

size and resolution sufficient to match the perspective in the same view in the field.

(Landscape Institute, 2011: 3)

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. If other images are also prepared simply to show the nature of the proposed development then the same degree of accuracy may not be required, although fair representation remains important. As both products may appear graphically similar it is vital that all parties understand the distinction between them, in terms of the time that they take to prepare, the associated costs and their practical use, remembering their purpose is to illustrate the effects on viewers rather than to illustrate the proposals themselves (as in artists' impressions). 8.19

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, produced in Scotland but which, as noted previously, is widely used elsewhere. Particular reference should be made to these documents (and any amendments) for detailed technical guidance and for discussion of more theoretical aspects of visual representation. This is an evolving area of practice and landscape professionals should be alert to any new guidance that may emerge. 8.20

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. 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. 8.21

In preparing photomontages key requirements are that: 8.22

- all viewpoints that are to be used should be photographed at locations that are representative of the view in question and of the character of the location;
- sufficiently high-quality photographs should be used as the starting point for the production of the images;
- weather conditions shown in the photographs should (with justification provided for the choice) be either:
 - representative of those generally prevailing in the area; or
 - taken in good visibility, seeking to represent a maximum visibility scenario when the development may be highly visible;
- the photomontages should show relevant components of the development that are predicted to be visible from each viewpoint, including any associated land use change and, where appropriate and feasible, access arrangements;
- rendering of the photomontages should in general be as photorealistic as possible, but:



Figure 8.3 Cumulative photomontage of redevelopment at Twickenham Railway Station with other permitted development, a neighbouring hotel extension. Note the aspect ratio of the image to encompass the vertical field of view of the urban context; camera used in portrait orientation

- where the scheme is not fully developed visualisations must be based on clearly stated assumptions about how the development may appear;
- for large-scale urban developments block models are often used, illustrating scale, massing and arrangement, but without architectural detailing – although not photorealistic these can still be useful in representing the change in the view;
- the 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 when the image

is held at the correct specified viewing distance from the eye (usually between 300 millimetres and 500 millimetres).

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 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 real view. 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. It is therefore essential that not only should the development itself be represented fairly and accurately but that it should be capable of being understood within its landscape context (see Landscape Institute, 2011). Careful thought must also be given to how images are made available to different audiences, including sizes and types of image and printing quality. Photomontages should be printed at an appropriate scale for comfortable viewing at the correct distance.

8.23

Photomontages are preceded by creation of wirelines or wireframes, which in themselves can be a valuable aid to understanding the effects of a proposed development. These are 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 larger number of viewpoints, only some of which may then need to be used for preparation of full photomontages and for reporting purposes.

8.24

It has been common practice in the past, especially for wind farms, to present photomontages in what has been called the 'triple arrangement', in which, for a particular view, a panoramic baseline photograph, a matching wireframe image of the proposal and a fully rendered photomontage are combined on one landscape-format A3 sheet. It is now generally accepted 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 the general public. For non-expert audiences the emphasis should be on images that are more straightforward to read and that do not require a high degree of technical interpretation.

8.25

Photomontages should be reproduced at an agreed image size and should show an appropriate level of detail. Together with associated baseline photographs and wireframes for key viewpoints, these will generally be incorporated into a separate volume of the Environmental Statement, although this can sometimes make cross-referencing to the text more difficult.

8.26

The Non-Technical Summary of the Environmental Statement, which is required to communicate the content to a wider non-specialist audience (IEMA, 2012b), may also include some photomontages of key views in an appropriate format but in this case it should be emphasised that they are only selected images and that full understanding

8.27

requires examination of the full set of images. For all audiences guidance should be provided on how to view the image in order to best represent how the proposal would appear if constructed. The different views to be included in the Non-Technical Summary should be agreed with the EIA co-ordinator and the competent authority in advance and the location of the viewpoints should be clearly shown in each case.

3D models

- 8.28** 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. They can range from simple massing studies to inclusion of significant levels of detail. Such models are not required for most projects and are demanding of resources and computer power. They can, however, where appropriate, 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 the development from any viewpoint contained within the boundary of the model as well as to create and view fly-through imaging. Once baseline conditions are modelled, variations to a scheme can be relatively easily produced and compared.
- 8.29** Such approaches are most useful where there is a need to portray complex developments in more detail than can easily be achieved using a single or even several photomontages – for example 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. Equally they do not necessarily represent the way that people would actually experience the change and so can be misleading in an assessment context.
- 8.30** Achieving a high level of detail in such models takes considerable time and can incur considerably higher costs. The purpose of and audience for the model must be carefully considered 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 form the basis of a 3D animated virtual reality sequence.
- 8.31** Careful thought must be given to how the competent authority, stakeholders and the public will view graphic and especially 3D material and animations. 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 Environmental Statement itself or its technical appendices. But they can be supplied on a CD or DVD, or incorporated into a presentation using software programmes such as PowerPoint, or made available on websites to allow as many people as possible to have access to them. More complex material, especially 3D and animated graphics, must be used with caution 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.

Viewpoint 5

View north west towards the application site from Bridge Street. This view is from the location of strategic viewpoint 2 identified in the Character Assessment & Tall Buildings Strategy for Northampton's Central Area. This viewpoint is representative of visual receptors Res2 and Tra1



Photomontage of the proposed building



GPS coordinates: 475475, 259756
GPS elevation: 84m AOD

Viewer height: 1.6m
Date and time: 28/10/2011 13:49

Rev	By	Date	Description

ARUP

The Race Course
London, WC1R 9AT
T: +44 (0)20 7654 3400
www.arup.com

Carlsberg

Carlsberg Brewery, Northampton

Photomontage
Sheet 7 of 3

Job No: 217600-05
Issue: Issue

Drawn by: LMS-11

Check by: P1

Figure 8.4 A 3D model was produced for this proposed bottling hall to enable the proposed development to be accurately depicted in a photomontage

Non-digital forms of visual representation

- 8.32** Other non-digital visualisation techniques may also be appropriate, for example when speed of production and available budget are limiting factors, or simply when they are preferred. The main alternatives are overlays and perspective sketches – either hand drawn or constructed over computer-generated wire lines. Hand-drawn work can be more time consuming than the digital equivalent and is more difficult to amend but can still be useful if well executed. Artists' impressions should only be used if they are sufficiently accurate to be meaningful and their limitations are made clear.
- 8.33** Physical (as opposed to digital) models tend to be expensive to produce, but can be particularly useful in public consultation, especially in urban settings. As 3D printers become more affordable, they may in future offer an option for generating physical models more rapidly.
- 8.34** Finally, using photographs of similar developments to illustrate what a proposal may be like can be very helpful, provided it is made absolutely clear that they are of another development and are indicative and for illustrative purposes only.

Review of the landscape and visual effects content of an Environmental Statement

- 8.35** Competent authorities receiving Environmental Statements will often subject the documents to formal review of both the adequacy of the content and of their quality. The review process will usually check that the assessment:
- meets the requirements of the relevant Regulations;
 - is in accordance with relevant guidance;
 - is appropriate and in proportion to the scale and nature of the proposed development;
 - meets the requirements agreed in discussions with the competent authority and consultation bodies during scoping and subsequent consultations.
- 8.36** The summary good practice points in this guidance should assist in review of the landscape and visual effects content of an Environmental Statement. In addition, several existing sources may also help anyone involved in reviewing this topic to decide what to look for:
- IEMA has developed a set of general criteria for reviewing Environmental Statements and registrants for the EIA Quality Mark must meet the criteria (IEMA, 2011a).
 - The former Countryside Commission published criteria for reviewing the landscape and countryside recreation content of Environmental Statements (Countryside Commission, 1994).
 - Appendix 1 of Scottish Natural Heritage's handbook on Environmental Impact Assessment contains useful tests to help judge the landscape and visual effects content of Environmental Statements (David Tyldesley and Associates, 2009).
- 8.37** The competent 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

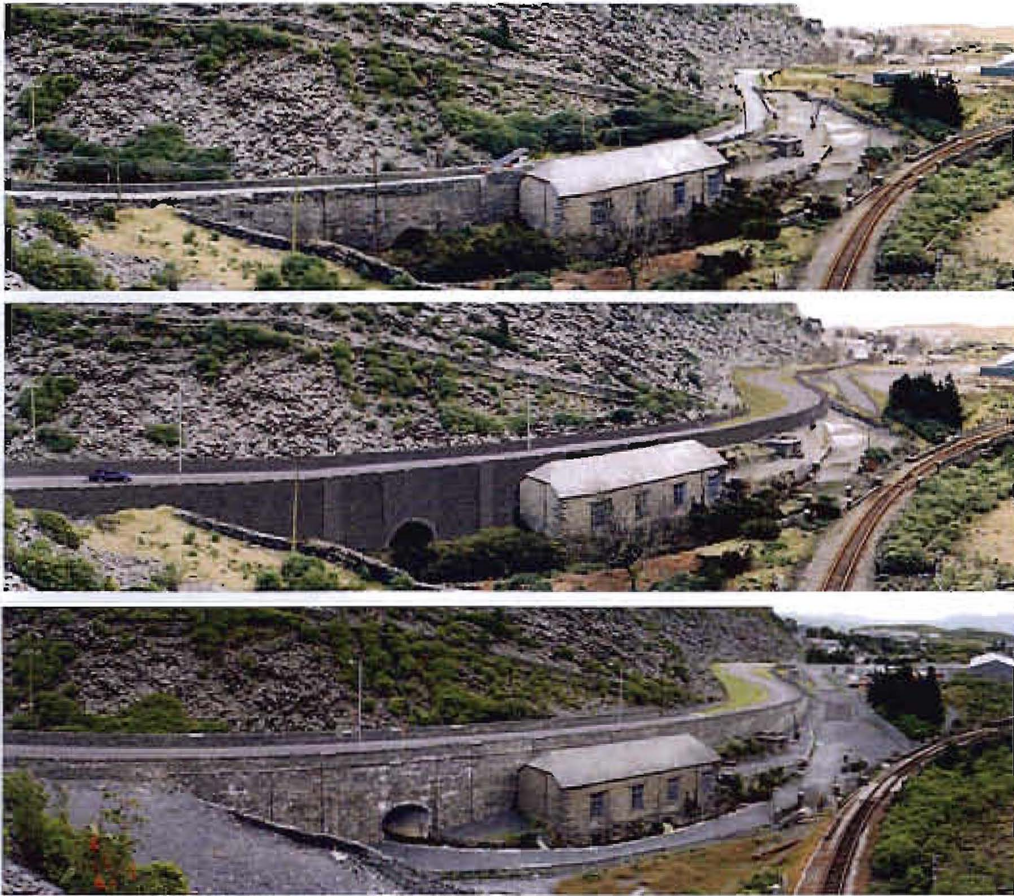


Figure 8.5 Review and monitoring: what actually happened compared with what was predicted in the LVIA

Top: Pre-existing view

Middle: Photomontage of proposed road improvement

Bottom: As-built view

out or advise on the review. Advice on whether landscape and visual effects are adequately and effectively covered should, if required, be sought from suitably qualified landscape professionals. Whoever carries out the review, it should generally consider, among other matters that may be agreed:

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

- the appropriate handling of cumulative landscape and visual effects, given the agreed scope and requirements for this work;
- the appropriate communication of all aspects of the assessment of landscape and visual effects in text, tables and illustrations;
- the effectiveness of visualisations in communicating the visual effects of the proposals at agreed viewpoints.

Summary advice on good practice

- The same broad principles for presenting landscape and visual effects information apply whether LVIA is carried out as part of an EIA or as a standalone 'appraisal'.
- Where LVIA is undertaken as part of an EIA, the approach to presentation should be discussed with the EIA co-ordinator to ensure the content included in the main text of the Environmental Statement is proportionate and appropriate to the significance of the findings of the LVIA.
- Presentation techniques must be carefully chosen and appropriately applied. The approach to presentation and the level of sophistication required in the illustration of change should be discussed and agreed with the competent authority at the outset.
- The effort required to produce appropriate illustrative material, especially visualisations to show the proposed changes, must be kept in proportion to the nature of the proposed development.
- The structure and content of a report on the assessment of landscape and visual effects will follow a broadly similar pattern in each case, but with variations reflecting particular circumstances.
- Agreement will be needed on how cumulative landscape and visual effects are to be covered – either as part of a separate cumulative effects section of the Environmental Statement or as a sub-section of the chapters dealing specifically with landscape and visual effects.
- In view of the clear differences between landscape effects and visual effects and the potential for them to be confused, it is good practice to report on them separately and to clearly distinguish between them.
- Ideally baseline information relevant to landscape and to visual effects should not be separated from the identification and description of effects, but where the EIA co-ordinator wishes to have a separate chapter on baseline findings the main findings should be summarised in the landscape and visual chapters.
- In an Environmental Statement the structure of reporting will need to be consistent across the environmental topics and to reflect relationships between topics, for example placing cultural heritage and ecology/nature conservation topics next to the landscape topic.
- Reporting of both landscape effects and visual effects should include description of the baseline, identification and description of effects, assessment of the significance of the effects, and description of mitigation measures, including how they will be delivered.

8 Presenting information on landscape and visual effects

The choice of appropriate presentation techniques is crucial to good communication.

Text should be comprehensive but also concise and to the point, and written in plain and easy-to-understand language.

Text should be impartial and dispassionate, presenting information and reasoning accurately and in a balanced way, and making clear where statements are based on the author's judgement.

Clear definitions should be provided for any technical terms that are used, supported by a glossary of terms.

Tables, and any matrices related to judgements of significance, should be used to support and to summarise narrative descriptive text rather than to replace it.

Text and illustrations need to work well together, with each complementing and supporting the other and with illustrations supporting rather than duplicating the content of the text.

The amount and type of illustrative material should be in proportion to the task in hand and should be agreed in consultation with the competent authority.

Maps, at suitable scales and levels of detail, should be prepared using appropriate digital methods and included in the Environmental Statement to illustrate key spatial aspects of the LVIA.

Photographs can have an important role to play in communicating information about the landscape and the visual effects of a proposed development, although they cannot convey exactly the way that the effects would appear on site.

For landscape effects photographs should illustrate the landscape character of the site and its context, from locations carefully chosen in discussion with the competent authority, with prevailing weather and atmospheric conditions described, seasonal effects noted, and technical details of the photography recorded.

In the baseline for visual effects photographs should illustrate existing views and visual amenity at agreed viewpoints. Change is best illustrated by means of visualisations, although these are not a substitute for descriptions in the text and may need to be accompanied by further explanation and description.

Choosing the right approach for visualisations requires careful consideration. 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.

Photomontage is the most widespread and popular visualisation technique for illustrating changes in views and visual amenity. It must be technically accurate to a degree appropriate to the nature of the project and reflecting discussions with the competent authority.

The photomontages that are included in an Environmental Statement must meet appropriate standards as described in the Landscape Institute's advice note (and any amendments) on requirements for photography and photomontage, and reflect other relevant guidance.

Photomontages should be based on sufficiently high-quality photographs that are representative of the view in question, show appropriate (and justified) levels of

visibility, show relevant components of the development as realistically as possible, and be printed at an appropriate scale for comfortable viewing at the correct distance.

Presenting photomontages in the 'triple arrangement', in which a panoramic baseline photograph, a matching wireframe image of the proposal and a fully rendered photomontage are combined, may compromise other important standards such as image size and ideal viewing distance.

Photomontages should be reproduced at an agreed image size and should show an appropriate level of detail. They may be incorporated into a separate volume of the Environmental Statement if necessary.

The Non-Technical Summary of the Environmental Statement may also include some photomontages of key views but it should be emphasised that they are only selected images and that full understanding requires examination of the full set of images.

3D models are most useful where there is a need to portray complex developments in more detail than can easily be achieved using a single or even several photomontages. They are not required for most projects and are demanding of resources and computer power.

Careful thought must be given to how the competent authority, stakeholders and the public will view graphics, and especially 3D material and animations. Ideally all parties should have access to the same type of information and illustrative material.

Non-digital visualisation techniques, such as overlays and perspective sketches (either hand drawn or constructed over computer-generated wire lines), may also be appropriate, for example when speed of production and available budget are limiting factors, or simply when they are preferred and illustrate the proposals adequately.

The competent authority will review the adequacy of the landscape and visual effects material included in the Environmental Statement, and the summary good practice points in this guidance and several other existing sources may help in this. If specialist advice or expertise is required to assist with the review it should be sought from suitably qualified landscape professionals.

Glossary

This glossary has been prepared specifically for this edition of the GLVIA and defines the meanings given to these terms as used in the context of this guidance.

Access land Land where the public have access either by legal right or by informal agreement.

Baseline studies Work done to determine and describe the environmental conditions against which any future changes can be measured or predicted and assessed.

Characterisation The process of identifying areas of similar landscape character, classifying and mapping them and describing their character.

Characteristics Elements, or combinations of elements, which make a contribution to distinctive landscape character.

Compensation Measures devised to offset or compensate for residual adverse effects which cannot be prevented/avoided or further reduced.

Competent authority The authority which determines the application for consent, permission, licence or other authorisation to proceed with a proposal. It is the authority that must consider the environmental information before granting any kind of authorisation.

Consultation bodies Any body specified in the relevant EIA Regulations which the competent authority must consult in respect of an EIA, and which also has a duty to provide a scoping opinion and information.

Designated landscape Areas of landscape identified as being of importance at international, national or local levels, either defined by statute or identified in development plans or other documents.

Development Any proposal that results in a change to the landscape and/or visual environment.

Direct effect An effect that is directly attributable to the proposed development.

'Do nothing' situation Continued change or evolution in the landscape in the absence of the proposed development.

Ecosystem services The benefits provided by ecosystems that contribute to making human life both possible and worth living. The Millennium Ecosystem Assessment (www.unep.org/maweb/en/index.aspx) grouped ecosystem services into four broad categories:

1. supporting services, such as nutrient cycling, oxygen production and soil formation – these underpin the provision of the other ‘service’ categories;
2. provisioning services, such as food, fibre, fuel and water;
3. regulating services, such as climate regulation, water purification and flood protection;
4. cultural services, such as education, recreation, and aesthetic value.

Elements Individual parts which make up the landscape, such as, for example, trees, hedges and buildings.

Enhancement 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.

Environmental Impact Assessment (EIA) The process of gathering environmental information; describing a development; identifying and describing the likely significant environmental effects of the project; defining ways of preventing/avoiding, reducing, or offsetting or compensating for any adverse effects; consulting the general public and specific bodies with responsibilities for the environment; and presenting the results to the competent authority to inform the decision on whether the project should proceed.

Environmental Statement A statement that includes the information that is reasonably required to assess the environmental effects of the development and which the applicant can, having regard in particular to current knowledge and methods of assessment, reasonably be required to compile, but that includes at least the information referred to in the EIA Regulations.

Feature Particularly prominent or eye-catching elements in the landscape, such as tree clumps, church towers or wooded skylines OR a particular aspect of the project proposal.

Geographical Information System (GIS) A system that captures, stores, analyses, manages and presents data linked to location. It links spatial information to a digital database.

Green Infrastructure (GI) Networks of green spaces and watercourses and water bodies that connect rural areas, villages, towns and cities.

Heritage The historic environment and especially valued assets and qualities such as historic buildings and cultural traditions.

Historic Landscape Characterisation (HLC) and Historic Land-use Assessment (HLA) Historic characterisation is the identification and interpretation of the historic dimension of the present-day landscape or townscape within a given area. HLC is the term used in England and Wales, HLA is the term used in Scotland.

Indirect effects Effects that result indirectly from the proposed project as a consequence of the direct effects, often occurring away from the site, or as a result of a sequence of interrelationships or a complex pathway. They may be separated by distance or in time from the source of the effects.

Iterative design process The process by which project design is amended and improved by successive stages of refinement which respond to growing understanding of environmental issues.

Key characteristics Those combinations of elements which are particularly important

to the current character of the landscape and help to give an area its particularly distinctive sense of place.

Land cover The surface cover of the land, usually expressed in terms of vegetation cover or lack of it. Related to but not the same as land use.

Land use What land is used for, based on broad categories of functional land cover, such as urban and industrial use and the different types of agriculture and forestry.

Landform The shape and form of the land surface which has resulted from combinations of geology, geomorphology, slope, elevation and physical processes.

Landscape An area, as perceived by people, the character of which is the result of the action and interaction of natural and/or human factors.

Landscape and Visual Impact Assessment (LVIA) A tool used to identify and assess the likely significance of the effects of change resulting from development both on the landscape as an environmental resource in its own right and on people's views and visual amenity.

Landscape character A distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse.

Landscape Character Areas (LCAs) These are single unique areas which are the discrete geographical areas of a particular landscape type.

Landscape Character Assessment (LCA) The process of identifying and describing variation in the character of the landscape, and using this information to assist in managing change in the landscape. It seeks to identify and explain the unique combination of elements and features that make landscapes distinctive. The process results in the production of a Landscape Character Assessment.

Landscape Character Types (LCTs) These are distinct types of landscape that are relatively homogeneous in character. They are generic in nature in that they may occur in different areas in different parts of the country, but wherever they occur they share broadly similar combinations of geology, topography, drainage patterns, vegetation and historical land use and settlement pattern, and perceptual and aesthetic attributes.

Landscape classification A process of sorting the landscape into different types using selected criteria but without attaching relative values to different sorts of landscape.

Landscape effects Effects on the landscape as a resource in its own right.

Landscape quality (condition) A measure of the physical state of the landscape. It may include the extent to which typical character is represented in individual areas, the intactness of the landscape and the condition of individual elements.

Landscape receptors Defined aspects of the landscape resource that have the potential to be affected by a proposal.

Landscape strategy The overall vision and objectives for what the landscape should be like in the future, and what is thought to be desirable for a particular landscape type or area as a whole, usually expressed in formally adopted plans and programmes or related documents.

Landscape value The relative value that is attached to different landscapes by society. A landscape may be valued by different stakeholders for a whole variety of reasons.

Magnitude (of effect) A term that combines judgements about the size and scale of the effect, the extent of the area over which it occurs, whether it is reversible or irreversible and whether it is short or long term in duration.

Parameters A limit or boundary which defines the scope of a particular process or activity.

Perception Combines the sensory (that we receive through our senses) with the cognitive (our knowledge and understanding gained from many sources and experiences).

Photomontage A visualisation which superimposes an image of a proposed development upon a photograph or series of photographs.

Receptors See Landscape receptors and Visual receptors.

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

Seascape Landscapes with views of the coast or seas, and coasts and adjacent marine environments with cultural, historical and archaeological links with each other.

Sensitivity A term applied to specific receptors, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value related to that receptor.

Significance A measure of the importance or gravity of the environmental effect, defined by significance criteria specific to the environmental topic.

Stakeholders The whole constituency of individuals and groups who have an interest in a subject or place.

Strategic Environmental Assessment (SEA) The process of considering the environmental effects of certain public plans, programmes or strategies at a strategic level.

Susceptibility The ability of a defined landscape or visual receptor to accommodate the specific proposed development without undue negative consequences.

Time depth Historical layering – the idea of landscape as a ‘palimpsest’, a much written-over manuscript.

Townscape The character and composition of the built environment including the buildings and the relationships between them, the different types of urban open space, including green spaces, and the relationship between buildings and open spaces.

Tranquillity A state of calm and quietude associated with peace, considered to be a significant asset of landscape.

Visual amenity The overall pleasantness of the views people enjoy of their surroundings, which provides an attractive visual setting or backdrop for the enjoyment of activities of the people living, working, recreating, visiting or travelling through an area.

Visual effects Effects on specific views and on the general visual amenity experienced by people.

Visual receptors Individuals and/or defined groups of people who have the potential to be affected by a proposal.

Visualisation A computer simulation, photomontage or other technique illustrating the predicted appearance of a development.

Zone of Theoretical Visibility (ZTV; sometimes Zone of Visual Influence) A map, usually digitally produced, showing areas of land within which a development is theoretically visible.

Notes

Chapter 1

1. (Paragraph 1.16) Scottish Executive Development Department (1999), for example, notes in the glossary definitions of 'impacts' and 'effects' that 'In this PAN, except where the context indicates otherwise, the words impact and effect have been used interchangeably.'

Chapter 3

1. (Paragraph 3.45) See for example Swanwick, Bingham and Parfitt (2003) and references therein; also Planning Aid (2010).

Chapter 4

1. (Paragraph 4.2) In England this is summarised in an approach that has become known as the 'Rochdale Envelope'. See Planning Inspectorate (2012).
2. (Paragraph 4.41) For further detail see IEMA (2011b), Box 6.5B.

Chapter 5

1. (Paragraph 5.4) See Swanwick and Land Use Consultants (2002). In Wales, landscape information is available in the LANDMAP system, developed by the Countryside Council for Wales, which systematically records and evaluates the landscape in five layers or aspects in a GIS, which in turn can be combined to produce Landscape Character Assessments. This can be found online at <http://www.ccw.gov.uk/landmap>. Natural England have published *An Approach to Seascape Character Assessment (NECR105)* which is available online at <http://publications.naturalengland.org.uk/publications/2729852>
2. (Paragraph 5.21) At the time of writing, no National Parks have been designated in Northern Ireland, although legislation has been introduced enabling their establishment in the future.

Chapter 6

1. (Paragraph 6.5) See for example GLA (2010).
2. (Paragraph 6.23) See for example the technical appendices in horner + maclennan and Envision (2006).

Chapter 7

1. (Paragraph 7.6) See for example the discussion on cumulative effects assessment in IEMA (2011b), Section 6.
2. (Paragraph 7.11) See European Commission (2012).
3. (Paragraph 7.12) Further guidance on defining the geographic and temporal scope of cumulative impact assessments can be found in Hyder (1999).

Chapter 8

1. (Paragraph 8.15) Refer to the Met Office website for visibility definitions: <http://www.metoffice.gov.uk/weather/uk/guide/key.html>

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