

Landscape Character Assessment

5.4 In rural landscapes, as defined in Chapter 2, Landscape Character Assessment (LCA) is the key tool for understanding the landscape and should be used for baseline studies. There is a well-established and widely used method for LCA, which is set out in current guidance documents.¹ This should be used to identify and describe:

- the elements that make up the landscape in the study area, including:
 - physical influences – geology, soils, landform, drainage and water bodies;
 - land cover, including different types of vegetation and patterns and types of tree cover;
 - the influence of human activity, including land use and management, the character of settlements and buildings, and pattern and type of fields and enclosure;
- the aesthetic and perceptual aspects of the landscape – such as, for example, its scale, complexity, openness, tranquillity or wildness;
- the overall character of the landscape in the study area, including any distinctive Landscape Character Types or areas that can be identified, and the particular combinations of elements and aesthetic and perceptual aspects that make each distinctive, usually by identification as key characteristics of the landscape.

Townscape character assessment

5.5 LVIA in urban contexts requires a good understanding of townscape (as defined in Chapter 2, Paragraph 2.7) and there are now accepted techniques of townscape character assessment which can help to achieve this. Landscape professionals involved in LVIA should participate in such assessments, although joint working with architects, planners or urban designers will be required in some cases. The nature of townscape requires particular understanding of a range of different factors that together distinguish different parts of towns and cities, including:

- the context or setting of the urban area and its relationship to the wider landscape;
- the topography and its relationship to urban form;
- the grain of the built form and its relationship to historic patterns, for example of burgage plots;
- the layout and scale of the buildings, density of development and building types, including architectural qualities, period and materials;
- the patterns of land use, both past and present;
- the contribution to the landscape of water bodies, water courses and other water features;
- the nature and location of vegetation, including the different types of green space and tree cover and their relationships to buildings and streets;
- the types of open space and the character and qualities of the public realm;
- access and connectivity, including streets and footways/pavements.

Seascape character assessment

5.6 Where LVIA is carried out in coastal or marine locations baseline studies must take account of seascape, as defined in Chapter 2 (Paragraphs 2.8 and 2.9). Methods to assess the character of seascapes, similar to the assessment methods for terrestrial landscapes, are being developed and practitioners should refer to the latest available guidance. It is important to take account of the particular characteristics and qualities of the marine and coastal environment, including those associated with the natural environment, cultural and social characteristics, and perceptual and aesthetic qualities. These will include:

- coastal features;
- views to and from the sea;
- particular qualities of the open sea;
- the importance of dynamic changes due to weather and tides;
- change in seascapes due to coastal processes;
- cultural associations;
- contributions of coastal features to orientation and navigation at sea.

Links to cultural heritage and historic landscape character

- 5.7 The relationship between landscape and historic landscape matters 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.
- 5.8 Historic landscape characterisation is complementary to Landscape Character Assessment. It looks at the material remains of the past and perceptions and interpretations of them, in order to help us understand the present-day landscape. In towns and cities this characterisation and other historic environment studies 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. Since the second edition of this guidance there have been significant advances in the assessment of historic landscape character, and in seascape and townscape characterisation, along with publication of related guidance and maps.
- 5.9 The history of the landscape, its historic character, the interaction between people and places through time, and the surviving features and their settings may be relevant to the LVIA baseline studies, as well as the cultural heritage topic. The evaluation needs to consider both the historic landscape characterisation and the Landscape Character Assessment. The LVIA also needs to address the fact that many historic features – archaeological remains, buildings and designed landscapes – are important in their own right as well as features of the landscape.
- 5.10 Landscape professionals should make good use of existing historic landscape information, and collaborate with historic environment specialists, who will be collating or recording such information for the cultural heritage part of the EIA. This collaboration will allow the landscape baseline information to reflect a full understanding of the historic characteristics and features of today's landscape.



Figure 5.4 Historic buildings often contribute to the character and quality of townscapes

The sharing of relevant baseline information should not be confused with the need for separate cultural heritage appraisals such as historic landscape characterisation and assessment or historic townscape appraisal, or there will be a danger of both double handling and inappropriate judgements by non-experts. It is particularly important that responsibilities are clear in considering any effects on the settings and views for historic buildings, Conservation Areas and other heritage assets.

5.11

Using existing character assessments

Many parts of the UK are already covered by existing character assessments at different scales. There is a 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. Although usually prepared for different original purposes, existing assessments can also contribute to LVIA. The first step in preparing the landscape baseline should be to review any relevant assessments that may be available at different levels in this hierarchy. Those published and adopted by competent authorities are usually the most robust and considered documents. Use should also be made of any existing historic characterisation studies to provide information on the time depth dimension of the landscape.

5.12

Existing assessments must be reviewed critically as their quality may vary, some may be dated and some may not be suited to the task in hand. Before deciding to rely on information from an existing assessment a judgement should be made as to the degree to which it will be useful in informing the LVIA process.

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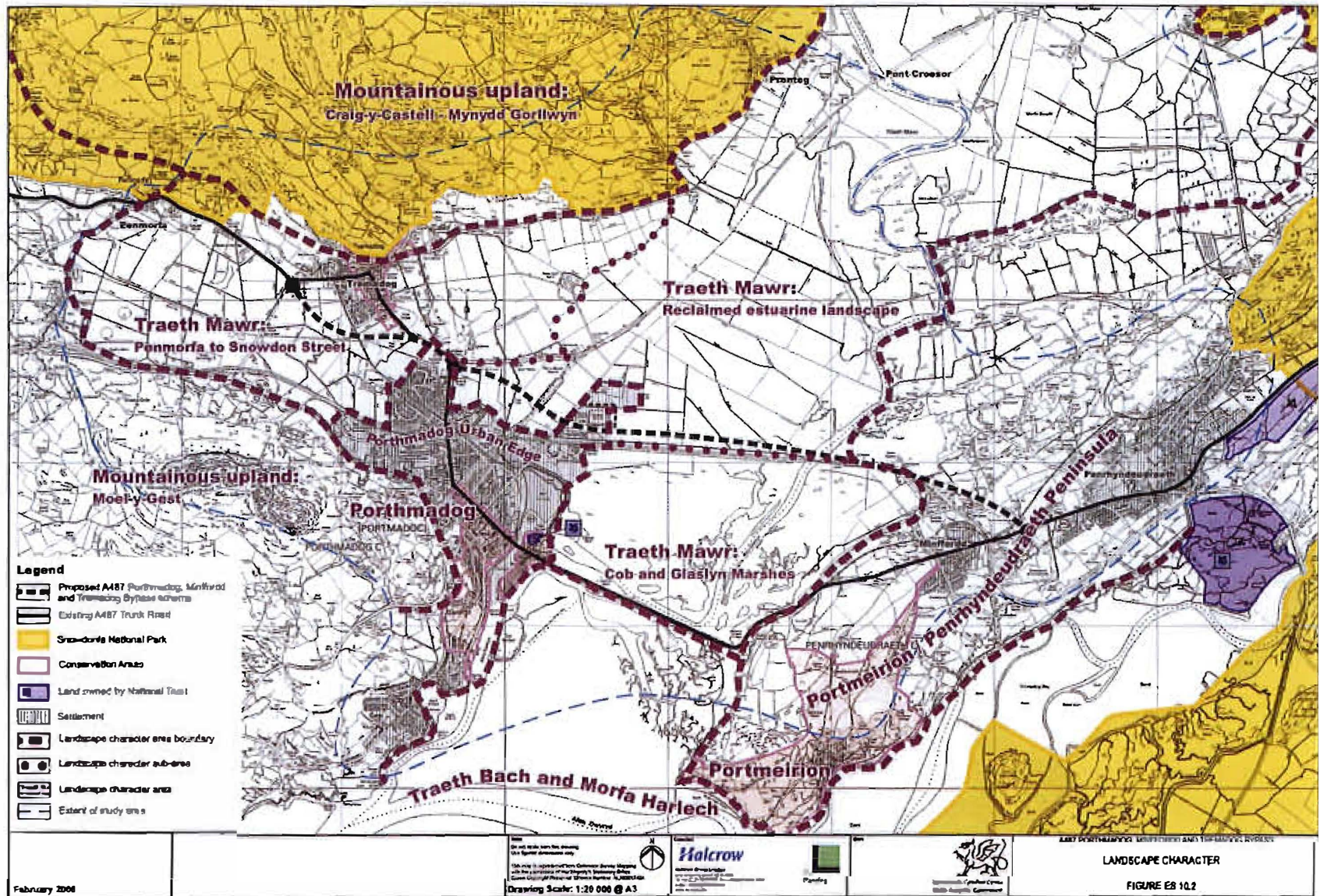


Figure 5.5 Where Landscape Character Assessments are not available, as in some parts of Wales, project-specific character areas can be derived, for example in Wales from an analysis of LANDMAP and other information, and structured site surveys

It should be reviewed in terms of:

- when it was carried out and the extent to which the landscape may have changed since then;
- its status, and whether or not it has been formally adopted, for example, as supplementary planning guidance;
- the scale and level of detail of the assessment and therefore its suitability for use in the LVIA, while noting that larger-scale assessments can often provide valuable context;
- any other matters which might limit the reliability or usefulness of the information.

Justification should be provided for any departure from the findings of an existing, established LCA.

It is essential to decide at the outset what scale of character assessment information is needed to provide a basis for the LVIA and then to judge the value of existing assessments against this. 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 generalised to be appropriate for the particular 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:

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- 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.

Existing assessments may need to be reviewed and interpreted to adapt them for use in LVIA – for example by drawing out more clearly the key characteristics that are most relevant to the proposal. Fieldwork will also be required to check the applicability of the assessment throughout the study area and to refine it where necessary, for example by identifying variations in character at a more detailed scale. Completely new 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.

5.15

Even where there are useful and relevant existing Landscape Character Assessments and historic landscape characterisations, it is still likely that it will 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.

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- 5.17 Where new landscape surveys are required, either of the whole study area or of the site and its immediate surroundings, they should follow recommended methods and up-to-date guidance. 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.
- 5.18 Evidence about change in the landscape, including in its condition, is an important part of the baseline. 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.

Establishing the value of the landscape

- 5.19 As part of the baseline description the value of the potentially affected landscape should be established. This means the relative value that is attached to different landscapes by society, bearing in mind that a landscape may be valued by different stakeholders for a whole variety of reasons. Considering value at the baseline stage will inform later judgements about the significance of effects. Value 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. LANDMAP in Wales, for example, evaluates each area for each of its five aspects or layers. 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 and individual elements of the landscape – such as trees, buildings or hedgerows – may also have value. All need to be considered where relevant.

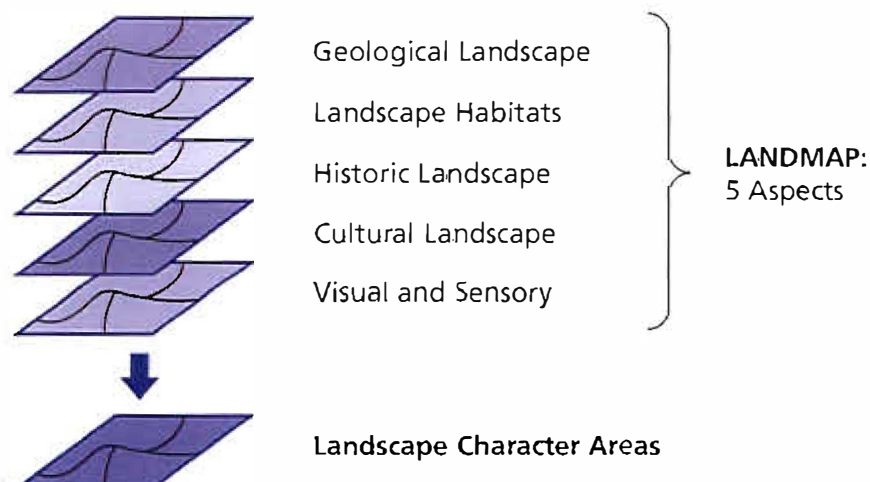


Figure 5.6 In Wales, landscape information is found in LANDMAP, providing data on five aspects of the landscape which can be combined (with other information) to define Landscape Character Areas

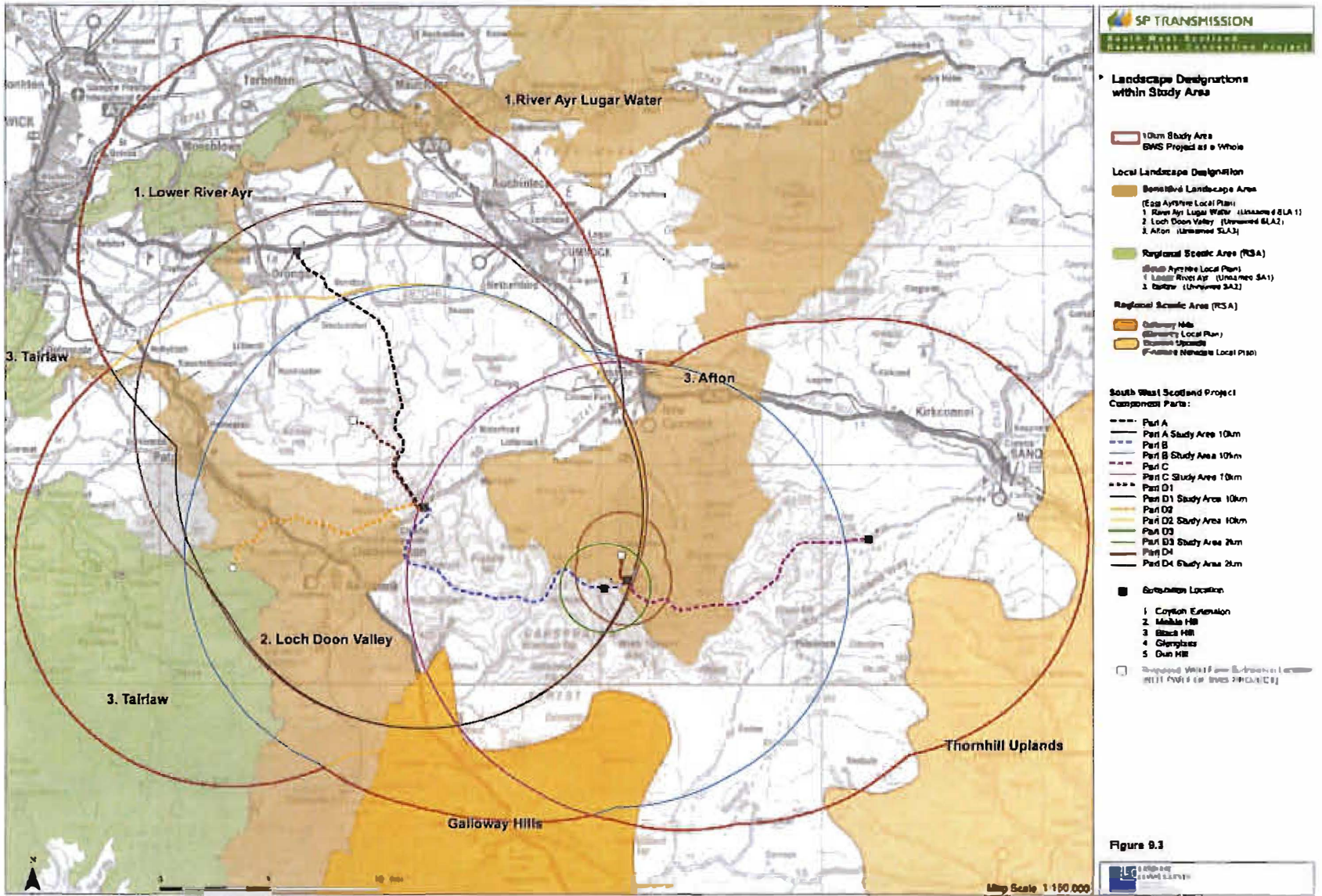


Figure 5.7 A review of existing landscape designations is usually the starting point in understanding landscape value

5.20 Information that will contribute to understanding value might include:

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

International and national designations

5.21 Internationally acclaimed landscapes may be recognised, for example as World Heritage Sites, and particular planning policies may apply to them. Nationally valued landscapes are recognised by designation, 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 Ireland²;
- National Scenic Areas in Scotland.



Figure 5.8 A listed building within a historic designed landscape

Across the UK there is also a variety of designations aimed at aspects of the historic environment (such as Conservation Areas and listed buildings) and non-statutory recognition of particular types of environment (such as Heritage Coasts). An LVIA should consider the implications of the full range of statutory and non-statutory designations and recognitions and consider what they may imply about landscape value. 5.22

The criteria and terms used in making statutory designations vary and may not always be explicitly stated. If a project subject to LVIA is in or near to one of them, it is important that the baseline study should seek to understand the basis for the designation and why the landscape is considered to be of value. Great care should be taken to understand what landscape designations mean in today's context. This means determining to what degree the criteria and factors used to support the case for designation are represented in the specific study area. 5.23

Desk study of relevant documents will often, although not always, 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 should help to establish how the criteria for designation are expressed, or not, in the particular area in question. At the same time it should be recognised that every part of a designated area contributes to the whole in some way and care must be taken if considering areas in isolation. 5.24

Local landscape designations

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 or 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 the relationship between the study area and the wider context of the designation. 5.25

Undesignated landscapes

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 where in recent years relevant national planning policy and advice has on the whole discouraged local designations unless it can be shown that other approaches would be inadequate. 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, supported by the landscape character approach. 5.26

Where local designations are not in use a fresh approach may be needed. As a starting point reference to existing Landscape Character Assessments and associated planning policies and/or landscape strategies and guidelines may give an indication of which landscape types or areas, or individual elements or aesthetic or perceptual aspects of the landscape are particularly valued. A stated strategy of landscape conservation is usually a good indicator of this. 5.27

5.28 In cases where there is no existing evidence to indicate landscape value, and where scoping discussions suggest that it is appropriate, value should be determined as part of the baseline study 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:

- Draw on a list of those factors that are generally agreed to influence value (see Box 5.1). 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.
- Draw up a list of criteria and factors specific to the individual project and landscape context.
- Apply a form of the ecosystem services approach, although 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, although it is under active consideration (IEMA, 2012a).

Box 5.1

Range of factors that can help in the identification of valued landscapes

- **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.
- **Scenic quality:** The term used to describe landscapes that appeal primarily to the senses (primarily but not wholly the visual senses).
- **Rarity:** The presence of rare elements or features in the landscape or the presence of a rare Landscape Character Type.
- **Representativeness:** Whether the landscape contains a particular character and/or features or elements which are considered particularly important examples.
- **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.
- **Recreation value:** Evidence that the landscape is valued for recreational activity where experience of the landscape is important.
- **Perceptual aspects:** A landscape may be valued for its perceptual qualities, notably wildness and/or tranquillity.
- **Associations:** Some landscapes are associated with particular people, such as artists or writers, or events in history that contribute to perceptions of the natural beauty of the area.

Based on Swanwick and Land Use Consultants (2002)

In practice one option, 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:

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- There cannot be a standard approach as circumstances will vary from place to place.
- Areas of landscape whose character is judged to be intact and in good condition, and where scenic quality, wildness or tranquillity, and 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 is likely to be greater emphasis on judging, for each landscape type or area, 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 its value.

Individual components of the landscape, including particular landscape features, and notable aesthetic or perceptual qualities can be judged on their importance in their own right, including whether or not they can realistically be replaced. They can also be judged on their contribution to the overall character 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.

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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 as far as possible 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.

5.31

A role for consultation

In making the assessment of landscape value it is important where possible to draw on information and opinions from consultees. Consultation bodies 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 may, where practicable, also suggest the range of values that people attach to the landscape. Scoping discussions with the competent authority should help to determine the reasonable extent of such consultation.

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Reporting on the baseline situation

5.33 When review of existing assessments and any new surveys are complete, and evidence about landscape value has been assembled, a landscape baseline report should be prepared. It should be a clear, well-structured, accessible report supported by illustrations where necessary and should:

- map, describe and illustrate the character of the landscape at an appropriate level of detail, covering both the wider study area and the site and its immediate surroundings, dividing it into Landscape Character Types and Areas as appropriate;
- identify and describe the individual elements and aesthetic and perceptual aspects of the landscape, particularly emphasising those that are key characteristics contributing to the distinctive character of the landscape;
- indicate the condition of the landscape, including the condition of elements or features such as buildings, hedgerows or woodland.

The aim should be to describe the landscape as it is at the time but also to consider what it may be like in the future in the absence of the proposal. This means projecting forward any trends in change and considering how they may affect the landscape over time, accepting that this involves a degree of speculation and uncertainty.

Predicting and describing landscape effects

5.34 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, such as overall character and key characteristics, individual elements or features, and specific aesthetic or perceptual aspects.
- The second step is to identify interactions between these landscape receptors and the different components of the development at all its different stages, including construction, operation and, where relevant, decommissioning and restoration/reinstatement.

5.35 The effects identified at the scoping stage should all be reviewed and amended, if necessary, in the light of any additional information available. New ones may also be identified as a result of the additional information obtained through consultation, baseline study and iterative development of the scheme design. The effects on landscape should embrace all the different types identified by the Regulations, namely the direct effects and any indirect, secondary, cumulative, short-, medium- and long-term, permanent and temporary, positive and negative effects of the development (as described in Paragraph 3.22). They 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 distinctiveness of the landscape;
- addition of new elements or features that will influence the character and distinctiveness of the landscape;
- combined effects of these changes on overall character.



Figure 5.9 Plan illustrating the effects of a proposed flood wall, showing partial and complete loss of trees and the location of the proposed development alongside visual receptors and designations

5.36 All effects that are considered likely to take place should be described as fully as possible:

- Effects on individual components of the landscape, such as loss of trees or buildings 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/condition 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.

Good, clear and concise description 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.

5.37 One of the more challenging issues is deciding whether the landscape effects should be categorised as positive or negative. It is also possible for effects to be neutral in their consequences for the landscape. An informed professional judgement should be made about this and the criteria used in reaching the judgement should be clearly stated. They might include, but should not be restricted to:

- the degree to which the proposal fits with existing character;
- the contribution to the landscape that the development may make in its own right, usually by virtue of good design, even if it is in contrast to existing character.

The importance of perceptions of landscape is emphasised by the European Landscape Convention, and others may of course hold different opinions on whether the effects are positive or negative, but this is not a reason to avoid making this judgement, which will ultimately be weighed against the opinions of others in the decision-making process.

Assessing the significance of landscape effects

5.38 The landscape effects that have been identified should be assessed to determine their significance, based on the principles described in Paragraphs 3.23–3.36. Judging the significance of landscape effects requires methodical consideration of each effect identified and, for each one, assessment of the sensitivity of the landscape receptors and the magnitude of the effect on the landscape.

Sensitivity of the landscape receptors

5.39 Landscape receptors need to be assessed firstly in terms of their sensitivity, combining judgements of their susceptibility to the type of change or development proposed and the value attached to the landscape. In LVIA sensitivity is similar to the concept of landscape sensitivity used in the wider arena of landscape planning, but it is not the same as it is specific to the particular project or development that is being proposed and to the location in question.

Susceptibility to change

5.40 This means the ability of the landscape receptor (whether it be the overall character or quality/condition of a particular landscape type or area, or an individual element

and/or feature, or a particular aesthetic and perceptual aspect) to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies.

The assessment may take place in situations where there are existing landscape sensitivity and capacity studies, which have become increasingly common. They may deal with the general type of development that is proposed, in which case they may provide useful preliminary background information for the assessment. But they cannot provide a substitute for the individual assessment of the susceptibility of the receptors in relation to change arising from the specific development proposal. 5.41

Some of these existing assessments may deal with what has been called 'intrinsic' or 'inherent' sensitivity, without reference to a specific type of development. These cannot reliably inform assessment of the susceptibility to change since they are carried out without reference to any particular type of development and so do not relate to the specific development proposed. Since landscape effects in LVIA are particular to both the specific landscape in question and the specific nature of the proposed development, the assessment of susceptibility must be tailored to the project. It should not be recorded as part of the landscape baseline but should be considered as part of the assessment of effects. 5.42

Judgements about the susceptibility of landscape receptors to change should be recorded on a verbal scale (for example high, medium or low), but the basis for this must be clear, and linked back to evidence from the baseline study. 5.43

Value of the landscape receptor

The baseline study will have established the value attached to the landscape receptors (see Paragraphs 5.19–5.31), covering: 5.44

- 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, especially the key characteristics, which may include individual elements of the landscape, particular landscape features, notable aesthetic, perceptual or experiential qualities, and combinations of these contributors.

The value of the landscape receptors will to some degree reflect landscape designations and the level of importance which they signify, although there should not be over-reliance on designations as the sole indicator of value. Assessments should reflect: 5.45

- internationally valued landscapes recognised as World Heritage Sites;
- nationally valued landscapes (National Parks, Areas of Outstanding Natural Beauty, National Scenic Areas or other equivalent areas);
- locally valued landscapes, for example local authority landscape designations or, where these do not exist, landscapes assessed as being of equivalent value using clearly stated and recognised criteria;
- landscapes that are not nationally or locally designated, or judged to be of equivalent

value using clearly stated and recognised criteria, but are nevertheless valued at a community level.

5.46 There can be complex relationships between the value attached to landscape receptors and their susceptibility to change which are especially important when considering change within or close to designated landscapes. For example:

- An internationally, nationally or locally valued landscape does not automatically, or by definition, have high susceptibility to all types of change.
- It is possible for an internationally, nationally or locally important landscape to have relatively low susceptibility to change resulting from the particular type of development in question, by virtue of both the characteristics of the landscape and the nature of the proposal.
- The particular type of change or development proposed may not compromise the specific basis for the value attached to the landscape.

5.47 Landscapes that are nationally designated (National Parks and Areas of Outstanding Natural Beauty in England and Wales and their equivalents in Scotland and Northern Ireland) will be accorded the highest value in the assessment. If the area affected by the proposal is on the margin of or adjacent to such a designated area, thought may be given to the extent to which it demonstrates the characteristics and qualities that led to the designation of the area. Boundaries are very important in defining the extent of designated areas, but they often follow convenient physical features and as a result there may be land outside the boundary that meets the designation criteria and land inside that does not. 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.

Magnitude of landscape effects

5.48 Each effect on landscape receptors needs to be assessed in terms of its size or scale, the geographical extent of the area influenced, and its duration and reversibility.

Size or scale

5.49 Judgements are needed about the size or scale of change in the landscape that is likely to be experienced as a result of each effect. This should be described, and also categorised on a verbal scale that distinguishes the amount of change but is not overly complex. For example, the effect of both loss and addition of new features may be judged as major, moderate, minor or none, or other equivalent words. The judgements should, for example, take account of:

- the extent of existing landscape elements that will be lost, the proportion of the total extent that this represents and the contribution of that element to the character of the landscape – in some cases this may be quantified;
- the degree to which aesthetic or perceptual aspects of the landscape are altered either by removal of existing components of the landscape or by addition of new ones – for example, removal of hedges may change a small-scale, intimate landscape into a large-scale, open one, or introduction of new buildings or tall structures may alter open skylines;

- whether the effect changes the key characteristics of the landscape, which are critical to its distinctive character.

Geographical extent

The geographical area over which the landscape effects will be felt must also be considered. This is distinct from the size or scale of the effect – there may for example be moderate loss of landscape elements over a large geographical area, or a major addition affecting a very localised area. The extent of the 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:

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- 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, influencing several landscape types or character areas.

Duration and reversibility of the landscape effects

These are separate but linked considerations. Duration can usually be simply judged on a scale such as short term, medium term or long term, where, for example, short term might be zero to five years, medium term five to ten years and long term ten to twenty-five years. There is no fixed rule on these definitions and so in each case it must be made clear how the categories are defined and the reasons for this.

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Reversibility is a judgement about the prospects and the practicality of the particular effect being reversed in, for example, a generation. This can be a very important issue – for example, while some forms of development, like housing, can be considered permanent, others, such as wind energy developments, are often argued to be reversible since they have a limited life and could eventually be removed and/or the land reinstated. Mineral workings, for example, may be partially reversible in that the landscape can be restored to something similar to, but not the same as, the original. If duration is included in an assessment of the effects, the assumptions behind the judgement must be made clear. Duration and reversibility can sometimes usefully be considered together, so that a temporary or partially reversible effect is linked to definition of how long that effect will last.

5.52

Judging the overall significance of landscape effects

To draw final conclusions about significance, the separate judgements about the sensitivity of the landscape receptors and the magnitude of the landscape effects need to be combined to allow a final judgement to be made about whether each effect is significant or not, as required by the Regulations, following the principles set out in Chapter 3. The rationale for the overall judgement must be clear, demonstrating how the assessments of sensitivity and magnitude have been linked in determining the overall significance of each effect.

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Significance can only be defined in relation to each development and its specific location. It is for each assessment to determine how the judgements about the landscape receptors and landscape effects should be combined to arrive at significance and to

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explain how the conclusions have been derived. There may also be a need to adopt a consistent approach across all the EIA topic areas and the EIA co-ordinator will need to be involved in the decisions on suitable approaches.

5.55 As indicated in Chapter 3 (see Paragraph 3.30) there are two main approaches to combining the individual judgements made under the different contributing criteria (although there may also be others):

1. They can be sequentially combined: susceptibility to change and value can be combined into an assessment of sensitivity for each receptor, and size/scale, geographical extent and duration and reversibility can be combined into an assessment of magnitude for each effect. Magnitude and sensitivity can then be combined to assess overall significance.
2. All the judgements against the individual criteria can be arranged in a table to provide an overall profile of each identified effect. An overview can then be taken of the distribution of the judgements for each criterion to make an informed professional assessment of the overall significance of each effect.

5.56 There are no hard and fast rules about what makes a significant effect, and there cannot be a standard approach since circumstances vary with the location and landscape context and with the type of proposal. At opposite ends of a spectrum it is reasonable to say that:

- major loss or irreversible negative effects, over an extensive area, on elements and/or aesthetic and perceptual aspects that are key to the character of nationally valued landscapes are likely to be of the greatest significance;
- reversible negative effects of short duration, over a restricted area, on elements and/or aesthetic and perceptual aspects that contribute to but are not key

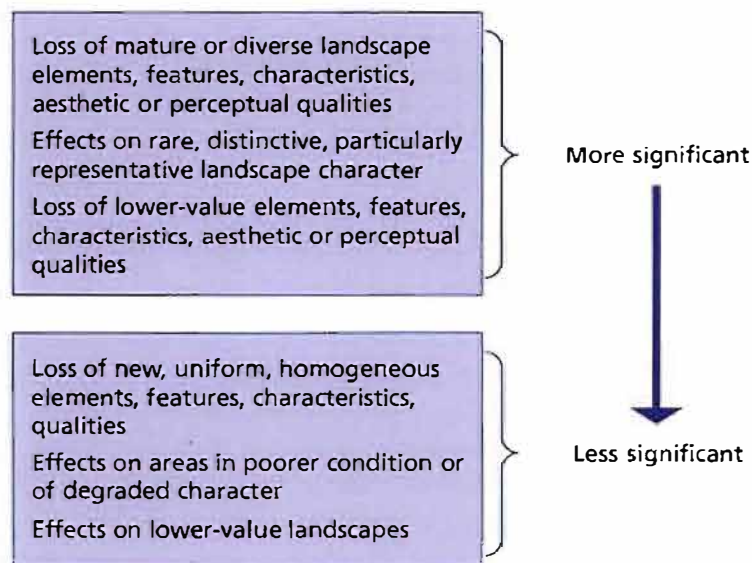


Figure 5.10 Scale of significance

characteristics of the character of landscapes of community value are likely to be of the least significance and may, depending on the circumstances, be judged as not significant;

- where assessments of significance place landscape effects between these extremes, judgements must be made about whether or not they are significant, with full explanations of why these conclusions have been reached.

Where landscape effects are judged to be significant and adverse, proposals for preventing/avoiding, reducing, or offsetting or compensating for them (referred to as mitigation) should be described. The significant landscape effects remaining after mitigation should be summarised as the final step in the process.

5.57

Further detail on mitigation is provided in Paragraphs 4.21–4.43.

Summary advice on good practice

- An assessment of landscape effects should consider how the proposal will affect the elements that make up the landscape, its aesthetic and perceptual aspects, its distinctive character and the key characteristics that contribute to this.
- Scoping should try to identify the range of possible landscape effects to be considered, but a decision can be made, in discussion with the competent authority, whether any are not likely to be significant and therefore do not need to be considered further.
- Scoping should also identify the area of landscape that needs to be covered in assessing landscape effects. The study area should include the site itself and the extent of the wider landscape around it which it is likely that the proposed development may influence. This will normally be based on the extent of Landscape Character Areas likely to be significantly affected either directly or indirectly, but the Zone of Theoretical Visibility developed as part of the assessment of visual effects (see Chapter 6) may also inform the decision.
- Baseline landscape studies should be appropriate to the context into which the development proposal will be introduced and in line with current guidance and terminology for Landscape Character Assessment, townscape character assessment and seascape character assessment, as relevant.
- Baseline studies for LVIA should ensure that, working with experts if necessary, cultural heritage features and relevant aspects of the historic landscape are recorded and judgements made about their contribution to the landscape, townscape or seascape. Assessment of the effects of development on historic aspects of the landscape must, however, be dealt with in the cultural heritage topic of an EIA and not as part of the landscape and visual topic.
- The first step in preparing the landscape baseline should be to review any relevant existing assessments that may be available. Existing assessments must be reviewed

critically as their quality may vary, some may be dated and some may not be suited to the task in hand.

It is essential to decide at the outset what scale of character assessment information is needed to provide a basis for the LVIA and then to judge the value of existing assessments against this.

Existing assessments may need to be reviewed and interpreted to adapt them for use in LVIA, and fieldwork should check the applicability of the assessment throughout the study area and refine it where necessary.

Where new landscape surveys are required, either of the whole study area or of the site and its immediate surroundings, they should follow recommended methods and up-to-date guidance.

Evidence about change in the landscape is an important part of the baseline. The condition of the landscape and any evidence of current pressures causing change in the landscape should be documented.

The value of the landscape that may be affected should be established as part of the baseline description. This will inform judgements about the significance of the effects.

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 and individual elements of the landscape – such as trees, buildings or hedgerows – may also be valued.

A landscape baseline report should set out the findings of the baseline work. It should be clear, well structured, accessible and supported by appropriate illustrations. The aim should be to describe the landscape as it is at the time but also to consider, if possible, what it may be like in the future, without the proposal.

To identify and describe the landscape effects the components of the landscape that are likely to be affected by the scheme, often referred to as the 'landscape receptors', should be identified and interactions between them and the different components of the development considered, covering all the types of effect required by the Regulations.

The effects identified at the scoping stage should all be reviewed in the light of the additional information obtained through consultation, baseline study and iterative development of the scheme design. They should be amended as appropriate and new ones may also be identified.

An informed professional judgement should be made about whether the landscape effects should be categorised as positive or negative (or in some cases neutral), with the criteria used in reaching this judgement clearly stated.

The landscape effects must be assessed to determine their significance, based on the principles described in Chapter 3. Judging the significance of landscape effects requires methodical consideration of each effect that has been identified, its magnitude and the sensitivity of the landscape receptor affected.

To draw final conclusions about significance the separate judgements about sensitivity and magnitude need to be combined into different categories of significance, following the principles set out in Chapter 3.

The rationale for the overall judgement must be clear, demonstrating how the judgements about the landscape receptor and the effect have been linked in determining overall significance.

A clear 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 judgements at each stage is explained and the effects are clearly reported, with good text to explain them and summary tables to support the text.

Final judgements must be made about which landscape effects are significant, as required by the Regulations. There are no hard and fast rules about what makes a significant effect, and there cannot be a standard approach since circumstances vary with the location and landscape context and with the type of proposal.

Where landscape effects are judged to be significant and adverse, proposals made for preventing/avoiding, reducing, or offsetting or compensating for them (referred to as mitigation) should be described. The significant landscape effects remaining after mitigation should then be summarised as the final step in the process.

Chapter 6

Assessment of visual effects



Chapter overview

- Scope
- Establishing the visual baseline
- Predicting and describing visual effects
- Assessing the significance of visual effects
- Judging the overall significance of visual effects

Scope

- 6.1 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 change or loss of existing elements of the landscape and/or introduction of new elements.
- 6.2 Scoping should identify the area that needs to be covered in assessing visual effects, the range of people who may be affected by these effects and the related viewpoints in the study area that will need to be examined. The study area should be agreed with the competent authority at the outset and should consider the area from which the proposed development will potentially be visible. The emphasis must be on a reasonable approach which is proportional to the scale and nature of the proposed development. At the scoping stage the study area will only be defined in a preliminary way and is likely to be modified as more detailed analysis is carried out, in discussion with the competent authority.

See Paragraphs 6.6–6.23 for more detail on mapping areas of visibility and on visual receptors and representative viewpoints.

Establishing the visual baseline

- 6.3 Baseline studies for visual effects should establish, in more detail than is possible in the scoping stage, the area in which the development may be visible, the different groups of people who may experience views of the development, the viewpoints where they will be affected and the nature of the views at those points. Where possible it can also be useful to establish the approximate or relative number of different groups of people who will be affected by the changes in views or visual amenity, while at the same time recognising that assessing visual effects is not a quantitative process.
- 6.4 These factors 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 that visual baseline

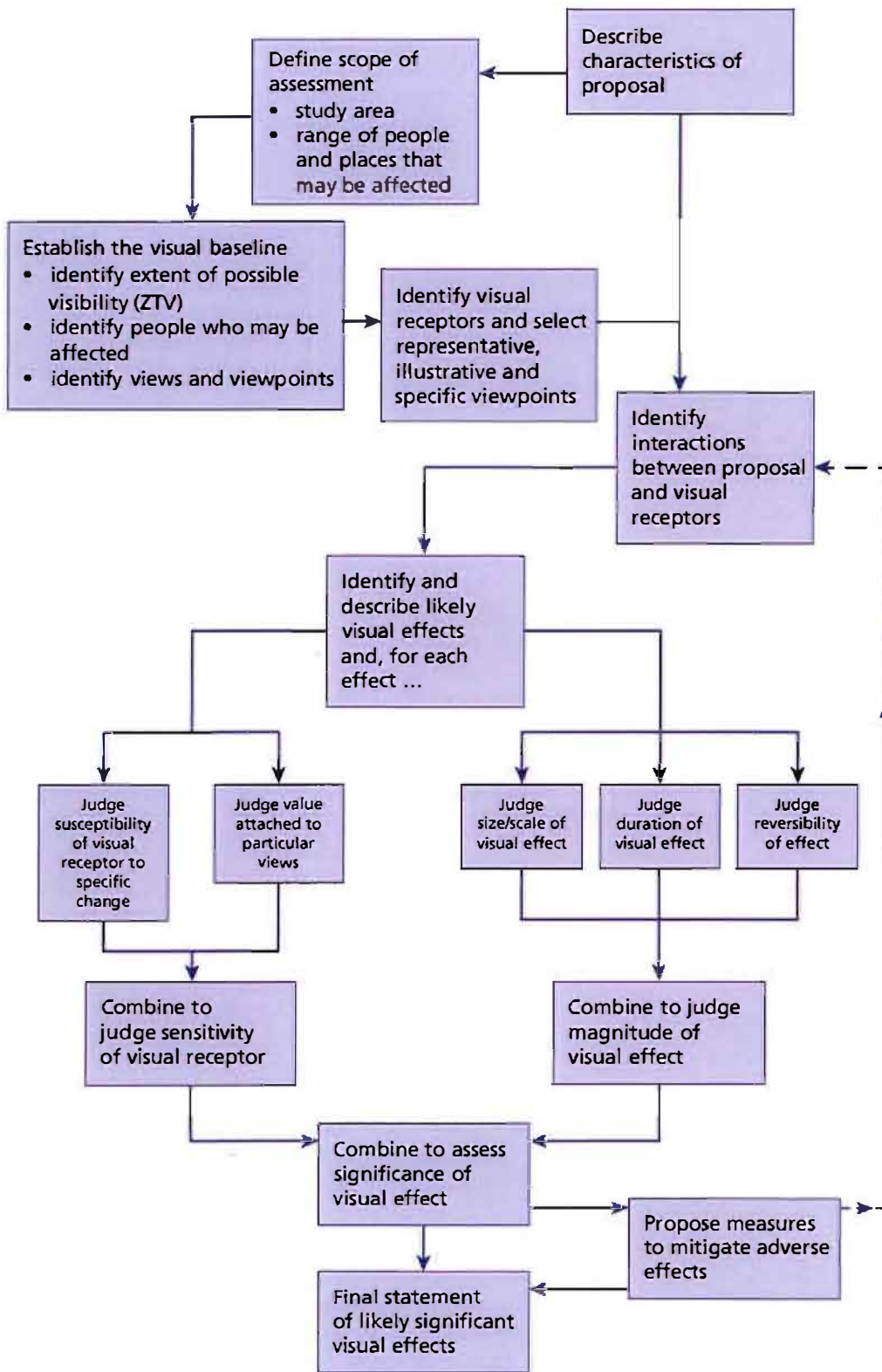


Figure 6.1 Steps in assessing visual effects

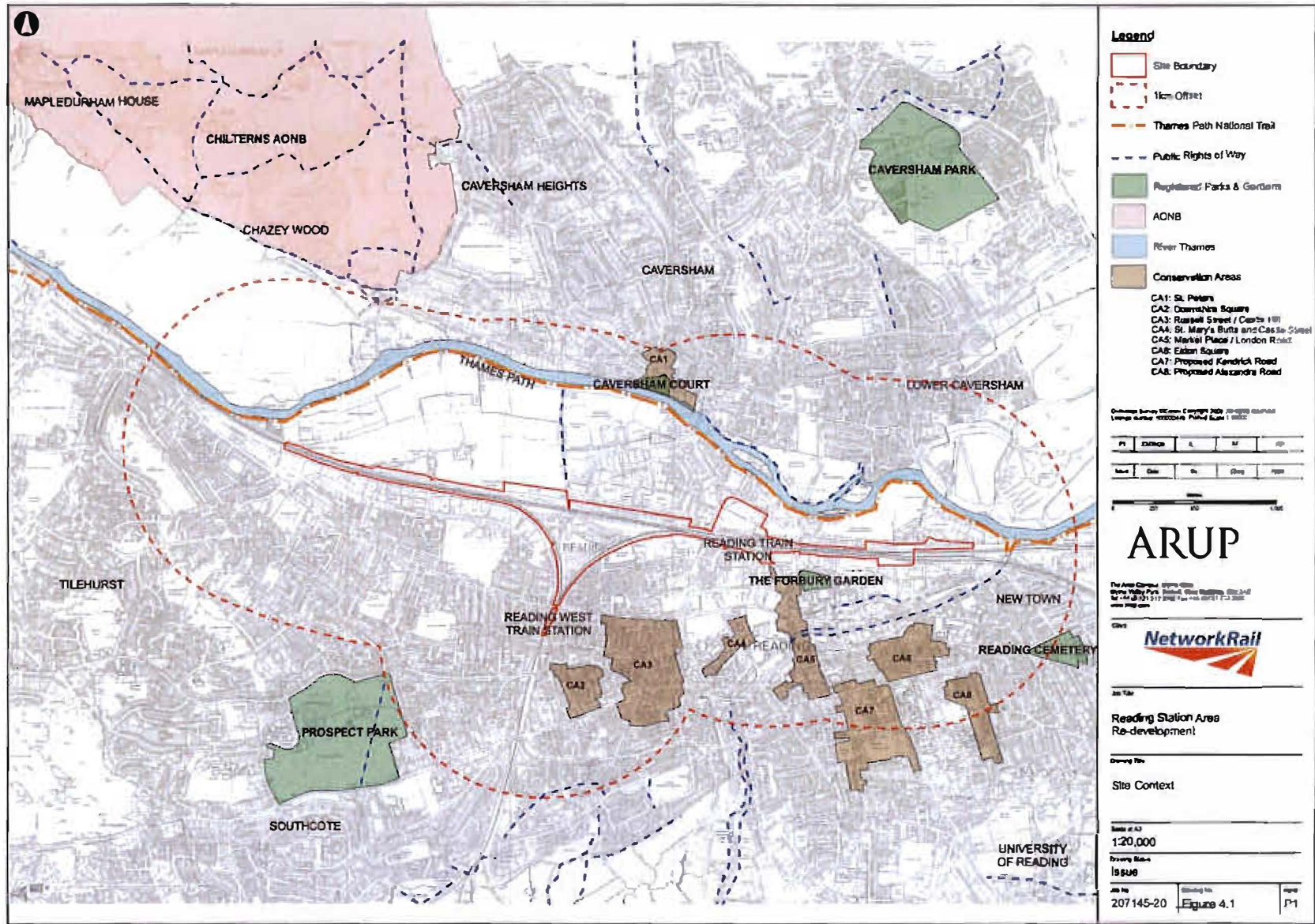


Figure 6.2 A site context plan identifying public rights of way, registered parks and gardens, an Area of Outstanding Natural Beauty and Conservation Areas. People visiting or using any of these may be visual receptors

data may require updating at intervals, particularly to reflect modifications to the design as a result of the iterative design process.

Interrelationships with the cultural heritage topic area need to be borne in mind when developing the visual baseline and identifying visual effects. Specialist input from cultural heritage professionals is likely to be required to interpret the range of relevant cultural heritage studies that may help to identify important viewpoints. Development proposals may, for example, have visual effects on the settings of heritage assets, including important views to and from those assets – settings are defined as ‘the surroundings in which a heritage asset is experienced’ (English Heritage, 2011). Where there are heritage assets in the vicinity of the proposed development their settings will need to be taken into account when mapping visibility and defining important views that may be altered by the proposal. In urban areas there may be particular interest in strategic views relating to heritage assets, landmarks and other key views and vistas that may have been defined by cultural heritage experts.¹ Some townscape assessments can also help with this.

6.5

Mapping visibility

Land that may potentially be visually connected with the development proposal – that is, areas of land from which it may potentially be seen – must be identified and mapped at the outset, bearing in mind the comments in Paragraph 6.2 about reasonableness and proportionality. Visibility mapping is an important tool in preparing the visual effects baseline but does not in its own right identify the effects. It can also play an important part in the different stages of the iterative design process. It can, for example, contribute to the early stages of site 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 in response to the potential visibility of different options.

6.6

There are two main approaches to mapping visibility:

6.7

1. Manual approaches use map interpretation, cross sections through the site in relation to its surroundings and visual envelope mapping on site. This means standing at the location of the development and looking out to identify and map the land that is visible from that and other points within the site. 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 involve a degree of subjectivity since they depend on judgements made 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, including appraisals outside EIA.
2. 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 theoretically be visible.

Use of digitally mapped areas of visibility has increasingly become the norm since the previous edition of this guidance was published, although it is less commonly used in

6.8

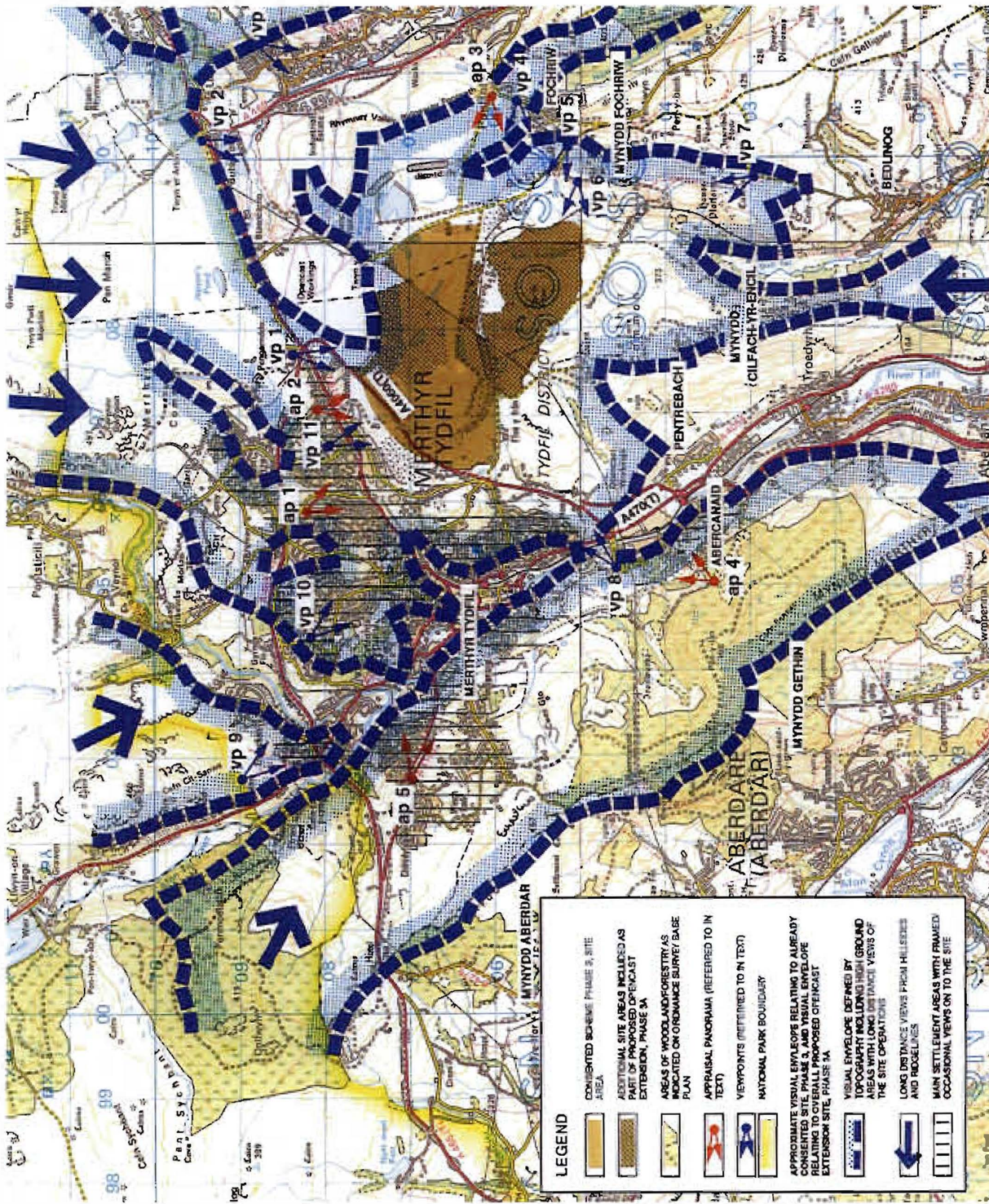


Figure 6.3 A manual approach to visual envelope mapping using topographic analysis and viewpoint surveys

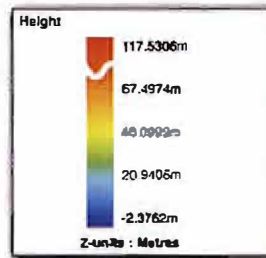
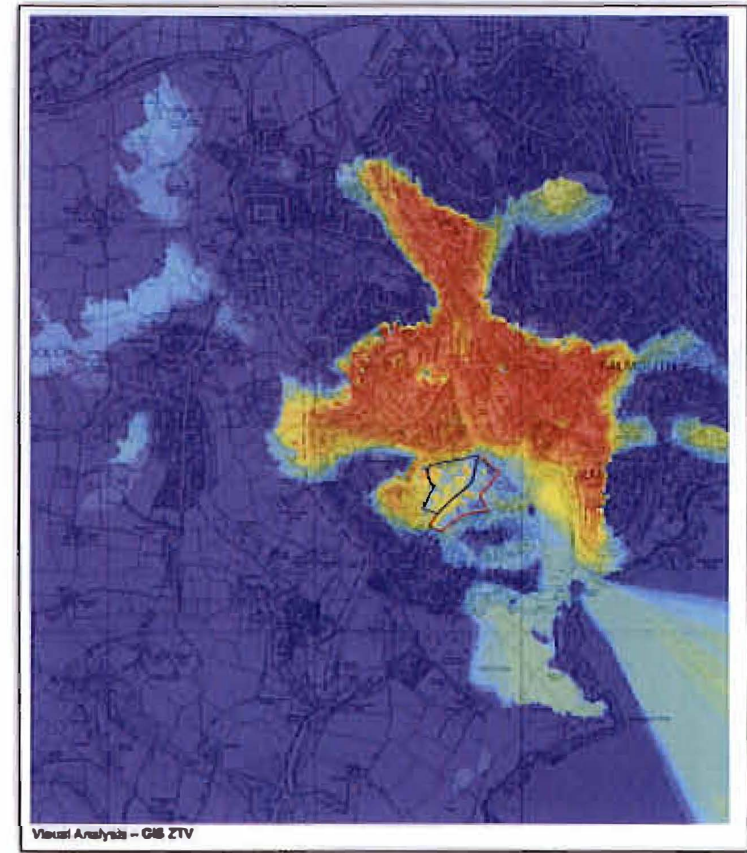
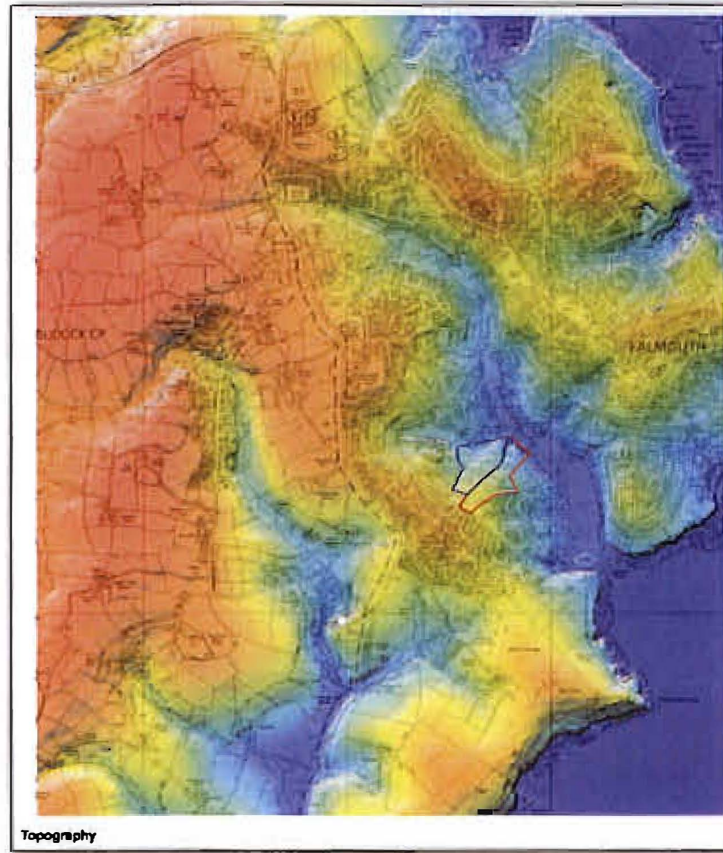
urban areas because of the difficulty of mapping and modelling accurately the buildings and structures that would influence potential visibility. The map products of this process are referred to as either the Zone of Visual Influence (ZVI) or the Zone of Theoretical Visibility (ZTV). The second of these (ZTV) is now recommended since it makes clear that the area so defined only shows land from which the proposal may theoretically be visible. That is, it treats the world as 'bare earth' and does not take account of potential screening by vegetation or buildings. 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.

In the case of linear developments such as 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 (see Figure 6.5). 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. 6.9

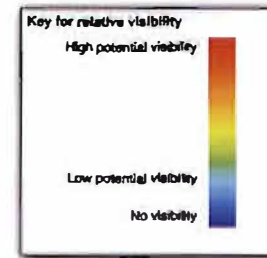
The ZTV mapping is the desk study component of the visibility analysis. In reality many factors other than terrain will influence actual visibility. Other landscape components that may affect visibility, for example buildings, walls, fences, trees, hedgerows, woodland and banks, can in theory be added 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 public viewpoints that may have views of the site and proposed development can be identified and the extent of the views checked. Site surveys are therefore essential to provide an accurate baseline assessment of visibility. 6.10

Both ZTV mapping and site survey should assume that the observer eye height is some 1.5 to 1.7 metres above ground level, based on the midpoint of average heights for men and women. The assumed eye height used must in any case be clearly stated. The effects of distance on views must 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. This will vary with the type of project and must be agreed with the competent authority. 6.11

For some types of development the visual effects of lighting may be an issue. In these cases it may be important to carry out night-time 'darkness' surveys of the existing conditions in order to assess the potential effects of lighting and these effects need to be taken into account in generating the 3D model of the scheme. Quantitative assessment of illumination levels, and incorporation into models relevant to visual effects assessment, will require input from lighting engineers, but the visual effects assessment will also need to include qualitative assessments of the effects of the predicted light levels on night-time visibility. The visibility survey and definition of ZTVs may need to be reviewed and updated as siting, layout and design proposals are progressively refined and lighting effects become clearer. 6.12



- Phase 1 boundary
- Phase 2 boundary



- Phase 1 boundary
- Phase 2 boundary

Note:
This plan illustrates the extent in which the site is potentially visible from the local area - the Zone of Theoretical Visibility (ZTV). The plan has been prepared using GIS computer software (MapInfo) and Ordnance Survey data. Field verification is required to refine the accuracy of the ZTV.



Project Details	Swanvale, Falmouth
Title	Figure 2: GIS Analysis
Scale	as shown
Drawing Ref	EED11007/02a
Date	January 2010
Checked	BCAP



Figure 6.4 Topographical analysis and ZTV for proposed urban development