
**VOLUME 11 ENVIRONMENTAL
ASSESSMENT**
**SECTION 2 ENVIRONMENTAL
IMPACT ASSESSMENT**

PART 1

HA 201/08

**GENERAL PRINCIPLES AND
GUIDANCE OF ENVIRONMENTAL
IMPACT ASSESSMENT**

SUMMARY

This Advice Note sets the context for environmental impact assessment in relation to Strategic Environmental Assessment, Assessment of Implications on European Sites and transport appraisal. It provides the general principles and guidance for undertaking environmental impact assessments and describes three levels of assessment (i.e. Scoping; Simple; and, Detailed).

INSTRUCTIONS FOR USE

1. Remove Contents pages from Volume 11 and insert new Contents pages for Volume 11 dated August 2008.
2. Remove the existing document entitled 'The Aims & Objectives of Environmental Assessment and How its Results are Reported' located in Volume 11, Section 2, Part 1 which is superseded by this document and archive as appropriate.
3. Insert the new Advice Note HA 201/08 into Volume 11, Section 2.
4. Please archive this sheet as appropriate.

Note: A quarterly index with a full set of Volume Contents Pages is available separately from The Stationery Office Ltd.



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THE DEPARTMENT FOR REGIONAL DEVELOPMENT
NORTHERN IRELAND

General Principles and Guidance of Environmental Impact Assessment

Summary: This Advice Note sets the context for environmental impact assessment in relation to Strategic Environmental Assessment, Assessment of Implications on European Sites and transport appraisal. It provides the general principles and guidance for undertaking environmental impact assessments and describes three levels of assessment (i.e. Scoping; Simple; and, Detailed).

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PART 1

HA 201/08

**GENERAL PRINCIPLES AND
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1. PRINCIPLES AND GUIDANCE FOR USE

1.1 This section considers the principles of and provides guidance for undertaking environmental impact assessments (both statutory and non-statutory) of projects.

1.2 The potential environmental effects of a project must be understood to:

- satisfy legal obligations;
- inform option choice;
- aid the planning and design process; and
- inform transport appraisals.

It is, therefore, essential that some idea of the likely effect on the environment is gained at the earliest opportunity.

1.3 The level of assessment undertaken must be fit for purpose and appropriate to the potential for the project to cause significant environmental effects. Therefore, all projects (including maintenance projects) at inception should undergo an initial scoping assessment of their likely environmental effects (refer to SECTION 2, Part

4). The need and content of further assessments will be guided by this early review and will vary with project type and the environmental setting.

1.4 The advice and methods set out in SECTION 2, Parts 2 to 6 (inclusive) and the topic-specific guidance (SECTION 3) are intended to provide an integrated and coherent approach to the environmental impact assessment of projects. Therefore, the guidance given in SECTION 2, Parts 2 to 6 (inclusive) should be read in conjunction with the guidance in SECTION 3. Correspondingly, topic-specific guidance should be applied within the framework set by SECTION 2, Parts 2 to 6 (inclusive) and the circumstances of each particular project.

1.5 The following diagram (Figure 1.1) illustrates schematically the activities undertaken within the environmental impact assessment process. The following activities are pictured: screening the project by determining whether statutory Environmental Impact Assessment (EIA) needs to be completed or not; scoping the topics and the level of assessment needed; an iterative consideration of survey, assessment and design, then reporting the findings; and, follow-up.

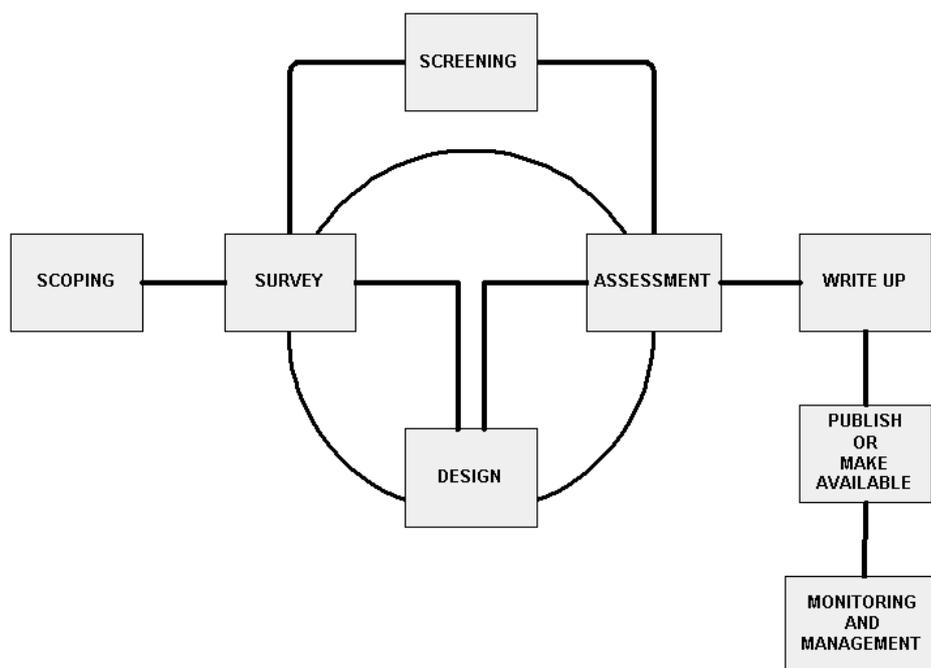


Figure 1.1 The Environmental Impact Assessment Process

1.6 The main general principle that should guide assessment activities, whether they are to meet statutory or non-statutory requirements, is that the process should be iterative continuing from the planning/appraisal stage, through design and option choice, construction and into the operational phase. The design and assessment processes are interwoven and will involve repeatedly going through the cycle of design and assessment until the design fulfils the objectives of the project (for guidance on project objectives refer to SECTION 2, Part 5, Chapter 1). There should also be an integrated approach to the environmental impact assessment, which promotes the interweaving of individual environmental topics, engineering design, and transport planning.

1.7 Consultation with the relevant Overseeing Organisation will always be necessary to decide on specific requirements in applying the guidance.

1.8 This guidance refers to the whole process by which information regarding the likely significant positive (beneficial) and negative (adverse) environmental effects of a planned project is systematically collected, assessed, publicised and taken into account in reaching a decision on whether the project should proceed as required by EC Directive 85/337/EEC as amended by EC Directive 97/11/EC and the Public Participation Directive 2003/35/EC (henceforth referred to as the EIA Directive), and as translated into UK law:

- In England and Wales, by Section 105 of the Highways Act 1980 as amended by the Highways (Assessment of Environmental Effects) Regulations 1988, the Highways (Assessment of Environmental Effects) Regulations 1994, the Highways (Assessment of Environmental Effects) Regulations 1999 and the Highways (Environmental Impact Assessment) Regulations 2007.
- In Northern Ireland, by Section 67 of The Roads (Northern Ireland) Order 1993 as amended by the Roads (Environmental Impact Assessment) Regulations (Northern Ireland) 1999 and the Roads (Environmental Impact Assessment) Regulations (Northern Ireland) 2007.

- In Scotland, by Sections 20A, 20B, 55A and 55B of the Roads (Scotland) Act 1984 as amended by The Environmental Assessment (Scotland) Regulations 1988, the New Roads and Street Works Act 1991, The Environmental Impact Assessment (Scotland) Regulations 1999 and The Environmental Impact Assessment (Scotland) Amendment Regulations 2006.

For the purposes of this guidance, this UK legislation is collectively referred to as the EIA Regulations.

1.9 EIA is mandatory for projects listed in Annex I of the EIA Directive. Annex II projects that are likely to have significant environmental effects having regard to the selection criteria in Annex III will also require statutory EIA. In the cases where assessment is not a mandatory requirement, projects still require adequate assessment to establish whether environmental issues arise, and if so, what their likely significance is, in order to inform good planning, option choice, design, and project construction and implementation. This guidance, therefore, covers both EIA, as required by UK law, and non-statutory environmental impact assessment.

1.10 For each Annex II project, the significance of the potential effect on the environment will determine whether an EIA or non-statutory environmental impact assessment is undertaken. It is important to note that the significance of the effect does not necessarily correlate to the size of the project (refer to Figure 1.2). Further guidance on screening is given in SECTION 2, Part 3.

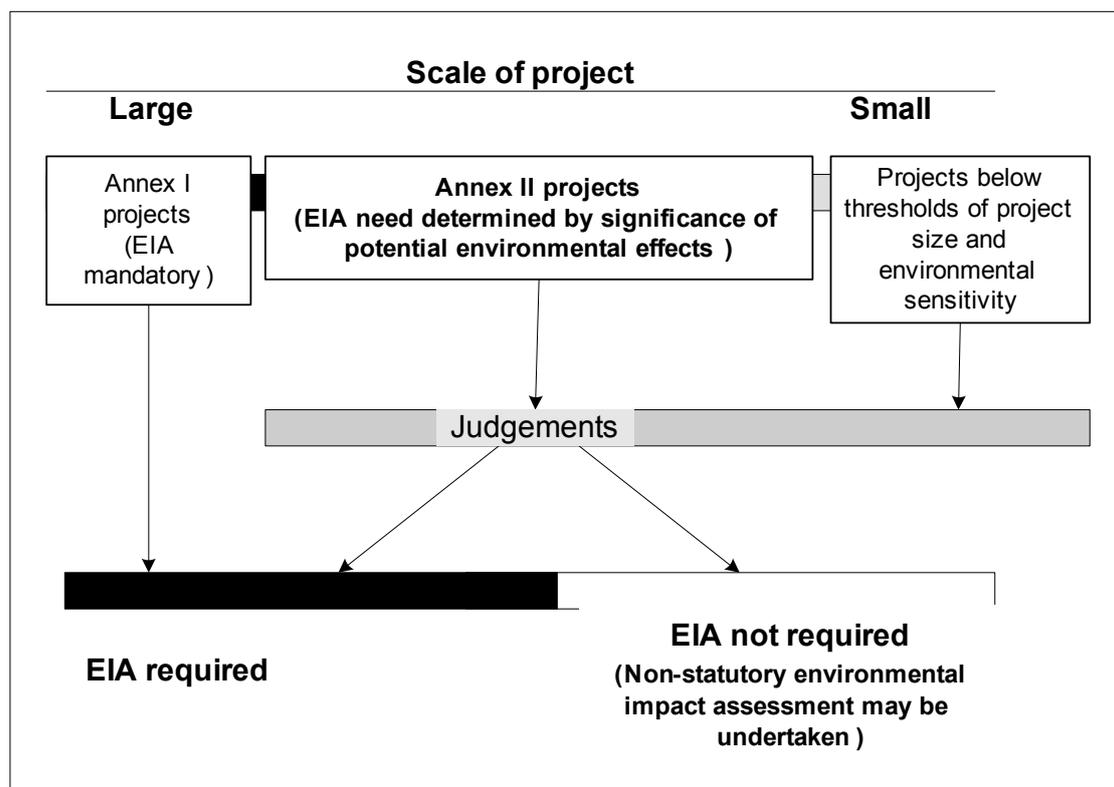


Figure 1.2 Need for Statutory Environmental Impact Assessment

1.11 Although maintenance projects lie outside the EIA Regulations, they have potential to give rise to significant environmental effects. These effects need to be understood to promote good option choice, planning and design and to ensure legislative requirements such as the need to avoid pollution to watercourses or safeguarding of protected species are complied with. Consequently, this advice also applies to maintenance works and non-statutory environmental impact assessment may still be required.

1.12 As a process, environmental impact assessment ensures that the environmental implications of decisions on projects are made available in order that they are taken into account ahead of decision-making. EIA and non-statutory environmental impact assessment should be considered a continuous process used to inform all decisions in the planning, development and design of a project.

2. PROJECT DEVELOPMENT AND ENVIRONMENTAL IMPACT ASSESSMENT LEVELS

2.1 This guidance promotes an approach to environmental impact assessment (including both statutory Environmental Impact Assessment (EIA) and non-statutory environmental impact assessment) that allocates effort according to: the likely significance of environmental effects; and, the type of decision that is to be taken and the risk and consequences of getting the assessment wrong.

2.2 This approach includes defining the assessment levels that may be relevant dependent on the potential environmental effects, the stage of project planning and the next project decision. The assessment levels are as follows:

- I. Scoping;
- II. Simple Assessment; and
- III. Detailed Assessment.

2.3 Most projects will reach a point when it is considered necessary to incorporate specific environmental measures into the design so as to avoid, reduce and, if possible, remedy significant adverse environmental effects that have been identified during the assessment. This will be achieved via the inclusion of mitigation and monitoring. To achieve this the process of design and assessment is, therefore, an iterative one (refer to Figure 2.1); the design and assessment processes are interwoven and will involve repeatedly going through the cycle of design and assessment until the design fulfils the objectives of the project. It is important to recognise that when the results of the assessment process are reported, the mitigation requirements and their monitoring should be clearly set out (refer to SECTION 2, Part 6).

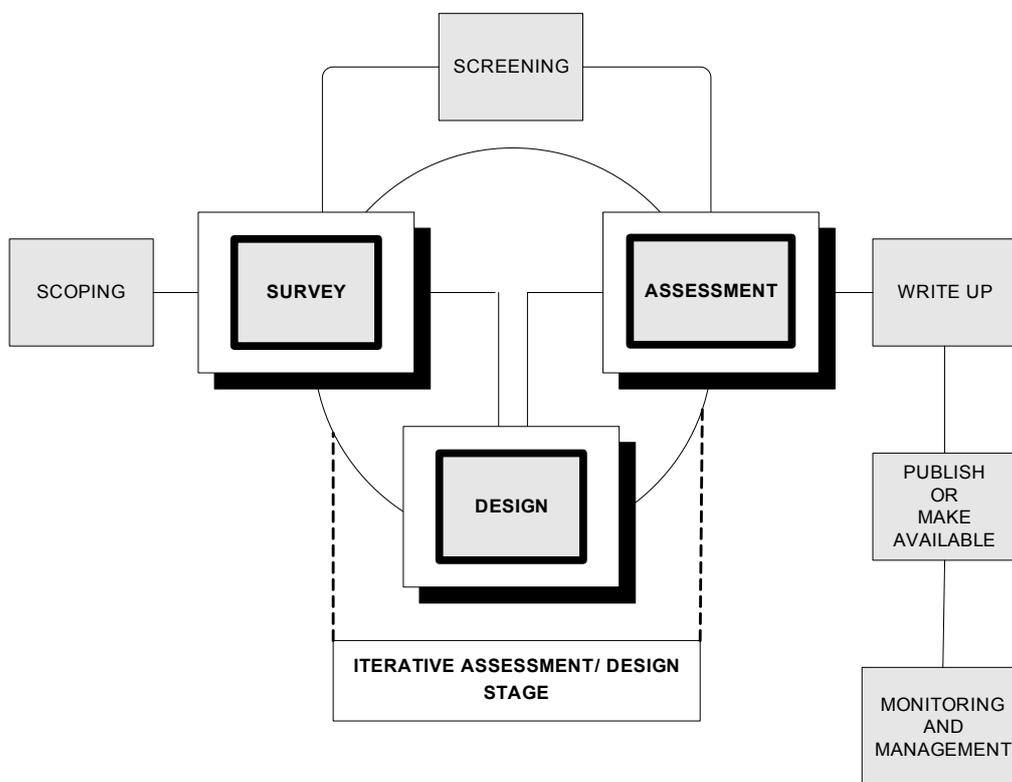


Figure 2.1 Iterative Assessment and Design Process

2.4 It is important to note that the levels of assessment are not sequential, in that one should not necessarily follow the other (refer to Figure 2.2). The assessments should be regarded as **consequential** in that the results of one assessment level would determine what, if any, further assessment work is required. Which level of assessment to apply at any stage in the design process will be informed by the scoping results, the project planning stage and options, and the environmental issues. Further guidance on assessment reporting is provided in SECTION 2, Part 6.

2.5 Throughout the assessment process, it is the significance of each environmental effect that will determine the need for further assessment. Consideration should, therefore, be given to all environmental effects that may arise from the implementation of a project, including positive (or beneficial) and negative (or adverse) effects, and permanent and temporary effects arising from direct, indirect, secondary, cumulative, short, medium and long-term impacts.

2.6 Consultations with the Overseeing Organisation will be necessary to confirm the appropriateness of extensive and/or atypical mitigation measures. The main design and assessment tasks are to:

- i. examine the need and performance of the measure through either predictive techniques or on the basis of experience gained elsewhere, taking into account cost, benefits and value for money; and
- ii. assess whether the measure would give rise to any subsequent environmental consequences not thus far assessed.

Assessment Levels

2.7 A summary of the assessment process is given in Figure 2.2.

I. Scoping

2.8 This activity is based around a desk study responding to available data and information (for example, using databases such as EnvIS in England). It employs a question led approach using effect identification techniques that are based upon generalised relationships and thresholds that either:

- i. establish the need for further assessment; or
- ii. exclude issues from further assessment.

2.9 Potential likely environmental issues should be identified here, and so too the corresponding level of assessment to be applied. In particular, decisions made and reported during the scoping phase should be clearly recorded, justified and defensible.

2.10 Following Scoping, it may be apparent that the project would result in no change against certain environmental topics. Other topics may have only negligible change and it may then be possible to simply apply established good design solutions, incorporating mitigation measures, to ensure the protection and, where possible, the enhancement of the environmental resource or receptor.

2.11 In this way different topics would be, or go on to be, assessed at different levels commensurate with the likely environmental effects and their significance.

2.12 Scoping can be an internal process and an external activity in which stakeholders are engaged in defining the assessment activities. Early stakeholder engagement may also provide an early indication of the likely future statutory environmental body consultation.

2.13 Further guidance on scoping is given in SECTION 2, Parts 4 and 6.

II. Simple Assessment

2.14 This activity is based on the assembly of data and information that is readily available. The Simple Assessment methods for each topic fulfil one of three functions:

- i. to address potential aspects identified at the Scoping level;
- ii. to reach an understanding of the likely environmental effects to inform the final design and assessment; or
- iii. to reach an understanding of the likely environmental effects that identifies the need for a Detailed Assessment.

2.15 Such additional information is typically gained through exploratory consultations with statutory environmental bodies, simple analysis, databases such as EnvIS in England, quantified assessment, reconnaissance surveys or investigation. Simple Assessments can be applied to projects that may be characterised as having design flexibility in many elements, but that the general solution and its purpose are established. Simple Assessment would be

sufficient if it established confidently that the forecast environmental effect would not be a fundamental issue in the decision-making process. Consultations with statutory environmental bodies are likely to be needed for at least some of the topics.

III. Detailed Assessment

2.16 Detailed Assessments are likely to require detailed field surveys and/or quantified modelling techniques. The Detailed Assessment would be applied where there exists the potential to cause significant effects on environmental resources and receptors.

2.17 The objective is to gain an in-depth appreciation of the beneficial and adverse environmental consequences of the project and to inform project decisions, since they are expected to be key issues in whether the project proceeds in its proposed configuration. Relevant stakeholder and statutory environmental body consultations on likely significant effects are important early in the project development process.

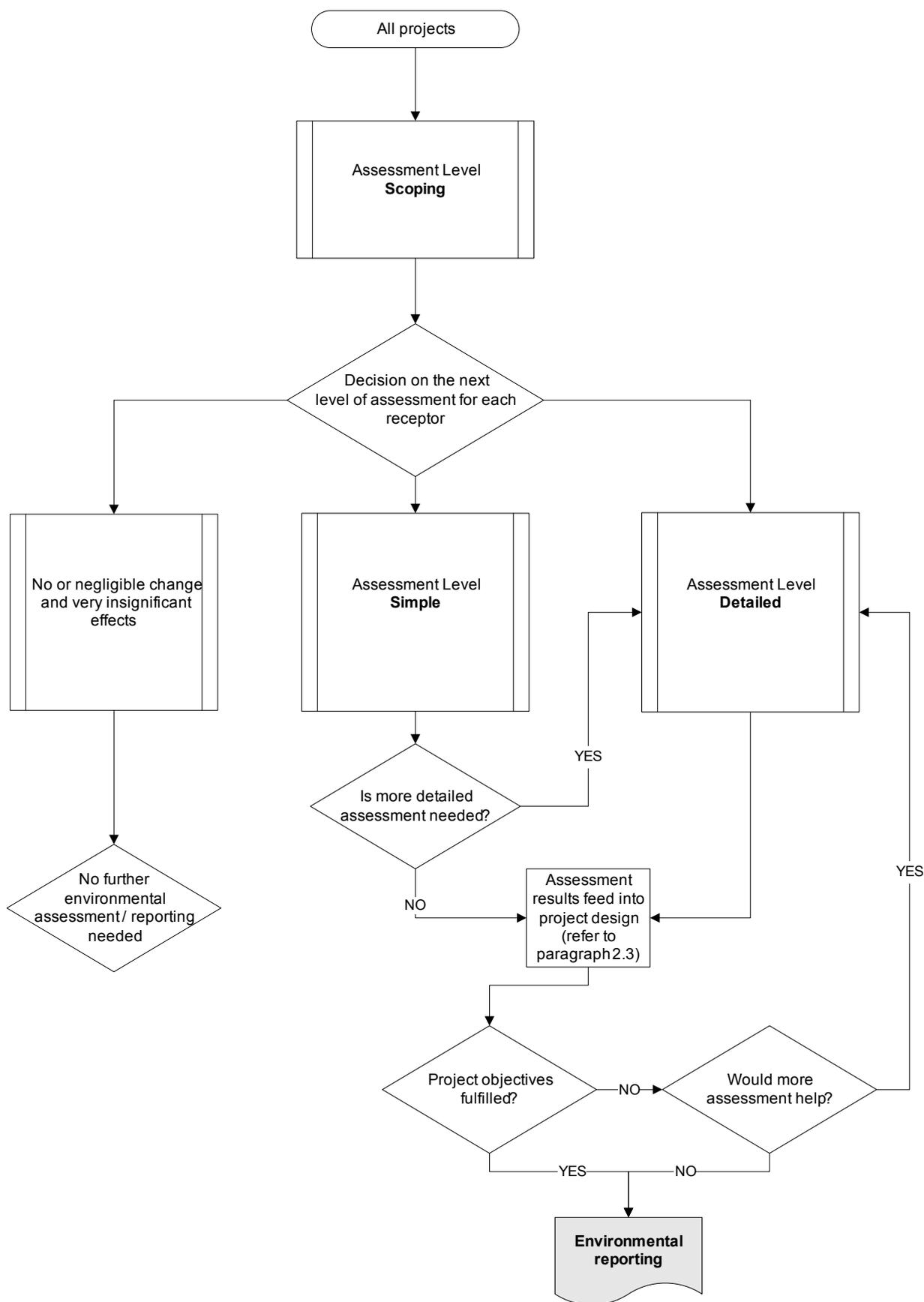


Figure 2.2 Relationship Between Assessment Levels

3. ENVIRONMENTAL IMPACT ASSESSMENT AND STRATEGIC ENVIRONMENTAL ASSESSMENT

3.1 Strategic Environmental Assessment (SEA) is undertaken for certain plans or programmes, plus, in Scotland and Wales, national and regional transport strategies. SEA may therefore precede and set the framework for projects that are subject to statutory Environmental Impact Assessment (EIA). Hence, all projects subject to EIA will need to be aware of any statutory obligations set out in the SEA Statement/ Environmental Report prepared for any relevant plans and programmes (and also national and regional transport strategies in Scotland and Wales). It is also good practice to recognise that projects not requiring an

EIA should recognise that SEAs may have a bearing on the scope of their design and assessment activities. The Overseeing Organisation is responsible for ensuring that SEA obligations associated with plans and programmes (and strategies) relevant to the project are considered. In particular, the Overseeing Organisation will provide the background information on relevant transport policy, plans and programmes, including related SEAs.

3.2 Figure 3.1 presents the context of SEA and EIA within the Environmental Assessment process:

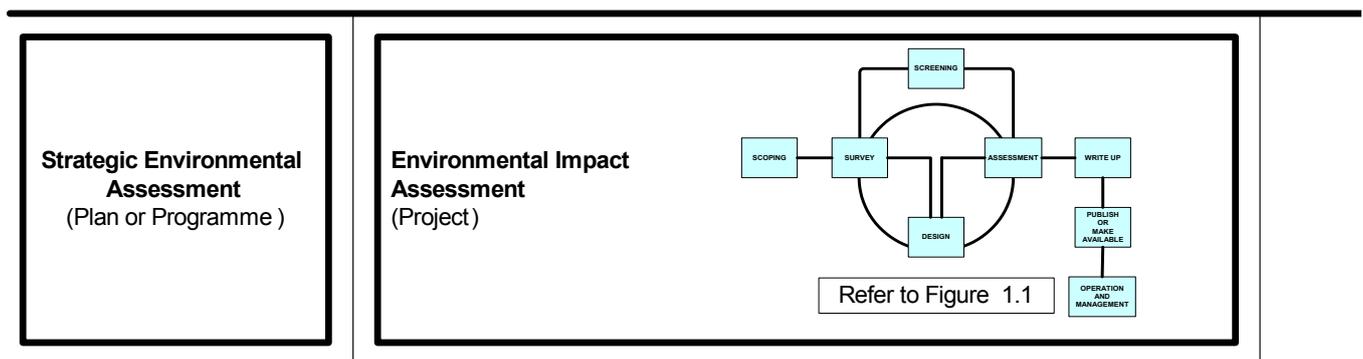


Figure 3.1 The Context of SEA and EIA Within the Environmental Assessment Process

3.3 The SEA process can create obligations for projects, for example:

- i. it may identify environmental problems that are to be addressed by the project;
- ii. it may identify significant adverse environmental effects that need to be addressed at the project stage;
- iii. it may identify measures to avoid, reduce or remedy significant adverse environmental effects that are to be implemented at the project level;
- iv. it may specify the delivery of monitoring surveys and results to those responsible for the monitoring of the significant effects of the plan or programme, which should be implemented through the project; and

- v. the project-level EIA or non-statutory environmental impact assessment may need to assemble certain environmental data to inform future SEAs.

3.4 In addition, there could be a series of other elements identified during the SEA that could impact on the delivery of projects. These could include:

- i. plan objectives, criteria and indicators that could have a bearing upon the objectives for the project. It may also be appropriate to compare the performance of the project against such objectives and indicators;
- ii. information concerning other linked projects in the plan, programme or strategy that would inform the assessment of cumulative effects;

iii. opportunities for strategic mitigation measures in which some effects resulting from the project are identified as being more appropriately resolved beyond the confines of the site boundary at more strategic locations, perhaps in partnership with others to achieve plan, programme or strategy objectives.

3.5 While SEAs prepared for transport plans, programmes and strategies are likely to be of most direct relevance, those prepared for other plans and programmes, for example, land use planning or for river basin management, may also be of relevance.

3.6 In England and Northern Ireland, detailed guidance on the SEA process for transport plans and programmes is provided by WebTAG Unit 2.11 www.webtag.org.uk. In Scotland, guidance on the SEA process is available at www.scotland.gov.uk/Topics/Environment/14587. In Wales, detailed guidance on the SEA process for transport plans and programmes is provided by the Welsh Assembly Government's Welsh Transport Planning and Appraisal Guidance (WelTAG).

4. ENVIRONMENTAL IMPACT ASSESSMENT AND ASSESSMENT OF IMPLICATIONS ON EUROPEAN SITES

4.1 Some projects may require separate Assessment of Implications on European Sites (AIES) in addition to statutory Environmental Impact Assessment (EIA). This section outlines the connections with EIA. Specific guidance on AIES is given in SECTION 4. Figure 4.1 presents AIES in the context of the Environmental Assessment process:

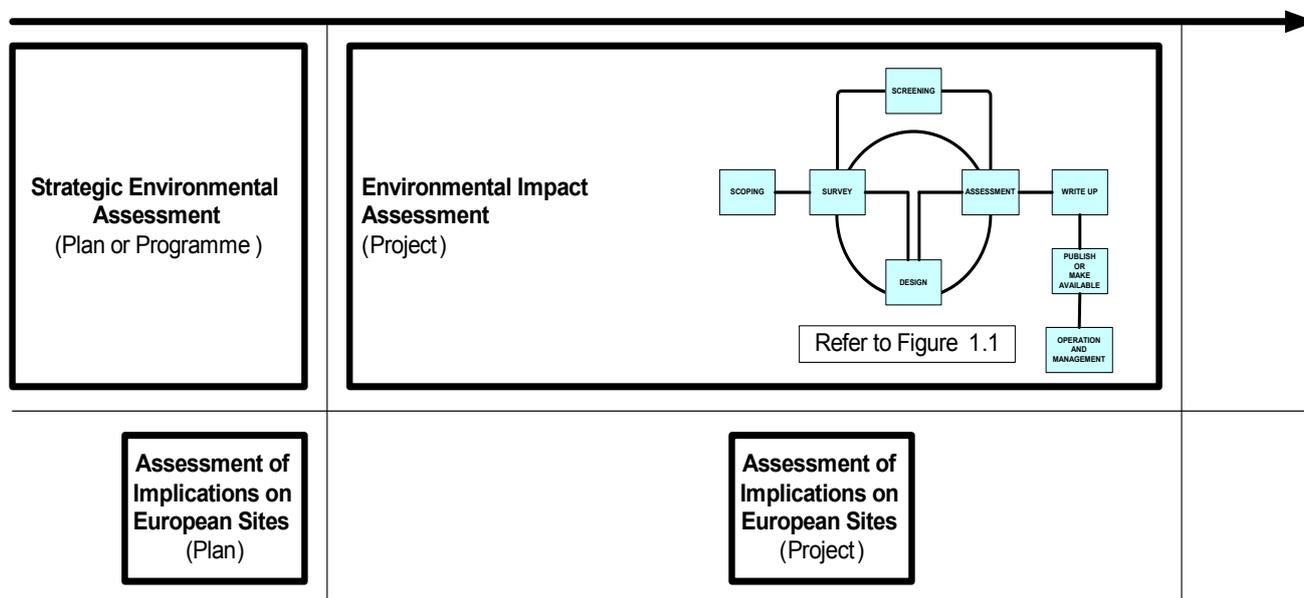


Figure 4.1 Assessment of Implications on European Sites in the Context of the Environmental Assessment Process

4.2 The environmental impact assessment for the project would be expected to include the main points from any AIES in its reporting. Care should be taken to ensure that the findings of the AIES are addressed accurately and consistently in the assessment reporting strands, in particular within an Environmental Statement, to ensure that a consistent message is being delivered.

4.3 When it is apparent that an EIA and AIES need to be undertaken then consideration should be given to surveys collecting information for both at the same time.

4.4 There are important legal and process differences between the EIA and AIES processes. AIES is a distinct and separate assessment required by law to inform the decision-making process where a plan or project is likely to have a significant effect on a Natura 2000 site in the UK (either alone or in combination with other plans or projects) and is not directly connected with or necessary to the management of the site.

4.5 The EIA process for a project would be expected to include the main points from any AIES in its reporting. Equally, in establishing any assessment scenarios for project-based EIAs recognition of any obligations that arise out of any previous AIESs should be made.

5. ENVIRONMENTAL IMPACT ASSESSMENT AND TRANSPORT APPRAISAL

5.1 The findings of the environmental impact assessment process may be used to inform transport appraisal reporting. Care should be taken to ensure that the findings of the environmental impact assessment process, particularly an Environmental Statement, are addressed consistently in the reporting strands of transport appraisal reporting to ensure that a consistent message is being delivered. Figure 5.1 represents the Environmental Assessment process in relation to the transport appraisal process.

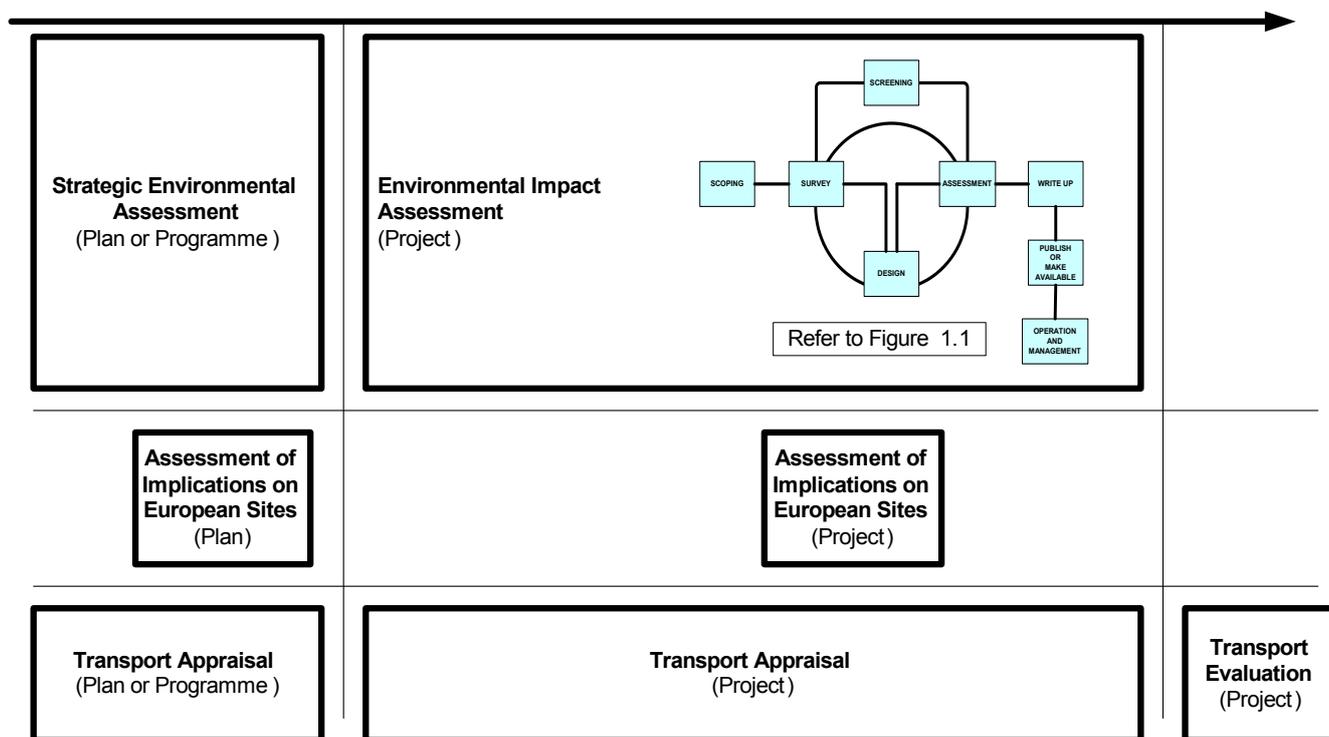


Figure 5.1 Environmental Assessment Process and Transport Appraisal Process

5.2 In particular, there are important legal and process differences between environmental impact assessment and transport appraisal. Appraisal is a process (with methodologies that differ from those used in the environmental impact assessment process) that looks at the worth of a course of action, the results of which are used to assist in the determination of whether a project is acceptable and worthy of funding. The environmental impact assessment process looks at the effects of a project on the environment in consultation with external bodies to inform the design and decision-making process. Not all issues addressed during the environmental impact assessment process will be considered in the transport appraisal process.

5.3 Transport appraisal is a key component in the Government transport planning process. At the project level transport appraisal is carried out to provide input to efficient resource allocation and prioritisation across Government. Appraisal allows for an objective review of investment options within the limits of resources. HM Treasury's Green Book (*Appraisal and Evaluation in Central Government*) forms the basis of the Government's process in relation to appraisal.

5.4 The appraisal advice for England and Northern Ireland is consolidated in the web-based Transport Analysis Guidance (WebTAG) system, which can be found at the Department for Transport website www.webtag.org.uk.

5.5 The objective-led Scottish Transport Appraisal Guidance (STAG) can be found at the Transport Scotland website www.transportscotland.gov.uk.

5.6 Similarly, the Welsh Assembly Government's Welsh Transport Planning and Appraisal Guidance (WelTAG) will soon become available electronically.

5.7 These systems provide structured advice at both project management and technical levels, as well as giving guidance on how to transpose the results of environmental impact assessment into the appraisal process. Where appropriate, for advice on how to convert DMRB assessment conclusions into appraisal conclusions under WebTAG, refer to www.webtag.org.uk (or the Overseeing Organisation's equivalents).

6. REFERENCES

Legislation:

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- Statutory Instrument 1994 No. 2716 The Conservation (Natural Habitats, &c.) Regulations 1994, *The Stationery Office Limited*, ISBN 0110457161.

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Statutory Instrument 2000 No. 192 The Conservation (Natural Habitats, &c.) (England) Regulations 2000, *The Stationery Office Limited*, ISBN 0110858638.

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GD 02/08 Quality Management Systems for Highway Design (Design Manual for Roads and Bridges Volume 0.2.1).

7. ENQUIRIES

All technical enquiries or comments on this Advice Note should be sent in writing as appropriate to:

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PART 2

HA 202/08

**ENVIRONMENTAL IMPACT
ASSESSMENT**

SUMMARY

This Advice Note provides guidance for undertaking statutory and non-statutory environmental impact assessments of all trunk road projects.

INSTRUCTIONS FOR USE

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2. Remove the existing document entitled 'The Scope of Environmental Assessment' located in Volume 11, Section 2, Part 2 which is superseded by this document and archive as appropriate.
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THE DEPARTMENT FOR REGIONAL DEVELOPMENT
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Environmental Impact Assessment

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**ENVIRONMENTAL IMPACT
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1. STATUTORY ENVIRONMENTAL IMPACT ASSESSMENT

1.1 As noted in SECTION 2, Part 3, the Screening process will determine whether a project requires statutory Environmental Impact Assessment (EIA). EIA refers to the whole process by which information regarding the likely environmental effects of a project is systematically collected, assessed, publicised and taken

into account in accordance with the requirements of the EIA Regulations.

1.2 Figure 1.1 represents EIA in the context of the Environmental Assessment process:

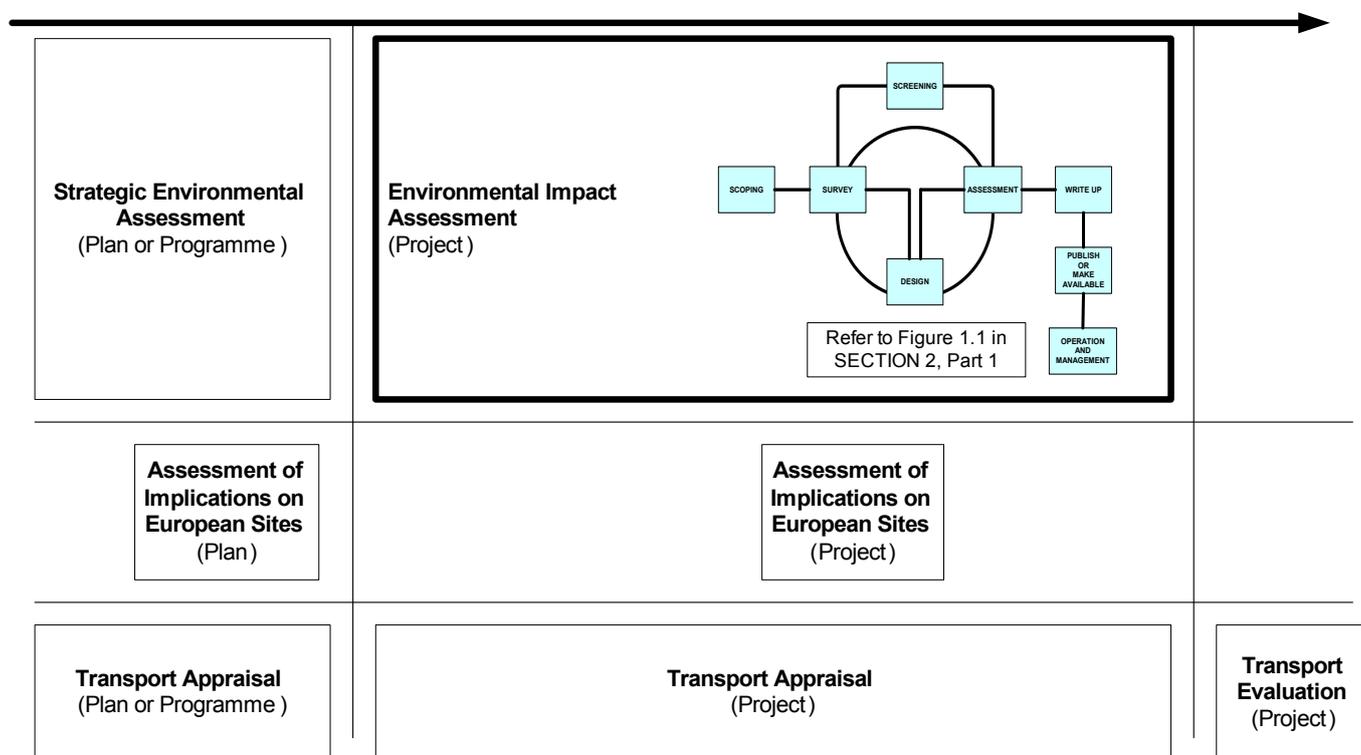


Figure 1.1 EIA Within the Context of the Environmental Assessment Process

1.3 Developers of projects requiring EIA are required to examine and report the following as a minimum in an Environmental Statement (ES) in accordance with the EIA Regulations and Annex IV of the EIA Directive:

- i. a description of the project (including site, design and size);
- ii. a description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects;

- iii. the data required to identify and assess the main effects which the project is likely to have on the environment;
- iv. an outline of the main alternatives studied and an indication of the main reasons for the choice (taking into account environmental effects); and
- v. a non-technical summary of (i) to (iv) above.

1.4 The need for this information is however subject to meeting the following criteria in accordance with the EIA Regulations and Articles 4 to 11 of the EIA Directive:

- i. that it is relevant to the specific characteristics of the project and of the environmental features likely to be affected by it; and
- ii. that the information may be reasonably gathered (having regard among other matters to current knowledge and methods of assessment).

1.5 The Overseeing Organisation of a project requiring an EIA must publish an Environmental Statement (refer to SECTION 2, Part 6, Chapter 3) including a Non-Technical Summary (refer to SECTION 2, Part 6, Chapter 4) in accordance with the requirements of the EIA Regulations, the statutory requirements under the EIA Directive and the Environmental Information Regulations 2004 (in England, Northern Ireland and Wales) or the Environmental Information (Scotland) Regulations 2004 (in Scotland), and any specific requirements of the Overseeing Organisation. In addition, Notice of the ES must be published as required by the EIA Regulations so as to give reasonable opportunity for the public to comment upon the ES.

1.6 From time to time the Overseeing Organisation may need to develop projects not covered by powers given to them under the Highways Act 1980 (as amended), the Roads (Scotland) Act 1984 (as amended) or the Roads (Northern Ireland) Order 1993 (as amended), such as new picnic sites. These may require planning permission from the Local Planning Authority and so the assessment process in these situations will need to progress with regard to the Town and Country Planning system, in particular the Town & Country Planning (Environmental Impact Assessment) (England & Wales) Regulations 1999 (as amended), the Planning (Environmental Impact Assessment) Regulations (Northern Ireland) 1999 (as amended), and the Environmental Impact Assessment (Scotland) Regulations 1999 (as amended).

2. NON-STATUTORY ENVIRONMENTAL IMPACT ASSESSMENT

2.1 Certain projects such as maintenance projects do not require statutory Environmental Impact Assessment (EIA), but they may still require adequate assessment to establish whether significant environmental effects are likely to arise, and if so, what their likely significance is, in order to inform option choice, good planning and design, incorporating any mitigation as necessary. This assessment is otherwise referred to as non-statutory environmental impact assessment.

2.2 In addition, even for new construction or improvement projects the results of the screening process (refer to SECTION 2, Part 3) may determine that EIA is not mandatory. In the cases where EIA is not a mandatory requirement, projects still require adequate assessment to establish whether environmental issues arise, and if so, what their likely significance is, in order to inform good planning, option choice, design, and project construction and implementation.

2.3 Non-statutory environmental impact assessment should progress under the framework and procedures set out for EIA, but with the assessment and reporting process adapted to reflect the significance of environmental effects that may arise on a case-by-case basis (refer to the assessment levels discussed in SECTION 2, Part 1, and to reporting discussed in SECTION 2, Part 6, Chapter 5). In each case, the assessment approach should be agreed with and approved by the Overseeing Organisation. It may be necessary to publish a Notice of Determination and report the determination process appropriately (refer to SECTION 2, Part 3 and SECTION 2, Part 6, Chapter 5).

2.4 Following completion of the determination process, there is no requirement to report or publish the non-statutory environmental impact assessment process under the EIA Regulations. However, it should be recognised these may be asked for: via The Freedom of Information Act 2000 (England, Northern Ireland and Wales) and the Freedom of Information (Scotland) Act 2002; in accordance with the Environmental Information Regulations 2004 (in England, Northern Ireland and Wales) or the Environmental Information (Scotland) Regulations 2004 (in Scotland); and in accordance with the specific requirements of the Overseeing Organisation. The Overseeing Organisation may therefore decide to publish the non-statutory environmental report.

3. REFERENCES

Legislation:

- Council Directive 85/337/EEC: Council Directive of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment, *Official Journal No. L 175*, 05/07/1985.
- Council Directive 97/11/EC: Council Directive 97/11/EC of 3 March 1997 amending Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, *Official Journal No. L 073*, 14/03/1997.
- Council Directive 2003/35/EC: Directive 2003/35/EC of the European Parliament and of the Council of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC, *Official Journal No. L 156*, 25/06/2003.
- Environmental Assessment (Scotland) Act 2005, *The Stationery Office Limited*, ISBN 0105900893.
- Freedom of Information Act 2000.
- Freedom of Information (Scotland) Act 2002.
- Highways Act 1980.
- New Roads and Street Works Act 1991.
- Roads (Scotland) Act 1984.
- Scottish Statutory Instrument 1999 No.1 The Environmental Impact Assessment (Scotland) Regulations 1999, *The Stationery Office Limited*, ISBN 0 11 0591070.
- Scottish Statutory Instrument 2004 No. 520 The Environmental Information (Scotland) Regulations 2004, *The Stationery Office Limited*, ISBN 0110693566.
- Scottish Statutory Instrument 2006 No. 614 The Environmental Impact Assessment (Scotland) Amendment Regulations 2006, *The Stationery Office Limited*, ISBN 0110714725.
- Statutory Instrument 1988 No. 1221 (S.122) The Environmental Assessment (Scotland) Regulations 1988, *The Stationery Office Limited*, ISBN 0110872215.
- Statutory Instrument 1988 No. 1241 The Highways (Assessment of Environmental Effects) Regulations 1988, *The Stationery Office Limited*, ISBN 011087241X.
- Statutory Instrument 1993 No. 3160 The Roads (Northern Ireland) Order 1993, *The Stationery Office Limited*, ISBN 0110342895.
- Statutory Instrument 1994 No. 1002 The Highways (Assessment of Environmental Effects) Regulations 1994, *The Stationery Office Limited*, ISBN 0110440021.
- Statutory Instrument 1999 No. 369 The Highways (Assessment of Environmental Effects) Regulations 1999, *The Stationery Office Limited*, ISBN 0 11 082053 3.
- Statutory Instrument 2004 No. 3391 The Environmental Information Regulations 2004, *The Stationery Office Limited*, ISBN 011051436X.
- Statutory Instrument 2007 No. 1062 The Highways (Environmental Impact Assessment) Regulations 2007, *The Stationery Office Limited*, ISBN 9780110765969.
- Statutory Rule 1999 No.89 Roads (Environmental Impact Assessment) Regulations (Northern Ireland) 1999, *The Stationery Office Limited*, ISBN 0 337 93407.

4. ENQUIRIES

All technical enquiries or comments on this Advice Note should be sent in writing as appropriate to:

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Director of Engineering

**VOLUME 11 ENVIRONMENTAL
ASSESSMENT**
**SECTION 2 ENVIRONMENTAL
IMPACT ASSESSMENT**

PART 3

HD 47/08

**SCREENING OF PROJECTS FOR
ENVIRONMENTAL IMPACT
ASSESSMENT**

SUMMARY

This Standard provides guidance on the screening process as applied to trunk road projects.

INSTRUCTIONS FOR USE

1. Remove Contents pages from Volume 11 and insert new Contents pages for Volume 11 dated August 2008.
2. Remove the existing document entitled 'Mitigation' located in Volume 11, Section 2, Part 3 which is superseded by this document and archive as appropriate.
3. Insert the new Standard HD 47/08 into Volume 11, Section 2.
4. Please archive this sheet as appropriate.

Note: A quarterly index with a full set of Volume Contents Pages is available separately from The Stationery Office Ltd.



THE HIGHWAYS AGENCY



SCOTTISH GOVERNMENT



Llywodraeth Cynulliad Cymru
Welsh Assembly Government

WELSH ASSEMBLY GOVERNMENT
LLYWODRAETH CYNULLIAD CYMRU



THE DEPARTMENT FOR REGIONAL DEVELOPMENT
NORTHERN IRELAND

Screening of Projects for Environmental Impact Assessment

Summary: This Standard provides guidance on the screening process as applied to trunk road projects.

REGISTRATION OF AMENDMENTS

Amend No	Page No	Signature & Date of incorporation of amendments	Amend No	Page No	Signature & Date of incorporation of amendments

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**VOLUME 11 ENVIRONMENTAL
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PART 3

HD 47/08

**SCREENING OF PROJECTS FOR
ENVIRONMENTAL IMPACT
ASSESSMENT**

Contents

Chapter

1. Screening a Project
2. References
3. Enquiries

1. SCREENING A PROJECT

1.1 This document is a Standard and mandatory sections apply.

Mandatory Sections

1.2 Mandatory sections of this document are contained in boxes. The Service Provider must comply with these sections or obtain agreement to a Departure from Standard (or equivalent) from the Overseeing Organisation. The remainder of the document contains advice and explanation, which is commended to users for consideration.

Departure from Standards

1.3 Unless a departure has been agreed, the implementation of the processes described in this Standard must be applied to all projects. If it is not considered necessary for this Standard to be applied, approval for Departure from Standards must be obtained from the Overseeing Organisation with the departure application clearly stating why this Standard should not be applied.

Screening

1.4 As noted in SECTION 2, Part 2, the requirement to carry out a statutory Environmental Impact Assessment (EIA) and publish an Environmental Statement only applies to certain projects that are deemed to exceed certain thresholds (refer to paragraph 1.8 below) and are predicted to have a significant effect on the environment. The process for deciding whether it is necessary to carry out an EIA and publish an Environmental Statement (ES) is called Screening. The context of screening within the overall environmental impact assessment process is shown in Figure 1.1 below.

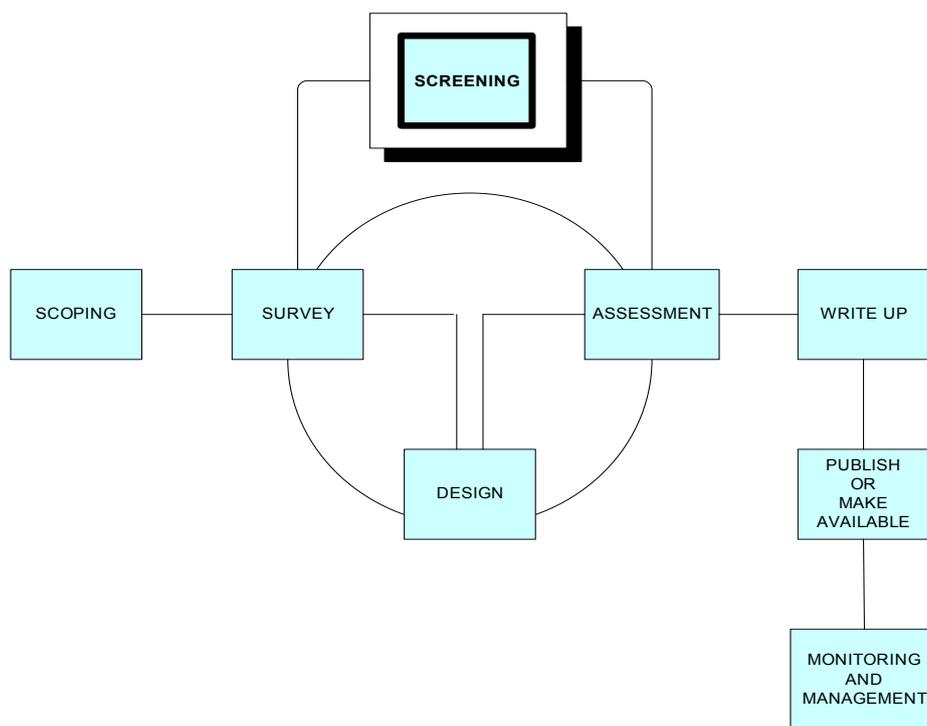


Figure 1.1 Diagram of Activities Undertaken Within the Environmental Impact Assessment Process

1.5 The screening process involves a number of steps which are required to determine whether or not an EIA should be undertaken for a project. Screening establishes:

- a) whether the project falls within Annex I or Annex II of the EIA Directive;
- b) whether an Annex II project represents a 'relevant project';
- c) the 'determination' for the purposes of the EIA Regulations; and
- d) reporting the determination.

1.6 A summary of the process is given below.

Step 1 – Deciding if the Project Falls Within Annex I or Annex II of the EIA Directive

1.7 The first screening decision is identifying whether the project falls within Annex I or Annex II of the EIA Directive (see Table 1.1). Certain types of projects are listed within Annex I and for these EIA is mandatory and no determination is necessary.

EIA Directive	Type of project	EIA requirement
Annex I	Construction of motorways and express roads. Construction of a new road of four or more lanes, or realignment and/or widening of an existing road of two lanes or less so as to provide four or more lanes, where such new road, or realigned and/or widened section of road would be 10 km or more in a continuous length.	EIA mandatory; an ES must be published.
Annex II	All other road projects (excluding strictly maintenance projects) not listed in Annex I.	A determination process must be followed that meets the requirements of the EIA Directive and the EIA Regulations. EIA need is determined by significance of effect.

Table 1.1: Projects That Fall Within Annex I or Annex II of the EIA Directive

Step 2 – Deciding if the Annex II Project is a ‘Relevant Project’

1.8 All projects not listed in Annex I, except those classed as strictly maintenance projects, fall under Annex II of the EIA Directive. To determine whether or not Annex II projects are relevant, thresholds of project size and environmental sensitivity exist in the EIA Regulations for Annex II projects:

- In England and Wales, the thresholds for project size and environmental sensitivity are defined in the Highways (Assessment of Environmental Effects) Regulations 1999 (as amended).
- In Northern Ireland, the thresholds for project size and environmental sensitivity are defined in the Roads (Environmental Impact Assessment) Regulations (Northern Ireland) 1999.
- In Scotland, the thresholds for project size and environmental sensitivity are defined in Part 3 of the Environmental Impact Assessment (Scotland) Regulations 1999 as amended by The Environmental Impact Assessment (Scotland) Amendment Regulations 2006.

1.9 In general, a relevant Annex II project is defined as:

“a project for constructing or improving a highway where the area of the completed works together with any area occupied during the period of construction or improvement by requisite apparatus, equipment, machinery, materials, plant, spoil heaps or other such facilities exceeds 1 hectare or where any such area is situated in whole or in part in a sensitive area.”¹

1.10 ‘Sensitive areas’ are listed in the EIA Regulations.

1.11 In general, if the Annex II project falls below the thresholds of size and outside of environmentally sensitive areas then it is considered not to be a relevant project and may be screened out of the formal EIA process. No determination decision is necessary, a Notice of Determination does not need to be published, and an Environmental Statement is not required. The result of Step 2 will need to be recorded for audit purposes.

1.12 A non-statutory environmental impact assessment (refer to SECTION 2, Part 2, Chapter 2) may still need to be undertaken to identify environmental constraints such as legally protected species, in order to inform good design and decision-making.

1.13 However, the thresholds are not absolute. There may be instances where the Annex II project falls outside the thresholds, but still has the potential to cause significant effects in consideration of the selection criteria in Annex III (refer to Step 3 below). This may occur, for example, where the project is located adjacent to a sensitive area and has potential to cause indirect significant environmental effects. It is therefore necessary to consider the likely significance of any effects arising from an Annex II project that falls outside of the thresholds on a case-by-case basis. A project of this nature may still be determined to be a ‘relevant project’.

1.14 All ‘relevant’ Annex II projects require a determination (see Step 3).

¹ Statutory Instrument 1999 No. 369 The Highways (Assessment of Environmental Effects) Regulations 1999, The Stationery Office Limited, ISBN 0 11 082053 3.

Step 3 – The Determination of a ‘Relevant Project’ for the Purposes of the EIA Regulations

1.15 For Annex II projects that are ‘relevant projects’ a determination process must be followed that meets the requirements of the EIA Regulations. This is the third stage in the screening process.

1.16 The focus of the determination is based on the question *‘Is the project being considered likely to have a significant effect on the environment?’*. The judgement as to whether the project is likely to have a significant effect is informed by the selection criteria in Annex III of the EIA Directive. The selection criteria² from the EIA Directive is summarised as follows:

1. Characteristics of projects;
2. Location of projects; and
3. Characteristics of the potential impacts.

1.17 At this stage, the judgement on the requirement for EIA revolves around the consideration of:

- a) What is proposed? (Project);
- b) What could be affected? (People and environment); and
- c) Whether the effects could be significant? (Assessment findings and judgement).

1.18 The question to consider in arriving at the determination is as follows:

Considering Annex III of the EIA Regulations, is the project going to have a significant environmental effect? If yes, then an EIA will be required. If no, a non-statutory environmental impact assessment may still need to be undertaken (refer to SECTION 2, Part 2, Chapter 2).

1.19 In order to make a satisfactory determination, some assessment work is required to inform the screening process. It is essential that determinations are soundly based whilst at the same time minimising the effort spent on assessment where it is not warranted.

Step 4 – Reporting the Determination

1.20 Each Overseeing Organisation has established procedures for recording the determination process (often referred to as the Record of Determination or RoD). As a minimum the procedures must record the considerations undertaken and the knowledge or judgement used, including the views of statutory environmental bodies, to inform the determination on behalf of the Secretary of State or equivalent. The determination has to be made available to the public and is referred to here as the “Notice of Determination”. A Notice of Determination must be published for each relevant project considered in accordance with the EIA Regulations.

1.21 The Notice of Determination should be published as early as practical, having due consideration for the related statutory procedures for the project and for when construction is likely to start for projects without a need for EIA. For example, ideally for a new construction project involving alignment choices and draft Orders, the Notice of Determination would be expected with the preferred route announcement, but this may not be possible. Table 1.2 gives examples of when the Notice of Determination should be published. No significant project progression or works should be undertaken that would prejudice the Secretary of State’s (or equivalent’s) position should representations be received.

² Council Directive 97/11/EC: Council Directive 97/11/EC of March 1997 amending Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, Official Journal No. L 073, 14/03/1997.

Project and related statutory procedures	When should the Notice of Determination be published at the very latest?		What is the preferable time for the publication of the Notice of Determination?
EXAMPLE 1			
Project with Line and Side Road Orders.	When EIA is mandatory the Notice of Determination should be published no later than the publication of the ES and draft Line and Side Road Orders.	When EIA is not a legal requirement, the Notice of Determination should be published no later than the publication of the draft Line and Side Road Orders.	Earlier publication of the Notice of Determination would be desirable e.g. with the preferred route announcement or scoping report publication.
EXAMPLE 2			
Project with no Line and Side Road Orders.	When EIA is mandatory the Notice of Determination should be published no later than the publication of the ES	When EIA is not a legal requirement, the Notice of Determination should be published early enough not to prejudice the Secretary of State's position.	When determination is not to complete EIA, publication should be at least six weeks (42 days) before either the investment, the start of works, or similar milestone.

Table 1.2 Notice of Determination Publication for Relevant Annex II Projects

Summary

1.22 Figure 1.2 summarises the screening process.

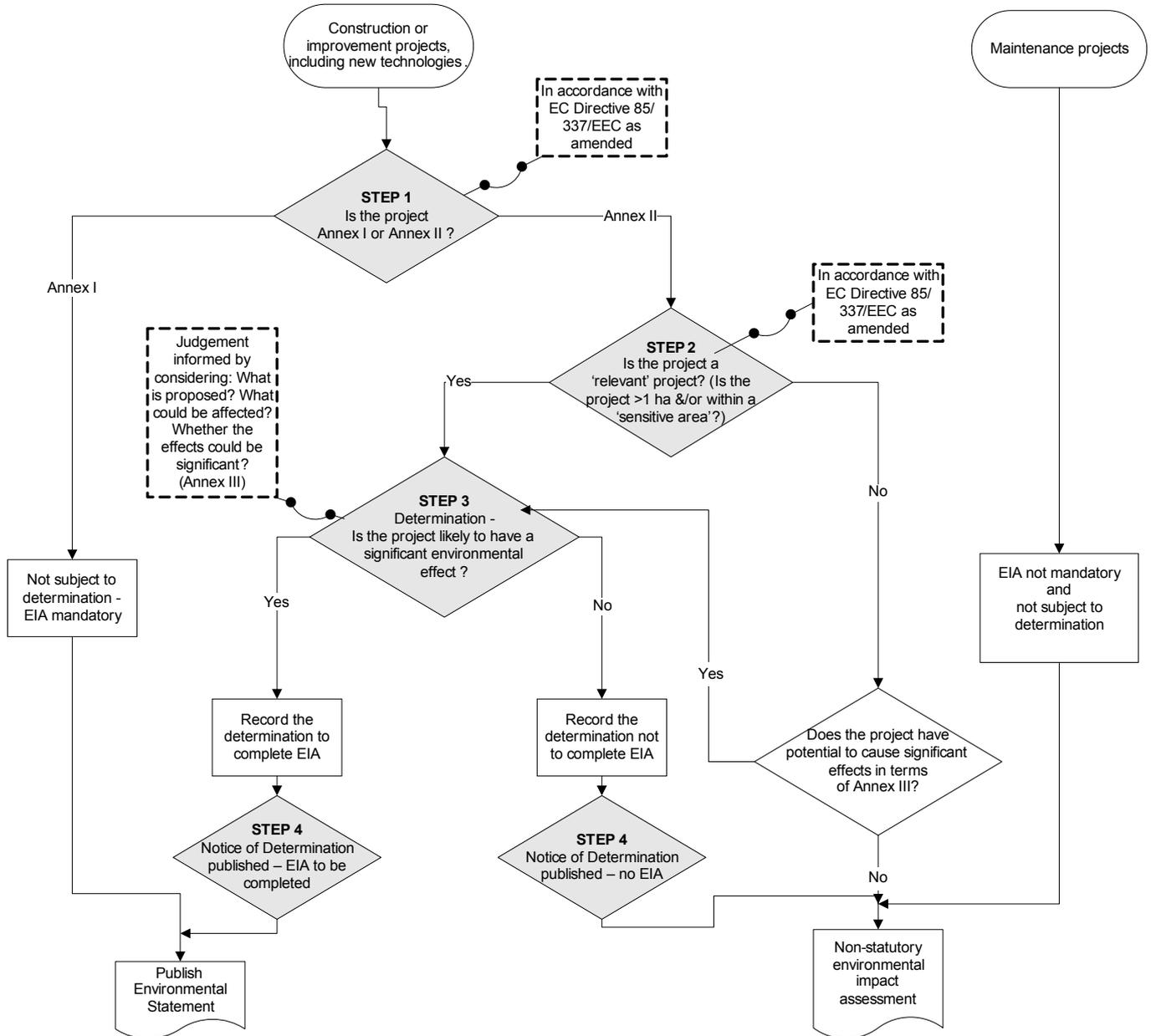


Figure 1.2 The Screening Process

1.23 The screening process applies to all projects, excluding those that are strictly maintenance. In addition, the screening process must be applied to the improvement component of any project linked to maintenance works. Purely maintenance works are included in the figure for completeness only.

2. REFERENCES

Legislation:

Council Directive 85/337/EEC: Council Directive of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment, *Official Journal No. L 175*, 05/07/1985.

Council Directive 97/11/EC: Council Directive of 3 March 1997 amending Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, *Official Journal No. L 073*, 14/03/1997.

Council Directive 2003/35/EC: Council Directive of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC, *Official Journal No. L 156/17*, 25/06/03.

Highways Act 1980.

New Roads and Street Works Act 1991.

Roads (Scotland) Act 1984.

Scottish Statutory Instrument 1999 No. 1 The Environmental Impact Assessment (Scotland) Regulations 1999, *The Stationery Office Limited*, ISBN 0 11 059107 0.

Scottish Statutory Instrument 2006 No. 614 The Environmental Impact Assessment (Scotland) Amendment Regulations 2006, *The Stationery Office Limited*, ISBN 0110714725.

Statutory Instrument 1988 No. 1221 (S.122) The Environmental Assessment (Scotland) Regulations 1988, *The Stationery Office Limited*, ISBN 0110872215.

Statutory Instrument 1988 No. 1241 The Highways (Assessment of Environmental Effects) Regulations 1988, *The Stationery Office Limited*, ISBN 011087241X.

Statutory Instrument 1993 No. 3160 The Roads (Northern Ireland) Order 1993, *The Stationery Office Limited*, ISBN 0110342895.

Statutory Instrument 1994 No. 1002 The Highways (Assessment of Environmental Effects) Regulations 1994, *The Stationery Office Limited*, ISBN 0110440021.

Statutory Instrument 1999 No. 369 The Highways (Assessment of Environmental Effects) Regulations 1999, *The Stationery Office Limited*, ISBN 0110820533 (England and Wales).

Statutory Instrument 2007 No. 1062 The Highways (Environmental Impact Assessment) Regulations 2007, *The Stationery Office Limited*, ISBN 9780110765969 (England and Wales).

Statutory Rule No. 89 Roads (Environmental Impact Assessment) Regulations (Northern Ireland) 1999.

Statutory Rule 2007 No. 346 Roads (Environmental Impact Assessment) Regulations (Northern Ireland) 2007, *The Stationery Office Limited*, ISBN 0 337 9790947.

3. ENQUIRIES

All technical enquiries or comments on this Standard should be sent in writing as appropriate to:

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**VOLUME 11 ENVIRONMENTAL
ASSESSMENT**
**SECTION 2 ENVIRONMENTAL
IMPACT ASSESSMENT**

PART 4

HA 204/08

**SCOPING OF ENVIRONMENTAL
IMPACT ASSESSMENTS**

SUMMARY

This Advice Note provides guidance for the scoping of environmental impact assessment for any type of trunk road project.

INSTRUCTIONS FOR USE

1. Remove Contents pages from Volume 11 and insert new Contents pages for Volume 11 dated August 2008.
2. Insert the new Advice Note HA 204/08 into Volume 11, Section 2.
3. Please archive this sheet as appropriate.

Note: A quarterly index with a full set of Volume Contents Pages is available separately from The Stationery Office Ltd.



THE HIGHWAYS AGENCY



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LLYWODRAETH CYNULLIAD CYMRU



DRD

Department for
Regional Development
www.drdrni.gov.uk

THE DEPARTMENT FOR REGIONAL DEVELOPMENT
NORTHERN IRELAND

Scoping of Environmental Impact Assessments

Summary: This Advice Note provides guidance for the scoping of environmental impact assessment for any type of trunk road project.

REGISTRATION OF AMENDMENTS

Amend No	Page No	Signature & Date of incorporation of amendments	Amend No	Page No	Signature & Date of incorporation of amendments

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**VOLUME 11 ENVIRONMENTAL
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PART 4

HA 204/08

**SCOPING OF ENVIRONMENTAL
IMPACT ASSESSMENTS**

Contents

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1. Scoping a Project
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3. Enquiries

1. SCOPING A PROJECT

1.1 Scoping seeks to decide which environmental topics are to be examined in statutory Environmental Impact Assessments (EIA) and non-statutory environmental impact assessments and how much effort should be expended – either a Simple or Detailed assessment. Therefore scoping should be considered the initial assessment level in the environmental impact assessment process (refer to SECTION 2, Part 1, Chapter 2). It is a tool that can be used to determine the

data and survey needs to inform the assessment process and to determine the appropriate assessment levels. Scoping can be an on-going activity that is re-activated at key stages in the project planning process as new information or available alternatives are narrowed to a preferred approach to the project. It can also be a useful exercise to carry out on projects that have not been developed for a period of time. Figure 1.1 represents the scoping process within the environmental impact assessment process.

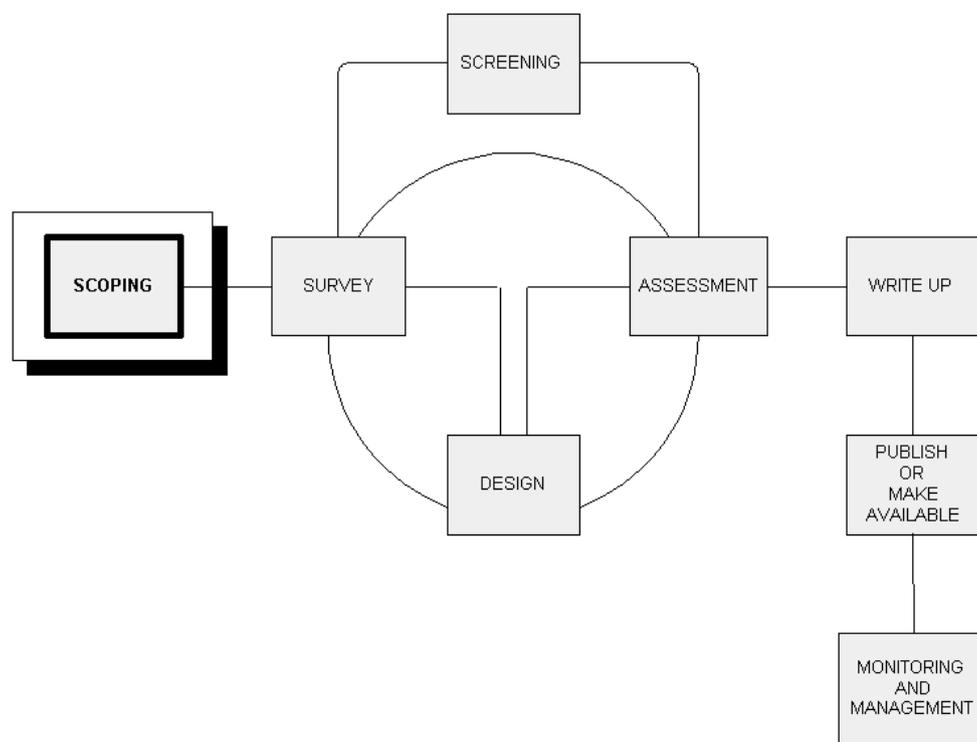


Figure 1.1 Scoping Within the Context of the Environmental Impact Assessment Process

1.2 Scoping can be carried out for any type of project, including new construction, improvement or maintenance projects.

1.3 Scoping can be an internal process and an external activity in which stakeholders are engaged in defining the assessment activities. The Overseeing Organisation should be equipped with an appreciation of those issues that are likely to have an important bearing on project delivery (for example, in England reference should be made to EnvIS). While the scope

of project assessment is set in the context of individual environmental topics, the scoping exercise should also recognise the interrelationships between topics and other projects, and also other priorities that may emerge from consultation with stakeholders and local communities.

1.4 Scoping should be undertaken ahead of any Simple or Detailed Assessment that is to be used to inform a project decision and the results of the scoping exercise reported appropriately (refer to SECTION 2,

Part 6, Chapter 2). The Designer must agree the scope of the EIA or non-statutory environmental impact assessment for that stage in the delivery process with the Overseeing Organisation.

1.5 These scoping results should be used to provide the basis for further assessment throughout the project design. The consequential approach to assessment introduced in SECTION 2, Part 1, Chapter 1 advocates that the level, and corresponding detail, of the coverage of the assessment should:

- inform option, design and planning decisions;
- be appropriate to the level of environmental risk, and type of conclusions and decisions that can be reasonably taken;
- provide the public with accessible reporting which reflects the assessment that has been carried out and gives due weight to significant effects; and
- clearly identify how assessment should progress beyond the scoping phase by determining data, survey and assessment needs.

1.6 For the purposes of scoping, the level of environmental risk associated with a project should be explored, and potential significant environmental effects should be identified. For example, there should be an appreciation of whether the project would require the disturbance of land for any of the works. Such disturbance may be temporary (e.g., trenching to introduce new cabling) or permanent (e.g., to construct foundations for a communications mast or gantry) and vary in scale from temporary topsoil storage to land use change with a new trunk road alignment. Environmental issues are often amongst the key issues affecting project delivery. These may relate to matters of scheduling of works, such as where breeding birds are concerned or where archaeological excavations need to be completed. They may relate to matters of principle on whether the scheme can proceed, for example as in relation to a Special Protection Area or Special Area of Conservation for nature conservation, an Air Quality Management Area, or a National Park or an Area of Outstanding Natural Beauty. All environmental effects that are likely to be significant, or risk being significant, should be assessed and reported.

1.7 There is no general definition of what constitutes significance in this context. Significance criteria are introduced generically in SECTION 2, Part 5, Chapter 2, and specifically in the SECTION 3 topic-

specific assessment guidance. The following factors should be considered:

- i. the characteristics of the project in terms of its size and activities, use of natural and man made resources, production of waste, risk and consequence of pollution incidents, and risk of accidents;
- ii. the importance of the receiving environment, i.e., of international, national, regional, county or local importance, or sensitivity or value. Designations reflect existing land use, abundance, protected status, quality, population density, ability to absorb the project and regenerative capacity of natural resources. Undesignated land may also be important;
- iii. the likely scale of the change following mitigation e.g., the land area, number of people affected and degree of change from the existing situation;
- iv. duration of any potential significant effects, whether they are permanent or temporary, and positive or negative, as a result of direct, indirect, secondary, cumulative, short, medium and long-term effects;
- v. the study area, particularly in considering the boundaries for cumulative effects, which may have to be defined beyond the project boundary and also the spatial boundary of the valued receptor/resource with potential to be affected directly or indirectly;
- vi. the time period within which significant effects may arise; and
- vii. consideration of past, present and reasonably foreseeable actions and trends that are having or will have a major influence on a valued receptor/resource (refer to SECTION 2, Part 5, Chapter 1).

1.8 A formal Scoping Opinion is not a requirement under the Highway EIA Regulations. However, the statutory environmental bodies, local authorities, and other public authorities with environmental responsibilities, and other key stakeholders are likely to have views on the scope of environmental impact assessments and it is good practice, particularly in the case of EIA, to consult with these interests to ensure that the issues to be addressed are appropriate. In addition, the local community and other non-statutory consultees may initially be more knowledgeable

about local conditions than those responsible for the assessment. Consequently, the opportunity to engage in dialogue with such groups, bearing in mind the individual groups' interests, has the potential to minimise the risk of unforeseen effects and to better focus the assessment upon those topics of significance. Similarly, where it is appropriate to supplement the topic guidance in SECTION 3, their advice can also be provided on surveys and data. Any dialogue should be directed towards establishing:

- a) whether and where there are existing resources or receptors that may need further investigation;
- b) whether existing environmental problems occur in the locality that may be ameliorated or potentially made worse by the proposed project;
- c) whether opportunities exist to improve environmental conditions which may coincide with delivery of the project;
- d) whether any trends or intermittent events occur that would be of relevance to the assessment, such as seasonal flooding or an activity occurring under some circumstances such as a large public events, diverted traffic, exceptional loads; and
- e) forthcoming events, activities, developments and land use changes that may have a bearing upon the future state of the environment.

1.9 The results of any scoping exercise should be recorded (refer to SECTION 2, Part 6, Chapter 2). Scoping Reports can range from a many page document down to just a few pages. The Overseeing Organisation will have established procedures for recording the results of the scoping process. Where a scoping exercise has been carried out and most of the effects have been found to be insignificant, it is likely that the reporting of this can be a simple document. For example, the scoping exercise associated with a simple road maintenance pavement renewal project may be reported in a few pages. Similarly, where a potential effect has been fully investigated but is found to be of little or no significance, it is sufficient to validate the level of assessment by recording:

- a) the work that has been done, e.g., a desk-top study and walkover survey by a qualified specialist;
- b) what this has shown, i.e., what effect, if any, has been identified; and
- c) why the effect is not significant.

1.10 Further guidance on reporting the results of the scoping exercise is presented in SECTION 2, Part 6, Chapter 2.

2. REFERENCES

Legislation:

- Council Directive 85/337/EEC: Council Directive of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment, *Official Journal No. L 175*, 05/07/1985.
- Council Directive 97/11/EC: Council Directive 97/11/EC of 3 March 1997 amending Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, *Official Journal No. L 073*, 14/03/1997.
- Council Directive 2003/35/EC: Council Directive of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC, *Official Journal No. L 156/17*, 25/06/03.
- Environmental Assessment (Scotland) Act 2005, *The Stationery Office Limited*, ISBN 0105900893.
- Highways Act 1980.
- New Roads and Street Works Act 1991.
- Roads (Scotland) Act 1984.
- Scottish Statutory Instrument 1999 No. 1 The Environmental Impact Assessment (Scotland) Regulations 1999, *The Stationery Office Limited*, ISBN 0 11 0591070.
- Scottish Statutory Instrument 2004 No. 520 The Environmental Information (Scotland) Regulations 2004, *The Stationery Office Limited*, ISBN 0110693566.
- Scottish Statutory Instrument 2006 No. 614 The Environmental Impact Assessment (Scotland) Amendment Regulations 2006, *The Stationery Office Limited*, ISBN 0110714725.
- Statutory Instrument 1988 No. 1221 (S.122) The Environmental Assessment (Scotland) Regulations 1988, *The Stationery Office Limited*, ISBN 0110872215.
- Statutory Instrument 1988 No. 1241 The Highways (Assessment of Environmental Effects) Regulations 1988, *The Stationery Office Limited*, ISBN 011087241X.
- Statutory Instrument 1993 No. 3160 The Roads (Northern Ireland) Order 1993, *The Stationery Office Limited*, ISBN 0110342895.
- Statutory Instrument 1994 No. 1002 The Highways (Assessment of Environmental Effects) Regulations 1994, *The Stationery Office Limited*, ISBN 0110440021.
- Statutory Instrument 1999 No. 369 The Highways (Assessment of Environmental Effects) Regulations 1999, *The Stationery Office Limited*, ISBN 0 11 082053 3.
- Statutory Instrument 2004 No. 3391 The Environmental Information Regulations 2004, *The Stationery Office Limited*, ISBN 011051436X.
- Statutory Instrument 2007 No. 1062 The Highways (Environmental Impact Assessment) Regulations 2007, *The Stationery Office Limited*, ISBN 9780110765969.
- Statutory Rule 1999 No. 89 Roads (Environmental Impact Assessment) Regulations (Northern Ireland) 1999, *The Stationery Office Limited*, ISBN 0 337 93407.
- Statutory Rule 2007 No. 346 Roads (Environmental Impact Assessment) Regulations (Northern Ireland) 2007, *The Stationery Office Limited*, ISBN 0 337 9790947.

3. ENQUIRIES

All technical enquiries or comments on this Advice Note should be sent in writing as appropriate to:

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**VOLUME 11 ENVIRONMENTAL
ASSESSMENT**
**SECTION 2 ENVIRONMENTAL
IMPACT ASSESSMENT**

PART 5

HA 205/08

**ASSESSMENT AND MANAGEMENT OF
ENVIRONMENTAL EFFECTS**

SUMMARY

This Advice Note provides guidance for determining the significance of environmental effects, including for cumulative effects, and for the management of those effects.

INSTRUCTIONS FOR USE

1. Remove Contents pages from Volume 11 and insert new Contents pages for Volume 11 dated August 2008.
2. Insert the new Advice Note HA 205/08 into Volume 11, Section 2.
3. Please archive this sheet as appropriate.

Note: A quarterly index with a full set of Volume Contents Pages is available separately from The Stationery Office Ltd.



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THE DEPARTMENT FOR REGIONAL DEVELOPMENT
NORTHERN IRELAND

Assessment and Management of Environmental Effects

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REGISTRATION OF AMENDMENTS

Amend No	Page No	Signature & Date of incorporation of amendments	Amend No	Page No	Signature & Date of incorporation of amendments

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Contents

Chapter

1. Information Assembly
2. Determining Significance of Environmental Effects
3. Management of Environmental Effects
4. References
5. Enquiries

1. INFORMATION ASSEMBLY

1.1 The task of identifying and assessing environmental effects should commence at the early inception of the project. Increasingly the potential for significant effects will have been recognised in plans or programmes. Where a Strategic Environmental Assessment (SEA) or Assessment of Implications on European Sites (AIES) has supported plans or programmes (or strategies in Scotland and Wales) it may also inform the scope of project environmental impact assessment activities (refer to SECTION 2, Part 1, Chapter 3). This scope may also have been informed by consultation with stakeholders, including the public and statutory environmental bodies.

1.2 This first chapter sets out the approach to identifying the factors and information needed to undertake the assessment of environmental effects and includes the following:

- I. Defining the project.
- II. Defining the study area.
- III. Defining assessment years and scenarios.
- IV. Information assembly.
- V. Project objectives and environmental impact assessment.
- VI. Environmental impact assessment and design.
- VII. Exploring alternatives.
- VIII. Identifying the most appropriate design.
- IX. Potential impacts.
- X. Mitigation, enhancement and monitoring.
- XI. Environmental performance.
- XII. Reporting.
- XIII. Uncertainty and validity of the assessment process.

I. DEFINING THE PROJECT

1.3 Correctly defining the project is essential. The Overseeing Organisation should ensure that the assessment matches the project that is the subject of

the decision-making and legal procedures, and that this relationship is made clear in the reporting (refer to SECTION 2, Part 6). Where statutory Environmental Impact Assessment (EIA) is completed, and an Environmental Statement produced, the Statement should be made public in accordance with the EIA Regulations, whether or not a Public Inquiry is required. Consideration of the Environmental Statement by the Secretary of State or equivalent before proceeding with a project is a mandatory part of the statutory decision-making process.

1.4 Division of a large project into small projects to avoid mandatory EIA is not only unacceptable, but is likely to be illegal and subject to challenge. Furthermore, the creation of smaller projects for management and administrative reasons needs to ensure that for the purposes of meeting the requirements of EIA Regulations (refer to SECTION 2, Part 2, Chapter 1), the defined projects are autonomous, neither dependent on other projects nor necessitating new additional projects in order to function. Project changes during the lifetime of that project, need to be screened and reviewed, and reported appropriately, to identify whether changes are significant enough to require further assessment.

II. DEFINING THE STUDY AREA

1.5 The study area for the assessment should be defined on a case-by-case basis reflecting the project and the surrounding environment over which significant effects can reasonably be thought to have the potential to occur both from that project and in combination with other projects. For the assessment of cumulative effects, the spatial boundary of the receptor/resource with potential to be affected directly or indirectly will also need to be considered. The study area will be set for each individual topic and it is good practice for this to be identified at an early stage (refer to SECTION 2, Part 4).

1.6 Where practical, establishing a common boundary across the assessment topics is desirable. For most projects the study area will be in the immediate environs around the project. However, for others it is possible that sensitive receptors and resources may be located beyond the immediate environs of the project, if there are ways through which the receptors and resources may experience effects associated with the project.

Consultation with stakeholders, including the public and statutory environmental bodies, and identification of potential receptors/resources and potential significant effects should inform the definition of the study area.

III. DEFINING ASSESSMENT YEARS AND SCENARIOS

1.7 The objective of environmental impact assessment is to gain an appreciation of the significant environmental effects predicted to result from a project. This process is outlined below.

1.8 The process involves forecasting the effects by comparing a scenario with the project against one without the project over time.

1.9 The absence and presence of the proposed projects are referred to as the Do-Minimum and Do-Something scenarios respectively. The potential significant environmental effects need to be defined for the Do-Minimum and Do-Something scenarios in the baseline year and a future year, or series of future years depending on the topic.

1.10 Table 1.1 sets out the assessment for the Do-Minimum and Do-Something scenarios.

Assessment Scenarios	Baseline year	Year 15 (or worst in first fifteen years)
Existing condition	✘/✓	✘
Do-Minimum	✓	✓
Do-Something	✓	✓

Table 1.1 Assessment Scenarios and Assessment Years

1.11 If one were forecasting the effects of construction, the baseline year would be chosen to represent the conditions prior to construction starting. This would be compared with the conditions during construction.

1.12 For the assessment of effects arising from the operation of the project, (such as the effects of traffic on noise and air quality) the baseline would again be

chosen to represent the situation prior to any effect, i.e., without the project and its traffic. This would then be compared with the conditions once the project is open to traffic.

1.13 Figure 1.1 shows an indicative assessment timeline for construction and operational effects.

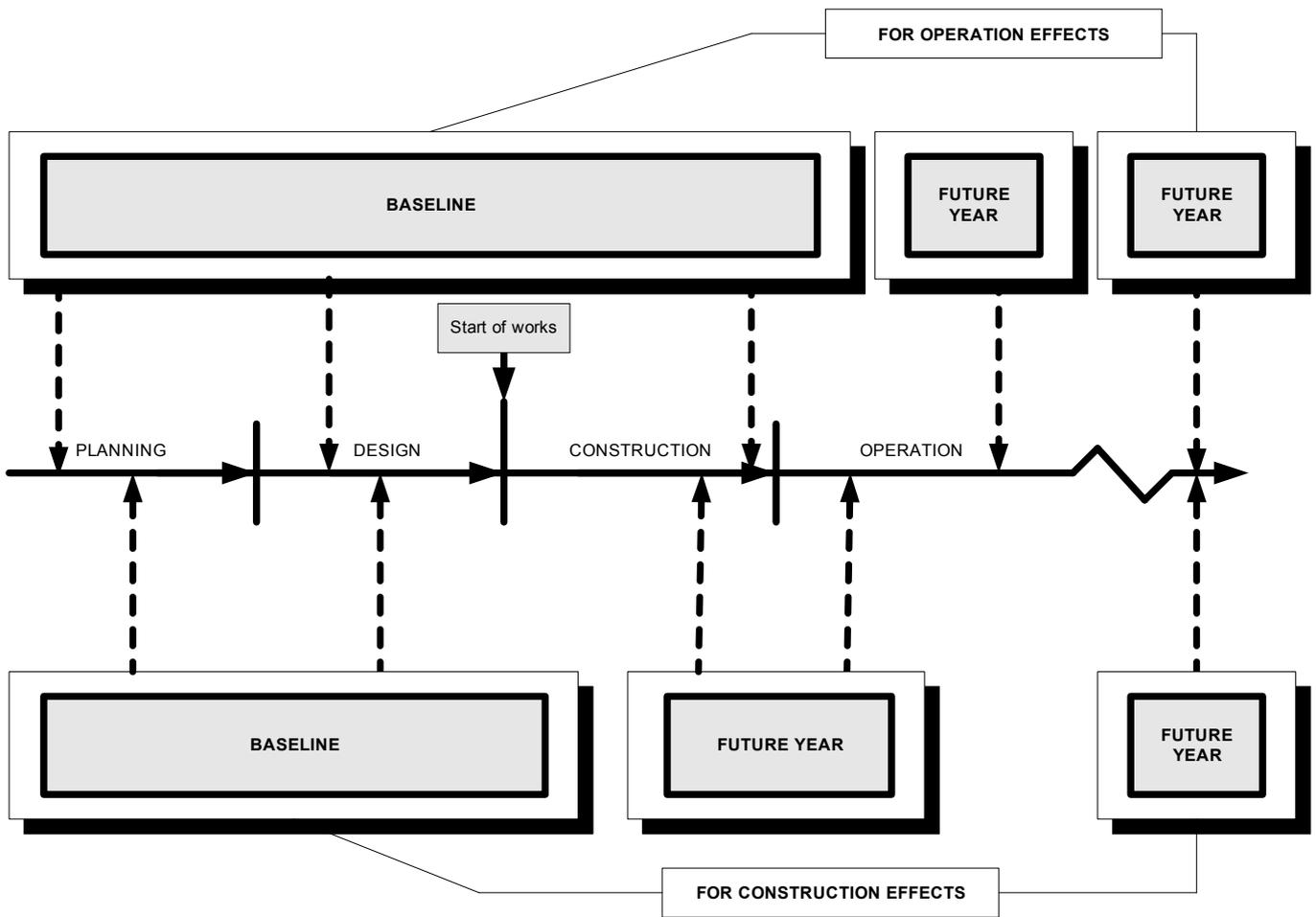


Figure 1.1 Assessment Scenarios

1.14 The topic chapters in SECTION 3 give specific guidance on baseline and future year choices for their topic. The future years are chosen to reflect any significant effects that may be predicted to arise and will be topic specific. For some topics, the worst year within the first 15 year period needs to be assessed. For others, particular target years may be assigned. Year 15 is typically the year chosen as it is likely that the mitigation measures will have achieved a significant effect by this time. For example, landscaping can typically take 15 years to deliver the mitigation of a significant effect.

1.15 To inform the likely baseline and future assessment years, each potentially affected receptor and resource should be scoped in accordance with the guidance set out in SECTION 2, Part 4. Where known, historic or current actions contributing to the state of the resource should be reviewed, indicating whether the effects are increasing or decreasing over time. Both Do-Minimum and Do-Something scenarios could

be influenced by changes in legislation, land use and climate change, transport and community activities. Relevant legislation and regulation, standards and policies should therefore be identified and examined in an attempt to determine the various changes that are likely to occur regardless of the road project. These can inform the choice of assessment year(s).

IV. INFORMATION ASSEMBLY

1.16 There is a great deal of environmental information readily available to Designers from Government Organisations and agencies, academic and charitable organisations as well as the Overseeing Organisation. Data, survey and assessment needs should, therefore, be the subject of the scoping process as well as the overall project management process. It is important that the gathering of site environmental information does not lead to unnecessary anxiety amongst local people and the possible blighting of properties. However, increasingly projects will

have been identified in publicly available Transport Plans. Before the Designer undertakes a site visit, consideration should be given to the sensitivity of receptors and resources and the confidentiality of particular interests. Approval should also be sought from the Overseeing Organisation prior to approaching landowners and undertaking site visits.

1.17 Some environmental surveys should be undertaken at specific times of the year to ensure that appropriate data are obtained (see topic specific advice in SECTION 3). In order not to encounter delay, the Designer should determine the need for time sensitive surveys as early as possible in the option choice, planning, assessment and design process and then incorporate these into the project planning schedule unless impractical or unnecessary e.g., where the risk is small. Where justifiable constraints limit the scope of surveys these should be discussed with the relevant statutory environmental bodies to determine an appropriate approach and reported appropriately (refer to SECTION 2, Part 6).

1.18 Environmental data collated during the assessment process can help to populate asset databases and inform performance reporting and it should therefore be recorded, where it doesn't already exist, in line with the requirements of the Overseeing Organisation (e.g., in England, environmental data resulting from data collection should be recorded in EnvIS). Equally, data held by the Overseeing Organisation is likely to be a valuable source of data to inform the assessment process.

V. PROJECT OBJECTIVES AND ENVIRONMENTAL IMPACT ASSESSMENT

1.19 Whilst not a statutory requirement of the EIA Regulations it is useful to define the project's objectives in the early stages of a project. The objectives are the measures against which the success of the project can be judged. Project objectives can therefore be used as a benchmark against which the performance of a project can be measured (refer to SECTION 2, Part 5, Chapter 1, Section XI).

1.20 It is important to establish and understand if there is a hierarchy of objectives from national, even international, policy objectives through to the specific objectives for local areas and individual communities. For example, project objectives may be linked to objectives set out in any higher level plans or programmes (or strategies) as described via SEA reports or transport appraisal reports and plans. An awareness

of conflicting objectives is needed and approaches followed to minimise the adverse risk of conflict.

1.21 The project objectives will contribute to the reporting of the extent to which:

- national, regional and local policies and strategic objectives are achieved;
- statutory obligations and project-specific objectives (including those confirmed in Public Inquiries) are achieved; and
- problems have been resolved.

1.22 The reporting of the environmental impact assessment process can therefore be used as a tool to demonstrate the effectiveness of the option choice, design and mitigation in relation to the project objectives at the time of assessment.

1.23 Objectives that are developed specifically for the project should be agreed in consultation with the Overseeing Organisation. Such objectives should be robust, be achievable in terms of affordability and value for money and measurable where appropriate, to ensure that they can be monitored and validated.

VI. ENVIRONMENTAL IMPACT ASSESSMENT AND DESIGN

1.24 One key requirement of environmental impact assessment is to ensure that there is a regular flow of information between the Designers and the topic area specialists. This is to ensure that the emerging findings of the assessment are conveyed and the feasibility of 'designing-out' potential significant adverse environmental effects is adequately considered and then carried out as an iterative process.

1.25 Avoiding, reducing and remedying significant adverse environmental effects through option choice and by inclusive design of mitigation measures is an integral part of the iterative design and planning of a project. Some mitigation may be incorporated as part of the design process for the project, for example, the selection of vertical and horizontal alignment or the location of junctions. The incorporation of other additional mitigation measures such as noise barriers or earth bunds can be separately identified to complement the chosen alignment to produce an efficient and cost-effective design.

1.26 During environmental impact assessment of a project, due regard should be given to effects that may

arise not just when the project is constructed or opened, but also in the longer term. Permanent and temporary, direct, indirect, secondary, cumulative, short, medium and long-term, positive and negative effects all need to be addressed via the design process (i.e., future effects of project implementation, operation and maintenance). Opportunity to incorporate environmental enhancement measures into the design should also be given due consideration.

1.27 In determining the most appropriate form of design solutions there should be no ambiguity. Only those measures which the Overseeing Organisation has power to control or implement and which are committed (refer to SECTION 2, Part 5, Chapter 1, Section X) should be assessed; any measures dependent upon agreement with third parties should be presented as such and not be construed as part of committed measures. Such mitigation by agreement should not feature in the assignment of effect significance unless it has been agreed to an extent that it is reasonably certain it can be secured.

1.28 Addressing the interaction of effects between the separate environmental topics requires integrated working practices with effective co-ordination between topic specialists throughout the assessment process.

1.29 It is possible that Environmental Reports prepared for plans and programmes (and strategies) under the SEA Regulations and the Assessment of Implications on European Sites process (where applicable) will impose requirements upon the design of projects. Indeed, it is possible that strategic mitigation measures may need to be delivered via individual projects. Consequently, the Designer needs to be aware of any such obligations placed on their project. The effectiveness of the project design in meeting the strategic measures defined in SEA Environmental Reports and implemented through projects may also be the subject of monitoring and auditing as part of the review reporting process defined by the SEA Regulations (refer to SECTION 2, Part 1, Chapter 3).

1.30 The assessment should reflect upon the extent to which land use and management change, and indeed how climate change, may alter future conditions. As a result of this, a new problem or opportunity may arise that does not exist under the current conditions. If dealt with as part of the assessment, cost effective solutions may be identified early when the problem is anticipated rather than left to become evident over time.

1.31 The effect of climate change is a key consideration in the assessment process. The headline

changes in climate that the UK is expecting to experience as climate change manifests itself are:

- a) more extreme and variable weather conditions;
- b) increased fluvial flooding; and
- c) changes in sea level.

1.32 There is likely to be a regional variation in the extent to which these changes occur, with the whole of the UK experiencing change, but with a greater regional emphasis on some aspects. Current UK climate change predictions, produced by the UK Climate Impacts Programme, look at 3 time frames, the 2020s, 2050s, and the 2080s, with the climatic changes becoming more pronounced the further away from the present we move. Until recently, the assumption has been that the aggregated weather observations of the past provided a good indication of current and future weather patterns. The pace of climate change is seriously challenging this presumption, and it is now important to consider the life and purpose of design features, and ensure that they continue to function under the increasing challenges of a changing climate.

1.33 Some environmental features may benefit under climate change, whilst others may deteriorate. It is down to the professional judgement (informed by relevant up to date studies, research and expert opinion where these are available) of the specialists to assess the effect of climate change, in the context of the assessment of the proposed works, on the elements under their examination, and determine the extent to which it requires a formal consideration. If climate change impacts are anticipated to increase the pressure on the element under examination, within the design life of the proposed project, then the latest UK climate change scenarios, published by the Met Office, should be considered as part of the assessment. In addition, the Designer should refer to the specific policy requirements of the Overseeing Organisation on climate change.

1.34 The separate topics areas in SECTION 3 each address climate change in greater detail.

VII. EXPLORING ALTERNATIVES

1.35 The formulation of alternatives needs to be driven by a regard to the project objectives rather than focussed on the narrow pursuit of one or two primary objectives. The aim of exploring alternatives is to ensure consideration of possible solutions that offer the best outcomes across the full range of objectives set by the Overseeing Organisation. The number and significance of adverse effects should, therefore, be minimised.

1.36 Transport projects are increasingly identified as a result of plans, programmes, strategies or studies in which an appraisal of alternatives has already been undertaken in the establishment of the project brief. Where a project contributes towards a higher-level plan, programme, strategy or study that has been the subject of, for example, a Multi-Modal Study, or Regional Spatial Strategy, then a wider range of alternatives may have previously been examined and reported in the public domain. Where this higher-level appraisal has considered alternatives, there is no requirement to duplicate the process. Therefore the consideration of alternatives should concentrate only on those alternative designs that emerge in pursuit of the project objectives.

1.37 Consequently, the Overseeing Organisation may need to consider the following types of alternatives including the “Do-Minimum” option:

- a) **demand alternatives:** to meet the need through demand management techniques;
- b) **activity alternatives:** such as provision of traffic calming instead of a new road;
- c) **location alternatives:** selection of different corridors or access routes;

and as a sub-set of these main alternatives:
- d) **delivery alternatives:** alternatives that reflect different means of delivering the desired end point in production terms, for example, a clear span bridge or one with piers and abutments in the river;
- e) **scheduling alternatives:** programming the activities to avoid periods of enhanced environmental sensitivity. Alternative temporary land-take during construction should be considered;
- f) **input alternatives:** use of different materials, lighting strategies or different designs; and
- g) **mitigation alternatives:** a variety of solutions may be available to mitigate the adverse consequences of a proposal.

1.38 Not all alternatives need to be explored to an equal level of detail. Some alternatives will be examined in less detail than others, as a short study may reveal that they can be eliminated early in the process. Others may survive to a later stage in the project delivery process. The amount of investigation

should be proportionate to the feasibility and benefits that an alternative may generate. An audit trail of such alternatives that have been examined, and the reason for not pursuing them, should be put in place.

1.39 To meet the requirements of the EIA Regulations (refer to SECTION 2, Part 2, Chapter 1), a summary of the main alternatives studied by the Overseeing Organisation that emerge in pursuit of the project objectives, the reason for the Overseeing Organisation’s choice of project (taking into account potential significant environmental effects), and an indication of the main reasons for continuing with the project taking consideration of potential significant environmental effects, must be provided in the Environmental Statement. The main alternatives typically relate to ‘Demand’, ‘Activity’ or ‘Location’ alternatives e.g., those considered and presented at public consultation for a major project. It should be noted that consideration of alternatives for other assessment processes (e.g., Assessment of Implications on European Sites) might be different from the above.

VIII. IDENTIFYING THE MOST APPROPRIATE DESIGN

1.40 In determining the most appropriate design, the following considerations should be made:

- a) the long-term effectiveness of the proposed design to secure the project objectives;
- b) the ability for the design to incorporate measures to avoid, reduce or remedy significant adverse environmental effects;
- c) the effect the design may have on other environmental receptors or resources;
- d) the deliverability and practicality of the proposed design; and
- e) the full cost of successful implementation including the practicalities of establishment and future management and maintenance costs.

1.41 The mitigation of significant adverse environmental effects should be dealt with as an iterative part of the option choice, planning and design stage. Failure to do so may result in: failure to deliver the project; and failure to avoid, reduce or remedy significant adverse environmental effects, particularly where land is not secured to allow delivery or future maintenance. Expensive solutions may also arise if the mitigation measures are implemented post construction. The following principles can be identified:

- a) mitigation measures perform to an acceptable standard in safety, environmental, economic, social and community terms;
- b) the mitigation measures can be fully implemented and all mitigation measures are agreed with the Overseeing Organisation. The implications for management and maintenance should be recognised by the Designer and the Overseeing Organisation (e.g., the provision of planting to form a visual screen entails a commitment to establishment maintenance in the early years and a long-term management obligation); and
- c) the Overseeing Organisation should ensure that the design and mitigation measures do not unnecessarily restrict the flexibility during implementation to achieve the same or improved level of environmental performance by alternative means.

1.42 The iterative assessment and design processes should seek to incorporate measures to avoid or reduce the significant environmental effect following a hierarchical system, where avoidance is always the first mitigation measure to be considered:

- a) Avoidance – consider and incorporate measures to prevent the effect (for example, consider alternative design options or phase the project to avoid environmentally sensitive periods).
- b) Reduction – where avoidance is not possible, then methods to lessen the effect should be considered and incorporated into the project design. Consultation with the Overseeing Organisation will determine whether any remaining ‘residual’ effect is considered to be environmentally acceptable.
- c) Remediation – where it is not possible to avoid or reduce a significant adverse effect, then measures to offset the effect should be considered.

1.43 The costs for environmentally sound project design and mitigation should be considered at all stages when the overall costs for funding of the project are calculated and planned, but the most cost effective and environmentally acceptable solutions will be delivered where potential environmental effects are given early consideration.

IX. IDENTIFYING POTENTIAL IMPACTS

1.44 In assessing the environmental effects of a project it is first necessary to identify the impacts that may arise as a result of project implementation. The EIA Regulations require the assessment to cover the likely significant effects arising from the permanent and temporary, direct, indirect, secondary, cumulative, short, medium and long-term, positive and negative impacts of a project.

1.45 While the majority of impacts potentially associated with road projects are well known, local circumstances may have the potential to generate unique or controversial situations. Through the process of establishing an appreciation of the problems and opportunities within the study area, an awareness of the likely impacts will emerge. These likely impacts should be identified and considered initially at the scoping stage, prior to identifying needs for further assessment.

1.46 All impacts, whether real or perceived by the community, are worthy of consideration during the environmental impact assessment process. However, the time and resource devoted to purely perceived impacts should be commensurate with that needed to secure understanding. Different impacts may overlap and the interaction of these impacts should be identified during the environmental impact assessment process.

a. Permanent and temporary impacts

1.47 Recognition should be made that permanent impacts will be more significant than those of a temporary nature. For example, the impact may only occur during a single phase of the project construction and be temporary. Alternatively, the impact may be long-term or irreversible and hence permanent. It is, therefore, important that the assessment distinguishes between permanent and temporary impacts.

1.48 Temporary impacts are those that are considered to be short or medium-term. Therefore, where the impact will be temporary, consideration should be given to the likely duration of the impact.

1.49 SECTION 3 provides further guidance on the analysis of permanent and temporary impacts associated with each environmental topic.

b. Direct, indirect and secondary impacts

1.50 The assessments should not just concentrate on the direct impacts that are generally very obvious, for example, the noise benefits of reduced traffic.

Assessments should also consider indirect impacts which occur in two basic forms:

- i. impacts related to pressure as a result of project-induced change. For example, an environmental resource may experience increased pressures as the result of the implementation of a project. For example, the removal of hedgerows to make severed fields more viable; and
- ii. those that alter the character, behaviour or functioning of the affected environment because of the knock-on impacts of the project over a wider area or timescale. For example, the removal of hedgerows above may lead to changes in soil retention.

1.51 Discovering indirect impacts early in the project delivery process helps determine whether to proceed or to modify the proposed design so that the long-term indirect consequences are consistent with the long-term needs and goals of the affected area as set out in adopted plans and programmes (and strategies).

1.52 SECTION 3 provides further guidance on the analysis of direct, indirect and secondary impacts associated with each environmental topic.

c. Cumulative impacts

1.53 The EIA Regulations require cumulative impacts to be considered in EIA. In addition, it is good practice to consider cumulative impacts in non-statutory environmental impact assessment.

1.54 Cumulative impacts result from multiple actions on receptors and resources and over time and are generally additive or interactive (synergistic) in nature. Cumulative impacts can also be considered as impacts resulting from incremental changes caused by other past, present or reasonably foreseeable actions together with the project¹. Therefore, in setting the baseline scenario (refer to SECTION 2, Part 5, Chapter 1, Section III) it should be recognised that a cumulative assessment may be needed.

1.55 There are principally two types of cumulative impact in environmental impact assessment. These are:

- i. cumulative impacts from a single project; and
- ii. cumulative impacts from different projects (in combination with the project being assessed).

1.56 In the first type (i.e., cumulative impacts from a single project), the impact arises from the combined action of a number of different environmental topic-specific impacts upon a single receptor/resource.

1.57 In the second type (i.e., cumulative impacts from different projects, in combination with the project being assessed), the impact may arise from the combined action of a number of different projects, in combination with the project being assessed, on a single receptor/resource. This can include multiple impacts of the same or similar type from a number of projects upon the same receptor/resource.

1.58 For the purposes of this guidance, 'reasonably foreseeable' is interpreted to include other projects that are 'committed'. These should include (but not necessarily be limited to):

- Trunk road and motorway projects which have been confirmed (i.e., gone through the statutory processes).
- Development projects with valid planning permissions as granted by the Local Planning Authority, and for which formal EIA is a requirement or for which non-statutory environmental impact assessment has been undertaken.

1.59 In each case, other projects to be considered in the assessment of cumulative effects should be determined in consultation with the Local Planning Authority and other statutory bodies and confirmed with the Overseeing Organisation on a project-by-project basis.

1.60 SECTION 3 provides further guidance on the approach to identify and analyse the interrelationship between impacts associated with each environmental topic. It is important that there is good co-ordination of the sharing of results between topic areas to ensure a comprehensive identification and understanding of the interaction between impacts.

¹ *Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interaction*, European Commission, May 1999.

X. MITIGATION, ENHANCEMENT AND MONITORING

1.61 Legislation provides the Overseeing Organisation with powers to:

“acquire land for the purpose of mitigating any adverse effect which the existence or use of a highway constructed or improved by them, or proposed to be constructed or improved by them, has or will have on the surroundings of the highway.”²

1.62 Within these limitations and in accordance with the relevant legislation, the Designer should actively explore the feasibility and costs of delivering schemes that deliver across all the project’s objectives and make effective contributions towards sustainable development.

1.63 Some measures may mitigate more than one effect. For example, planting can reduce visual effects for people and also benefit wildlife; balancing ponds may be designed with pollution control measures and deliver the required hydrological regime. Occasionally, measures can produce adverse as well as beneficial effects, e.g., an environmental barrier might severely increase visual effect or the excavation of balancing ponds may affect buried archaeological sites. It is important to manage measures to ensure that legal requirements are fulfilled and that the project objectives and anticipated benefits and commitments are achieved. Similarly, it may be necessary to monitor particular measures to ensure their successful implementation. These requirements should be covered by the standard Environmental Management System used for the project (refer to SECTION 2, Part 5, Chapter 3).

1.64 There are principally two types of mitigation; essential or desirable. Determining whether mitigation is essential or desirable relies on the professional judgement of the topic specialist. If mitigation is defined as essential, and it can be provided under the requirements and powers of the relevant legislation, then the Overseeing Organisation has statutory powers with which to deliver this. This type of mitigation can therefore be guaranteed and is taken into consideration during the assessment process. Desirable mitigation is a measure considered to be environmentally beneficial but that cannot usually be achieved using statutory powers. For example, desirable mitigation may require third party agreement. Unless this agreement is in place

prior to the statutory processes, it cannot be guaranteed and therefore should not be considered when assigning significance. This is because, where a decision has been taken that the project can proceed given the reported level of environmental performance, then changes that undermine that decision may threaten the future integrity of the project, and this is more likely to arise where mitigation is purely desirable. The reporting and implementation of desirable mitigation should therefore be considered on a project-by-project basis, as agreed with the Overseeing Organisation. SECTION 2, Part 5, Chapter 1, Section VIII discusses the hierarchical approach for developing mitigation.

1.65 At each stage in the project planning process, the design and the mitigation measures should be agreed with the Overseeing Organisation. The mitigation and management commitments and requirements should also be reported appropriately in accordance with the requirements of the Environmental Management System (refer to SECTION 2, Part 5, Chapter 3). The Overseeing Organisation should ensure that appropriate skills are available to design and deliver the measures agreed during project assessment. Of crucial importance are those measures affecting and reducing the significance of adverse effects (i.e., essential mitigation). The likely effectiveness of these measures should be clearly evaluated and reported. The Overseeing Organisation should ensure that appropriate powers in accordance with relevant legislation are used to ensure that essential mitigation can be delivered. It is important that the Overseeing Organisation monitors its commitments to mitigate for adverse significant environmental effects and enhance the environment where required (for example, the duty to enhance biodiversity under Section 40 of the Natural Environment Rural Communities Act 2006). Follow-up management processes should be in place to ensure the delivery of essential features or controls takes place. In addition, the success of mitigation should be reported in accordance with the specific requirements of the Overseeing Organisation to inform continuous improvement of performance. The cost associated with the construction and establishment of measures should be included in the overall project cost, throughout the project planning and construction process.

1.66 Any commitments made earlier in the environmental assessment process should not be overlooked, particularly as these commitments and any associated measures may need to be reported to fulfil statutory obligations. Where they are no longer needed

² Highways Act 1980 (as amended), Part XII, Section 246.

to deliver an objective, then an audit trail should record this situation.

XI. ENVIRONMENTAL PERFORMANCE

1.67 In defining the design and mitigation solutions, rather than being overly prescriptive, the project objectives and level of environmental performance that the solution is to achieve should be specified early in the assessment process, preferably at the Scoping phase (refer to SECTION 2, Part 4).

1.68 Defining objectives specific to the project allows for the consideration of novel or innovative measures. On the other hand, there may be situations that require strict adherence to mitigation measures that are known to be successful. Due consideration of risk, failsafe and corrective measures to achieve the objective of the mitigation should be made when novel or innovative approaches are being considered. Particular care should be taken to ensure that the setting of a single performance objective does not then result in a secondary unforeseen adverse effect.

1.69 In consultation with the Overseeing Organisation, the Designer should explore alternative means of minimising mitigation costs and maintaining flexibility, whilst ensuring that the requirements of the project objectives are fulfilled and the level of environmental performance is not compromised. Where alternatives arise, these should be explored with the Overseeing Organisation to ensure there is no trade-off between maintaining flexibility and environmental performance. The level of environmental performance required may be appropriately documented as a commitment in an Environmental Management System (EMS) (refer to SECTION 2, Part 5, Chapter 3) in accordance with the specific requirements of the Overseeing Organisation. Ensuring that the proposed design and mitigation measures achieve their purpose and fulfil the project objectives is fundamental to minimise the significant adverse effects of any project and to meet any legal requirements.

1.70 Monitoring and validating of the project objectives should be undertaken to establish whether the project obligations have been met. The timescale for monitoring and validating should be agreed with the Overseeing Organisation.

1.71 Further guidance regarding project objectives is given in SECTION 2, Part 5, Chapter 1, Section V.

1.72 Environmental commitment data should be recorded as part of the process of reporting

environmental impact assessments. Performance monitoring should be recorded in accordance with the requirements of the relevant Overseeing Organisation (for example, through EnvIS in England).

XII. REPORTING

1.73 SECTION 2, Part 6 provides guidance on the reporting of the environmental impact assessment process.

XIII. UNCERTAINTY AND VALIDITY OF THE ASSESSMENT PROCESS

1.74 The environmental impact assessment process should recognise that there may be some uncertainty attached to the prediction of environmental effects and this should be recognised in each of the SECTION 3 topic areas. The following are key sources of uncertainty:

- the validity of baseline data;
- the effect of the passage of time on the validity of data;
- future changes that could affect the conclusions of an assessment; and
- assumptions and predictions.

1.75 The sources of uncertainty and their implications should be clearly identified and documented, usually in qualitative terms, as the assessment progresses. Where it is meaningful to do so, the uncertainty should be expressed quantitatively, e.g., reflecting the error range associated with a particular prediction. The passage of time and environmental knowledge or change may alter uncertainty. There is, therefore, a link between uncertainty and validity in time.

1.76 One source of uncertainty is the time period or window between the various stages in project development or environmental impact assessment reporting. This influences the validity of the assessment since the data on which predictions are based may become out of date (e.g. through changes in the baseline environment). Similarly, where the environmental impact assessment places reliance upon data drawn from studies of plans or programmes (or strategies), or data gathered during a previous stage in the project delivery process, then the validity of this information should be confirmed. This may require the gathering of updated information through site visits and consultations.

1.77 Apart from considering the validity of the baseline data, the likely period over which the project and individual topic assessments would remain valid should also be considered. Retaining previously gathered data would improve the efficiency of subsequent assessments. In certain circumstances, and if agreed with the Overseeing Organisation, it may be cost effective to continue data collection during periods of inactivity, reviewing the data once the project is to be taken forward. Alternatively, continual data collection may be necessary in order to establish greater confidence in the baseline data.

1.78 Designers and the Overseeing Organisation need to be aware of the changes that may occur that question the validity of environmental data. They should consider the following variables:

- i. the baseline environment changes, e.g., community expansion or species movement;
- ii. the problem being addressed by the project changes and the project varies with consequentially different impacts arising;
- iii. environmental values change e.g. new designations; and
- iv. societal values change e.g. change of policy or legislation; new environmental design and mitigation possibilities emerge.

1.79 In some planning situations, typically urban situations, the environment may be subject to rapid change such that it is difficult to forecast the future situation. Consequently, some of the data, assumptions and predictions may become invalid. The environmental impact assessment should provide a commentary upon the likely period over which the data is envisaged to be valid and the degree of uncertainty attached to such data.

1.80 Projects emerging from plans and programmes (and strategies) may have been assessed at different levels of detail using data of potentially variable quality. Appropriate validation of the assessment from the plan or programme (or strategy) may be necessary at the commencement of the project development process since several years may elapse prior to the project development process commencing.

2. DETERMINING SIGNIFICANCE OF ENVIRONMENTAL EFFECTS

2.1 The purpose of environmental impact assessment is not to assess or characterise the environment for its own sake, but rather to influence design and option choice and ensure effort to mitigate effects is focussed on those more significant effects. The criterion for arriving at the assessment of environmental effects can be considered in a formulaic manner. In most cases the output of an environmental impact assessment will be to report on the significance of a particular effect.

2.2 The significance of the effect is formulated as a function of the receptor or resource environmental value (or sensitivity) and the magnitude of project impact (change). In other words, significance criteria are used to report the effect of the impact.

2.3 This second chapter sets out the approach to determining significance of environmental effects and includes the following:

I Assigning environmental value.

II Assigning magnitude of impact.

III Assigning significance.

IV Cumulative effects.

I ASSIGNING ENVIRONMENTAL VALUE

2.4 Typical SECTION 3 descriptors and criteria for the environmental value of an environmental resource are listed in Table 2.1. Note that not all of the SECTION 3 topics will use all the following value categories.

Value (sensitivity)	Typical descriptors
Very High	<ul style="list-style-type: none"> Very high importance and rarity, international scale and very limited potential for substitution.
High	<ul style="list-style-type: none"> High importance and rarity, national scale, and limited potential for substitution.
Medium	<ul style="list-style-type: none"> High or medium importance and rarity, regional scale, limited potential for substitution.
Low (or Lower)	<ul style="list-style-type: none"> Low or medium importance and rarity, local scale.
Negligible	<ul style="list-style-type: none"> Very low importance and rarity, local scale.

Table 2.1 Environmental Value (or Sensitivity) and Typical Descriptors

II ASSIGNING MAGNITUDE OF IMPACT

2.5 Typical SECTION 3 descriptors and criteria which define the magnitude of an impact of a project are listed in Table 2.2.

Magnitude of impact	Typical criteria descriptors
Major	<ul style="list-style-type: none"> Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements (Adverse).
	<ul style="list-style-type: none"> Large scale or major improvement of resource quality; extensive restoration or enhancement; major improvement of attribute quality (Beneficial).
Moderate	<ul style="list-style-type: none"> Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements (Adverse).
	<ul style="list-style-type: none"> Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality (Beneficial).
Minor	<ul style="list-style-type: none"> Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements (Adverse).
	<ul style="list-style-type: none"> Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring (Beneficial).
Negligible	<ul style="list-style-type: none"> Very minor loss or detrimental alteration to one or more characteristics, features or elements (Adverse).
	<ul style="list-style-type: none"> Very minor benefit to or positive addition of one or more characteristics, features or elements (Beneficial).
No change	<ul style="list-style-type: none"> No loss or alteration of characteristics, features or elements; no observable impact in either direction.

Table 2.2 Magnitude of Impact and Typical Descriptors

III ASSESSING SIGNIFICANCE

2.6 The approach to assigning significance of effect relies on reasoned argument, professional judgement and taking on board the advice and views of appropriate organisations. For some disciplines, predicted effects may be compared with quantitative thresholds and scales in determining significance. Assigning each effect to one of the five significance categories enables different topic issues to be placed upon the same scale, in order to assist the decision-making process at whatever stage the project is at within that process. These five significance categories are set out in the Table 2.3.

Significance category	Typical descriptors of effect
Very Large	Only adverse effects are normally assigned this level of significance. They represent key factors in the decision-making process. These effects are generally, but not exclusively, associated with sites or features of international, national or regional importance that are likely to suffer a most damaging impact and loss of resource integrity. However, a major change in a site or feature of local importance may also enter this category.
Large	These beneficial or adverse effects are considered to be very important considerations and are likely to be material in the decision-making process.
Moderate	These beneficial or adverse effects may be important, but are not likely to be key decision-making factors. The cumulative effects of such factors may influence decision-making if they lead to an increase in the overall adverse effect on a particular resource or receptor.
Slight	These beneficial or adverse effects may be raised as local factors. They are unlikely to be critical in the decision-making process, but are important in enhancing the subsequent design of the project.
Neutral	No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

Table 2.3 Descriptors of the Significance of Effect Categories

2.7 It is important to note that significance categories are required for positive (beneficial) as well as negative (adverse) effects. The five significance categories give rise to eight potential outcomes. Applying the formula, the greater the environmental sensitivity or value of the receptor or resource, and the greater the magnitude of impact, the more significant the effect. The consequences of a highly valued environmental resource suffering a major detrimental impact would be a very significant adverse effect. The typical significance categories presented in Table 2.4 and within SECTION 3 topics have been prepared specifically for decision-making on projects and they may not necessarily be appropriate to other projects.

		MAGNITUDE OF IMPACT (DEGREE OF CHANGE)				
		No change	Negligible	Minor	Moderate	Major
ENVIRONMENTAL VALUE (SENSITIVITY)	Very High	Neutral	Slight	Moderate or Large	Large or Very Large	Very Large
	High	Neutral	Slight	Slight or Moderate	Moderate or Large	Large or Very Large
	Medium	Neutral	Neutral or Slight	Slight	Moderate	Moderate or Large
	Low	Neutral	Neutral or Slight	Neutral or Slight	Slight	Slight or Moderate
	Negligible	Neutral	Neutral	Neutral or Slight	Neutral or Slight	Slight

Table 2.4 Arriving at the Significance of Effect Categories

2.8 Change can be either beneficial or adverse, and effects can also, therefore, be either beneficial or adverse. In some cases above the significance is shown as being one of two alternatives. In these cases a single description should be decided upon with reasoned judgement for that level of significance chosen.

2.9 The significance should be assigned after consideration of the effectiveness of the design and committed mitigation measures (in line with the Overseeing Organisation’s requirements). That is, significance is assigned with mitigation in place allowing for the positive contribution of all mitigation that is deliverable and committed. In Scotland and Wales, the assignment of significance before the consideration of the effectiveness of the design and committed mitigation measures should also be undertaken, allowing for the case or reason for and the effectiveness of mitigation to be described.

2.10 At the early stages of project design, the details of mitigation are likely to be poorly defined. The significance assigned to effects by the Designer should

be based upon the assumption that only standard mitigation practices should be put in place. Where other mitigation measures may be feasible or desirable to address the effects, then these should be noted but these should not influence the significance score that is assigned at this early stage. The uncertainty regarding their adoption needs to be made clear and subsequently resolved by the Overseeing Organisation at the later stages of the project assessment and design.

2.11 The SECTION 3 topics seek to ensure that the following questions, where relevant, should be considered in evaluating the significance of potential effects:

- i. Which receptors/resources would be affected and in what way?
- ii. Is the receptor/resource of a local, regional, national or international importance, sensitivity or value?

- iii. Does the effect occur over the long or short term; is it permanent or temporary and increase or decrease with time?
- iv. Is the change reversible or irreversible?
- v. Are environmental and health standards (e.g., local air quality standards) being threatened?
- vi. Are feasible mitigating measures available?

2.12 SECTION 3 guidance provides advice on the significance criteria for individual topics. If necessary the description of the criteria may be adjusted to reflect the specific effects that a project may generate but the overall criteria levels should not be adjusted. If changes are made, it is advisable to agree these with the Overseeing Organisation and in turn the statutory environmental bodies in advance of forecasting the actual significance criteria.

IV DETERMINING SIGNIFICANCE OF CUMULATIVE EFFECTS

2.13 When considered in isolation, the environmental effects of any single project upon any single receptor/resource may not be significant. However, when individual effects are considered in combination, the

resulting cumulative effect may be significant. The focus in assigning significance to cumulative effects should be determined by the extent to which the impacts can be accommodated by the receptor/resource. Thresholds (limits beyond which cumulative change becomes a concern) and indicative levels of acceptable performance of a receptor/resource may also aid the assessment process.

2.14 The following factors should be considered in determining the significance of cumulative effects:

- Which receptors/resources are affected?
- How will the activity or activities affect the condition of the receptor/resource?
- What are the probabilities of such effects occurring?
- What ability does the receptor/resource have to absorb further effects before change becomes irreversible?

2.15 It is useful to standardise significance criteria for cumulative effects. The 5 categories below could be used as a framework for determining significance of cumulative effects:

Significance	Effect
Severe	Effects that the decision-maker must take into account as the receptor/resource is irretrievably compromised.
Major	Effects that may become key decision-making issue.
Moderate	Effects that are unlikely to become issues on whether the project design should be selected, but where future work may be needed to improve on current performance.
Minor	Effects that are locally significant.
Not Significant	Effects that are beyond the current forecasting ability or are within the ability of the resource to absorb such change.

Table 2.6 Determining Significance of Cumulative Effects

2.16 It should be noted that the assessment of air quality and other assessment processes, for example Assessment of Implications on European Sites, might have different requirements for the consideration of cumulative effects.

3. MANAGEMENT OF ENVIRONMENTAL EFFECTS

Introduction

3.1 Advice on good environmental design, mitigation measures associated with specific environmental topics and on the implementation and management of environmental issues in projects is given in DMRB Volume 10 (or its updates), in SECTION 3 and in guidance specific to the relevant Overseeing Organisation. This chapter advises on how a project's likely significant environmental effects, as identified by the environmental impact assessment process, should be managed in order to mitigate adverse project consequences and to proactively protect the environment.

The Environmental Management Process

3.2 In order to maintain a project's long-term environmental performance and delivery of its objectives it is essential that a link is built between the project design and assessment process and the environmental management process. A structured and formalised approach will allow environmental planning, implementation, review and reporting to work as one. Environmental Management Systems (EMS), such as those specified in the ISO 14000 series of standards and the Eco-Management and Audit Scheme (EMAS), cover such a structured approach. For England, cross reference should be made to DMRB's guidance for EnvIS, which sets out environmental management information requirements for EnvIS (a Geographical Information System (GIS) based Environmental Information System which houses environmental asset and management information). Reference should be made to the specific requirements for EMS of each of the Overseeing Organisations.

3.3 The environmental management process addresses the how, when, who, where and what of integrating environmental mitigation measures and management throughout an existing or proposed operation or activity. It encompasses all the elements that are sometimes addressed separately in option choice, consultation, design, mitigation, monitoring and action plans. The function of the environmental management process is, therefore, to:

- i. assist in the identification of significant environmental effects;
- ii. assist in the co-ordination of the option choice, design and implementation of measures;
- iii. ensure awareness of the project's commitments to design, mitigation, enhancement and monitoring measures made in project design and reporting;
- iv. provide a checklist of measures;
- v. measure environmental performance; and
- vi. provide the basis for monitoring and auditing the delivery of environmental measures.

3.4 The environmental management process may typically be divided into four main stages:

- i. Planning and Design: covering activities related to:
 - feasibility;
 - outline design;
 - detailed design.
- ii. Construction: covering activities:
 - prior to construction (e.g. site preparation);
 - during construction (e.g. works);
 - during establishment (e.g. site reinstatement).
- iii. Handover: covering:
 - the transfer of scheme-specific environmental information from new-build to network management agents.
- iv. Operation and Maintenance: covering environmental management in the course of network:
 - operation;
 - maintenance.

3.5 The environmental management process is complementary to the activities undertaken during the environmental impact assessment process and collates all appropriate and relevant information that should exist within the project Designer's teams. To support the delivery of project mitigation, a suitable environmental management process should accompany all environmental impact assessments. This process should fulfil the specific requirements of the Overseeing Organisation.

4. REFERENCES

Legislation:

- Council Directive 85/337/EEC: Council Directive of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment, *Official Journal No. L 175*, 05/07/1985.
- Council Directive 92/43/EEC: Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, *Official Journal L 206*, 22/07/1992.
- Council Directive 97/11/EC: Council Directive 97/11/EC of 3 March 1997 amending Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, *Official Journal No. L 073*, 14/03/1997.
- Council Directive 97/62/EC: Council Directive 97/62/EC of 27 October 1997 adapting to technical and scientific progress Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora *Official Journal No L 305*, 08/11/1997.
- Council Directive 2001/42/EC: Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment, *Official Journal No. L 197*, 21/07/2001.
- Council Directive 2003/35/EC: Directive 2003/35/EC of the European Parliament and of the Council of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC, *Official Journal No. L 156*, 25/06/2003.
- Environmental Assessment (Scotland) Act 2005, *The Stationery Office Limited*, ISBN 0105900893.
- Highways Act 1980.
- New Roads and Street Works Act 1991.
- Natural England Rural Communities Act 2006 (c.16).
- Roads (Scotland) Act 1984.
- Scottish Statutory Instrument 1999 No. 1 The Environmental Impact Assessment (Scotland) Regulations 1999, *The Stationery Office Limited*, ISBN 0 11 0591070.
- Scottish Statutory Instrument 2004 No. 475 The Conservation (Natural Habitats, &c.) Amendment (Scotland) Regulations 2004, *The Stationery Office Limited*, ISBN 0110693124.
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- Statutory Instrument 1988 No. 1221 (S.122) The Environmental Assessment (Scotland) Regulations 1988, *The Stationery Office Limited*, ISBN 0110872215.
- Statutory Instrument 1988 No. 1241 The Highways (Assessment of Environmental Effects) Regulations 1988, *The Stationery Office Limited*, ISBN 011087241X.
- Statutory Instrument 1993 No. 3160 The Roads (Northern Ireland) Order 1993, *The Stationery Office Limited*, ISBN 0110342895.
- Statutory Instrument 1994 No. 1002 The Highways (Assessment of Environmental Effects) Regulations 1994, *The Stationery Office Limited*, ISBN 0110440021.
- Statutory Instrument 1994 No. 2716 The Conservation (Natural Habitats, &c.) Regulations 1994, *The Stationery Office Limited*, ISBN 0110457161.

Statutory Instrument 1999 No. 369 The Highways (Assessment of Environmental Effects) Regulations 1999, *The Stationery Office Limited*, ISBN 0 11 082053 3.

Statutory Instrument 2000 No. 192 The Conservation (Natural Habitats, &c.) (England) Regulations 2000, *The Stationery Office Limited*, ISBN 0110858638.

Statutory Instrument 2004 No. 1633 The Environmental Assessment of Plans and Programmes Regulations 2004, *The Stationery Office Limited*, ISBN 0110494555.

Statutory Instrument 2004 No. 3391 The Environmental Information Regulations 2004, *The Stationery Office Limited*, ISBN 011051436X.

Statutory Instrument 2007 No. 1062 The Highways (Environmental Impact Assessment) Regulations 2007, *The Stationery Office Limited*, ISBN 9780110765969.

Statutory Instrument 2007 No. 1843 The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007, *The Stationery Office Limited*, ISBN 9780110777160.

Statutory Rule 1999 No. 89 Roads (Environmental Impact Assessment) Regulations (Northern Ireland) 1999, *The Stationery Office Limited*, ISBN 0 337 93407.

Statutory Rule 2004 No. 280 The Environmental Assessment of Plans and Programmes (Northern Ireland) Regulations 2004, *The Stationery Office Limited*, ISBN 0337955859.

Welsh Statutory Instrument 2004 No. 1656 (W.170) The Environmental Assessment of Plans and Programmes (Wales) Regulations 2004, *The Stationery Office Limited*, ISBN 011090964X.

Guidance:

Design Manual for Roads and Bridges, Volume 10, Environmental Design and Management, February 2001.

European Commission (2000): Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC. *Office for Official Publications of the European Communities*.

European Commission (2001): Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of Article 6(3) and Article 6(4) of the 'Habitats' Directive 92/43/EEC. *European Commission DG Environment, Brussels*.

European Commission (2007): Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC.

5. ENQUIRIES

All technical enquiries or comments on this Advice Note should be sent in writing as appropriate to:

Division Director of Network Services –
Technical Services Division
The Highways Agency
City Tower
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Division Director of Network Services –
Technical Services Division

Director, Major Transport Infrastructure Projects
Transport Scotland
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Director of Engineering

**VOLUME 11 ENVIRONMENTAL
ASSESSMENT**
**SECTION 2 ENVIRONMENTAL
IMPACT ASSESSMENT**

PART 6

HD 48/08

**REPORTING OF ENVIRONMENTAL
IMPACT ASSESSMENTS**

SUMMARY

This Standard provides guidance for reporting the environmental impact assessment process, including Scoping Reports, Environmental Statements, Non-Technical Summaries, and reporting non-statutory environmental impact assessments.

INSTRUCTIONS FOR USE

1. Remove Contents pages from Volume 11 and insert new Contents pages for Volume 11 dated August 2008.
2. Insert the new Standard HD 48/08 into Volume 11, Section 2.
3. Please archive this sheet as appropriate.

Note: A quarterly index with a full set of Volume Contents Pages is available separately from The Stationery Office Ltd.



THE HIGHWAYS AGENCY



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THE DEPARTMENT FOR REGIONAL DEVELOPMENT
NORTHERN IRELAND

Reporting of Environmental Impact Assessments

Summary: This Standard provides guidance for reporting the environmental impact assessment process, including Scoping Reports, Environmental Statements, Non-Technical Summaries, and reporting non-statutory environmental impact assessments.

REGISTRATION OF AMENDMENTS

Amend No	Page No	Signature & Date of incorporation of amendments	Amend No	Page No	Signature & Date of incorporation of amendments

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**VOLUME 11 ENVIRONMENTAL
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PART 6

HD 48/08

**REPORTING OF ENVIRONMENTAL
IMPACT ASSESSMENTS**

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1. General Principles of Environmental Reporting
2. The Scoping Report
3. The Environmental Statement
4. The Non-Technical Summary
5. Non-statutory Environmental Impact Assessment
6. References
7. Enquiries

1. GENERAL PRINCIPLES OF ENVIRONMENTAL REPORTING

1.1 This document is a Standard and mandatory sections apply.

Mandatory Sections

1.2 Mandatory sections of this document are contained in boxes. The Service Provider must comply with these sections or obtain agreement to a Departure from Standard (or equivalent) from the Overseeing Organisation. The remainder of the document contains advice and explanation, which is commended to users for consideration.

Departure from Standards

1.3 Unless a departure has been agreed, the implementation of the processes described in this Standard must be applied to all projects. If it is not considered necessary for this Standard to be applied, approval for Departure from Standards must be obtained from the Overseeing Organisation with the departure application clearly stating why this Standard should not be applied.

1.4 The environmental impact assessment process can generate many working documents covering subject areas and specific effects. The aim of reporting is to provide decision-makers and the public with an accessible document which reflects the assessment activities, provides a clearly auditable trail of assessment decisions, and to provide clear information on the environmental measures to be implemented by the project and to give due weight to significant effects. Reporting may be required to:

- i. meet the Overseeing Organisation's internal communication needs and approval processes;
- ii. provide the basis for the monitoring and auditing of the performance of environmental measures implemented as part of projects;

- iii. provide an audit trail for those implementing decisions;
- iv. provide assessment details for review by statutory consultees;
- v. fulfil statutory obligations of the Environmental Impact Assessment (EIA) Regulations (refer to SECTION 2, Part 1, Chapter 1) in relation to public participation and publication of an Environmental Statement;
- vi. fulfil statutory obligations of public access under the Environmental Information Regulations (in England, Wales and Northern Ireland the obligation falls under The Environmental Information Regulations 2004; in Scotland the obligation falls under The Environment Information (Scotland) Regulations 2004);
- vii. fulfil the obligations under the Charter for Transport, Environment and Health (the London Charter¹); and
- viii. fulfil obligations of the Overseeing Organisation.

1.5 Reporting should reflect the importance of the issues being considered, for instance, it is important to make a clear distinction between temporary and permanent effects. Good Environmental Statements or environmental reports always demonstrate a strong sense of co-ordination via an executive editor-type role. Individual specialist contributions should be edited to present a coherent, concise and consistent review of the issues. Environmental reports, including the Environmental Statement, should not be unnecessarily long or detailed. Good co-ordination undertaken from an early stage in the assessment process will ensure good interaction between the separate topic areas.

1.6 The environmental information provided in the reports should be:

¹ The Third Ministerial Environment and Health Conference held in London in 1999 consisting of delegates from the WHO European Region adopted a Charter to which the UK Government has signed up.

- i. unbiased: A factual impartial style should be used, (e.g., both advantages and disadvantages of the alternatives described). If the proposals have effects that are particularly adverse then they should be clearly presented and not hidden away;
- ii. easy to read: Clear, non-technical language should be used wherever possible, with the information presented in a logical manner using appropriate images and graphics for illustration; and
- iii. quantified and objective: A quantified and objective approach should be adopted, with a distinction being made between fact, assumptions and professional judgement.

1.7 Environmental issues are frequently important to the acceptability, or not, of proposed projects. All reports should be prepared with the knowledge that they may be made public and used as evidence at Public Inquiries. The first impression of a report, particularly an Environmental Statement, is of critical importance. If it has the appearance of a rushed, badly co-ordinated report, then this would tend to suggest that the assessment is of a similar quality. Applying simple rules can improve access to information and readability, e.g., a consistent approach – project descriptions consistently in the same direction with consistent use of project titles and making a clear distinction between temporary and permanent effects. Consequently, not only should the assessment process be robust, but also the reporting should be clear to inform the audience, instil confidence and avoid unnecessary delay or costs. Historically, the effects associated with the construction phase of a project have been reported as a separate chapter, this guidance recommends that effects resulting from construction, and any associated disruption, are assessed under the individual SECTION 3 topic chapters. Similarly, a separate chapter on the use of policies and plans has historically been reported as a separate chapter. However, this guidance recommends that effects on policies and plans are reported where they are most relevant (i.e., under the project description and the individual SECTION 3 topic chapters).

1.8 Problems encountered in obtaining information and constraints in undertaking assessments should also be identified. The role of professional judgement in assessments should be stated (refer to SECTION 1, Chapter 4). All environmental reports, and the Environmental Statement in particular, should provide documentation on the data age and sources, method of analysis and reference sources of information. Missing

or incomplete references make it difficult for readers to verify information, thereby decreasing the credibility of the report and leading to more work for the authors if verification is demanded at a later time (refer to SECTION 2, Part 5, Chapter 1).

1.9 In the course of an assessment it is likely that a number of topic reports will be prepared. Where reports originate from surveys, these should be entirely factual and should not provide an assessment of the findings or implications for the proposed project. Any reporting of the assessment should be provided in a separate assessment document or a clearly distinct section of the report perhaps in the case of smaller projects in order to aid clarity. By separating factual survey from potentially judgemental assessment, the environmental impact assessment process and its findings are better understood. Additionally, such factual reports could be used to inform third parties of relevant information if requested.

1.10 Topic reports should be published as a supporting volume, e.g., Volume 2 of the Environmental Statement. These need not contain, for example, raw data. However, supplementary information such as raw data should be available on deposit through the statutory and decision-making processes, e.g., at Public Inquiry, as they may comprise environmental information which would be considered.

1.11 Images, graphics and tables should be clearly understandable by the lay reader. A balance needs to be struck between the presentation of generalised and specific site information in the selection of the mapping scales and information presented. Where a single map can be used to illustrate more than one constraint or effect, without loss of clarity, this should be done. Images and graphics should contain only essential information, with all symbols or abbreviations explained. Again, simple rules benefit everyone: a north point, scale and scale bar should be included; all locations named and referred to in the text should be clearly identified on any maps included. Photomontage and computer generated images should be labelled as being ‘for illustration purposes only’, or similar, particularly where bridge structures, noise barriers and lighting proposals are being illustrated. Aerial and other photographs should be current, good quality, appropriate, uncluttered and annotated to help inform readers.

1.12 The electronic publication of the Environmental Statement, Non-Technical Summary and other supporting documents is encouraged where it is possible (in Scotland, all Environmental Statements must

be published on Transport Scotland's website). The electronic publication of non-statutory environmental impact assessments is also promoted where it is envisaged that such reports could be of general public interest (refer to SECTION 2, Part 2, Chapter 2). Where documents are made available electronically, the Overseeing Organisation should ensure that the electronic location of these documents is clearly advertised in accordance with the specific requirements of the Overseeing Organisation and that any documents are presented in a file format in common use by the general public. The font should be at an appropriate size to aid legibility on the screen. Where graphics are being presented electronically on the internet, particular care should be taken to ensure that plans and illustrations remain legible.

2. THE SCOPING REPORT

2.1 Scoping can be an internal process and an external activity in which stakeholders are engaged in defining the assessment activities. Further guidance is given in SECTION 2, Part 4. The Scoping Report is the means by which the Designer and the Overseeing Organisation can define the environmental impact assessment for the project and engage statutory environmental bodies and key stakeholders.

2.2 The following contents and method should be used in organising the information required in a Scoping Report. An indicative contents list is presented in Table 2.1. Due regard should be given to the specific requirements of the Overseeing Organisation.

<p>Introduction</p> <ul style="list-style-type: none">Introduction to the proposed projectThe location of the projectThe Overseeing OrganisationThe DesignerThe purpose of the Scoping Report <p>The Project</p> <ul style="list-style-type: none">Background to the project (including reasons for the project)The project objectivesA brief history of the project to date <p>Alternatives Considered</p> <ul style="list-style-type: none">Design options that have been examinedDesign options to be explored (where known) <p>Consultation</p> <ul style="list-style-type: none">Proposed publication strategy and timingsProposed consultation <p>Topic (for each)</p> <ul style="list-style-type: none">Study areaExisting and baseline knowledgeValue of the environmental resources and receptorsPotential effectsProposed level and scope of assessmentProposed methodology including significance <p>Consideration of cumulative effects</p> <ul style="list-style-type: none">Identify potential issues <p>References</p> <p>Glossary</p>

Table 2.1 Indicative Scoping Report Contents

2.3 The report can introduce the project, the Designer and the Overseeing Organisation and outline which topics should be examined, the proposed study area (highlighting topic-specific needs), assessment data needs, and survey and assessment methodologies to be used, notably where these differ from SECTION 3 for each topic. The level of assessment the Overseeing Organisation intends to apply for particular topics can be formally recorded. Future actions, consultation and publication strategy and timings and the intended structure and contents of the environmental report or Environmental Statement may all be introduced.

2.4 The Scoping Report should be circulated to statutory environmental bodies and may be circulated to other key stakeholders as appropriate to the project, so that agreement can be reached on the scope of the assessment, particularly if an Environmental Statement is required.

2.5 The Scoping Report should provide the following (also refer to SECTION 2, Part 4):

- i. an introduction to the proposed project (including size and likely activities) and its location, the Designer, the Overseeing Organisation and the purpose of the report (including details of consultation);
- ii. the project background (reasons for the project for example, accidents, traffic congestion) and the project objectives;
- iii. a brief history of the project to date;
- iv. the alternatives that have been examined and those to be explored where known;
- v. the anticipated programme and publication events, including the determination (refer to Step 2 in SECTION 2, Part 3) and Environmental Statement where relevant;
- vi. for each topic, existing knowledge, value of the environmental resources and receptors, the potential effects and the time period within which significant effects may arise, and the proposed study area (considering the boundaries of cumulative effects);
- vii. for each topic, consideration of past, present and reasonably foreseeable actions and trends that are having or will have a major influence on a valued receptor/resource;

- viii. for each topic, confirmation of the level of assessment, including proposed methodology – this should simply reference DMRB Volume 11 and only be expanded and explained when proposed survey and assessment methodologies differ from the SECTION 3 advice; and
- ix. for each topic, confirmation that the project’s environmental design will be carried out in accordance with DMRB Volume 10 (or its updates).

2.6 While a Scoping Report may be generated at several points throughout the period of a project’s development, the contents should reflect the level of existing knowledge associated with the project and receptors/resources, and the next milestone in the delivery process that the project would reach.

2.7 A Scoping Report should normally be prepared for projects that are subject to statutory Environmental Impact Assessment (EIA). For other projects, reporting of the scoping exercise can provide a means of communicating key issues, and the approach to the environmental impact assessment, between the Designer and the Overseeing Organisation, and with key stakeholders. It follows that in these situations the reporting of the scoping exercise needs to be appropriate to the level of environmental risk likely to be encountered. Advice should be sought from the Overseeing Organisation.

3. THE ENVIRONMENTAL STATEMENT

3.1 The Environmental Statement informs the final decision on whether a project should be allowed to proceed. The function of an Environmental Statement is to give stakeholders, including the public and statutory environmental bodies an opportunity to express an opinion before a project is initiated and, in accordance with the relevant Environmental Impact Assessment (EIA) Regulations, notice of the Environmental Statement must be published (refer to SECTION 2, Part 2). The aim is to provide an accessible document which reflects the assessment that has been carried out and gives due weight to significant effects. The process of screening informs the decision whether to complete an EIA and publish an Environmental Statement and further details can be found in SECTION 2, Part 3.

3.2 An Environmental Statement is the document that should contain information meeting the requirements of the EIA Directive and as translated into UK law by the EIA Regulations (refer to SECTION 2, Part 1).

3.3 The Environmental Statement will identify, describe and assess in an appropriate manner, in the light of each individual case and in accordance with Articles 4 to 11 of the EIA Directive and the EIA Regulations, the significant environmental effects of the project on the factors mentioned in Article 3 of the EIA Directive. It will contain the information referred to in the EIA Regulations and Annex IV of the EIA Directive to the extent that the Secretary of State or equivalent considers that it is relevant to the specific characteristics of the project and of the environmental features likely to be affected by it and that (having regard in particular to current knowledge and methods of assessment) the information may reasonably be gathered. As a minimum, an Environmental Statement should contain the following:

- i. a description of the project (in accordance with the relevant EIA Regulations);
- ii. a description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse environmental effects;

- iii. the data required to identify and assess the main effects which the project is likely to have on the environment;
- iv. an outline of the main alternatives studied and an indication of the main reasons for the choice of project, taking into account the environmental effects; and
- v. a non-technical summary of the information mentioned in paragraphs (I) to (IV) above.

3.4 An Environmental Statement should comprise two parts, of different levels of detail:

- i. the Statement - a comprehensive and concise document drawing together all the relevant information about the project; and
- ii. a Non-Technical Summary (NTS) – a brief report summarising the principal sections of the Statement in non-technical language, in accordance with the specific requirements of the Overseeing Organisation. The NTS should be readily understandable by members of the public. In Wales, the NTS should be a bi-lingual document. The NTS should be bound in to the Statement, but also be available as a freestanding document.

3.5 The following contents and method should be used in organising the information required in the Environmental Statement. An indicative contents list for Environmental Statements is presented in Table 3.1. Due regard should be given to the specific requirements of the Overseeing Organisation.

Non-technical Summary

Introduction

- Identify the project
- Legal basis for the Environmental Statement, including screening
- Purpose of the Statement
- Scope and content

The Project

- Background to the project
- Problems/need in relation to relevant policies and plans, and the project objectives
- Any further support of policies
- Project description
- Land use setting and land take
- Construction, operation and long term management

Alternatives Considered

- Design options

Environmental Impact Assessment Methods

- Scoping, including summary of consultation
- Surveys and predictive techniques, method and constraints
- Significance criteria
- Mitigation and enhancement

Topic (for each)

- Study area
- Baseline conditions
- Value (sensitivity) of resource
- Regulatory/policy framework
- Design, mitigation and enhancement measures, including monitoring requirements
- Magnitude of impacts (change)
- Significant effects
- Indication of any difficulties encountered
- Summary

Assessment of cumulative effects

Environmental Management Plan

Conclusions

- Summary of significant effects
- Summary of mitigation measures

References

Glossary

Table 3.1 Indicative Environmental Statement Contents

Introduction

3.6 The introduction to the Statement should provide the following:

- i. the name and main features of the project, together with a map at an appropriate scale showing the project in its regional and local context;
- ii. the legal basis for the Statement with reference to the relevant EIA Regulations;
- iii. the purpose of the Environmental Statement, and its relationship with the published project. A list of any draft Orders with which the Environmental Statement is associated should be included in this section;
- iv. a description of how the Statement is structured and the roles of each part;
- v. where a copy of the Statement can be obtained and the cost of obtaining a copy;
- vi. where further information about the project may be requested;
- vii. reference to the notice of the Environmental Statement, stating that comments on the Statement should be received within at least 6 weeks from the date of publication of the notice, and stating to whom and where comments should be sent;
- viii. references to the publication of relevant Statements/Reports relating to Assessment of Implications on European Sites where applicable; and
- ix. reference to the next stages of project promotion through the statutory processes.

The Project

3.7 The case for the project should be summarised in non-technical terms and should begin by providing background details for the project. This section should be followed by a brief description of the existing problem that the project is designed to address relating this to relevant policies, plans and programmes, and the accompanying Strategic Environmental Assessment (SEA) Environmental Report where available, and the project's objectives (refer to SECTION 2, Part 5, Chapter 1). This should include a description of any

existing environmental problems that would be relieved by the proposed project. A diagram showing the annual average daily traffic figures on the existing trunk road and/or adjacent local roads for the existing year and the forecast figures without the project for the year in which the project opens and the year with the most traffic in the first 15 years after opening (with different growth forecasts) should accompany any descriptions. If appropriate a similar diagram showing peak hour flows should also be included. All figures should be shown on the same diagram for ease of comparison. If the present situation is likely to deteriorate in future because of traffic growth, this situation should also be noted, considering the certainty of the outcome and development status of adjacent projects and land use changes. The Do-Minimum and Do-Something (refer to SECTION 2, Part 5, Chapter 1, Section III) scenarios should be clearly defined.

3.8 The Environmental Statement should indicate briefly the degree to which transport and environmental policies, and related transport appraisals, Environmental Reports published in accordance with the requirements of the SEA Directive and the Overseeing Organisation, and other relevant policies would be supported by the project - for example, by referring to accident reduction forecasts, predicted economic benefits or traffic reduction on other roads. The Statement should therefore include a separate section on relevant plans and policies that will be supported by the project. In this section, the traffic effects of the proposed project should be described, making reference to diagrams similar to those described above but with the project in place.

3.9 However, assessing the effect of the project on relevant topic-specific policies or plans should generally be reported under the individual SECTION 3 topics chapters.

3.10 A brief description should be given of significant features along the length of the project followed by a description of the project from one end of the route to the other. It should include the project's horizontal alignment in relation to nearby identifiable locations; the vertical alignment (embankment, cutting, false cutting); structures such as bridges, viaducts, crossings, and tunnels; junctions; and lighting, large signs and gantries. Side roads should usually be included within the description of junctions, unless they are significant in their own right, when it might be more appropriate to give them their own brief description. All significant aspects of the project design should be quantified wherever possible.

3.11 Information should also be provided on the existing use of land taken by the project, and the future use of land should the project be built taking into account the appropriate changes from other committed projects (refer to SECTION 2, Part 5, Chapter 1).

3.12 The main aspects of the construction, operation and maintenance of the project should be described, including, where significant, advance works. For the construction period, this should comprise information on the length of the construction period; any land beyond the proposed highway boundary required for construction purposes. SECTION 3 topic guidance such as 'Materials' will cover likely types and approximate quantities of aggregates and the quantity of any surplus material for disposal off-site. The temporary and permanent effects from construction will be addressed by each topic as appropriate (refer to SECTION 2, Part 5, Chapter 1, Section IX).

Alternatives Considered

3.13 Current legislation requires that an Environmental Statement includes an outline of the main alternatives of the project design studied by the Overseeing Organisation, and that an indication of the main reasons for the Overseeing Organisation's choice of project is to be provided which takes into account the environmental effects. The design options studied by the Overseeing Organisation (for example, those taken to public consultation) should be briefly described, and the reasons for their rejection stated (refer to SECTION 2, Part 5, Chapter 1, Section VII). However, where a higher-level appraisal has considered alternatives, there is no requirement to duplicate the process. Where public consultation included only one option, the reasons why others were not put forward should be briefly stated.

3.14 The description of alternatives should give an indication of any difficulties encountered during the development of the project, including technical or wider general problems in compiling the required information.

Environmental Impact Assessment Methods

3.15 The Statement should include a brief review of the scoping exercise, how the main environmental issues were identified, including significant issues raised by statutory environmental bodies and other key stakeholders, remembering information given in confidence is exempt if the release would "constitute a breach of confidence actionable by that (person) or any other person" (Freedom of Information Act 2000 and the Freedom of Information (Scotland) Act 2002). Any descriptions used to indicate the magnitude or

significance should be defined alongside any difficulties in compiling or assessing information. The data used to estimate the significance of the effects should be clearly described including their sources.

3.16 There are a number of ways in which the information on baseline conditions, mitigation and predicted effects can be presented. One approach treats these as three discrete sections, and includes all of the relevant information under these headings, in turn. A second begins by considering the effects of a project, which are potentially significant, and looks at each topic individually in terms of the baseline condition, relevant mitigation measures and the predicted effect. A third option covers all of the baseline condition information together in one section, then considers the proposed mitigation and effects after mitigation for each topic in turn. For a small project with few significant effects, there is little difference between the three methods. However, for large projects, or ones with a number of significant effects, the second or third methods should be used. The Designer should consult with the Overseeing Organisation on its requirements for the way information is to be presented.

3.17 The individual sections discussing how the different assessment scenarios would be affected by the proposed project should make clear reference to the Do-Minimum and Do-Something scenarios (refer to SECTION 2, Part 5, Chapter 1, Section III). For all projects, there should be a clear presentation of both temporary and permanent effects. Cumulative effects should also be discussed. Although the reporting of the assessment of effects will focus on worst case scenarios, it is important to highlight positive changes that have the potential to enhance.

3.18 In evaluating the significance of potential effects, the SECTION 3 topics should ensure that the following questions have been considered:

- i. Which receptors/resources would be affected and in what way?
- ii. Is the receptor/resource of a local, regional, national or global importance, sensitivity or value?
- iii. Does the effect occur over the long or short term; is it permanent or temporary and increase or decrease with time?
- iv. Is the change reversible or irreversible?
- v. Are environmental and health standards (e.g., local air quality standards) being threatened?
- vi. Are feasible mitigating measures available?

3.19 Wherever appropriate, the text of the Environmental Statement should reference the relevant survey and specialist reports available from the Overseeing Organisation, which contain the more detailed and technical information. SECTION 3 guidance indicates the assessment information that should generally be included in the Statement. Relevant statutory and other designations should be referred to within the corresponding section of the baseline description, as should any local authority planning policies, which might be affected by the proposed project. Where other aspects of the existing environment could be significantly affected they should also be included.

3.20 The data used to estimate the significance of the effects should be clearly described including their source, and descriptions used to reach the significance should be defined alongside any difficulties in compiling or assessing information (refer to SECTION 2, Part 5, Chapter 1). Within the discussion of a particular assessment scenario, the length and degree of detail reported should relate to the magnitude of the impact and the significance of the effects. If the assessment process has indicated that a project would have no significant effect, the Statement should include a brief explanation why. Each section should end with an overall assessment of the magnitude and significance on the baseline and future assessment scenarios, highlighting any major problems or benefits. Guidance for assigning significance is given in SECTION 2, Part 5, Chapter 2.

3.21 Inclusion of a section describing methodologies increases the credibility of the assessment. As a default, DMRB Volume 11 methodologies should be followed, and these can be referenced as such and description kept to a minimum. Where the project justifies an alternative assessment method, which has to be agreed with the Overseeing Organisation, the description should justify the method and set out the assumptions on which it is based. The period during which a survey was conducted should also be noted.

3.22 The Environmental Statement plays an important role in the specification of mitigation measures (refer to SECTION 2, Part 5, Chapter 1, Section X), and providing a public statement of the agreed and essential measures (i.e. those measures taken into account when assigning significance) along with any desirable and enhancement measures as agreed with the Overseeing Organisation on a case-by-case basis. The Statement should therefore make clear where management and monitoring activities are to be undertaken to ensure that the approved level of environmental commitment

and performance is delivered. Further advice on the environmental impact assessment process is provided in SECTION 2, Part 5.

Assessment of Cumulative Effects

3.23 In general, cumulative assessment will be most successful when the assessment of all other environmental effects of the project is complete. Table 3.2 is an example of a summary table for reporting cumulative effects.

Environmental Management Plan

3.24 The production of an Environmental Management Plan is a useful way of setting out how mitigation of a project can be delivered, enabling decision-makers to see the commitment given to implementation.

3.25 The Environmental Management Plan should be produced at the same time or soon after the environmental impact assessment process is concluded and reported. Users should consult the relevant Overseeing Organisation on current procedures, policy and guidance. Further guidance is given in SECTION 2, Part 5, Chapter 3.

Conclusions

3.26 The results of the environmental impact assessment should be concluded clearly and concisely, summarising committed mitigation and, where applicable, enhancement measures, addressing the significant effects of the project, and describing how each of the project objectives (including those of relevant plans and policies) has been fulfilled. Reference should be made to the specific requirements of the Overseeing Organisation.

QUALITY CONTROL

3.27 Environmental Statements should be quality assured using the checklist provided in Table 3.3.

Transportation Effect	Cumulative Effect	Spatial Extent	Magnitude	Timing/ Duration	Mitigation/ Enhancement	Uncertainty	Significance of effect
Transportation Measure:			Restricted Road Building				
Community and Private Assets:							
3dB(A) increase for 200 residents along A345 Moderate adverse	Traffic noise contributes to high ambient noise levels and the community receiving severance	Local	200 residents Moderate	5-10 years/ long-term	Quiet road surfacings and speed control.	Low	Moderate adverse
Increase in severance to residents along A345 Minor adverse			Residents Low	1-5 years/ short-term	Speed control	Low	
Road Drainage and the Water Environment:							
25 ha loss of Norchester floodplain storage Major adverse	Additive loss due to 30 ha housing project. Increased run-off expected.	District	55 ha loss High	5 years/ long-term	Multi-agency co-ordination of floodplain compensation measures.	High	Major adverse
Materials:							

Table 3.2 Example of Cumulative Effects Summary Table

Ref	Topic
A	Does the Environmental Statement provide the following essential information:
A1	Name and address of the Overseeing Organisation?
A2	Name of the Design organisation responsible for preparing the Statement?
A3	The legal basis for the Statement?
A4	Where copies may be obtained?
A5	Where comments should be sent?
A6	Publication date and closing date for receipt of comments?
A7	A description of the project comprising information on the site, design and size of the project?
A8	A description of the measures envisaged to avoid, reduce or remedy significant adverse effects?
A9	Sufficient data in order to identify and assess the main environmental effects?
A10	An outline of the main alternatives studied and an indication of the main reasons for the choice taking into account environmental effects?
A11	A Non-Technical Summary, including an environmental constraints map?
B	Project Description
B1	Has the case for the project been defined in non-technical terms?
B2	Has the existing problem that the project is designed to address been described and does this relate to policies and project objectives?
B3	Have project objectives been defined?
B4	Is the project described in adequate detail but without restricting detailed design?
B5	The length of the construction period and land needed for construction purposes?
B6	The main aspects of the construction of the project including, where significant, advance works?
B7	Is the environmental planning policy context for the area described?
B8	Have relevant statutory and other designations been described?
C	Alternatives
C1	Have alternatives been assessed suitably and in a manner that is suitably comparative to the assessment of the preferred option?
C2	Have the reasons been identified for rejecting alternatives taking account of environmental effects?
D	Assessment Method
D1	Are DMRB V11 methods used and specific methods/techniques used described and data limitations identified?
D2	Are data sources properly identified and referenced?
D3	Are the survey periods detailed?
D4	Are the stakeholders involved in the assessment recorded?
D5	Have the results of any public or statutory environmental bodies consultation been presented appropriately?
D6	Are uncertainties, assumptions, difficulties and the use of professional judgement made clear?
D7	Is the future Do-Minimum situation adequately described?
D8	Is the study area(s) fair and reasonable?

Ref	Topic
E	Mitigation, Enhancement and Monitoring
E1	Are mitigation measures certain to be provided?
E2	Are the descriptions of mitigation measures quantified to include the type, location and an indication of their effectiveness as far as possible?
E3	Do the mitigation measures enhance or give rise to other adverse effects?
E4	Have mitigation or enhancement measures, that are dependent upon the outcome of subsequent negotiations with third parties, been identified?
E5	Are commitments on the scheduling of activities to reduce effects made?
E6	Are commitments for further surveys/investigations/consultations made?
E7	Have restrictions to be placed on contractors been recorded?
E8	Are the environmental commitments sufficiently clear for implementation?
E9	Has a list of mitigation and enhancement measures and monitoring commitments been included or referenced?
F	Forecast Significant Effects
F1	Has the magnitude, probability, duration (temporary and permanent), reversibility and significance of effects been detailed in accordance with the requirements of the Overseeing Organisation?
F2	Are significant adverse and beneficial effects identified and described, with a justification for the 'significance' decision?
F3	Have the interaction of effects and cumulative effects been considered?
F4	Have uncertainties in the design, mitigation or assessment been recognised?
F5	Have the effects been quantified as far as practicable?
G	Conclusion
G1	Have the conclusions being clearly reported?
G2	Is there a summary of the significant environmental effects?
H	Reporting Style
H1	Does the Statement instil confidence in the assessment process?
H2	Is the Statement readable to the audience for which it is intended?
H3	Do illustrative materials depict sensitive parts of the project and mitigation measures accurately and clearly?
H4	Is the Statement unbiased, balanced, comprehensive and transparent in its logic and presentation?
H5	Have the project objectives been reported against?
H6	Is the Non-Technical Summary suitably clear and free from technical jargon?
H7	Does the Non-Technical Summary presentation match the findings of the Statement?

Table 3.3 Environmental Statement Review Checklist

3.28 In undertaking a review, the Overseeing Organisation should exercise appropriate quality control to ensure fitness for purpose.

4. THE NON-TECHNICAL SUMMARY

4.1 Production of a Non-Technical Summary (NTS) is a legal requirement for projects requiring an Environmental Statement and could be seen as good practice for projects requiring the production of a non-statutory environmental report. The NTS should highlight the principal findings of the Environmental Statement. The document should be free from technical jargon and abbreviations. The NTS should fulfil the specific requirements of the Overseeing Organisation. In Wales, requirements specify that the NTS for Welsh projects should be bi-lingual.

4.2 It is important to summarise each section of the Statement. A brief description of the proposed project should be provided commencing with a description of the main features, followed by a description along the alignment relating to nearby locations. Coverage of the significant structures, junctions, lighting, and gantries as appropriate should be included. Road names and classifications should be specified in such descriptions.

4.3 If possible, the NTS should also outline the main aspects of the construction work, for instance the likely duration, any advance works, designated routes and access arrangements. The NTS should only report the baseline assessment scenario where it is important to appreciating the significance of the effects being described. This may include the opening of a new road or other committed developments. The NTS should note that the Statement provides a description of the baseline and future Do-Minimum scenarios (refer to SECTION 2, Part 5, Chapter 1, Section III). The part of the summary, which assesses significant effects on aspects of the baseline environment, should consider each in turn and should reflect the conclusions of the corresponding sections of the Statement. Measures taken to reduce the effects should be taken into account and described. Only the key significant effects should be presented.

4.4 The NTS should record how the proposals have been developed, briefly describing the main options considered with the major reasons for their rejection, including environmental reasons. The types of alternatives to be reported will depend on the type and scale of project under consideration. Where the project has emerged from a published study or plan that examined alternatives, reference should be made to these and how such documents can be obtained or reviewed.

4.5 Images and graphics should be used where appropriate. An important part of the NTS is the environmental constraints map of the project and its surrounding area. As a minimum, this map should show all of the places referred to in the text of the NTS, including major roads and junctions, population centres, and designated areas and buildings.

4.6 The length of the NTS will be determined to a great extent by the length and complexity of each individual project. Designers should seek advice on the size and format of the NTS from the Overseeing Organisation.

5. NON-STATUTORY ENVIRONMENTAL IMPACT ASSESSMENT

5.1 There is no prescribed format for reporting non-statutory environmental impact assessment although the structure presented in Table 5.1 is proposed as a template. It broadly follows the outline as for the compilation of an Environmental Statement but it is likely not to be as comprehensive.

5.2 It should be remembered that this type of assessment may still come under public scrutiny by choice or by requirement under the relevant Environmental Information Regulations. So the report should be fit for purpose (i.e., the report content should reflect the level of assessment undertaken for the project) and produced in accordance with the specific requirements of the Overseeing Organisation on a case-by-case basis.

<p>Introduction/overview Identify the project Purpose of the Report (including reporting of the Determination process) Scope and content</p> <p>The Project Background to the project Regulatory framework (including relevant policies and plans), and the project objectives Any further support of Government policies Project description Land use setting and land take Construction, operation and long term management</p> <p>Alternatives Considered Design options</p> <p>Environmental Impact Assessment Methodology Scoping Surveys and predictive techniques, method and constraints Significance criteria Mitigation and enhancement</p> <p>Topic (for each) Study area Baseline conditions Value (sensitivity) of resource Regulatory/policy framework Design, mitigation and enhancement measures, including monitoring requirements Magnitude of impacts (change) Significant effects Indication of any difficulties encountered Summary</p> <p>Assessment of cumulative effects Environmental Management Plan Conclusions Summary of significant effects Summary of mitigation measures including timescales for delivery</p> <p>References Glossary</p>

Table 5.1 Indicative Environmental Report Contents

6. REFERENCES

Legislation:

- Council Directive 85/337/EEC: Council Directive of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment, *Official Journal No. L 175*, 05/07/1985.
- Council Directive 97/11/EC: Council Directive 97/11/EC of 3 March 1997 amending Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, *Official Journal No. L 073*, 14/03/1997.
- Council Directive 2003/35/EC: Directive 2003/35/EC of the European Parliament and of the Council of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC, *Official Journal No. L 156*, 25/06/2003.
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- Scottish Statutory Instrument 1999 No. 1 The Environmental Impact Assessment (Scotland) Regulations 1999, *The Stationery Office Limited*, ISBN 0 11 0591070.
- Scottish Statutory Instrument 2004 No. 520 The Environmental Information (Scotland) Regulations 2004, *The Stationery Office Limited*, ISBN 0110693566.
- Scottish Statutory Instrument 2006 No. 614 The Environmental Impact Assessment (Scotland) Amendment Regulations 2006, *The Stationery Office Limited*, ISBN 0110714725.
- Statutory Instrument 1988 No. 1221 (S.122) The Environmental Assessment (Scotland) Regulations 1988, *The Stationery Office Limited*, ISBN 0110872215.
- Statutory Instrument 1988 No. 1241 The Highways (Assessment of Environmental Effects) Regulations 1988, *The Stationery Office Limited*, ISBN 011087241X.
- Statutory Instrument 1993 No. 3160 The Roads (Northern Ireland) Order 1993, *The Stationery Office Limited*, ISBN 0110342895.
- Statutory Instrument 1994 No. 1002 The Highways (Assessment of Environmental Effects) Regulations 1994, *The Stationery Office Limited*, ISBN 0110440021.
- Statutory Instrument 1999 No. 369 The Highways (Assessment of Environmental Effects) Regulations 1999, *The Stationery Office Limited*, ISBN 0 11 082053 3.
- Statutory Instrument 2004 No. 3391 The Environmental Information Regulations 2004, *The Stationery Office Limited*, ISBN 011051436X.
- Statutory Instrument 2007 No. 1062 The Highways (Environmental Impact Assessment) Regulations 2007, *The Stationery Office Limited*, ISBN 9780110765969.
- Statutory Rule 1999 No.89 Roads (Environmental Impact Assessment) Regulations (Northern Ireland) 1999, *The Stationery Office Limited*, ISBN 0 337 93407.
- Statutory Rule 2007 No. 346 Roads (Environmental Impact Assessment) Regulations (Northern Ireland) 2007, *The Stationery Office Limited*, ISBN 0 337 9790947.

Guidance:

Design Manual for Roads and Bridges, Volume 10, Environmental Design and Management, February 2001.

7. ENQUIRIES

All technical enquiries or comments on this Standard should be sent in writing as appropriate to:

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Director of Engineering

**VOLUME 11 ENVIRONMENTAL
ASSESSMENT
SECTION 2 ENVIRONMENTAL
IMPACT ASSESSMENT**

PART 7

HA 218/08

**GLOSSARY OF TERMS USED IN DMRB
VOLUME 11, SECTIONS 1 AND 2**

SUMMARY

This Advice Note is a glossary for terms used in Volume 11, SECTION 1 and Volume 11, SECTION 2.

INSTRUCTIONS FOR USE

1. Remove Contents pages from Volume 11 and insert new Contents pages for Volume 11 dated August 2008.
2. Insert the new Advice Note HA 218/08 into Volume 11, Section 2.
3. Please archive this sheet as appropriate.

Note: A quarterly index with a full set of Volume Contents Pages is available separately from The Stationery Office Ltd.



THE HIGHWAYS AGENCY



SCOTTISH GOVERNMENT



Llywodraeth Cynulliad Cymru
Welsh Assembly Government

WELSH ASSEMBLY GOVERNMENT
LLYWODRAETH CYNULLIAD CYMRU



DRD

Department for
Regional Development
www.drdni.gov.uk

THE DEPARTMENT FOR REGIONAL DEVELOPMENT
NORTHERN IRELAND

Glossary of Terms Used in DMRB Volume 11, SECTIONS 1 and 2

Summary: This Advice Note is a glossary for terms used in Volume 11, SECTION 1 and Volume 11, SECTION 2.

REGISTRATION OF AMENDMENTS

Amend No	Page No	Signature & Date of incorporation of amendments	Amend No	Page No	Signature & Date of incorporation of amendments

REGISTRATION OF AMENDMENTS

Amend No	Page No	Signature & Date of incorporation of amendments	Amend No	Page No	Signature & Date of incorporation of amendments

**VOLUME 11 ENVIRONMENTAL
ASSESSMENT**
**SECTION 2 ENVIRONMENTAL
IMPACT ASSESSMENT**

PART 7

HA 218/08

**GLOSSARY OF TERMS USED IN DMRB
VOLUME 11, SECTIONS 1 AND 2**

Contents

Chapter

1. Glossary of Terms
2. Enquiries

1. GLOSSARY OF TERMS

Advanced works	The construction activities that are required in preparation for the construction phase of a project. Advanced works may include, for example, the clearance of vegetation or the relocation of utilities.
Alternative options	Different design possibilities considered during project development that have potential to fulfil the Project Objectives .
Appraisal	A process (with methodologies that differ to those of environmental impact assessment) that looks at the worth of a course of action.
Assessment	A process by which information about effects of a proposed plan, project or intervention is collected, assessed and used to inform decision-making.
Baseline conditions	The environment as it appears (or would appear) immediately prior to the implementation of the project together with any known or foreseeable future changes that will take place before completion of the project.
Cumulative impact	The following definition is widely accepted – <i>“Impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the project.”</i> ¹ For the purposes of the DMRB Volume 11 guidance, a cumulative impact may arise as the result of: a) the combined impact of a number of different environmental topic-specific impacts from a single environmental impact assessment project on a single receptor/resource; and b) the combined impact of a number of different projects within the vicinity (in combination with the environmental impact assessment project) on a single receptor/resource.
Decision-makers	In England, this is the Secretary of State. In Northern Ireland, this is the Northern Ireland Ministers. In Scotland, this is the Scottish Ministers. In Wales, this is the Welsh Ministers.
Design Manual for Roads and Bridges (DMRB)	A set of documents that provide a comprehensive manual system which accommodates all current standards, advice notes and other published documents relating to the design, assessment and operation of trunk roads (including motorways).
Designer	The organisation commissioned to undertake the various stages of scheme preparation and supervision of construction. This includes specialist sub-consultants brought in to advise on specific areas of assessment and mitigation.
Desirable mitigation	A measure considered to be environmentally beneficial but that cannot usually be achieved using statutory powers. For example, third party agreement may be required.

¹ European Commission (May 1999) *Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions*.

Detailed Assessment	Method applied to gain an in-depth appreciation of the beneficial and adverse consequences of the project and to inform project decisions. Detailed Assessments are likely to require detailed field surveys and/or quantified modelling techniques.
Determination Decision	Formal judgement as to whether a project requires statutory Environmental Impact Assessment or not.
Do-Minimum Scenario	The conditions that would persist in the absence of the implementation of a construction or improvement project, but given that maintenance is on-going.
EIA Directive	Used to refer to EC Directive 85/337/EEC as amended by EC Directive 97/11/EC and the Public Participation Directive 2003/35/EC.
EIA Regulations	<i>“A collective name for the various statutory instruments through which the EC Council Directive on Environmental Assessment (Directive 85/337/EEC as amended by Directive 97/11/EC” and the Public Participation Directive 2003/35/EC) “has been implemented in the UK.”²</i>
Effect	Term used to express the consequence of an impact (expressed as the ‘significance of effect’), which is determined by correlating the magnitude of the impact to the importance, or sensitivity, of the receptor or resource in accordance with defined significance criteria. For example, land clearing during construction results in habitat loss (impact), the effect of which is the significance of the habitat loss on the ecological resource.
Enhancement	A measure that is over and above what is required to mitigate the adverse effects of a project.
Environmental Assessment	A method and a process by which information about environmental effects is collected, assessed and used to inform decision-making. Assessment processes include Strategic Environmental Assessment, Assessment of Implications on European Sites and environmental impact assessment.
Environmental impact assessment	<i>“The systematic, reproducible and interdisciplinary identification, prediction and evaluation, mitigation and management of impacts from proposed development and its reasonable alternatives.”³</i> used for the purposes of this guidance when referring to both statutory Environmental Impact Assessment (EIA) and non-statutory environmental impact assessment.
Environmental Impact Assessment (EIA)	A statutory process by which certain planned projects must be assessed before a formal decision to proceed can be made. Involves the collection and consideration of environmental information, which fulfills the assessment requirements of Directive 85/337/EEC (as amended), including the publication of an Environmental Statement.
Environmental Management Plan	Developed prior to any works commencing on site, the primary purpose of the Environmental Management Plan is to guide environmental management of implementation of the project as required by the Overseeing Organisation.

² Adapted from a definition given by the Institute of Environmental Management and Assessment (2004). *Guidelines for Environmental Impact Assessment*.

³ Institute of Environmental Management and Assessment (2004). *Guidelines for Environmental Impact Assessment*.

Environmental Statement (ES)	A document produced in accordance with the EIA Directive as transposed into UK law by the EIA Regulations.
Essential mitigation	Mitigation which the Overseeing Organisation has the statutory power to achieve.
Evaluation	The determination of the significance of effects. Evaluation involves making judgements as to the value of the receptor/resource that is being affected and the consequences of the effect on the receptor/resource based on the magnitude of the impact.
Impact	Change that is caused by an action; for example, land clearing (action) during construction which results in habitat loss (impact).
Improvement	The doing of any act under powers conferred by Part V of the Highways Act 1980 (as amended).
Minister	In England, the Minister is the Secretary of State. In Northern Ireland, the Minister is the Northern Ireland Minister. In Scotland, the Minister is the Scottish Minister. In Wales, the Minister is the Welsh Minister.
Mitigation	Measures intended to avoid, reduce and, where possible, remedy significant adverse environmental effects.
Monitoring	A continuing assessment of the performance of the project, including mitigation measures. This determines if effects occur as predicted or if operations remain within acceptable limits, and if mitigation measures are as effective as predicted.
Non-statutory environmental impact assessment	Identifying, predicting and evaluating the environmental effects (both negative and positive) of projects for which statutory EIA is not mandatory.
Non-Technical Summary (NTS)	Information for the non-specialist reader to enable them to understand the main predicted environmental effects of the proposal without reference to the main Environmental Statement.
Operational	The functioning of a project on completion of construction.
Overseeing Organisation	The organisation responsible for the project i.e., the Highways Agency (an agency of the Department for Transport); Transport Wales (part of the Welsh Assembly Government); Transport Scotland (an agency of the Scottish Government); or in Northern Ireland, the Roads Agency of the Department for Regional Development.
Plan	A document setting out the intention or intentions of the Overseeing Organisation.
Preferred option	The chosen design option that most successfully achieves the project objectives and becomes subject to further design and assessment.
Programme	A series of steps that have been identified by the Overseeing Organisation, or series of projects that are linked by dependency.

Project	One, or more, aspect of a programme or plan that has been identified by the Overseeing Organisation and which usually involves a direct physical intervention.
Project Brief	The Project Brief defines the objective of the whole project and is the basis for the project design. The Project Brief is issued to the Overseeing Organisation by the Executive Agency of the Department for Transport; the Welsh Assembly Government; the Scottish Government; or, the Northern Ireland Department for Regional Development.
Project objectives	The objectives of the project, set by the Overseeing Organisation and including those set out in the Project Brief.
Receptor	A defined individual environmental feature usually associated with population, fauna and flora that has potential to be affected by a project.
Relevant project	A project that falls under Annex II of the Council Directive 85/37/EEC (as amended) and for which Determination is required.
Resource	A defined but generally collective environmental feature usually associated with soil, water, air, climatic factors, landscape, material assets, including the architectural and archaeological heritage, that has potential to be affected by a project.
Scoping	The process of identifying the issues to be addressed by the environmental impact assessment process. It is a method of ensuring that an assessment focuses on the important issues and avoids those that are considered to be not significant. ⁴
Screening	The formal process undertaken to determine whether it is necessary to carry out a statutory Environmental Impact Assessment and publish an Environmental Statement in accordance with the EIA Regulations.
SEA Regulations	A collective term used for EC Council Directive 2001/42/EC (the SEA Directive) as transposed into UK law by: <ul style="list-style-type: none">• the Environmental Assessment of Plans and Programmes Regulations 2004, No. 1633 (England);• the Environmental Assessment of Plans and Programmes (Northern Ireland) Regulations 2004, No. 280 (Northern Ireland);• Environmental Assessment (Scotland) Act 2005 (Scotland); and• the Environmental Assessment of Plans and Programmes (Wales) Regulations 2004, No. 1656 (W.170) (Wales).
Significance of effect	A measure of the importance or gravity of the environmental effect, defined by significance criteria specific to the environmental topic.

⁴ Adapted from a definition given by the Institute of Environmental Management and Assessment (2004). *Guidelines for Environmental Impact Assessment*.

Simple Assessment	<p>Initial, brief assessment activity based on the assembly of data and information that is readily available, to fulfil one of the following functions:</p> <ol style="list-style-type: none">To address unknown aspects in the Scoping assessment level;To reach an understanding of the likely environmental effects to inform the final design and assessment; or,To reach an understanding of the likely environmental effects that identifies the need for a Detailed Assessment.
Stakeholder	<p>An organisation or individual with a particular interest in the project.</p>
Statutory consultee	<p><i>“Organisations that the relevant determining authority is required to consult by virtue of the EIA Regulations.”⁵</i></p>
Statutory environmental bodies	<p>In England and Wales, “statutory environmental bodies” means:</p> <ul style="list-style-type: none">• Any principal council as defined in subsection (1) of section 270 of the Local Government Act 1982 for the area where the land is situated;• Where the land is situated in England; Natural England and English Heritage, and the Countryside Council for Wales and the National Assembly for Wales where, in the opinion of the Secretary of State, the land is sufficiently near to Wales to be of interest to them;• Where the land is situated in Wales; the Countryside Council for Wales, and Natural England and English Heritage where, in the opinion of the National Assembly for Wales, the land is sufficiently near to England to be of interest to the organisation;• The Environment Agency; and• Any other public authority which has environmental responsibilities and which the Secretary of State or the National Assembly for Wales considers likely to have an interest in the project. <p>In Northern Ireland, “statutory environmental bodies” means:</p> <ul style="list-style-type: none">• Any district council for the area in which the project for construction or improvement of the road is situated; and• Any authorities likely to be concerned by the project by reason of their specific environmental responsibilities.” <p>In Scotland, “statutory environmental bodies” means:</p> <ul style="list-style-type: none">• The appropriate planning authority where the proposed project is likely to affect land in their area;• The National Park authority for any National Park where the proposed project is likely to affect land in the National Park;

⁵ Institute of Environmental Management and Assessment (2004). *Guidelines for Environmental Impact Assessment*.

- Scottish Natural Heritage;
- The Scottish Environment Protection Agency established under section 20 of the Environment Act 1995;
- Historic Scotland; and
- Other bodies designated by statutory provision as having specific environmental responsibilities.

Strategic Environmental Assessment (SEA)

A formal, systematic and comprehensive process for assessing the environmental effects of a proposed plan or programme, or additionally in Scotland and Wales, strategies, in accordance with the SEA Regulations.

Study area

The spatial area within which environmental effects are assessed (i.e. extending a distance from the project footprint in which significant environmental effects are anticipated to occur). This may vary between the topic areas.

Sustainable development

The overarching aim 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*”.⁶

Topic report

Document produced to report the findings of the environmental impact assessment of an individual topic area that may or may not contain raw data.

⁶ *Securing the Future – UK Government sustainable development strategy*, Cm. 6467, March 2005, published by The Stationery Office, ISBN 0101646720.

2. ENQUIRIES

All technical enquiries or comments on this Advice Note should be sent in writing as appropriate to:

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**CORRECTIONS WITHIN DESIGN MANUAL FOR ROADS AND BRIDGES
AUGUST 2009**

**SUMMARY OF CORRECTION – HA 200/08 VOLUME 11, SECTION 1, PART 1
AIMS AND OBJECTIVES OF ENVIRONMENTAL ASSESSMENT**

Please replace pages 1/1 and 1/2.

Additional text has been inserted in Table 1.1 – Section 3, 11.3.5 Geology and Soils.

We apologise for the inconvenience caused.

*Highways Agency
August 2009*

London: The Stationery Office

**VOLUME 11 ENVIRONMENTAL
ASSESSMENT
SECTION 1 INTRODUCTION**

PART 1

HA 200/08

**AIMS AND OBJECTIVES OF
ENVIRONMENTAL ASSESSMENT**

SUMMARY

This Advice Note introduces guidance for environmental assessment in relation to all trunk road projects. It sets the overall aims and objectives of the Environmental Assessment process.

INSTRUCTIONS FOR USE

1. Remove Contents pages from Volume 11 and insert new Contents pages for Volume 11 dated August 2008.
2. Remove the existing document entitled 'The Application of the Advice Note' located in Volume 11, Section 1, Part 1 which is superseded by this document and archive as appropriate.
3. Insert the new Advice Note HA 200/08 into Volume 11, Section 1.
4. Please archive this sheet as appropriate.

Note: A quarterly index with a full set of Volume Contents Pages is available separately from The Stationery Office Ltd.



THE HIGHWAYS AGENCY



SCOTTISH GOVERNMENT



Llywodraeth Cynulliad Cymru
Welsh Assembly Government

WELSH ASSEMBLY GOVERNMENT
LLYWODRAETH CYNULLIAD CYMRU



THE DEPARTMENT FOR REGIONAL DEVELOPMENT
NORTHERN IRELAND

Aims and Objectives of Environmental Assessment

Summary: This Advice Note introduces guidance for environmental assessment in relation to all trunk road projects. It sets the overall aims and objectives of the Environmental Assessment process.

REGISTRATION OF AMENDMENTS

Amend No	Page No	Signature & Date of incorporation of amendments	Amend No	Page No	Signature & Date of incorporation of amendments

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**VOLUME 11 ENVIRONMENTAL
ASSESSMENT
SECTION 1 INTRODUCTION**

PART 1

HA 200/08

**AIMS AND OBJECTIVES OF
ENVIRONMENTAL ASSESSMENT**

Contents

Chapter

1. Introduction and Application
2. Aims and Objectives of the Guidance
3. Integrating with Project Approvals and Delivery
4. Expertise for Environmental Assessment
5. References
6. Enquiries

1. INTRODUCTION AND APPLICATION

1.1 The purpose of Volume 11 is to give guidance for the Environmental Assessment of projects. All types of projects can have significant effects on the environment. Decision-makers need to be able to understand these effects and the Environmental Assessment process provides a way of assessing and reporting these effects. Volume 11, therefore, covers the Environmental Assessment of all projects.

1.2 In this context, the Environmental Assessment process referred to above covers statutory Environmental Impact Assessment (EIA), non-statutory environmental impact assessment, and Assessment of Implications on European Sites. Reference is also made to Strategic Environmental Assessment (SEA) and Transport Appraisal and how these are linked to project-based environmental impact assessments.

1.3 Table 1.1 sets out the structure of Volume 11.

1.4 SECTION 1 sets the overall framework for project-based Environmental Assessments.

1.5 SECTION 2 covers the general principles that apply specifically to environmental impact assessments for projects and therefore sets the context for the more detailed topic-specific environmental impact assessment guidance presented in SECTION 3.

1.6 SECTION 3 is broken down into a set of specific topic areas. SECTION 3 gives specific guidance on environmental impact assessment methods, forecasting techniques and the levels of design detail and consultations needed for each environmental topic to enable the assessment to be undertaken. The topic-specific sections also provide guidance on the provision and assessment of mitigation and enhancement measures as well as providing specific clarification on reporting requirements.

1.7 SECTION 4 provides guidance for the Assessment of Implications on European Sites process.

Volume 11	Reference	Title
SECTION 1 - Introduction		
11.1.1	HA 200	Aims and Objectives of Environmental Assessment
SECTION 2 - Principles of Environmental Impact Assessment		
11.2.1	HA 201	General Principles and Guidance of Environmental Impact Assessment
11.2.2	HA 202	Environmental Impact Assessment
11.2.3	HD 47	Screening of Projects for Environmental Impact Assessment
11.2.4	HA 204	Scoping of Environmental Impact Assessments
11.2.5	HA 205	Assessment and Management of Environmental Effects
11.2.6	HD 48	Reporting of Environmental Impact Assessments
11.2.7	HA 218	Glossary of Terms Used in DMRB Volume 11, SECTIONS 1 and 2
SECTION 3 - Environmental Impact Assessment Topics		
11.3.1	HA 207	Air Quality
11.3.2	HA 208	Cultural Heritage
11.3.3	HA 209	Landscape
11.3.4	HA 210	Nature Conservation
11.3.5		Geology and Soils
11.3.6	HA 212	Materials
11.3.7	HA 213	Noise
11.3.8	HA 214	Effects on All Travellers
11.3.9	HA 215	Community and Private Assets
11.3.10	HA 216	Road Drainage and the Water Environment
SECTION 4 – Assessment of Implications on European Sites		
11.4.1	HD 44/09	Assessment of Implications on European Sites

Table 1.1 Structure of DMRB Volume 11 Environmental Assessment

1.8 Advice on the overall project reporting process, covering Environment, Economics, Traffic and Engineering, is given in TD 37 (DMRB 5.1.2 Scheme Assessment Reporting).

Implementation

1.9 This guidance should be used forthwith on projects in accordance with the Overseeing Organisation's specific instructions.

2. AIMS AND OBJECTIVES OF THE GUIDANCE

2.1 The aim of this guidance is to provide advice which reflects both legislative and best practice requirements. It seeks to ensure information about the environmental effects of projects is collected, assessed and used to inform option choice, design and decision-making in a timely and cost effective manner.

2.2 The objectives of this guidance are to provide:

- a) a consistent approach to project-based environmental assessment and its reporting; and
- b) an approach by which the Overseeing Organisation can be assured that they have complied with all environmental regulations as well as their own policies and procedures.

2.3 Specifically, the guidance seeks to promote:

- a) a level of environmental assessment that is appropriate to the project;
- b) consideration of the likely environmental effects of possible alternatives to inform option and design choice in a way which enables the importance of the predicted effects and the scope for mitigating these effects to be assessed;
- c) consideration and reporting of the likely environmental effects of possible projects so planning and design decisions can be made that promote sustainable development and other environmental policies;
- d) opportunities for stakeholders, including the public and statutory environmental bodies to comment at appropriate times on proposals taking account of their environmental implications and the specific requirements of the Overseeing Organisation;
- e) a basis for the development of environmental management measures responding to the environmental requirements of the project; and
- f) environmental commitments which are carried through to the construction and operational stages of the project.

3. INTEGRATING WITH PROJECT APPROVALS AND DELIVERY

3.1 It will be the role of the Overseeing Organisation to ensure that the environmental issues are fully integrated in the project planning, option choice, design, assessment and approval processes. This should be undertaken in a manner that reflects the environmental sensitivity of the project and the environmental risks associated with the project decision that the assessment is to inform.

3.2 It is emphasised that it is not necessary to undertake assessment to a similar level of detail at every stage of project approval and delivery. For example, once it is established no significant effects are likely, assessment should stop and the decision reported accordingly. The converse is also true, if greater assessment detail earlier in a project's planning, design and development would better inform decision-making, a more detailed assessment should be undertaken. This is discussed further in SECTION 2, Part 1, Chapter 2.

3.3 The Designer should seek agreement and approval from the Overseeing Organisation to the proposed levels of assessment to be applied at each stage of project approval. If certain topics need to be described and assessed in greater detail this would be achieved by varying the assessment levels to the particular requirements of the project. A robust explanation of the reasons why different topics are examined to different levels of detail would be required within the assessment reports (refer to SECTION 2, Part 6).

3.4 In some cases it may be necessary to consider environmental effects not described in the guidance in detail, or to vary methods to suit the particular requirements of a project. In such cases the Designer should seek agreement and approval from the Overseeing Organisation.

3.5 The effects of a proposed project may be direct, indirect, secondary, cumulative, short, medium and long-term, and can be positive or negative and permanent or temporary. Therefore, whilst parts of the assessment may be carried out within each topic as a discrete activity, there may be interactions between the topics as well as cumulative effects that arise in relation to other development projects (refer to SECTION 2, Part 5). These should all be considered before the level of assessment is decided upon. It is for the Designer

to co-ordinate the work of taking these topics forward and to consider the wider interactions and effects in developing and refining possible design options and any preferred option identified with the Overseeing Organisation.

3.6 It should not be assumed that an assessment of a project, which has not been taken forward for a number of years, is still valid. Since some information may date with time and so render the assessments as out-of-date, a good scoping exercise should highlight these deficiencies. Advice and approval from the Overseeing Organisation should be sought in such instances.

4. EXPERTISE FOR ENVIRONMENTAL ASSESSMENT

4.1 It is important that those involved in projects have sufficient relevant expertise to conduct environmental assessments in the project delivery process. The level of expertise should be commensurate with the level of complexity of the project and the likely significance of environmental effects to be encountered.

4.2 The level of experience should reflect the anticipated level of environmental risks associated with the project. Appendix E of GD 02/08 (DMRB 0.2.1) gives indicative levels of experience, professional status, training and competency that the Overseeing Organisation considers necessary to enable Designers to fulfil typical project roles. The Overseeing Organisation should ensure that contractual arrangements obtain the necessary expertise called for by GD 02/08.

5. REFERENCES

Legislation:

- Council Directive 85/337/EEC: Council Directive of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment, *Official Journal No. L 175*, 05/07/1985.
- Council Directive 92/43/EEC: Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, *Official Journal L 206*, 22/07/1992.
- Council Directive 97/11/EC: Council Directive 97/11/EC of 3 March 1997 amending Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, *Official Journal No. L 073*, 14/03/1997.
- Council Directive 97/62/EC: Council Directive 97/62/EC of 27 October 1997 adapting to technical and scientific progress Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora *Official Journal No L 305*, 08/11/1997.
- Council Directive 2001/42/EC: Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment, *Official Journal No. L 197*, 21/07/2001.
- Council Directive 2003/35/EC: Directive 2003/35/EC of the European Parliament and of the Council of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC, *Official Journal No. L 156*, 25/06/2003.
- Environmental Assessment (Scotland) Act 2005, *The Stationery Office Limited*, ISBN 0105900893.
- Highways Act 1980.
- New Roads and Street Works Act 1991.
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- Scottish Statutory Instrument 1999 No. 1 The Environmental Impact Assessment (Scotland) Regulations 1999, *The Stationery Office Limited*, ISBN 0 11 0591070.
- Scottish Statutory Instrument 2004 No. 475 The Conservation (Natural Habitats, &c.) Amendment (Scotland) Regulations 2004, *The Stationery Office Limited*, ISBN 0110693124.
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- Scottish Statutory Instrument 2007 No. 349 The Conservation (Natural Habitats, &c.) Amendment (No. 2) (Scotland) Regulations 2007, *The Stationery Office Limited*, ISBN 9780110776217.
- Statutory Instrument 1988 No. 1221 (S.122) The Environmental Assessment (Scotland) Regulations 1988, *The Stationery Office Limited*, ISBN 0110872215.
- Statutory Instrument 1988 No. 1241 The Highways (Assessment of Environmental Effects) Regulations 1988, *The Stationery Office Limited*, ISBN 011087241X.
- Statutory Instrument 1993 No. 3160 The Roads (Northern Ireland) Order 1993, *The Stationery Office Limited*, ISBN 0110342895.
- Statutory Instrument 1994 No. 1002 The Highways (Assessment of Environmental Effects) Regulations 1994, *The Stationery Office Limited*, ISBN 0110440021.
- Statutory Instrument 1994 No. 2716 The Conservation (Natural Habitats, &c.) Regulations 1994, *The Stationery Office Limited*, ISBN 0110457161.
- Statutory Instrument 1999 No. 369 The Highways (Assessment of Environmental Effects) Regulations 1999, *The Stationery Office Limited*, ISBN 0 11 082053 3.
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Statutory Instrument 2007 No. 1062 The Highways (Environmental Impact Assessment) Regulations 2007, *The Stationery Office Limited*, ISBN 9780110765969.

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6. ENQUIRIES

All technical enquiries or comments on this Advice Note should be sent in writing as appropriate to:

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