

# **GUIDELINES FOR LANDSCAPE AND VISUAL IMPACT ASSESSMENT**

**THIRD EDITION**

**CONSULTATION DRAFT**

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# Chapter 1: Introduction

## Background

1.1 The landscape around us is an important part of people's lives, contributing to individual, community and national identity and offering a wide variety of benefits in terms of quality of life, well-being and economic activity. It is not, however, unchanging. Many different pressures have progressively altered familiar landscapes in the past and will continue to do so in the future, creating new landscapes. Many of these drivers of change arise from the requirement for development to meet the needs of a growing and changing population. They include land management, especially farming and forestry, and many forms of development including new housing, commercial developments, new forms of energy such as wind turbines and solar arrays, new infrastructure such as roads, railways and power lines and extraction of minerals for a variety of uses, among many others. Climate change too is a factor bringing about change in landscapes.

1.2 In the last thirty years there has been growing emphasis on the need to accommodate such change and development in ways that are sustainable. Definitions of sustainable development are widely debated but in current thinking it is interpreted in this way<sup>1</sup>:

*“Development that meets the needs of the present without compromising the ability of existing communities and future generations to meet their own needs. It is central to the economic, environmental and social success of the country both that these three aspects of development are addressed positively and equally*

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□ From the 8<sup>th</sup> Report of the Communities and Local Government Select Committee, on the draft National Planning Policy Framework, 15<sup>th</sup> December 2011.

*and that planning both serves to protect and to enhance and add value to the environment”.*

Achieving this balance is especially important when dealing with landscape change because landscape is important to so many people. But attitudes to change in the landscape are complex making it particularly important that the nature of change and its effects are clearly communicated to the people who may be affected and to decision makers.

1.3 Environmental Impact Assessment (EIA) is an environmental management tool that has been used in many different parts of the world since 1970. It has been formally required for certain projects in the UK since the (then) European Economic Community introduced Council Directive 85/337/EEC (subsequently amended, primarily by Council Directive 97/11/EC) on the ‘Assessment of the effects of certain private and public projects on the environment’. The objective of the Directive is to provide the competent authorities *“with relevant information to enable them to take a decision on a specific project in full knowledge of the project's likely significant impact on the environment”*<sup>2</sup>. The implementation of this directive in the UK, which is achieved through a number of different country regulations (discussed further in Paragraph 2.11) requires the identification, prediction and evaluation of the key environmental effects of a change or development, and use of the information gathered both to reduce likely adverse effects during the design of the project and to inform the decision making process.

1.4 Since its introduction EIA has become a very important tool for predicting and evaluating the wide range of effects of development on the environment and on people. Landscape and Visual Impact Assessment (LVIA) is a separate but

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□ From preamble to Council Directive 97/11/EC amending Directive 85/337/EEC. Official Journal No. L073, 14/03/1997, pg 0005.

closely linked process that operates within the overall framework of EIA. It specifically aims to ensure that all possible effects of change and development both on the landscape itself and on views and visual amenity, are taken into account in decision-making. The Landscape Institute and the Institute of Environmental Management and Assessment (and its predecessor the Institute of Environmental Assessment) have worked together since 1995 to publish guidelines on good practice in Landscape and Visual Impact Assessment. Two previous editions of the guidelines, published in 1995 and 2002, have already played a very significant role in encouraging higher standards in the conduct of LVIA projects. This is the third edition of the guidance.

1.5 Terminology is complex in this area. In the original European Directive '*impact*' assessment generally refers to the process of environmental impact assessment, while '*effects*' refers to the changes arising from the development that is being assessed. This guidance clearly distinguishes between impact (the action) and effect (the effect of that action) and recommends that these terms should be used consistently. It is, however, recognised that some practitioners - and indeed people in general - may use the terms impact and effect interchangeably while still adhering to the Directives and Regulations. The Directive is clear that the emphasis is on the identification of significant environmental effects and includes effects that are positive and negative, direct and indirect, long and short term, and reversible and irreversible, as well as cumulative effects.

1.6 EIA is a formal requirement for some types of project, and likely to be formally required for others if certain circumstances exist. As a core part of the EIA process LVIA is also formally required. Both processes can, however, also be used informally to assist in other forms of land use change or development that fall outside the requirements of the directives and regulations. Informal use of such procedures can be a very useful way of thinking about the design of different forms of development or other projects that may possibly bring about

environmental change. Reference is sometimes made to the appraisal of landscape and visual effects when such work is carried out informally outside the requirements of the EIA Directives and Regulations. This guidance is mainly concerned with formal requirements for EIA and the role of LVIA in that but it may also be useful in such informal 'appraisal' situations as well.

## The changing context

1.7 This third edition replaces the earlier editions and takes account of changes that have taken place since 2002 when the second edition was published. Since then the UK has both signed and ratified the European Landscape Convention, which places new obligations on government in dealing with landscape matters, further raising the profile of this important area and emphasising the role that landscape can play as an integrating framework for many areas of policy. Successful implementation of the ELC will mean, for example, that: *"all England's diverse landscapes are valued and well looked after, providing a sense of place and identity relevant to people's lives, and that their complex ecosystems function well. All landscapes will be more effectively planned, well designed and sensitively managed with people in mind"*<sup>3</sup>. The greater profile for landscape issues has been signalled by publication of a briefing note for politicians on Landscapes of the Future<sup>4</sup>. At the same time changes to the planning system through the National Planning Policy Framework mean that, at least in England, pressures for change in the landscape and the emphasis on finding ways to achieve sustainable development are likely to grow.

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□ Natural England (2007) The European Landscape Convention - A Framework for Implementation. Natural England, DEFRA and English Heritage.

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□ Parliamentary Office of Science and Technology (2011) Landscapes of the Future. POSTNOTE No. 380.

1.8 In the last ten years the parallel and complementary tool of Landscape Character Assessment (LCA) has also developed significantly. This has been influenced by the joint guidance produced by the (then) Countryside Agency and Scottish Natural Heritage, also in 2002, and the subsequent publication of Topic Papers on important matters including landscape sensitivity and capacity and methods of historic landscape character assessment. New approaches to landscape have also emerged, for example the growing emphasis on green infrastructure and the policy focus on ecosystem services as a way of establishing the benefits delivered by land and landscape.

1.9 Last but not least, since 2002, when both the LVIA and the LCA guidance were published, there has been considerable growth in experience of applying these methods and testing them through Public Inquiries and related legal processes. This experience has revealed the need for some issues to be clarified and for the guidance to be revised to take account of changing circumstances.

### **Influencing those who carry out Landscape and Visual Impact Assessments**

1.10 This new edition of the LVIA guidelines has been produced to take account of these changes in the context for LVIA, to reflect the expanded range of good practice that now exists and to address some of the questions and uncertainties that have arisen from the second edition. LVIA continues to be a particularly challenging area of work compared with some other aspects of Environmental Impact Assessment because it involves a high level of professional judgement about issues that have great importance for the public and can pose difficult particular problems for decision makers.

1.11 In 1997 the Landscape Institute received a Royal Charter of Incorporation, and thereby became confirmed as the recognised expert and professional body for landscape matters. The holistic perspective that landscape professionals take,

coupled with the broad scope of their interests as embodied in the Charter, means that they can make a particularly valuable contribution to EIA in general and LVIA in particular.

1.12 Landscape professionals play key roles in the multidisciplinary teams who carry out a substantial proportion of EIAs. Sometimes they play a leading role. It is vitally important that they are able to demonstrate the highest professional standards and that their work should offer exemplars of good practice. While there has already been continuous improvement in the standard and content of environmental statements (ES) (which are the documents resulting from the process of EIA) as experience has grown, there is still a clear need for sound, reliable and widely accepted advice on good practice for all aspects of EIA.

1.13 As with the previous editions, this guidance aims to meet that need and help practitioners to achieve quality and consistency in their approach to LVIA. This should help to raise standards in this important area of professional work and ensure that change in the landscape is considered in a way that befits its importance in people's lives. The content of this new edition of the guidance on LVIA is based on the accumulated practice experience of members of the Landscape Institute and the Institute of Environmental Management and Assessment. The intention is to help to achieve consistency, credibility, and effectiveness in landscape and visual impact assessment when carried out as part of an EIA. This edition clarifies good practice and should help practitioners to be more consistent both in the use of terminology and in overall approach.

1.14 The guidance concentrates on principles, while also seeking to steer specific approaches where there is a general consensus on methods and techniques. It is not prescriptive in that it does not provide a detailed 'recipe' that can be followed in every situation. **It is always the primary responsibility of the landscape professional carrying out an assessment, to ensure that the**

**approach and methodology adopted is appropriate to the particular circumstances.**

### **A wider audience**

1.15 Although aimed mainly at those carrying out landscape and visual impact assessments, the guidance may also be of value to others who have an interest in the EIA process and may help to improve understanding of the particular processes of landscape and visual impact assessments. They include:

- Developers and members of professional development project teams;
- Practitioners, often consultants, responsible for managing the process of EIA and for reviewing the outputs;
- Planners and others within local government and the government agencies who may be the recipients of Environmental statements and have to review them;
- Politicians, amenity societies and the general public who may be involved in decisions about development proposals;
- Those providing education about landscape and visual impact assessment as one of a range of tools and techniques in landscape planning and design;
- Students wishing to learn about the process of landscape and visual impact assessment.

1.16 Although written primarily in the context of the UK approach to EIA and LVIA it is recognised that previous editions have also been used in other parts of the world. The aim has been to make the advice specific enough to meet the needs of UK practitioners but also to avoid too much detail about specific legislation which will make it of less value elsewhere.

## Organisation and structure of the guidelines

1.17 The guidelines are organised in three parts as follows:

**Part 1** is an introduction to the revised edition. **Chapters 2 and 3** discuss the broad scope of the topic, outline the general context in which LVIA is undertaken and highlight its importance. The content is designed to help inform a broad audience about what LVIA is, why it is important, how it fits into EIA more generally and how it relates to other topics and approaches. It sets the scene by providing some of the theory and background to the subject but is not concerned with the practicalities of actually carrying out LVIA.

**Part 2** is the core of the practical guidelines. It sets out some fundamental principles but focuses on methods, procedures and technical issues, set out in the following Chapters:

**Chapter 4** - outlines the overall process of LVIA and places it in the context of wider EIA processes;

**Chapter 5** - describes what those involved in LVIA need to know about the development or change that is proposed;

**Chapter 6** - describes how the general process applies to assessing landscape impacts;

**Chapter 7** - describes how the general process applies to assessing visual impacts;

**Chapter 8** - reviews ways of approaching the issue of cumulative impact in relation to landscape and visual matters;

**Chapter 9** discusses approaches to presenting material about landscape and visual impact assessment in an Environmental Statement.

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## **Consultation questions**

Does this chapter clearly explain what LVIA is?

Does this chapter clearly explain the purpose of the guidance and what it should be used for?

Is any further explanation of how to use the guidance needed?

Any other suggestions or comments on Chapter 1?

## Chapter 2: Scope and definitions

### What does landscape mean?

2.1 Since the previous edition of this guidance was published the European Landscape Convention has been signed and ratified in the United Kingdom (UK) and is being put into effect through a wide variety of actions. The Convention adopts a definition of landscape that is now being widely used in many different situations and is adopted in this guidance:

*'Landscape is an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.'*

(Council of Europe, 2000)

2.2 This definition reflects the thinking that emerged in the UK in the late 1980s and early 1990s and was summarised in the 2002 guidance on Landscape Character Assessment. The inclusive nature of landscape was captured there in a paragraph stating that:

*"Landscape is about the relationship between people and place. It provides the setting for our day-to-day lives. The term does not mean just special or designated landscapes and it does not only apply to the countryside. Landscape can mean a small patch of urban wasteland as much as a mountain range, and an urban park as much as an expanse of lowland plain. It results from the way that different components of our environment - both natural (the influences of geology, soils, climate, flora and fauna) and cultural (the historical and current impact of land use, settlement, enclosure and other human interventions) - interact together and are perceived by us. People's perceptions turn land into the concept of landscape".*

(Swanwick, C. and Land Use Consultants (2002))

2.3 This guidance embraces this broad and inclusive interpretation of what landscape means. It applies to towns and cities as much as to rural landscapes, and includes seascape as well as landscape (see Paras. 3.2 - 3.8). It is not only concerned with landscapes that are recognised as being special or valuable, but is also about the ordinary and the everyday – the landscapes where people live and work, or spend their leisure time. The same principles can be applied in all these different landscape settings, provided that full attention is given to the particular characteristics of each place.

2.4 The importance of this definition is that it moves beyond the idea, which is still prevalent, that landscape is largely a matter of aesthetics and visual amenity. Instead it encourages an equal focus on landscape as a resource in its own right. It provides an integrated way of thinking about our surroundings and is increasingly considered to provide a useful physical and spatial framework for thinking about a wide range of environmental, land use and development issues. It also recognises that all landscapes are important, whatever their location, whether in an urban fringe area or an area of wild countryside.

### **The importance of landscape**

2.5 The need to give particular attention to the effects of landscape change arises from the importance that people attach to landscape - whether as individuals, enjoying landscapes through all the senses, as local communities or as national bodies. This importance is a reflection of several factors. These have been identified in a variety of documents (see for example Scottish Landscape Forum, 2007 and Natural England, 2010) among others. It is argued that landscape provides:

- A shared resource which is important in its own right as a public good;

- An environment for plants and animals;
- The setting for day to day lives - for living, working and recreation;
- Opportunities for aesthetic enjoyment;
- A sense of place which in turn can contribute to individual, local and national identity;
- Continuity with the past through its relative permanence and its role in acting as a cultural record of the past;
- A source of memories and associations, which in turn may contribute to wellbeing;
- Inspiration for learning, as well as for art and other forms of creativity.

In addition landscape can bring economic benefits by providing an essential resource for recreation and tourism and also by its now known impact on health and well being.

## **Landscape in Environmental Impact Assessment**

2.6 Environmental Impact Assessment requires a wide range of environmental topics to be investigated. The European Directives, the Regulations that apply in the UK, and the guidance documents that support them, all list these albeit with slight variations in the wording. The topics can be summarised as:

- human beings, population
- flora and fauna
- soil ,water, air, climate
- **landscape**
- cultural heritage (including architectural and archaeological heritage)
- material assets

2.7 As well as specifically identifying landscape as a topic to be covered, the Directives and the Regulations also include the need to deal with the inter-relationship or the interaction between them, raising the issue of how landscape interrelates with matters such as, for example, population, flora and fauna and cultural heritage. This, together with the ELC definition of landscape, supports the need both to deal with landscape as a resource in its own right, including its overall character and the constituent elements that contribute to this, and in terms of people's views and visual amenity.

#### *Landscape as a resource*

2.8 The inclusive definition of landscape outlined above places emphasis on landscape as a resource. In the UK this particularly reflects the emphasis on landscape character that has developed since the 1980s. Landscape results from the interplay of the physical, natural and cultural components of our surroundings and the way that people perceive these interactions. Different combinations of these elements create the distinctive character of landscapes in different places, allowing different landscapes to be mapped, analysed and described. Character is not just about the elements or the 'things' that make up a landscape, but also embraces the aesthetic and perceptual factors that make different places distinctive.

#### *Views and visual amenity*

2.9 When the inter-relationships between people (human beings or population in the language of the Directives and the Regulations) and landscape is considered this introduces related, but very different considerations, notably the views that people have of the landscape and the effects of change on their visual amenity. When a landscape is changed in some way there is a probability that the change will be seen by someone and often by several different groups of

people. This may affect both particular views of the landscape and have an effect on the overall pleasantness of the surroundings that people enjoy - which is what visual amenity means.

2.10 The distinction between these two aspects is very important but often misunderstood, even by professionals. The two components of LVIA are:

- **Landscape effects assessment:** deals with changes to landscape as a resource. Society as a whole has an interest in this and it is recognised as one of the key dimensions of environmental interest, alongside matters such as biodiversity, or cultural heritage. It is concerned with issues like protected landscapes, the contribution of landscape character to sense of place and quality of life for all, and the way that change may affect individual components of the landscape;
- **Visual effects assessment:** is concerned with how the surroundings of individuals or groups of people may be specifically affected by change in the landscape. This means assessing changes in specific views and in the general visual amenity experienced by particular people in particular places.

**LVIA deals with both and should clearly demonstrate understanding of the difference between them. If a professional assessment does not properly define them or distinguish between them, then other professionals and members of the public are likely to be confused.**

## **Approaches across the UK**

2.11 Devolution in the United Kingdom has meant growing emphasis on the individuality of approaches between devolved administrations and their related organisations. The framework within which EIA is carried out consists of:

- European Union Directives;
- UK Country Regulations which interpret and implement the Directives;
- Guidance documents produced by Government Departments to assist in implementation, including planning policy guidance and other forms of more specific EIA guidance, including guidance on specific types of change or development;
- Specialised guidance produced by Government Agencies or professional bodies or others dealing with specific aspects of implementation.

2.12 The EU Directives covering EIA and related matters apply equally to all countries of the UK. They are implemented through country regulations that may be different in each country within the UK and may also change periodically as they are updated. England and Wales are covered by the same general EIA regulations but there are different sets of regulations in both Scotland and Northern Ireland. Each country also has a number of specific regulations that cover a range of named activities, some of them outside the planning system. Such specific regulations include (among others) electricity supply, transport, fish farming, energy production and transmission, gas and petroleum extraction, water abstraction, afforestation, land drainage, agricultural improvements on uncultivated land or semi-natural areas and restructuring of rural land holdings.

2.13 Planning policy guidance also differs across the four countries, as does the specialised guidance that has been issued by government departments and their agencies. Specialist guidance from agencies and others also varies widely and changes regularly. Scottish Natural Heritage has been particularly active in producing advice and guidance both on EIA in general and on issues relating to the effects of wind farms in particular.

2.14 These guidelines intentionally do not set out to provide a guide to this complex framework of legislation and guidance for EIA in general or for more

specific aspects of it. To do so would immediately date the document as regulations, planning policies and guidance will always change quite regularly. **Anyone, whether a professional or a member of an organisation, or an individual who may be involved in an EIA, must ensure that they are fully familiar with the current legislation, regulations and guidance documents that may be relevant to the specific case they are dealing with.** The web sites of relevant Government Departments and agencies should always provide the starting point for up to date information and will usually contain links to other relevant material.

2.15 The principles and details of the LVIA process set out in these guidelines are universally applicable throughout the UK and are also likely to have relevance to those dealing with similar issues in other countries. They concentrate on the generalities of good practice rather than the specifics of their application in particular places. If used beyond the UK it will be important to remember that concepts and definitions vary and approaches must be tailored to local circumstances and legislation.

### **Distinctive features of LVIA**

2.16 LVIA has some significant characteristics that distinguish it from several of the other topic areas that are covered in EIA. One is the degree to which it relies upon judgements about the nature of change, its effects and their significance, when it is known that people's attitudes to that change may vary widely. The other is the extent to which those carrying out LVIA may also be engaged in the process of designing aspects of the proposed scheme itself.

#### *The role of professional judgement*

2.17 EIA requires the identification, prediction and evaluation of the effects of development or land use change. For some environmental topics covered in EIA it is possible to use agreed measurable, technical guidelines or legislative standards against which to assess such effects. For example there may be agreed thresholds for levels of unacceptable noise, or recommended limits to air pollution. Assessing landscape and visual effects is more difficult. Some of it can be based on quantitative measurement of some relatively objective matters, such as the number of trees lost to construction of a new mine, for example. But other parts rely on qualitative judgements, for example about what effect the introduction of a new development or land use change has on visual amenity, or about the significance of changes in the character of the landscape.

2.18 The role of professional judgement is also characteristic of other environmental topics, such as ecology or cultural heritage, especially when it comes to judging whether or not a particular change matters and how significant it is. In all cases there is a need for the judgements that are made to be based on clear and transparent methods so that the reasoning applied at different stages can be traced and examined by others. Professional judgements must be based on both training and experience and in general suitably qualified and experienced landscape professionals should carry out landscape and visual impact assessments.

2.19 Even with qualified professionals there can be differences in the judgments made. In an ideal situation more than one person should be involved in the initial assessment to provide checks and balances. Where the professional judgments made on behalf of different interested parties vary widely the decision makers in the competent authority will ultimately need to weigh up the evidence and reach a conclusion.

### *LVIA and the design process*

2.20 EIA has traditionally been thought of as something that happens at the end of a linear process in which the project is planned and designed and then the EIA is performed to assess the effects of that finalised design. The Environmental Statement then reports on the predicted effects of the proposal on the range of environmental topics and on the mitigation measures that might be implemented. But in good practice in modern EIA the process is much more iterative, with the different stages of the EIA feeding into the planning and design of the project so that each informs the other through feedback loops.

2.21 This iterative process of EIA has great strength because it links the analysis of environmental issues with steps to improve the siting, layout and design of a particular scheme. In a sense EIA becomes a design tool. Site planning and the detailed design, as well as screening and initial appraisal of a development project are informed by and respond to the on-going environmental impact assessment, as the environmental constraints and opportunities are revealed in progressively greater detail and influence each stage of decision making. Experience indicates that this approach can result in more successful and cost effective developments and can reduce the time required to complete the assessment. Such an iterative approach is appropriate to any form of new development of whatever scale or type and it is increasingly becoming the norm on EIA practice.

2.22 The assessment of landscape and visual effects is especially able to contribute to such an iterative design process, not least because landscape professionals are often core members of the design team. Identification of landscape and visual impacts and of the potential to mitigate them can help to minimise or avoid negative effects of the development and, where appropriate, identify opportunities for landscape enhancement. During the site selection and initial design stages of a project the landscape architect may begin to identify opportunities and constraints relating to alternative options and make

comparative assessments of them in order to identify those with least adverse effect on the landscape and on visual amenity. This will take the form of simple scoping exercises, which aim to identify in general terms the range of possible negative impacts and positive benefits that may arise with different options.

2.23 If alternatives have been considered as part of the scheme's development, then this type of iterative design and assessment process can be helpful in providing evidence that such alternative sites and/or designs have been assessed in terms of their landscape and visual effects. It is therefore important to:

- record how the scheme has developed throughout the life of the project;
- demonstrate how landscape and visual effects have been taken into account;
- show why some alternative options have been rejected.

2.24 Once the preferred development option has been selected, the landscape professional works with the design team firstly to scope the range of potential effects in more detail and then, as the scheme is developed more fully, to identify and describe the landscape and visual impacts that may occur and to propose appropriate mitigation to avoid or reduce the adverse effects and, if possible and appropriate, to maximise potential benefits. This may result in a modified scheme design allowing further cycles of impact prediction and mitigation until nothing further can be done. At this stage the residual impacts, which cannot be mitigated further, can be identified and evaluated.

2.25 In these situations the landscape architect is closely involved in the development of the scheme and its design. Some might argue that they may be too closely involved and unable to take a sufficiently detached and dispassionate view of the proposals in the final assessment of landscape and visual impact. This should not be the case if the landscape architect takes a professional and

independent stance, which transparently addresses both the negative and positive effects of a scheme.

2.26 Recent research (IEMA, 2011) has shown that the iterative design approach to EIA is now common amongst practitioners and its value is widely recognised. It can however raise difficulties in presenting information. In particular there is a dilemma about whether or not predicted impacts that have been avoided through mitigation, as part of the design process, should still be included in the final environmental statement. Some argue that they should be, in order to demonstrate how environmental considerations have influenced scheme design to achieve better final solutions. On the other hand, this to some degree contradicts the spirit of the EIA Regulations, which emphasise that the Environmental Statement should concentrate on the significant environmental effects of the development as proposed - that is the ones that are likely to affect a decision. This is an area of continuing debate and is of particular relevance to LVIA because of the contribution of practitioners to design decisions.

2.27 Landscape professionals will need to find ways of dealing with this dilemma in preparing material for inclusion in the final Environmental Statement. There is no simple solution and as the IEMA report itself notes: *“One approach is to initially present the development’s significant effects from an earlier design stage within the ES and then set out the influence the assessment had on the design as ‘mitigation’. However, such an approach could be seen to act against the aims of the EIA Regulations, which expect the ES to set out an assessment of the significant environmental effects of the development as proposed, rather than the development as it was a number of months before the application was submitted”*.

2.28 A possible solution may be to include tables, which summarise the possible effects identified in early stages of the project development alongside the measures incorporated into the design to overcome them. If dealt with briefly

in this way, the desire for transparency about all stages of the design and about the incorporation of mitigation measures would be met. At the same time the Environmental Statement would not become excessively long and the focus would still be on the effects of the final scheme as submitted.

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## **Consultation questions**

Does this chapter give a satisfactory explanation of the importance of landscape?

Does the chapter clearly set out the basics of LVIA methodology?

Does this chapter clearly explain LVIA in a UK-wide context, sufficiently covering the devolved nations?

Does this chapter place the correct emphasis on the role of professional judgement?

Any other suggestions or comments on Chapter 2?

## **Chapter 3: Context and interrelationships**

### **Introduction**

3.1 The relationship of LVIA to the wider process of EIA has been introduced in Chapter 2. There are also several interrelationships with other topics that need to be considered. They can be grouped into four main themes:

- Specific forms of landscape, notably townscape and seascape (where the land meets the sea);
- Other topics in EIA, especially flora and fauna and cultural heritage;
- Strategic and spatial planning matters
- Wider environmental concerns.

The interfaces between LVIA and each of these areas are discussed in the following paragraphs.

### **Specific forms of ‘landscape’**

3.2 The definition of landscape included in Chapter 2 (see Paragraphs 2.1 and 2.2) is broad and all embracing. It includes all types and forms of landscape from high mountains to green space within urban areas and many others in between. It therefore includes marine and coastal landscapes and the landscapes of villages, towns and cities. As interest in landscape has grown in recent years there has been growing emphasis on the interpretation of landscape in these specific situations. Townscape and seascape have emerged as particular forms or types of landscape that may require special attention and new methods of

assessing them have emerged. These guidelines embrace all forms of landscape and do not separate townscape and seascape out for particular attention. The following paragraphs do, however, indicate the way that these particular types of landscape are dealt with in other forms of guidance so that links can be made. If an LVIA is located in an urban or marine context then particular attention will need to be paid to the distinctive character of these landscapes and to any specific guidance that exists.

## **Townscape**

3.3 Townscape refers to areas (a term first introduced by Gordon Cullen in 1961) where buildings and related infrastructure are the dominant components. Villages, towns and cities can make important contributions as elements in wider open landscapes but townscape means the landscape within the built up area, including the relationships between buildings and different types or urban greenspace. Townscape assessment is a form of landscape character assessment that focuses on these predominantly developed landscapes. There are important relationships with the historic dimensions of the landscape since the evolution of villages, towns and cities over time is a major contributor to their current form and character.

3.4 LVIA in urban contexts should aim to secure development and change that is in keeping with the townscape in which it is set or, especially in degraded areas, which enhances the townscape, while in both cases respecting the history of that townscape. This requires a good understanding of the townscape and there are now accepted techniques of townscape character assessment which can help to achieve this. The nature of townscape requires particular understanding of a range of different factors that together distinguish different parts of towns and cities. Landscape professionals involved in LVIA should be involved in addressing all of these although joint working with architects, planners

or urban designers may be required in some cases. The factors that need to be given particular attention include the:

- Context/setting of the urban area and its relationship to the wider landscape;
- Topography and its relationship to urban form;
- Grain of the built form and its relationship to historic patterns, for example of burgage plots;
- Layout and scale of the buildings and the density of development;
- Building types, including architectural qualities, period and materials;
- Presence of particular heritage assets;
- Patterns of land use, both past and present;
- Character and qualities of the public realm;
- Contribution to the landscape of water bodies, water courses and other water features;
- Types of open space and greenspace and their relationships to buildings and streets;
- Variations in nature and location of vegetation;
- Access and connectivity, including streets and footways/pavements.

3.5 Certain landscape and visual issues require particular attention in the urban context. They include effects on:

- Relationships between a town and its landscape setting
- Areas of distinctive and harmonious townscape character;
- Views to and from important buildings;
- Important view, panoramas and vistas both within the town and from the town to its surroundings and vice versa;
- The setting of important buildings;
- Relationships between open spaces, greenspaces, water bodies or watercourses and nearby buildings and streets.

## Seascape

3.6 The growing emphasis on seascapes in the UK has arisen because of the importance of coastal and marine environments and the growing pressures being placed upon them for new forms of development, notably offshore wind farms and tidal energy schemes as well as the development of coastal risk management defences. In addition new legislation has emerged focussed on marine environments (the Marine and Coastal Access Act 2009 and the draft UK Marine Policy Statement (2010) is a high-level policy statement which specifically establishes the concept of 'seascape'. It states that references to seascape *“should be taken as meaning landscapes with views of the coast or seas, and coasts and the adjacent marine environment with cultural, historical and archaeological links with each other...”*. This emphasises the meeting point of land and sea but 'seascape' is also sometimes interpreted as encompassing areas beyond the low water mark and so includes both areas near to the shore and the open sea where land may not be visible. Landscape, as opposed to seascape is defined as lying to the landward side of the high water mark. The interrelationship between the two is clearly critical and any assessment of the landscape and visual effects of change in coastal environments should seamlessly relate the two together, and also take account of possible requirements to consider the open sea.

3.7 Pioneering work in Wales and Scotland has led to the development of methods to assess the character of seascapes similar to the assessment methods for terrestrial landscapes. This has been consolidated in guidance on seascape assessment<sup>5</sup>. This adopts the same definition of landscape from the European Landscape Convention that is used in these guidelines but re-words it to define seascape as: *“An area of sea, coastline and land, as perceived by*

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<sup>5</sup> Briggs, J., Campbell, K., Houlston, I., Tudor, C. (2011) Seascape Character Assessment Guidance for England, Scotland & Wales: Consultation Draft V1.2A. February 2011

*people, whose character results from the actions and interactions of land with sea”.*

3.8 When LVIA is undertaken in a marine context reference should be made to the particular characteristics and qualities of the seascapes. The way that people experience them is especially important and account needs to be taken of:

- Views to and from the sea;
- Particular qualities of the open sea where land may be virtually invisible;
- The importance of ephemeral changes due to weather and tides;
- Change in seascapes due to coastal processes;
- The nature of people with an interest in seascapes, from those who make a living from the sea to those who enjoy it for recreation;
- Contributions of coastal features to orientation and navigation at sea.

### **Other topics in EIA**

3.9 The European Directive on EIA, and associated country regulations for the UK, list the topics to be covered, as in Para 2.6 and also stress the importance of interactions between them. Those involved in LVIA should be alert to anticipate such interactions, and there should be regular liaison with experts dealing with other topics. Mitigation measures proposed to address impacts in one topic area may themselves, for example, have significant impacts on another topic area - perhaps most obviously tree planting proposed to screen views of a development could have an effect on archaeological resources if sited without reference to the cultural heritage topic. Similarly mitigation proposals for another topic may result in features being added to the landscape, For example:

- hydrological impacts requiring attenuation ponds;
- noise effects requiring acoustic screening by tall fences;

- ecological mitigation requiring additional structures in a road scheme such as “green bridges”

3.10 There are many topics that potentially may have some interaction with landscape and visual topic matters. Perhaps the most critical are the cultural heritage and the ecology topics. Both have their own assessment methods and associated guidance but they also interact with landscape and visual interests in important ways. Understanding of these topics can add to understanding of the character and origins of the landscape but can also have a positive influence on the design of a scheme and on mitigation measures by helping to ensure that proposals are sensitive to the influences that history and ecology have in shaping current character of the landscape.

3.11 Other important interactions may occur with noise effects and with hydrology, for example surface water and drainage, and there may be others in specific cases. All these interactions may form part of the cumulative impact assessment for a project (see Chapter 8). A key role for the landscape architect in complex projects is to integrate the mitigation proposals into a comprehensive landscape strategy and design. Without this integrated approach a ‘shopping list’ of individual measures might be implemented without their possible effects on the landscape outcomes of the proposals being considered.

### *Cultural heritage*

3.12 In EIA cultural heritage is usually defined as being synonymous with the historic environment and includes more detailed sub-topics dealing respectively with archaeological remains, historic buildings and historic landscapes<sup>6</sup>.

Assessment of these resources and of the effects that development and change

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<sup>6</sup> Highways Agency (2007) Design Manual for Roads and Bridges Volume 11 Section 3 Part 2. HA 208/07  
Halcrow Group Ltd (2007) Assessing the effect of road schemes on historic landscape character. Draft for discussion. Highways Agency and English Heritage.

may have on them, requires specialist knowledge and understanding and experts in these areas will almost always be involved in advising on this topic. There has been substantial activity over the last ten years to develop methods of survey and evaluation in each of these areas and a wealth of relevant technical literature is available, mainly from the responsible statutory agencies in the devolved UK administrations but also from local authorities and interest groups.

3.13 These different dimensions of the historic environment overlap to some degree with landscape and visual matters. Visible archaeological remains, such as hill forts, field banks, or stone circles may be important landscape features in some locations while historic buildings are often critical to the character and quality of townscapes. Surveys of landscape as a baseline for LVIA should ensure that these and similar features are recorded and judgements made on their contribution to the landscape. This may require collaboration with historic environment specialists who may be recording such information in the cultural heritage part of the EIA. Care must be taken, however, not to confuse the sharing of relevant baseline information with the separate assessments of such resources as cultural heritage, or there will be a danger of both double handling and inappropriate judgments by non-experts in cultural heritage.

3.14 The closest interface is between historic landscapes and landscape and visual interests. When the previous edition of these guidelines was written historic landscapes were largely thought of in terms of parks and gardens, battlefields and the settings of historic buildings and work on the historic dimensions of the wider landscape was in its infancy. In the last ten years there has been rapid development in techniques such as historic landscape character assessment in England, and similar tools in Scotland and Wales. Seascapes and townscapes have also been targeted for tailored historic approaches and there is a growing volume of documentation relevant to all such historic landscape work. The relationship between landscape and historic landscape issues is close. The first is concerned with the landscape as it is today. The second is concerned with

how the landscape came to be as it is, dealing with historic dimensions such as time depth and historical layering - the idea of landscape as a 'palimpsest', a much written over manuscript.

3.15 This close relationship means that in developing the baseline for a landscape and visual assessment landscape architects should make good use of existing historic landscape information, or liaise with those who may be conducting such surveys afresh as part of an EIA. This will allow the landscape baseline information to reflect a full understanding of the historic origins of today's landscape.<sup>7</sup>

3.16 The relationship is equally strong in townscape and in England English Heritage is supporting a national programme of surveys of the archaeology, topography and historic buildings of England's historic towns and cities. The results of such surveys can help to provide good understanding of the historic time depth of townscapes and flesh out descriptions of townscape character with fuller explanation of the layers of history that underpin it. This can make a valuable contribution to townscape surveys as a baseline for LVIA but, as in other areas of cultural heritage, the assessment and evaluation of the effects of development on historic dimensions of townscape must be dealt with in the cultural heritage topic and not the landscape and visual topic.

### *Ecology*

3.17 The ecology topic (described in the EIA Directive as "*flora and fauna*") also has close relationships with landscape and visual issues. There are specific

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<sup>7</sup> Examples of the use of historic landscape character information (although not specific to LVIA) are available in the joint English Heritage/Lancashire County Council report '*Using historic landscape characterisation*' (Clark, Darlington and Fairclough, 2004) and specific discussion of its use in relation to EIA for road schemes can be found in '*Assessing the Effect of Road Schemes on Historic Landscape Character*' (Highways Agency, 2007).

methods of ecological survey and evaluation that are used in this part of EIA)<sup>8</sup>. In LVIA understanding of the ecological habitats and species that make up a particular study area will add depth and detail to surveys and descriptions of landscape character. The interest is not in understanding the specialist value of these habitats and species from an ecological perspective, but in knowing how they contribute to the landscape. Landscape specialists and ecologists should share and exchange information, partly as a matter of efficiency and effectiveness in avoiding duplication in survey work. For example, from a landscape perspective it may be noted in surveys that ancient hedgerows are a key characteristic of the landscape, but the ecological survey can add detail in identifying the main species typical of such hedgerows.

### **Strategic and Spatial Planning**

3.18 EIA and hence LVIA are closely linked to the system of strategic and spatial planning that operates in the UK. The EC Directive and country specific EIA Regulations make no specific reference to supplying information on relevant planning policy within the ES. An analysis of relevant plans and policies, including the degree of compliance or conflict of the development with the policies and other relevant issues, is helpful in order to demonstrate how these policy guidelines have been taken into account in developing the project and compiling the ES. It should also provide a picture of the decision-making context in which the environmental effects will be evaluated. To maximise the benefit from this process, it is important to consider the planning context for the development at an early stage of site planning / design and assessment. Many LPAs seek a separate Planning Statement as part of the suite of documents to accompany planning applications for large or complex proposals.

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<sup>8</sup> IEEM (2011) 'Guidelines for Ecological Impact Assessment in Britain and Ireland - Terrestrial, Freshwater and Coastal' Consultation Draft. Available in electronic form at <http://www.ieem.net/docs/ECIAGuidelines.pdf>

3.19 More specifically LVIA must always be set firmly in the context of the relevant planning policies that prevail in the area in question, at national, regional and local levels as appropriate. These often contain criteria that will be helpful in ensuring comprehensive assessment of effects. Understanding the planning context can be of benefit in helping to identify and establish the issues that need to be considered in an LVIA, particularly in relation to policies for both designated landscapes of all types and for the wider landscape. Where this information is not provided in a separate planning policy section in the ES the relevant planning policy information should be included in the report on the landscape and visual impact assessment.

#### *Strategic Environmental Assessment*

3.20 Plans and policies are themselves now subject to environmental assessment under European Directive 2001/42/EC on “*The assessment of the effects of certain plans and programmes on the environment*”. It has been widely recognised that project-level EIA alone cannot lead to comprehensive environmental protection or sustainable development. Assessing the impacts of an individual proposal cannot always satisfactorily address the more strategic aspects of the project or the cumulative effects that may arise. The Strategic Environmental Assessment (SEA) Directive is intended to address this and ensure that environmental consequences are addressed at strategic as well as project levels. It is transposed into UK law by a series of country specific Government Regulations but these largely reproduce the directive without adding further requirements. There are close relationships between SEA and sustainability appraisals of development plans which have been carried out in various forms since the 1990s and have become an integral part of spatial planning, covering plans at all levels from national to local. There is a degree of overlap between the two processes and landscape and visual amenity issues may arise in both.

3.21 Government and UK country agency guidance<sup>9</sup> on implementing the SEA Directive and Regulations includes the same list of environmental effects as the EIA Directive and Regulations and therefore includes landscape. It also advocates an approach to setting SEA objectives, linked to establishment of linked criteria and indicators, that can be used to test the environmental effects of the plan to compare the effects of strategic or policy alternatives. Many SEAs rely mainly on landscape designations to demonstrate landscape importance and possible sensitivity. A more sophisticated approach focussing on landscape character is, however, now usually required.

3.22 In assessing strategic policies and programmes relating to the effects of specific types of development on the landscape, preparation of the baseline should make reference to existing surveys of landscape character, to other documents like landscape or green infrastructure strategies, and to any sensitivity or capacity studies that may have been carried out. These usually focus on sensitivity to a particular type of change or development, although some do deal with intrinsic or inherent sensitivity, without specifying the particular type of change. The baseline should also consider how the landscape will change in the absence of the plan, programme, strategy or policy, by considering information about the drivers of change in the landscape and the way that these may change in the future.

3.23 Objectives, criteria and indicators should then be established, tailored to the particular locality and the nature and level of detail of the plan, programme, strategy or policy, which will allow its effects to be assessed. Generic objectives that have been suggested in existing guidance (see note 6) are to:

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<sup>9</sup> For example: ODPM (2005) A Practical Guide to the Strategic Environmental Assessment Directive. ODPM London; Natural Scotland/Scottish Executive (2006) Strategic Environmental Assessment Toolkit; Scottish Executive; SNH (undated) Landscape Considerations in Strategic Environmental Assessment. SNH, Inverness.

- conserve and enhance landscape character and scenic value of the area;
- protect and enhance the landscape everywhere and particularly in designated areas
- value and protect diversity and local distinctiveness
- improve the quantity and quality of publicly accessible open space
- restore landscapes degraded as a consequence of past industrial action.

3.24 Judgments must then be made, using the combination of objectives, criteria and indicators, about the extent to which the plan, programme, strategy or policy may have effects on the landscape, using procedures similar to project EIA. Different types of effect, including for example short and long term, direct and indirect, positive and negative and cumulative, all need to be considered. Reference should be made to more detailed guidance on SEA and landscape for more detailed advice and examples.<sup>10</sup>

#### *Cumulative Effects Assessment*

3.25 Both the EIA and SEA Directives and the associated UK country regulations require the assessment of cumulative effects. The topic has become increasingly important in recent years but a widely agreed definition of what it means has proved elusive. LVIA, both of projects and of plans, programmes, strategies or policies must deal with cumulative landscape and visual effects in an appropriate way. The 2002 edition of this guidance defined them as effects resulting from *“additional changes to the landscape or visual amenity caused by the proposed development in conjunction with other developments (associated with or separate to it), or actions that occurred in the past, present or are likely to occur in the foreseeable future”*. There has been no further general definition of

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<sup>10</sup> Scottish Executive; SNH (undated) Landscape Considerations in Strategic Environmental Assessment. SNH, Inverness.

Land Use Consultants (2005) Landscape Indicators for Strategic Environmental Assessment of Local Transport Plans – Issues to consider. Discussion Paper for Countryside Agency, Landscape, Recreation and Access Division.

cumulative landscape and visual effects since then but there has been particular emphasis on the cumulative effects of windfarm development because of the intervisibility of these tall structures. In Scotland considerable effort has been devoted to addressing definitions and interpretations of cumulative landscape and visual effects specifically in relation to windfarms in guidance that has been widely used<sup>11</sup>. Further detail of ways of handling cumulative landscape and visual effects, drawing on this and other material, is included in Chapter 8.

### **Wider environmental concerns**

3.26 EIA and LVIA both take place in the context of growing concern about environmental issues. These issues and concerns are constantly evolving, as are the tools and techniques used to address them. The interrelationships between LVIA and sustainable development, climate change and emerging thinking about ecosystem services are briefly summarised below.

#### *Sustainable development*

3.27 One of the main roles of the planning system is to contribute to the achievement of sustainable development. According to the widely accepted definition in the Brundtland report<sup>12</sup> this means “*development that meets the needs of the present without compromising the ability of future generations to meet their own needs*”. It is widely accepted that it is central to the economic, environmental and social wellbeing of the country and recognises the importance of ensuring that all people should be able to satisfy their basic needs and enjoy a decent quality of life, both now and in the future. Both EIA and SEA have major roles to play in securing sustainable development and as landscape is an important contributor to quality of life LVIA is also a significant contributor.

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<sup>11</sup> SNH (2005) Guidance on the cumulative effect of windfarms. Version 2. Revised 13.04.05

<sup>12</sup> The Report of the Brundtland Commission, *Our Common Future*, 1987

3.28 Landscapes do not stand still. They are dynamic and always liable to change as their functions change and as a wide variety of drivers of change have an impact on them. LVIA cannot be based on assumptions that all change is necessarily detrimental and must recognise that society's needs change and that individual and community attitudes also change over time. This can make the professional judgments about the significance of changes identified through LVIA particularly difficult. This is especially so when dealing with developments such as forms of renewable energy that have a very important role in helping to achieving sustainable development at a time of great environmental change.

#### *Climate change*

3.29 One of the major factors to bring about future change in the landscape is climate change. Many organisations have described this as the most serious long-term threat to the natural environment. It is generally agreed that there is an urgent need to reduce greenhouse gas emissions in order to avoid potentially catastrophic effects.

3.29 There is a growing need for EIA to take account of climate change in terms of the effects that the proposed change or development may have on both the mitigation of climate change and our adaptation to it. In LVIA the issues relating to climate change are particularly related to the changes in the landscape that may result. These changes may have effects both in changing the baseline conditions against which change is judged and, possibly, influencing the judgements that are made about the significance of the effects.

3.30 Baseline assessments of existing conditions in which the development will take place should reflect changes in the environment that will occur before the time at which the development will actually be carried out. They should also take account of the processes of change that may affect the site and its

surroundings without the development and independently of it. A baseline for a landscape and visual impact assessment should therefore ideally try to assess what factors will influence the landscape before the development takes place and also over the medium to long term in the absence of the development. The assessment of effects on the landscape is therefore made not only at a single point in time but is set against a backdrop of continual change.

3.31 Climate change impacts must be taken into account in this context even though it may be difficult to predict what may happen at a local level. Changes in the landscape cannot be predicted with certainty but can often be described qualitatively. Some will be direct and relatively immediate, such as flooding, drought and fire events. Others will be direct but be more subtle and experienced over a longer time frame, such as habitat shift/loss, biodiversity change, changes in farming and forestry – for example the possibility of conversion from less to more intensive land uses in the marginal uplands.

3.32 Some changes will be indirect, for example changes in soil water regimes leading consequentially to erosion/shrinkage and subsequently to damage to important elements in the built environment and perhaps the cultural heritage, which may in turn influence the landscape. Climate influence is a key variable in defining landscape character and it is of global, national, regional, county, district and local importance. Climate change is a major force for change within the landscape that will potentially affect landscape character, perceptions of valued landscapes and the integrity of landscape elements in the years ahead.

3.33 Planning policy is likely to place much more emphasis in future on the need for energy from renewable and low carbon sources as concerns about climate change grow. This means that judgements about the significance of any landscape and visual effects of such developments, and whether they are judged to be positive or negative, will be made in an evolving policy context. As an obvious example, wind farms and solar/photovoltaic developments that are now

often considered by some to be unacceptable intrusions in the landscape may in future be seen as essential contributors to low carbon lifestyles. It is not the effects on the landscape that change but the judgements about the acceptability of those effects.

### *Ecosystem services*

3.34 EIA and LVIA require that value is attached to environmental resources. This is relatively easy when those resources are designated in some way, reflecting the importance that society attaches to them. The situation is more difficult where there are no designations. This does not mean that the resource in question has no value, rather that its value needs to be assessed on merit. Recently there have been significant developments in the area through increased emphasis on the 'ecosystem services approach'. This is not new and has its origins in the Millennium Ecosystem Assessment (MEA). It first appeared in practice in the UK in the Quality of Life Capital approach developed by the then Countryside Agency in England. This in turn influenced LVIA practice and was, for example, the approach advocated by the Highways Agency in the Chapter of the Design Manual for Roads and Bridges dealing with landscape and visual issues. The Quality of Life Capital approach has now been replaced by emerging thinking on ecosystem services.

3.35 The concept of ecosystem services is based on the idea that the natural environment provides people with services or benefits. These services in turn relate to the functions of different components of the natural environment. According to the MEA these services can be classified into four broad categories:

- *the supporting services* that underpin all other services, such as the creation of soils;
- *the provisioning services* , meaning the provision of the necessities of life such as food, timber, or fuel;

- *the regulating services* that regulate ecosystem processes, such as the capture of carbon and the regulation of water quality and quantity; and
- *the cultural services* or the benefits that people obtain from the environment contributing to wellbeing and quality of life;

3.36 Many valued landscape features perform a wide range of functions that in turn have the potential to deliver a wide range of different services of value to people. But whether these functions actually are of value to people often depends on the location of the feature, both strategically and locally. The approach can be applied to a variety of geographical units – for example, ecosystems themselves, catchment areas, landscape character areas or types or their particular features and attributes and areas of green infrastructure, among others.

3.37 Some have argue that ‘landscape services’ would in fact be a better term than ecosystem services as it is a broader and more integrating concept closely allied to place and so more meaningful to people. However, ecosystem services will probably remain as the overarching term since it underpins some important natural environment legislation. But when applied specifically to a landscape spatial framework, as might be the case in an LVIA, then the idea of landscape services may be appropriate.

3.38 Whatever the environmental resource to which the concept is applied, specific ‘landscape’ services fall into two categories, namely those relating to the fabric of the landscape itself, for example, its landscape character or sense of place, and its sense of history; and those relating to the landscape’s role in providing visual amenity, aesthetic enjoyment, inspiration, recreational opportunities and other benefits to human wellbeing. The implication of this approach for LVIA is that when considering the value of landscape as a resource (see Chapter 6) it may sometimes be appropriate and helpful to use the concepts

of ecosystem services, especially when considering interactions with other environmental topics.

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## **Consultation questions**

Is the relationship between LVIA and EIA topics explained clearly in this chapter?

Should this chapter also cover topics such as GI or landscape functions?

Should this chapter include anything more on the role of other professionals and experts?

Is the relationship between LVIA and the wider planning policy context explained clearly?

Any other suggestions or comments on Chapter 3?

## **Chapter 4: Principles and overview of process**

### **Introduction**

4.1 This chapter introduces the processes of LVIA and sets them in the context of the wider EIA procedures. There is now a well established set of procedures for EIA. The different components of the process are summarised in simplified form in Figure 4.1 and in the flow chart in Figure 4.2. LVIA is normally carried out as a separate theme or topic study within an EIA and appears as a separate section of the ES. There are links between the EIA process and LVIA at virtually every stage. Greater detail on how the key parts of the process are carried out specifically for landscape effects and for visual effects are included in Chapter 6 and 7 respectively. A clear distinction must be drawn between the process of carrying out the assessment - the EIA (or more specifically the LVIA) - and the presentation of the findings of the assessment - the Environmental Statement or ES. Guidelines on handling information about landscape and visual impacts in the Environmental Statement are provided in Chapter 9.

### **Screening**

4.2 This step determines the need for an EIA. The UK EIA regulations set out the types of project, known as Annex 1/Schedule 1 projects for which an EIA is mandatory. They also list Annex 2/Schedule 2 projects which may require EIA if they are likely to have significant effects on the environment. The screening process considers the nature, size and location of the development and the nature and scale of the likely environmental effects, through reference to Schedule 3, to decide whether or not an EIA is required.

4.3 The proposer of a scheme must seek a screening opinion from the competent authority to indicate whether an EIA is required. The regulations require that when decisions are made by the competent authority as to the need for an EIA, the criteria to be taken into account include whether or not the development is in a location that falls within a defined range of sensitive areas. The list of potentially sensitive areas includes a variety of national landscape designations. These designations, and the meaning of sensitivity here and in the broader context of landscape planning, are discussed further in Chapter 6.

**Figure 4.1 Components of the EIA Process**

<b>Component</b>	<b>Description</b>
Project description/specification	Provides a description of the proposed development for the purpose of the assessment, that is, identifying the main features of the proposals and establishing parameters such as maximum extents of the development or sizes of the elements. Normally includes description of any alternatives considered.
Screening	Determination of whether an EIA is needed for the proposed development
Scoping	Makes an initial judgment about the scope of the EIA and of the issues that need to be covered under the individual topics or themes. Includes establishment of the relevant study area.
Baseline studies	Establishes the existing nature of the environment in the study area, including the effects of any changes likely to occur independently of the development proposal. Includes information on the value attached to the different environmental resources.
Identification and description of the effects	Systematic identification of the effects that are likely to occur and description of their nature.
Evaluation of effects	Systematic and transparent evaluation of the effects identified.
Mitigation measures	Proposals for measures designed to avoid/prevent, reduce, or offset or compensate for any negative effects. Mitigation proposals may be incorporated into the project design through the iterative design and assessment process
Preparation of the Environmental Statement	Presentation of the findings of the EIA in written and graphic form in the Environmental Statement.
Monitoring and auditing	Monitoring and auditing of the effects of the implementation of the proposal and of the mitigation measures proposed, especially where they are covered by conditions attached to any permission that may be given.

4.4 In contributing to the screening process the landscape professional may be called upon to provide a professional, albeit informal, opinion as to the potential sensitivity of the landscape or the visual amenity in the area likely to be affected by the scheme. In making any judgments and providing such advice and opinion, it is important to adopt a structured and systematic approach from the outset and record all actions undertaken, information gathered, issues taken into consideration, assumptions made and opinions offered, together with reasoned justifications..

4.5 The EIA process has clear and proven benefits in improving the siting, layout and design of development schemes. Landscape and visual issues, because they are often closely related to scheme design, are an essential part of this. The process can contribute to all forms of development whether included in Schedules/Annexes 1 or 2 or not. As a result some scheme proposers will choose to carry out an EIA even when not formally required to do so, simply because the benefits are recognized.

### **Project description/specification**

4.6 An overall description of the characteristics of the proposed development, sometimes referred to as the 'project specification', makes an important contribution to all the topics covered in an EIA. It provides a description of the siting, layout and other characteristics of the development and is a critical part of an EIA in assisting understanding of all parties of exactly what is proposed. Knowledge and understanding will grow during the course of the project. Outline information will be known at screening, more detail at scoping and even more detail will emerge through the assessment as the iterative design process continues.

4.7 In incorporating this information into the final Environmental Statement it is not usually necessary to repeat the information in individual sections of the Statement dealing with particular topics. Rather it is important to make sure that the project description provides all the information needed to identify its effects on particular aspects of the environment. For LVIA it is important to understand, from the project description, the essential aspects of the scheme which will potentially give rise to its effects on the landscape or on visual amenity. At this stage it may also be possible to flag up potential effects that can be addressed by incorporating mitigation measures into the scheme design. Understanding key aspects of the project and matters of mitigation in scheme design are both considered further in Chapter 5.

## **Scoping**

4.8 Defining the scope of the EIA study is one of the most critical parts of the process in that it sets the context for everything else which follows. If the scope is defined too narrowly, some critical areas of uncertainty or adverse impact may emerge late in the day, at a time when decisions on the shape of the project are too far advanced to allow for any real change. On the other hand, if the scope of the work is too loosely defined, then much time, effort and cost may be spent on pursuing unnecessary detail.

4.9 Scoping is the procedure by which the key topics to be examined and the areas of likely significant effects are identified. Under the regulations proposers of schemes may ask the competent authority for a scoping opinion, to help to identify the potential effects of a scheme. The objective of scoping is to ensure that all relevant issues are addressed in the EIA but it should not be used to pre-judge the effect of a development at this early stage. This stage usually requires a desk study, site and scheme familiarisation and informal consultations with the competent authority and the main statutory and other consultees. A request may

also be made to the competent authority for a scoping opinion concerning the information that is ultimately to be supplied in the ES. The scoping opinion can help to ascertain the Authority's opinion on what the main or significant effects are likely to be and to define the content or scope of the ES.

4.10 An ES is not necessarily rendered invalid if it does not cover all the matters specified in the scoping opinion provided by the competent authority, or because an applicant fails to provide further information when required to do so. However, if it is deemed that the applicant has failed to provide sufficient information on the environmental effects to enable the competent authority to make an informed decision, the planning application is likely to be refused. Some less important effects may be 'scoped out' in that they will not be explored in detail in the EIA. But they may still be briefly reported on in the ES to alert readers to the fact that they were considered.

4.11 A scoping document can be produced to set out the range of possible issues, explaining why each will or will not be evaluated in the full assessment. It may also include brief details on methods, assessment techniques and the presentation of information to be included in the final ES. Although not mandatory a scoping document can be helpful and may be prepared as a free-standing document or incorporated in the ES.

4.12 In terms of LVIA scoping should be expected to consider several key matters, which should ideally be discussed with landscape professionals in the competent authority as well as with statutory consultees, interest groups and local people. They include:

- the extent of the study area to be used for assessment of landscape and visual effects;
- sources of information;

- the nature of the possible landscape and visual effects that might occur, especially those deemed most likely to occur and most significant, but without at this stage predicting that they necessarily will occur;
- the main receptors<sup>13</sup> of the potential landscape and visual effects that need to be addressed in the full assessment including viewpoints that should be assessed;
- the extent and level of detail for the baseline studies that will be carried out for the LVIA;
- methods to be used in assessing of the significance of the effects that may be identified;
- the requirements with respect to the assessment of cumulative landscape and visual effects.

### **Baseline studies**

4.13 The initial step in any landscape or visual impact assessment is to establish the baseline landscape and visual conditions. The information collected will, when reviewed alongside the description of the proposed change or development, form the basis for the identification and description of the landscape and visual effects of the proposal. The purpose of baseline studies for landscape is to provide an understanding of the landscape in the area that may be affected – its constituent element, its character and patterns in the way that character varies, its condition, the way the landscape is experienced, and the value or importance attached to it. For visual amenity the aim is to establish the area in which the proposed development may be visible, the viewpoints from which it can be seen, the people who experience views at those points, and the nature of the views.

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<sup>13</sup> See Chapters 6 and 7 for definitions of receptors.

4.14 The level of detail provided should be appropriate to the scale and type of development, the potential sensitivities associated with the landscape and its visual amenity and the potential landscape and visual effects likely to occur. It should also be appropriate to the different stages of the assessment process. For example, at the site selection, screening and scoping stages, the primary aim is to identify key issues and constraints. For this purpose, a fairly broad-brush preliminary site appraisal may be adequate based primarily, for example, on landscape designations, existing landscape character assessments, information about historic landscapes, mapped areas of ancient woodland and known sites of recreational interest. Once the preferred site has been selected, and screening and scoping are completed more comprehensive and detailed baseline studies are required.

4.15 Landscape and visual baseline studies play an important part not only in the assessment process but also in the design process, providing an overview of the environmental constraints or opportunities that may influence the design of the final development. Principle sources of background information include the competent authority, government agencies and local special interest groups and organisations. It is important that the information collated is considered in relation to that for other parallel studies such as cultural heritage and flora and fauna to ensure an integrated approach to design development. The EIA co-ordinator will usually play an important part in facilitating such integration across the topic areas.

4.16 It is important to bear in mind that the baseline landscape is dynamic not static. The landscape may already be changing for reasons unrelated to the development. The baseline studies therefore address not only the existing landscape, but also how it has developed to reach its current state, the present drivers of change that may be identified and the likely future character of the landscape, without the proposed development, that may result. Account may should also be taken of any landscape management strategies or guidelines that

may exist or are in preparation for the area. The baseline studies should aim to provide a factual record and analysis of the current nature and value of the landscape and visual amenity in the area. They must not be confused or combined with the prediction and assessment of effects, which is not appropriate at this stage. Methods of recording, analysing and evaluating the baseline conditions for assessing landscape and visual effects are summarised in Chapters 6 and 7.

### **Identification and description of effects**

4.17 Once the key aspects of the proposed change or development that are relevant to landscape and visual effects have been determined, and the baseline conditions established, the effects expected to occur can be predicted. There is no formulaic way of doing this. It is a matter of systematic thinking about the range of possible interactions throughout the whole life cycle of the development. Opinions may also be sought from the competent authority, statutory consultees, interest groups and local communities, to build on the advice given in the scoping process.

4.18 Paragraphs 2.19 to 2.27 have discussed the importance of viewing EIA as an iterative design process in which effects are progressively identified and dealt with by mitigation. In this iterative approach some potential effects will already have been identified during the screening and/or scoping processes. Some may have been judged so unlikely to occur or so insignificant that it is not essential to consider them further – sometimes referred to as ‘scoping out’ of some potential effects. Others may have been addressed by mitigation measures incorporated into the scheme design through the iterative design/assessment process - either being designed out altogether or rendered unimportant. Both situations must be made clear in the final ES, so that there is transparency about effects that have been considered at some point in the process, but not taken further. Other than

these effects that are considered and eliminated at an earlier point, all potentially significant effects must be fully considered in the assessment stage of LVIA.

4.19 In most cases it will be essential to give equal and detailed consideration to both:

- Effects on the landscape as a resource - its overall character, and the individual elements and aesthetic and perceptual qualities contributing to that character (the landscape effects)
- Effects on views and visual amenity as experienced by people (the visual effects).

Sometimes there may be important effects on the landscape itself, but the development may be in a location that is not highly visible. Equally it is possible, although less likely, that there may be significant visual effects without significant effects on the landscape itself.

4.20 All the types of effect that are specified by the Regulations must be covered, namely the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the development. For LVIA this initially means careful thought about identifying the effects on landscape or visual amenity that are directly attributable to some aspect of the proposed development itself, whether they be:

- positive or beneficial effects;
- negative, adverse or detrimental effects.

#### *Cumulative and indirect effects*

4.21 As indicated in Paragraph 3.25, both the EIA and SEA Directives and the associated UK regulations require the assessment of cumulative effects. Assessment of cumulative effects has become increasingly important in LVIA and is discussed in detail in Chapter 8. The definition of cumulative landscape

and visual effects depends in practice on the scoping process and agreement with the competent authority on exactly how it is to be interpreted for a particular project. The definition introduced in the second edition of this guidance (*“additional changes to the landscape or visual amenity caused by the proposed development in conjunction with other developments (associated with or separate to it), or actions that occurred in the past, present or are likely to occur in the foreseeable future”*) has proved useful but is limited. In EIA more generally definitions of cumulative effects can be very broad, going well beyond such additive effects to include secondary, synergistic, enabling, and disabling effects, among others.

4.22 Indirect effects would often be included in such a broad scoping definition of cumulative effects. In LVIA they can pose particular difficulties as they arise from consequential changes in the landscape or in visual amenity that may be delayed in time or located some distance from the source of the effect. For example, alterations to the drainage regime in the vicinity of a site, such as a quarry, could result in changes to the vegetation cover downstream and a consequent change to the landscape. Indirect effects may also result from associated development, or other developments that follow on as a consequence of the one being assessed. For example there may be related requirements for mineral extraction or for utilities to be upgraded. These in turn may create further landscape and visual effects, which may also need to be explored, ideally as part of the cumulative effects assessment.

## **Mitigation**

4.23 The purpose of mitigation is to avoid (or, as in the EIA regulations, prevent), reduce and where possible compensate for (or, as in the EIA regulations, offset) any significant adverse effects on the environment arising from the proposed development. Enhancement also needs to be considered. It is

not a formal requirement of the regulations, and is often referred to incorrectly as an outcome of proposed mitigation measures - where for example planting is proposed to mitigate landscape and/or visual effects but will also achieve an enhancement of the baseline condition of the landscape. In practice enhancement is not specifically related to mitigation of adverse landscape and visual effects but means any proposals that seek to improve the landscape of the proposed development site and its wider setting beyond its baseline condition. Further details of these different strategies are in Chapter 5.

4.24 Mitigation measures are generally more effective if they are designed as an integral part of the iterative process of project planning and design. Mitigation is then, wherever possible, considered right from the point of project inception, when alternative designs or site options are being considered. It can be used to adapt and modify the development to take account of constraints and opportunities, and achieve the optimum environmental fit as part of an environmentally integrated design. If good environmental planning and design principles are then applied throughout scheme development a high degree of mitigation can be built in from the outset, thereby reducing the extent of adverse effects.

4.25 Mitigation measures are now generally considered to fall into three categories:

- measures, developed through the iterative design process, which have become integrated mainstream components of the project design;
- standard construction practices for avoiding and minimising environmental effects;
- measures, designed to address any adverse effects remaining after primary measures and standard construction practices have been incorporated into the scheme,

4.26 There is a hierarchy of mitigation suggesting the order in which mitigation measures should be considered. The *ideal* strategy for mitigating an adverse effect that is identified is one of avoidance or prevention. If this is not possible, alternative strategies firstly of reduction, and then, in the case of unavoidable negative effects, compensation measures to offset them should be explored. Leaving consideration of mitigation measures for adverse landscape or visual effects to the later stages of scheme design, where it must take the form of reduction or compensation rather than avoidance, can result in increased mitigation costs. This is because early opportunities for avoidance of negative effects are missed and because compensation for negative effects is generally less cost effective than avoiding them in the first place.

### **Evaluation of effects**

4.27 The EIA Directive and UK regulations refer to projects "*likely to have significant effects on the environment*". Much has been written about the interpretation of 'significant' both generally in EIA and specifically in LVIA. The emphasis on significance means that identifying and describing the effects of a project is not enough in itself. The effects must also be assessed in a way that allows a reasonable judgment to be made about their significance.

4.28 Significance is not absolute and is based on value judgments. It is vital that the basis of such judgments is understandable and transparent so that the underlying assumptions and contributing judgments can be examined by others. All types of effects must be evaluated, whether they are characterised as direct or indirect, positive/beneficial or negative/adverse/detrimental or cumulative. Judging significance depends on consideration of a number of criteria which it is widely recognised should include:

#### *The nature of the receptors*

- The level at which the receptor affected is important in policy terms (whether international, national, regional or local);
- The sensitivity of the receptor to the type of change or development proposed;

*The nature of the change or effect*

- The magnitude or size of the change predicted;
- The geographical extent of the area which the change will influence;
- The duration of the effect and its reversibility.

4.29 All of these criteria are important and a comprehensive assessment of significance should ideally consider them all. Terminology is important to understanding and clear, consistent use of words is desirable. In Chapters 6 and 7 the meanings of words such as importance, sensitivity and magnitude are discussed as they relate to both landscape and visual effects. Definitions are also included in the glossary in Annex XX. The use of the words “sensitive” or “sensitivity” requires particularly careful consideration since it is used in different ways in EIA legislation and guidance and in the wider field of landscape planning. This is considered further in Chapter 6.

4.30 Judgments as to the significance of the effects are arrived at by a process of reasoning, based upon analysis of the baseline conditions, identification of receptors and assessment of their sensitivity, and the degree and nature of the changes that may result from the proposals. In presenting the assessment of effects in LVIA the aim should be to achieve clarity and transparency. This should help to provide information in a way that will help decision-makers, who are not usually expert in the field, to reach an informed decision. It will also help to ensure that the reasoning behind the judgments is clear to all parties. The following principles should help in achieving this:

- Narrative text describing the landscape and visual effects and the judgments made about their significance is, if well-written, likely to be most helpful to non-experts in aiding understanding of the issues;
- Criteria used to assess significance should be clearly defined and any steps which combine different criteria should be fully explained;
- Tables and matrices should only be used to support and summarise narrative descriptive text, not to replace it;
- Numerical scoring or weighting of criteria is generally to be avoided, or at least treated with considerable caution, since it can suggest a spurious level of precision in the judgments and encourage inappropriate mathematical combining of scores;
- Verbal scales with three to six categories are preferred as the means of summarising judgments for each of the contributing criteria. The scales that are used may need to be consistent with those adopted in other topic areas in the EIA.
- Two way matrices or tables can be a useful way of communicating interrelationships between an array of inter-linked factors. but using them to consider significance of effects is not considered to be good practice.
- Judgments about significance are best summarised in a table in which each predicted effect has a profile of judgments across the range of criteria used;
- Combining judgments on individual criteria to reach an overall judgment of significance should be done as consistently as possible and in a way which is transparent.

4.31 The final overall judgment of the significance of the predicted landscape and visual effects is usually summarised in a series of categories of significance. These vary considerably from project to project but they should be appropriate to the nature, size and location of the proposed development and should be consistent as far as possible across the different topic areas in the EIA. The categories are usually on a verbal scale with between three and six points

ranging from minor to substantial impacts. In current practice the words used in each category vary considerably (See Figure 4.xx which includes an array of words used in examples of LVIA).

**Figure 4.XX Categories of Significance used in LVIAs<sup>14</sup>**

Example 1	Negligible	Very Low	Medium-Low	Medium	Medium-High	High	Very High
Example 2		Slight		Moderate		Substantial	
Example 3	Negligible	Minor		Moderate		Major	
Example 4		Minor		Moderate		Major	Severe

For clarity and consistency, and depending upon the agreed approach being taken to this across the whole EIA, LVIAs should generally use three or five categories of significance for landscape and visual effects. A three point scale can be phrased in terms of either:

**MINOR - MODERATE - MAJOR or SLIGHT - MODERATE - LARGE**

At the ends of the scale additional words can, if necessary, be added to give more differentiation, for example:

**NEGLIGIBLE - MINOR - MODERATE - MAJOR - SUBSTANTIAL**

**NEGLIGIBLE - SLIGHT - MODERATE - LARGE - VERY LARGE**

<sup>14</sup> These examples are from Guidance on Landscape and Visual Impact Assessment (2<sup>nd</sup> Edition) (2002), Appendix 6.

4.32 Descriptors can be attached to each of the categories to help understanding of what they signify. It is also good practice for any tabular summary of significance to be accompanied by a final statement summarising the most significant effects that are likely to influence the outcome of the decision making process. An example is provided in Box XX.

**Box XX: Example of a written summary of significant landscape and visual effects**

**Engaging with stakeholders and the public**

4.33 Since the last edition of this guidance was published there has been growing emphasis on consultation and public involvement in EIA. This has arisen principally from the ratification by the UK, in February 2005, of the Aarhus Convention<sup>15</sup>. This encourages widespread, timely and effective participation in environmental decision-making. This has been reinforced by changes in legislation on planning and related matters that place greater emphasis on local communities.

*Engaging with stakeholders*

4.34 There are statutory roles for consultation in EIA as a whole that, by definition, also apply to LVIA. In the initial stages of project planning, before screening has determined whether or not an EIA is formally required, consultation with the Regulatory Authority can help to establish the likely acceptability of the proposed development and the preferred development site. If

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<sup>15</sup> United Nations Economic Commission for Europe (UNECE) (1998) Aarhus Convention on access to information, public participation in decision-making and access to justice in environmental matters. UNECE.

an EIA is required, formal procedures then require consultation with statutory bodies during the scoping stage. There is an obligation on them, as well as on the consenting authority, to provide, on request, information that is likely to be relevant to the assessment. In the case of LVIA this may include previous landscape surveys or landscape character assessments of the area, historic landscape information, and advice on the existence of and the basis for landscape designations. The scoping work provides the opportunity for discussion and agreement with the consenting authority and other statutory consultees on matters such as survey areas for landscape and visual baseline studies, survey methods and assessment techniques and issues of potential concern.

4.35 Other interested parties and non-statutory consultees may also have important contributions to make at this stage but the particular agenda and terms of reference of any organisation consulted must be taken into account when assessing the weight to be given to the views expressed and deciding how they may influence the project proposals. While important, such views will need to be weighed in the balance with many other factors, such as government policy, or the provisions of the development plan. For both statutory and non-statutory consultees it is important to distinguish between 'in principle' objections and specific comments on the proposals.

### *Engaging with the public*

4.36 The views of the consenting authority and of the statutory consultees, as well as any other interested parties or non statutory consultees are not necessarily representative of the views of local people. Formally the EIA procedures only require consultation with the public at the stage of submission and review of the Environmental Statement. But there is a growing view that

there are considerable benefits to be gained from involving the public in early discussion of the proposals and of the environmental issues that may arise. This can make a positive contribution to scoping the landscape and visual issues that may arise.

4.37 The timing of engagement with the public and other interested parties will depend upon many factors, including the nature of the development but, in general, the earlier the better. A relatively early interim presentation of information about the project to interested parties can help to maintain goodwill, especially where a two-way exchange of ideas and views on scheme design can be initiated. Such participation may not always result in full agreement, but it may serve to resolve some issues and to clarify any remaining objections. In its most useful form, participation in consultation will improve the quality of the information influencing the scheme design, and may result in positive changes to the design.

4.38 Public consultation can inevitably be difficult. The developer may on occasions be reluctant to release information about the development for reasons of commercial sensitivity or uncertainty. There may also be a perception that to invite discussion and debate is to subject the project to “unnecessary” interference. Statutory consultees and members of the public may be suspicious about the consultation process and could be uncompromisingly hostile to the proposed development. They may also be concerned that they will prejudice their future position, by becoming too closely involved and may need to be persuaded that the offer to participate is genuine. In such circumstances a poorly managed programme of consultations could generate adverse publicity.

#### *Principles of consultation*

4.39 Despite the inevitable difficulties, well organized and timely consultation and engagement with both stakeholders and public can bring substantial benefits to a project. This can include much improved understanding of what is proposed

and access to high quality local environmental information that would otherwise not have been available to the assessment. This can be of great benefit to LVIA in providing better understanding of the landscape and of local attitudes to it.

4.40 Successful engagement will be assisted by the following good practice principles:

- Consultation must be genuine and open. The temptation to make the most of consultation for information gathering, while being reluctant to disseminate information, is to be resisted;
- Timing of consultation should be carefully planned to prevent premature disclosure, which might encourage blight or make developers commercially vulnerable. There may be occasions where controlled release of information, or confidentiality safeguards, are required;
- Requests for participation by stakeholders and the public should be timely. There is no point in seeking ideas and views if it is actually too late for the scheme design to be modified.
- Sufficient time must be allowed for those consulted to be able to consider and act on the information provided;
- The objectives of consultation should be clearly stated. Information presented to consultees should be appropriate in content and level of detail, clearly identifying those issues on which comment is being sought;

4.41 Methods of engaging with different groups should be carefully considered and appropriate. The approach to consultation is likely to be common across all the EIA topics and determined by the EIA coordinator and LVIA consultation will need to fit into this. There is also a great deal of guidance available on appropriate consultation and participation techniques, which should be consulted where appropriate.

## Consultation questions

Does this chapter define key terms clearly?

Does this chapter offer a satisfactory introduction to describing and identifying landscape and visual effects?

Does this chapter give a satisfactory introduction to mitigation?

Does this chapter give a satisfactory introduction to engagement with stakeholders and the public?

Are the key steps in the process set out clearly?

Is the guidance on defining the study area clear?

Is the distinction between landscape effects and visual effects clear?

Is a narrative summary of effects and significance preferable to a tabular/matrix summary?

Any other suggestions or comments on Chapter 4?

# Chapter 5: What you need to know about the proposed development

## Introduction

5.1 An assessment of landscape and visual effects requires a proper understanding of both the attributes of the receiving environment and the location, scale and nature of the proposed development, bearing in mind that the term 'development' is not limited solely to built form and associated landscape treatment and/or ancillary works. Information about the development needs to be assembled, considered as to its relevance for assessment purposes, kept under review during the planning and design stages, updated where appropriate and then 'fixed' to enable the assessment to be finalised.

5.2 This information should include:

- a description of the project that is sufficiently detailed for assessment purposes;
- information about alternatives that have been considered, where relevant;
- information concerning relevant stages in the project's life cycle, including, as appropriate construction, operation, decommissioning and restoration/reinstatement stages;
- measures proposed to prevent/avoid, reduce and, if possible, offset or compensate for any significant adverse effects on the environment.

This information will generally be built up as the project moves towards a 'fixed' description. More detail will be added as, for example, the project design is

refined and mitigation measures are incorporated to address landscape and visual, as well as other effects.

### **Description of the proposed development or change**

5.3 It is essential that the description of the development on which the assessment of effects is based is sufficiently detailed to ensure that the effects can be clearly identified, although the level of detail provided will vary from project to project. It is now established in case-law that the project must be defined in sufficient detail, even in an outline planning application, to allow its effects on the environment to be identified and assessed . The parameters of the development to be consented must be defined such that variations from those parameters can in turn be made subject to assessment.

5.4 In presenting material about the proposals a clear, concise but nevertheless comprehensive description of the proposal can make a very important contribution to the credibility and effectiveness of the final ES. The description should, as a minimum, describe the siting, layout and characteristics of the proposed development. The development proposals, which are common to all topics addressed in the ES, are usually described in full in a separate section of the ES. By cross referencing back to this basic description, only specific and particularly relevant features and aspects of the project need to be reported on in the part of the ES dealing with the assessment of landscape and visual effects.

5.5 Good practice in presenting landscape and visual effects in the ES is described more fully in Chapter 9. However it is essential that the development proposals are clearly presented and illustrated and ideally this requires:

- easy-to-read proposals maps at a size appropriate to the scale of the development, together with other selected drawings which may include cross sections;
- for complex projects, or those of long duration, for example power stations or major mineral workings, a series of drawings is likely to be needed showing the situation at different stages, such as construction, operation, and decommissioning, or different phases in the development;
- illustrations should be included so that the reader of the assessment can secure a proper understanding of what is proposed. These may include:
  - layout plans of the main design elements, access and site circulation, land uses, contours and site levels;
  - cross sections and elevations of buildings and other important elements or elements, including key dimensions;
  - the proposed landscape framework including landform and planting.

## **Consideration of alternatives**

5.6 Where alternatives have been considered by the developer the EIA Regulations require that an outline description of them should be provided together with an indication of the main reasons (including environmental) for the final choice. Consideration of alternative approaches to the development proposal is considered to be good practice and should be encouraged as a means of achieving potentially more sustainable development.

5.7 This nevertheless tends to focus attention on major alternatives, for example sites in different development locations. But all development schemes go through design iterations, between project inception and submission, which could include consideration of alternative layouts or designs. These too can legitimately be described as alternatives that have been considered. For some

projects the 'do nothing' or 'do minimum' scenario', against which the development will be compared, may be presented as an alternative.

5.8 The landscape professional could therefore be requested to advise on a number of different alternatives that might include:

- alternative locations or sites;
- different approaches in terms of scheme design, or the size / scale / orientation of the proposed development.
- alternative site layouts, access and servicing arrangements.

5.9 Exploring such alternatives may allow initial identification of opportunities for mitigating potentially negative/adverse effects of the scheme at an early stage. If there are potentially serious landscape and/or visual effects associated with a particular site then prevention or avoidance of these effects through the selection of an alternative location may be the preferred solution. Where this is not feasible, avoidance of such effects may be achieved through the redesign of those parts of the proposal that would otherwise give rise to potentially serious negative/adverse effects

5.10 Depending on the type of study that is being carried out and the stage reached in the assessment process, more than one project alternative may be taken forward for comparative assessment, with a detailed project description required for each alternative. The most common examples of this occur in the field of linear development such as transport infrastructure, long distance gas / water pipes, grid connections and flood risk management structures along rivers. In such cases route option appraisals for alternatives routes are frequently undertaken before a decision is made on the preferred route. Once the preferred route is selected a more detailed assessment is then carried out. Other types of project could benefit from a similar, hierarchical approach to the consideration of alternatives.

## Stages in the project life-cycle

5.11 The characteristics of projects, and hence the possible landscape and visual effects they may have, may vary through the life of the project.

Construction, operation, decommissioning and restoration phases of a development are usually characterised by quite different physical elements and activities. A separate, self-contained description of the development at each stage in the life cycle is therefore needed to assist in the understanding and then prediction of landscape and visual effects.

5.12 The duration of any of the effects is also an important consideration - for example a less severe effect may be considered more significant if it is expected to continue for a much longer period of time than a more severe short-term effect. Landscape professionals should be explicit and clearly state what is meant by terms such as 'short-term', 'medium-term' and long-term'. At the same time, they should also be aware that the overall duration of a project should not be disguised by breaking it up into discrete stages.

5.13 For the **construction stage**, depending on the nature of the project, the relevant information could include:

- the location of site access and haul routes (which are likely to differ from permanent access proposals), movement of traffic and machinery;
- positions and scale of cut, fill, borrow, disposal and other working areas;
- the origin and nature of materials and locations for stockpiles;
- type and location of construction equipment and plant;
- provision of utilities, including water, drainage, power and lighting, including the nature of and times of site lighting when work is in progress;
- scale, location and nature of temporary parking, on-site accommodation;

- measures for the temporary protection of existing features and temporary screening;
- the programme of work, including any proposed phasing of construction.

5.14 For the **operational stage** of a project the matters which may be most relevant to the landscape and visual impact assessment could include:

- location of buildings, servicing arrangements, storage areas, infrastructure/ utilities and/or other structures;
- access arrangements and traffic movements;
- lighting;
- car parking;
- noise and movement of vehicles in so far as it may affect perceptions of tranquillity in the landscape;
- signage and boundary treatment(s);
- outdoor activities that may be visible;
- operational landscape including landform, structure planting and hard landscape features;
- land management operations and objectives;
- areas of possible future development.

5.15 The **decommissioning and restoration** stage may also give rise to landscape and visual effects. Important aspects could include:

- decommissioning and site restoration activities, including demolition, deconstruction, dismantling, movement of materials and plant around the site and temporary access arrangements;
- residual buildings and structures;
- after-use potential and plans;
- disposal or recycling of wastes and residues;

## Information requirements

5.16 For each of these stages in the project life cycle and, where relevant, for the various scheme components, a range of qualitative and quantitative information will be valuable to give a proper and proportionate understanding of what is proposed, to assist in assessments of landscape and visual effects. The information needed may include:

- areas under different uses;
- dimensions of major plant, buildings and structures;
- volumes of material;
- numbers of scheme components such as houses and parking spaces;
- design of scheme components (including layout, scale, style, distinctiveness);
- form of scheme components (including shape, bulk, pattern, edges, orientation, complexity);
- materials (including information concerning texture, colour, shade, reflectivity, opacity);
- movements of plant, materials, vehicles and people, both construction workforce and occupants during operation

5.17 It is a requirement that the development is described in sufficient detail to enable the effects to be identified and assessed. But it is also recognised that it is often difficult to provide accurate and complete information on all these varied aspects of a development proposal. Where the landscape professional considers that key data on project characteristics is lacking, it will be necessary to add a caveat to the assessment. If going further and estimating what could potentially occur, perhaps based upon a reasonable 'worst case scenario', then the assumptions on which such judgements may be based should be made explicit.

The sources of information used in the assessment should also be clearly set out.

5.18 Prior to finalising the assessment and the ES, there should be communication with the EIA co-ordinator to ensure the information used is up-to-date, to agree the scope of the reasonable 'worst case' scenario that is to be used and also to ensure that different topic assessments are using consistent assumptions about the proposal. If they are not the ES will need to explain and justify any such variations.

### **Mitigation of landscape and visual effects**

5.19 Dealing with the mitigation of landscape and visual effects effectively can be challenging, as indicated elsewhere in this guidance:

- Paragraphs 2.18 - 2.22 describe the benefits of the iterative process of EIA and the particular contribution of LVIA to the iterative design process, but also acknowledge the difficulties that can arise in deciding whether or not possible effects that have been 'designed out' of the scheme should still be reported on;
- Paragraphs 4.24 - 4.26 indicate that mitigation measures are generally more effective if they can be incorporated as an integral part of the iterative design process;

5.20 Mitigation measures may be incorporated into the design at a number of stages and should, where possible, be considered from project inception, when site options and alternative designs are being considered. In this way mitigation becomes a tool to adapt and modify the development to take account of constraints and opportunities and achieve the optimum environmental fit as part of an environmentally integrated design. The point at which the design is finalised

for the purposes of assessment and preparation of the planning application must, however, be agreed so that the assessment of effects can proceed on the basis of firm information and assumptions about the scheme.

5.21 Mitigation measures can be divided (as in Paragraph 4.25) into: primary measures, which become mainstream components of the project design; standard construction practices for avoiding and minimising environmental effects; and secondary measures, designed to address any adverse effects remaining after the first two types have been incorporated into the scheme. To address the concern (see above) about whether or not possible effects that have been 'designed out' of the scheme should still be reported on, the primary mitigation measures and the standard construction practices should ideally be included in the project description (and also in the design and access statement for the project). The project description should start by briefly reviewing the potential effects identified early on and the design responses which have been introduced to prevent or reduce the adverse effects, including, for example, modifications to siting, access, layout, buildings, structures, ground modelling and planting. It can be assumed that both these types of mitigation measures will definitely be implemented as they are to be an integral part of the scheme.

5.22 Secondary mitigation measures are those that are not built into the final development proposals and which are therefore considered in the assessment of the landscape and visual effects of the scheme. They will not automatically be implemented and there will need to be careful consideration of how they can be secured. In an ideal world, applying landscape and visual impact assessment as an iterative planning and design tool, would allow all necessary and desirable mitigation to be incorporated into the overall design such that secondary mitigation should not prove necessary. This will rarely be possible but that should not discourage the landscape professional from trying to achieve such an outcome.

## **Strategies for mitigating likely negative (adverse) landscape and visual effects**

5.23 In accordance with the EIA Directive and relevant country regulations, mitigation measures should be proposed to prevent, reduce and where possible offset any significant adverse landscape and visual effects. reduce or offset any negative landscape and visual effects. In EIA practice 'prevent' has generally been substituted by 'avoid' and offset has generally been substituted by 'compensate'. To avoid confusion both are referred to below but no matter the semantics, the intention behind these words is clear. These three forms of mitigation form what has been termed the 'mitigation hierarchy' and good practice should aim to achieve mitigation at the highest possible level in this hierarchy. The ideal strategy is one of prevention or avoidance. If this is not possible, alternative strategies, firstly of reduction, and then of offsetting or compensation may need to be explored depending on individual circumstances. Some of the main issues associated with these different strategies are outlined below.

### *Prevention or avoidance*

5.24 Avoidance of potentially significant negative landscape and visual effects can be achieved through careful planning, siting, and design. In many cases time and costs may be reduced if potentially serious environmental constraints can be identified and avoided during the early stages of scheme development). This may be achieved by the selection of a site that can more readily accommodate the proposed development or through innovative design within the selected site. This is closely related to the consideration of alternatives outlined in Paragraphs 5.6 - 5.10.

5.25 Consideration of alternative locations for the proposed project away from the site under consideration, or alternative carefully planned locations of components of the scheme within the selected site, could both offer ways of

avoiding potentially serious landscape and visual effects. As indicated above, such actions should be reported upon within the LVIA so that the reader is made aware of all that has been done in this regard. If the consideration of mitigation measures for negative landscape or visual effects is left to the later stages of scheme design, this can result in increased mitigation costs, because early opportunities for avoidance of negative effects are missed.

### *Reduction*

5.26 Where potentially significant negative effects cannot be avoided, the strategy should be to reduce those that remain as far as possible. Measures that are "add-on" or "cosmetic" landscape works, such as screen planting designed to reduce the negative effects of an otherwise fixed scheme design, are likely to be the least successful. The sympathetic treatment of external areas can, depending on the circumstances, help the integration of a new development with the surrounding landscape but in general the emphasis should be on modifying scheme design through successive iterations to reduce adverse effects. Leaving measures to reduce effects to the later stages of scheme design, may result in a less internally consistent and mitigated scheme and could increase costs.

5.27 Mitigation measures that may help to reduce potentially negative landscape and visual effects include, but are not limited to:

- Adjustment of site levels;
- Use of appropriate form, detailed design, materials and finishes where it is neither desirable or practicable to screen buildings. In these circumstances, the design of the structures, and selection of materials, colour treatments and textural finishes, should be selected to aid integration with the surroundings;
- Creation of strategically sited landforms together with structure planting on and/or off-site;

- Avoiding or reducing obtrusive light. Lighting for safety or security purposes may be unavoidable and may give rise to significant adverse visual effects. In such cases, consideration should be given to different ways of minimising light pollution and reference should be made to appropriate guidance, such as that provided by the Institute of Lighting Engineers<sup>16</sup>.

5.28 All of the potentially negative (adverse) landscape and visual effects that are considered likely to occur throughout the project life cycle (including its construction, operation, decommissioning and restoration stages) may be considered for mitigation where this is possible. But the emphasis should be on those considered to be significant as this is the focus of the statutory requirements. Mitigating a significant adverse effect may reduce the degree or alter the nature of the effect. The residual effect that remains following the application of such secondary mitigation may not necessarily render it insignificant but should act to reduce its significance.

5.29 Mitigation measures to reduce landscape and visual effects can themselves have adverse effects on the landscape or on visual amenity and their planning and design needs careful consideration. They should be designed to fit with the existing character of the landscape, respecting and building upon local landscape distinctiveness, for example in use of materials that are locally derived. They should also respond, where possible, to landscape objectives that may have been set in development or management plans for the area.

5.30 In addition mitigation measures for effects in other topic areas may have additional consequences for landscape and visual amenity. The iterative design process should allow these to be assimilated and their additional effects taken into account in the overall mitigation strategy. For example, culverts and other features required to maintain safe passage for wildlife, could themselves be visually intrusive. Design measures can ensure both their effectiveness in

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<sup>16</sup> Reference needed for Institute of Lighting Engineers Guidance.

mitigating adverse ecological effects and their appropriateness in terms of fit with landscape character where appropriate. Similarly, landscape or visual mitigation may require planting where the design considerations would also include the ecological acceptability of the species used. The EIA co-ordinator may have a role in ensuring that such reciprocal effects of mitigation measures on other topic areas are taken into account. This could be seen to form part of the assessment of intra-project cumulative effects, to which those involved in LVIA may be required to contribute (see Chapter 8).

5.31 Mitigation measures, especially planting schemes, are not immediately effective. Advance planting can help to reduce the time between the development commencing and the planting becoming established. If such planting forms part of the scheme design it should be included in the design and access statement and in the project description. Where planting is intended to provide a visual screen for the development it may also be appropriate to assess the effects for different periods of time, such as at year 0 – the start of the operational stage, year 5 (when short-term grades into medium-term) and year 15 where medium-term grades into longer-term. The assessment of the effects over time will better demonstrate the contribution made by such measures to reducing the adverse effects of the scheme at different stages.

#### *Offsetting/Compensation*

5.32 Where a negative landscape or visual effect cannot be avoided, or reduced to an acceptable degree, consideration should be given to any opportunities to offset, or compensate for such unavoidable residual effects. Offsetting or compensation should normally involve, as far as possible, like for like replacement. To achieve this, a reliable assessment is needed of the nature, extent and value of the resource that would be lost or damaged (drawing upon baseline information supplemented where necessary). The aim should be to

replace like with like or, where this is not possible, features of equivalent value should be provided.

5.33 It is debatable whether full offsetting of adverse effects is possible. For example, a new area of woodland may eventually offset the loss of an existing highly valued mature woodland in visual and landscape character terms, but it is unlikely that it would compensate for the loss of established habitat or amenity value in the interim between its establishment and its full development. Similarly loss of an area of ancient woodland cannot, almost by definition, be compensated for other than in timescales extending over generations. In general, offsetting and compensation should therefore be regarded as a measure of last resort.

5.34 It is increasingly common for offsetting measures to be offered that are not closely related to the lost or damaged features. Such measures may sometimes be actively sought by local communities or local authorities to offset unavoidable negative effects. They might include, for example, the provision of new local amenity areas, parks or greenspaces, or the creation or provision of a work of art. Such measures should normally be linked to the development in some way. The terms offset or compensation should not be confused with enhancement (see below).

### **Enhancement**

5.35 This is distinct from and goes beyond mitigation, so the term should not be used to describe the outcomes of mitigation measures. While mitigation is specifically linked to negative landscape and visual effects that may have been identified, enhancement means proposals that seek to improve the landscape resource and the visual amenity of the proposed development site and its wider setting, over and above its baseline condition. Enhancement may take many forms, including improved land management or restoration of historic landscapes, habitats and other valued features; enrichment of impoverished

agricultural landscapes; measures to conserve and improve the attractiveness of town centres; and, creation of new landscape, habitat and recreational areas. Through such measures environmental enhancement can make a very real contribution to sustainable development and the overall quality of the environment.

5.36 Enhancement proposals are by no means a component of all assessments of landscape and visual effects. Ideally, enhancement proposals should not be left to the 'after-thought' stage of project development. If they can be brought sensibly into the project planning and design stage and then form part of the overall proposal, they may be legitimately assessed as part of the proposal. They in turn may, depending on circumstances, give rise to positive effects that should be identified and assessed.

5.37 Where enhancement proposals do form part of the overall scheme, they should be based on a sound initial assessment of the landscape and visual amenity of the area and of any trends likely to bring about future change. The following questions can usefully be considered but local circumstances may vary and different questions may be relevant. Nevertheless, as a starting point:

- Can the development help improve the visual amenity enjoyed in the area?
- Can it restore, reconstruct or provide new local landscape character and local distinctiveness?
- Can it assist in meeting landscape management objectives for the area?

Can it help address specific issues and/or opportunities such as restoration of damaged or derelict land; the scope for habitat improvement; or the scope for cultural heritage benefit?

## Securing implementation of mitigation and enhancement measures

5.38 It is essential to demonstrate that any measures included as part of the mitigation package to respond to negative landscape and visual effects can be delivered in practice. This may be considered a part of the assessment of effects and taken into account by decision makers. It deals with the likelihood of the mitigation occurring, which in turn relates to matters of certainty or confidence in the re-evaluation of the significance of landscape and visual effects after mitigation to determine residual significance. Similar considerations apply to enhancement measures proposed for inclusion in the scheme, where a firm commitment to and method of delivery must be included.

5.39 If mitigation or enhancement measures are material factors likely to influence the outcome of a project proposal then a judgment needs to be made about whether they are technically achievable, practically deliverable and likely to be sustainable in the future. This should begin with technical considerations - for example can like for like replacement habitat creation measures actually be realised successfully. Expert scientific, technical/design advice may be required to make sure that such proposals are well founded and where possible based on successful precedents.

5.40 Ways in which the mitigation measures, and any agreed enhancement proposals, will be delivered in practice is now commonly dealt with through an Environmental Management Plan (EMP). An EMP is defined as “*a practical tool for managing the effects of a specific project in the post-consent phase, typically in the run up to, and during, the construction phase of a project, and potentially into the operational phase*”<sup>17</sup>. Such plans, which may also appear under other names, can be started during the design stages of a project but at the latest should be available after consent has been given but before the start of

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<sup>17</sup> IEMA/LUC (2008) Environmental Management Plans. IEMA.

construction. In wider EIA practice it is increasingly argued that EMPs should form part of the ES. They should ideally make clear how mitigation and enhancement is to be achieved and may extend to who is responsible. This might include any measures to mitigate adverse landscape and visual effects that may be proposed on land outside the site, provided it can be demonstrated that there is a reasonable chance of securing their delivery.

5.41 On-site mitigation measures designed to reduce adverse landscape and visual effects can often be secured through planning conditions attached to the planning consent, provided that the mitigation is described in a way that allows this. They should, for example be clear and specific and compliance with the condition must be possible<sup>18</sup>. The competent authority should make sure that all the promised mitigation measures are, where appropriate, covered by conditions or, if not conditioned, by suitable legal agreement. Relevant conditions should be able to be monitored, and it should be made clear who is to implement and monitor the measures that are put forward. Compensation and enhancement measures can also be secured through conditions but may be better incorporated into planning obligations that are agreed as part of the consent procedures.

5.42 Mitigation measures should be linked to suitable specifications and performance standards, for example covering the establishment, management, maintenance and monitoring of new landscape features. They should describe what is required for mitigation to be effective, in sufficient detail to allow conditions to be drafted and for detailed schemes to be submitted for approval before implementation. There should also be some form of contingency plans, in the event that mitigation measures should prove to be unsuccessful. It can be helpful to ask a site contractor to review the wording describing mitigation and enhancement measures as failures in language and understanding driver can hinder their effective implementation. In short mitigation of landscape and visual

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<sup>18</sup> For further detail see Box 6.5B in IEMA Special Report –The State Of Environmental Impact Assessment Practice In The UK

effects is most likely to be successful if it is appropriate, feasible and effectively communicated.

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## **Consultation questions**

Does this chapter provide clear guidance on describing the development?

Does this chapter provide clear guidance on mitigation?

Does this chapter provide clear guidance on enhancement?

Is the terminology relating to mitigation in this chapter satisfactory?

Any other suggestions or comments on Chapter 5?

## Chapter 6: Dealing with landscape effects

### Introduction

6.1 The scoping stage (see Paragraph 4.xx) should have identified the potentially significant effects of the project and those parts of the landscape within which they may occur. The list of potential significant effects will usually include effects on:

- the individual components of the landscape - the elements and landscape features which make up the study area;
- the aesthetic and perceptual aspects of the landscape - such as, for example, its scale, complexity, openness, tranquillity or wildness;
- the character of the landscape created by particular combinations of these elements, features and aesthetic and perceptual aspects in particular places;
- particularly valued parts of the landscape, whether individual components or areas and the special qualities that contribute to this value.

6.2 Some of these aspects may already have been discussed during the scoping process and decisions taken, with the consenting authority and stakeholders, that they do not need to be considered further. Any potential effects that have not been eliminated in agreeing the scope of the work should be covered in a more detailed assessment through the steps of:

- baseline survey of the landscape and its component parts, and of the value attached to it;
- identification and description of the likely effects of the scheme on the landscape;
- evaluation of the effects identified in order to judge their overall significance.

## **Establishing the landscape baseline**

6.3 Baseline studies for assessing the landscape effects require a mix of desk study and field work to identify and record the character of the landscape and the elements, features and aesthetic and perceptual factors which contribute to it, as well as the value attached to the landscape. Landscape character assessment (LCA) is the key tool for understanding the landscape and is usually the starting point for baseline surveys. There is a well-established and widely used method for LCA, which is set out in current guidance documents<sup>19</sup>. It is a two stage process - the first stage, characterisation, is relatively value free and provides an understanding of the nature of the landscape and the way that it varies in the study area. This is expressed as maps and related descriptions of landscape character types or areas and identification of the key characteristics that make each one distinctive. The second stage, making judgments, must be tailored to the particular application.

6.4 LCA is increasingly complemented by and linked to the parallel technique of Historic Landscape Character Assessment (HLCA) or equivalent and related techniques. While LCA seeks to describe the character of the landscape as it is now, HLCA aims to show how it evolved over time to reach its present character. LCA and HLCA are complementary techniques and together provide a comprehensive understanding of the landscape both past and present. Both should be used, as appropriate, in establishing the character of the landscape in the study area. It should, however, be borne in mind that there may be separate studies of the effects of the proposed change or development on historic landscape character. The interrelationship between the two will need to be considered by those responsible, aided by the EIA coordinator. The approach to LCA will vary depending on the availability of existing characterisations and the need for additional or new baseline assessment work.

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<sup>19</sup> Insert reference to new revised guidance when available - need to check with Christine Tudor at Natural England for current position.

6.5 Many parts of the UK are already covered by existing landscape character assessments at different levels in what is called the hierarchy of assessment, from broad scale national or regional assessments, through to more detailed local authority assessments, to in some cases quite fine grain local or community assessments. Many of these assessments have been undertaken to assist in the formulation of Structure Plan, Unitary Development Plan and Local Plan policies, and also for specific purposes like the development of indicative strategies for forestry, or to facilitate policy formulation in countryside or urban landscape/townscape strategies. But they can also contribute to LVIA and the first step in preparing the baseline landscape description should be to review the relevant assessments that may be available at all levels in this hierarchy. Reference should also be made to any Historic Landscape Characterisation studies (or equivalent) for the area, which will provide information on the ‘time-depth’ dimension of the landscape.

6.6 Existing landscape character assessments should be reviewed critically as their quality may vary and some may be dated. Before deciding to rely on information from an existing assessment it should be reviewed in terms of:

- when it was carried out and the extent to which the landscape may have changed since then;
- the scale and level of detail of the assessment and its suitability for use in the LVIA;
- any other matters which might limit the reliability or usefulness of the information;
- the degree to which it will inform the LVIA process

6.7 Broad scale assessments at national or regional level can be helpful in setting the landscape context, but are unlikely to be helpful on their own as the basis for LVIA – they may be too generalized to be fit for purpose. Local authority assessments will provide more useful information about the landscape types that

occur in the study area. Ideally both should be used together in the following ways:

- broad scale assessments set the scene and reference can be made to the descriptions of relevant character types or areas to indicate the key characteristics that may be apparent in the study area;
- local authority assessments provide more detail on the types of landscape that occur in the study area. They can be mapped to show how the proposals relate to them and the descriptions and definition of key characteristics can be used to inform the description of the landscapes that may be affected by the proposal;

6.8 Original or supplementary landscape character assessment work covering the whole study area will only be required when there are no existing assessments or when they are available but either have serious limitations that restrict their value or do not provide information at an appropriate level of detail. New surveys, if and when required, should follow recommended methods and up to date guidance, referring particularly to current LCA guidance (see footnote 1). In brief they should consist of both desk study and fieldwork to allow characterisation of the landscape and identification of the most important factors contributing to this. The methods are equally applicable to townscapes and urban settings, to urban fringe areas, to coastal landscapes and seascapes, and to rural landscapes.

6.9 Even where there are useful and relevant existing landscape character assessments and historic landscape character assessments, it may still be necessary to carry out specific and more detailed surveys of the site itself and perhaps its immediate setting or surroundings. This provides the opportunity to record the specific characteristics of this more limited area, but also to analyse to what extent the site and its immediate surroundings conform to or are different from the wider landscape character assessments that exist and to pick up other

characteristics that may be important in considering the effects of the proposal.

6.10 Where new landscape surveys are required either of wider landscape character or of the site and its immediate surroundings, survey information may be recorded in a variety of ways but good records are essential. This is especially so in LVIA as the landscape baseline may eventually be used in a public inquiry where other parties could request access to field records. It is important that:

- appropriate record sheets should be used. Although there are many examples available in guidance documents and elsewhere it is very important to use one appropriate for the specific location and purpose. This may on occasion mean designing a customized one.
- the sheets should include written descriptions, checklists of the components of the landscape and the aesthetic and perceptual qualities it displays, sketches if helpful and links to map annotations and photographic records;
- both paper copies and digital recording methods can be used but most importantly the information should be retrievable and accessible to others.

6.11 A baseline landscape description should be prepared and presented in a clear, well-structured and accessible report, supported by illustrations where necessary. This should draw upon the information gathered from review of existing landscape character assessments and any additional desk study or field survey work carried out. It should reflect good practice, as set out in the current LCA guidance so that:

- drawing on existing assessments as appropriate, the character of the landscape is mapped, illustrated and described, at an appropriate level of detail, dividing it into landscape character types and areas as appropriate;
- where an additional detailed level of assessment has been carried out of the landscape in the site and its immediate surroundings, the individual

elements, features and aesthetic and perceptual qualities should be mapped and described at this more local level;

- the condition of the different landscape types and/or areas, and their constituent parts should be recorded and any evidence of current pressures causing change in the landscape documented, drawing on previous reports and data sources as well as field records.

6.12 The condition of the landscape refers to the state of an individual area of landscape and should be described as factually as possible. Reference to the maintenance and condition of individual elements or features such as buildings, hedgerows, woodland, for example, can be helpful. Evidence about change in the landscape, including in its condition, is an important part of the baseline. The aim should be not only to describe the landscape as it is now, but also to consider what it may be like in the future. This means projecting forward any trends in change and considering how they may affect the landscape over time.

#### *Establishing the value of the landscape*

6.13 As part of the baseline description the value of the affected landscape should be established. Landscape value has been defined<sup>20</sup> as “*the relative value that is attached to different landscapes by society*”. It can apply to areas of landscape as a whole, or to the individual elements, features and aesthetic or perceptual dimensions which contribute to the character of the landscape. Landscapes or their component parts may be valued at the community, local, national or international levels. A review of existing landscape designations is usually the starting point in understanding landscape value but the value attached to undesignated landscapes also needs to be carefully considered. Individual elements of the landscape - such as trees, buildings, hedgerows, or historic features may also have value. All need to be considered where relevant.

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<sup>20</sup>Land Use Consultants and Swanwick, C. (2011) Landscape Character Assessment Guidance - 2011 Revision. Consultation Draft for Natural England, Scottish Natural Heritage and Countryside Council for Wales.

6.14 Information that will contribute to understanding value can be obtained by researching existing evidence about how people value the landscape of the study area. This might include:

- information about areas recognised by statute such as (depending on jurisdiction) National Parks, National Scenic Areas, Areas of Outstanding Natural Beauty;
- local planning documents which may show the extent of and policies for local landscape designations and for Conservation Areas;
- information on the status of individual features such as, for example, Listed Buildings, Tree Preservation Orders; important hedgerows, cultural heritage elements such as designed landscapes of various forms, archaeological sites of importance and other special historical or cultural heritage sites such as battlefields or historic gardens;
- tourism literature and promotional material including post cards, which may indicate value attached to the identity of particular areas (e.g. 'Constable Country' or specially promoted views);
- material on landscapes of local or community interest, such as local green space, village greens or allotments.

#### International and national designations

6.15 Internationally acclaimed landscapes may be recognised as World Heritage Sites and particular planning policies may apply to them. Nationally valued landscapes are recognised by designations, which have a formal statutory basis that varies in different parts of the UK. They include:

- **National Parks** in England, Wales and Scotland
- **Areas of Outstanding Natural Beauty** in England, Wales and Northern Ireland
- **National Scenic Areas** in Scotland.

6.16 The criteria used in making these designations vary. If a project subject to LVIA is in or near to one of them, it is vital that the baseline study should help to fully understand the basis for the designation and why the landscape is considered to be of value. This means:

- understanding the specific basis for the designation of the area, especially the selection criteria applied at the time of designation, the approach to the definition of boundaries, and whether or not the landscape has subsequently changed;
- determining to what degree the criteria and factors used to support the case for designation are represented in the specific study area.

6.17 Desk study of relevant documents will provide information concerning the basis for designation but sometimes, at the more local scale of an LVIA study area, it is possible that the landscape value of that specific area may be different from that suggested by the formal designation. Fieldwork can help to establish how the criteria for designation are expressed, or not, in the particular area. At the same time it should be recognized that every part of a designated area contributes to the whole and care must be taken if considering areas in isolation.

#### Local landscape designations

6.18 In many parts of the UK local authorities identify locally valued landscapes and recognise them through local designations of various types (such as Special Landscape Areas, Areas of Great Landscape Value). They are then incorporated into planning documents along with accompanying planning policies that apply in those areas. As with national designations the criteria that are used to identify them vary and similar considerations apply. It is necessary to understand the reasons for the designation and to examine how the criteria relate to the particular area in question. Unfortunately many of these locally designated landscapes do not have good records of how they were selected, what criteria were used and how boundaries were drawn. This can make it difficult to get a clear picture of how a study area fits into the wider context of the designation.

## Undesignated landscapes

6.19 The fact that an area of landscape is not designated either nationally or locally does not mean that it does not have any value. This is particularly so in areas of the UK, mainly in England, where relevant national planning policy and advice has actively discouraged local designations. The European Landscape Convention promotes the need to take account of all landscapes, with less emphasis on the special and more recognition that ordinary landscapes also have their value. Where local designations are not in use a fresh approach may be needed.

6.20 In such cases, and where on going scoping discussions suggest that it is appropriate, value should be determined as part of the baseline survey through new survey and analysis. This requires definition of the criteria and factors that are considered to confer value on a landscape or on its components. There are a number of possible options, including:

- to draw on a list of those factors that are generally agreed to influence value. The list in Box 6.xx is an example of the factors that may be relevant in judging value. They need to be interpreted to reflect the particular legislative and policy context prevailing in particular places. The list is not comprehensive and other factors may be considered important in specific areas.
- to draw up a list of criteria and factors that is specific to the individual project and landscape context.
- to apply a form of the ecosystem services approach. However, this is a cross cutting and integrating approach and is likely to encroach on other themes or topics in the EIA. Although there is interest in this approach, experience of using it in EIA is limited so this may not be a preferred method;

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## **Box 6.xx : Range of factors that help in the identification of valued landscapes**

**Landscape quality** means the physical state of the landscape. It includes the extent to which typical character is represented in individual areas, the intactness of the landscape from visual, functional and ecological perspectives and the condition of individual elements of the landscape.

**Scenic quality:** depends upon perception and reflects the particular combination and pattern of elements in the landscape, its aesthetic qualities, its more intangible sense of place or 'genius loci' and other more intangible qualities.

**Rarity:** A landscape may be valued because it is a rare type, or because it contains rare elements, features or attributes

**Representativeness:** A landscape may be valued because it is considered to be a particularly good example of its type either in terms of its overall character or because of the elements or features it contains.

**Conservation interests:** The presence of features of wildlife, earth science or archaeological or historical and cultural interest can add to the value of the landscape as well as having value in their own right.

**Perceptual aspects:** A landscape may be valued for its perceptual qualities, notably wildness and/or tranquillity

**Consensus:** There may be a consensus of opinion, expressed by the public, informed professionals, interest groups, and artists, writers and other media, on the importance of the landscape.

**Cultural Associations:** Some landscapes are associated with particular people, artists, writers or events in history contribute to perceptions of natural beauty of the area.

*Source: Land Use Consultants and Swanwick, C. (2011) Landscape Character Assessment Guidance - 2011 Revision. Consultation Draft for Natural England, Scottish Natural Heritage and Countryside Council for Wales.*

6.21 In practice one, or a combination of the first two options is likely to be most effective. There are several key points to consider in deciding how to approach this:

- there cannot be a standard approach as circumstances will vary from place to place;
- areas of landscape which are judged to exhibit high levels of landscape quality, scenic quality, wildness or tranquillity, where natural or cultural heritage features make a particular contribution to the landscape, or where there are important associations, are likely to be highly valued;
- many areas that will be subject to LVIA will be ordinary, everyday landscapes. In such areas some of the possible criteria may not apply and so there will perhaps be greater emphasis on judging, for each landscape type or area, its landscape quality. This may be based on the terms in Box 6.xx, i.e. representation of typical character, the intactness of the landscape and the condition of the elements of the landscape. Scenic quality may also be relevant, and will need to reflect factors such as sense of place and aesthetic and perceptual qualities. Judgements may be needed about which particular components of the landscape contribute most to both landscape and scenic quality.

6.22 Individual components of the landscape, including particular landscape features, and notable aesthetic or perceptual qualities can be judged for their

importance in their own right, including whether or not they can be realistically replaced. They can also be judged for their contribution to the overall character, quality and value of the wider landscape. For example, an ancient hedgerow may have high value in its own right but also be important because it is part of a hedgerow pattern that contributes significantly to landscape character.

6.23 Assessment of the value attached to the landscape should be carried out within a clearly recorded and transparent framework so that decision making is clear. Fieldwork can either be combined with the landscape character assessment work, as described above, or be carried out at a later stage. Field observations supporting the assessment should be clearly recorded using appropriate record sheets and records should be retained in an accessible form for future reference. If there is reliance on previous assessments, for example carried out by a local authority as part of a wider landscape character assessment or landscape management strategy, this must be made clear and such information should be treated in a critically reflective way.

#### *A role for consultation*

6.24 In making the assessment of value it is important to draw on information and opinions from consultees. Statutory consultees will usually give an expert view as well as providing relevant existing information. Consultations with local people or groups who use the landscape in different ways will suggest the range of values that people attach to the landscape, although in some cases they may be contradictory. For example:

- People who live or work in an area may have a different perception of the landscape to that held by visitors because of their more regular contact with the landscape and the ongoing changes within it;
- A wider public beyond the local population values some landscapes. They may be well known landscapes valued nationally or internationally, for

example the Giant's Causeway, Stonehenge, Edinburgh Castle or Caernarvon castle .

### *Conclusions from baseline survey and analysis*

6.25 At the end of this stage conclusions should have been reached and information recorded on:

- the range of landscape character types or areas that occur in the study area;
- the components and qualities of the landscape that make up that character;
- the components and qualities that make a particular contribution to distinctive character, usually by identification as key characteristics;
- the value attached to the different landscape types or areas that have been identified;
- the value attached to individual elements, features or aesthetic or perceptual aspects of the landscape either in their own right or because of their contribution to the character of the landscape types or areas.

For smaller scale projects that are likely to have effects only in a limited area there is likely to be more emphasis on individual elements and features or aesthetic and perceptual qualities at the local level.

### **Predicting and describing landscape effects**

6.26 Once the baseline information about the landscape is available this can be combined with understanding of the details of the proposed change or development that is to be introduced into the landscape to identify and describe the landscape effects. The first step is to identify the components of the landscape that are likely to be affected by the scheme, often referred to as the 'landscape receptors'. They will usually include:

- the overall character of the landscape in a particular location that is affected;
- the individual elements or features making up the landscape that may be affected;

- specific aesthetic or perceptual aspects of the landscape that may be affected

6.27 The second step is to identify and describe the different effects on the landscape that are predicted to occur. The initial lists of likely significant effects, identified during the screening and scoping processes, should be reviewed and amended as a result of the additional information obtained through consultation, baseline survey and development of the scheme design including any mitigation measures integrated into the design. Each potentially significant effect should be systematically re-considered and should, if possible, take account of all parts of the development at all its different stages, including construction, operation and, where relevant, decommissioning. The effects are likely to include:

- Change in and/or partial or complete loss of elements, features or aesthetic or perceptual aspects that contribute to the character and quality of the landscape;
- Addition of new elements or features that will influence the character and quality of the landscape and alter perceptions.

6.28 The changes that are considered likely to take place should be set out as fully as possible:

- Effects on individual components of the landscape – loss of trees or hedgerow for example, or addition of new elements should be identified and mapped (and if appropriate and helpful quantified by measuring the change);
- Changes in landscape character or quality in particular places need to be described as fully as possible and illustrated by maps and images that make clear, as accurately as possible, what is likely to happen.

6.29 One of the most challenging issues is deciding whether or not the landscape effects should be assessed as positive (beneficial), neutral or negative (damaging). The difficulty is that others may perceive this differently. Assessors

must however make an informed judgment and express this in the Environmental Statement.

6.30 Good, clear, concise and meaningful descriptions of the effects that are identified is key to helping a wide range of people understand what may happen if the proposed change or development takes place. Tables summarising the judgments about significance, as discussed below, should be secondary and supporting sources of information. The links between descriptions of effects and supporting summary tables should be easy to follow.

### **Evaluating the significance of landscape effects**

6.31 The landscape effects that have been identified must be evaluated to determine their significance, based on the principles described in Paragraphs 4.XX to 4.XX. Judging the significance of landscape and visual effects requires evaluation of the nature of the landscape receptors and the nature of the change or effect on the landscape. So that the decision making process is clear and transparent these factors should be addressed separately and explicitly, even if they are ultimately combined in some way.

#### *Nature of the landscape receptors*

6.32 Landscape receptors need to be evaluated in terms of their **sensitivity** to the type of change or development proposed, and their **importance**, in policy terms, which in turn is likely to reflect the **value** attached to the landscape.

#### Sensitivity

6.33 In evaluating landscape effects in LVIA sensitivity should be used in the same sense as in the wider arena of landscape planning, namely as: *“the relative ability of a landscape to respond to and, where appropriate, accommodate*

*change of a particular type. It reflects landscape character, the nature of change and the way both are experienced and perceived”<sup>21</sup>.*

6.34 More specifically, with respect to landscape as opposed to visual effects, it means landscape character sensitivity, which is defined as: *“the sensitivity of the landscape as a whole, in terms of its overall character, its quality and condition, the aesthetic aspects of its character, and also the sensitivity of individual elements contributing to the landscape.”<sup>22</sup>.*

6.35 Used in this sense landscape sensitivity is specific to a particular form of change or development. The difficulty of dealing with intrinsic or inherent sensitivity, without reference to a particular change or development, has become apparent in recent years and baseline assessment of sensitivity without reference to a particular form of development is not recommended. Sensitivity is likely to vary according to the character of the existing landscape and the nature of the proposed development or type of change being considered. It should not be recorded as part of the landscape baseline but should be considered as part of the assessment of effects.

6.36 Judgments about sensitivity must be made on the basis of information assembled in the baseline survey, about landscape character, its constituent elements, features, and aesthetic and perceptual aspects and definition of the key characteristics of the landscape. Understanding of the nature of the change or development proposed must then inform judgements about which attributes of the landscape, and what aspects of overall character, are sensitive to that change and to what degree. Judgments must be made about degrees of sensitivity for landscape character types or landscape character areas and/or for individual components of the landscape. If appropriate a three or five point verbal scale (for example high, medium or low sensitivity) can be used to record the

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<sup>21</sup> Refer to source as Revised Version of Topic Paper 6 but need to check with Christine Tudor of NE as to current status.

<sup>22</sup> As above

judgement but the basis for this must be fully described and linked back to evidence from the baseline survey.

### Importance/value

6.37 The baseline survey establishes the value attached to the landscape receptors, covering,

- the value of the landscape character types or areas that may be affected, based on review of any designations at both national and local levels, and, where there are no designations, judgements based on criteria that can be used to establish landscape value;
- the value of individual contributors to landscape character, including individual elements of the landscape, particular landscape features, and notable aesthetic, perceptual or experiential qualities.

6.38 Establishing the value of the landscape receptors allows judgments to be made about their importance as receptors of specific effects in the context of landscape planning policy and guidance. Aspects of the landscape that:

- are essential to nationally valued landscapes (National Parks, Areas of Outstanding Natural Beauty, National Scenic Areas or other equivalent areas) are likely to be of national policy importance;
- are essential to locally valued landscapes, for example local authority landscape designations or, where these do not exist, landscapes assessed as locally valuable using clearly stated and recognised criteria, and individual elements, or features or qualities recognised as important in their own right, are likely to be of local importance;
- are not nationally or locally designated or cannot be judged locally valuable using clearly stated and recognised criteria, but are nevertheless valued by local people, might be judged as of community importance.

6.39 There can be complex relationships between the sensitivity and the importance of landscape receptors, which are especially important when considering change within or close to designated landscapes. For example,

- A valued landscape, whether nationally or locally designated, does not automatically, and by definition, have high sensitivity;
- It is possible for a valued landscape to have relatively low sensitivity to the particular type of development in question because of both the characteristics of the landscape and the nature of the development;
- the particular type of change or development may not compromise the reasons why value is attached to the landscape.

6.40 Landscapes that are nationally designated (National Parks and AONBs in England and Wales and their equivalents in Scotland and Northern Ireland) will be accorded the highest level of importance in the assessment. But the significance of an effect on them will depend on the nature of the effect and the sensitivity of the landscape.

6.41 If the area affected is on the margin of a designated area or adjacent to it, thought must be given to the extent to which it demonstrates the characteristics and special qualities that give the designated area its value. Boundaries, for example, often follow convenient physical features and there may be land that meets the criteria outside the boundary and land inside which does not meet the criteria. Similar principles apply to locally designated landscapes but here the difficulty may be that the characteristics or qualities that provided the basis for their designation are not always clearly set down.

#### *Nature of landscape effects*

6.42 Each effect on landscape receptors need to be evaluated in terms of its **magnitude**, the **geographical extent** of the area influenced, and its **duration and reversibility**.

#### Magnitude

6.43 Judgments are needed about the amount of change that is likely to be experienced. This should be described, but also categorised on a verbal scale that distinguishes the degree of change but is not overly complex. For example - both loss and addition of new features may be judged on a scale of - major, substantial, moderate, minor or none or other equivalent words.

#### Geographical extent

6.44 The geographical area over which the landscape effects will be felt must also be considered. This is distinct from magnitude - there may for example be moderate loss of landscape features over a large geographical area, or a major addition affecting a very local area. The extent of effects will vary widely depending on the nature of the proposal and there can be no hard and fast rules about what categories to use. In general effects may have an influence at the following scales, although this will vary according to the nature of the project and not all may be relevant on every occasion:

- at the **site** level, within the development site itself;
- at the level of the **immediate setting** of the site;
- at the scale of the **landscape type or character area** within which the proposal lies;
- on a **larger scale**, covering several landscape types or character areas.

#### Duration and reversibility of the landscape effects

6.45 These are separate but linked. Duration can usually be simply judged on a scale such as short term, medium term or long term. But it must be made clear how these are interpreted - for example, short term might be zero to five years, medium term five to fifteen years and long term over fifteen years, but there is no fixed rule on this.

6.46 Reversibility is a judgement about the prospects of and the practicality of that change being reversed in, for example, a generation. This can be a very important issue - for example, many forms of development are argued to be reversible since they have a limited life and could eventually be removed and/or the land returned to agriculture. This is a difficult area as perceptions of reversibility may vary with people's life stage. If it is included in an assessment of the effects, the assumptions behind the judgment must be made clear.

6.47 Both duration and reversibility need to be defined up front for the specific type of development being assessed and in accordance with planning conventions. For example 25 years (a normal period for the duration of minerals and wind farm developments) is considered temporary but long term, whereas highways and residential developments are considered permanent

#### *Judging the significance of effects*

6.48 To draw final conclusions about significance the separate judgements about the nature of the receptors and the nature of the effects need to be combined into different categories of significance. The rationale for the overall judgment must be clear, demonstrating how the assessment of the nature of the receptors and the nature of the effect have been linked in determining the significance of effect. This should be explained in narrative text, supported by tables or matrices as appropriate.

6.49 Significance is not absolute and can only be defined in relation to each development and its location. It is for each assessment to determine how the assessments of the nature of landscape receptors and effects should be combined to create significance thresholds and to explain how the conclusions about the significance for each of the effects have been derived. There may also be a need to adopt a consistent approach across all the EIA topic areas and the EIA coordinator will need to be involved in the decisions on suitable approaches.

6.50 LVIA has tended to rely on linking judgements about the 'sensitivity' of the receptor and about the 'magnitude' of the effects to arrive at conclusions about the significance of the effects. 'Sensitivity' has been used in a sense that combines both landscape sensitivity in the landscape planning sense, as defined above, and the value or importance of the landscape. 'Magnitude' has combined the scale of the change, the extent of the area over which it is felt, whether it is reversible or irreversible and whether it is short or long term in duration. Both therefore already link the individual criteria described above in different ways, but it is not usually made clear that each step in this process is based on judgement and the individual judgments in each step are not transparent.

6.51 The judgments of 'sensitivity' and 'magnitude' are often combined in a two sided matrix and categories or thresholds of significance are allocated to each discrete box of the matrix according to particular combinations of levels of sensitivity and of magnitude. This approach was included in the first edition of these guidelines, and is still advocated in other guidance<sup>23</sup>. This approach can be useful in presenting conclusions about significance, but it is an oversimplification and is not wholly transparent. An alternative is to present a table or profile showing assessments under each of the criteria individually, before reaching an overall conclusion about significance.

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<sup>23</sup> Refer to SNH and DMRB

6.52 A step by step process of making judgements should allow the identification of significant effects to be as transparent as possible, provided that the effects are identified and described accurately, the basis of the judgments at each stage is explained and there is not over reliance on single word judgments in tables with no explanatory text to support and explain them. In general:

- loss of mature or diverse landscape elements or features, is likely to be more significant than the loss of new or uniform / homogenous elements;
  - effects on character areas that are particularly rare, distinctive, representative of their type and/or in very good condition are likely to be more important than effects on areas in poor condition or degraded character;
  - loss of landscape elements, features or characteristics is likely to be more important if they are identified as being of high value. Thus, significant effects on landscape areas or characteristics recognised for their national importance are likely to be of more importance in general terms than effects on areas or characteristics of local importance, whilst recognising that the local community may perceive this differently.
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## **Consultation questions**

Does this provide clear guidance on establishing the landscape baseline?

Is sufficient distinction made between landscape character and landscape designations at the baseline stage?

Is the guidance clear on the assessment of designated and other landscapes?

Does this section provide clear guidance on predicting and describing landscape

effects?

Does this chapter give adequate consideration to landscape value?

Any other suggestions or comments on Chapter 6?

DRAFT

## **Chapter 7: Dealing with visual effects**

### **Introduction**

7.1 An assessment of visual effects deals with the effects of change and development on the views available to people and their visual amenity. The concern here is with assessing how the surroundings of individuals or groups of people may be specifically affected by changes in the content and character of views as a result of the loss of existing elements of the landscape and/or introduction of new elements.

7.2 The scoping process (see Paragraph 4.xx) should identify a range of potential visual effects that may result from a project. It should also identify the area that needs to be covered in assessing these effects, the viewpoints in this study area that will need to be examined and the range of people who may be affected by the proposed changes. Defining the study area will at this stage only be preliminary and the initial area may extend to the whole of the area from which the development is potentially visible. The area to be reported on may in practice subsequently be limited to reflect those views of the proposed development that are likely to be of particular interest or concern. The study area for the assessment should be agreed with the competent authority at the outset, but this discussion should recognize that the final area might change as a result of fieldwork, or changes to the proposal.

### **Establishing the visual baseline**

7.3 The baseline for assessing visual effects should establish: the area in which the development may be visible; the viewpoints from which different

groups of people may experience views of the development; and the nature and approximate or relative number of the different groups of people who will be affected by the changes in views or visual amenity. These are all interrelated and need to be considered in an integrated way rather than as a series of separate steps. It is also important to be aware of the potential for visual baseline data to require updating at intervals. This may result from modifications to the design as mitigation of effects is incorporated through the iterative design process or perhaps because the assessment has been delayed. The original baseline information may therefore need to be revisited as appropriate.

7.4 There are important interrelationships with the EIA topic area of cultural heritage that may need to be borne in mind when developing the visual baseline and identifying visual effects. This is primarily because development proposals may have visual effects on the settings of heritage assets, including important views to and from those assets. Settings are defined<sup>24</sup> as “*the surroundings in which a heritage asset is experienced*” and views are an integral part of this. Where there are heritage assets in the vicinity of the proposed development the definition of their settings will need to be taken into account when mapping visibility and defining important views that may be changed. In urban areas in particular there may be interest in strategic views relating to heritage assets, landmarks, and other key views and vistas that have been defined<sup>25</sup>.

#### *Mapping visibility*

7.5 Land that may potentially be visually connected with the development proposal - that is areas of land from which all or part of it may potentially be seen - must be identified and mapped. Visibility mapping should be a key part of analysing the visual effects baseline and can be used at different stages in the assessment process. It can, for example, be useful at the early stages of site

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<sup>24</sup> English Heritage (2011) *The Setting of Heritage Assets: English Heritage Guidance*. English Heritage. London.

<sup>25</sup> See for example - GLA (2010) *London View Management Framework Supplementary Planning Guidance*.

design and assessment to determine the potential visibility of a site compared to a similar development located on an alternative site. It can also be used to help in the consideration of concept layout and design alternatives to establish the potential visibility of different options and in the detailed assessment stage it can be used to explore the visibility of a specific aspect or aspects of the development.

7.6 There are two main approaches to mapping visibility:

- Manual approaches use map interpretation, cross sections through the site in relation to its surroundings, and visual envelope mapping on site, which means standing on the site and looking out to identify and map the land that is visible from it standing at the location of the development and looking out to identify and map the land that is visible from that (and other) points. This can establish the outer limit or visual envelope of the land that may be visually connected with the proposal. These methods are time consuming and contain a degree of subjectivity since they depend on judgments by the surveyor and do not allow for the fact that the highest point of the development is likely to be well above the surveyor's eye line. Nevertheless, they can still be helpful in initial scoping and for smaller projects or cases where resources are limited.
- Digital approaches use elevation data to create a digital terrain model of the study area and calculate inter-visibility between points or along lines radiating out from the development location, to construct a map showing the area from which the proposal may potentially be visible and those from which it is definitely not visible.

7.7 Use of digitally mapped areas of visibility has increasingly become the norm since the previous edition of this guidance was published. The map products of this process are referred to as either the Zone of Visual Influence

(ZVI), or the Zone of Theoretical Visibility (ZTV). The second of these (ZTV) is now generally recommended since it makes clear that the area so defined only shows land from which the proposal may theoretically be visible. Desk study, using digital methods, should identify the ZTV for the development proposal and, where appropriate, should be constructed using multiple point analysis, combining ZTV maps for different parts of the proposal.

7.8 In the case of linear developments like road or rail schemes the ZTV must be constructed for a sequence of points along the road, a process that can now easily be carried out digitally. In addition the height of structures, such as bridges or gantries, and of vehicles that will use the route, should be built into the ZTV construction so that the visibility of all aspects of the proposal is considered.

7.9 The ZTV mapping is the desk study component of the visibility analysis. In reality many factors other than terrain will influence actual visibility. Other landscape components that may affect visibility, like buildings, walls, fences, trees, hedgerows, woodland and banks for example, can in theory be added to digital models that are based on terrain but this is difficult to achieve accurately, especially for a large study area. Their effects are best judged by field surveys that can examine and record their location, size and extent, and their effect in screening visibility at key points. Landmarks in the vicinity of the site can be useful as reference points when looking towards the site to identify its location in the view and residential properties that may have views of the site and proposed development can be identified and an assessment made of their orientation and whether there are specific windows with views towards the site. Site surveys are therefore essential to provide an accurate visual baseline.

7.10 Both ZTV mapping and site survey should bear in mind that the observer eye height is 1.5 to 1.6 metres above ground level. The effects of distance should also be considered - for example parts of the ZTV that are most distant from the

proposal may be omitted from the final visual effects baseline if it is judged that visibility from this distance will be extremely limited.

7.11 For some types of development the visual effects of lighting may be an issue. In these cases it may be important to carry out 'dark' nighttime surveys of the existing conditions in order to assess the potential effects of lighting. Lighting effects need to be taken into account in generating the 3D model of the scheme. Landscape Architects may be able to undertake qualitative assessments of such effects but for more detailed quantitative assessment, and incorporation into models relevant to visual effects assessment, input will usually be required from lighting engineers. The visibility survey and definition of ZTVs will need to be reviewed and updated as siting, layout and design proposals are progressively refined or amended.

#### *Identifying viewpoints and views*

7.12 The ZTV identifies land that, theoretically, is visually connected with the proposal and this is refined by site survey to confirm the extent of visibility. But the key step is to identify the viewpoints within this area from which the proposal will actually be seen. Such viewpoints may include:

- public viewpoints, including areas of land and buildings providing public access, including different forms of open access land, and public footpaths and bridleways;
- private viewpoints, including houses and places where people work;
- transport routes where there may be views from private vehicles and from different forms of public transport.

7.13 Viewpoints might be selected because the proposed change or development would result in significant effects on the people at that point who see the view and how it may be changed by the proposals. The scoping study

and discussions with the competent authority and other interested parties will help to identify these, but selection also needs to be informed by the ZTV analysis, by fieldwork, and by research on access, recreation, tourism, popular vantage points and distribution of population.

7.14 Viewpoints fall broadly into two groups:

- **representative viewpoints**, selected to illustrate a larger number of viewpoints that cannot all be included individually. For example one house may be taken to be representative of the views of a larger number of houses in a settlement; and certain points may be chosen to represent views from public footpaths and bridleways;
- **specific viewpoints**, chosen because they are key viewpoints within the landscape, including for example specific local visitor attractions, viewpoints in areas of particularly noteworthy visual and/or recreational amenity, such as landscapes carrying statutory landscape designations, or viewpoints with particular cultural landscape associations.

7.15 The selection of the final viewpoints used for the assessment should take account of a range of factors including:

- accessibility to the public;
- potential number and sensitivity of viewers who may be affected;
- viewing distance (i.e. short, medium and long distance views) and elevation;
- nature of viewing experience (for example static views, views from settlements and points along sequential routes);
- view type (for example panoramas, vistas, glimpses);
- potential for cumulative views of the proposed development in conjunction with other developments (see Chapter 8).

7.16 The viewpoints used need to cover as wide a range of situations as is both possible and reasonable. In addition to fixed views they should also, as far as

possible cover important sequential views along public rights of way and transport corridors, where views of the development may be progressively revealed. They should cover both near and more distant views, though not so distant as to be meaningless, unless it is useful to demonstrate the influence of distance. And they should cover the full range of different types of people who may be affected. The detailed location of each viewpoint should be carefully considered and should be as typical or representative as possible of the view likely to be experienced. The details of viewpoint locations should be accurately mapped and catalogued and the direction and area covered by the view recorded. The information should be sufficient for someone else to return to the exact location and record the same view.

7.17 At each agreed viewpoint baseline photographs should be taken to record the existing views. The Landscape Institute has published separate technical guidance on photography and photomontage in landscape and visual impact assessment<sup>26</sup>, which should be consulted when taking baseline photographs. Additional useful information is also available from other sources<sup>27</sup>.

### *Receptors of visual effects*

7.18 At the same time as identifying viewpoints the baseline studies must identify the people who will be affected by the changes in views and visual amenity - usually referred to as visual receptors. They may potentially include residents living in the area, people who work there, people passing through, and people engaged in recreation of different types, whether residents or visitors. People generally have differing responses to views and visual amenity depending on the context (location, time of day, season, degree of exposure), and purpose for being in a particular place (for example recreation, residence or

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<sup>26</sup> Landscape Institute (2011) Photography and photomontage in landscape and visual impact assessment Landscape Institute Advice Note 01/11.

<sup>27</sup> See for example the technical appendices in Horner and McLennan and Envision (2006) Visual Representation of Windfarms - Good Practice Guidance. Scottish Natural Heritage.

employment or passing through, on roads or by other modes of transport). During passage through the landscape, certain activities or locations may be specifically associated with the experience and enjoyment of the landscape, such as the use of footpaths, tourist or scenic routes and associated viewpoints.

7.19 Records should be produced for each viewpoint of the types of viewers who will be affected. Where possible an estimate should also be made of the numbers of the different types of people who might be affected in each case. Where no firm data is available this may simply need to be a relative judgment, for example noting few people in one place compared with many in another. The duration of possible views should also be recorded - for example views from roads may be fleeting and of short duration, while views from attractive viewpoints for visitors are likely to be of longer duration, or there may be sustained views from nearby houses.

#### *Combining the baseline information*

7.20 The completed visual baseline should focus on information that will help to identify significant visual effects. It should not be unnecessarily expanded with detail of views and visual receptors that are unlikely to be significantly changed or are too distant to be useful. It should combine information on the:

- location, nature and characteristics of the chosen representative and specific viewpoints;
- type and relative numbers of people (visual receptors) likely to be affected at each location;
- nature, composition and characteristics of the existing views experienced at the viewpoints;
- elements, such as landform, buildings or vegetation, which may interrupt, filter or otherwise influence the views;

7.21 The potential extent to which the existing site is visible from surrounding areas (the ZTV), the chosen viewpoints, the types of visual receptors affected and the nature and direction of views can all be combined in well designed maps. Existing views should be illustrated by photographs supplemented, where appropriate, by sketches with annotations added to emphasise any particularly important components of each view. It is important to include technical information about the photography used to record the baseline, including camera details, date and time of photography and weather conditions.

### **Predicting and describing visual effects**

7.22 Preparation of the visual baseline is followed by the systematic identification of likely effects on the potential visual receptors. Considering the different sources of potential visual effects alongside the principal visual receptors that might be affected, perhaps by means of a table, will assist in the initial identification of significant effects for further study. In order to assist in description and comparison of the effects on views it can be helpful to consider;

- The proportion of the view that would be occupied by the development for example full, partial, or glimpse
- the proportion of the development or particular features that would be visible, such as full, most, small part, none;
- the distance of the viewpoint from the development and whether the viewpoint would focus on the development due to its scale and proximity or the development would be only a small minor element in a panoramic view;
- whether the view is stationary or transient or one of a sequence of views, as from a footpath or moving vehicle.

7.23 Changes in visual amenity may arise from built or engineered forms and/or from soft landscape elements of the development. Consideration should be given to the seasonal differences in effects arising from the varying degree of screening and/or filtering of views by vegetation that will apply in summer and winter. Thus assessments may need to be provided for both the season with least leaf cover and therefore minimum screening and for fuller screening in summer conditions

7.24 By their very nature the visual effects of a development are best communicated to decision-makers and the public by means of visualisations showing how the changes in views will appear. Methods of communicating visual effects, especially in the final ES, are covered in Chapter 9. It may not be possible to prepare visualisations for every viewpoint that has been identified and there may need to be discussions with the competent authority or other relevant consultees to ensure that an appropriate number and range of viewpoints are used, covering a range of representative locations and the types and relative numbers of people likely to experience the change. Where possible and appropriate it may be helpful if visualisations can take into account some of the seasonal effects influencing screening by vegetation and also represent some different stages in the project life cycle. This will, however, depend on time and resources available and will be a matter for discussion with the competent authority.

### **Assessing the significance of visual effects**

7.25 When the effects of the proposed change on views and visual amenity have been identified and described they must be assessed for their significance. This assessment should be based on the principles set out in Chapter 4 and should take account of the nature of the visual receptors and the nature of the change or effect on views and visual amenity. As with landscape effects, to aid

clear and transparent judgments the factors contributing to the judgments should be addressed separately and explicitly, even though they may ultimately be combined in some way.

### *Nature of visual receptors*

7.26 Each visual receptor should be assessed in terms of both its **sensitivity** and its **importance**, which are related but different considerations.

### Sensitivity

7.27 People generally have differing responses to views and visual amenity depending on the context (location, time of day, degree of exposure), and their purpose for being in a particular place (whether for recreation, travelling through the area, residence or employment). Sensitivity of the visual receptors is therefore a function of:

- the occupation or activity of people experiencing the view at a particular location;
- the extent to which their attention or interest may be focused on the landscape around them;

7.28 The most sensitive receptors are likely to include:

- people, whether residents or visitors, who are engaged in outdoor recreation, including use of public rights of way, whose attention or interest is likely to be focused on the landscape and on particular views;
- visitors to heritage assets, or to other attractions, where views of the surroundings are an important contributor to the experience;
- communities where views contribute to the landscape setting enjoyed by residents in the area;

- occupiers of residential properties with views affected by the development;
- occupiers of places of work where views are an important contributor to the setting and to the quality of working life;
- travellers on road, rail or other transport routes where appreciation of the landscape is an important part of the experience - such as scenic routes.

7.29 Other, usually less sensitive, receptors are likely to include:

- people engaged in outdoor sport or recreation which does not involve appreciation of views of the landscape;
- people travelling through or past the affected landscape in cars, on trains, or other transport routes who are not likely to notice views; and
- people at their place of work whose attention may be focused on their work or activity not on their surroundings and where the setting is not important to the quality of working life.

### *Importance*

7.30 Judgments should also be made about the importance of the visual receptors and the views they experience based on the following considerations, which need to be weighed up to make an overall judgment:

- The nature of the people who experience the views and visual amenity at each viewpoint and in particular whether they are public or private - most land use planning regimes for example tend to consider that public views are of more important than views from private property;
- The number of people who are likely to experience the view at a viewpoint;
- The length of time over which views may be experienced - for example residents at home, especially using rooms normally occupied in waking/daylight hours, are likely to experience views for longer than those briefly passing by on a road;

- Recognition of the importance of views, for example in relation to heritage assets, or through planning designations;
- Indicators of the importance of views to visitors, for example through appearance in guidebooks or on tourist maps, through provision of facilities provided for their enjoyment (such as parking places, sign boards and interpretive material) and references to them in literature or art, such as 'Ruskin's View' over Lunedale, or the view from the Cob in Porthmadog over Traeth Mawr to Snowdonia which features in well known Welsh paintings.

7.31 Although planning regimes generally attach less weight to views from private property residents may be particularly sensitive to changes in their visual amenity. For example some houses are located specifically to take advantage of fine views. The cumulative effects on a number of residents in an area may also be considered to give rise to an effect on the community as a whole. It is therefore important to give some attention to effects on views from the curtilages and key rooms of adjacent or nearby houses in the locality, accepting that this may, for practical reasons, only be partly achievable.

#### *Nature of the visual effects*

7.32 Each of the effects identified on the views and visual amenity of visual receptors needs to be evaluated in terms of its **magnitude**, including the geographical extent of the area influenced, and its **duration and reversibility**.

7.33 Judging the magnitude of the visual effects identified needs to take account of the:

- scale of the change in the view with respect to the loss or addition of features in the view and changes in its composition, including the proportion of the view occupied by the proposed development;

- degree of contrast or integration of any new features or changes in the landscape with the existing or remaining landscape elements and characteristics in terms of form, scale and mass, line, height, colour and texture;
- angle of view in relation to the main activity of the receptor;
- distance of the viewpoint from the proposed development;
- extent of the area over which the changes would be visible.

#### *Duration and reversibility of visual effects*

7.34 As with landscape effects these are separate but linked considerations. Similar categories should be used such as short term, medium term or long term, provided that their meaning is clearly stated with clear criteria for the lengths of time encompassed in each case.

#### **Identifying the significant visual effects**

7.35 Assessing the significance of visual effects should take into consideration the sensitivity to change of the visual receptors in question, their relative importance and the nature, including magnitude and duration, of the effect. In making a judgment about the significance of visual effects the following points should be noted:

- changes affecting people (receptors) who are particularly sensitive to changes in views and visual amenity are more likely to be significant;
- changes in views affecting people at recognised and important viewpoints or from recognised scenic routes are likely to be more significant than changes affecting other less important viewpoints or other paths and roads;
- changes affecting large numbers of people are generally likely to be more significant than those affecting a relatively small group of users. However in

wild or tranquil landscapes the sensitivity of the people who live in or visit them may be very high and this should be reflected in judging the significance of the change;

- Large scale changes which introduce new, discordant or intrusive elements into the view are more likely to be significant than small changes or changes involving features already present within the view;

7.36 The results of the visual analysis can usefully be summarised in table form, setting out the numbers of receptors (properties, roads, paths etc), the sensitivity of the receptors, their relative importance, the magnitude and duration of the effect and an overall assessment of significance. This assessment should, as indicated in Chapter 4, use categories of high, medium or low significance, or variants of this, but not normally using more than five categories. In describing the visual effects more fully in narrative form, particular emphasis should be placed on the most significant effects that are likely to have the greatest influence on a final judgment.

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## **Consultation questions**

Is guidance on establishing the visual baseline clear?

Is the guidance on predicting and describing visual effects clear?

Is the guidance on assessing the significance of visual effects clear?

Is the guidance on identifying significant visual effects clear?

Any other suggestions or comments on Chapter 7?

## Chapter 8: Dealing with cumulative effects

### Introduction

8.1 Cumulative effects assessment (sometimes abbreviated to CEA) is required both by the EIA and the SEA Directives and by the associated UK country regulations. The topic has grown in importance in recent years but a generally agreed definition of what it means has proved elusive. The Guidelines on CEA published in 1999<sup>28</sup> defined cumulative effects as “*Impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the project*”. They were defined as related to but separate from, indirect impacts (see Paragraphs XX) and impact interactions, defined as “*The reactions between impacts whether between the impacts of just one project or between the impacts of other projects in the area*”.

8.2 LVIA must deal with cumulative effects and interpret what this term means in the context of the landscape and visual effects of specific projects. This may be referred to as CLVIA. The 2002 edition of these guidelines defined cumulative landscape and visual effects as those that “*result from changes to the landscape or visual amenity caused by the proposed development in conjunction with other developments (associated with or separate to it), or actions that occurred in the past, present or are likely to occur in the foreseeable future*”.

8.3 There has been no further published definition of cumulative landscape and visual effects and this definition is still broadly applicable but requires further clarification. Since this definition was published there has been particular

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<sup>28</sup> Hyder (1999). Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions. Report for EC DG XI Environment, Nuclear Safety & Civil Protection. Reference NE80328/D1/3.

emphasis on exploring the cumulative effects of wind farm development because of both the number of schemes requiring assessment and the potentially high level of inter-visibility of these tall structures, which means that cumulative effects may be more likely. In Scotland considerable effort has been devoted to addressing definitions and interpretations of cumulative landscape and visual effects specifically in relation to windfarms and the resulting guidance<sup>29</sup> has been widely used, not only in Scotland. This Chapter draws on this and other guidance, and on other work by IEMA on more general interpretations of cumulative effects. Developments continue in this area and those involved in LVIA should make sure that they keep abreast of new guidance that may emerge.

### **What do cumulative effects mean?**

8.4 Cumulative effects can mean the interactions between different types of environmental effects resulting from a project, including potentially quite complex interrelationships between different topics (intra-project cumulative effects). Those involved in conducting an LVIA as part of an EIA may need to consider possible links between landscape and visual effects and effects, design alterations and mitigation measures identified in other topic areas. Examples might include relationships between noise effects and visual effects, both of which may be related to the line of sight between source and receptor, or the effects of features created by hydrology mitigation measures on landscape character. But they are unlikely to have to carry out a comprehensive assessment of this type of cumulative effect unless also acting as the EIA co-ordinator.

8.5 In LVIA practice the cumulative landscape and visual effects that are often

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<sup>29</sup> SNH (2005) Guidance - Cumulative Effect of Windfarms Version 2 revised 13.04.05

of greatest concern to stakeholders are those that may result from an individual project that is being assessed interacting with the effects of other proposed developments in the area (inter-project cumulative effects). This requires decisions about what other proposals should be included, in terms of the type of development, the extent of an appropriate study area and the timescale to be considered. Two key questions are:

- should cumulative effects be limited to proposals of the same type as the project under consideration or include other types of development in the vicinity?
- what approach should be taken to dealing with past, present or future proposals either for the same or, depending on the answer to the first question, different types of development?

*What types of development to include*

8.6 The scoping part of the EIA will need to consider, ideally through consultation and agreement with the competent authority and other stakeholders, whether the cumulative effects assessment should consider only developments of the same type as the proposal or include other types of development. The first is probably more common, but can be quite limiting. It may, for example, miss important effects on both landscape and visual amenity that may result from agreed proposals to build a major housing scheme or a trunk road in the vicinity of a proposed wind farm whose effects are being assessed. Reviewing the planning context for the new proposal may to some extent cover these and they might also be dealt with by means of a Strategic Environmental Assessment for development in the area. A decision may, however, still be needed on whether or not they are to be included in the cumulative effects assessment. So in practice the requirement for assessment of cumulative effects can relate to one or a combination of:

- other examples of the same type of development;
- other types of change or development predicted to occur in the study area, including but not restricted to those that may arise as an indirect consequence of the main project under consideration;
- in the case of large complex projects, different scheme components that are themselves seeking planning consent.

8.7 The work involved in assessing cumulative effects for all forms of development is clearly much greater than a more restricted assessment based only on the same type of development. The challenge is to keep the task in proportion and relevant to the project under consideration. Agreeing the scope of the assessment is therefore vital and common sense has an important part to play in reaching agreement regarding the scope of the CEA. Where the competent authority and other stakeholders are uncertain about the preferred approach the landscape professional may have to exercise professional judgment about what is needed. The emphasis in EIA is on significant effects rather than a comprehensive cataloguing of every conceivable effect that might occur. Thinking through what significant effects are likely to be generated by the proposal being assessed when considered cumulatively alongside other forms of potential new development should allow a sensible decision to be reached. Scoping of CEA applies to all topics in the EIA, not just to the LVIA, and the EIA coordinator is likely to play a role in the consultation and decision-making.

#### *Timescale of proposals for inclusion*

8.8 There is a reasonable consensus about how development proposals at different stages in the planning process, whether of the same or different types, should be treated in assessing cumulative effects. Taking 'the project' to mean the current proposal that is being assessed, it is suggested that:

- Existing schemes which are under construction, should be considered to be

part of the baseline for both landscape and visual effects assessment and should not be part of the cumulative effects assessment for the project;

- Schemes with planning consent, not yet constructed but due to be constructed before the project, should be included in the cumulative effects assessment;
- Schemes ahead of the project in the planning process but that have not received consent should be considered in the cumulative effects assessment;
- Schemes at pre-planning or 'scoping stage' are not generally considered in the CEA.

### **Assessing cumulative landscape effects**

8.9 In assessing cumulative landscape effects the aim is to decide what additional effects on the fabric and character of the landscape may be caused by the project under consideration when taken together with the effects of other development projects, either of the same or of different types, as agreed in the scoping exercise. This may result from adding new types of change or by increasing or extending the effects of the project identified when it is considered in isolation. For example, the landscape effects of the project may be judged of relatively low significance when taken on their own, but when taken together with the effects of other schemes, the effects may become more significant.

Cumulative landscape effects are likely to include:

- effects on the fabric of the landscape as a result of changes in individual elements or features of the landscape and /or the introduction of new elements or features;
- effects on the aesthetic attributes of the landscape, for example its scale, sense of enclosure, diversity, pattern and colour, and/or on its perceptual or

experiential attributes, such as a sense of naturalness, or remoteness or tranquillity;

- effects on the overall character of the landscape as a result of changes in fabric or in aesthetic or perceptual attributes, leading to modification of key characteristics and possible creation of new landscape character types/sub types or character areas/sub-areas.

### *Defining a study area*

8.10 As with other aspects of cumulative effects, it will be important to agree the approach to defining a study area, as well as the proposed study area itself, with the competent authority and other stakeholders. Common sense must prevail in order to keep the task to manageable proportions and to ensure that the focus is on cumulative effects that are likely to be significant.

8.11 There are three possible approaches:

- Since the concern is with the accumulation of effects on landscape character and the components that contribute to it, the most logical way to define a study area may be to use the boundaries of the landscape character area, or some equivalent area, that the proposal sits within. This allows judgments about when the cumulative effects of the project together with other developments become such as to change the landscape character in the area to a significantly different character, perhaps sufficient to create a new landscape type or sub-type;
- Another approach is to use the Zone of Theoretical Visibility (ZTV) defined in assessing the visual effects of the scheme and the areas of overlap with the ZTVs of the other developments to be considered. This is likely to be particularly useful when the development in question may be seen in conjunction with other developments in the vicinity even if the other projects are not in the same character area;

- A study area may be suggested by the competent authority and/or stakeholders based on one or both of the above, or on other local considerations, perhaps reflecting local knowledge. The case for such an area will need to be clearly justified.

### *Establishing the landscape baseline for cumulative landscape effects*

8.12 The baseline information for the assessment will start from the baseline for the scheme being individually assessed but this may need to be modified, both in the extent of the area covered and in content, to allow for the inclusion of other schemes. The process will be the same as that described in Chapter 6. For reasons of economy and efficiency maximum use will need to be made of existing landscape character assessments but it is important to stress that new surveys may be needed if they do not meet the specific needs of the assessment of cumulative effects. If new surveys are needed to cover the wider study area they should follow the same procedures as the survey for the project being assessed. The result should be a clear, well structured and accessible account of the landscape of the wider study area, covering its character, any division of the landscape into character types or areas, and identification of key characteristics that give each landscape its distinctive character.

8.13 The baseline survey should also identify all designated landscapes in the study area, whether at international, national, regional or, where appropriate, local levels. Where there are no designations an assessment should be made of the value attached to the landscape using the same methods as for the main project assessment.

### *Identifying the landscape effects and assessing their significance*

8.14 Once the types of development to be considered and the extent of the study area have been agreed and the landscape baseline established, a map

and inventory of all the relevant projects to be considered should be prepared. Enough must be known about the nature of the other projects to allow their landscape effects to be predicted and described. This will allow the effects of the main proposal being assessed to be set alongside the additional projects and the cumulative effects identified. The emphasis should be on cumulative effects that result in:

- change in and/or partial or complete loss of elements, features or aesthetic or perceptual aspects that contribute to the character and quality of the landscape;
- addition of new elements or features that will influence the character and quality of the landscape and alter perceptions.

8.15 When the individual scheme being assessed is considered together with other proposed developments in the area (as agreed in scoping) these effects must be considered particularly in terms of consequences for the key characteristics of the landscape in question. Judgments must be made about whether or not the character of the landscape is changed to such an extent that it becomes a new landscape type or sub-type.

8.16 In order to keep the task of assessing cumulative landscape effects to a reasonable and manageable scale the prediction of effects and assessment of their significance should ideally progress in parallel so that it is clear that the emphasis will always be put on the most significant effects. The approach to assessing the significance of cumulative landscape effects should be guided by the same principles as the approach to the initial project assessment. It should deal with:

- the sensitivity of the landscape to the types of change under consideration. It may be possible to make use of existing landscape sensitivity studies that cover the study area. These studies judge the different levels of sensitivity of

the landscapes identified in an LCA to a specific type or types of change, but will only be relevant if they cover the specific type of development included in the cumulative effects assessment and the specific location in question;

- the policy importance of the cumulative effects predicted, dealing particularly with effects on nationally designated landscapes, locally designated landscapes where appropriate, and other valued components of the landscape;
- the magnitude of the effects, both in terms of their size and the geographical area they cover. In cumulative effects assessment some of the factors considered in determining the magnitude of an effect identified in relation to the project's direct effects may alter when considered in combination with other developments;
- The duration of the effects, including the timescale of the project being assessed in relation to that of the additional projects being considered, and the extent to which the effects may be considered reversible.

8.17 Considering all these factors together should show whether considering the effects of the project being assessed in combination with other projects in the study area, influences the significance of its individual effects. The most significant cumulative effects are likely to be those that, in combination, would change the landscape character of the study area to such an extent as to have major effects on its key characteristics and even, in some cases to transform it into a different landscape. This may be the case even where the effects of the individual projects are not significant, but when taken together they result in significant effects.

### **Assessing cumulative visual effects**

8.18 Cumulative visual effects are the additional effects on views of the landscape enjoyed by people, and on their visual amenity, which result from

adding the effects of the project being assessed to the effects of the other projects on the baseline conditions. This may result from changes in the content and character of the views experienced in particular places due to introduction of new elements or removal of or damage to existing ones.

### *Defining a study area*

8.19 The study area for identifying potential cumulative visual effects may be defined by creating ZTVs (see Paragraph 7.xx) for each project that has been identified for inclusion. In theory, in the areas where the ZTVs overlap people at identified viewpoints may be able to see one or more of the developments and will therefore potentially experience cumulative visual effects. Actual inter-visibility however depends upon a variety of factors, which can include topography, aspect, tree cover, buildings or other visual obstructions, elevation, direction and distance of view, and weather and light conditions.

8.20 The initial study area may include all the overlapping ZTVs of all the relevant projects. This approach has been particularly important in assessing wind farms, which can be inter-visible over considerable distances and so the study areas for cumulative effects can be extensive. This may not necessarily be the case for other types of development but the distance between viewpoints and the relevant projects clearly has an effect in determining the significance of the cumulative effects. As with cumulative landscape effects common sense must prevail in deciding on the extent of assessment that is appropriate. Discussion with the competent authority and other stakeholders should assist in agreeing a reasonable area to be covered.

### *Establishing the baseline for cumulative visual effects*

8.21 The baseline information is likely to be the same as for the visual effects assessment of the main project being considered, although amendments may be needed as the assessment develops. The baseline will consist of:

- identifying viewpoints: usually the same viewpoints are used for assessing cumulative visual effects as for the assessment of the main project being examined because the aim is to define the extra effects at those viewpoints;
- the extent and nature of existing views from each viewpoint;
- the type and number of people likely to be affected at each location;
- the nature and characteristics of the views and visual amenity enjoyed by those people.

8.22 The competent authority and stakeholders should also be involved in agreeing whether the set of agreed representative viewpoints selected for the assessment of the proposed development at the baseline stage continues to be sufficient for the cumulative visual effects assessment or whether additional 'cumulative' viewpoints should be considered.

*Identifying the visual effects and assessing their significance*

8.23 As a number of separate developments must be considered there is interest in the way in which they may be viewed, as discussed in the SNH guidance on cumulative effects<sup>30</sup>. At one viewpoint a viewer looking at the view in one direction may see them at the same time, or a viewer turning through the whole 360 degrees may see different developments in different directions and sectors of the view in succession. Users of linear routes, either footpaths or other rights of way, or transport routes, may potentially see the different developments revealed in succession as a series of sequential views. Both types of experiences need to be considered.

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<sup>30</sup> SNH (2005) Guidance - Cumulative Effect of Windfarms Version 2 revised 13.04.05. Paragraph 37, page 9, and Appendix 5 Sections 5 and 6 and Annex 5.

8.24 The view with the other visible developments, and the contribution and importance of the project in its contribution to the cumulative visual effect, must be described for each view at each viewpoint and also for the sequential views experienced on important linear routes. The most significant additional effects may need to be illustrated by visualisations to indicate the change compared with the project alone. The visual receptors will already have been identified and categorised in terms of their importance and sensitivity to change and these assessments will be unchanged. The magnitude of the visual effects may however be altered by the addition of other developments and judgments must be made about this. Thought must also be given to the way in which any sequential views will be experienced, including the duration of views of other developments in combination with the project.

8.25 Combining the assessments of the importance and sensitivity of the receptors and the magnitude and duration of the additional visual effects then allows their significance to be judged. Higher levels of significance may arise from:

- Developments that are in close proximity to the main project and are clearly visible together in views from the selected viewpoints;
- Developments that are highly inter-visible, with overlapping ZTVs: even though the individual developments may be at some distance from the main project and from individual viewpoints, and viewed individually are not particularly significant, the overall cumulative effect on a viewer at a particular viewpoint may be more significant.

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## **Consultation questions**

Is the process for assessing cumulative landscape effects explained clearly?

Is the process for assessing cumulative visual effects explained clearly?

Is the difference between cumulative visual and cumulative landscape effects covered adequately?

Is the mitigation of cumulative effects covered adequately?

This draft is based broadly on current practice in assessing cumulative landscape and visual effects. But CEA is a complex field and different approaches already exist in wider impact assessment practice, including different understandings of what projects should be included, what types of effects should be considered, how study areas should be defined, and how mitigation should be dealt with. Are you happy with the way CEA is dealt with in this draft or would you like to see additions or changes? If so, what?

Any other suggestions or comments on Chapter 8?

DRAFT

# **Chapter 9: Presenting LVIA information in an Environmental Statement**

## **Introduction**

9.1 This Chapter provides information on presentation techniques that may be used to communicate the results of landscape and visual assessments. The findings of an LVIA may often be presented initially as a 'stand-alone' document and where a formal EIA is not required, this may be used as a supplementary report to accompany a planning application. Where there is a requirement for an EIA the LVIA will normally be managed through the EIA process and be presented in a relatively standard way across all the environmental topics. This has benefits in ensuring that interactions between topic areas are fully addresses. In such cases the information from the LVIA will be integrated into a full Environmental Statement.

9.2 Whether the LVIA report forms part of an Environmental Statement or is produced as a stand-alone document the appropriate presentation techniques must be carefully chosen and appropriately applied. These documents will be subject to close scrutiny and may need to be explained and substantiated at a public inquiry.

## **Content of the landscape and visual impact assessment**

9.3 The structure and content of a landscape and visual impact assessment report will follow a broadly similar pattern in each case, but there will be variations depending on factors such as the scope of work agreed with the

competent authority and consultees and the likely significance of the affected landscape and visual resources.

9.4 The opening sections of the landscape and visual impact assessment should present basic information on the objectives, responsibilities and methodology and may include the:

- planning and legal context relevant to landscape and visual matters, including planning policies and guidance dealing with relevant landscape matters, including designations and strategies for the character of the landscape in the vicinity of the development;
- remit of those responsible for preparing the assessment;
- overall approach and method, and any specific techniques used;
- scope of the assessment, especially the key issues identified and reference to how these were determined;
- practical constraints encountered in carrying out the work and data deficiencies that have influenced its execution.

9.5 The LVIA report, or the equivalent Chapter or section of the ES, should contain:

- a clear description of the basic components of the proposed development that are of relevance to the assessment of the landscape and visual effects;
- an explanation of how the design of the scheme evolved, how landscape and visual considerations contributed to this and what measures to prevent or offset (avoid or reduce) any potential adverse effects, and what enhancement

measures, have already been incorporated into the scheme through the iterative design process. In some cases a Design Statement may be required with the planning application and so LVIA could simply summarise this or refer to it.

9.6 The report should then deal separately with landscape effects and with visual effects and, in each case, should include:

- description of the baseline conditions relevant to that topic;
- systematic identification and description of the potentially significant effects that are likely to occur;

transparent and clearly explained assessment of the significance of the effects, taking account of the nature of the landscape or visual receptors, in terms of their sensitivity and relative importance and the nature of the likely effects in terms of their magnitude and duration, as in Chapters 6 and 7;

- further committed measures, in addition to those already incorporated into the scheme, designed to reduce significant adverse effects or to offset or compensate for them;
- explanation of the way that any measures included as part of the committed mitigation package to respond to negative effects, and any proposed offsetting/ compensation and/or enhancement measures, will actually be delivered in practice, including reference to the need for additional monitoring.

## **Presenting information on landscape and visual effects**

9.7 Much of the detailed material about landscape and visual effects will be presented as written text supported by maps, illustrations and photographs (see below) Writing should be comprehensive, covering all the material assembled in the assessment, but also concise and to the point and written in simple easy to understand English. Above all it should be impartial, presenting information and reasoning accurately and in a balanced way and making clear where statements are based on the author's judgment. Clear and, as far as possible, standard definitions should be provided for any technical terms that are used, supported by a glossary of terms.

9.8 Tables and matrices, if used and described correctly, can be effective in complementing the text, providing a useful summary of important information. They can assist with comparisons, for example between different scheme options and types of effect, which can be especially valuable in the early stages of planning and design. They can also be a useful way of making potentially large volumes of complex information more readily accessible to the competent authority charged with making a decision, to consultees and also to the public.

9.9 Such tables must be carefully and consistently prepared as decision-makers may rely on them to provide a summary of the landscape and visual effects. It should, however, be stressed that, as indicated in Chapter 4, these tables, and any matrices related to judgments of significance, should be used to support and to summarise narrative descriptive text, rather than to replace it.

9.10 Illustrations can often communicate information more quickly and easily than text and have an especially important role in relation to landscape and visual effects. Much of the essential landscape and visual information can easily be communicated through maps, plans, photographs and other illustrative material. But text and illustrations need to work well together with each complementing and supporting the other. Illustrations should be relevant to and support the text, which should cross-refer to them so the reader can relate the

text to the illustration or look to the illustration to help them understand what is being said in the text. They should support rather than duplicate the content of the text.

9.11 The choice of appropriate presentational techniques is crucial to good communication. Illustrations should have a specific purpose and be designed to provide information of clear relevance to the assessment. It is important to illustrate as realistically as possible how the development will appear in terms of the character of the surrounding landscape as well as from specific viewpoints where it will be seen by particular groups of people.

9.12 The illustrative material is prepared in the first place for communication between those carrying out the LVIA, and also in some cases for others who may be involved in the EIA, including the EIA co-ordinator. It needs to represent clearly the work that has been done in reaching conclusions so that others are able review the assessment. The amount of material should be proportionate to the task in hand and should be agreed in consultation with the competent authority. Similarly approaches to visualisations of change should be agreed, as should the levels of accuracy, which again should be appropriate to the task in hand.

#### *Map information*

9.13 Maps, at appropriate scales and showing appropriate levels of detail, should be prepared using appropriate digital methods and included in the Environmental Statement to accurately show:

- necessary information about the precise location and nature of the proposal, including information about phasing and any associated development in other locations;

- the landscape character of the area, including landscape types that have been identified and, where appropriate, the distribution of important individual elements of the landscape that may be affected by the proposed development;
- evidence about the value attached to the landscape, including the boundaries of any relevant national, local or other designations;
- the agreed extent of the zone of theoretical visibility (or equivalent) of the proposed development, at an appropriate scale and printed on an appropriate sheet size to allow for ease of reference. This map (or maps) should include details of how the ZTV may have been constructed including, as necessary and appropriate:
  - details of the topographic data source and its accuracy;
  - details of any height adjustments ie for the presence of buildings or trees and how they have been located and accuracy;
  - confirmation as to whether earth curvature and refraction of light have been taken into account;
  - details of height above ground level used to calculate the ZTV;

9.14 In addition the maps should show:

- the location of important viewpoints within the ZTV;
- distance zones indicating how far the viewpoints and different parts of the ZTV are from the proposed location of the project;
- In the case of the assessment of cumulative effects the location of the other developments included in the assessment and the extent of their individual ZVIs and areas of overlap where more than one will be visible;

- Precise maps showing the detailed location, direction of view and angle of view for each of the viewpoints, to be read in conjunction with the photographs and photomontages from these viewpoints.

9.15 For large and complex schemes Geographical Information Systems and related software can be especially useful in analysing and presenting information relevant to both the landscape and the visual baselines. These tools allow layers of data on a variety of topics to be collated, sieved, superimposed and incorporated in various ways into the Environmental Statement. Where it is helpful and relevant this can be particularly useful in analysing and presenting relationships between baseline data on topics such as topography, soils, hydrology, vegetation and habitats, population and settlement patterns, transport networks, land use, and historical and cultural features, as well as their interactions to create landscape character.

#### *Photographs and visualisations*

9.16 Photographs have an important role to play in communicating information about the landscape and the visual effects of a proposed development. In dealing with landscape effects they can be included in the ES to illustrate the site and its setting and, in so doing, to communicate relevant aspects of landscape character of both. It is not possible to include photographs of every part of every different landscape and so photographs should be selected to illustrate a representative range of landscape character types or areas and some of their important key characteristics. When incorporating photographs the following points should be considered:

- the locations from which the photographs are taken should be carefully chosen and justified;

- prevailing weather and atmospheric effects should normally be described, ideally using consistent Met Office terminology, and any effects of the conditions on the photographs should also be noted;
- seasonal effects on the photographs and the landscape they are illustrating are also important and the effects of these too should be noted;
- technical aspects of the photography, including lens type and focal length, should also be stated with reasons given for the choices made. For further details see the Landscape Institute's technical note on photography<sup>31</sup>.

9.17 In terms of visual effects photographs should be used in the baseline assessment to illustrate important views in the local and wider environment and to represent the visual amenity experienced by those experiencing the views. However, illustrating change in views and visual amenity relies on some form of visualisation and choosing the right approach requires careful consideration. Since the second edition of this guidance was published there have been rapid developments in digital technology, providing a range of options for visualisation and including both 2D and 3D approaches.

9.18 Many different factors need to be taken into account in deciding what form of illustrative techniques to use in a particular project, especially when choosing between 2D and 3D techniques. They need to be appropriate to the type and scale of project envisaged and also to take account of a wide range of practical considerations. Figure 9.1 summarises some of the key steps to take in reaching decisions on which approach to use.

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<sup>31</sup> Landscape Institute (2011) Photography and photomontage in landscape and visual impact assessment Landscape Institute Advice Note 01/11.

**Figure 9.1 Choosing appropriate illustrative techniques**

<b>Step 1</b>	Discuss the project with the client and the competent authority to work out what is required for illustration of the assessment. Consider the type of graphics and presentation likely to be most appropriate for the proposed development, taking account of the scale and complexity of the proposal and taking steps to ensure that the approach is proportionate - there is little advantage in using advanced techniques if a simple thumbnail sketch may be more appropriate.
<b>Step 2</b>	Explore further to determine which options should be pursued, from 2D photomontages to 3D animation or fully interactive virtual reality. This may reflect time constraints, resource issues and the needs of the different audiences involved.
<b>Step 3</b>	Consider the level of costs and benefits associated with each approach to enable the client to make an informed choice.
<b>Step 4</b>	Identify delivery dates for the presentation material and relate this to critical project milestones such as a submission of the planning application, to ensure appropriate time is allowed for key steps, such as delivery of Ordnance Survey data or preparation of a site survey, as well as for work with the project design team..
<b>Step 5</b>	Agree with the client the technique to be used, the projected costs and a programme and inform the competent authority of the approach to be used..

<b>Step 6</b>	Allow time for consultation with the client and the competent authority at an intermediate stage to permit slight changes in the direction or emphasis of the project.
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### Photomontage

9.19 Photomontage is the most widespread and popular visualisation technique for illustrating changes in views and visual amenity. A photomontage is the superimposition of an image onto a photograph for the purpose of creating a representation of potential changes to any view. Their main advantage is that they can illustrate the development within the “real” landscape and from known viewpoints. The Landscape Institute has provided comprehensive guidance in its Advice Note on Photography and Photomontage in LVIA<sup>32</sup>, which notes that: *“The objective of a photomontage is to simulate the likely visual changes that would result from a proposed development, and to produce printed images of a size and resolution sufficient to match the perspective in the same view in the field.*

9.20 To meet the rigorous requirements of planning applications and public inquiries photomontages must be technically accurate, to a degree appropriate to the nature of the project and reflecting discussions with the competent authority. If images are also prepared simply to provide a general impression of a proposal the same degree of accuracy may not be required but attention to detail and fair representation of what is proposed remains important. As both products may appear graphically similar it is vital that all parties understand the distinction between them, in terms of both the time that they take to prepare and the associated costs and the end use to which they will be applied.

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<sup>32</sup> Landscape Institute (2011) Photography and photomontage in landscape and visual impact assessment Landscape Institute Advice Note 01/11.

9.21 The photomontages that are included in an Environmental Statement must meet appropriate standards as described in the Landscape Institute's advice note on requirements for photography and photomontage. There is also specific guidance on preparing and presenting visual representations of wind farms, particularly in Scotland<sup>33</sup>. . Particular reference should be made to these documents for detailed technical guidance and for discussion of more theoretical aspects of visual representation.

9.22 Approaches to the preparation of photomontages and the means of making them available to different audiences should be discussed with the competent authority at the scoping stages and as the work on the assessment evolves. They should also take full account of relevant aspects of the recent technical guidance, as noted above. The methods used, any difficulties that may arise, decisions taken and final specifications for the visual material included in or with the Environmental Statement, should all be set out clearly in a statement of methods.

9.23 In preparing photomontages key requirements are that:

- all viewpoints that are to be used should be photographed at detailed locations that are representative of the view in question and of the character of the location;
- high quality photography should be used as the starting point for the manipulation of the images and weather conditions should be representative of those prevailing in the area;

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<sup>33</sup> Horner and McLennan and Envision (2006) Visual Representation of Windfarms - Good Practice Guidance. Scottish Natural Heritage.

- photomontages should show relevant components of the development that are predicted to be visible from each viewpoint, including access and any associated land use change related to the proposal;
- rendering of the photomontages should in general be as photorealistic as possible (although for large scale urban developments block models are often used, illustrating scale, massing, arrangement, but not details and these cannot be photorealistic) and should as far as possible show the development in conditions of maximum visibility;
- field of view and image sizes of the completed photomontages should be selected to give a reasonably realistic view of how the landscape will appear, if the image is held at a recommended viewing distance from the eye (usually between 300mm and 500mm);
- Photographs and photomontages should be printed, or published digitally, at an appropriate scale for comfortable viewing at the correct distance.

9.24 Visual representations can never be the same as the real experience of the change that is to take place. They are tools designed to assist all interested parties to understand how the change proposed will affect views of the landscape at particular viewpoints. It is sometimes argued that the most suitable way to view photomontages is in the field where they can be compared with the landscape itself. There is no doubt that this is desirable, but it is not always possible, especially for the general public and one of the purposes of photomontages is to make up for the fact that not all interested parties can visit the site and the viewpoints. Careful thought must be given to how images are made available to different audiences, including sizes and types of image and printing quality.

9.25 Photomontages are preceded by creation of wirelines or wireframes - computer generated line drawings, based on a digital terrain model combined

with information about the location and scale of components of the development, to give a relatively simple indication of how the proposal will appear from different viewpoints. They are relatively quick to produce and so can be developed for a large number of viewpoints, only some of which may then need to be used for preparation of full photomontages.

9.26 It has been common practice in the past to present photomontages in what has been called the ‘triple arrangement’ in which for a particular view a panoramic baseline photograph, and a matching wireframe image of the proposal and a fully rendered photomontage photograph are combined on one landscape format A3 sheet. It is now generally the view that this arrangement may compromise other important standards such as image size and ideal viewing distance. This form of presentation may still be useful for discussion between landscape professionals involved in technical work on assessing visual effects, but in general is not considered to be the best way to communicate with non-landscape experts, for example in the competent authority, or stakeholder organisations, or with decision makers and the general public. For non-expert audiences the emphasis should be on images that are straightforward to read and do not require a high degree of technical interpretation.

9.27 Photomontages and associated baseline photographs and wireframes for key viewpoints should be incorporated into a separate volume of the ES. Photomontages should be at an agreed image size and should show an appropriate level of detail. An unbound set of the drawings should also be made available for ease of examination in the field. The Non-Technical Summary of the ES should also include photomontages of key views in an appropriate format. For all audiences guidance should be provided on how best to view the image in order to best represent how the proposal would appear if constructed. The views to be included in the ES and in the Non-Technical Summary should be agreed with the competent authority in advance and the location of the viewpoints should be clearly shown in each case.

### 3D models

9.28 More advanced approaches to visualisation are based on 3D computer simulations, such as virtual reality models built up from map data, digital terrain models and aerial photographic data. These can cover a sufficiently large area to demonstrate the wider context and setting of a proposed development. Once a 3D model has been created, it becomes possible to view any aspect of a development from any viewpoint contained within the boundary of the model as well as to create and view fly through imaging. These techniques have considerable practical value as once baseline conditions are modelled, variations to a scheme can be relatively easily produced and compared.

9.29 Such approaches are most useful on occasions where there may be a need to portray complex developments in more detail than can be easily achieved using a single or several photomontages. An example may be where there is a requirement to select a large number of viewpoints, moving perhaps from an aerial to a ground perspective and on into the interior of a building. An animated sequence may also be helpful in explaining the orientation of a site more dynamically than a series of single photographs can achieve. In exactly the same way as a traditional physical model can vary in its level of detailing, 3D computer models can also range from simple massing studies to inclusion of significant levels of detail.

9.30 Inevitably, achieving a high level of detail takes considerable time and incurs higher costs, hence the importance of clarifying the purpose of and audience for the model before deciding what is required, in discussion with the client and the competent authority. The precise choice of techniques for illustration of a particular scheme will depend on the data available, and especially on the timing of the work and the budget available. Several economies may also be possible - for example using the same model to generate an

accurate 2D perspective, which may then in turn form the basis of a 3D animated virtual reality sequence.

9.31 Careful thought must be given to the accessibility of graphic, and especially 3D material and animations, to the competent authority, to stakeholders and to the public. Ideally all parties should have access to the same type of information and illustrative material. Digital images cannot always be incorporated into hard copy reports like the ES itself, or its technical appendices, but can be supplied on a CD or DVD, or incorporated in a presentation using software programme such as PowerPoint, or made available on web sites to allow access for as many people as possible. But more complex material, especially 3D and animated graphics must be used cautiously as people may not have access to the necessary technology to view it. Public meetings or exhibitions are likely to be the main way of showing such information but these may only reach a limited number of stakeholders.

#### Non-digital forms of visual representation

9.32 Other visualisation techniques may be appropriate under certain circumstances, for example where speed of production and available budget are limiting factors or the method offers the preferred option. The main alternatives are overlays and perspective sketches - either hand drawn or constructed over computer generated wire lines. Advances in technology and experience of using it often mean, however, that hand drawn work is more time consuming than the digital equivalent. Artist's impressions, should in general be avoided unless they are sufficiently accurate.

9.33 Physical (as opposed to digital) models tend to be expensive to produce, but can be particularly useful in public consultation, especially in urban settings. Using photographs of similar developments to illustrate what a proposal may be

like can be very helpful, provided it is made clear that they are of another development and are indicative and for illustrative purposes only.

## **Review of landscape and visual effects material in an Environmental Statement**

9.34 The competent authority has a key role to play in both the collation and consideration of relevant comments from statutory consultees and review of the adequacy of the landscape and visual effects material included in the Environmental Statement. The review process will check that the assessment meets the requirements of the EIA Regulations and also the specific terms of reference discussed and agreed with the developer, during scoping or subsequent consultations.

9.35 The authority may need to consider whether it would be advisable to seek specialist advice or expertise, or indeed to appoint an independent third party to carry out or advise on the review. Whichever approach is used, the review should generally consider the:

- scope, content and appropriateness of both the landscape and the visual baseline studies
- methods used in conducting the assessment of landscape and visual effects;
- accuracy and completeness of identification of potential landscape and visual effects;
- appropriateness of proposed mitigation, both in terms of measures incorporated into the scheme design and those identified to mitigate further effects of the final scheme;
- approach to judging the significance of the effects identified, in terms of transparency and clarity of communication, and clarity in identifying and describing the significant residual effects;

- appropriate communication of all aspects of the assessment of landscape and visual effects both, in text, tables and illustrations.

9.36 IEMA has developed a set of general criteria for reviewing Environmental Statements<sup>34</sup> that can also be applied to the landscape and visual impact assessment section of the ES. In the past some criteria for review of environmental assessments in terms of their countryside and landscape content have also been developed<sup>35</sup> and brief guidance is also included in Scottish Natural Heritage's handbook on Environmental Assessment<sup>36</sup>. All of these may help those charged with reviewing the landscape and visual content of Environmental Statements to decide what to look for. The good practice points in this guidance should provide a more detailed basis for review.

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## **Consultation questions**

Is the guidance on the structure and general content of a report clear?

Is the guidance on presenting written information on landscape and visual effects clear?

Is the guidance on presenting illustrative material such as maps, photographs and photomontages clear?

Any other comments or suggestions on Chapter 9?

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<sup>34</sup> IEMA (2011) EIA Quality Mark - ES Review Criteria.

<sup>35</sup> Countryside Commission (1994) Environmental Assessment - The treatment of landscape and countryside recreation issues. Countryside Commission. CCP 326. Cheltenham Digest included in Countryside Planning File. CCP 452.

<sup>36</sup> David Tyldesley and Associates (2009) A handbook on environmental impact assessment. 3<sup>rd</sup> Edition. SNH. (In Appendix 1, Box 4, Page 193 - Useful Tests to Apply to Environmental Statements in respect of Landscape and Visual Impact Assessments)