contracts for construction have yet to be let. In such cases, it may be appropriate to provide an indication of the types of measures that may be employed. In addition, performance targets for the mitigation can be set. For example, the level of noise below which a significant impact will not occur or below the background noise level can be determined.

This can then be used as a performance target for any equipment or techniques that are employed during implementation. The benefit of this is that while the specific mitigation measures are unknown, their effect in reducing the environmental impact of the development should be certain. However, it is important that the target that is set is achievable.

12.3.2 Innovative approaches

The development of mitigation measures should be seen as an opportunity to add value to a proposal in terms of the benefit to affected communities and the environment. In this context, practitioners should consider if innovative approaches to mitigation might provide more benefits than simply applying measures to reduce the environmental impact of the development. For example, it might be more appropriate to invest the money that might have been spent on providing modest ecological mitigation to a site of little ecological value, on enhancing the management of an existing ecologically valuable site within the vicinity of the development.

Where such innovative approaches are designed to benefit the local community, it is appropriate to institute a public participation programme to ensure that what is being provided is what they need or desire.

12.3.3 "Counterfeit" Mitigation

Many ESs propose mitigation measures that under closer investigation do not indicate a commitment to implementing any environmental protection measures above those required by law. Common examples are:

- *Statements which commit the developer to complying with legislation.* In the event that legal obligations were breached the development may not be allowed to proceed or continue to operate anyway. This is therefore not mitigation, but simply meeting legal requirements.
- *Statements which commit the developer to discussions with local authority/ Environment Agency/Scottish Natural Heritage, etc.* These are often not accompanied by a commitment to comply with the wishes of the organisation concerned. However, a more helpful approach would be for the discussions to take place ahead of the submission of the ES, enabling specific mitigation measures to be included in the text.
- *Statements which commit the developer to giving consideration to a particular measure.* This provides little certainty that the measure will actually be implemented and therefore it is more appropriate to consider the impact of the development in the absence of such measures.

None of the above suggest that the developer is likely to implement any additional measures to mitigate the environmental impact of the proposal. Furthermore, the credibility of an ES and the trust in the developer may be undermined by implying that these are mitigation measures. All such statements should therefore be avoided.

12.4 Commitment to mitigation

Given the importance of mitigation measures in determining the environmental impact of a proposal, there should be a clear indication of the measures that *will* be implemented, and therefore form part of the proposal. For example, some measures may only be under consideration or may rely on the cooperation of other parties. In such cases there is no clear commitment to the implementation of the measures and therefore, for the purposes of the description of the environmental impacts, it should be assumed that they will not be implemented.

The description of mitigation measures in the ES should be in sufficient detail to enable the reader to understand precisely what is to be implemented. The provision of this detail also gives the reader of the ES confidence that the measures have been considered in detail. For example, vague references to the provision of a nature conservation area might suggest that

there is little intent to implement such a scheme (unless forced to do so) and the proposal has been included in the ES to satisfy potential objectors. On the other hand, the provision of a plan setting out the habitats to be created, species to be planted and measures to be taken to encourage wildlife into the area indicate that the measure has been considered in detail and is more likely to be implemented.

12.4.1 Securing mitigation measures

However clear the description of the mitigation measures and unambiguous the statements of the commitment of the developer to their execution, their inclusion in an ES do not oblige the developer to implement them when the project is constructed. Ensuring that mitigation forms part of the development can only be ensured by incorporating the measures into planning conditions and / or legal agreements. Planning conditions are required, among other things, to be precise and enforceable, and depending on the complexity of the ES it may therefore be inappropriate to provide a condition requiring simply that "the development be in accordance with the measures set out in the ES" without greater definition of the measures to be adopted. Research published by the Department of the Environment, Transport and the Regions suggests that an appropriate response is to establish a schedule of environmental commitments that can be updated during planning negotiations and finally framed in appropriate conditions or legal agreements.[122] The focus of such planning conditions or agreements should be on those measures that are considered to be important to the environmental performance of the project.

Where there is uncertainty relating to the effectiveness of a mitigation measure, it may be important to apply performance standards that set out what should be achieved rather than how they may be achieved. For example, requiring a development to be screened by tree planting from a particular viewpoint ensures that if the planting implemented is ineffective, then the developer is still under an obligation to achieve the objective.

[122] DETR (1997), Mitigation Measures Used in Environmental Statements, HMSO, London.

Summary

- One of the major benefits of EIA is the prevention or reduction of the environmental impacts of a project. Using EIA in this way not only benefits the environment, but due to the enhanced environmental acceptability of a proposal, can improve the chances of receiving consent for the project.
- Environmental problems can be identified in the early stages of a project through the integration of EIA with project design. This enables the design to be modified to eliminate or reduce the environmental effect.
- As magnitude and significance of environmental effects will often rely on the adequacy and effectiveness of the mitigation measures it is important that the ES clearly describes them and clearly indicates the measures that will be implemented, and therefore form part of the proposal.
- The inclusion of mitigation measures in an ES does not itself oblige the developer to implement them. To achieve this, the determining authority must include the measures as conditions on the permission, or through legal agreements.
- The project manager of an EIA should consider the proposed mitigation measures and whether there are any overlaps or conflicts between them. Any potential environmental effects of adopted mitigation measures should be assessed and considered to be part of the impact of the proposal.
- Mitigation measures are not always certain to be successful. Uncertainty should be clearly stated in the ES and the impact of the proposal in the absence of the mitigation measure should be given.
- In cases where it is not possible to provide the detail of mitigation measures it may be appropriate to provide an indication of the types of measures that may be employed together with a performance target for the measures, e.g. in terms of reducing impacts or limiting an impact.
- Value can be added to a proposal through the development of mitigation measures that benefit affected communities and the environment.

References

DETR (1997), Mitigation Measures Used in Environmental Statements, HMSO, London.

13.0 The Environmental Statement

Whilst there are many elements of the EIA process that are important, the Environmental Statement (ES) is the main communication tool for the findings of the EIA. It is the most visible part of the process and the one that tends to receive the attention of decision makers (officers and elected members), statutory consultees and the affected public. The EIA Directive sets out specific requirements for the content of an ES and these have been translated into the various EIA Regulations in the UK. Failure to comply with these requirements can form the basis for a legal challenge from objectors to a project and it is therefore important that those responsible for a project ensure that their documentation is in compliance with the Regulations.

The ES can also set the tone for the relationship between the developer, decision makers and the public. An ES should be an objective document which sets out the environmental effects of the project and the measures to be taken to mitigate them. If there is any sense that the document is biased and may be under emphasising adverse effects (and over emphasising positive effects) then any trust between the different parties may be undermined. These guidelines strongly recommend that any promotional statements are provided in a separate document (e.g. planning support statement) and are not associated with the ES.

13.1 The legal context

The EIA Directive sets out minimum requirements for the content of an ES. It also specifies other issues that should be addressed, but which are subject to the judgement of the member state. For the EIA Regulations for planning in England and Wales this judgement has been passed on to the local planning authority. The minimum requirements for an ES under the EIA Directive are those specified in Article 5 (3) (see Box 13.1) of the EIA Directive together with the information specified in Annex 4 (see Box 13.2) which can be reasonably required to assess the environmental effects of the development:

Box 13.1
Article 5(3) of the EIA Directive

- A description of the project comprising information on the site, design and size of the project
- A description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects
- The data required to identify and assess the main effects which the project is likely to have on the environment
- An outline of the main alternatives studied by the developer and an indication of the main reasons for his choice, taking into account the environmental effects
- A non technical summary of the information mentioned in the previous indents.

(In England and Wales the requirements are found in Schedule 4 to the Regulations, which broadly repeats the above).

There is, however, no statutory requirement as to the form which an Environmental Statement must take. It may comprise of more than one document so long as it is clear that they are to be read together as an Environmental Statement, and that the requisite information is included. It is not sufficient to rely on the fact that the environmental information which would go into an Environmental Statement is provided through various separate reports which are not linked together in this way.[123]

123 It was for this reason that the House of Lords quashed the permission granted to Fulham Football Club in the case of Berkeley -v- Secretary of State for the Environment and Fulham Football Club (2000), criticising the "paper-chase" which the collection of disparate reports required third parties to participate in to derive the relevant environmental information

Box 13.2
Annex IV of the EIA Directive

1 Description of the project, including in particular:
   - A description of the physical characteristics of the whole project and the land-use requirement during the construction and operational phases,
   - A description of the main characteristics of the production processes, for instance, nature and quantity of the materials used,
   - An estimate, by type and quantity, of expected residues and emissions (water, air and soil pollution, noise, vibration, light, heat, radiation, etc.) resulting from the operation of the proposed project.

2 An outline of the main alternatives studied by the developer and an indication of the main reasons for this choice, taking into account the environmental effect.

3 A description of the aspects of the environment likely to be significantly affected by the proposed project, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and inter-relationship between the above factors.

4 A description of the likely significant effects of the proposed project on the environment resulting from:
   - The existence of the project
   - The use of natural resources
   - The emission of pollutants, the creation of nuisances and the elimination of waste, and the description by the developer of the forecasting methods used to assess the effects on the environment.
   - The description should cover the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the project.

5 A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.

6 A non-technical summary of the information provided under the above headings.

7 An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the developer in compiling the required information.

There have been relatively few challenges based on the adequacy of an ES, most concentrate on the decision as to whether or not an EIA should be required. In one case[124] which did look at the sufficiency of the ES, the matter was disposed of by the Court more on the basis that no complaint had been made until the case had gone to Court (there were in fact challenges based on three other grounds), but it was confirmed that the Berkeley case[125] was relevant only to the question of whether an ES should have been provided, rather than a qualitative assessment of the document produced. In other cases[126] the Courts have displayed an unwillingness to interfere where there has been "substantial compliance" with the objectives of the Regulations and the Directive but where some minor aspects have not been complied with. Berkeley expressly accepted that there may be cases where there has been "substantial compliance" such that a decision cannot be impugned, but on the facts there the House of Lords declined to hold that there had been such substantial compliance.

The significance of a lack of any suggested errors in an ES will depend on the circumstances of each case. In one of the more extreme cases[127] the Court granted permission to proceed with a judicial review against the decision to grant planning permission when it was discovered that there was an arithmetical error in the ES on the percentage increase in the

124 R -v- Derbyshire County Council ex parte Murray (2000)

125 Berkeley -v- Secretary of State for the Environment and Fulham Football Club (2000)

126 For example R (on the application of Burkett) -v- LB Hammersmith & Fulham (2003) [NB: this was the hearing of the substantive challenge to the permission rather than the preliminary question of whether the challenge was too late which went all the way to the House of Lords in 2002 before permission to proceed with the substantive challenge was granted]

127 Crichton and Palmer -v- Wellingborough Borough Council and Sywell Aerodrome (2002)

period during which an airfield could be used.[128] On the facts it was said that, having regard to the advice given to the LPA's Planning Committee and the reliance that was placed on this particular statistic, the error was crucial to their determination and the result may well have been different had the correct figure been reported.

As can be seen in Box 13.2, point 6, a required piece of information is a "non-technical summary".[129] This should be a summary of "the main findings of the Environmental Statement in accessible plain English"[130] and applicants are encouraged to publish it separately from the main Environmental Statement.[131]

13.2 First impressions

The first impressions of a document can be important. It can provide confidence that the EIA has been undertaken in a thorough, organised fashion and that some thought has been put into presenting the information and dealing with the environmental effects. Alternatively, it can provide the impression that the EIA has been treated simply as a regulatory hurdle to be overcome and that environmental considerations have not been adequately integrated into the design and planning of the project. The following provides some guidance on making a good first impression in the presentation of the ES:

- Write for the reader
- Limit the size of the document
- Integrate the contributions
- Consider the non-technical summary
- Be innovative in making the documentation accessible

13.2.1 Write for the reader

The main users of an ES are the decision makers and the public and the most successful ESs are written with this in mind. They make it easy for the users to read, assimilate and understand the information being presented. This allows them to form clear views on the merits of the proposal, or on those issues over which there may be some concern, thus clarifying the basis for any arguments. Writing for the reader does require more thought and more work. However, it will result in an improved document and will instil confidence that, should the development proceed, similar attention may be given to its implementation to ensure that the adverse environmental effects are minimised and managed.

Writing for the reader encompasses many of the principles set out in the bullet points above. Some additional guidelines are:

- Write for the non-specialist. Despite the presence of a non-technical summary, the main users of the full ES are likely to be non-specialists, but with some knowledge of the subject area. An ES should be written with this in mind and the use of technical or specialist jargon should be avoided where possible, or explained where it is unavoidable. A glossary can be very useful to ensure that technical terms or jargon are explained.
- Use illustrations, maps, photographs and diagrams wherever possible. People can assimilate messages from pictures much more effectively than they can from text.
- Consider having the document edited by someone with experience of turning technical documents into ones that are readable by the public, but without losing the technical accuracy.
- Consider using a designer or desk top publisher to improve the presentation of the document. This can make a significant contribution to improving its readability. For

[128] The development would have allowed use throughout the whole 12 months of the year rather than just 9 months of the year, and this was wrongly categorised as a 25% increase rather than a 33% increase

[129] Schedule 4 paragraph 6 of the EIA Regulations

[130] Circular 2/99 paragraph 85. The equivalent reference in the Directive, in Annex IV paragraph 6, is to a "non-technical summary of the information provided under the [above] headings"

[131] Circular 2/99 paragraph 105

example, A3 documents often allow illustrations and the text to which they refer to be placed alongside each other.

Authors of ESs should avoid writing ESs in a way that is convenient for themselves or to impress the client of a consultant (usually reflected in length).

There will, nevertheless, be some specialist readers who may want to examine the raw data on which interpretations and predictions are based. This is best provided in a series of technical appendices and summarised in the main ES.

13.2.2 Limit the size

Documents which are large and difficult to handle will do little to impress the users of the ES. A voluminous document can be an indicator of a poor EIA process: either scoping has not been adequately undertaken to focus on the key issues or the content has not been adequately edited to make it into a coherent single document. Guidance issued by the Department of the Environment in 1995 suggested that the maximum size for an ES should be 150 pages, with any additional information placed in appendices. This guidance is still appropriate and is reiterated by these guidelines. However, information that is vital to understanding the proposal and its associated environmental effects should not be relegated to appendices. If this occurs, it is suggested that further editing is required to get the length of the text down to manageable proportions.

In exceptional circumstances (e.g. nationally significant projects), it will not be possible to adequately provide the information in this length of document. In these cases, some thought should be given to how to best present the information so that it is easily understood and assimilated by the decision makers and the public.

Box 13.3
ES for the Channel Tunnel Rail Link

The Channel Tunnel Rail Link was a significant railway development project designed to provide a high speed rail link between London and the Channel Tunnel. The project covered a distance of 108 km including many locations that would result in complex environmental problems that required detailed assessment work to predict the effects and develop methods to avoid or reduce them. The length of the corridor and the complexity of some of the environmental issues meant that there was a considerable volume of information required to communicate the environmental effects and set out the means of reducing them. The presentation of the information in format consistent with more routine ESs would have resulted in a document that was voluminous and difficult to navigate. Some thought had to go in to how to present the information to communicate the key information on the environmental effects of the development. Two key approaches were adopted:

1. The route corridor was divided into windows and all of the information relating to a particular window was collated together. The purpose was that if a reader was interested in a particular section of the route that might affect them, then they could easily access the information rather than try and piece together the information from different chapters within an ES.

2. Whilst an overview of the environmental effects would be an important influence on the decision, there were particular 'hot spots' where significant impacts were likely and these would have a particular influence on the outcome of the decision. In order to highlight these locations and issues to decision makers a 'hot spots' report was produced. Again, this helped the decision makers to easily access some of the key information without having to extract it from the large volume of information provided on the impact of the proposal as a whole.

Source: ERM (1994), Channel Tunnel Rail Link Environmental Statement, Union Railways.

13.2.3 Integrate the contributions

An ES that is simply a set of separate technical reports placed in a single binder together with a description of the proposal, is often an indicator of a poorly managed ES. Such documents are often difficult to read (due to the variation in writing styles and presentation formats) and are repetitious (e.g. containing several descriptions of the proposal). It is vital that an ES has a single editor who is responsible for integrating the various contributions from the EIA and for removing the overlaps between the sections. This is an extension of the role of managing the EIA. The editor should be better able to identify any contradictions or interactions between the different impacts which have been investigated and ensure that they are addressed before the ES is submitted to the determining authority.

13.2.4 The non-technical summary (NTS)

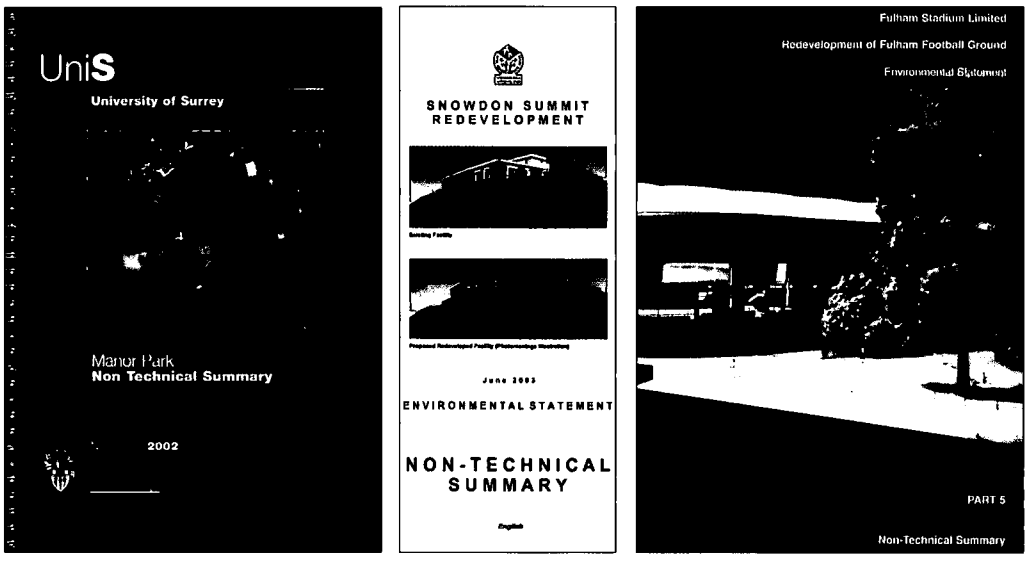

Figure 13.1
The non-technical summary is an important communication tool

Whilst the ES is the main source of information on the environmental effects of a project, the non-technical summary will be the main source of information to the largest number of people. It is this document that will be read by many members of the public, but also by many of those who will make the final decision on whether the project should proceed or not. For this reason, close attention should be given to the content and the format of a non-technical summary. The following good practice attributes should be considered:
The NTS should:

- be a fair reflection of the main ES and should cover all aspects of the EIA process, not just provide a summary of the impacts.
- be available as a separate document
- be written in non-technical language
- inform people of the environmental effects of the proposal, rather than concentrating on the measures to be taken to reduce environmental effects
- ideally, be free of charge to all members of the public and other interested parties
- include appropriate illustrations

13.2.5 Facilitate access

The Regulations allow for a charge to be made for copies of ESs, but this is to only cover the cost of printing and reproduction of the document. In the case of the Regulations relating to offshore production facilities and pipelines the charge may not exceed £2.00.[132] An additional disadvantage of large ESs is that they tend to be expensive to reproduce. Charges in excess of £250 for an ES are not uncommon. This cost can be a deterrent to members of the public to become involved in the EIA process, particularly if a project is to affect an area of lower socio-economic standing. In some cases there is a suspicion that the

[132] Regulation 9.4, Statutory Instrument 1999 No. 360, The Offshore Petroleum Production and Pipe-lines (Assessment of Environmental Effects) Regulations 1999

cost is deliberately set high in order to deter the public from becoming informed about the project. While it may succeed to some extent in achieving this objective, it is also likely to breed an attitude of distrust and suspicion amongst those who do, nevertheless, become involved.

The provisions requiring copies of the ES to be on display at key locations[133] (usually the Council offices) theoretically provides for public access, but has some very real practical limitations. Access is only provided when people are often unavailable, i.e. they are working during office hours, and the facilities do not always exist for a member of the public to study a document for a full day. For these reasons, careful consideration should be given to the cost of the ES in order to enable affected communities to access the information. It is acknowledged that this can create a tension between the desire for good presentation (implying the extensive use of colour) and the need to keep the cost of documents to a level that will enable members of the public to access the information.

Modern technology offers the opportunity to provide an answer to this tension by giving improved access to environmental information for relatively little cost. Copies of the ES can be made available on the Internet for members of the public to download. Such a file could be of a considerable size so a more practical solution may be to provide copies of the ES on a compact disc to enable it to be viewed on a computer. The cost of reproduction in this format would be a few pounds compared to the few hundred pounds it costs to reproduce documents of several hundred pages.

For those willing to make the investment, computer technology offers the opportunity to experiment with innovative methods of communicating environmental information relating to a proposal, e.g. virtual reality trips around a new development, or the opportunity to view a computer model of a development from any chosen viewpoint (although care must always be taken to ensure that the presentation maintains the integrity of the ES as an objective assessment of the required elements).

13.3 Content of the ES

When considering the content of an ES, it is worth referring back to the basic principles of EIA set out in chapter 3 of these guidelines. In particular, an ES should be focused on the key issues, and should be credible and transparent. Satisfying these principles can be achieved by a systematic approach to the production of the ES. Implementing some simple but often ignored practices will make a significant contribution:

- Make a clear distinction between fact, opinion based on fact and opinions. Where the latter is provided acknowledge that contrary views may be equally valid
- State all assumptions which form the basis of any aspect of the assessment, e.g. assumptions used in modelling of air quality. The provision of background data or detailed methodologies in appendices may be appropriate.
- State clearly the source of any information contained in the ES. Where a documented source has been used, provide the full reference.
- Provide copies or summaries of documents which form the basis of the EIA, e.g. scoping opinions or responses to consultation. This adds to the transparency of the document by allowing the reader to check that all issues raised by the consultees have been addressed.
- Where other documents have been used that are directly relevant to the project (e.g. traffic impact assessment, retail study, etc), provide the full reference and indicate where copies of the document may be obtained or can be viewed.
- Padding should be avoided. Many ESs contain an extensive analysis of planning policies and argue that a proposal is in compliance with the policies. This advocacy role is in conflict with the impartiality that should characterise an ES and these guidelines recommend that such analysis is provided in a separate planning statement, unless there are issues specifically relating to the environmental impact of a proposal.

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[133] See 14.2.3 below

- Specifically edit the document to identify overlaps and any relationships between the different sections. Duplication should be eliminated.
- Provide a consistent template for the chapters which deal with the baseline conditions and impacts of the proposal. This will assist the reader in navigating around the document.
- Clearly define terms that are used within the document. For example, many practitioners choose to differentiate between the impact of the proposal and effect which that is likely to have on the environment.
- Clearly define any limitations or uncertainty relating to the assessment. For example, details of the development may not have been finalised, the confidence that can be placed in certain predictions may be uncertain, or the effectiveness of some of the proposed mitigation measures may not be known. Any such information should be made explicit.

13.3.1 Preparing an ES

There is no standard structure for an ES. Those preparing such documents should think about the form in which the information can be best communicated to the readers of the ES. For most ESs a simple structure will suffice, but for documents which are extraordinarily long a more innovative approach may be required to ensure that the reader does not 'drown' in information (see Box 13.3).

When planning an EIA sufficient time should be allocated for writing the ES. It is not possible to provide specific guidance on how long this should be, as it will depend on the size and complexity of the project as well as the associated EIA. As a rough guide, editing the text of an ES can take between 2 to 8 weeks and time must also be allowed for assimilating the graphics. Editing will require checking of text, making revisions, clarifying issues with authors and undertaking final quality control checks. In the event that the ES requires some design and desktop publishing input additional time must also be allowed for this (e.g. up to two weeks). This will include the selection of graphics and gaining approval for the design to be used. Similarly, if the document is to be printed, then another 1-2 weeks may have to be allowed for this.

Summary

- The Environmental Statement (ES) is the most visible part of the EIA process and acts as the main communication tool for the findings of the EIA. It is the document that tends to receive the attention of decision makers, statutory consultees and the affected public.
- There is no standard structure for an ES. Those preparing such documents should think about the form in which the information can be best communicated to the readers of the ES. For most ESs a simple structure will suffice, but a more innovative approach may be required for documents which are extraordinarily long.
- The ES should be an objective document which sets out the environmental effects of the project and the proposed mitigation measures. If there is any sense that the document is biased then any trust between the different parties may be undermined.
- A well presented ES can provide confidence that the EIA has been undertaken in a thorough, organised fashion. Poor presentation can create the impression that the EIA has been treated simply as a regulatory hurdle and that environmental considerations have not been adequately integrated into the design and planning of the project.
- The main users of the full ES are likely to be non-specialists and as such the ES should be written with this in mind and the use of technical or specialist jargon should be avoided where possible, or explained within a glossary where it is unavoidable. The use of illustrations, maps, photographs and diagrams wherever possible will improve the overall presentation and understanding of the issues.
- Raw data and supporting technical information should be included in technical appendices and only summarised in the main ES. This will help to limit the size and maintain the focus of the main ES.
- The use of a single editor should ensure that the ES is not simply a set of separate technical reports placed together with a description of the proposal.
- Close attention should be given to the content and the format of the non-technical summary. The NTS should be provided as a separate document presenting a fair reflection of the main ES, covering all aspects of the EIA process and not just summarising the impacts.
- A good practice EIA will take measures to facilitate a wide readership of the ES. Modern technology offers a variety of opportunities through provision of improved access to environmental information for relatively little cost e.g. use of the Internet or CD-ROM.
- An ES should be focused on the key issues, and should be credible and transparent.

References

Statutory Instrument 1999 No. 360, The Offshore Petroleum Production and Pipe-lines (Assessment of Environmental Effects) Regulations 1999

14.0 Review & Decision Making

14.1 Requirements before a decision can be made

When an Environmental Statement is submitted to a local planning authority or other approving authority, they are under an obligation to take this and other environmental information into account when making the decision on whether the project should proceed or not. Environmental information includes the ES, but also the comments of statutory consultees, the public and other organisations. Contrary views to those contained in the ES should therefore be taken into consideration. Procedural requirements for dealing with an ES are described below and in more detail elsewhere (see DETR 2000). In brief, the approving authority must seek the views of the statutory consultees (e.g. English Nature, Scottish Environmental Protection Agency, etc) and make the information available to the public for comment for a fixed period. Only after this period can the approving authority seek to take a decision on the proposal.

14.2 The legal context

An important point to bear in mind is that even if the assessment identifies significant environmental effects which cannot be mitigated totally, it does not follow that planning permission must be refused[134]. The requirement for a local planning authority generally when determining a planning application is to have regard to the development plan, so far as material to the application, and to all other material considerations.[135] The likely environmental effect of the development is just one such material consideration, and as a matter of law its status is no higher than any other. Nevertheless the decision-maker may afford it such weight as it sees fit as a material consideration so long as its decision is not perverse[136].

It is the duty of the decision-maker to consider whether the ES provides sufficient detail for a proper assessment. It has now been established by the second *Rochdale* case[137] that this is a question for the decision-maker in which the Courts will not interfere unless the decision arrived at is perverse. If it is believed that there is insufficient information then there is power for the decision-maker (whether the local planning authority or the Secretary of State) to request further information from the applicant[138].

14.2.1 Conditions Needed to Validate the EIA Methodology

As has been noted above, it will be appreciated that there may well be a need to rely on specific conditions attached to the development consent in order to validate the approach taken in the ES. If there any assumptions at outline application stage, on which basis the EIA proceeded, then it is important that these assumptions are secured at the detailed design stage. For example if the ES was based on a Masterplan which is to be prescriptive rather than illustrative such that future submissions of reserved matters must be in compliance with it, there must be a condition on the outline planning permission to this effect[139].

Such regulatory matters could in principle be dealt with either by way of a condition or a planning obligation under section 106 of the Town & Country Planning Act 1990,[140]

134 This fact is confirmed in paragraph 13 of Circular 2/99

135 Section 70(2) of the Town and Country Planning Act 1990

136 Tesco Stores Limited –v- Secretary of State (1995)

137 Ex parte Milne (2000)

138 Regulation 19

139 For an example of such a condition see the discussion on the second Rochdale case in Section 6.0 - Developing the Proposal and Planning an EIA, above

140 see the case of R (on application of Portland Port Limited and Portland Harbour Limited) –v- Weymouth and Portland Borough Council (2001)

although policy is that conditions should be used in preference to a planning obligation in cases where either are available.[141]

14.2.3 Publicity for the Decision-Making Process

When the Environmental Statement is submitted with the Application the publicity obligations fall on the local planning authority. The procedure is governed by Regulation 13, and it may be summarised briefly as follows:

- the applicant must send at least three spare copies of the Environmental Statement so that the local planning authority can provide copies to the Secretary of State; and
- the applicant must make available sufficient additional copies for them to be sent to the consultation bodies specified in Regulation 2(1). They may either be sent to them by the local planning authority or by the applicant direct. The consultation bodies include agencies such as English Nature and the Environment Agency.

An application which is, or is later determined to be, an EIA application, is not rendered invalid simply because an Environmental Statement does not accompany the application and this is not a reason for the local planning authority to decline to register the application.[142] However the local planning authority cannot be obliged to determine the application (other than to refuse it) until the Environmental Statement has been submitted.[143]

The publicity obligations fall on the applicant when an Environmental Statement is submitted after the application. The procedure is found in Regulation 14, and it can be summarised briefly as follows:

- notice of the intended submission of an Environmental Statement must be posted in a local newspaper[144] and on site[145] before the Environmental Statement is submitted; and
- the same number of copies must be provided to the local planning authority for the consultation bodies as if the Environmental Statement were submitted with the application

In all cases the applicant is to arrange for additional copies of the Environmental Statement to be made available to the public for inspection.[146] Copies may be purchased at a reasonable charge while stocks last.[147]

It is possible that new information will come to light during the course of consultation, or that the development proposals have to be amended in such a way that the ES has to be amended. When new environmental information is requested under Regulation 19 this has to be subjected to similar consultation requirements as applied to the ES.[148] As is noted in section 6.5.4 above a pragmatic LPA should be able to accept voluntary updating material in the absence of a formal Regulation 19 request, even though the Regulations do not explicitly set out a procedure for doing so. Minor clarifications or additional information can be taken into consideration without being subjected to the publicity procedure, although the dangers of updating the ES by means of a letter are illustrated by the Court's warning in the case of *Burkett*[149] where the assessment exercise only survived because the Court was prepared to exercise its discretion not to quash the permission by holding that there had at all times been "substantial compliance" with the Regulations. The guidance that can be derived from recent case-law is that a constant drip-feed of updating and

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141 see paragraphs 12-13 of Circular 11/95

142 Circular 2/99 paragraphs 67-69

143 Regulation 3(2)

144 Regulation 14(2)

145 Regulation 14(3)

146 Regulation 17

147 Regulation 18

148 Regulation 19(3)-(9)

149 R (on the application of Burkett) -v- LB Hammersmith & Fulham (2003) – the substantive hearing of the case rather than the preliminary issue of whether the challenge was brought in time

supplementary material which is not adequately publicised may well fall foul of the Regulations, but properly-packaged supplementary material should not so long as it is given adequate publicity equivalent to the publicity requirements for the full ES on submission.

Every stage of the decision-making process must be publicised. This includes a requirement to state in the decision[150] that the environmental information has been taken into account[151], and a requirement to notify the Secretary of State[152] of the decision and to publish notice in the press advising what the determination was and of the reasons for it.[153] The press notice must also indicate where documentation relevant to the decision can be inspected (i.e. the planning register), and this documentation must include the reasons for the decision and (where relevant) a summary of the mitigation measures proposed to off-set the environmental effects of the development permitted.[154] For decisions of the Secretary of State he must notify the local planning authority, and provide a similar statement of the reasons for the decision and of any mitigation measures so that the local planning authority can put it on the planning register.[155]

Whilst acknowledging the importance of these publicity requirements the Courts have proven to be loathe to quash planning permissions solely on account of a failure to follow the letter of the Regulations on publicity. In some cases the Courts have been prepared to find that there has been "substantial compliance"[156] such that interference is not justified, and in one particular case[157] the Court held that where notification was not placed on the planning register following the grant of planning permission the appropriate remedy would be for the Court to direct that such notification be given, rather than to quash the permission, given that the failure was merely "secondary and procedural".

14.2.4 Time Period for Determination of an EIA Application

One consequence of an application being determined to be an EIA application is that the local planning authority have 16 weeks to determine it, rather than the usual 8 weeks[158]. Whilst an ES can be submitted along with the application or afterwards, the 16 weeks only starts to run once the ES has been submitted.[159]

14.3 Quality control

In order to ensure that the ES satisfies the legal requirements and is consistent with good practice, these guidelines recommend that the ES should be subjected to a review. This is essentially a quality control check prior to using the information as a basis for a decision and for associated condition setting.

On receipt of the application, and before reading the ES in detail, it is worth checking that the 'simple' legal obligations have been fulfilled and that the applicants have fulfilled any particular requests of the approving authority:

- Check that in addition to the usual planning application document, the EIA related documents have been provided. For example, under the EIA Regulations for planning in England and Wales 3 copies of the ES should be provided for the Secretary of State.
- Check that a non-technical summary is included in or with the ES
- Check whether sufficient copies of the ES have been provided in line with any request

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150 That is to say the decision notice granting planning permission, not the resolution authorising it – per R (on the application of Richardson) -v- North Yorkshire County Council (2003)

151 Regulation 3(2)

152 Regulation 21(1)(a)

153 Regulation 21(1)(b)

154 Regulation 21(1)(c)

155 Regulation 21(2)

156 see Berkeley -v- Secretary of State and Fulham Football Club (2000)

157 R (on the application of Richardson) -v- North Yorkshire County Council (2003)

158 Regulation 32(2)(a)

159 Regulation 32(2)(b)

made before the application. Consider whether any additional copies may be required.

- Confirm whether the applicant has supplied any of the statutory consultees, or other organisations, with copies of the ES. If so, check whether the contact to which they have been sent is the appropriate one and whether they have been advised of the authority to which they should send their comments. Also ensure that you are aware of the date on which the information was sent.
- Confirm whether obligations with regard to publicity and availability of the ES have been complied with.

On completion of this and fulfilment of other procedural obligations, it can be confirmed that the application is in order and a more detailed analysis is appropriate.

14.4 Undertaking a review

Whilst undertaking a review is traditionally seen as part of the decision making process, the value of such a quality control check should not be underestimated by consultants and developers. It is good practice for producers of ESs to have a draft document reviewed to ensure that any outstanding issues can be addressed prior to submission to the determining authority. This has the potential to improve the speed of the decision making process.

14.4.1 Responsibility for the review

Assuming that the review is being undertaken within the context of the decision making, it is the responsibility of the approving authority to ensure that a review is undertaken. It should be noted that the review is not a legal requirement, but is considered to be good practice and is likely to make any subsequent decisions more defensible and less open to challenge.

A review can be undertaken 'in house' using appropriate specialists from within the authority. Alternatively, the authority may prefer to use the expertise and independence of an external organisation. The Institute of Environmental Management & Assessment, consultants and some universities will provide such a service. Any combination of these approaches can also be used. For example, an authority may choose to take an overview of the adequacy of the ES using in house staff, but seek the assistance of a consultant when attempting to evaluate the adequacy with which a particular impact has been addressed (e.g. air quality).

The use of an external organisation has particular advantages when attempting to establish the independence of the decision making process. For example, where a local authority is the developer as well as the decision maker, they may prefer to have an external 'stamp of approval' on the adequacy of the ES. Similarly, large developments that are subject to EIA tend also to be important in economic terms and the local authority may wish to avoid accusations of a 'political' influence in their consideration of the environmental information.

However, where an external organisation is used, it may be appropriate for the approving authority to evaluate the comments made in the review based on their more intimate knowledge of the site and its surroundings, and the social, economic, cultural and political context.

14.4.2 Review methods

There are a range of methods available for reviewing an ES and none can be considered the 'correct' method to use. Regardless of the method adopted, it is recommended that a review is undertaken by an individual (or individuals) with knowledge of the EIA process and an understanding of a range of specialist subjects which are likely to be covered in the ES. A review seeks to determine[160]:

[160] Based on Scholten (1995)

- Whether information is sufficient for decision making in the light of the nature of the development and the environmental issues of concern
- Whether the information conforms with current scientific and technical knowledge
- Whether the information is relevant in terms of focusing on the key issues and being provided in a form that is understandable to decision makers and the public

It should be noted that it is not the purpose of a review to verify the information contained in an ES, although where information provided in the ES is clearly contradictory or sufficiently different from information known from other sources then it is appropriate to question its validity.

The methods available for review are:

- Use of the original agreed scoping opinion or terms of reference
- Use of formal review criteria
- Professional judgement of an appropriate specialist(s)

These can be used in combination. Where possible it is beneficial to assemble a team of people that can undertake the review. This would consist of those with knowledge of the EIA process and might also include specialists who can comment on the assessment of specific impacts (e.g. air quality, noise, etc).

A scoping opinion agreed near the outset of an EIA can provide a basis for a review. The main purpose would be to check that the issues the proponent was asked to assess have been addressed and that no significant issues have been omitted. This method is most useful where the scope of the EIA has been agreed in detail and covers the issues set out in Chapter 9, such as the methods to be used to gather baseline data and the significance criteria to be used. If the scoping opinion simply consists of a list of issues to be addressed, then the review will require the application of considerable professional judgement to evaluate the information in the ES. Consideration should also be given to the extent to which the scope of the EIA may have altered during the process. For example, an issue that was considered to be significant at the outset may have been eliminated as a result of the redesign of the project. Approving authorities should note that, if they did not request that a particular issues was addressed in the scoping opinion, they are not precluded from asking for additional information on this issue at the decision making stage.

A range of formal review criteria are freely available to be used as a basis for reviewing an ES. A list of such criteria is provided in Box 14.1. These are essentially a checklist of the type of information that should be provided, or the questions that should be answered, by an ES. As with any checklist they help to ensure that the reviewer does not omit any important issues. They are also helpful in prompting the reviewer to think about the transparency and the balance of the document and the extent to which it is well presented and understandable to the non-specialist. An individual wishing to use such criteria would still require some knowledge of the EIA process and some knowledge of a range of disciplines is also an advantage. An approving authority could develop its own criteria, perhaps using a combination of those given in Box 14.1 and incorporating any factors that are particularly relevant to the geographical area or the type of development being dealt

Box 14.1
Review Criteria:

Commission of the European Communities:
http://europa.eu.int/comm/environment/eia/eia-support.htm

Institute of Environmental Management & Assessment Review Criteria.
http://www.iema.net/download.php/reviewcrit.pdf

Scottish Executive (1999), Planning Advice Note, PAN 58, Environmental Impact Assessment, Scottish Executive. http://www.scotland.gov.uk/library/pan/pan58-00.htm

Lee, Colley,Bonde & Simpson, Reviewing the Quality of Environmental Statements and Environmental Appraisals, Occasional Paper 55, EIA Centre, University of Manchester.

with. For example, more specific criteria could be developed for off shore oil and gas developments or off shore wind farms.

Finally, a review can be undertaken based on the professional judgement of the reviewer. This will require knowledge of EIA and an understanding of current best practice for the assessment of particular impacts. This approach may be more helpful where there is a need to focus on particular issues which are not dealt with in any depth in the scoping document or review criteria. Similarly, if reviewing the adequacy of the assessment of a particular impact, there are rarely review criteria that are sufficiently detailed to provide the basis for the review. In these circumstances the use of a specialist to review this aspect of an ES is preferable.

Whichever method is adopted, it is recommended that it should result in a report. This provides a clear analysis of the ES and a record of the outcomes of the review. If additional information is required, it provides a clear basis on which to make the request. The approving authority may or may not wish to make the review report available to the applicant and the public. Although they should be aware that they may be required to provide if a request is submitted under the Environmental Information Regulations 1992[161].

14.4.3 Using the review findings

Many of the review criteria listed in Box 14.1 include grading systems that provide an indication of the quality of the ES or the manner in which it had dealt with specific issues (e.g. describing the baseline conditions). It should be remembered that these grades do not necessarily indicate the level of legal compliance of the document (although an ES that falls short of complying with the Regulations is unlikely to achieve a satisfactory grade). The grading systems are useful for providing an indication of the quality of the information provided, but the attention of the decision makers should be on the content of the review. Their more detailed knowledge of the project and particularly the location may lead to a different view from the reviewers of the significance of the main findings. Alternatively, while an issue may not have been adequately assessed, the decision makers may take a view that they can satisfactorily avoid any significant impacts through imposing conditions on the consent for the project without requiring significant additional information.

In the event that any additional information is requested as a result of the review, it should be remembered that this may be subject to similar public consultation requirements as the original ES if the request for information is made under Regulation 19. The Regulations and Government advice should be consulted to ensure that legal obligations are complied with.

14.4.4 Good practice approach to review

The review of an ES is a practice that occurs within most EIA systems around the world. International good practice guidance has been published (Scholten 1995) and this is as applicable in the UK as to anywhere else in the world. The guidance comprises of a proposed systematic approach to undertaking a review that should enable it to be undertaken within any decision making context. The adoption of such a systematic approach establishes a set of actions to be taken by the approving authority, adds to the transparency of the decision making process and thus makes it more defensible, and finally it can help to orientate the expectations of the review process, especially where resources are limited. The following steps should be taken:

- **Set the boundaries for the review** – this will primarily be in terms of the time and the budget available. The EIA Regulations allow for the minimum determination period to be extended to 16 weeks, but it is common for a decision to take even longer. The approving authority should check whether there is an agreement with the applicant to go beyond this period or whether such a request should be made. The time and the budget are likely to be the determinants of the remainder of the approach taken.
- **Select the reviewers** – it may be decided to use internal staff or an external organisation or 'panel'. The external option is likely to be more expensive and therefore the budget

[161] Statutory Instrument 1992 No. 3240

available will be an important factor in determining whether this is feasible. If the budget available is not sufficient for a full external review, it may be more important to decide on the critical issues and have these reviewed by an appropriate specialist. Remember that some specialist advice may be provided by the statutory consultees.

- **If undertaking the review internally, select the basis for the review** – for example, this may be review criteria or the original scoping opinion
- **Determine whether additional sources of information might be helpful** – for example, work may have been undertaken on the site or close to it for other reasons. The data derived from this could be used to verify the findings of the ES. ESs for similar types of development may also be useful, particularly where good practice examples can be obtained. These may act as a benchmark for the ES being reviewed. It is also particularly helpful where the proposal is an unusual or technically complex type of development.
- **Undertake the review** – it is helpful to produce a summary of the good points and the deficiencies and then to decide on the importance of the deficiencies for decision making. Following this, the means of dealing with these deficiencies can be determined including the need to request further information. It is more helpful if the deficiencies can be expressed in terms of the additional information that should be provided rather than simply identifying a gap in the information provided. Thinking about how this gap should be filled may reveal that it is unreasonable to provide the information, or that sufficient methods do not exist to provide it.
- **Publish the review report**

14.5 Public review

Parallel to the technical review described above, the public and other organisations are provided with an opportunity to read the ES and submit comments to the approving authority. In the UK the system relies on the information being made available and the public taking the time and/or allocating the resources to access the information. Whilst copies of the ES are required to be made available during reasonable hours, these can often coincide with the period during which most people are at work. Given this the applicant or the approving authority may decide to be more proactive in providing information to the public and seeking their views on the proposal and its associated environmental effects. Proposed measures could include:

Guidance on public participation:

IEMA (2002), *Perspectives: Guidelines on Public Participation in Environmental Decision Making*, IEMA.

- Ensuring the cost of purchasing a copy of the ES is kept to a reasonable level – consider the socio-economic status of those that may be affected by the proposal
- Making the ES accessible outside of working hours – for example, libraries in towns often open into the evenings
- Making the ES accessible in locations where it can be read and studied (the local post office may be convenient, but is not conducive to analysing a technical document)
- Consider making it possible for members of the public to borrow copies of the ES
- Consider providing the ES in a low cost format (e.g. CD ROM or downloadable from the internet)
- Hold a public exhibition that allows a more visual presentation of the information
- Hold workshops to engage the public in providing their views

The views that are provided by the public and any other organisations are considered to be part of the environmental information that must be taken into consideration by the approving authority.

14.6 Decision making

This guidance cannot advise on how a decision should be taken. However, with regard to the EIA it is important to consider certain factors. Foremost is the need to recognise that environmental information is only one of the components that will be considered when deciding whether to give consent to the project. For example, the economic benefits of a project may be considered to be sufficiently important to override the adverse environmental effects. Nevertheless, the approving authority is under an obligation to take into account the environmental information and the reasons for approving the project will need to be published. It is therefore important that a rational consideration of the environmental effects is undertaken.

In granting consent to a proposed project, it should be remembered that mitigation measures and monitoring proposals will need to be incorporated into conditions and legal agreements to make them binding on the developer. It may be beneficial to set out a schedule of the mitigation measures contained in the ES and to decide on which of them is critical to the environmental performance and acceptability of the project. It is these that the conditions and legal agreements should focus on. Along with the reasons for granting consent to a project, the main conditions are also required to be published. This provision is to ensure that there is public access to the information in order that they can be satisfied that their interests are being protected and to enable them to verify that the conditions are being complied with.

Summary

- The information contained in an ES will be taken into account by the approving authority when making the decision on whether the project should proceed or not. Further environmental information will also be considered, including the comments of statutory consultees, the public and other organisations.
- It may be necessary to rely on specific conditions attached to the development consent in order to validate the approach taken in the ES. Any assumptions at outline application stage, on which basis the EIA proceeded, should be secured at the detailed design stage.
- In order to ensure that the ES satisfies the legal requirements and is consistent with good practice, the ES should be subjected to a review.
- Reviews should be undertaken by determining authorities, but can also be used by developers and consultants to address outstanding issues prior to the submission of the ES to the determining authority
- Reviews may require the assistance of external organisations particularly where specialist knowledge is required or there is a need to demonstrate independence and transparency in the process
- Reviews can be conducted on the basis of the original terms of reference or scoping opinion, generic review criteria or the professional judgement of those undertaking the review, or a combination of these
- The attention of the decision makers should be on the content of the review. Their more detailed knowledge of the project and particularly the location may lead to a different view from the reviewers of the significance of the main findings.
- A systematic approach to review includes the setting of the boundaries for the review; selection of the review team; selecting the basis for the review; identifying the need for additional sources of information; undertaking the review and publishing the review report
- The public have the opportunity to and should be encouraged to participate in the review process

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Statutory Instrument 1992 No. 3240 The Environmental Information Regulations 1992 Approved by both Houses of Parliament

15.0 Follow up

Follow up refers to the environmental activities undertaken as part of the implementation of the project. It is traditionally the weakest part of the EIA process, but one of the most important as it contributes to determining whether EIA makes a difference in terms of improved environmental protection. Follow up includes:

- Environmental management measures to reduce the impact of construction activities
- Monitoring of impacts and the effectiveness of mitigation measures, enabling any remedial action to be taken and the accuracy of the predictions to be verified
- A plan to ensure the delivery of mitigation measures, setting out what is to be done, who is responsible and when it is to be undertaken
- Monitoring to ensure compliance with conditions, legal agreements or other environmental legislation
- Steps to be taken to manage the environmental impacts of changes to the project design that occur after consent for the project has been provided.

The provision of information on follow up activities in the ES can add credibility to the document and to the reputation of the applicant. It indicates that there is a commitment to the protection of the environment beyond the words written in the ES. On the other hand, some follow up measures can prove to be expensive and, unless they are well planned, can be of minimum benefit in terms of additional protection to the environment. Therefore, follow up measures should not be applied indiscriminately, but should be targeted at those issues which are likely to result in the avoidance or minimisation of significant environmental effects. Some projects will not require any, or only a few, follow up measures, whereas others are likely to include follow up as a significant part of the implementation of the project.

Much is made of the benefit of monitoring environmental impacts to provide better information on the actual impacts that occur and enable the comparison of these with the original predictions. This would consequently benefit the improvement of predictive techniques. However, there is little incentive for the developer to fund such monitoring when the benefits are likely to be experienced by others. Nevertheless, for those organisations involved in repetitive development of a similar nature (e.g. energy, minerals and water industries) there may be a benefit in improving their EIAs in this way for future developments. It will provide confidence that predictions provided in an ES are reasonably accurate and that the developer can deliver on commitments to environmental protection measures.

15.1 The legal context

In terms of obligations on the developer, there is no requirement for monitoring or follow up activities to be undertaken in the EIA Regulations. However, monitoring of environmental effects may be required by conditions on the project. In addition, some developments may be subject to other environmental legislation under which the monitoring of impacts can be required, e.g. IPPC.

Where a developer has committed to follow up activities as a result of conditions or legal agreements (or as a voluntary action) but is not directly responsible for construction of the project they may wish to ensure that any contractors are performing in accordance with the requirements and other stakeholder expectations. Setting environmental requirements within contracts or ensuring that environmental management proposals are included as part of the tendering process are two methods that might be used to achieve this.

15.2 Determining follow up requirements

Given the potential expense and logistical undertakings of implementing follow up activities it is important that they are well targeted and used where necessary. Criteria that can guide the need to implement follow up activities are:

- Compliance – relating to the need to demonstrate compliance with conditions, legal agreements and / or legislation.
- Uncertainty – relating to the prediction of impacts or the likely success of mitigation measures. A lack of familiarity with mitigation measures may also be important.
- Risk – of a significant environmental effect (including risks to human health) in the event that a prediction proves to be inaccurate or mitigation measures prove not to be as successful as was anticipated.

Follow up activities may be proposed by the developer within the ES. Whether this is the case or not, in the event that the approving authority considers the follow up activities to be important to the acceptability of the project, then the authority should seek to secure them within conditions or legal agreements.

15.3 Approaches to follow up

In order for all stakeholders to have confidence in the any follow up activities it is necessary to be able to address the following questions:

- **What is the objective of the activity?** Establishing the objective will determine the nature of the follow up activity. It will also clarify whether the activity is necessary. For example, if the development is likely to carry on unaffected regardless of findings from monitoring, then it is likely that monitoring would not be a key objective and may not be necessary. Objectives could include:
  - To determine whether the activity that is the source of the impact should continue
  - To identify whether there is a need to implement additional mitigation measures or remedial measures
  - To provide quantitative data to verify any potential complaints
  - To check the predictions made in the ES.

- **Who will be responsible for undertaking follow up and who are the other stakeholders that have an interest?** Identifying those responsible for undertaking the activity creates accountability and thereby helps to ensure that it is implemented.

  Other stakeholders involved in the activity might include those who will be provided with the resulting information, e.g. monitoring data may be provided to the local authority.
- **When and / or how frequently should the activity be undertaken?** Frequency can range from a single event to something that occurs on a continuous basis throughout the life of the project
- **How will the activity be undertaken?** The nature of the activity needs to be defined. This can range from a simple surveillance visit to the use of sophisticated monitoring equipment, or regular surveys by an appropriate specialist.
- **What action is likely to be taken to in the event that the follow up activities result in negative findings?** Given that an issue is considered to be sufficiently important to be a focus of a follow up activity, it is likely that it will be important to implement additional mitigation measures or remedial action if adverse effects are identified. Nevertheless, it may not always be possible to determine the nature of this action when planning the follow up activities. As a result this question will not always be addressed at the stage of producing an ES.

To provide a systematic response to these key questions it is becoming common practice to answer them within the framework of an Environmental Management Plan (EMP). These

are particularly used during the construction period of a project, but can accommodate any phase. These guidelines encourage the use of such plans and suggest that a draft of such a plan should be included in the ES. Additional detail and alterations to the plan can be accommodated during the decision making period and up to and during implementation. An EMP should be a working document which alters to accommodate changes to the development and to environmental requirements relating to the project. Typical issues addressed in an EMP are given in Box 15.1.

Figure 15.1
Extract from EMP
This extract from EMP for the Clair Project shows the commitments that have been made in the ES and the stages at which these are to be implemented during the development of the project

ES Section	Issue	Mitigation or management action (i.e. does not include features commited to be designed out in this ES)	Project phase: Detailed design	Pre-installation/commissioning	Installation	Hook-up and Commissioning	Pre-operations	Operations	(Pre) Decommissioning
		content							
10	Drill cuttings	If onshore processing of drill cutting is required, work with contractors identify alternatives to landfill for the end products of drill cuttings processing.					■	■	
10	Drill cuttings	Undertake visual inspection of the area before drilling and then after each subsequent year of drilling.		■	■		■	■	
10	Drill cuttings	Depending on the results of visual inspection (above) determine whether monitoring of drill cuttings is required.		■	■		■	■	
11	Underwater noise and disturbance	Contribute to the overall understanding of underwter noise (Part of BP wide programme for noise data collection taking place in summer 2001)	■	■	■	■	■	■	■
11	Underwater noise and disturbance	Learn from Mahnus EOR experience of pipelaying in summer 2001 and ensure that lessons learned are incorporated into the Clair pipeline installation plans.	■	■	■	■	■	■	■
11	Underwater noise and disturbance	Determine whether noise can be reduced at source (e.g. isolation mounts, enclosures / mufflers etc.) This is also an occupational health issue.	■	■	■	■	■	■	■
11	Underwater noise and disturbance	Carry out cetacean monitoring by marine mammal observers during pile driving operations; ramp up or delay start when marine mammals are nearby.	■	■	■	■	■	■	■
11	Underwater noise and disturbance	Carry out cetacean monitoring by marine mammal observers during pile lay operations.	■	■	■	■	■	■	■
11	Underwater noise and disturbance	Verify the noise propagation model with field data.	■	■	■	■	■	■	■
12	Flaring	Carry out safety studies to determine whether full flare gas recovery is acceptable from a safety point of view.	■	■	■	■	■	■	■
12	Flaring	Investigate ways of further reducing first yearflaring by refining gas plant commisssioning details.	■	■	■	■	■	■	■
12	Flaring	Monitor flaring performance to validate projections presented in the ES to identify significant causes, and set internal targets to achieve ongoing improvement through operational best practice.	■	■	■	■	■	■	■
12	Power generation emissions	Consider the implementation of recommendations of the Energy Efficiency Report.	■	■	■	■	■	■	■

Courtesy of BP Clair

For controversial projects or proposals in sensitive locations, it is becoming good practice for environmental management information to be provided to a liaison committee. This might include members from the local planning authority, other environmental regulators and representatives of the local community. This provides these stakeholders with the opportunity to evaluate the environmental performance of the project and to propose adjustments to the environmental management regime.

15.3.1 Environmental Management Systems

Formal environmental management systems (EMSs) are an alternative approach to managing the impacts of a project during implementation. These will usually be certified to ISO 9001 (the international standard for EMSs) or registered to the Eco-Management and Audit Scheme (EMAS), a European Union based scheme. These systems ensure that appropriate structures, procedures and training are provided to support the management of environmental effects. EMAS also requires annual reporting on environmental performance.

Adopting a formal EMS can be a time consuming process so application to the construction phase may only be appropriate when it is anticipated to take a long period of time (several

years) or when the contracting company is accredited rather than the site. It is more common to apply an EMS to the operational phase of a project. The benefit is that it provides confidence that the management of environmental effects will become an integral part of the development rather than something that is undertaken simply to achieve consent for the project.

Commitment to the implementation of an EMS is likely to be inappropriate where the developer will not be the ultimate occupier and operator of the project. Typical projects would be industrial or business parks. For such projects, it would be inappropriate for the developer to make commitments on behalf of an as yet unknown occupier. In addition, environmental management techniques available at the time of future occupation may be in advance or have changed radically from those which would be proposed at the time the ES is produced.

15.4 Methods

These guidelines are not designed to provide detailed information on the methods that might be adopted for monitoring specific impacts. However, activities which form part of a follow up programme will normally fall into one of the activities set out in Table 15.1.

Table 15.1
Follow up methods

Method	Description and Purpose	Examples
Surveillance	Undertaken to verify that easily identified impacts are not too severe or to ensure that mitigation measures have been implemented	Confirming that tree planting has been undertaken and is successful
Monitoring	A more empirical approach to surveillance undertaken at regular intervals or continuously. Measures the actual impacts of a project and / or verifies the effectiveness of mitigation measures. Often used to ensure compliance with environmental requirements for a project.	Monitoring of water quality prior to discharge to a water course to ensure compliance with Environment Agency requirements
Auditing	Checks undertaken on a periodic basis to ensure that impacts, mitigation and working practices are being implemented as required. Usually undertaken to ensure compliance with conditions or other legislative requirements.	Audit of construction practices of a contractor to ensure compliance with planning conditions and with contractual environmental requirements.
Impact Auditing	An audit of the actual impact of a project against the predicted impacts contained in the ES. Undertaken to understand the accuracy of predictive techniques and to improve them.	Monitoring traffic patterns and volumes from a supermarket development to improve the reliability of predictions for similar developments in the future.
Reporting	This may be an output of any of the above. Recipients may include regulatory authorities and / or the public.	Annual reports on environmental performance of a project.

Summary

- Follow up measures contribute to determining whether EIA makes a difference.
- The provision of information on follow up activities indicates commitment, adding credibility to the ES and the reputation of the applicant.
- Follow up measures should be targeted at issues likely to result in the avoidance or minimisation of significant environmental effects.
- Follow up activities may be required for a number of reasons:
  - compliance with conditions, legal agreements and / or legislation;
  - uncertainty over the prediction of impacts or the likely success of mitigation measures; and
  - the risk of a significant environmental effect in the event that a prediction proves to be inaccurate or mitigation measures prove unsuccessful.
- An Environmental Management Plan (EMP) should be developed to consolidate all information on follow up activities and to assign responsibility for their implementation
- Formal environmental management systems (EMSs) are an alternative approach to impact management that provide confidence that environmental management of effects will become an integral part of the development.

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Abbreviations

AONB	Area of Outstanding Natural Beauty
BPEO	Best Practical Environmental Option
CEA	Cumulative Effects Assessment
dB	decibels (unit of noise measurement)
DETR	Department of Environment, Transport and the Regions
DEFRA	Department for the Environment Food and Rural Affairs
EIA	Environmental Impact Assessment
EMAS	Eco Management and Audit Scheme
EMP	Environmental Management Plan
ES	Environmental Statement
IAIA	International Association for Impact Assessment
IEMA	Institute of Environmental Management and Assessment
IPPC	Integrated Pollution Prevention and Control
LPA	Local Planning Authority
NTS	Non Technical Summary
ODPM	Office of the Deputy Prime Minister
PPG	Planning Policy Guidance
SA	Sustainability Appraisal
SAC	Special Area of Conservation
SEA	Strategic Environmental Assessment
SSSI	Site of Special Scientific Interest
UNEP	United Nations Environment Programme
UNECE	United Nations Economic Commission for Europe

Glossary

Aarhus Convention
UNECE led agreement on access to environmental information, public participation in environmental decision making and access to justice in environmental matters.

Baseline Studies
Work done to determine and describe the environmental conditions against which any future changes can be measured or predicted and assessed.

Biodiversity
The variety of life forms, the different plants, animals and micro-organisms, the genes they contain and the eco-systems they form. It is usually considered at three levels: genetic diversity, species diversity and ecosystem diversity.

Cumulative Effects Assessment
The assessment of the impact on the environment which results from the incremental impact of an action when added to other past, present or reasonably foreseeable actions.

Department of Environment Transport and the Regions
Ex UK Government department previously responsible for environmental planning in the UK, a function now fulfilled by the Office of the Deputy Prime Minister

Department for the Environment, Food and Rural Affairs
UK Government department with responsibilities for EIA of uncultivated land and semi-natural areas in England and Wales

Eco Management and Audit Scheme
A formal environmental management system established by the European Union that requires external verification and publication of an environmental statement.

EIA Regulations
Collective name for the various statutory instruments through which the EC Council Directive on Environmental Assessment (Directive 85/337/EEC as amended by Directive 97/11/EC) was implemented in the UK.

Environmental Assessment
See Environmental Impact Assessment.

Environmental Capacity
The rate of resource consumption and waste discharge that can be sustained indefinitely in a defined impact region without progressively impairing bioproductivity and ecological integrity.

Environmental Impact Assessment
The systematic, reproducible and interdisciplinary identification, prediction and evaluation, mitigation and management of impacts from a proposed development and its reasonable alternatives. Sometimes known as environmental assessment.

Environmental Management Plan
A structured plan that outlines the mitigation, monitoring and management requirements arising from an environmental impact assessment.

Environmental Management System
A structured approach for determining, implementing and reviewing environmental policy through the use of a system which includes organisational structure, responsibilities, practices, procedures, processes and resources. Often formally carried out to meet the requirements of ISO 14001 or EMAS.

Environmental Management Tools
Methods for helping improve environmental performance of a project or organisation through effective management of impacts.

Environmental Statement
Document in which the results of an EIA are presented to decision-makers and the public.

Geographical Information Systems
Computer database of environmental information that can be easily updated and manipulated to assist in impact predictions and presentation.

Habitats Regulations
EC Council Directive 92/43/EEC, known as the Habitats Directive, was transposed in the UK by the Habitats Regulations 1994 (as amended). The Habitats Regulations apply to UK land and territorial waters and act to ensure biodiversity of natural habitats and of wild flora and fauna through a range of measures including designation of SAC's.

Health Impact Assessment
A study similar to EIA which focuses on health impacts of development actions. Most attention is concentrated on morbidity and mortality, but increasingly, the World Health Organization (WHO) definition of health as being a state of 'social, physical and psychological well-being and not just the absence of disease' is being used to guide this type of assessment work.

Integrated Pollution Prevention and Control
Environmental permitting system that aims to prevent, reduce and eliminate pollution at source established by EC Directive 96/61/EC on Integrated Pollution Prevention & Control (IPPC) and implemented by the Pollution Prevention and Control Regulations

ISO14001
The International Standard Organisation's environmental management system specification.

Life Cycle Analysis
The evaluation of aspects (often environmental) of a product through all stages of its life cycle.

Mitigation Measures
Methods employed to avoid, reduce, remedy or compensate for significant adverse impacts of development proposals.

Non Technical Summary
Information for the non-specialist reader to enable them to understand the main environmental impacts of the proposal without reference to the main environmental statement.

Office of the Deputy Prime Minister
UK Government department with responsibility's for the administration of the Town and Country Planning regime in England and Wales

Phase 1 Habitat Survey
Recognised methodology used for collating information on the habitat structure of a particular site.

Photomontage
The superimposing of an image onto a photograph for the purpose of creating a realistic representation of proposed or potential changes to a view.

Residual Impacts
Those impacts that would remain after the effect of mitigation measures have been accounted for.

Scoping
The process of identifying the issues to be addressed by an EIA. It is a method of ensuring that an EIA focuses on the important issues and avoids those that are considered to be less significant.

Secondary impact
Indirect or induced changes in the environment, population, economic growth and land use and other environmental effects resulting from these changes in land use, population and economic growth. The potential effects of additional changes that are likely to occur later in time or at a different place as a result of the implementation of a particular action.

Section 106 Agreements
Section 106 of the Town & Country Planning Act 1990 (as amended) allows the drafting of agreements (known as planning obligations) between a Council and developers.

Sites of Special Scientific Interest (SSSI)
The main national conservation site protection measure in Britain designated under the Wildlife and Countryside Act 1981 (part 2).

Special Area of Conservation (SAC)
International designation implemented under the Habitats Regulations for the protection of habitats and (non bird) species.

Statutory Consultees
Organisations that the relevant determining authority is required to consult by virtue of the EIA Regulations. These can include LPAs, Environment Agency, Scottish Environmental Protection Agency, English Nature, Scottish Natural Heritage, etc.

Strategic Environmental Assessment
A formal process of systematic analysis of the environmental effects of development policies, plans, programmes and other proposed strategic actions. This process extends the aims and principles of EIA beyond the project level and when major alternatives are still open.

Sustainability Appraisal
A tool to assess the sustainability of policies and programmes, to raise awareness of sustainable development issues and to assist decision makers in determining the content of plans and programmes.

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Transport	– Highways (Assessment of Environmental Effects) Regulations 1999 (SI No. 369) – Transport and Works (Assessment of Environmental Effects) Regulations 2000 (SI 2000 No. 3199) – Transport and Works (Assessment of Environmental Effects) Regulations 1995 (SI 1995 No. 1541) – Transport and Works (Assessment of Environmental Effects) Regulations 1998 (SI 1998 No. 2226) - applies to England & Wales	Design Manual for Roads and Bridges Volume 11: Environmental Assessment (Highways Agency, Scottish Executive, National Assembly for Wales & Department for the Environment Northern Ireland, available from http://www.archive.official-documents.co.uk/document/ha/dmrb/index.htm)

Ports and Harbours	– The Harbour Works (Environmental Impact Assessment) Regulations 1999 (SI 1999 No. 3445) - England & Wales, Scotland – The Harbour Works (Environmental Impact Assessment) (Amendment) Regulations 2000 (SI 2000 No. 2391) - England & Wales, Scotland	
Energy	– The Electricity Works (Environmental Impact Assessment) (England and Wales) Regulations 2000 (SI 2000 No 1927) – Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999 (SI 1999 No 2892) - applies to England & Wales, & Scotland – The Offshore Petroleum Production and Pipe-lines (Assessment of Environmental Effects) Regulations 1999 (SI 1999 No. 360) - applies to England & Wales, Scotland, & Northern Ireland. – The Public Gas Transporter Pipe-line Works (Environmental Impact Assessment) Regulations 1999 (SI 1999 No 1672) - applies to England, Scotland & Wales – The Pipe-line Works (Environmental Impact Assessment) Regulations 2000 (SI 2000 No. 1928) - applies to England & Wales, Scotland, & Northern Ireland	Guidance on the Electricity Works (Environmental Impact Assessment) (England and Wales) Regulations (DTI, September 2000) Guidance Notes: Offshore Wind Consents Process (DTI, January 2003) Guidance notes on the Offshore Petroleum Production and Pipelines Assessment of Environmental Effects) Regulations 1999 – available from http://www.og.dti.gov.uk/regulation/guidance/opp_pipelines/index.htm
Agriculture	– Environmental Impact Assessment (Uncultivated Land and Semi-natural Areas) (England) Regulations 2001 (SI 2001 No. 3966) – Environmental Impact Assessment (Uncultivated Land and Semi-natural Areas) (Wales) Regulations 2002 (SI 2002 No. 2127 (W214)	– Guidelines: Environmental Impact Assessment for use of uncultivated land or semi-natural areas for intensive agricultural purposes (DEFRA, 2002, available from http://www.defra.gov.uk/environ/eia/default.htm) – The Environmental Impact Assessment (EIA) Regulations for uncultivated land and semi-natural areas (DEFRA leaflet, 2002, available from website as above) – Guidance Note 1 General Guidance (Overview of Regulations) The Environmental Impact Assessment (EIA) regulations for use of uncultivated land and semi-natural areas for intensive agricultural purposes (National Assembly for Wales, August 2002) – Guidance Note 2 Screening Applications (National Assembly for Wales, August 2002)
Water abstraction	Water Resources (Environmental Impact Assessment) (England and Wales) Regulations 2003 (SI 2003 No. 164)	

Scotland

Sector	*Regulations*	*Government guidance*
Planning	Environmental Impact Assessment (Scotland) Regulations 1999 (SSI No 1) - Part II Town and Country Planning as amended by The Environmental Impact Assessment (Scotland) Amendment Regulations 2002 (SSI No 324)	– Scottish Executive Development Department Circular 15/1999 – Scottish Executive Development Department Planning Advice Note 58
Forestry	The Environmental Impact Assessment (Forestry) (Scotland) Regulations 1999 (SSI 43)	
Land drainage	Environmental Impact Assessment (Scotland) Regulations 1999 (SSI No 1) - Part IV Drainage Works	
Fish farming	Environmental Impact Assessment (Fish Farming in Marine Waters) Regulations (SI 367) - England & Wales, Scotland	– Guide to the Environmental Impact Assessment (Fish Farming in Marine Waters) Regulations 1999 (Scottish Executive Rural Affairs Department, March 1999) – Environmental Assessment Guidance Manual for Marine Salmon Farmers (Crown Estates Commissioners in consultation with the Scottish Executive)
Transport	Environmental Impact Assessment (Scotland) Regulations 1999 (SSI No 1) - Part III Roads	Design Manual for Roads and Bridges Volume 11: Environmental Assessment (Highways Agency, Scottish Executive, National Assembly for Wales & Department for the Environment Northern Ireland, available from http://www.archive.official-documents.co.uk/document/ha/dmrb/index.htm)
Ports and Harbours	– The Harbour Works (Environmental Impact Assessment) Regulations 1999 (SI 1999 No. 3445) - England & Wales, Scotland – The Harbour Works (Environmental Impact Assessment) (Amendment) Regulations 2000 (SI 2000 No. 2391) - England & Wales, Scotland	
Energy	– Environmental Impact Assessment (Scotland) Regulations 1988 (SSI No 1221) - Part III Electricity – Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999 (SI 1999 No 2892) - applies to England & Wales, & Scotland – The Offshore Petroleum Production and Pipe-lines (Assessment of Environmental Effects) Regulations 1999 (SI 1999 No. 360) - applies to England & Wales, Scotland, & Northern Ireland. – The Public Gas Transporter Pipe-line Works (Environmental Impact Assessment) Regulations 1999 (SI 1999 No 1672) - applies to England, Scotland & Wales – The Pipe-line Works (Environmental Impact Assessment) Regulations 2000 (SI 2000 No. 1928) - applies to England & Wales, Scotland, & Northern Ireland	
Agriculture	Environmental Impact Assessment (Uncultivated Land and Semi-Natural Areas) (Scotland) Regulations 2002 (SSI 2002 No. 6)	
Water abstraction		

Northern Ireland

Sector	*Regulations*	*Government guidance*
Planning	Planning (Environmental Impact Assessment) Regulations (Northern Ireland) 1999 (SR No 73)	Planning Service (Northern Ireland) Development Control Advice Note 10 (Revised 1999)
Forestry	Environmental Impact Assessment (Forestry) Regulations (Northern Ireland) 2000 (SR No 84) as amended by the Environmental Impact Assessment (Forestry) (Amendment) Regulations (Northern Ireland) 2002 (SR 2002 No 249)	
Land drainage	Drainage (Environmental Impact Assessment) Regulations (Northern Ireland) 2001 (SR 2001 No 394)	
Fish farming	Environmental Impact Assessment (Fish Farming in Marine Waters) Regulations (Northern Ireland) 1999 (SR No 415)	
Transport	Roads (Environmental Impact Assessment) Regulations (Northern Ireland) 1999 (SR No. 98)	Design Manual for Roads and Bridges Volume 11: Environmental Assessment (Highways Agency, Scottish Executive, National Assembly for Wales & Department for the Environment Northern Ireland, available from http://www.archive.official-documents.co.uk/document/ha/dmrb/index.htm)
Ports and Harbours	Harbour Works (Assessment of Environmental Effects) Regulations (Northern Ireland) 1990 (SR No 181) The Harbour Works (Environmental Impact Assessment) Regulations (Northern Ireland) 2003 (SR 2003 136)	
Energy	– The Offshore Petroleum Production and Pipe-lines (Assessment of Environmental Effects) Regulations 1999 (SI 1999 No. 360) - applies to England & Wales, Scotland, & Northern Ireland. – The Pipe-line Works (Environmental Impact Assessment) Regulations 2000 (SI 2000 No. 1928) - applies to England & Wales, Scotland, & Northern Ireland	
Agriculture	Environmental Impact Assessment (Uncultivated Land and Semi-Natural Areas) Regulations (Northern Ireland) 2001 (SR 2001 No. 435)	

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