



Office of the
Deputy Prime Minister

Creating sustainable communities

A Practical Guide to the Strategic Environmental Assessment Directive



SCOTTISH EXECUTIVE



Llywodraeth Cynulliad Cymru
Welsh Assembly Government



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Office of the
Deputy Prime Minister

Creating sustainable communities

A Practical Guide to the Strategic Environmental Assessment Directive

Practical guidance on applying European
Directive 2001/42/EC “on the assessment of
the effects of certain plans and programmes
on the environment”

September 2005

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1. Introduction

Purpose of the Practical Guide

- 1.1 This Practical Guide provides information and guidance on how to comply with the European Directive 2001/42/EC “on the assessment of the effects of certain plans and programmes on the environment”, known as the Strategic Environmental Assessment or SEA Directive. The Guide is intended to apply to all plans and programmes in the UK which fall within the scope of the Directive. Specific guidance has however been developed for certain types of plans and programmes, particularly land use and spatial planning and transport planning (see paragraphs 1.10 and 1.11 below). Users should refer primarily to the relevant specific guidance when preparing those plans and programmes.
- 1.2 The Practical Guide has been developed jointly by the Office of the Deputy Prime Minister, the Scottish Executive, the Welsh Assembly Government and the Department of the Environment in Northern Ireland.
- 1.3 The guidance in this publication on how to comply with the Directive is not intended as an interpretation of the law, but should be read in conjunction with the SEA Directive and the Regulations which transpose it into UK law:
- *The Environmental Assessment of Plans and Programmes Regulations 2004 (Statutory Instrument 2004 No.1633)*
 - *The Environmental Assessment of Plans and Programmes Regulations (Northern Ireland) 2004 (Statutory Rule 2004 No. 280)*
 - *The Environmental Assessment of Plans and Programmes (Scotland) Regulations 2004 (Scottish Statutory Instrument 2004 No. 258), and*
 - *The Environmental Assessment of Plans and Programmes (Wales) Regulations 2004 (Welsh Statutory Instrument 2004 No. 1656 (W.170))*
- 1.4 The first of the above SEA Regulations applies to any plan or programme which relates either solely to the whole or any part of England, or to England and any other part of the UK. Each of the regulations for Scotland, Wales and Northern Ireland applies to plans and programmes which relate solely to the whole or any part of Scotland, Wales or Northern Ireland.
- 1.5 The SEA Regulations reproduce the Directive and do not add any further requirements. However, they adapt the Directive to arrangements in the UK in certain respects, notably by defining the authorities responsible for SEA (the ‘Responsible Authorities’), designating the organisations to be consulted (the ‘Consultation Bodies’, or in Scotland ‘Consultation Authorities’), and setting out time limits and other arrangements for consulting and informing authorities and the public. The Practical Guide refers to the Regulations, rather than to the Directive, only in connection with these matters.
- 1.6 Users of the Practical Guide may include:
- The Responsible Authorities which produce plans and programmes subject to SEA;
 - The Consultation Bodies or Consultation Authorities with environmental responsibilities which must be consulted under the Directive;

- Other government bodies, including those with roles in oversight of plans or programmes;
- Consultants and advisers involved in undertaking SEA; and
- All those who may be affected by or have an interest in plans or programmes, including members of the public, non-government organisations, businesses and developers.

1.7 The Guide includes sections on:

- Background and context of the Directive;
- Consultation;
- SEA and sustainable development; and
- The steps in the SEA process.

1.8 The publication also includes answers to frequently asked questions, a glossary of SEA terms, a series of appendices on matters of detail, a Quality Assurance checklist, and the SEA Directive itself.

1.9 The Environmental Assessment (Scotland) Bill was introduced into the Scottish Parliament on 2 March 2005. The Scottish Executive is proposing to extend the number of public sector strategies, programmes and plans which qualify for SEA. Should the Bill be passed, the Scottish Executive is committed to producing comprehensive guidance.

Other guidance on SEA

1.10 The European Commission has published guidance on the SEA Directive in *Implementation of Directive 2001/42/EC on the Assessment of the Effects of Certain Plans and Programmes on the Environment*. This provides useful advice on interpreting the terms used in the Directive, and is referred to below as “the European Commission guidance”. It is available on the EU website: www.europa.eu.int/comm/environment/eia/030923_sea_guidance.pdf.

1.11 Other UK guidance on the SEA Directive, including that for specific types of plans and programmes, includes:

- Transport plans in England (DfT): *Strategic Environmental Assessment – Core Guidance for Transport Plans and Programmes* (www.webtag.org.uk/webdocuments/2_Project_Manager/11_SEA/index.htm)
- Environment Agency Guidelines 2004: SEA Good Practice Guidelines (www.environment-agency.gov.uk/seaguidelines)
- Land use and spatial plans in England (ODPM): *Sustainability Appraisal of Regional Spatial Strategies and Local Development Frameworks* (Consultation Paper 2004: www.odpm.gov.uk/stellent/groups/odpm_planning/documents/page/odpm_plan_030923.pdf; final version forthcoming). This Sustainability Appraisal guidance supersedes earlier SEA guidance for planning authorities published by ODPM in 2003.
- Land use and spatial plans in Scotland (Scottish Executive): *Interim planning advice on the Environmental Assessment of Development Plans* (2003) (www.scotland.gov.uk/library5/planning/eadp-00.asp)

- Land use and spatial plans in Wales (Welsh Assembly Government): *Strategic Environmental Assessment (SEA) of Unitary Development Plans – Interim Good Practice Guide* (2004) (www.wales.gov.uk/subiplanning/content/devplans/sea-interim-good-prac-guide/strat_homepage-e.htm)

1.12 The Welsh Assembly Government and the Department of the Environment in Northern Ireland are developing further SEA guidance for Welsh planning authorities and the Northern Ireland Planning Service respectively.

Acknowledgements

1.13 This Practical Guide draws extensively on the previous ODPM publication *The SEA Directive: Guidance for Planning Authorities*, prepared by Levett-Therivel Sustainability Consultants. It also draws on work by Land Use Consultants, Collingwood Environmental Planning and TRL on aspects of sustainability appraisal in planning and on SEA of transport plans. A public consultation exercise was carried out on a draft of the Practical Guide in 2004. The ODPM, the Scottish Executive, the National Assembly for Wales and the Department of the Environment in Northern Ireland would like to express their thanks to all of the many individuals and organisations who have contributed to this publication.

2. Background and Context

Objectives and requirements

- 2.1 Article 1 of the Directive states that its objective is “to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development”. These aims are consistent with a range of Government policies on the environment and sustainable development.
- 2.2 Though usually referred to as the SEA Directive, it does not use the term “strategic environmental assessment” or SEA; rather, it requires an “environmental assessment” of certain plans and programmes. For convenience, however, the term SEA is used in this guidance to mean an environmental assessment which complies with the Directive.
- 2.3 The Directive defines “environmental assessment” (Article 2(b)) as a procedure comprising:
- preparing an Environmental Report on the likely significant effects of the draft plan or programme;
 - carrying out consultation on the draft plan or programme and the accompanying Environmental Report;
 - taking into account the Environmental Report and the results of consultation in decision making; and
 - providing information when the plan or programme is adopted and showing how the results of the environmental assessment have been taken into account.
- 2.4 Figure 1 sets out these requirements in detail in the words of the Directive and with references to the relevant provisions.

The Directive’s field of application

- 2.5 Under Article 2(a), the plans and programmes subject to the Directive are those which are:
- subject to preparation and/or adoption by an authority at national, regional or local level or which are prepared by an authority for adoption, through a legislative procedure by Parliament or Government, and
 - required by legislative, regulatory or administrative provisions.
- 2.6 Characteristics of “**administrative provisions**” are likely to be that they are publicly available, prepared in a formal way, probably involving consultation with interested parties. The administrative provision must have sufficient formality such that it counts as a “provision” and it must also use language that plainly requires rather than just encourages a plan or programme to be prepared.

Figure 1 – The SEA Directive’s requirements	
Requirements	Where covered in Guide (stage/appendix)
Preparation of an environmental report in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and geographical scope of the plan or programme, are identified, described and evaluated. The information to be given is (Art. 5 and Annex I):	
a) An outline of the contents, main objectives of the plan or programme, and relationship with other relevant plans and programmes;	A / Appendix 2
b) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme;	A / Appendix 3
c) The environmental characteristics of areas likely to be significantly affected;	A / Appendices 3 and 4
d) Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC;	A / Appendices 3 and 4
e) The environmental protection objectives, established at international, Community or national level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation;	A, B / Appendix 5
f) The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors. (Footnote: These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects);	B / Appendices 6, 7 and 8
g) The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;	B
h) An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;	B
i) a description of measures envisaged concerning monitoring in accordance with Article 10;	B, E / Appendix 10
j) a non-technical summary of the information provided under the above headings.	B, C
The report shall include the information that may reasonably be required taking into account current knowledge and methods of assessment, the contents and level of detail in the plan or programme, its stage in the decision-making process and the extent to which certain matters are more appropriately assessed at different levels in that process to avoid duplication of the assessment (Art. 5.2).	C
Consultation:	
• authorities with environmental responsibility, when deciding on the scope and level of detail of the information to be included in the environmental report (Art. 5.4).	A
• authorities with environmental responsibility and the public shall be given an early and effective opportunity within appropriate time frames to express their opinion on the draft plan or programme and the accompanying environmental report before the adoption of the plan or programme (Art. 6.1, 6.2).	B, D
• other EU Member States, where the implementation of the plan or programme is likely to have significant effects on the environment of that country (Art. 7).	D
Taking the environmental report and the results of the consultations into account in decision-making (Art. 8).	D

continued

Figure 1 – The SEA Directive's requirements (*cont'd*)

Requirements	Where covered in Guide (stage/appendix)
<p>Provision of information on the decision: When the plan or programme is adopted, the public and any countries consulted shall be informed and the following made available to those so informed:</p> <ul style="list-style-type: none"> • the plan or programme as adopted; • a statement summarising how environmental considerations have been integrated into the plan or programme and how the environmental report pursuant to Article 5, the opinions expressed pursuant to Article 6 and the results of consultations entered into pursuant to Article 7 have been taken into account in accordance with Article 8, and the reasons for choosing the plan or programme as adopted, in the light of the other reasonable alternatives dealt with; and • the measures decided concerning monitoring (Art. 9 and 10). 	D
<p>Monitoring of the significant environmental effects of the plan's or programme's implementation (Art. 10).</p>	B, E / Appendix 10
<p>Quality assurance: environmental reports should be of a sufficient standard to meet the requirements of the SEA Directive (Art. 12).</p>	Appendix 9 – QA checklist

2.7 Article 3(2) makes SEA mandatory for plans and programmes:

- a) which are prepared for agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning or land use **and** which set the framework for future development consent for projects listed in Annexes I and II to the Environmental Impact Assessment (EIA) Directive (85/337/EEC); or
- b) which, in view of the likely effect on sites, have been determined to require an assessment pursuant to Article 6 or 7 of the Habitats Directive (92/43/EEC).

2.8 The European Commission guidance (paragraph 3.23) states that plans and programmes which **set the framework for future development consent of projects** would normally contain 'criteria or conditions which guide the way a consenting authority decides an application for development consent'. **Development consent** is defined in the EIA Directive as "the decision of the competent authority or authorities which entitled the developer to proceed with the project" (Article 1(2) of the EIA Directive).

Appendix 1 contains an indicative list of plans and programmes in the UK subject to the SEA Directive.

2.9 The SEA Directive applies to plans and programmes whose first formal preparatory act is on or after 21 July 2004, and also to those whose formal preparation began before 21 July 2004 but which have not been either adopted or submitted to a legislative procedure leading to adoption by 21 July 2006.

2.10 A **first formal preparatory act** is likely to be a definite and clearly ascertainable part of the process of preparation of the plan or programme. However, the European Commission guidance (paragraph 3.65) states that "the word 'formal' does not necessarily mean that the act should be required by national law, nor whether it produces legal effects in national law.

A judgement should be made in each case, taking into account factors such as the nature of the act in question, the nature of the steps preceding it, and the apparent aim of the transitional provision, namely to pursue legal certainty and good administration”.

- 2.11 The term ‘**submitted to a legislative procedure**’ refers to the adoption of a plan or programme through an Act of Parliament or secondary legislation such as Regulations, rather than by a decision of the Responsible Authority. Legislative procedures for adoption are used in some EU Member States, but in the UK it is unusual for plans or programmes to be adopted in this way.

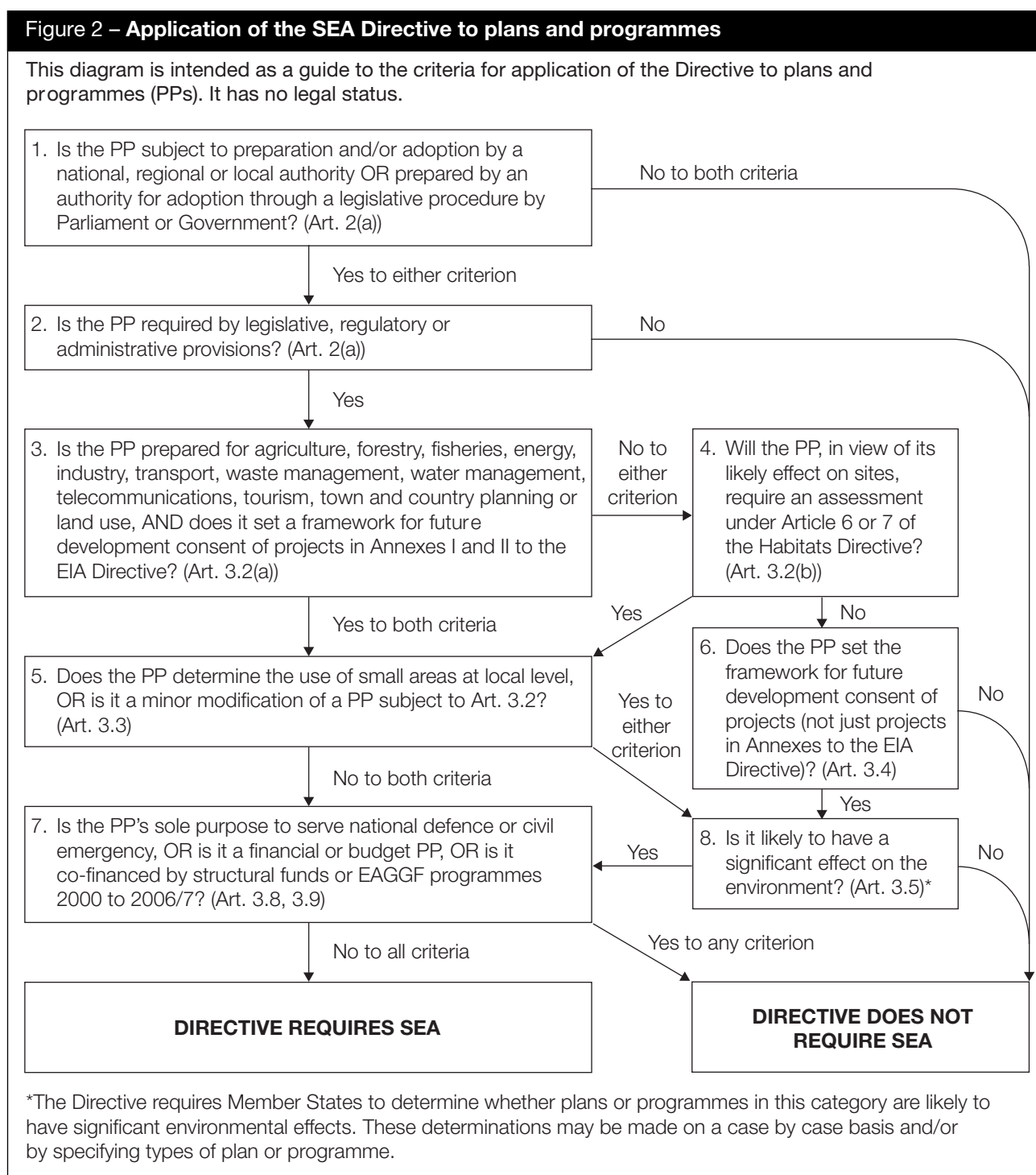
Provisions on screening and exemptions

- 2.12 Under Article 3(3) and 3(4), environmental assessment is required for certain categories of plans and programmes only where they are **determined to be likely to have significant environmental effects**. Plans and programmes in these categories are:
- Plans and programmes of the types listed in Article 3(2) which determine the use of small areas at local level, or which are minor modifications to plans and programmes;
 - Plans and programmes of types which are not listed in Article 3(2), which set the framework for future development consent of projects (not limited to projects listed in the Annexes to the EIA Directive).
- 2.13 The European Commission guidance (paragraphs 3.33–3.35) suggests that **plans or programmes which determine the use of small areas at local level** might include “a building plan which, for a particular, limited area, outlines details of how buildings must be constructed, determining, for example, their height, width or design.... The complete phrase ... makes it clear that the whole of a local authority area could not be excluded (unless it were itself small). ...The key criterion for the application of the Directive, however, is not the size of area covered but whether the plan or programme would be likely to have significant environmental effects”.
- 2.14 “Similarly, ‘**minor modifications**’ should be considered in the context of the plan or programme which is being modified and of the likelihood of their having significant environmental effects [...] Article 3(3) clarifies the position by recognising that a modification may be of such small order that it is unlikely to have significant environmental effects, but requiring that where the modification ... is likely to have significant environmental effects then an assessment should be carried out regardless of the scale of the modification” (European Commission guidance, paragraph 3.36).
- 2.15 Responsible Authorities must carry out screening to determine whether plans or programmes of the types covered by Article 3(3) and 3(4) (see paragraph 2.12 above) are likely to have significant environmental effects, and hence whether SEA is required under the Directive. Annex II of the Directive lists criteria for determining the likely significance of the environmental effects of plans or programmes. The Responsible Authority must make its conclusions on a determination available to the public, including reasons for not requiring SEA. The SEA Regulations also detail publicity requirements for determinations, and make provision for a direction by the Secretary of State or devolved Ministers.
- 2.16 When forming a view on whether SEA is needed in these cases, Responsible Authorities must consult the Consultation Bodies (Consultation Authorities in Scotland). Chapter 3 gives more information on these bodies and their role.

2.17 Under Article 3(8), **the Directive does not apply to:**

- plans and programmes the sole purpose of which is to serve national defence or civil emergency
- financial or budget plans and programmes
- plans and programmes supported by the EU Structural Funds and the European Agricultural Guidance and Guarantee Fund for the programming periods from 2000 to 2006 or 2007 (under Council Regulations (EC) Nos 1260/1999 and 1257/1999), on which programme spending continues until the end of 2008.

2.18 Figure 2 shows the Directive's field of application in the form of a diagram.



The Directive and SEA practice

- 2.19 Environmental assessment is already established practice for many types of plan and programme in the UK, but specific requirements and approaches vary. The Directive brings a new emphasis to the following areas in particular:
- Collecting and presenting information on the environmental baseline and current problems, and their likely future evolution;
 - Predicting significant environmental effects of the plan or programme, including those of strategic alternatives;
 - Addressing adverse environmental effects through mitigation measures;
 - Consulting the public and authorities with environmental responsibilities as part of the assessment process; and
 - Monitoring the environmental effects of the plan or programme during its implementation.

Who should do SEA?

- 2.20 The Directive does not prescribe who is to carry out an SEA, but normally it is the task of the Responsible Authority, i.e. the body which prepares and/or adopts the plan or programme.
- 2.21 Good practice in SEA emphasises the value of integrating the assessment with the plan- or programme-making process. Many benefits of SEA may be lost if it is carried out as a completely separate work-stream or by a separate body. But it is also helpful to involve people, either within the Responsible Authority or outside, who are not directly concerned in producing the plan or programme and can contribute expertise or a detached and independent view.

The level of detail in SEA

- 2.22 An SEA need not be done in any more detail, or using any more resources, than is useful for its purpose. The Directive requires consideration of the significant environmental effects of the plan or programme, and of reasonable alternatives that take into account the objectives and the geographical scope of the plan or programme. It is desirable to provide sufficient commentary to justify the conclusions arrived at, with reference to the baseline information wherever possible.
- 2.23 Article 5 of the Directive lists factors to be considered in deciding what information to include in the Environmental Report:
- Information that may reasonably be required, taking into account current knowledge and methods of assessment;
 - The contents and level of detail of the plan or programme;
 - The objectives and geographical scope of the plan or programme;
 - The stage reached in the decision making process; and
 - The extent to which it would be more appropriate to assess certain matters elsewhere in the decision-making process.

- 2.24 It is not usually appropriate in SEA, and is often impracticable, to predict the effects of an individual project-level proposal in the degree of detail that would normally be required for an EIA of a project. If, however, a plan or programme proposes a specific development or type of land use for a particular area or location, the Environmental Report should include information which can reasonably be provided on the likely significant effects of that proposal and alternatives to it.
- 2.25 Where proposals need to be assessed more than once, e.g. at different stages of a plan or programme, information from earlier assessments can be used subject to any updating or extra detail which may be necessary. This can help to avoid unnecessary duplication of assessment.

SEA and other forms of assessment

- 2.26 When seeking to integrate SEA with other types of appraisal, such as Sustainability Appraisal, Equality Impact Assessment or Health Impact Assessment, it may be helpful to look for:
- Opportunities to optimise information collection processes so that information collected can be used to satisfy all appraisal requirements.
 - Consistency amongst objectives used.
 - Compatibility of information generated through forecasting and prediction techniques to generate comparable results, e.g. between social, economic and environmental information.
 - Integrating staging of assessment to create a single process wherever possible, taking advantage of synergies.
 - Facilitating transparency in decision making through analysis techniques that generate comparable findings.
- 2.27 The SEA Directive requires consideration of the likely significant effects of a plan or programme on human health. Responsible Authorities may find it helpful to draw on the methods of Health Impact Assessment when considering how a plan or programme might affect people's health, and how positive effects could be enhanced and negative effects reduced. Information on HIA and health matters is included in Frequently Asked Questions, and Appendix 4, Figure 10 includes sources of baseline information on health.
- 2.28 A combined procedure which meets the requirements of both the SEA Directive and other EU legislation must include the procedural steps required by both.

The regulatory impact of the Directive

- 2.29 Information on the costs and benefits of implementing the SEA Directive in the UK is available in the Regulatory Impact Assessment accompanying the Environmental Assessment of Plans and Programmes Regulations 2004 on the ODPM website (www.odpm.gov.uk). A Regulatory Impact Assessment for Scotland has also been produced and is available on the Scottish Executive website (www.scotland.gov.uk/Topics/Business-Industry/support/15242/19299).

3. SEA and Consultation

Requirements for consultation

- 3.1 The Directive creates the following requirements for consultation (summarised in Figure 3):
- Authorities which, because of their environmental responsibilities, are likely to be concerned by the effects of implementing the plan or programme, must be consulted on the scope and level of detail of the information to be included in the Environmental Report. These authorities are designated in the SEA Regulations as the Consultation Bodies (Consultation Authorities in Scotland).
 - The public and the Consultation Bodies must be consulted on the draft plan or programme and the Environmental Report, and must be given an early and effective opportunity within appropriate time frames to express their opinions.
 - Other EU Member States must be consulted if the plan or programme is likely to have significant effects on the environment in their territories.
 - The Consultation Bodies must also be consulted on screening determinations on whether SEA is needed for plans or programmes under Article 3(5), i.e. those which may be excluded if they are not likely to have significant environmental effects (see paragraph 2.12).
- 3.2 A plan or programme prepared wholly within one part of the UK (e.g. England) may have significant effects in another part (e.g. Scotland or Wales). In such cases the Responsible Authority must make arrangements to consult the Consultation Bodies and the public in the areas affected. In Scotland such consultations should be routed via the SEA Gateway (see paragraph 3.9).
- 3.3 Consultation with the public at earlier stages (e.g. when considering the scope of the Environmental Report) can provide useful information and public and stakeholder opinions on issues relevant to the plan or programme and the SEA. This can also help to avoid issues arising later which might delay the preparation of the plan or programme.
- 3.4 The Directive requires responses to consultation to be taken into account during the preparation of the plan or programme and before its adoption or submission to a legislative procedure.
- 3.5 The Directive refers only to consultation with the Consultation Bodies and with the public. Responsible Authorities will however normally consult a range of other bodies in the course of preparing their plans and programmes (e.g. Local Authorities, Regional Development Agencies and Primary Care Trusts) and information from these may be useful in SEA.

Figure 3 – Summary of consultation requirements under the SEA Directive

Steps in the SEA	Consultation requirements in Domestic situations	Additional requirements in Transboundary situations
Determination if a plan or programme requires an SEA	Consult Consultation Bodies (Consultation Authorities in Scotland) if screening is required. Information made available to the public.	
Decision on scope and level of detail of the assessment	Consult Consultation Bodies.	
Environmental report and draft plan or programme	Information made available to the public. Consult Consultation Bodies. Consult the public.	Consultation of 'environmental authorities' in the Member State likely to be affected. Consultation of the public concerned in the Member State likely to be affected.
During preparation of plan or programme	Take account of Environmental Report and opinions expressed (and produce statement).	Take account of results of transboundary consultation.
Adopted plan or programme; statement and measures concerning monitoring	Information made available to Consultation Bodies. Information made available to the public.	Information made available to the consulted Member State.
<i>(Adapted from European Commission guidance, paragraph 7.2)</i>		

The Consultation Bodies

3.6 The designated Consultation Bodies in the UK are:

- England: Countryside Agency, English Heritage, English Nature, and the Environment Agency
- Northern Ireland: The Department of the Environment's Environment and Heritage Service
- Scotland (Consultation Authorities): Historic Scotland, Scottish Natural Heritage, and the Scottish Environment Protection Agency
- Wales: Cadw (Welsh Historic Monuments), Countryside Council for Wales, and the Environment Agency Wales

3.7 It is proposed to create a new organisation, Natural England, which will take on many of the functions of the Countryside Agency and English Nature. Advice will be issued in due course on any changes to the consultation arrangements under the Directive.

- 3.8 The Consultation Bodies in England, Northern Ireland and Wales have developed statements of the services and standards which Responsible Authorities can expect from them:
- England: www.environment-agency.gov.uk/commondata/105385/sea_service_standards_838433.pdf
 - Northern Ireland: www.ehsni.gov.uk
 - Wales: www.environment-agency.gov.uk/aboutus/512398/830672/832860/830725/?version=1&lang=_e
- 3.9 Scottish Consultation Authorities will publish guidance for Responsible Authorities by the end of 2005. This will be made available on the Scottish Executive SEA website and those of the Consultation Authorities. All consultations can be directed through the Scottish Executive's SEA Gateway (SEA.Gateway@scotland.gsi.gov.uk). The Gateway offers a single point of contact for Responsible Authorities to deposit screening and scoping requests electronically and seek SEA advice if required.

Consulting the public

- 3.10 The Directive defines “the public” as “one or more natural or legal persons and, in accordance with national legislation or practice, their associations, organisations or groups” (Article 2(d)). The public to be consulted includes, but is not limited to, “the public affected or likely to be affected by, or having an interest in [a plan or programme] including relevant non-governmental organisations” (Article 6(4)).
- 3.11 It is for the Responsible Authority to identify the public to be consulted on a particular plan or programme and its Environmental Report. The authority must also take account of any legal obligations or guidelines, in addition to those of the Directive, which are relevant to the plan or programme for which it is responsible.
- 3.12 When carrying out consultation, Responsible Authorities must have regard as appropriate to:
- The agreement between Government and the voluntary sector, the *Compact Code of Good Practice on Community Groups*, which sets out agreed ways of working with community groups and voluntary organisations including black and ethnic minority groups and organisations (see www.thecompact.org.uk)
 - The *Scottish Compact Good Practice Guides*, which provide advice on the Scottish Executive's relations with the voluntary sector including good consultation practices (see www.scotland.gov.uk/library2/doc16/cgpg-00.asp)
 - The Race Relations (Amendment) Act 2000 to promote race equality and the Disability Act 1995 to ensure that disabled people are not discriminated against.
 - The Cabinet Office *Code of Practice on Consultation*, which sets out criteria for conducting effective consultation. UK non-departmental public bodies and local authorities are encouraged to follow this code.
- 3.13 The Audit Commission's briefing on effective community consultation (*Listen Up!*) sets out a range of consultation techniques with advice on how they can be used and their advantages, disadvantages and resource implications – see References for details.

Practical aspects of consultation

- 3.14 Responsible Authorities must allow enough time for consultation when preparing for the plan or programme and the Environmental Report. It may be helpful to produce an outline of how consultation is to be conducted, making clear how the Directive's requirements will be met (normally as part of the wider consultation strategy for the plan or programme). The outline could indicate the objectives of the consultation process, what consultation activities will be conducted, what information and documents will be made available, how they can be obtained, how consultation responses will be considered, and how the Responsible Authority will provide feedback to consultees. It may be beneficial to involve a selection of consultees in the development of this outline.
- 3.15 Effective consultation needs appropriate skills, knowledge and experience. The form of consultation and the participation of individuals and organisations will vary depending on the nature and scale of the plan or programme. It is for example often difficult for local representative groups to take a regional perspective, when their work and interests are focused on a particular locality. Similarly, bodies represented at the regional level may not always be familiar with local issues. It is important to ensure that participants are involved at appropriate levels. This can also help to reduce the number of consultation activities and to avoid the problems of "consultation fatigue".
- 3.16 Some consultees will want to become active participants, while others may only wish to be kept informed, or to be involved through participatory events or written consultation. Much depends on the measures used to encourage their interest and involvement. It is important to be aware that consultees are not a homogenous group and to allow them to indicate how they wish to be involved. Lists of consultees will typically expand and change as the SEA progresses and issues emerge or cease to be relevant.

Transboundary consultation with EU Member States

- 3.17 Where a plan or programme is likely to have significant effects on the environment in another Member State of the European Union, the Directive provides for transboundary consultation. Separate guidance will be issued on the practical arrangements. Where a Responsible Authority expects a plan or programme to require transboundary consultation, it must bear in mind the time needed for contact to be established between the government bodies concerned, identification of and consultation with the public and environmental authorities in the affected Member State, and consideration of the resulting comments.

4. SEA and Sustainable Development

- 4.1 The objectives of the SEA Directive include the promotion of sustainable development. This section outlines what this means in the UK context.
- 4.2 The UK Government has published a Sustainable Development Strategy (*Securing the Future – delivering a UK sustainable development strategy*, March 2005) at the heart of which is the simple idea of ensuring a better quality of life for everyone, now and for generations to come. The Strategy builds on the previous 1999 document, and contains an integrated vision or purpose, five principles, four agreed priorities and a new set of indicators for implementing and ensuring sustainability. It covers England and all non-devolved issues, including international relations. (See Figure 4 for an overview). The new UK strategy provides a strong basis for renewed action to deliver sustainable development.
- 4.3 A shared UK framework for sustainable development to 2020, *One future – different paths* (2005), has also been agreed by the UK Government and the administrations in Scotland, Wales and Northern Ireland. The framework will be supported by separate strategies for each administration, building on existing work and also translating the framework into action, based on their different responsibilities, needs and views.
- 4.4 The Department of the Environment in Northern Ireland and National Assembly for Wales have both endorsed this approach, and the National Assembly has also described sustainable development more simply, saying that we should treat the Earth as though we intend to stay. In March 2004 the National Assembly adopted its present statutory Sustainable Development Scheme, *Starting to Live Differently*, which sets out its vision of a sustainable Wales. In October 2004, the Welsh Assembly Government published its *Sustainable Development Action Plan 2004–2007*, which puts the Scheme into effect and now supports the shared UK Framework too.
- 4.5 For its part, the Scottish Executive affirmed the priority it attaches to sustainable development in *A Partnership for a Better Scotland* which, in setting out its programme for 2003–2007, calls for “a Scotland that delivers sustainable development; that puts environmental concerns at the heart of public policy and secures environmental justice for all of Scotland’s communities”. The Executive has joined the UK Government, Welsh Assembly Government and the Department of the Environment in Northern Ireland in signing up to a UK strategic framework for sustainable development, committing us to work together towards a shared purpose, principles and priorities. A new sustainable development strategy for Scotland, based on the purpose, principles and priorities in the shared UK framework, is currently being developed for publication in autumn 2005.
- 4.6 Responsible Authorities wishing to cover the full range of sustainable development issues in their assessments are free to broaden the scope of the assessment to include social and economic effects of their plans and programmes in addition to environmental effects. The Environmental Report required by the SEA Directive can be included in an assessment report on the wider effects of the plan or programme, such as a Sustainability Appraisal Report. However it must clearly show that the Directive has been complied with, for example by signposting to enable the components that meet the requirements for the Environmental Report to be readily identified.
- 4.7 In England, the Planning and Compulsory Purchase Act 2004 makes Sustainability Appraisal mandatory for Regional Spatial Strategies and Local Development Documents. ODPM guidance on Sustainability Appraisal in this context incorporates the requirements of the SEA Directive. In Wales, the Act makes Sustainability Appraisal mandatory for Local Development Plans.

Figure 4 – Extract from UK Sustainable Development Strategy, March 2005**'A common purpose'**

"Living on the earth's income rather than eroding its capital" – quotation from the 'Taking it on' consultation response from e3 Consulting

To set the United Kingdom on a more sustainable track, we must know what we are aiming for. The 1999 strategy set out clearly that sustainable development means "a better quality of life for everyone, now and for generations to come", and used the widely used international definition "development which meets the needs of the present without compromising the ability of future generations to meet their own needs."

The four central aims of the 1999 strategy were:

- social progress which recognises the needs of everyone
- effective protection of the environment
- prudent use of natural resources, and
- maintenance of high and stable levels of economic growth and employment.

These aims effectively captured the simple priority areas at the heart of sustainable development. However, although the 1999 strategy stressed that these objectives had to be pursued at the same time, in practice, different agencies focused on those one or two most relevant to them. So a new purpose is needed to show how government will integrate these aims and evolve sustainable development policy – to develop the earlier strategy, not depart from it. It needs to paint a picture of what things should look like if we achieve sustainable development, while maintaining continuity with the aims of the 1999 strategy.

The following 'purpose', which has been agreed by the UK Government and the Devolved Administrations, has now been adopted as the new framework goal for sustainable development:

The goal of sustainable development is to enable all people throughout the world to satisfy their basic needs and enjoy a better quality of life, without compromising the quality of life of future generations.

For the UK Government and the Devolved Administrations, that goal will be pursued in an integrated way through a sustainable, innovative and productive economy that delivers high levels of employment; and a just society that promotes social inclusion, sustainable communities and personal well being. This will be done in ways that protect and enhance the physical and natural environment, and use resources and energy as efficiently as possible.

Government must promote a clear understanding of, and commitment to, sustainable development so that all people can contribute to the overall goal through their individual decisions.

Similar objectives will inform all our international endeavours, with the UK actively promoting multilateral and sustainable solutions to today's most pressing environmental, economic and social problems. There is a clear obligation on more prosperous nations both to put their own house in order, and to support other countries in the transition towards a more equitable and sustainable world.

(Extract from DEFRA 2005, pages 15–16.)

4.8 A set of shared UK principles that will be used to achieve the purpose and which will form the basis for policy in the UK is outlined in the shared UK framework and reflected in the UK Government's Strategy. These have been agreed by all of the administrations in the UK:

- Living within environmental limits;
- Ensuring a strong, healthy and just society;
- Achieving a sustainable economy;
- Promoting good governance; and
- Using sound science responsibly.

4.9 The framework strategy also identifies four shared priorities for immediate action:

- Sustainable consumption and production – achieving more with less;
- Climate change and energy – securing a profound change in energy generation and use, preparing for climate change and setting a good example;
- Natural resource protection and environmental enhancement through a better understanding of environmental limits, environmental enhancement and recovery, and a more integrated policy framework; and
- Sustainable communities that embody the principles of sustainable development at the local level.

5. Stages of SEA

Introduction

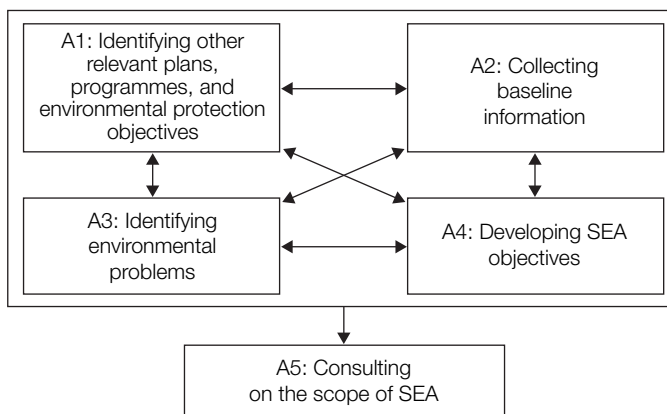
- 5.1 This section gives stage-by-stage advice on the Directive's requirements, the decisions to be taken and the documentation to be provided. More detailed information on specific aspects of SEA is given in the Appendices. Figure 5 summarises the main stages in the SEA process and the purpose of each stage.
- 5.2 These stages are intended to be valid for all plans and programmes to which the Directive applies, whatever their sector or geographical scope. However, where specific guidance is available for certain types of plans and programmes, readers are advised to use the stages set out in that guidance (see paragraphs 1.10–1.12 above). In practice SEA needs to be adapted to the scale and nature of the plan or programme in question, its place in any hierarchy or sequence of plans or programmes, and the stage reached in the decision-making process.
- 5.3 The SEA process, including preparation of the Environmental Report, is most effective when started as early as possible, ideally at the same time as the preparation of the plan or programme. SEA will often involve an iterative process of collecting information, defining alternatives, identifying environmental effects, developing mitigation measures and revising proposals in the light of predicted environmental effects. It will be important to identify an end-point where further iterations are unlikely to bring further significant improvements in predicting the environmental effects of the plan or programme.
- 5.4 Responsible Authorities are encouraged to work with other authorities and public bodies in conducting their SEA. Such an approach can help achieve greater consistency amongst the environmental assessments being conducted for the various types of plans and programmes prepared by a Responsible Authority, as well as maximising the efficient use of resources, e.g. through establishing a common set of baseline information.
- 5.5 The following stages do not include screening in cases where it is necessary to establish whether SEA is required – see paragraphs 2.12–2.16.
- 5.6 Figure 6 illustrates the relationships between the main stages. It is important, however, to treat the SEA as a flexible process, tailored to the needs of the different types of plans and programmes to which the Directive applies, while at the same time ensuring that the requirements of the Directive are met.
- 5.7 The methods outlined in this section and in the Appendices can be regarded as tools and techniques to be used to meet the requirements of the Directive. In practice, the Responsible Authority may find it appropriate to vary its approach, for instance in combining qualitative and quantitative assessment.

Figure 5 – Stages in the SEA process

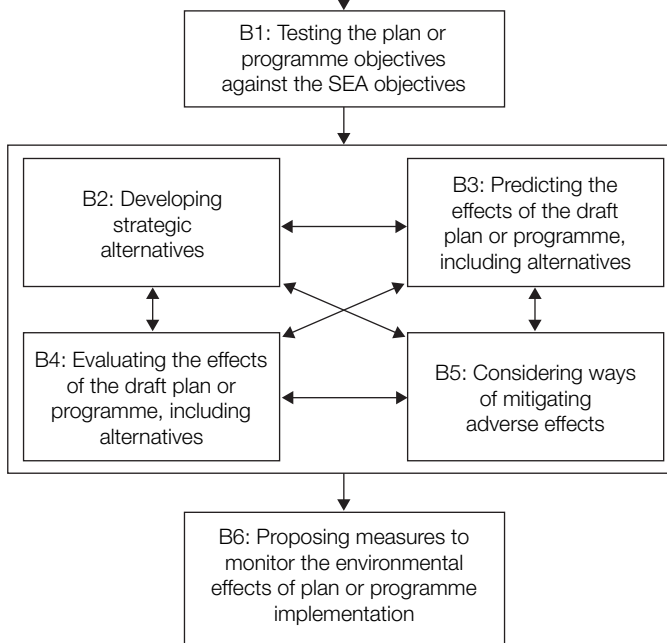
SEA stages and tasks	Purpose
Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope	
Identifying other relevant plans, programmes and environmental protection objectives	To establish how the plan or programme is affected by outside factors, to suggest ideas for how any constraints can be addressed, and to help to identify SEA objectives.
Collecting baseline information	To provide an evidence base for environmental problems, prediction of effects, and monitoring; to help in the development of SEA objectives.
Identifying environmental problems	To help focus the SEA and streamline the subsequent stages, including baseline information analysis, setting of the SEA objectives, prediction of effects and monitoring.
Developing SEA objectives	To provide a means by which the environmental performance of the plan or programme and alternatives can be assessed.
Consulting on the scope of SEA	To ensure that the SEA covers the likely significant environmental effects of the plan or programme.
Stage B: Developing and refining alternatives and assessing effects	
Testing the plan or programme objectives against the SEA objectives	To identify potential synergies or inconsistencies between the objectives of the plan or programme and the SEA objectives and help in developing alternatives.
Developing strategic alternatives	To develop and refine strategic alternatives.
Predicting the effects of the plan or programme, including alternatives	To predict the significant environmental effects of the plan or programme and alternatives.
Evaluating the effects of the plan or programme, including alternatives	To evaluate the predicted effects of the plan or programme and its alternatives and assist in the refinement of the plan or programme.
Mitigating adverse effects	To ensure that adverse effects are identified and potential mitigation measures are considered.
Proposing measures to monitor the environmental effects of plan or programme implementation	To detail the means by which the environmental performance of the plan or programme can be assessed.
Stage C: Preparing the Environmental Report	
Preparing the Environmental Report	To present the predicted environmental effects of the plan or programme, including alternatives, in a form suitable for public consultation and use by decision-makers.
Stage D: Consulting on the draft plan or programme and the Environmental Report	
Consulting the public and Consultation Bodies on the draft plan or programme and the Environmental Report	To give the public and the Consultation Bodies an opportunity to express their opinions on the findings of the Environmental Report and to use it as a reference point in commenting on the plan or programme. To gather more information through the opinions and concerns of the public.
Assessing significant changes	To ensure that the environmental implications of any significant changes to the draft plan or programme at this stage are assessed and taken into account.
Making decisions and providing information	To provide information on how the Environmental Report and consultees' opinions were taken into account in deciding the final form of the plan or programme to be adopted.
Stage E: Monitoring the significant effects of implementing the plan or programme on the environment	
Developing aims and methods for monitoring	To track the environmental effects of the plan or programme to show whether they are as predicted; to help identify adverse effects.
Responding to adverse effects	To prepare for appropriate responses where adverse effects are identified.

Figure 6 – Relationship between the SEA Tasks

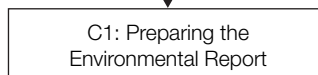
Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope



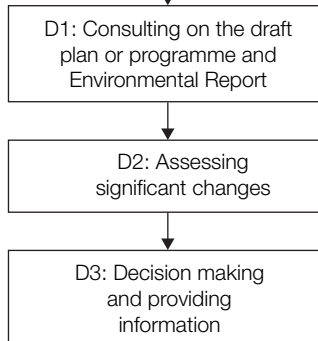
Stage B: Developing and refining alternatives and assessing effects



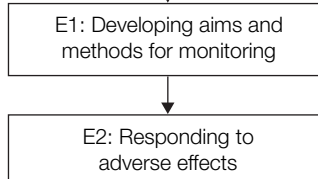
Stage C: Preparing the Environmental Report



Stage D: Consulting on the draft plan or programme and the Environmental Report



Stage E: Monitoring implementation of the plan or programme



Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope

What the Directive says:

The Environmental Report shall include information on [inter alia]:

- the “relationship [of the plan or programme] with other relevant plans and programmes” (Annex I(a))
- “the environmental protection objectives, established at international, [European] Community or [national] level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation” (Annex I (e))
- “relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme” and “the environmental characteristics of areas likely to be significantly affected” (Annex I (b), (c))
- “any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC” (Annex I (d))

“The authorities ... which, by reason of their specific environmental responsibilities, are likely to be concerned by the environmental effects of implementing plans and programmes ... shall be consulted when deciding on the scope and level of detail of the information which must be included in the environmental report” (Article 5.4 and 6.3).

5.A.1 At this stage the Responsible Authority compiles the background information needed for an SEA. To get the full benefit of integrating SEA into the plan or programme preparation process, this material is needed at the outset, when issues are being identified and alternative options are being developed.

5.A.2 Responsible Authorities need to consider what information they already have and what more they will need. They may already hold useful information, for example from environmental assessments of previous plans or programmes. It may be useful to consult the public at this stage to seek additional information and initial opinions.

Much baseline information will be generic to an area or sector, rather than specific to the particular plan or programme on which SEA is being carried out. It could therefore be used to support assessments of a range of plans or programmes prepared by one or more authorities. There are potential opportunities for information sharing and collaboration when information is collected. To get the best value from the baseline information, it is desirable to keep it up to date rather than merely being a snapshot of the situation at a particular time.

A1 – Identifying other relevant plans, programmes and environmental protection objectives

5.A.3 A plan or programme may be influenced in various ways by other plans or programmes, or by external environmental protection objectives such as those laid down in policies or legislation. These relationships enable the Responsible Authority to take advantage of potential synergies and to deal with any inconsistencies and constraints.

- 5.A.4 Some issues may already have been dealt with in other plans and programmes, and need not be addressed further in the plan or programme which is being developed. Where significant tensions or inconsistencies arise, however, it may be helpful to consider principles of precedence between levels or types of plan or programme; the relative timing of the plans or programmes concerned; the degree to which the plans, programmes and objectives accord with current policy or legal requirements; and the extent of any environmental assessments which have already been conducted.

Appendix 2 gives an indicative list of plans, programmes and environmental protection objectives which may be relevant, and an example of documenting the links.

A2 – Collecting baseline information

- 5.A.5 Baseline information provides the basis for predicting and monitoring environmental effects and helps to identify environmental problems and alternative ways of dealing with them. Both qualitative and quantitative information can be used for this purpose. Aspects of the baseline to be considered are listed in Annex I of the Directive (see Figure 1), but the Environmental Report can focus on those where significant effects are likely, provided it is made clear why other matters do not need to be addressed. The baseline and environmental effects can also include matters not listed in Annex I, such as geological conditions, mineral resources, flood risk, energy consumption, noise and light pollution.

- 5.A.6 For each indicator selected, enough information is needed to answer the following questions:

- How good or bad is the current situation? Do trends show that it is getting better or worse?
- How far is the current situation from any established thresholds or targets?
- Are particularly sensitive or important elements of the receiving environment affected, e.g. vulnerable social groups, non-renewable resources, endangered species, rare habitats?
- Are the problems reversible or irreversible, permanent or temporary?
- How difficult would it be to offset or remedy any damage?
- Have there been significant cumulative or synergistic effects over time? Are there expected to be such effects in the future?

Appendix 3 suggests how baseline information can be collected and presented.
Appendix 4 lists some key sources for baseline information.

In theory, collection of baseline information could go on indefinitely. A practical approach is essential. Set a time limit for information collection. Do not expect to be able to obtain all relevant information in the first SEA of a plan or programme, but make arrangements to fill any major gaps for future replacements or reviews of plans or programmes.

- 5.A.7 Environmental assessments conducted in the preparation of other relevant plans and programmes are likely to be useful sources of information. SEA objectives and environmental problems identified through the SEA process and the alternatives to the plan or programme to be considered in the SEA can also be a guide to the type and level of detail of baseline information to be collected.
- 5.A.8 Existing survey information, data sets and related sets of indicators may be extremely useful for baseline identification and monitoring effects, and a variety of sources are listed in Appendix 4. Geographic Information Systems may also be a useful tool in collecting and maintaining up-to-date baseline information. However, it is important for Responsible Authorities to be aware of the quality of the information being provided, including how it was collected and how it can be used appropriately in assessing the effects of the plan or programme.
- 5.A.9 Where baseline information is unavailable or unsatisfactory, Responsible Authorities may consider how they could improve it for use in assessments of future plans or programme. Monitoring information collated during the implementation of various plans and programmes has the potential to be a valuable source of baseline information, although it will not necessarily relate to all requirements of the latter. The need for better information is an important consideration when deciding how to monitor the implementation of the plan or programme – see Stages B and E below.

A3 – Identifying environmental problems

- 5.A.10 Identifying environmental problems is an opportunity to define key issues and improve the SEA objectives. Responsible Authorities will be aware of many environmental problems which they currently face. It is important however to look for any potential problems, on the basis of:
- earlier experience with issues identified in other plans and programmes;
 - identification of possible tensions with other plans, programmes and environmental protection objectives;
 - identification of possible tensions between current or future baseline conditions and existing objectives, targets or obligations; and
 - consultation with the Consultation Bodies and the public.
- 5.A.11 The identification of environmental problems must be based on evidence related to baseline information.

A4 – Developing SEA objectives

- 5.A.12 While not specifically required by the Directive, SEA objectives are a recognised way of considering the environmental effects of a plan or programme and comparing the effects of alternatives. They serve a different purpose from the objectives of the plan or programme, though they may in some cases overlap with them. SEA objectives are used to help show whether the objectives of the plan or programme are beneficial for the environment, to compare the environmental effects of alternatives, or to suggest improvements. For example, improving biodiversity may be an objective of both a plan or programme and an SEA, but the

plan or programme may also have an objective of protecting specific wildlife sites which may be tested against the objective of whether they improve biodiversity.

- 5.A.13 SEA objectives can often be derived from environmental objectives which are established in law, policy, or other plans or programmes, or from a review of baseline information and environmental problems. They can be used or adapted for SEAs of related plans and programmes, whereas each individual plan or programme has its own specific objectives.
- 5.A.14 Objectives can be expressed in the form of targets, the achievement of which is measurable using indicators.

Appendix 5 gives information on developing SEA objectives, and targets and indicators based on them.

- 5.A.15 Objectives, targets and indicators can be revised as baseline information is collected and environmental problems identified, and can be used in monitoring the implementation of the plan or programme.

It may be useful to develop SEA objectives, indicators and targets in consultation with the Consultation Bodies and relevant stakeholders, and review them in the light of baseline information and any problems identified.

A5 – Consulting on the scope of SEA

- 5.A.16 Responsible Authorities must seek the views of the Consultation Bodies on the scope and level of detail of the Environmental Report. Consultation at this stage helps to ensure that the Report will be robust enough to support the plan or programme during the later stages of full public consultation. Responsible Authorities may also find it useful to consult other organisations and individuals concerned at this stage to obtain information and opinions (including other parts of its own organisation where appropriate).
- 5.A.17 The Consultation Bodies are developing principles and procedures for handling scoping inquiries (see paragraphs 3.6–3.9). It is for Responsible Authorities to establish how best to approach the Consultation Bodies in any particular case, but if possible it is recommended that they aim to produce an outline of the Environmental Report (see Figure 7 on the content of Environmental Reports), focusing on the most important elements such as objectives and baseline information. In Scotland, reports on scoping are submitted to the Consultation Authorities via the SEA Gateway (see also paragraph 3.9).
- 5.A.18 The Directive does not require full consultation with the public or bodies other than Consultation Bodies until the Environmental Report on the draft plan or programme is finalised (see Figure 3). However, depending on the nature and stage of development of the plan or programme, Responsible Authorities may wish to undertake wider consultation and/or make environmental information available during earlier stages. This can help to inform discussion at this stage and facilitate decision-making at later stages. Feedback from organisations or the public may also provide more information or highlight new issues for the Environmental Report.

Stage B: Developing and refining alternatives and assessing effects

What the Directive says:

“... an environmental report shall be prepared in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme, are identified, described and evaluated” (Article 5.1). Information to be provided in the Environmental Report includes “an outline of the reasons for selecting the alternatives dealt with” (Annex I (h)).

- 5.B.1 At this stage, the Responsible Authority confirms the scope of the Environmental Report, what alternatives and types of effect to assess, and what level of detail to present, taking account of Consultation Bodies’ advice. It is desirable for the Responsible Authority to predict and evaluate the effects of elements of the evolving plan or programme, including alternatives, while they are working on them. Where adverse effects are seen to be likely, possibilities for mitigation must be considered. Aspects of Stage B may need to be carried out more than once in the course of a plan’s or programme’s development.

While the activities at Stage A can be carried out before work begins on the plan or programme, those at Stage B are integral to the plan or programme preparation process and cannot be done effectively in isolation from it.

B1 – Testing the plan or programme objectives against the SEA objectives

- 5.B.2 The objectives of the plan or programme will need to be tested against the SEA objectives to identify both potential synergies and inconsistencies. This information may help in developing alternatives during the development of the plan or programme, and may in some cases help to refine the objectives of the plan or programme itself. Where a plan or programme has several objectives it may also be helpful to test them against each other, as inconsistencies may give rise to adverse environmental effects.
- 5.B.3 The compatibility of the plan or programme objectives with each other and with SEA objectives can be tested using a framework such as that shown in Figure 12 in Appendix 5.

B2 – Developing strategic alternatives

- 5.B.4 In conducting SEA, Responsible Authorities must appraise the likely significant environmental effects of implementing the plan or programme and any reasonable alternatives. It is normal practice when developing a plan or programme to propose different ways of fulfilling its objectives. In the UK the term “options” is often used. Each alternative can be tested against the SEA objectives, with positive as well as negative effects being considered, and uncertainties about the nature and significance of effects noted. This will often be an iterative process, with the alternatives being revised as part of the SEA to enhance positive effects and reduce negative ones.
- 5.B.5 Alternatives considered often include scenarios termed ‘no plan or programme’ and ‘business as usual’. It is important to be clear what these alternatives mean in relation to a particular

plan or programme. ‘No plan or programme’ might mean not introducing a plan or programme where none already exists, or it might in effect propose no further action to implement a plan or programme (e.g. no more developments in a particular area). ‘Business as usual’ usually means a continuation of an existing plan or programme, as an alternative to preparing a new one. It is important to be aware that baselines will change over time under ‘no plan or programme’ and ‘business as usual’ alternatives, as well as under new plans or programmes.

Appendix 6 gives more detail on identifying and assessing alternatives.

- 5.B.6 At this stage it may be possible to drop some alternatives from further consideration and document the reasons for eliminating them. Justifications for these choices will need to be robust, as they can affect decisions on major developments.
- 5.B.7 It is not the purpose of the SEA to decide the alternative to be chosen for the plan or programme. This is the role of the decision-makers who have to make choices on the plan or programme to be adopted. The SEA simply provides information on the relative environmental performance of alternatives, and can make the decision-making process more transparent.
- 5.B.8 Throughout this part of the assessment, it may be necessary to revisit earlier tasks such as the collection of baseline information, as new information and issues emerge.

B3 – Predicting the effects of the plan or programme, including alternatives

- 5.B.9 Prediction of effects involves:
- Identifying the changes to the environmental baseline which are predicted to arise from the plan or programme, including alternatives. The predicted effects of alternatives can be compared with each other, or with ‘no plan or programme’ and/or ‘business as usual’ scenarios where these exist, and against the SEA objectives.
 - Describing these changes in terms of their magnitude, their geographical scale, the time period over which they will occur, whether they are permanent or temporary, positive or negative, probable or improbable, frequent or rare, and whether or not there are secondary, cumulative and/or synergistic effects.
- 5.B.10 Predictions do not have to be expressed in quantitative terms. Hard data may enable Responsible Authorities or expert advisers to make detailed quantitative predictions, and this can be particularly useful where a plan’s or programme’s effects are uncertain, close to a threshold, or cumulative. However quantification is not always practicable, and qualitative predictions can be equally valid and appropriate. In current practice, these are often expressed in easily understood terms such as ‘getting better or worse’ or a scale from ++ (very positive) to -- (very negative). It can be useful to link predictions to specific objectives, e.g. ‘will the plan or programme promote change in a desired direction?’
- 5.B.11 However, qualitative does not mean ‘guessed’. Predictions need to be supported by evidence, such as references to any research, discussions or consultation which helped those carrying out the SEA to reach their conclusions. The Environmental Report must document any

difficulties such as uncertainties or limitations in the information underlying both qualitative and quantitative predictions. Assumptions, for instance about underlying trends or details of projects to be developed under the plan or programme, need to be clearly stated. To enhance transparency, Responsible Authorities are encouraged to summarise reasons for their decision to pursue a quantitative or qualitative approach to prediction of effects for each predicted impact.

- 5.B.12 Where a plan or programme includes proposals for individual projects, these need to be assessed at a sufficient level of detail to enable significant environmental effects to be broadly predicted. This is particularly helpful where the plan or programme sets the context for decision making on whether to proceed with the proposal, or where alternatives are excluded or significantly reduced at that stage. The EIA Directive does not require consideration of alternatives, although if developers have considered alternatives they are required to report on this. Where EIA is needed later for a project, it is likely to be informed by the findings of the SEA, but it will not usually be appropriate to provide the level of detail needed for EIA in the context of the plan or programme (see paragraph 2.24).

Appendix 7 gives further guidance on prediction and evaluation of effects.

Appendix 8 discusses how secondary, cumulative and synergistic effects can be addressed.

B4 – Evaluating the effects of the draft plan or programme, including alternatives

- 5.B.13 Evaluation involves forming a judgement on whether or not a predicted effect will be environmentally significant. The criteria of significance in Annex II of the Directive are relevant when considering a specific effect, e.g. its scale and permanence and the nature and sensitivity of the receiving environment. It may also be helpful to refer to the baseline information and indicators defined at Stage A.
- 5.B.14 Appendix 7 (Figure 18) suggests a format for integrating the prediction and evaluation of effects and summarising the findings of this stage. This is derived from established practice, but puts more emphasis on mitigation and enhancement measures. Issues to be considered for each alternative presented include:
- Is it clear exactly what is proposed, how the alternatives differ from each other, and how they relate to the plan or programme as a whole?
 - Is each alternative likely to have a significant adverse or beneficial effect in relation to each of the environmental objectives or targets from Stage A?
 - If so, can the adverse effect be avoided or its severity reduced, or can the beneficial effect be maximised?
 - If the adverse effect cannot be avoided, e.g. by conditions or changes to the way it is implemented, can the alternative be changed or eliminated?
 - If its effect is uncertain, or depends on how the plan or programme is implemented, how can this uncertainty be reduced?

The point of the assessment is not to fill in the matrix, but to ensure that the proposal or alternative is as environmentally beneficial or sustainable as possible. The table is only a tool for doing this. The actual assessment of effects uses appropriate qualitative and quantitative tools and is supported by evidence. Figure 19 identifies some of these prediction and evaluation techniques. The matrix presents a format for summarising the assessment findings, accompanied by an explanation of the key findings and the assumptions underpinning these, including links to baseline information where this is possible.

- 5.B.15 The Directive also requires the analysis of effects to include “short, medium and long-term, permanent and temporary ... effects” (Annex I(f)). Effects may vary over different timescales, e.g. adverse short term effects from disturbance of habitats but beneficial ones in the long term from reductions in air pollution or greenhouse gases. The timescales themselves will also vary depending on the type of plan or programme and the alternatives being considered.
- 5.B.16 Where possible, it is useful to apply short, medium and long timescales consistently throughout the assessment. However if different timescales are used, this will need to be made clear within the Environmental Report. For air pollution, for instance, the short, medium and long terms could be 3, 10 and 25 years, while for climate change they could be 5, 20 and 100 years.
- 5.B.17 It may be impossible to predict the precise effects of a plan or programme. However, the Responsible Authority must demonstrate that consideration has been given to all of the effects in Annex I(f) of the Directive, for example by explaining any distinctions that can be made between the short, medium or long term effects in the comments column. (See Appendix 6, Figure 16).

B5 – Considering ways of mitigating adverse effects

- 5.B.18 Annex I of the Directive requires the Environmental Report to include measures to prevent, reduce or offset any significant adverse effects on the environment of implementing the plan or programme. For convenience, these measures are referred to in this Guide as ‘mitigation measures’, but they include proactive avoidance of adverse effects as well as actions taken after effects are noticed.
- 5.B.19 Mitigation measures must be considered during the preparation of plans and programmes to address effects identified in the SEA. Responsible Authorities need to allow time for these mitigation measures to be considered and for plans and programmes to be revised where appropriate.
- 5.B.20 Mitigation can take a wide range of forms, including:
- Changes to the alternative concerned, or to the plan or programme as a whole
 - Changes to a specific proposal within the plan or programme
 - Inclusion of new provisions within the plan or programme
 - Technical measures to be applied during the implementation stage, e.g. buffer zones, application of design principles
 - Identifying issues to be addressed in project EIAs
 - Proposals for changing other plans and programmes

B6 – Proposing measures to monitor the environmental effects of plan or programme implementation

- 5.B.21 The significant environmental effects of the implementation of plans and programmes must be monitored to identify any unforeseen adverse effects and to enable appropriate remedial action to be taken (though the Directive does not create any obligations concerning remediation). Decisions on what to monitor and how to do it need to be considered early in the SEA process and throughout the course of preparing the plan or programme. Stage E includes further guidance on developing aims and methods for monitoring.

Stage C: Preparing the Environmental Report

What the Directive says:

“The environmental report shall include information that may reasonably be required taking into account current knowledge and methods of assessment, the contents and level of detail in the plan or programme, [and] its stage in the decision-making process” (Article 5.2).

Information to be provided in the Environmental Report includes:

- “the likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors. These effects should include secondary, cumulative, synergistic, short, medium and long-term, permanent and temporary, positive and negative effects” (Annex I (f) and footnote)
- “an outline of the reasons for selecting the alternatives dealt with” (Annex I (h))
- “the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme” (Annex I (g))

C1 – Preparing the Environmental Report

- 5.C.1 The Environmental Report is a key output of SEA, presenting information on the effects of the “draft plan or programme”, the Directive’s term for the plan or programme on which formal public consultation is carried out. Annex I of the Directive lists the information to be provided in the Environmental Report. Figure 7 proposes a structure for the Environmental Report.
- 5.C.2 While the Environmental Report need not be issued as a separate document from the draft plan or programme, it must be clearly distinguishable.
- 5.C.3 An Environmental Report may be included within a document covering effects other than those on the environment, for example as part of a Sustainability Appraisal. Where this is done, the document must clearly show that the Directive’s requirements in relation to the Environmental Report have been met. This could be achieved through signposting the place or places in the document where the information required by the Directive is provided.
- 5.C.4 In deciding the length and the level of detail to be provided in an Environmental Report, the Responsible Authority needs to bear in mind its purpose as a public consultation document. It is likely to be of interest to a wide variety of readers, including decision-makers, other plan/programme-making authorities, statutory consultees, non-government organisations, and members of the public, and needs to be prepared with this range of users in mind. It must include a non-technical summary. A Quality Assurance checklist is provided in this guidance to help Responsible Authorities ensure that the quality of the Environmental Report is sufficient to meet the requirements of the Directive.

Appendix 9 gives a suggested checklist for quality assurance.

Figure 7 – Possible structure and contents of the Environmental Report

Structure of report	Information to include
Non-technical summary	<ul style="list-style-type: none"> • Summary of the SEA process • Summary of the likely significant effects of the plan or programme • Statement on the difference the process has made to-date • How to comment on the report
Methodology used	<ul style="list-style-type: none"> • Approach adopted in the SEA • Who was consulted, and when • Difficulties encountered in compiling information or carrying out the assessment
Background	<ul style="list-style-type: none"> • Purpose of the SEA • Objectives of the plan or programme
SEA objectives and baseline and context	<ul style="list-style-type: none"> • Links to other international, national, regional and local plans and programmes, and relevant environmental objectives including how these have been taken into account • Description of baseline characteristics and predicted future baseline • Environmental issues and problems • Limitations of the data, assumptions made etc. • SEA objectives, targets and indicators
Plan/Programme issues and alternatives	<ul style="list-style-type: none"> • Main strategic alternatives considered and how they were identified • Comparison of the significant environmental effects of the alternatives • How environmental issues were considered in choosing the preferred strategic alternatives • Other alternatives considered and why they were rejected • Any proposed mitigation measures
Plan or programme policies	<ul style="list-style-type: none"> • Significant environmental effects of the policies and proposals • How environmental problems were considered in developing the policies and proposals • Proposed mitigation measures • Uncertainties and risks
Implementation	<ul style="list-style-type: none"> • Links to other tiers of plans and programmes and the project level (environmental impact assessment, design guidance etc.) • Proposals for monitoring

Stage D: Consultation and decision-making

What the Directive says:

“The authorities [with relevant environmental responsibilities] and the public... shall be given an early and effective opportunity within appropriate time frames to express their opinion on the draft plan or programme and the accompanying Environmental Report before the adoption of the plan or programme” (Article 6(2)).

“The environmental report ..., the opinions expressed [in responses to consultation]... and the results of any transboundary consultations ... shall be taken into account during the preparation of the plan or programme and before its adoption...” (Article 8).

“...when a plan or programme is adopted, the [environmental] authorities... [and] the public ... are informed and the following items [shall be] made available to those so informed: (a) the plan or programme as adopted, (b) a statement summarising how environmental considerations have been integrated into the plan or programme.... [including] the reasons for choosing the plan or programme as adopted, in light of other reasonable alternatives dealt with, and (c) the measures decided concerning monitoring” (Article 9(1)).

D1 – Consulting on the draft plan or programme and environmental report

- 5.D.1 The Environmental Report must be made available at the same time as the draft plan or programme, as an integral part of the consultation process, and the relationship between the two documents clearly indicated.
- 5.D.2 Publication of proposals and consultation on them are already established practice for many plans and programmes, and are in many cases legal requirements. The timing of consultation is however also important. Responsible Authorities must ensure that the public and the Consultation Bodies are given “an early and effective opportunity within appropriate time frames to express their opinion”. Chapter 3 above provides more detailed guidance on consulting the Consultation Bodies and the public as part of SEA.

D2 – Assessment of significant changes

- 5.D.3 Where plans or programmes go through several successive consultation exercises, it is important to keep the implications for the Environmental Report under review to ensure that it remains consistent with the plan or programme on which opinions are being sought. If significant changes are made from the original proposals, the Responsible Authority will need to consider whether a revised Environmental Report is needed.

D3 – Decision making and providing information

- 5.D.4 The Directive requires the information in the Environmental Report and the responses to consultation to be taken into account during the preparation of the plan or programme and before the final decision is taken to adopt it. Responsible Authorities must produce a summary of how they have taken these findings into account, and how environmental considerations have been integrated into the plan or programme, with enough information to make clear any changes made or alternatives rejected.

- 5.D.5 Information must also be made available on how monitoring will be carried out during implementation. The Environmental Report will already have documented proposed monitoring measures, and they can now be confirmed or modified in the light of consultation responses.
- 5.D.6 The Directive requires the plan or programme itself, when adopted, to be made available to the public, the Consultation Bodies, and EU Member States where these have been consulted. This Guide assumes that all plans and programmes in the UK which are subject to the Directive are available under existing legal provisions or policy. It is for the Responsible Authority to ensure that arrangements are in place to inform the public and other consultees that the plan or programme has been adopted, and to give them access to it if they are not provided with copies.

Stage E: Monitoring implementation of the plan or programme

What the Directive says:

“Member States shall monitor the significant environmental effects of the implementation of plans and programmes in order, inter alia, to identify at an early stage unforeseen adverse effects, and to be able to undertake appropriate remedial action” (Article 10.1).

The Environmental Report shall include “a description of the measures envisaged concerning monitoring” (Annex I (i)).

- 5.E.1 Monitoring allows the actual significant environmental effects of implementing the plan or programme to be tested against those predicted. It thus helps to ensure that any problems which arise during implementation, whether or not they were foreseen, can be identified and future predictions made more accurately.
- 5.E.2 Monitoring can be integral to compiling baseline information for future plans and programmes, and to preparing information which will be needed for EIAs of projects. Monitoring and evaluation of progress towards objectives and targets can form a crucial part of the feedback mechanism. Feedback from the monitoring process helps to provide more relevant information that can be used to pinpoint specific performance issues and significant effects, and ultimately lead to more informed decision-making.

Appendix 10 gives more information on monitoring and describes how Responsible Authorities might design an SEA monitoring system.

E1 – Developing aims and methods for monitoring

- 5.E.3 The Directive’s provisions on monitoring apply when the plan or programme is being put into effect, rather than during its preparation and adoption. However, preparations for monitoring will need to be considered in the course of preparing the plan or programme.
- 5.E.4 In many cases, information used in monitoring will be provided by outside bodies, including those which provide baseline information (see Appendix 4). Responsible Authorities need to ensure that monitoring information is appropriate to their needs and is up to date and reliable, and that sources of information are referenced.
- 5.E.5 Monitoring in accordance with the Directive can be incorporated into existing monitoring arrangements. However, if monitoring is not already established under arrangements for implementing a plan or programme, a new procedural step for carrying it out will be required.

E2 – Responding to adverse effects

- 5.E.6 Responsible Authorities are encouraged to consider how to react if monitoring reveals adverse effects. While the Directive itself does not create new obligations on environmental protection, other legislation or policies may require action on the part of either the Responsible Authority or another body. Details of any contingency arrangements could be included in the mitigation measures set out in the Environmental Report. This may include

giving feedback to those responsible for plans and programmes higher up in the hierarchy on the effects of these plans and programmes.

- 5.E.7 The Directive requires monitoring to identify ‘unforeseen adverse effects’. It is recognised that it may be difficult to identify and implement monitoring mechanisms for unexpected effects, or, where such monitoring takes place, to attribute adverse effects to implementation of the plan or programme. The European Commission guidance (paragraph 8.12) suggests that ‘unforeseen adverse effects’ should be understood as “...shortcomings of the prognostic statements in the environmental report (e.g. regarding the predicted intensity of an environmental effect) or unforeseen effects resulting from changes of circumstances, which have led to certain assumptions in the environmental assessment being partly or wholly invalidated”.
- 5.E.8 Further guidance on monitoring is provided in Appendix 10 and documents in the References section of this guide.

EC Directives and other international instruments related to the SEA Directive

EC directives

Environmental Impact Assessment Directive (85/337/EEC, amended by 97/11/EC)

www.europa.eu.int/comm/environment/eia/full-legal-text/85337.htm

The Habitats Directive (92/43/EEC on the conservation of natural habitats and of wild fauna and flora)

www.europa.eu.int/comm/environment/nature/nature_conservation/eu_nature_legislation/habitats_directive/index_en.htm

The Water Framework Directive (2000/60/EC)

www.europa.eu.int/comm/environment/water/water-framework/index_en.html

United Nations Economic Commission for Europe (UNECE)

Convention on Environmental Impact Assessment in a transboundary context (1991) (the Espoo Convention)

www.unece.org/env/eia/documents/conventiontextenglish.pdf

Protocol on Strategic Environmental Assessment (2003)

<http://www.unece.org/env/eia/documents/protocolenglish.pdf>

Convention on access to information, public participation and access to justice in environmental matters (1999) (the Aarhus Convention)

www.unece.org/env/eia/documents/conventiontextenglish.pdf

Glossary

Consultation Bodies: Authorities which because of their environmental responsibilities are likely to be concerned by the effects of implementing plans and programmes and must be consulted at specified stages of the SEA. The Consultation Bodies designated in the SEA Regulations are:

- England: Countryside Agency, English Heritage, English Nature, and the Environment Agency.
- Northern Ireland: The Department of the Environment's Environment and Heritage Service.
- Scotland: Historic Scotland, Scottish Natural Heritage, and the Scottish Environment Protection Agency. (Scottish Regulations use the term "Consultation Authorities").
- Wales: Cadw (Welsh Historic Monuments), Countryside Council for Wales, and the Environment Agency Wales.

Environmental Appraisal: A form of environmental assessment used in the UK (primarily for development plans) since the early 1990s, supported by *Environmental Appraisal of Development Plans: A Good Practice Guide* (DoE, 1993); more recently superseded by Sustainability Appraisal. Some aspects of environmental appraisal foreshadow the requirements of the SEA Directive.

Environmental Assessment: Generically, a method or procedure for predicting the effects on the environment of a proposal, either for an individual project or a higher-level "strategy" (a policy, plan or programme), with the aim of taking account of these effects in decision-making. The term 'Environmental Impact Assessment' (EIA) is used for assessments of projects (see definition below). In the SEA Directive (Article 2(b)), an environmental assessment means "the preparation of an environmental report, the carrying out of consultations, the taking into account of the environmental report and the results of the consultations in decision-making and the provision of information on the decision", in accordance with the Directive's requirements.

Environmental Impact Assessment (EIA): Generic term used to describe environmental assessment as applied to projects. In this Guide, 'EIA' is used to refer to the type of assessment required under European Directive 337/85/EEC.

Environmental Report: The report required by the SEA Directive as part of an environmental assessment, which identifies, describes and evaluates the likely significant effects on the environment of implementing a plan or programme.

Health Impact Assessment (HIA): The World Health Organisation has defined HIA as "a combination of procedures, methods and tools by which a policy, programme or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within a population" (European Centre for Health Policy, 1999); this is known as the Gothenburg Consensus definition.

Indicator: A measure of variables over time, often used to measure achievement of objectives.

- **Output Indicator:** An indicator that measures the direct output of the plan or programme. These indicators measure progress in achieving plan or programme objectives, targets and policies.
- **Significant Effects Indicator:** An indicator that measures the significant effects of the plan or programme.
- **Contextual indicator:** An indicator used in monitoring that measures changes in the context within which a plan or programme is being implemented.

Mitigation: Used in this Guide to refer to measures to avoid, reduce or offset significant adverse effects on the environment.

Objective: A statement of what is intended, specifying the desired direction of change in trends.

Plan or Programme: For the purposes of this Guide, the term ‘plan or programme’ covers any plans or programmes to which the Directive applies.

Responsible Authority: The organisation which prepares and/or adopts a plan or programme subject to the Directive and is responsible for the SEA.

Scoping: The process of deciding the scope and level of detail of an SEA, including the environmental effects and alternatives which need to be considered, the assessment methods to be used, and the structure and contents of the Environmental Report.

Screening: The process of deciding whether a plan or programme requires SEA (Figure 2 shows how the Directive’s criteria apply to plans and programmes).

Strategic Environmental Assessment (SEA): Generic term used to describe environmental assessment as applied to policies, plans and programmes. In this Guide, ‘SEA’ is used to refer to the type of environmental assessment required under the SEA Directive.

SEA Directive: European Directive 2001/42/EC “on the assessment of the effects of certain plans and programmes on the environment”.

SEA Regulations: The Regulations transposing the SEA Directive into UK law (see paragraph 1.3).

Significant environmental effects: Effects on the environment which are significant in the context of a plan or programme. Criteria for assessing significance are set out in Annex II of the SEA Directive.

Sustainability Appraisal: A form of assessment used in the UK, particularly for regional and local planning, since the 1990s. It considers social and economic effects as well as environmental ones, and appraises them in relation to the aims of sustainable development. Sustainability Appraisal fully incorporating the requirements of the SEA Directive is required for Local Development Documents and Regional Spatial Strategies in England and Local Development Plans in Wales under the Planning and Compulsory Purchase Act 2004, and guidance on this has been published separately.

Appendix 1

Indicative list of plans and programmes subject to the SEA Directive

This is an indicative list of types of plan and programme in the UK which are subject to the SEA Directive in some or all cases. It is not possible to give a definitive list because of the number of plans and programmes in existence and the varying extent to which the Directive's criteria apply, either to types of plan or programme or to individual plans or programmes within a type. The list will be kept up to date on the ODPM website and used for reporting to the European Commission on the implementation of the Directive, as required under Article 13.4.

Plans and programmes in this list which determine the use of small areas at local level, or which are minor modifications to plans and programmes within this list, only require SEA if they are judged likely to have significant environmental effects. Chapter 2 gives further information on screening to determine whether SEA is required.

Land use and spatial planning

The Directive applies to plans and programmes in the following categories:

- Structure Plans
- Local Plans
- Unitary Development Plans
- The Mayor's Spatial Development Strategy (London)
- Area Plans (Northern Ireland)
- Subject Local Plans (Scotland)
- The National Planning Framework (Scotland)
- National Park Plans (Scotland)
- The Wales Spatial Plan
- Minerals Local Plans
- Minerals Plans (Scotland)
- Waste Local Plans
- Combined Minerals and Waste Local Plans
- Area Waste Plans (Scotland)

Under the Planning and Compulsory Purchase Act 2004, the following plans in England and Wales are subject to Sustainability Appraisals which fully incorporate the requirements of the Directive:

- Local Development Documents, comprising Development Plan Documents and Supplementary Planning Documents
- Local Development Plans (Wales)
- Regional Spatial Strategies (incorporating Regional Transport Strategies)

Other regional and local authority plans and programmes

- Local Air Quality Action Plans
- Local Housing Strategies
- Local Transport Plans
- Municipal Waste Management Strategies
- Regional Development Strategy for Northern Ireland (and associated reviews)
- Regional Economic Strategies (prepared by Regional Development Agencies)
- Review of Regional Transportation Strategy (Northern Ireland)

Environmental protection and management

- Areas of Outstanding Natural Beauty Management Plans
- National Park Management Plans
- National policy statements on planning for waste management (currently PPS 10 “Planning for sustainable waste management” in England and TAN21 “Waste” in Wales)
- Waste Management Plans in Northern Ireland
- National Waste Plan (Scotland)
- River Basin Management Plans and Programmes of Measures
- Salmon Action Plans

Other plans and programmes

- Oil and Gas Licensing Rounds
- Offshore Windfarm Site Licensing Rounds
- Nuclear Decommissioning Strategies
- Water Service Capital Works Programme (Northern Ireland)

Community Strategies

Local planning authorities will need to consider whether the SEA Directive applies to their Community Strategies. The Government would expect all Community Strategies to address environmental issues, and therefore to have the potential to have significant environmental effects. However, whether the Directive applies will depend primarily on the degree to which the Community Strategy can be considered in itself to set the framework for future development consents, either directly or via relevant policies in the development plan.

In determining this, local planning authorities will need to consider both the content of the Strategy, which is very much at the discretion of each authority, and the context of other relevant plans and programmes that are in place or are being put in place. Government guidance on preparing Community Strategies identifies the close links that should exist between Community Strategies, existing Development Plans and proposed Local Development Documents (LDDs). The key relationship between Community Strategies and LDDs will be that the latter should give spatial expression to those elements of the former that relate to the use and development of land.

Relevant factors in determining whether SEA is required include the relationship between the two, the degree of detail included in each, and which is the most recent. In broad terms, additional assessment of Community Strategies is unlikely to be needed where existing Development Plans have regard to (or future LDDs reflect in spatial terms) those elements of the Community Strategy with a land-use dimension. In addition, it is unlikely that a Community Strategy will provide more detail than the Development Plan or LDD for the purpose of setting the framework for future consents. It is thus unlikely that it could give rise to additional obligations under the Directive. However, authorities need to reach a view in each case. To establish whether SEA is required, the authorities concerned may find Figure 2 useful.

Authorities may also wish to consider, regardless of the legal position on the application of SEA, the benefits of applying some of the approaches included in the Directive as part of securing more effective linkages between the Community Strategy and LDDs.

Appendix 2

Other relevant plans, programmes and environmental protection objectives

The Environmental Report must provide information on the plan's or programme's "relationship with other relevant plans and programmes" and "the environmental protection objectives, established at international, [European] Community or [national] level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation" (Directive Annex I a, e).

No list of such plans, programmes or objectives can be definitive, but relevant plans and programmes may include:

- Land use or spatial plans for areas affected by the plan or programme, including those at different geographical levels (e.g. Regional Spatial Strategies, the Wales Spatial Plan, Local Development Frameworks and their component documents, and Minerals and Waste Development Plans)
- Plans dealing with aspects of the physical environment, e.g. River Basin Management Plans, Strategic Flood Risk Assessments, Shoreline Management Plans
- Plans and programmes for specific sectors or types of activity, e.g. Regional Economic Strategies, Local Transport Plans, Waste Management Plans

Environmental protection objectives may be set by policies or legislation, such as:

- European Directives, including the Habitats, Birds, Nitrates, Air Quality, Water Framework and Waste Framework Directives
- International undertakings such as those on greenhouse gases in the Kyoto Protocol
- UK initiatives such as Biodiversity Action Plans and the Scottish Biodiversity Strategy
- The UK Sustainable Development Strategy, and those of England, Wales, Scotland, and Northern Ireland
- White Papers setting out policies (e.g. Urban, Rural, Aviation)
- Planning Policy Statements and Minerals Policy Statements
- The Welsh Assembly Government's Environment Strategy

The results of this exercise can be documented as a table such as Figure 8 which shows the requirements of the other plans, programmes or objectives concerned, the constraints or challenges they pose, and how the plan or programme might take account of them.

Figure 8 – Possible approach to documenting links with other relevant plans and programmes or environmental protection objectives

Other plan/programme	Objectives or requirements of the other plan or programme	How objectives and requirements might be taken on board
European Biodiversity Strategy (EBS)	The EBS is developed around four major themes: <ul style="list-style-type: none"> • Conservation and sustainable use of biological diversity • Sharing of benefits arising out of the use of genetic resources • Research, identification, monitoring and exchange of information • Education, training and awareness 	Promoting the conservation and sustainable use of biodiversity
UK Sustainable Development Strategy (UK SDS)	The UK SDS has five main principles: <ul style="list-style-type: none"> • Living within environmental limits • Ensuring a strong, healthy and just society • Achieving a sustainable economy • Promoting good governance • Using sound science responsibly 	Ensuring that development is within environmental limits; promotes a strong, healthy and just society; helps to promote a sustainable economy; and promotes good governance
Regional Spatial Strategy	Improve air quality in the region	Transport measures X, Y and Z are needed to reduce emissions
Local Development Framework	Reduce traffic intrusion in specified parts of an Area of Outstanding Beauty	Improving bus services and traffic management measures

Source – partly adapted from Department for Transport, 2004

Appendix 3

Collecting and presenting baseline information

Sufficient information needs to be collected to identify the environmental issues and trends that characterise the areas affected by the plan or programme and to provide the evidence base against which its potential effects can be measured and assessed.

Deciding what information to collect

The collection of information can be more easily managed if:

- The information collected is relevant and appropriate to the spatial scale of the plan or programme.
- Information collection is focused on those aspects of the environmental character of the plan or programme area that are: (i) sufficient to identify the key environmental issues that are relevant to the plan or programme area; and (ii) aspects upon which the plan or programme may have a significant effect.
- The data and information collected is relevant to the SEA objectives and indicators.

Types and sources of baseline information

There are many sources of environmental information, but it is for the Responsible Authority to assess the value of any information in relation to its needs. An information set may not be appropriate for an authority's purpose; it may be unavailable at the right scale, out of date, unreliable, partial or biased. Where information is problematic, choices will need to be made on whether to avoid using it, make use of it with an explanation of its limitations, or collect further information to remove uncertainty. Information collection needs to focus on issues and scales relevant to the plan in question, to avoid the preparation of a generalised 'State of the Environment' report.

Baseline information may be quantitative or qualitative, and it is often useful to include a combination of both. Quantitative information sets are usually built up from existing monitoring and research activities while qualitative information is likely to be based on judgement. For the purposes of SEA qualitative information needs to be supported by reasoned evidence.

Responsible Authorities will probably already hold some of the environmental information they need, but there may be gaps in the information that need to be filled in order to provide an appropriate baseline for the SEA process. There are many different sources and forms of information, and it is important to explore all avenues before deciding that new information needs to be collected. Sources of information include:

- Information included in other strategies, plans or programmes, which set the context for plan or programme preparation (see Appendix 2).
- Service providers (e.g. Consultation Bodies, primary care trusts etc.), who may be able to provide environmental data as well as technical advice and information.

- Other consultees, including representative bodies and members of the public, who often have a wealth of knowledge and understanding of the strategy or plan area, e.g. local conservation groups.

Not all information may be available immediately. The SEA team may need to consider whether improvements are needed to current information collection to fill existing gaps. Ways of improving the availability of information can be included in proposals for monitoring the implementation of the plan or programme.

Mapping and presentation of information

It is often useful to map information, to show how it varies across the plan or programme area. Using time data series, it is also possible to show how changes have occurred over time. Geographic Information Systems (GIS) are particularly useful in this respect. They enable layers of information to be built up, and it is possible to examine how closely one set of information relates to another. In this way, geographical patterns and linkages can be established and explored. Where data cannot be mapped, the use of graphs, diagrams and other visual forms of representation can help to make the data easier to understand.

Identifying trends

Much information will record the state of the environment at a point or points in time, providing a historic record or a snapshot. Where possible, however, it is important to examine likely future trends under a 'no plan or programme' or 'business as usual' scenario. In particular, it will be useful to examine whether trends demonstrate that existing plans and programmes are achieving agreed targets or moving towards or away from targets. This trend analysis can help to highlight existing and potential future environmental problems.

Presenting baseline information

Figure 9 gives an example of how baseline information can be organised and presented.

Figure 9 – Possible way of organising and presenting baseline information

SEA Topic	Indicator	Quantified information (for Responsible Authority unless otherwise noted)	Comparators and targets	Trend	Issues/ constraints
POPULATION AND HUMAN HEALTH	% of people in authority's area describing their health as not good	5.8% in 2001	England and Wales 9.2% (2001)	6.4% in 1999: getting better	Favourable situation. Lower than national average and getting better.
	% of population not getting minimum level of healthy exercise	10% of people exercise 30 minutes or more 5 or more days of the week	This is the lowest rate for any district in the region (1999/2000)	No trend available, although Dept. of Health now has data	Unfavourable situation – low level of exercise, insufficient exercise to benefit health.
	No. of people affected by ambient noise	Awaiting information	DEFRA noise map	No trend available	Unable to identify situation
	Public concern over noise	Noise is not perceived to be a problem (2003)	DEFRA noise map	No trend available	Favourable situation

Source – Levett-Therivel Sustainability Consultants (based on multiple sources including SEA pilot: Taunton urban extension, 2003). Figures are illustrative only.

Appendix 4

Sources of baseline information

The following figure lists a selection of sources of information for describing the baseline environment in an SEA. The first section lists information sources that cover multiple topics, while the following sections cover specific SEA topics. Figure 10 does not claim to be comprehensive. In particular, regional and county level monitoring sites are very useful sources of additional information.

The websites are correct as of September 2005.

Figure 10 – Sources of baseline information	
Source of information	Examples of available information
General	
Audit Commission and IDeA: Library of Local Performance Indicators www.local-pi-library.gov.uk www.audit-commission.gov.uk www.idea-knowledge.gov.uk	Includes a list of quality of life indicators
Audit Scotland www.audit-scotland.gov.uk	Waste, performance indicators
British Geological Survey www.bgs.ac.uk	Minerals, aquifers, flooding, contaminated land. Map based information
Centre for Environmental Data and Recording (CEDaR) www.habitas.org.uk/cedar	Database on the distribution of flora and fauna and geological sites within Northern Ireland and its coastal waters
The Confederation of Scottish Local Authorities (CoSLA) www.cosla.gov.uk/	Scottish legislation, guidance, monthly bulletins etc.
Countryside Access and Activities Network (CAAN) www.countrysidecreation.com	Information on the strategic development and management of countryside recreation across Northern Ireland
Countryside Agency www.countryside.gov.uk www.ccnetwork.org.uk	Designated areas and the landscape, landscape character assessment, rural services
The Countryside Council for Wales www.ccw.gov.uk	Habitats management, sightings, designated areas, species and habitat information, landscapes
Countryside Information Service (DEFRA) www.cis-web.org.uk	Spatial information about the countryside, including landscape features, vegetation habitats and topography
<i>continued</i>	

Figure 10 – Sources of baseline information (cont'd)

Source of information	Examples of available information
Defra www.defra.gov.uk www.defra.gov.uk/environment/statistics www.defra.gov.uk/environment/statistics/pubatt/download/pdf/survey2001.pdf www.defra.gov.uk/erdp/docs/regchapindex.htm Regional Quality of Life Counts: www.sustainable-development.gov.uk/indicators/national/index.htm www.sustainable-development.gov.uk/sustainable/quality99	Quality of air, water (including rivers), soil, waste, wildlife, public attitudes to the environment, economic output, investment, employment, poverty and social exclusion, education, health, housing, crime, land use, noise Quality of Life Counts Strategy: e.g. <i>Securing the Future: The UK Government's Sustainable Development Strategy</i>
Environment Agency www.environment-agency.gov.uk/yourenv	Biodiversity Action Plan Species Data; Location of landfill sites; Soils data; Groundwater vulnerability maps; Flood risk maps; Regional State of the Environment reports
Environment Agency Wales www.environment-agency.gov.uk/regions/wales	Air, water, waste, other environmental facts and figures
The Environment and Heritage Service, Northern Ireland www.ehsni.gov.uk	Waste, water pollution, natural heritage, buildings and monuments and other general publication
EUROSTAT – Statistical Office of the European Communities epp.eurostat.cec.eu.int/portal/page?_pageid=1090,30070682,1090_33076576&_dad=portal&_schema=PORTAL	General and Regional Statistics; Information on Economy and Finance; Population and Social Conditions; Industry, Trade and Services; Agriculture and Fisheries; External Trade; Environment and Energy; Science and Technology Sustainable Development; Structural; Euro; and Long-Term Indicators
General Register Office for Scotland www.gro-scotland.gov.uk	Archaeology, monuments etc.
Institute of Environmental Management and Assessment www.iema.net/	Various environmental facts, figures and indicators
The Landscape Institute – library www.l-i.org.uk/lilib.htm	Books, reports, periodicals, slides/audio-visual material and pamphlets on landscape architecture and related subjects covering contemporary and historic material. Selection of British Standards, publications and legislation
Local Authority, County Council and other regional and local monitoring sites (including Annual Monitoring Reports and State of the Environment Reports)	Various environmental facts, figures, indicators and performance outcomes
Multi-Agency Geographic Information for the Countryside (MAGIC) www.magic.gov.uk	Ward-level GIS information

continued

Figure 10 – Sources of baseline information (cont'd)

Source of information	Examples of available information
National Society for Clean Air and Environmental Protection www.nasca.org.uk/pages/index.cfm	Links to policy and legislation, tools and techniques and case studies
National Trust www.nationaltrust.org.uk/main/ www.nts.org.uk/web/site/home/home.asp?	Places of historic interest or natural beauty
ODPM – Local Government Performance www.bvpi.gov.uk	Local authority actions and activities, mostly response indicators
ODPM – Planning Statistics www.odpm.gov.uk/stellent/groups/odpm_control/documents/contentservertemplate/odpm_index.hcst?n=2586&l=1	Generalised land use database statistics, previously-developed land, previously developed (brownfield) land
Office for National Statistics (ONS) www.statistics.gov.uk/ see also www.neighbourhood.statistics.gov.uk www.wales.gov.uk/keypubstatisticsforwales/topicindex/topicindex-e.htm	Population trends, social and economic data, public attitudes etc.
Regional Observatories and Information Partnerships, Intelligence Units www.regionalobservatories.org.uk East Midlands: www.eastmidlandsobservatory.org.uk East of England: www.eastofenglandobservatory.org.uk London: www.london.gov.uk North East: www.n-e-region.com/ www.regionalobservatories.org.uk/north_east.html North West: www.nwriu.co.uk South East: www.see-in.co.uk South West: www.swro.info/ www.swenvo.org.uk West Midlands: www.wmro.org.uk Yorkshire and the Humber: www.yorkshirefutures.com	Regional Observatories enable access to key regional data and intelligence. Working on a range of economic, social, and environmental issues, they do this by: <ul style="list-style-type: none"> • Providing analysis of data and research • Helping to disseminate and widen access to intelligence • Conducting research to fill data gaps
Royal Institute of British Architects – library www.architecture.com/go/Architecture/Reference/Library_898.html	Research and information on all aspects of architecture
Royal Town Planning Institute – library www.rtpi.org.uk/library/	Publications on planning-related topics, including a wide-ranging collection of current UK local plans, and current periodicals
Scotland and Northern Ireland Forum for Environmental Research (SNIFFER) www.sniffer.org.uk/	Water, land, air and urban environment

continued

Figure 10 – Sources of baseline information (cont'd)

Source of information	Examples of available information
Scottish Environment Protection Agency/SEPA SEA Gateway www.sepa.org.uk See also: www.sepa.org.uk/publications/state_of/index.htm www.sepa.org.uk/data/eper/mainpage.htm www.sepa.org.uk/spri/index.htm www.sepa.org.uk/guidance/index.htm	Quality of air, water, soil, flooding, waste management, including State of the Environment Reports Environmental Pollution Emission Register (EPER) Scottish Pollutant Release Inventory (SPRI) SEPA Guidance
Scottish Executive www.scotland.gov.uk/Topics/Statistics www.scotland.gov.uk/stats/envonline Scottish Executive – Sustainable Development www.scotland.gov.uk/Topics/Environment/17108/7368	Statistics on a range of topics related to the environment, including sustainable development indicators.
Scottish Natural Heritage www.snh.org.uk	Protected areas, natural heritage trends, wildlife
Scottish Neighbourhood Statistics www.sns.gov.uk/	Population trends, social and economic data etc.
State of the Welsh Environment 2003 – Summary Report: www.wales.gov.uk/subienvironment/topics-e.htm#5	Information on a range of topics related to environmental protection including climate change and energy supply, wildlife, pollution, land use, resources etc.
Wales Spatial Plan www.wales.gov.uk/themesspatialplan/content/spatial-plan-e.htm	Spatial division, settlement patterns, employment and economic statistics, environmental issues, infrastructure provision
Other contacts for Wales: National Parks – info@anpa.gov.uk Heritage Coast – info@southernwales.com Welsh Development Agency – enquiries@wda.co.uk , www.wda.co.uk Welsh Assembly Government: www.wales.gov.uk/contacts/index.htm www.wales.gov.uk/keypubstatisticsforwales/index.htm Planning.Division@Wales.gsi.gov.uk StrategicPolicyUnit@Wales.gsi.gov.uk Environment@Wales.gsi.gov.uk Transport.Forum@Wales.gsi.gov.uk WEFO1@Wales.gsi.gov.uk	
<i>continued</i>	

Figure 10 – Sources of baseline information (cont'd)

Source of information	Examples of available information
<p>Other contacts for Scotland: Scottish SEA Gateway: SEA.Gateway@scotland.gsi.gov.uk www.scotland.gov.uk/Home</p> <p>SEPA's SEA gateway: Environmental Strategy, SEPA Corporate Office, Erskine Court, The Castle Business Park, Stirling FK9 4TR, tel. 0131 446 2290/ email: sea.gateway@sepa.org.uk. www.sepa.org.uk.</p>	<p>SEPA advice will normally focus on water, air and soil (land) interests, but may as appropriate and where information is held, include advice on climatic factors, material assets, biodiversity and health.</p> <p>Consultations routed through the SEA Gateway will be forwarded to SEPA's SEA Gateway. On plans of a local/regional nature consultations will normally be dealt with by the relevant local office, and on plans of a Scotland wide/UK nature, dealt with by Corporate Offices</p>
<p>Other contacts for Northern Ireland: www.doeni.gov.uk/</p> <p>Northern Ireland Environmental Link (NIEL) www.nienvironmentlink.org</p>	<p>Provides links to environmental information and publications, other relevant websites, environmental practitioners etc.</p>
Biodiversity, flora and fauna	
<p>Association of Local Government Ecologists www.alge.org.uk</p>	<p>Biodiversity reports and publications</p>
<p>Biodiversity Action Plans www.ukbap.org.uk</p>	<p>Local Biodiversity Action Plans, Species Action Plans, Habitat Action Plans</p>
<p>Botanical Society of the British Isles www.bsbi.org.uk</p>	<p>British Society for Botanical Information – Flora</p>
<p>British Trust for Ornithology (BTO) www.bto.org</p>	<p>Birds</p>
<p>Butterfly Conservation Society www.butterfly-conservation.org</p>	<p>Butterflies</p>
<p>Countryside Agency www.countryside.gov.uk</p>	<p>Countryside character, landscape etc.</p>
<p>Countryside Council for Wales www.ccw.gov.uk</p>	<p>Habitats management, sightings, designated areas, species and habitat information</p>
<p>Deer Commission for Scotland www.dcs.gov.uk</p>	<p>Deer management</p>
<p>Defra www.defra.gov.uk www.defra.gov.uk/environment/statistics</p>	<p>Land use and land cover</p>
<p>English Nature www.english-nature.org.uk</p>	<p>Designations, Local Authority managed SSSIs etc.</p>
<p>Environment Agency www.environment-agency.gov.uk/yourenv</p>	<p>Environmental facts and figures, Environment Agency indicators (air, climate, land, people and lifestyles, pollution, resources and waste, water, wildlife) etc.</p>
<i>continued</i>	

Figure 10 – Sources of baseline information (cont'd)

Source of information	Examples of available information
Fisheries Research Service www.frs-scotland.gov.uk	Fisheries, aquaculture, fish stocks etc.
Forestry Commission Scotland www.forestry.gov.uk/scotland	Forestry, woodland, etc.
Forestry Commission Wales www.forestry.gov.uk/wales	Forestry, woodland, etc.
Joint Nature Conservation Committee www.jncc.gov.uk	Habitat, species and marine conservation
Local Wildlife Trusts and Local Biological Record Centres	Information on biodiversity, flora and fauna for local areas, including non-designated sites of wildlife interest
National Biodiversity Network www.nbn.org.uk www.searchnbn.net www.ukbap.org.uk	Habitats and species. Provides access to the network of Local Record Centres as well as other significant biodiversity datasets
Plantlife www.plantlife.org.uk	Wild plants
RSPB www.rspb.org.uk www.rspb.org.uk/science/birdweb England: www.rspb.org.uk/england/index.asp Scotland: www.rspb.org.uk/scotland/index.asp Wales: www.rspb.org.uk/wales/index.asp Northern Ireland: www.rspb.org.uk/nireland/index.asp	Bird monitoring and survey work
Scottish Biodiversity Forum www.scotland.gov.uk/about/ERAD/CANH/CF/00014870/	Species and habitats
Scottish Environment Protection Agency www.sepa.org.uk	State of the environment reports and information on biodiversity
Scottish Natural Heritage www.snh.org.uk	Protected areas, natural heritage trends, wildlife
Woodland Trust www.woodland-trust.org.uk/	Native woodland heritage
Water and soil	
British Geological Survey www.bgs.ac.uk	Geology including minerals, unstable land, contaminated land, groundwater etc.
Centre for Ecology and Hydrology www.ceh.ac.uk	Terrestrial and freshwater environmental research
<i>continued</i>	

Figure 10 – Sources of baseline information (cont'd)	
Source of information	Examples of available information
Defra www.defra.gov.uk www.defra.gov.uk/environment/statistics	Inland water quality and use, agricultural land classification, etc.
Department for Agriculture and Rural Development, Northern Ireland www.dardni.gov.uk	Statistics on agriculture, farm characteristics, forestry etc.
Department for Regional Development Water Service (Northern Ireland) www.waterni.gov.uk/index.htm	Water conservation, drinking water quality, etc.
Department of Trade and Industry (DTI) www.offshore-sea.org.uk	Off-shore oil and gas, renewable energy, marine issues
Environment Agency www.environment-agency.gov.uk/subjects/water	Water quality, flood maps, floodplains, waste management, etc.
The Environment and Heritage Service, Northern Ireland www.ehsni.gov.uk	Waste, water pollution, natural heritage and other general publications
Geological Survey of Northern Ireland (GSNI) www.bgs.ac.uk/gsni/home.html	Geological advice and information in support of planning, land use, environment protection and natural resource assessment. Conduct surveys for new data
Macaulay Land Use Research Institute (MLURI) www.mluri.sari.ac.uk/	Soil, plants, water
Scottish Environment Protection Agency www.sepa.org.uk/data/index.htm See also: www.sepa.org.uk/publications/bathingwaters/index.htm www.sepa.org.uk/publications/wfd/index.htm www.sepa.org.uk/data/classification/index.htm www.sepa.org.uk/data/river_levels/data.htm www.sepa.org.uk/flooding/index.htm www.sepa.org.uk/publications/technical/spey/index.htm www.sepa.org.uk/publications/nws/index.htm www.sepa.org.uk/publications/wds/index.htm www.sepa.org.uk/policies/index.htm	Water quality data – including water quality classification scheme, monitoring and new classifications established to meet requirements of the Water Framework Directive Bathing water quality data River level data Flood warning information Catchment Management Plans – e.g. the Spey Catchment Plan Waste Strategy/waste data reports – e.g. Waste Data Digests providing information about waste arisings SEPA Policies – e.g. Groundwater Policy
Scottish Water www.scottishwater.co.uk	Drinking water quality, waste water quality, river basin management
Soil Resources Institute www.silsoe.cranfield.ac.uk/nsri	Sustainable management of soil and land resources
The Water Industry Commissioner for Scotland www.watercommissioner.co.uk/	Water services

continued

Figure 10 – Sources of baseline information (cont'd)

Source of information	Examples of available information
Air	
Action Energy / Carbon Trust www.thecarbontrust.co.uk	Information on energy saving and carbon management
Air Pollution Information System www.apis.ac.uk	Concentrations of carbon dioxide, sulphur dioxide etc. and their impacts
Air Quality Archive www.airquality.co.uk/archive/data_and_statistics_home.php www.airquality.co.uk/archive/laqm/laqm.php	Concentrations of carbon dioxide, sulphur dioxide etc. Local Air Quality Management Plans
Commission for Integrated Transport www.cfit.gov.uk/reports	Transport integration, studies, road safety, expenditure
Department for Regional Development, Northern Ireland www.drdni.gov.uk	Regional development statistics
Department for Transport www.transtat.dft.gov.uk	Traffic levels, modal split, environmental impact
The Environment and Heritage Service, Northern Ireland www.ehsni.gov.uk	Air quality review and assessment
National Atmospheric Emissions Inventory www.naei.org.uk/	Concentrations of carbon dioxide, sulphur dioxide etc.
NETCEN www.netcen.co.uk/	Air quality, contaminated land, etc.
Scottish Environment Protection Agency www.sepa.org.uk/data/index.htm See also: www.sepa.org.uk/data/emissions_SO2_NOx/	Quality of air NO ₂ and SO _x Emissions
Scottish Executive – Pollution www.scotland.gov.uk/Topics/Environment/Pollution Scottish Executive – Transport statistics www.scotland.gov.uk/about/CSU/DD-EAS-Trans/00015781/TranTheme.aspx	Pollution and transport statistics
Climatic factors	
Air Quality Archive www.airquality.co.uk	Concentrations of carbon dioxide, sulphur dioxide etc. Local Air Quality Management Plans
The Environment and Heritage Service, Northern Ireland www.ehsni.gov.uk	Climate change, indicators etc.
<i>continued</i>	

Figure 10 – Sources of baseline information (cont'd)	
Source of information	Examples of available information
Met Office www.metoffice.co.uk	Weather patterns etc.
ODPM www.planning.odpm.gov.uk/lucs	Land use change, flood risk etc.
The Office of Gas and Electricity Markets (OFGEM) www.ofgem.gov.uk/ofgem	Combined Heat and Power (CHP) energy providers and statistics
Renewable Energy Statistics Database www.restats.org.uk / www.etsu.com/RESTATS	Renewable energy sites, capacity and generation etc.
Scottish Environment Protection Agency www.sepa.org.uk/data/index.htm	Industrial emissions data
Scottish Executive – Climate change www.scotland.gov.uk/Topics/Environment/Climate-Change	Climate change
UK Climate Impacts Programme www.ukcip.org.uk	CO ₂ emissions, climate change effects
Various transport related agencies and organisations	Information collected for Local Transport Plans, Regional Transport Strategies and the TAN8 decision tool
Population and human health	
Association of Public Health Observatories (APHO) – coordinating body for PHOs (one in each of the 9 government regions in England and one in Wales). PHO websites can be accessed via that of APHO: www.apho.org.uk	Various public health and related statistics, including census data, morbidity and mortality, reports on wide range of topics including health inequalities
British Geological Survey www.bgs.ac.uk	Information on potentially harmful elements in soils and water
Chief Medical Officer's reports for Wales www.cmo.wales.gov.uk/content/communications/reports/index-e.htm	Statistics on general health including demography, mortality, respiratory diseases, sexual health, physical activity, health targets etc.
Defra www.defra.gov.uk/environment/noise	Noise policy, research and mitigation
Department for Regional Development, Northern Ireland www.drdni.gov.uk	Regional development statistics
Department for Transport www.dft.gov.uk / www.transtat.dft.gov.uk	Traffic levels, accidents, modal split, etc.
<i>continued</i>	

Figure 10 – Sources of baseline information (cont'd)

Source of information	Examples of available information
Department of Health www.dh.gov.uk www.dh.gov.uk/PolicyAndGuidance/HealthAndSocialCareTopics/HealthInequalities/fs/en www.dh.gov.uk/assetRoot/04/09/54/14/04095414.pdf www.dh.gov.uk/PublicationsAndStatistics/Legislation/HealthAssessment/fs/en Choosing Health – Making healthy choices easier www.dh.gov.uk/PublicationsAndStatistics/Publications/PublicationsPolicyAndGuidance/PublicationsPolicyAndGuidanceArticle/fs/en?CONTENT_ID=4094550&chk=aN5Cor The Health Survey for England www.dh.gov.uk/PublicationsAndStatistics/PublishedSurvey/HealthSurveyForEngland/fs/en	Statistics and surveys of health levels and health care provision Health inequalities Policy Appraisal and Health document, for quantifying impacts Health Assessment Plans for improving health and reducing health inequalities Comprises a series of annual surveys beginning in 1991
Department of Health, Social Services and Public Safety, Northern Ireland www.dhsspsni.gov.uk	Family practitioner services, social services, drugs and alcohol information
Food Standards Agency www.food.gov.uk	Food surveys, information sheets, reports
General Registers of Scotland www.gro-scotland.gov.uk	Census data and general population statistics
Health and Safety Executive www.hse.gov.uk www.hse.gov.uk/statistics/regions/wales.pdf	Health in employment related statistics
The Health and Safety Executive for Northern Ireland www.hseni.gov.uk	Health in employment related statistics for Northern Ireland
Health Education Board for Scotland www.hebs.scot.nhs.uk	Health data, statistics, publications, support, journals
Health of Wales Information Service www.wales.nhs.uk/	Health data, statistics, publications, support, links
HealthPromis http://healthpromis.hda-online.org.uk	Evidence-based public health, health promotion and health inequalities
Health Protection Agency www.hpa.org.uk	Information on infectious diseases, chemicals and poisons, radiation and emergency response
HM Treasury http://greenbook.treasury.gov.uk/	General guidance on distributional analysis, valuing non-market impacts etc.
<i>continued</i>	

Figure 10 – Sources of baseline information (cont'd)	
Source of information	Examples of available information
Home Office – Research and Statistics www.homeoffice.gov.uk/rds/index.htm	Crime, fear of crime statistics, patterns of criminality, etc.
National Institute for Health and Clinical Excellence (NICE) www.publichealth.nice.org.uk www.publichealth.nice.org.uk/page.aspx?o=HIAGateway	Provides national guidance on the promotion of good health and the prevention and treatment of ill health. Health Impact Assessment – techniques, impacts of determinants of health on human beings etc.
NHS Health Scotland www.phis.org.uk/	Various public health and related statistics
Office for National Statistics (ONS) www.statistics.gov.uk/statbase/Source.asp?vlnk=548&More=Y	Health statistics, published quarterly
Public Health Electronic Library www.phel.gov.uk/	Various public health and related statistics
Regional Public Health websites, available as links through Government Offices in the Regions and following the 'Public Health' link: www.gos.gov.uk/	Regional public health information covering a wide range of topics such as mental health, hospital activity, child health, population, physical activity, obesity, smoking
Royal Environmental Health Institute for Scotland www.royal-environmental-health.org.uk/index.htm	Annual report on environmental health in Scotland
Scotlands Health on the Web www.show.scot.nhs.uk/	Various public health and related statistics
Scottish Health Statistics www.isdscotland.org	Health data, statistics
Scottish Natural Heritage www.snh.org.uk	Landscape and heritage
Welsh Health Impact Assessment Support Unit www.whiasu.cardiff.ac.uk/	Resources and guidance for HIA practitioners
Material assets	
Empty Homes Agency www.emptyhomes.com	Vacant properties
ODPM www.housing.odpm.gov.uk/statistics/publicat	Housing completions, tenant satisfaction, etc.
Scottish Executive www.scotland.gov.uk/about/DD/EAS/00014844/home.aspx www.scotland.gov.uk/about/ASD/DD-EAS-Env/00017731/page1340818912.aspx	Housing Statistics Planning Statistics
<i>continued</i>	

Figure 10 – Sources of baseline information (cont'd)

Source of information	Examples of available information
Scottish Neighbourhood Statistics www.sns.gov.uk/	Population trends, social and economic data etc.
Cultural, heritage and landscape	
The Built Heritage Directorate of Environment and Heritage Service www.eh.sni.gov.uk/built/built.shtml	Historic monuments and buildings
CABE www.cabespace.org.uk	Urban design, culture, landscape
Cadw (Historic Environment Agency, Welsh Assembly Government) www.cadw.wales.gov.uk	Listed buildings, heritage and archaeological reports, conservation registers including landscapes
Countryside Agency www.countryside.gov.uk	State of the Countryside Reports and information, Countryside Indicator Research, Landscape character, rural services survey etc.
Countryside Council for Wales www.ccw.gov.uk	Countryside and landscape information
English Heritage www.english-heritage.org.uk	Heritage Counts – State of the Historic Environment Report Record of all National Monuments – listed buildings, scheduled monuments, parks and gardens, and battlefields register
Historic Scotland www.historic-scotland.gov.uk	Archaeology, monuments etc.
Local Authority Historic Environment Record Centres	Designated and non-designated sites
The National Monuments Record of Wales and the Extended National Database www.rcahmw.org.uk/nmrw.shtml	Record of all National Monuments in Wales
ODPM www.housing.odpm.gov.uk/factsheet/dwelling	Housing statistics, research and factsheets
ODPM www.press.dtlr.gov.uk/pns/DisplayPN.cgi?pn_id=2000_0260	Green Belt
PASTMAP http://jura.rcahms.gov.uk/PASTMAP/start.jsp	Scheduled Ancient Monuments, Listed Buildings, Historic Gardens and Design Landscapes, National Monuments Record of Scotland
Royal Commission on the Ancient & Historic Monuments of Scotland (RCAHMS) www.rcahms.gov.uk	Buildings, sites, and ancient monuments
Scottish Natural Heritage www.snh.org.uk	Landscape and earth heritage

Appendix 5

Developing SEA objectives, indicators and targets

The Directive does not require objectives to be developed for the SEA itself, but they are widely used in SEA to ensure that the right level of consideration is achieved.

An objective is a statement of what is intended, specifying a desired direction of change. For this guidance, a distinction needs to be made between three types of objectives:

- The objectives of the plan or programme in question. Government policies and guidance increasingly require these to be based on sustainability considerations, and the development of SEA objectives may help to promote ideas for making them more environmentally friendly and sustainable.
- External objectives: other objectives to which Responsible Authorities need to have regard independently from the SEA process. They may include environmental protection objectives (which, if binding, must be covered in the Environmental Report), but they can also be economic or social.
- SEA objectives, devised to test the environmental effects of the plan or to compare the effects of alternatives. (See also paragraph 5.A.12).

Objectives can be expressed so that they are measurable (e.g. an objective to ‘reduce greenhouse gas emissions’, could be expressed as “reduce CO₂ emissions by 12.5% by 2010”). The achievement of objectives is normally measured by using indicators.

SEA objectives can often be derived from environmental protection objectives identified in other plans and programmes or from a review of baseline information and environmental problems. The Consultation Bodies and other stakeholders may also suggest SEA objectives.

Figure 11 suggests some SEA objectives and indicators. The Responsible Authority can adapt these to take account of local circumstances and concerns, for instance adding or deleting local environmental objectives. A plan or programme concerned with minerals, for example, could include more objectives for soil and water quality, maintenance of the hydrological regime, and mineral reserves, and could express them in more detailed terms.

Figure 11 – Examples of SEA objectives and indicators

SEA topics	Possible SEA objectives (to be adapted to regional/local circumstances by deletions, additions and refinements)	Possible SEA indicators: ways of quantifying the baseline, prediction, monitoring (to be adapted to regional/local circumstances by deletions, additions and refinements)
Biodiversity, fauna and flora	<ul style="list-style-type: none"> • avoid damage to designated wildlife and geological sites and protected species • maintain biodiversity, avoiding irreversible losses • restore the full range of characteristic habitats and species to viable levels • reverse the long term decline in farmland birds • ensure the sustainable management of key wildlife sites and the ecological processes on which they depend • provide opportunities for people to come into contact with and appreciate wildlife and wild places 	<ul style="list-style-type: none"> • reported levels of damage to designated sites/species • achievement of Biodiversity Action Plan targets • reported condition of nationally important wildlife sites, Sites of Special Scientific Interest (SSSIs) etc. • achievement of 'Accessible Natural Greenspace Standards' • number/area of Local Nature Reserves
Population and human health	<ul style="list-style-type: none"> • create conditions to improve health and reduce health inequalities • promote healthy living • protect and enhance human health • reduce and prevent crime, reduce fear of crime • decrease noise and vibration • increase opportunities for indoor recreation and exercise 	<ul style="list-style-type: none"> • size of population • changes in demography • years of healthy life expectancy / infant mortality rate • mortality by cause • recorded crimes per 1,000 population • fear of crime surveys • number of transport/pedestrian/cyclist road accidents • number of people affected by ambient noise levels • proportion of tranquil areas • percentage of population living in most deprived areas/reliant on key benefits/income deprived • general resident perception surveys
Water and soil	<ul style="list-style-type: none"> • limit water pollution to levels that do not damage natural systems • maintain water abstraction, run-off and recharge within carrying capacity (including future capacity) • reduce contamination, and safeguard soil quality and quantity • minimize waste, then re-use or recover it through recycling, composting or energy recovery • maintain and restore key ecological processes (e.g. hydrology, water quality, coastal processes) 	<ul style="list-style-type: none"> • quality (biology and chemistry) of rivers, canals and freshwater bodies • quality and quantity of groundwater • water use (by sector, including leakage), availability and proportions recycled • water availability for water-dependent habitats, especially designated wetlands • amount/loss of greenfield / brownfield land and proportion available for reuse • number of houses affected by subsidence, instability, etc. • housing density • waste disposed of in landfill • contaminated land • flood risk

continued

Figure 11 – Examples of SEA objectives and indicators (cont'd)		
SEA topics	Possible SEA objectives (to be adapted to regional/local circumstances by deletions, additions and refinements)	Possible SEA indicators: ways of quantifying the baseline, prediction, monitoring (to be adapted to regional/local circumstances by deletions, additions and refinements)
Air	<ul style="list-style-type: none"> • limit air pollution to levels that do not damage natural systems • reduce the need to travel • reduce respiratory illnesses 	<ul style="list-style-type: none"> • number of days of air pollution • levels of key air pollutants / by sector and per capita • achievement of Emission Limit Values • population living in Air Quality Management Area • access to key services • distances travelled per person per year by mode of transport • modal split • traffic volumes
Climate Factors	<ul style="list-style-type: none"> • reduce greenhouse gas emissions • reduce vulnerability to the effects of climate change e.g. flooding, disruption to travel by extreme weather, etc. 	<ul style="list-style-type: none"> • electricity and gas use • electricity generated from renewable energy sources and CHP located in the area • energy consumption per building and per occupant • carbon dioxide (CO₂) emissions • flood risk
Cultural heritage and landscape	<ul style="list-style-type: none"> • preserve historic buildings, archaeological sites and other culturally important features • create places, spaces and buildings that work well, wear well and look well • protect and enhance the landscape everywhere and particularly in designated areas • value and protect diversity and local distinctiveness • improve the quantity and quality of publicly accessible open space 	<ul style="list-style-type: none"> • percentage of Listed Buildings and archaeological sites 'at risk' • number and proportion of vacant dwellings • building functionality: use, access, space • building impact: form and materials, internal environment, urban and social integration, character and innovation • percentage of land designated for particular quality or amenity value, including publicly accessible land and greenways • proportion of population within 200m of parks and open spaces • percentage of residents rating improvement/other in activities for teenagers, cultural facilities including for children and sport, leisure and parkland facilities
<p>Adapted from <i>Local Quality of Life Counts, Regional Quality of Life Counts</i>, ODPM guidance on integrated policy appraisal, <i>Environmental Appraisal of Development Plans: A Good Practice Guide, Guidance on the Methodology for Multi-Modal Studies</i>, Counsell and Haughton (2001), Sustainable Development Plans Group (2001), Construction Industry Council</p>		

The following considerations are relevant at this stage:

- The development of SEA objectives and indicators and the collection of baseline information inform each other. As the objectives become clearer, they will help to focus and restrict the collection of baseline information, whilst the baseline information helps to identify which SEA objectives are of most concern for a particular plan or programme.
- Objectives are linked to indicators explicitly measuring progress or otherwise towards them.
- Each objective is genuinely needed and does not duplicate or overlap with other objectives.

It may be useful to test the internal compatibility of the SEA objectives, for instance using a framework such as Figure 12. There may be tensions between objectives that cannot be resolved: the compatibility assessment will clarify these so that subsequent decisions are well based, and mitigation or alternatives can be considered.

Figure 12 – Testing compatibility of objectives

Objective 1					
Objective 2	✓				
Objective 3	✓	X			
Objective 4	X				
Objective 5	✓	✓	✓		
SEA objective	Objective 1	Objective 2	Objective 3	Objective 4	

✓ compatible
 X incompatible
 blank: no links

Some objectives may be more important than others. It may be worthwhile to give a rough ranking of objectives, or to highlight those which are judged to be particularly important – for instance because current conditions are problematic or because they are of particular concern to the public – to help focus the later stages of the SEA.

A similar approach may also be used to compare SEA and plan or programme objectives, as part of Stage B activities.

Appendix 6

Developing and assessing alternatives

Identifying alternatives

Only reasonable, realistic and relevant alternatives need to be put forward. It is helpful if they are sufficiently distinct to enable meaningful comparisons to be made of the environmental implications of each.

Some alternatives are discrete, involving a choice between one alternative and another, as in Figure 13. These are often the broad options considered early in plan and programme preparation. Other alternatives can be combined in various ways. Alternatives may be grouped into scenarios, for instance rapid economic growth, 'most sustainable' option, etc.

For key plan or programme issues, a hierarchy of options may be considered, as shown in Figure 14. Obviation of demand is often environmentally and socially better than providing for demand or rationing consumption through price or limited capacity. For example, better local amenities or services might make some journeys unnecessary; and insulation and design

Figure 13 – Example of discrete alternatives

An analysis of higher-level strategies identified three dimensions related to the provision of new housing as part of a wider exercise to stem population loss:

- The number of new houses needed to create sustainable neighbourhoods and attract households back
- The density of housing, which has a bearing on house type and design and is a key determinant of what prospective occupiers might find attractive
- The location of housing: in simplistic terms, greenfield v. brownfield.

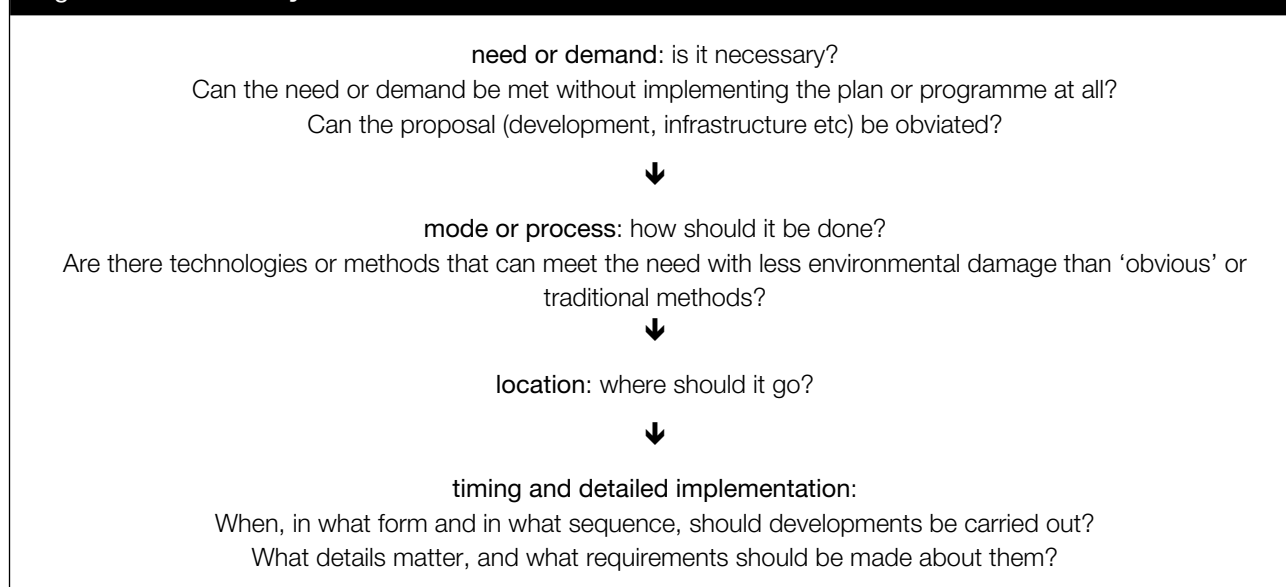
Eight alternatives representing various combinations of these dimensions were identified:

1. Do the minimum: Little or no net new development – new build as replacement for demolition, only modest increases in dwellings through conversion of existing buildings, reduction in vacant properties and land, and more intensive use of buildings. De-allocate all existing greenfield allocations and no windfall developments beyond those already with permission.
2. No change: Maintain existing densities and greenfield allocations and allow development on windfall sites. Modest net increase in housing stock.
3. Meet target of 200 net new dwellings per year through option 1, plus density increase on cleared sites and development on previously developed land not used as open space. De-allocate all existing greenfield allocations.
4. Meet the Regional Planning Guidance target through option 1, plus lower density increase than option 2, by retaining existing greenfield allocations.
5. Meet the Regional Planning Guidance target through option 1, plus lower density increase than option 3, and increasing density on existing greenfield allocations, seeking up to a maximum 25% of development on greenfield sites.
6. Meet the regeneration strategy target (about 500 net new dwellings per year) through option 3, but with much higher densities.
7. Meet the regeneration strategy target through option 4, but with higher densities.
8. Meet the regeneration strategy target through option 5, with new greenfield allocations.

Clearly there could be many other targets between 200 and 500 net new dwellings per year.

Source – adapted from the SEA pilot: Newcastle City Council UDP Review, June 2003.

Figure 14 – ‘Hierarchy’ of alternatives



standards can reduce the need for domestic heating. Obviation is not the same thing as restricting or thwarting demands which may simply lead to the displacement of a problem: it is better seen as looking for different, more sustainable, means to achieve human quality of life ends.

To keep the big issues clear, the alternatives considered at this early stage need not be elaborated in too much detail. Only the main differences between the alternatives need to be considered and documented.

Figure 15 gives examples of alternatives which could fall under each of these headings.

Clearly not all of these options are applicable in all cases. For instance, demand reduction measures are often outside the control of a Responsible Authority. Some alternatives may not be practical, or within a Responsible Authority’s powers, while others may not be appropriate to a particular stage or level of plan or programme. A wider range of alternatives will be available at a regional level than at a local level, and decisions made at the ‘higher’ level will close off some alternatives. Nevertheless, ‘up the hierarchy’ thinking could suggest a wider, and more sustainable, range of alternatives than hitherto considered.

Stakeholders may usefully be involved in the generation and assessment of both strategic and more detailed alternatives through consultation. Demonstrating that there are choices to be made is an effective way of engaging stakeholders in the process. The alternatives considered throughout the process must be documented and reasons given on why they are or are not taken forward.

Assessing alternatives

The assessment of alternatives may be made in broad terms against the SEA objectives, provided there is sufficient detail to identify the significant environmental effects of each alternative. Where appropriate any cumulative, secondary and synergistic, short, medium, and long-term effects need to be highlighted, indicating whether they are likely to be permanent or temporary.

Figure 15 – Examples of alternatives

Topic	Obviation	Mode/type	Location	Implementation/ timing
Transport/ accessibility	Reduce the need to travel by locating amenities/ services nearer their users, or housing users nearer the amenities they need; helping people meet more needs at home (e.g. homeworking, information technology)	Encourage walking and cycling Support good public transport, matched to journey desires (e.g. provide sites for modal interchange, protect rail corridors)	Locate amenities and services together, so people can accomplish several errands in one trip, e.g. multi-functional town centres Locate bike stands and bus stops more conveniently than parking	Have walking/cycling infrastructure and public transport services in place before development comes in to use If extra traffic capacity is unavoidable, design at minimum necessary capacity, avoid discouraging other modes (e.g. design in traffic calming, safe routes for pedestrians and cyclists), minimise noise, land take and visual intrusion.
Housing	Match supply needs: <ul style="list-style-type: none"> • Encourage adaptation of buildings to maximise the potential for comfortable occupation (e.g. loft and garage conversions, subdivision of large houses) • High standard sheltered accommodation for older people as an alternative to staying in unnecessarily large houses Make best use of existing building stock: <ul style="list-style-type: none"> • Encourage living above shops • Conversion of redundant non-domestic buildings, loft conversions, flexible subletting of surplus space 	Make best use of land: <ul style="list-style-type: none"> • Encourage infill, development of small sites, rebuilding at higher densities • Promote dense and land-efficient built forms, e.g. terraces, low rise flats, communal open spaces • Maximise density • Use existing infrastructure in new construction 	Minimise new infrastructure demands (e.g. by avoiding locations remote from amenities) Focus new housing on brownfield sites and away from floodplains	Match timing of housing development to needs and to public service provision

continued

Figure 15 – Examples of alternatives (cont'd)

Topic	Obviation	Mode/type	Location	Implementation/timing
Waste	Encourage developers to prepare waste management plans	Ensure that waste can be used as a resource by providing facilities for storing recyclable products (e.g. architectural salvage yards, sites for storage of recycled aggregates)	Locate waste management sites near source of waste and/or users of waste as resource	Provide recycling facilities at housing and employment sites Use materials efficiently in construction. Use recycled materials in construction
Energy	Reduce demand for energy in housing by promoting low energy lighting and appliances, very efficient boilers, high insulation standards, conservatories an lobbies, large south-facing and small north-facing windows etc.	Promote renewable energy, energy from waste, Combined Heat and Power	Small-scale, community-owned renewable energy installations to minimise transmission loss	Use best available energy efficiency technologies in building construction and operation; site housing to optimise solar gain; use materials with low embodied energy
Water	Reduce demand for water use	Promote rainwater collection systems, effluent recycling	Consider several small facilities rather than one large one	Promote use of water-saving devices e.g. low-flow showers, low-flush toilets Promote landscaping using plants that do not require much watering

When assessing alternatives, it may be helpful to ask:

- Are the alternatives distinct and clearly presented?
- Are they likely to have any adverse effects? Can these be prevented, reduced or offset?
- Can positive effects be enhanced?
- Can any of the effects be quantified in a meaningful way?
- Who are likely to be the 'winners', and 'losers' for each alternative (e.g. rural versus urban dwellers; young versus old; people with cars versus those without; future versus current generations, etc.)?
- Are any effects of the alternatives unclear or ambiguous? Is any further analysis appropriate?
- Are the effects likely to be variable over the short, medium and long-term?

As an input to a decision about preferred alternatives, it may be useful to summarise the assessment results for the different alternatives in one table (e.g. Figure 16 or Figure 17). This can help to identify the most environmentally beneficial or sustainable alternative, or to show the beneficial and/or adverse effects of different alternatives. Symbols or other ways of presenting information regarding the likely effects (e.g. beneficial, adverse, uncertain, not significant) can be used, but should be accompanied by a commentary explaining and justifying the choice of symbol with reference to the baseline situation relevant to the objective. This helps promote transparency, aids users of the assessment and provides an opportunity to record opportunities for enhancement or mitigation.

A combined qualitative and quantitative assessment can be useful. The example matrix approach shown here need not be the sole method of comparison, assessment and documentation.

Figure 16 – Example of comparison of alternatives

		Option 1: multi-function waste treatment facilities (management, storage and processing) in each population centre with >25,000 inhabitants				Option 2: limited function waste treatment facilities (management, recycling, and some treatment) dotted around the county provided on a basis of one facility per 10,000 inhabitants			
SEA Objective	Short term	Med term	Long term	Comments/ explanation	Short term	Med term	Long term	Comments/ explanation	
Limit air pollution to levels that do not damage natural systems	+/-	+/-	+/-	Operating conditions may reduce amount of pollution from waste treatment, but more vehicle trips needed to bring waste to the limited number of sites	+	++	+++	Easier access to treatment facilities should reduce the number and length of trips to assemble waste at the site. Effect is cumulative	
Reduce the need to travel	+/-	+/-	-	Limited number of treatment sites results in more and longer trips. Effect accumulates as the volume of waste produced per capita rises	+	++	+++	As above	
Preserve historic buildings, and other culturally important features	0	0	0	Has no obvious impact	-	-	-	Potential impact if new treatment sites affect valued or protected localities or sites. Unquantifiable at present	
Key: + positive - negative 0 neutral ? uncertain +/- minor ++/- – major									

Figure 17 – Example table for assessment of alternatives against SEA objectives

SEA Objective	Option A – Concentrate development on MOD Site, on northern edge of main market town		Option B – Even development within three main towns, brownfield prioritised	
	Performance	Commentary/explanation	Performance	Commentary/explanation
Environmental Objective 1 – To maintain and enhance the quality of landscapes and townscapes	–	Visual impact of the development, and change in character of the town (e.g. setting) could be significant. Setting aside such a large area of land for development could mean that development of other brownfield sites in the town would become more difficult to develop	++	Would bring back into use derelict and degraded sites, which are currently causing visual blight across all three towns
Environmental Objective 2 – To improve air quality	–	Could lead to air quality standards being breached	+	As brownfield sites are centrally located, should allow for development to take place that would encourage walking and cycling, and less reliance on the car
Environmental Objective 3 – Summary appraisal against environmental objectives	--	Cumulative effects could be major, without appropriate policies to ensure that landscape quality is maintained, loss of grassland biodiversity is compensated for, and that a significant switch from car use to public transport and/or walking/ cycling is achieved	+	Generally positive (some minor effects re. ecological value of brownfield sites). Would make most efficient use of land
<i>etc</i>				
Key: + positive – negative 0 neutral ? uncertain +/- minor ++/- – major A distinction could also be made between short, medium and long term, if appropriate				

Appendix 7

Prediction and evaluation of effects

The most familiar form of SEA prediction and evaluation technique is a table such as that at Figure 18.

Figure 18 – Illustration of documentation of effects				
SEA objectives (examples only – see Appendix 5 for more information on developing objectives)	Targets (where available)	Can the effect be quantified? (if yes, insert data)	Effects over time	Comments/explanation (e.g. likelihood/certainty of effect occurring, geographical scale of effect, temporary or permanent, significance, reversibility etc.)
Protect biodiversity at ecosystem, species and genetic levels	10% increase in the area of land managed for wildlife by 2007	Yes, qualitative and quantitative data on the number, area and condition of wildlife sites	++	This policy is likely to bring significant positive effects in the medium to long term (5–10 years). Likelihood/certainty: high Scale: northern areas Temporary or permanent: permanent Timing: medium to long term
Promote positive health related behaviour	5% increase in proportion of school children walking, cycling or using public transport on journeys to school by 2010	Yes, school children surveys, number of schools with School Travel Plans etc.	+	No research has been undertaken into the link between this policy and opportunities to improve human health. It is considered likely that effects will be positive in the long term. Likelihood: uncertain Scale: northern areas Temporary or permanent: permanent Timing: long term
Increase levels of public transport accessibility	all homes to be within 400m of a bus stop by 2007	Yes, surveys of 'pedsheds'	++	This policy is likely to improve access to public transport in the medium to long term. Likelihood/certainty: high Scale: northern area Temporary or permanent: permanent Timing: medium to long term Recommendation: consider integrating additional public transport facilities into existing development
Key: + positive – negative 0 neutral ? uncertain +/- minor ++/- – major				

Effects predictions are often generally broad-brush and qualitative, e.g.

... getting worse over the next 15 years; or

... mildly negative, on a scale from strongly positive (+ +) to strongly negative (– –); or

... worse under Scenario A than under Scenario B.

But the predictions could also be more detailed and quantitative, e.g. a measurable effect would

... increase from 10 to 12 parts per million between 2005 and 2020; or

... increase by 20% between 2005 and 2020; or

... increase by 20% by 2020 under Scenario A and by 16% under Scenario B; or

... exceed national standards by 6% by 2020.

In considering the effects of a plan or programme, some useful rules of thumb may be:

- When using symbols or other ways of presenting information regarding the likely effects (e.g. beneficial, adverse, uncertain, not significant), always explain and justify the choice of symbol with reference to the baseline situation relevant to the SEA objective.
- Focus on effects of the plan or programme, rather than other factors that may influence the achievement of the SEA objective.
- Consider whether the effect is likely to be permanent or temporary, and the timescale over which the effect is likely to be observed.
- Provide detailed and quantitative predictions where possible but avoid using spurious measurements, not grounded in evidence.
- Consider the effects of displacement of environmental problems to other areas as a result of the plan or programme.
- Clearly state and document where the assessment includes consideration of vulnerability, risk and uncertainty.
- Use the measurement of effects to improve the environmental performance of individual policies as well as the plan or programme as a whole.

Figure 19 suggests possible prediction and evaluation techniques and sources of further information.

Figure 20 gives a fuller explanation of issues to consider when filling in Figure 18. Following this flowchart helps to ensure that prediction, evaluation and mitigation are linked and that a full range of mitigation measures are considered.

Figure 19 – Prediction and evaluation techniques for SEA

Technique	SEA activities					Examples or sources of further information
	establish baseline	identify effects	predict effects	evaluate effects	test for consistency	
						(see References and Further Information for details of publications)
Expert judgement	✓	✓	✓	✓	✓	Therivel (2004)
Public participation	✓	✓		✓		Audit Commission (2000)
Quality of Life Capital	✓			✓		Countryside Agency et al (2001)
Geographical information systems	✓		✓	✓		European Environment Agency (1998)
Network analysis		✓	✓			Therivel (2004)
Modelling	✓		✓			European Commission (1999)
Scenario/sensitivity analysis			✓			Therivel (2004)
Multi-criteria analysis				✓		DETR (2001)
Carrying capacity, ecological footprints				✓		Chambers <i>et al.</i> (2000) European Commission (1999)
Compatibility assessment					✓	Figure 12

Figure 20 – The process of assessing the effects of a plan or programme

What kind of effect will the option, policy or proposal have on this objective over the short, medium and long term? Consider secondary, cumulative and synergistic effects as well as direct effects. In case of doubt, assume a worst case or get more information to reduce the uncertainty

negative



positive or neutral



unclear



depends on implementation



Can the effect be mitigated? Particularly if the SEA objective is important, the environment is sensitive, or the effect is irreversible, not substitutable, or cumulatively significant?

Can the effect be enhanced?

What further information is needed to clarify the effect?

What would need to be done to ensure that the right effect is achieved?

no



yes



yes



no



Consider deleting or modifying the plan or plan alternatives

Mitigate the plan or plan alternative accordingly and document this change

Mitigation measures could include:

- changes to the wording of the plan or plan alternative;
- the removal of the plan alternatives that are unsustainable or do not promote the SEA objectives;
- the addition of new plan alternatives;
- devising new alternatives, possibly a combination of the best aspects of existing alternatives;
- identifying issues to be considered in environmental impact assessment of specific developments.

No change

Gather more baseline data as appropriate before reconsidering this question

The SEA Directive requires the Environmental Report to discuss ‘any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information’ (Annex I (h)). Examples of uncertainty could be where it is unclear what a development might look like on the ground, what public transport services might run in the future, or what future pollution control technologies might be available. One way of dealing with uncertainty is to note, in the ‘comments/ explanation’ column of Figure 18, the degree of certainty of the effect prediction.

Implement to achieve the right effect

The effect of the plan or plan alternative will often depend on how the plan is implemented, so it will not be possible to predict the effects with certainty. To reduce this type of uncertainty – and as a mitigation measure – the SEA team should aim to put in place measures to ensure that the issue is handled appropriately during implementation.

Appendix 8

Assessing secondary, cumulative and synergistic effects

Introduction

Many environmental problems result from the accumulation of multiple small and often indirect effects, rather than a few large and obvious ones. Examples include loss of tranquillity, changes in the landscape, loss of heathland and wetland, and climate change. These effects are very hard to deal with on a project-by-project basis through EIA. It is at the SEA level that they are most effectively identified and addressed.

Annex I of the SEA Directive requires that the assessment of effects include secondary, cumulative and synergistic effects.

Secondary or indirect effects are effects that are not a direct result of the plan, but occur away from the original effect or as a result of a complex pathway. Examples of secondary effects are a development that changes a water table and thus affects the ecology of a nearby wetland; and construction of one project that facilitates or attracts other developments.

Cumulative effects arise, for instance, where several developments each have insignificant effects but together have a significant effect; or where several individual effects of the plan (e.g. noise, dust and visual) have a combined effect.

Synergistic effects interact to produce a total effect greater than the sum of the individual effects. Synergistic effects often happen as habitats, resources or human communities get close to capacity. For instance a wildlife habitat can become progressively fragmented with limited effects on a particular species until the last fragmentation makes the areas too small to support the species at all.

These terms are not mutually exclusive. Often the term cumulative effects is taken to include secondary and synergistic effects.

Principles of assessing cumulative effects

Assessment of cumulative effects needs:

- to be considered throughout, and as part of the SEA and plan and programme preparation, not as a separate process.
- to focus on identifying the total effect of both direct and indirect effects on receptors. Receptors may include natural resources (e.g. air, water, soil, landscape), sections of the population (e.g. people living in particular areas or vulnerable members of the community) or ecosystems and species (e.g. heathland).
- to be considered in relation to the nature and extent of the receptors, such as ecosystems and communities, rather than administrative boundaries.
- to be considered in relation to effects of proposals within a plan or programme and those which may result from interaction with the effects of other plans and programmes.

- to take account of how close the plan or programme, in association with other plans and programmes or other factors, will bring the receptors to their capacity/threshold to remain productive or sustainable.
- to be aware of the level of uncertainty, which can be considerable. If it is not feasible to eliminate this, the uncertainty needs to be documented. The Directive only requires that SEA is based on information that can reasonably be required taking into account current knowledge and methods of assessment.

Assessing cumulative effects as part of SEA

Figure 21 sets out key points in the assessment of cumulative, secondary and synergistic effects during the SEA process.

Figure 21 – Stages of SEA and the consideration of cumulative, secondary and synergistic effects	
Stages of Environmental Assessment	Key points in the assessment of cumulative, secondary and synergistic effects
Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope	<p>Identifying other relevant plans or programmes and environmental protection objectives</p> <ul style="list-style-type: none"> • Identify key receptors which may be subject to cumulative effects. • Consider any cumulative effects that other current and reasonably foreseeable plans, programmes and strategies may have on key receptors. Some plans may be more influential than others: this needs to be noted. <p>Collecting baseline information</p> <ul style="list-style-type: none"> • For each key receptor document: <ul style="list-style-type: none"> – The current status – How this has changed over time, and how it is likely to change in the future without the implementation of the plan or programme – What has led to the present condition – How close to capacity the key receptor is, that is, can it absorb further effects before changes become significant and/or irreversible. • Recognise that the scope of cumulative effects can be very wide and that it is important to focus the assessment. • Baseline for cumulative effects may be summarised in a format similar to Figure 9. <p>Identifying environmental problems</p> <ul style="list-style-type: none"> • Identify receptors that are particularly sensitive, in decline or if practicable are near their threshold (since these components may not be able to cope with the multiple stresses). <p>Developing SEA objectives</p> <ul style="list-style-type: none"> • Development of SEA objectives, indicators and targets may be influenced by significant cumulative effects identified and where practicable environmental thresholds/capacity. <p>Consulting on the scope of SEA</p> <ul style="list-style-type: none"> • Set out the likely significant cumulative effects of the preferred strategic alternatives and plan to consider cumulative effects as part of the rest of the SEA process.
<i>continued</i>	

Figure 21 – Stages of SEA and the consideration of cumulative, secondary and synergistic effects (cont'd)

Stages of Environmental Assessment	Key points in the assessment of cumulative, secondary and synergistic effects
<p>Stage B: Developing and refining alternatives and assessing effects</p>	<p>Testing the plan or programme objectives against the SEA objectives</p> <ul style="list-style-type: none"> • Testing the consistency between plan or programme objectives and SEA objectives may help highlight potential cumulative effects. <p>Developing strategic alternatives</p> <ul style="list-style-type: none"> • Ensure that the different alternatives that are selected for testing as part of the assessment are also assessed for their cumulative, secondary or synergistic effects. • Recognise that the assessment of cumulative, secondary or synergistic effects of different alternatives could be used to screen out unacceptable alternatives. <p>Predicting the effects of the plan or programme including alternatives</p> <ul style="list-style-type: none"> • Predict and assess the cumulative effects of the plan or programme on the key receptors, i.e. the cumulative effects of current and reasonably foreseeable plans, programmes and strategies, with and without the plan or programme. • Recognise that there is uncertainty in predicting effects and determining significance and this can arise due to the variation in natural systems and their interactions; a lack of information, knowledge or scientific agreement regarding cause-effect relationship; or the inability of predictive models to accurately represent complex systems. • Accept that the level of risk and uncertainty associated with cumulative effects increases at the higher planning levels because scales are broader and issues are generally larger. • Document limitations and inadequacies of data/information. • Recognise that there may be several approaches available to assist in the prediction of cumulative effects, and that there is not a single approach applicable to all situations. <p>Evaluating the effects of the plan or programme including alternatives</p> <ul style="list-style-type: none"> • Assess both in terms of magnitude – the difference between the with and without plan or programme scenarios – and where practicable in terms of the capacity/threshold of the valuable environmental resources. <p>Mitigating adverse effects</p> <ul style="list-style-type: none"> • Document the measures envisaged to mitigate cumulative effects. <p>Proposing measures to monitor the environmental effects of plan or programme implementation</p> <ul style="list-style-type: none"> • Document measures proposed to monitor significant cumulative effects recognising that it may be difficult to determine what ‘share’ of cumulative effects is due to the given plan or programme.
<p>Stage C: Preparing the Environmental Report</p>	<ul style="list-style-type: none"> • Report cumulative effects in a transparent and accessible way and explain how they were identified and assessed. • Provide a description of how effects are assessed and which methods were adopted. • Provide a description of how the various forms of cumulative effects are most likely to occur in the plan or programme. • Describe the significant cumulative effects of the plan or programme on each receptor, recording assumptions and uncertainty.

continued

Figure 21 – Stages of SEA and the consideration of cumulative, secondary and synergistic effects (cont'd)

Stages of Environmental Assessment	Key points in the assessment of cumulative, secondary and synergistic effects
Stage D: Consulting and decision-making	<p>Consulting on the plan or programme and the Environmental Report</p> <ul style="list-style-type: none"> • Use the consultation process to help predict and evaluate the cumulative effects of the plan or programme. <p>Assessing significant changes</p> <ul style="list-style-type: none"> • Where significant changes are made to the plan or programme identify changes in the cumulative effects. <p>Decision making and provision of information</p> <ul style="list-style-type: none"> • Provide information on how the cumulative effects, along with other significant effects of the plan or programme, were taken into account in preparing the plan or programme.
Stage E: Monitoring implementation of the plan or programme	<p>Developing aims and methods for monitoring</p> <ul style="list-style-type: none"> • Monitor effects using the appropriate indicators which take account of cumulative effects as well as direct effects. <p>Responding to adverse effects</p> <ul style="list-style-type: none"> • It may be necessary to take action where significant adverse cumulative effects are identified as a result of monitoring.

Methods for assessing cumulative effects

Figure 22 identifies some of the various techniques that may be used in assessing cumulative impacts, with their advantages and disadvantages. It is for the practitioner undertaking the SEA to choose which method is most appropriate. This may involve the use of various approaches that can be adapted and combined to suit particular needs rather than a single method. When selecting techniques consider:

- ability to organise, analyse and present information
- stage of the assessment (e.g. scoping, baseline information collection, analysis, reporting)
- types of issues involved and cumulative effects being examined
- key receptors being examined
- quality and extent of baseline information
- level of expertise available

Publications containing further information on cumulative effects assessment:

- *Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions* (European Commission)
- *Addressing Cumulative Environmental Effects* (Canadian Environmental Assessment Agency)
- *Guidelines for Cumulative Effects Assessment in SEA of Plans* (Cooper 2004 / Imperial College)

See References and Further Information for details and links.

Figure 22 – Techniques for assessing cumulative, secondary and synergistic effects

Method	Description	Advantages	Disadvantages
Questionnaires, interviews and panels	Useful in gathering the wide range of information on multiple actions and receptors needed to address cumulative effects. Brainstorming sessions, interviews with knowledgeable individuals and group consensus building activities can help identify the important cumulative effects in the area	Flexible and able to deal with subjective information	Cannot quantify effects and comparison of alternatives is subjective
Checklists	Identify potential cumulative effects by providing lists of common or likely effects and juxtaposing multiple actions and resources. This can be seen as a shortcut to scoping	Systematic and concise	Can be inflexible and does not address interactions or cause-effect relationships
Matrices	Matrices use a tabular format to organise the interactions between human activities and resources of concern (see Figures 16, 17, 18 and 24)	Provides good visual summary and can be used to identify and evaluate effects to some degree	Can be complex and cumbersome and does not address cause-effect relationships
Causal Chain/ Network/ Systems analysis	Helps to identify the cause-effect relationships resulting in cumulative effects using flow diagrams. Allows the user to analyse the multiple effects of various actions and trace indirect effects on resources that accumulate from direct effects on other resources (see Figure 23)	Facilitate conceptualisation of cause-effect relationships and identify direct effects	No spatial or temporal scale and diagrams can be complex and cumbersome
Modelling	An analytical tool which enables the quantification of cause-effect relations which result in cumulative effects by simulation of environmental conditions.	Addresses cause-effect relationships and gives quantified results. Geographic boundaries and time-frames are usually explicit	Needs a lot of time and data and extrapolation is still largely subjective. Can be difficult to adapt some models to a particular situation
Trends analysis	Assesses the status of a resource, ecosystem or human community over time and usually results in graphical projection of past or future conditions. Changes in the occurrence or intensity of stressors over the same time period can also be determined. Trends can help the analyst identify cumulative effects, establish appropriate environmental baselines or project future cumulative effects	Addresses accumulation over time and helps to identify problems	Needs a lot of data and extrapolation is still largely subjective
Overlay mapping and GIS	Used to identify where effects may occur. Can superimpose effects on receptors or resources to establish where effects may be significant	Flexible and easy to update. Can consider multiple projects and past, present and future options. Allows clear visual presentation	Can be expensive and time consuming and difficult to quantify effects

continued

Figure 22 – Techniques for assessing cumulative, secondary and synergistic effects (cont'd)

Method	Description	Advantages	Disadvantages
Expert Opinion	A way of identifying and assessing effects. Expert panels can be formed to facilitate exchange of information and to express views on cumulative effects	Particularly useful where other methods are not available but significant cumulative effects are considered likely	Relies on expertise – may affect transparency or acceptance of the assessment process
Carrying Capacity and Threshold Analysis	Based on recognition that thresholds exist in the environment and that cumulative effects can result in thresholds being exceeded	Useful in addressing accumulation of effects against thresholds and considering trends in the environment	It is not always possible to establish the threshold or carrying capacity for a particular resource or receptor

Figure 23 – Example of a table for recording cumulative effects and their causes

Cumulative Effect	Affected Receptor	Causes
Habitat fragmentation	Wildlife habitats	Use of land for flood management, transport infrastructure and industrial development
Climate change	Worldwide	Greenhouse gas emissions from industrial development and increases in traffic volumes
Loss of tranquillity	Countryside	Industrial development and increases in traffic volumes
<i>etc.</i>		

Figure 24 – Example of a table for recording the cumulative effects of plan or programme on receptors

Policy	SEA objective			
	Biodiversity (habitat fragmentation)	Climate (climate change)	Landscape (tranquillity)	Water (flooding)
Green industry	0 (on brownfield sites)	– (additional trips)	0 (on brownfield sites)	0 (outside of floodplain)
Communications	0 (existing infrastructure corridors)	+ (reduce need to travel)	0 (existing infrastructure corridors)	0 (existing infrastructure corridors)
Public Transport	0 (increase public transport)	+ (increase public transport)	0 (on existing brownfield sites)	0 (on existing brownfield sites)
<i>etc.</i>				
Cumulative impact/proposed mitigation measures	0 No overall significant effects. Recommendations: Infrastructure to use existing corridors and avoid environmentally sensitive sites	+ Overall positive effect due to reduce use of private cars	0 No overall significant effects. Recommendations: Infrastructure to use existing corridors and avoid visually sensitive sites	0 No overall cumulative effects expected
Key: + positive – negative 0 neutral				

Appendix 9

Quality Assurance checklist

The quality of the SEA process can be assured through the choice of a good SEA team, the collection of appropriate information, the use of effective prediction techniques, consultation, and integration of the SEA findings into the plan or programme. This section suggests a quality assurance checklist based on the guidance in this publication. It is intended to help test whether the requirements of the SEA Directive are met, identify any problems in the Environmental Report, and show how effectively the SEA has integrated environmental considerations into the plan-making process.

The checklist is designed to be used by anyone involved in an SEA in any capacity: Responsible Authorities which carry out SEAs, the Consultation Bodies and other consultees, inspectors, auditors, independent experts, and members of the public. It covers both the technical elements of the SEA and the procedural steps of the SEA process under the Directive. It can be applied at any stage of the SEA to check the quality of work carried out up to that point.

Figure 25 – Quality Assurance checklist

Objectives and context

- The plan's or programme's purpose and objectives are made clear.
- Environmental issues and constraints, including international and EC environmental protection objectives, are considered in developing objectives and targets.
- SEA objectives, where used, are clearly set out and linked to indicators and targets where appropriate.
- Links with other related plans, programmes and policies are identified and explained.
- Conflicts that exist between SEA objectives, between SEA and plan objectives and between SEA objectives and other plan objectives are identified and described.

Scoping

- Consultation Bodies are consulted in appropriate ways and at appropriate times on the content and scope of the Environmental Report.
- The assessment focuses on significant issues.
- Technical, procedural and other difficulties encountered are discussed; assumptions and uncertainties are made explicit.
- Reasons are given for eliminating issues from further consideration.

Alternatives

- Realistic alternatives are considered for key issues, and the reasons for choosing them are documented.
- Alternatives include 'do minimum' and/or 'business as usual' scenarios wherever relevant.
- The environmental effects (both adverse and beneficial) of each alternative are identified and compared.
- Inconsistencies between the alternatives and other relevant plans, programmes or policies are identified and explained.
- Reasons are given for selection or elimination of alternatives.

Baseline information

- Relevant aspects of the current state of the environment and their likely evolution without the plan or programme are described.
- Environmental characteristics of areas likely to be significantly affected are described, including areas wider than the physical boundary of the plan area where it is likely to be affected by the plan.
- Difficulties such as deficiencies in information or methods are explained.

continued

Figure 25 – Quality Assurance checklist (cont'd)**Prediction and evaluation of likely significant environmental effects**

- Effects identified include the types listed in the Directive (biodiversity, population, human health, fauna, flora, soil, water, air, climate factors, material assets, cultural heritage and landscape), as relevant; other likely environmental effects are also covered, as appropriate.
- Both positive and negative effects are considered, and the duration of effects (short, medium or long-term) is addressed.
- Likely secondary, cumulative and synergistic effects are identified where practicable.
- Inter-relationships between effects are considered where practicable.
- The prediction and evaluation of effects makes use of relevant accepted standards, regulations, and thresholds.
- Methods used to evaluate the effects are described.

Mitigation measures

- Measures envisaged to prevent, reduce and offset any significant adverse effects of implementing the plan or programme are indicated.
- Issues to be taken into account in project consents are identified.

The Environmental Report

- Is clear and concise in its layout and presentation.
- Uses simple, clear language and avoids or explains technical terms.
- Uses maps and other illustrations where appropriate.
- Explains the methodology used.
- Explains who was consulted and what methods of consultation were used.
- Identifies sources of information, including expert judgement and matters of opinion.
- Contains a non-technical summary covering the overall approach to the SEA, the objectives of the plan, the main options considered, and any changes to the plan resulting from the SEA.

Consultation

- The SEA is consulted on as an integral part of the plan-making process.
- Consultation Bodies and the public likely to be affected by, or having an interest in, the plan or programme are consulted in ways and at times which give them an early and effective opportunity within appropriate time frames to express their opinions on the draft plan and Environmental Report.

Decision-making and information on the decision

- The environmental report and the opinions of those consulted are taken into account in finalising and adopting the plan or programme.
- An explanation is given of how they have been taken into account.
- Reasons are given for choosing the plan or programme as adopted, in the light of other reasonable alternatives considered.

Monitoring measures

- Measures proposed for monitoring are clear, practicable and linked to the indicators and objectives used in the SEA.
- Monitoring is used, where appropriate, during implementation of the plan or programme to make good deficiencies in baseline information in the SEA.
- Monitoring enables unforeseen adverse effects to be identified at an early stage. (These effects may include predictions which prove to be incorrect.)
- Proposals are made for action in response to significant adverse effects.

Appendix 10

Monitoring

Introduction

The Directive requires the significant environmental effects of implementing the plan or programme to be monitored “in order, inter alia, to identify [...] unforeseen adverse effects and to be able to undertake remedial action” (Article 10(1)). Responsible Authorities may already monitor implementation of plans or programmes against their objectives or targets. Some of these may be environmental, but this will not necessarily be enough to satisfy the Directive. Responsible Authorities must ensure when designing their monitoring arrangements that they comply with this provision. This guidance uses the term ‘SEA monitoring’ to cover the overall monitoring of environmental effects.

SEA monitoring can be used to answer questions such as:

- Were the assessment’s predictions of environmental effects accurate?
- Is the plan or programme contributing to the achievement of desired environmental objectives and targets?
- Are mitigation measures performing as well as expected?
- Are there any adverse environmental effects? Are these within acceptable limits, or is remedial action desirable?

Proposed monitoring framework

Step 1: What needs to be monitored?

The first step is to consider exactly what needs to be monitored. Monitoring measures must be clearly linked to the SEA process, for example:

- The objectives, targets and indicators that were developed for the SEA (see Stage A).
- Features of the environmental baseline that will indicate the effects of the plan or programme (see Stage A).
- The likely significant effects that were identified during the effects assessment (see Stage B).
- The mitigation measures that were proposed to offset or reduce significant adverse effects (see Stage B).

Monitoring needs to consider both adverse and beneficial effects.

Effects relate to the plan or programme as a whole, and monitoring must therefore include consideration of cumulative, secondary and synergistic effects over and above the effects of the individual measures in the plan or programme, and effects over the lifespan of the plan or programme.

It is not necessary to monitor everything, or to monitor an effect indefinitely. Instead monitoring needs to be focused on significant environmental effects, e.g. those:

- that indicate a likely breach of international, national or local legislation, recognised guidelines or standards.
- that may give rise to irreversible damage, with a view to identifying trends before such damage is caused.
- where there was uncertainty over possible adverse effects, and where monitoring would enable mitigation measures to be taken.

Step 2: What sort of information is required?

The type (e.g. quantitative or qualitative) and the level of detail of environmental monitoring information required will depend on the characteristics and level of detail of the plan or programme and its predicted environmental effects.

SEA monitoring involves measuring indicators which may establish a causal link between implementation of the plan or programme and the likely significant effect being monitored. The monitoring framework may be established in a way that seeks to take account of external factors and focus upon the links between the plan or programme implementation and the effect. Where it is difficult to establish these links it might be necessary to collect further information on plan or programme output indicators (e.g. emissions).

Though not required by the Directive, it may also be helpful to undertake more contextual monitoring of environmental change. This could involve measuring environmental effects or aspects of the environment that were not identified in the environmental assessment, or identifying changes in the broader environmental context.

When selecting indicators to monitor, consider how they will be analysed. Analysis of indicators may include:

- **Change in indicators:** The effects of plans and programmes can be gauged by examining patterns of change in the indicators and the extent to which related indicators have changed. This can be achieved through analysing groups of indicators together to create a profile of the issue being measured.
- **Baselines and predicted effects:** Changes in the direction of indicators can be measured against the baseline position and predicted effects documented in the environmental report.
- **Benchmarking:** Changes in the direction of indicators can also be measured against other comparable locations or receptors to establish whether similar effects are occurring. Benchmarking may help in the assessment of relative performance by taking into account external forces of change. This is best achieved by establishing a common set of core indicators.
- **Use of qualitative and quantitative information:** Monitoring of most indicators will be based on the collection of quantitative information, but there may also be a need to incorporate some qualitative information in the analysis to improve understanding.

- Interpretative commentaries: One task of analysis is providing a considered interpretation of the results. This may be presented via appropriate explanations and commentaries within monitoring reports.

Step 3: What are the existing sources of monitoring information?

Many authorities undertake some form of environmental monitoring. In some cases, the implementation of a plan or programme is monitored against pre-defined objectives, targets and indicators. This type of performance monitoring does not necessarily include environmental effects, unless the Responsible Authority has developed environmental performance indicators or environmental best value indicators. But plan or programme performance monitoring can be helpful when considered together with SEA monitoring. Other existing monitoring is typically focused on legal requirements but may provide information which is useful either directly or with some degree of analysis or manipulation.

Wherever possible, use existing monitoring arrangements to obtain the required information identified in Step 2. Consider issues such as:

- What are the existing monitoring arrangements for the plan or programme, and does this provide any of the required information?
- What are the existing monitoring arrangements for other plans, programmes or projects within the authority, and is there scope for aggregating or disaggregating data to obtain any of the required information?
- Is any of the required information available from other sources, e.g. higher or lower level authorities or data sources used for establishing the environmental baseline?
- What organisational arrangements are needed to deliver the monitoring?

Figure 11 includes some existing indicators which may be suitable for monitoring the significant effects of implementing plan and programmes.

Step 4: Are there any gaps in the existing information, and how can these be filled?

Additional information may be required to monitor those aspects selected in Step 1. Some ways in which the required information can be obtained in a cost-effective and efficient way include:

- Incorporate SEA monitoring into existing performance monitoring for plans and programmes.
- Expand other existing monitoring systems to include additional parameters.
- Where applicable, enter into agreements with other authorities to standardise monitoring methods and share information.

Step 5: What should be done if adverse effects are found?

The Directive does not require a plan or programme to be modified if monitoring reveals adverse effects on the environment. However, monitoring is intended to enable mitigating activities to be taken, and action may be required either by the Responsible Authority or other bodies. It may be useful to establish a mechanism or framework to identify if and when remedial action is needed in response to adverse effects, including:

- Criteria or thresholds for remedial action (e.g. what are the conditions that would be regarded as environmentally undesirable or unacceptable).
- Potential remedial actions that could be taken if a significant environmental effect was identified (e.g. review aspects of the plan or programme that are causing the effects and make amendments, develop mitigation measures).
- Those responsible for taking the remedial action (e.g. another authority or agency may be responsible for taking the remedial action and may need to be consulted).

Documentation of monitoring programmes in tabular form can be useful, and might include the following information:

- What needs to be monitored (effects, other trends)?
- What sort of information is required (indicator)?
- Where can the information be obtained (sources of information)?
- Are there any gaps in existing information and how can these be resolved?
- When should remedial action be considered?
- What remedial action could be taken?

Step 6: Who is responsible for the various monitoring activities, when should these be carried out, and what is the appropriate format for presenting the monitoring results?

When documenting the monitoring strategy consider:

- the time, frequency and geographical extent of monitoring (e.g. link to timeframes for targets; and monitoring whether the effect is predicted to be short, medium or long-term).
- who is responsible for the different monitoring tasks, including the collection, processing and evaluation of environmental information.
- how to present the monitoring information with regard to its purpose and the expertise of those who will have to act upon the information (e.g. information may have to be presented in a form accessible to non-environmental specialists).

A table can be a useful format for documenting how the monitoring process could be managed, and might include information on:

- Monitoring activity to be undertaken
- Responsibility for undertaking the monitoring
- When the monitoring needs to be carried out (dates and frequency)
- How results should be presented and in what format
- Status of monitoring and any problems encountered.

While the Directive does not prescribe the time and frequency of preparing monitoring reports, in some cases these will be set in other legal requirements or administrative procedures. The European Commission guidance suggests that SEA monitoring activities and reporting can be integrated in the regular planning cycle, or may coincide with “the regular revision of a plan or programme, depending on which effects are being monitored and upon the length of intervals between revisions” (paragraph 8.5). Where there are no such regular revisions, “time and frequency for monitoring the effects of the plan or programme should be laid down, either in a general rule or in the context of each individual environmental report” (Appendix 1).

Frequently Asked Questions on the SEA Directive

European Commission guidance on the SEA Directive (“Implementation of Directive 2001/42 on the Assessment of the Effects of Certain Plans and Programmes on the Environment”) provides useful advice on interpreting many of the terms used in the Directive. It is available on the EU website www.europa.eu.int/comm/environment/eia/030923_sea_guidance.pdf.

How is the Directive transposed into UK law?

The Directive is transposed by Regulations under the European Communities Act 1972. One set of Regulations covers all plans and programmes subject to the Directive which relate either solely to England or to both England and other parts of the UK. Separate Regulations for plans and programmes which relate solely to Scotland, Wales or Northern Ireland have been introduced by the Scottish Executive, Welsh Assembly Government and the Department of the Environment in Northern Ireland respectively (see paragraph 1.3)

Which plans and programmes require SEA under the Directive?

An indicative list is included in this Guide (see Appendix 1). This will be kept up to date and used for reporting to the European Commission.

How should a Responsible Authority decide whether the Directive applies to a plan or programme?

A diagram showing how the Directive’s criteria apply is at Figure 2 of this Guide. In certain cases SEA is required only if an individual plan or programme has significant environmental effects; the Directive sets out criteria for the significance of effects in Annex II.

What is meant by “set the framework for future development consent of projects” in Articles 3(2)(a) and 3(4)?

The European Commission guidance indicates that this applies where the plan or programme contains criteria or conditions which guide the consenting authority in deciding an application for development consent. Development consent is defined in the EIA Directive Article 1(2) as “the decision of the competent authority or authorities which entitled the developer to proceed with the project”.

What SEA guidance is available in the UK?

The SEA Practical Guide is intended to apply to all plans and programmes in the UK subject to the Directive. Specific guidance has however been developed for certain plans and programmes, particularly land use and spatial planning and transport. Scottish Consultation Authorities will publish guidance for Responsible Authorities by the end of 2005, which will be made available on the Scottish Executive SEA website and those of the Consultation Authorities. Users should refer primarily to the relevant specific guidance when preparing those types of plans and programmes.

How is the significance of environmental effects assessed?

This is a matter for professional judgement. Annex II of the Directive provides a list of criteria that can be used to judge whether an environmental effect is significant. Further advice on interpretation of the criteria set out in Annex II is provided in the European Commission guidance on the SEA Directive.

If an SEA has been done, is EIA still needed?

The SEA Directive does not disapply the EIA Directive. In practice an SEA will typically be concerned with broad proposals and alternatives, while EIA is project-specific and requires more detailed information on the effects of a particular proposal. SEA can help the preparation of an EIA but does not remove the need for one.

If an SEA has been done on a high level or “parent” plan or programme, is one required for plans or programmes at lower tiers or later stages?

The Directive provides for avoidance of duplication between plans or programmes in hierarchies. In practice the extent of assessment needed will often depend on the relationship between the plans or programmes concerned. ‘Lower level’ plans and programmes are generally more detailed and locationally specific than those at higher tiers, and an SEA may therefore be needed to assess effects not previously covered in the necessary detail.

If SEA is conducted as part of a wider assessment, is a separate Environmental Report needed?

The European Commission guidance states that the Environmental Report can be included in a wider assessment of the effects of the plan or programme – for example, as part of a sustainability assessment which also covers social and economic effects. Where this is done, the document must clearly show that the Directive has been complied with, for example by signposting to enable the components that meet the requirements for the Environmental Report to be readily identified.

Who will do SEAs?

The Directive does not specify who should carry out SEA. The obligation to ensure that an SEA is done normally lies with the Responsible Authority which produces the plan or programme, but the work may be done either by the authority’s own staff or by others such as consultants, or a combination of the two.

Will the UK set up a body to approve or review SEAs? How will the quality of SEAs be controlled?

There are no plans to create a dedicated body to carry out or oversee SEAs. The best approach is to integrate this role into the overall arrangements for oversight of plans or programmes. The Practical Guide can be used as a quality assurance tool, and a Quality Assurance checklist is in Appendix 9.

In Scotland, the Scottish Executive has established the SEA Gateway, which offers a single point of contact for Responsible Authorities to electronically deposit Screening / Scoping requests and seek SEA advice if required.

Where can I find out more about effects on human health?

It will be helpful to make contact in the first instance with the Director of Public Health in the local Primary Care Trust (PCT) for the area(s) concerned. A list of all PCTs in England can be found at: www.nhs.uk/england/authoritiestrusts/pct/list.aspx.

PCTs are statutory bodies with responsibility for improving and protecting the health of the population, reducing health inequalities and delivering better care to their local population. Directors of Public Health in PCTs produce Annual Public Health Reports which can provide useful baseline information for the SEA. They can provide advice on the health of the local population, sources of information and evidence at local level, and setting objectives.

In Wales, Local Public Health Teams in Local Health Boards may be helpful points of contact for responsible authorities.

Other sources of information are given in Appendix 4, Figure 10. These include the National Institute for Health and Clinical Excellence, the Health Protection Agency, Public Health Observatories, Public Health Groups in the Government Offices for the Regions, and the Health of Wales Information Service.

Further guidance on health assessment is available on the Department of Health website: www.dh.gov.uk/PublicationsAndStatistics/Legislation/HealthAssessment/fs/en and from the Welsh Health Impact Assessment Support Unit at: www.whiasu.cardiff.ac.uk/

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**DIRECTIVE 2001/42/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 27 June 2001
on the assessment of the effects of certain plans and programmes on the environment**

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 175(1) thereof,

Having regard to the proposal from the Commission ⁽¹⁾,

Having regard to the opinion of the Economic and Social Committee ⁽²⁾,

Having regard to the opinion of the Committee of the Regions ⁽³⁾,

Acting in accordance with the procedure laid down in Article 251 of the Treaty ⁽⁴⁾, in the light of the joint text approved by the Conciliation Committee on 21 March 2001,

Whereas:

- (1) Article 174 of the Treaty provides that Community policy on the environment is to contribute to, *inter alia*, the preservation, protection and improvement of the quality of the environment, the protection of human health and the prudent and rational utilisation of natural resources and that it is to be based on the precautionary principle. Article 6 of the Treaty provides that environmental protection requirements are to be integrated into the definition of Community policies and activities, in particular with a view to promoting sustainable development.
- (2) The Fifth Environment Action Programme: Towards sustainability — A European Community programme of policy and action in relation to the environment and sustainable development ⁽⁵⁾, supplemented by Council Decision No 2179/98/EC ⁽⁶⁾ on its review, affirms the importance of assessing the likely environmental effects of plans and programmes.
- (3) The Convention on Biological Diversity requires Parties to integrate as far as possible and as appropriate the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans and programmes.

(4) Environmental assessment is an important tool for integrating environmental considerations into the preparation and adoption of certain plans and programmes which are likely to have significant effects on the environment in the Member States, because it ensures that such effects of implementing plans and programmes are taken into account during their preparation and before their adoption.

(5) The adoption of environmental assessment procedures at the planning and programming level should benefit undertakings by providing a more consistent framework in which to operate by the inclusion of the relevant environmental information into decision making. The inclusion of a wider set of factors in decision making should contribute to more sustainable and effective solutions.

(6) The different environmental assessment systems operating within Member States should contain a set of common procedural requirements necessary to contribute to a high level of protection of the environment.

(7) The United Nations/Economic Commission for Europe Convention on Environmental Impact Assessment in a Transboundary Context of 25 February 1991, which applies to both Member States and other States, encourages the parties to the Convention to apply its principles to plans and programmes as well; at the second meeting of the Parties to the Convention in Sofia on 26 and 27 February 2001, it was decided to prepare a legally binding protocol on strategic environmental assessment which would supplement the existing provisions on environmental impact assessment in a transboundary context, with a view to its possible adoption on the occasion of the 5th Ministerial Conference 'Environment for Europe' at an extraordinary meeting of the Parties to the Convention, scheduled for May 2003 in Kiev, Ukraine. The systems operating within the Community for environmental assessment of plans and programmes should ensure that there are adequate transboundary consultations where the implementation of a plan or programme being prepared in one Member State is likely to have significant effects on the environment of another Member State. The information on plans and programmes having significant effects on the environment of other States should be forwarded on a reciprocal and equivalent basis within an appropriate legal framework between Member States and these other States.

⁽¹⁾ OJ C 129, 25.4.1997, p. 14 and OJ C 83, 25.3.1999, p. 13.

⁽²⁾ OJ C 287, 22.9.1997, p. 101.

⁽³⁾ OJ C 64, 27.2.1998, p. 63 and OJ C 374, 23.12.1999, p. 9.

⁽⁴⁾ Opinion of the European Parliament of 20 October 1998 (OJ C 341, 9.11.1998, p. 18), confirmed on 16 September 1999 (OJ C 54, 25.2.2000, p. 76), Council Common Position of 30 March 2000 (OJ C 137, 16.5.2000, p. 11) and Decision of the European Parliament of 6 September 2000 (OJ C 135, 7.5.2001, p. 155). Decision of the European Parliament of 31 May 2001 and Decision of the Council of 5 June 2001.

⁽⁵⁾ OJ C 138, 17.5.1993, p. 5.

⁽⁶⁾ OJ L 275, 10.10.1998, p. 1.

- (8) Action is therefore required at Community level to lay down a minimum environmental assessment framework, which would set out the broad principles of the environmental assessment system and leave the details to the Member States, having regard to the principle of subsidiarity. Action by the Community should not go beyond what is necessary to achieve the objectives set out in the Treaty.
- (9) This Directive is of a procedural nature, and its requirements should either be integrated into existing procedures in Member States or incorporated in specifically established procedures. With a view to avoiding duplication of the assessment, Member States should take account, where appropriate, of the fact that assessments will be carried out at different levels of a hierarchy of plans and programmes.
- (10) All plans and programmes which are prepared for a number of sectors and which set a framework for future development consent of projects listed in Annexes I and II to Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment ⁽¹⁾, and all plans and programmes which have been determined to require assessment pursuant to Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild flora and fauna ⁽²⁾, are likely to have significant effects on the environment, and should as a rule be made subject to systematic environmental assessment. When they determine the use of small areas at local level or are minor modifications to the above plans or programmes, they should be assessed only where Member States determine that they are likely to have significant effects on the environment.
- (11) Other plans and programmes which set the framework for future development consent of projects may not have significant effects on the environment in all cases and should be assessed only where Member States determine that they are likely to have such effects.
- (12) When Member States make such determinations, they should take into account the relevant criteria set out in this Directive.
- (13) Some plans or programmes are not subject to this Directive because of their particular characteristics.
- (14) Where an assessment is required by this Directive, an environmental report should be prepared containing relevant information as set out in this Directive, identifying, describing and evaluating the likely significant environmental effects of implementing the plan or programme, and reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme; Member States should communicate to the Commission any measures they take concerning the quality of environmental reports.
- (15) In order to contribute to more transparent decision making and with the aim of ensuring that the information supplied for the assessment is comprehensive and reliable, it is necessary to provide that authorities with relevant environmental responsibilities and the public are to be consulted during the assessment of plans and programmes, and that appropriate time frames are set, allowing sufficient time for consultations, including the expression of opinion.
- (16) Where the implementation of a plan or programme prepared in one Member State is likely to have a significant effect on the environment of other Member States, provision should be made for the Member States concerned to enter into consultations and for the relevant authorities and the public to be informed and enabled to express their opinion.
- (17) The environmental report and the opinions expressed by the relevant authorities and the public, as well as the results of any transboundary consultation, should be taken into account during the preparation of the plan or programme and before its adoption or submission to the legislative procedure.
- (18) Member States should ensure that, when a plan or programme is adopted, the relevant authorities and the public are informed and relevant information is made available to them.
- (19) Where the obligation to carry out assessments of the effects on the environment arises simultaneously from this Directive and other Community legislation, such as Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds ⁽³⁾, Directive 92/43/EEC, or Directive 2000/60/EC of the European Parliament and the Council of 23 October 2000 establishing a framework for Community action in the field of water policy ⁽⁴⁾, in order to avoid duplication of the assessment, Member States may provide for coordinated or joint procedures fulfilling the requirements of the relevant Community legislation.
- (20) A first report on the application and effectiveness of this Directive should be carried out by the Commission five years after its entry into force, and at seven-year intervals thereafter. With a view to further integrating environmental protection requirements, and taking into account the experience acquired, the first report should, if appropriate, be accompanied by proposals for amendment of this Directive, in particular as regards the possibility of extending its scope to other areas/sectors and other types of plans and programmes,

⁽¹⁾ OJ L 175, 5.7.1985, p. 40. Directive as amended by Directive 97/11/EC (OJ L 73, 14.3.1997, p. 5).

⁽²⁾ OJ L 206, 22.7.1992, p. 7. Directive as last amended by Directive 97/62/EC (OJ L 305, 8.11.1997, p. 42).

⁽³⁾ OJ L 103, 25.4.1979, p. 1. Directive as last amended by Directive 97/49/EC (OJ L 223, 13.8.1997, p. 9).

⁽⁴⁾ OJ L 327, 22.12.2000, p. 1.

HAVE ADOPTED THIS DIRECTIVE:

Article 1

Objectives

The objective of this Directive is to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development, by ensuring that, in accordance with this Directive, an environmental assessment is carried out of certain plans and programmes which are likely to have significant effects on the environment.

Article 2

Definitions

For the purposes of this Directive:

- (a) 'plans and programmes' shall mean plans and programmes, including those co-financed by the European Community, as well as any modifications to them:
 - which are subject to preparation and/or adoption by an authority at national, regional or local level or which are prepared by an authority for adoption, through a legislative procedure by Parliament or Government, and
 - which are required by legislative, regulatory or administrative provisions;
- (b) 'environmental assessment' shall mean the preparation of an environmental report, the carrying out of consultations, the taking into account of the environmental report and the results of the consultations in decision-making and the provision of information on the decision in accordance with Articles 4 to 9;
- (c) 'environmental report' shall mean the part of the plan or programme documentation containing the information required in Article 5 and Annex I;
- (d) 'The public' shall mean one or more natural or legal persons and, in accordance with national legislation or practice, their associations, organisations or groups.

Article 3

Scope

1. An environmental assessment, in accordance with Articles 4 to 9, shall be carried out for plans and programmes

referred to in paragraphs 2 to 4 which are likely to have significant environmental effects.

2. Subject to paragraph 3, an environmental assessment shall be carried out for all plans and programmes,

- (a) which are prepared for agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning or land use and which set the framework for future development consent of projects listed in Annexes I and II to Directive 85/337/EEC, or
- (b) which, in view of the likely effect on sites, have been determined to require an assessment pursuant to Article 6 or 7 of Directive 92/43/EEC.

3. Plans and programmes referred to in paragraph 2 which determine the use of small areas at local level and minor modifications to plans and programmes referred to in paragraph 2 shall require an environmental assessment only where the Member States determine that they are likely to have significant environmental effects.

4. Member States shall determine whether plans and programmes, other than those referred to in paragraph 2, which set the framework for future development consent of projects, are likely to have significant environmental effects.

5. Member States shall determine whether plans or programmes referred to in paragraphs 3 and 4 are likely to have significant environmental effects either through case-by-case examination or by specifying types of plans and programmes or by combining both approaches. For this purpose Member States shall in all cases take into account relevant criteria set out in Annex II, in order to ensure that plans and programmes with likely significant effects on the environment are covered by this Directive.

6. In the case-by-case examination and in specifying types of plans and programmes in accordance with paragraph 5, the authorities referred to in Article 6(3) shall be consulted.

7. Member States shall ensure that their conclusions pursuant to paragraph 5, including the reasons for not requiring an environmental assessment pursuant to Articles 4 to 9, are made available to the public.

8. The following plans and programmes are not subject to this Directive:

- plans and programmes the sole purpose of which is to serve national defence or civil emergency,
- financial or budget plans and programmes.

9. This Directive does not apply to plans and programmes co-financed under the current respective programming periods⁽¹⁾ for Council Regulations (EC) No 1260/1999⁽²⁾ and (EC) No 1257/1999⁽³⁾.

⁽¹⁾ The 2000-2006 programming period for Council Regulation (EC) No 1260/1999 and the 2000-2006 and 2000-2007 programming periods for Council Regulation (EC) No 1257/1999.

⁽²⁾ Council Regulation (EC) No 1260/1999 of 21 June 1999 laying down general provisions on the Structural Funds (OJ L 161, 26.6.1999, p. 1).

⁽³⁾ Council Regulation (EC) No 1257/1999 of 17 May 1999 on support for rural development from the European Agricultural Guidance and Guarantee Fund (EAGGF) and amending and repealing certain regulations (OJ L 160, 26.6.1999, p. 80).

Article 4

General obligations

1. The environmental assessment referred to in Article 3 shall be carried out during the preparation of a plan or programme and before its adoption or submission to the legislative procedure.
2. The requirements of this Directive shall either be integrated into existing procedures in Member States for the adoption of plans and programmes or incorporated in procedures established to comply with this Directive.
3. Where plans and programmes form part of a hierarchy, Member States shall, with a view to avoiding duplication of the assessment, take into account the fact that the assessment will be carried out, in accordance with this Directive, at different levels of the hierarchy. For the purpose of, *inter alia*, avoiding duplication of assessment, Member States shall apply Article 5(2) and (3).

Article 5

Environmental report

1. Where an environmental assessment is required under Article 3(1), an environmental report shall be prepared in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme, are identified, described and evaluated. The information to be given for this purpose is referred to in Annex I.
2. The environmental report prepared pursuant to paragraph 1 shall include the information that may reasonably be required taking into account current knowledge and methods of assessment, the contents and level of detail in the plan or programme, its stage in the decision-making process and the extent to which certain matters are more appropriately assessed at different levels in that process in order to avoid duplication of the assessment.
3. Relevant information available on environmental effects of the plans and programmes and obtained at other levels of decision-making or through other Community legislation may be used for providing the information referred to in Annex I.
4. The authorities referred to in Article 6(3) shall be consulted when deciding on the scope and level of detail of the information which must be included in the environmental report.

Article 6

Consultations

1. The draft plan or programme and the environmental report prepared in accordance with Article 5 shall be made

available to the authorities referred to in paragraph 3 of this Article and the public.

2. The authorities referred to in paragraph 3 and the public referred to in paragraph 4 shall be given an early and effective opportunity within appropriate time frames to express their opinion on the draft plan or programme and the accompanying environmental report before the adoption of the plan or programme or its submission to the legislative procedure.
3. Member States shall designate the authorities to be consulted which, by reason of their specific environmental responsibilities, are likely to be concerned by the environmental effects of implementing plans and programmes.
4. Member States shall identify the public for the purposes of paragraph 2, including the public affected or likely to be affected by, or having an interest in, the decision-making subject to this Directive, including relevant non-governmental organisations, such as those promoting environmental protection and other organisations concerned.
5. The detailed arrangements for the information and consultation of the authorities and the public shall be determined by the Member States.

Article 7

Transboundary consultations

1. Where a Member State considers that the implementation of a plan or programme being prepared in relation to its territory is likely to have significant effects on the environment in another Member State, or where a Member State likely to be significantly affected so requests, the Member State in whose territory the plan or programme is being prepared shall, before its adoption or submission to the legislative procedure, forward a copy of the draft plan or programme and the relevant environmental report to the other Member State.
2. Where a Member State is sent a copy of a draft plan or programme and an environmental report under paragraph 1, it shall indicate to the other Member State whether it wishes to enter into consultations before the adoption of the plan or programme or its submission to the legislative procedure and, if it so indicates, the Member States concerned shall enter into consultations concerning the likely transboundary environmental effects of implementing the plan or programme and the measures envisaged to reduce or eliminate such effects.

Where such consultations take place, the Member States concerned shall agree on detailed arrangements to ensure that the authorities referred to in Article 6(3) and the public referred to in Article 6(4) in the Member State likely to be significantly affected are informed and given an opportunity to forward their opinion within a reasonable time-frame.

3. Where Member States are required under this Article to enter into consultations, they shall agree, at the beginning of such consultations, on a reasonable timeframe for the duration of the consultations.

Article 8

Decision making

The environmental report prepared pursuant to Article 5, the opinions expressed pursuant to Article 6 and the results of any transboundary consultations entered into pursuant to Article 7 shall be taken into account during the preparation of the plan or programme and before its adoption or submission to the legislative procedure.

Article 9

Information on the decision

1. Member States shall ensure that, when a plan or programme is adopted, the authorities referred to in Article 6(3), the public and any Member State consulted under Article 7 are informed and the following items are made available to those so informed:

- (a) the plan or programme as adopted;
- (b) a statement summarising how environmental considerations have been integrated into the plan or programme and how the environmental report prepared pursuant to Article 5, the opinions expressed pursuant to Article 6 and the results of consultations entered into pursuant to Article 7 have been taken into account in accordance with Article 8 and the reasons for choosing the plan or programme as adopted, in the light of the other reasonable alternatives dealt with, and
- (c) the measures decided concerning monitoring in accordance with Article 10.

2. The detailed arrangements concerning the information referred to in paragraph 1 shall be determined by the Member States.

Article 10

Monitoring

1. Member States shall monitor the significant environmental effects of the implementation of plans and programmes in order, *inter alia*, to identify at an early stage unforeseen adverse effects, and to be able to undertake appropriate remedial action.

2. In order to comply with paragraph 1, existing monitoring arrangements may be used if appropriate, with a view to avoiding duplication of monitoring.

Article 11

Relationship with other Community legislation

1. An environmental assessment carried out under this Directive shall be without prejudice to any requirements under

Directive 85/337/EEC and to any other Community law requirements.

2. For plans and programmes for which the obligation to carry out assessments of the effects on the environment arises simultaneously from this Directive and other Community legislation, Member States may provide for coordinated or joint procedures fulfilling the requirements of the relevant Community legislation in order, *inter alia*, to avoid duplication of assessment.

3. For plans and programmes co-financed by the European Community, the environmental assessment in accordance with this Directive shall be carried out in conformity with the specific provisions in relevant Community legislation.

Article 12

Information, reporting and review

1. Member States and the Commission shall exchange information on the experience gained in applying this Directive.

2. Member States shall ensure that environmental reports are of a sufficient quality to meet the requirements of this Directive and shall communicate to the Commission any measures they take concerning the quality of these reports.

3. Before 21 July 2006 the Commission shall send a first report on the application and effectiveness of this Directive to the European Parliament and to the Council.

With a view further to integrating environmental protection requirements, in accordance with Article 6 of the Treaty, and taking into account the experience acquired in the application of this Directive in the Member States, such a report will be accompanied by proposals for amendment of this Directive, if appropriate. In particular, the Commission will consider the possibility of extending the scope of this Directive to other areas/sectors and other types of plans and programmes.

A new evaluation report shall follow at seven-year intervals.

4. The Commission shall report on the relationship between this Directive and Regulations (EC) No 1260/1999 and (EC) No 1257/1999 well ahead of the expiry of the programming periods provided for in those Regulations, with a view to ensuring a coherent approach with regard to this Directive and subsequent Community Regulations.

Article 13

Implementation of the Directive

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive before 21 July 2004. They shall forthwith inform the Commission thereof.

2. When Member States adopt the measures, they shall contain a reference to this Directive or shall be accompanied by such reference on the occasion of their official publication. The methods of making such reference shall be laid down by Member States.

3. The obligation referred to in Article 4(1) shall apply to the plans and programmes of which the first formal preparatory act is subsequent to the date referred to in paragraph 1. Plans and programmes of which the first formal preparatory act is before that date and which are adopted or submitted to the legislative procedure more than 24 months thereafter, shall be made subject to the obligation referred to in Article 4(1) unless Member States decide on a case by case basis that this is not feasible and inform the public of their decision.

4. Before 21 July 2004, Member States shall communicate to the Commission, in addition to the measures referred to in paragraph 1, separate information on the types of plans and programmes which, in accordance with Article 3, would be subject to an environmental assessment pursuant to this Directive. The Commission shall make this information avail-

able to the Member States. The information will be updated on a regular basis.

Article 14

Entry into force

This Directive shall enter into force on the day of its publication in the *Official Journal of the European Communities*.

Article 15

Addressees

This Directive is addressed to the Member States.

Done at Luxembourg, 27 June 2001.

For the European Parliament

The President

N. FONTAINE

For the Council

The President

B. ROSENGREN

ANNEX I

Information referred to in Article 5(1)

The information to be provided under Article 5(1), subject to Article 5(2) and (3), is the following:

- (a) an outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes;
- (b) the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme;
- (c) the environmental characteristics of areas likely to be significantly affected;
- (d) any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC;
- (e) the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation;
- (f) the likely significant effects ⁽¹⁾ on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors;
- (g) the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;
- (h) an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;
- (i) a description of the measures envisaged concerning monitoring in accordance with Article 10;
- (j) a non-technical summary of the information provided under the above headings.

⁽¹⁾ These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects.

ANNEX II

Criteria for determining the likely significance of effects referred to in Article 3(5)

1. The characteristics of plans and programmes, having regard, in particular, to
 - the degree to which the plan or programme sets a framework for projects and other activities, either with regard to the location, nature, size and operating conditions or by allocating resources,
 - the degree to which the plan or programme influences other plans and programmes including those in a hierarchy,
 - the relevance of the plan or programme for the integration of environmental considerations in particular with a view to promoting sustainable development,
 - environmental problems relevant to the plan or programme,
 - the relevance of the plan or programme for the implementation of Community legislation on the environment (e.g. plans and programmes linked to waste-management or water protection).
 2. Characteristics of the effects and of the area likely to be affected, having regard, in particular, to
 - the probability, duration, frequency and reversibility of the effects,
 - the cumulative nature of the effects,
 - the transboundary nature of the effects,
 - the risks to human health or the environment (e.g. due to accidents),
 - the magnitude and spatial extent of the effects (geographical area and size of the population likely to be affected),
 - the value and vulnerability of the area likely to be affected due to:
 - special natural characteristics or cultural heritage,
 - exceeded environmental quality standards or limit values,
 - intensive land-use,
 - the effects on areas or landscapes which have a recognised national, Community or international protection status.
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