

APPENDIX A

Technical Overview and Definitions of Terms

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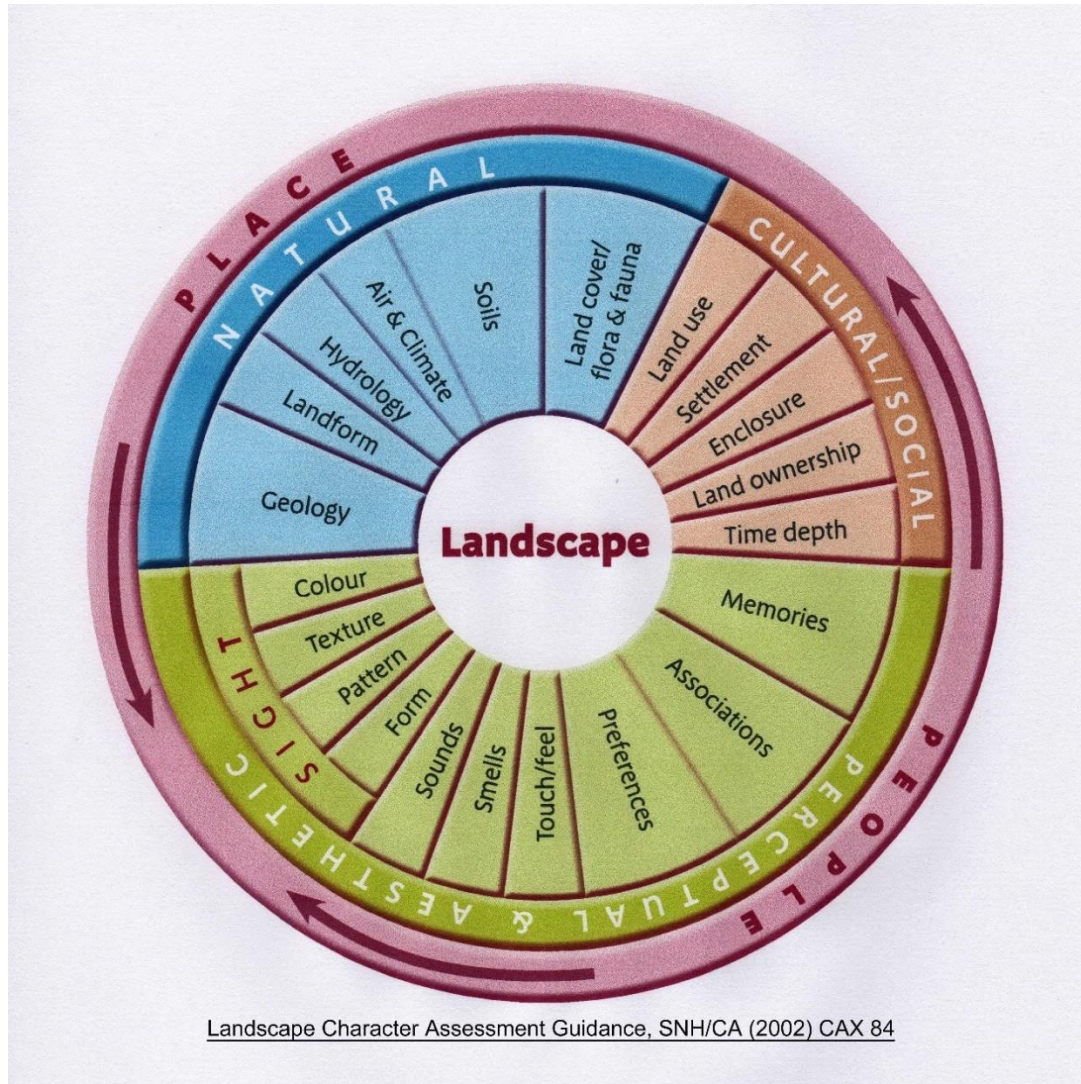
Definition and Explanation of Terms

- 1.1 The words, terms and phrases used throughout environmental and landscape assessments are usually the same, as this makes it easier to compare like with like across a range of disciplines and topics. Often, the terms are derived from international conventions and directives issued by bodies such as the European Union, and are thus used in planning policy and guidance; it therefore makes sense to use the same ones in technical assessments.
- 1.2 Also, as pressure on land and communities to absorb much-needed new development intensifies, there is an increasing interest in, and awareness of, the relevance and importance of, terms such as 'Landscape', 'Sensitivity', 'Quality' and 'Value'. Whilst the terms themselves may be familiar, their true meaning is not necessarily fully understood. Sometimes there are widely-accepted definitions of the terms, but in other cases the person carrying out the assessment sets out their own definitions, and explains the criteria which will be applied in the study.
- 1.3 This is important because the assessment process must be 'transparent'. The reasoning behind the assumptions and judgements which are made, and the conclusions drawn at the end, must be clear and easy to follow. There may not be agreement on the assumptions, judgements and conclusions themselves, especially as some of the areas covered may be considered 'subjective', but how they were arrived at should be obvious.
- 1.4 The definitions of the most widely-used terms are set out below.

LANDSCAPE

- 1.5 The European Landscape Convention (ELC) is at the heart of landscape-related matters in planning policy.
- 1.6 In its Preamble, the ELC states: *"the landscape... is a basic component of... natural and cultural heritage... A landscape, within the meaning of the convention, is an area as perceived by people, namely, a subject of public evaluation and aspirations"*.
- 1.7 It goes on to say: *"Landscape is a system of interaction, both spatial and social, between its elements... When such elements, or basic components of the landscape, are studied or used in their own right, they cannot reflect the systemic, holistic dimension of landscape. In practice, it is the interaction between the different elements that is more important than the elements themselves."*
- 1.8 In the foreword to its publication *An Approach to Landscape Character Assessment* (October 2014), Natural England (NE) explains that *"Landscape reflects the relationship between people and place, and the part it plays in forming the setting to our everyday lives. **It is a product of the interaction of the natural and cultural components of our environment**, and how they are understood and experienced by people."* [My emphasis]
- 1.9 The Countryside Agency and Scottish Natural Heritage's publication *Landscape Character Assessment Guidance for England and Scotland* (2002) ('LCA guidance') states that the term 'Landscape' *"... does not mean just special or designated landscapes and it does not only apply to the countryside. Landscape can mean a small patch of urban wasteland as much as a mountain range, and an urban park as much as an expanse of lowland plain. It results from the way that different components of our environment - both natural (the influences of geology, soils, climate, flora and fauna) and cultural (the historical and current impact of land use, settlement, enclosure and other human interventions) - interact together and are perceived by us. People's perceptions turn land into the concept of landscape"*.
- 1.10 The diagram below is taken from the 2014 guidance, and illustrates the many complex and multi-faceted aspects that contribute towards our understanding of 'Landscape', all of which need to be considered in a landscape assessment.

Figure 1: What is Landscape?



LANDSCAPE CHARACTER

- 1.11 The LCA guidance referenced above is recognised as the best-practice approach to LCA. It defines landscape character as “A distinct and recognisable pattern of elements that occur consistently in a particular type of landscape. Particular combinations of geology, landform, soils, vegetation, land use, field patterns and human settlement create character. Character makes each part of the landscape distinct, and gives each its particular sense of place”.
- 1.12 The diagram ‘What is landscape?’ above is used as the starting point for landscape assessment, and reminds us that landscape character is not only reflected in an area’s natural and physical attributes, but also in its cultural history, and in the way it influences people’s perceptions and emotions.
- 1.13 It should be noted that landscape character assessment can be applied to city-, town-, village- and seascape character as well.

LANDSCAPE QUALITY

- 1.14 There are different aspects of Landscape Quality which need to be considered in landscape assessment. From an LCA perspective, “Landscape quality (or condition) is based on judgements about the physical state of the landscape, and about its intactness, from visual, functional, and ecological perspectives. It also reflects the state of repair of individual features and elements which make up the character in any one place.” [ibid].

- 1.15 The term 'Quality' also reflects "... *the value that is placed on landscapes which appeal primarily to the visual senses, but this value is not absolute and tends to reflect prevailing ideas about which landscapes are of special value. Although quality is a separate issue from evaluation it is often linked because landscapes of higher quality may be more valued and more likely to be designated.*" [Source: Scottish Natural Heritage]
- 1.16 Quality in landscape terms may reflect a place which is considered beautiful because it is unspoilt, or because it is well-managed and cared-for, and the features which make it special are in good condition and intact. It may also be a judgement, varying from person to person, about the aesthetic and / or perceptual quality, or qualities, of the landscape, and how it 'makes them feel'.
- 1.17 It is important to note that a landscape may be defined as high quality as a result of natural habitats which contribute to biodiversity, for example, although it may not appear conventionally 'beautiful' to the casual observer.
- 1.18 Inevitably there is a certain amount of subjectivity in evaluating Landscape Quality, but it can be quantified (see for example those set out in the Green Flag Award Scheme <http://greenflagaward.org/judges/judging-criteria/>).

LANDSCAPE VALUE

- 1.19 Guidance for landscape assessments sets out in some detail methods for establishing Landscape Value; however, in LVIA, Landscape Value determines Landscape Sensitivity, whereas in LSCA, it is also used to determine Landscape Capacity (both the LVIA and LSCA processes are described in the Landscape Assessment Methods section below).
- 1.20 Understanding Landscape Value is essential, as it plays a major role in most environmental, landscape and social planning policies. It is also an integral part of the process of arriving at judgements about sensitivity and capacity.
- 1.21 Para. 109 of the NPPF sets out how the planning system should contribute to and enhance the natural and local environment. The first item on the list is "**protecting and enhancing valued landscapes**".
- 1.22 Para. 110 states: "*In preparing plans to meet development needs, the aim should be to minimise pollution and other adverse effects on the local and natural environment. Plans should allocate land with the least **environmental or amenity value**, where consistent with other policies in this Framework*".
- 1.23 Landscape Value has been defined in GLVIA3 as "*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*". National Parks and AONBs are examples of landscapes which are considered highly valuable for various reasons, and which require protection through designation and planning policy.
- 1.24 GLVIA3 notes that "... *the presence of features of wildlife... or historical and cultural interest can add to the value of the landscape as well as having value in their own right.*" [GLVIA3 p. 84]
- 1.25 The Council of Europe has published a useful document (Naturopa No. 98 2002 http://www.coe.int/t/dg4/cultureheritage/heritage/Landscape/naturopa_en.asp) which explains the concept of Landscape Value and why it is so important. It describes the different types of Landscape Value, including economic, social and heritage.
- 1.26 The function or role that a particular area or site performs in the wider landscape context, and the contribution it makes, is also an important factor in establishing its value.
- 1.27 As set out above, 'Landscape Value' plays an important role in planning policy, especially as it is an integral component of 'Quality of Life' (see definition below). Pursuing sustainable development, which is at the heart of national planning policy, involves seeking positive improvements in people's Quality of Life as well as in the quality of the built, natural and historic environment.
- 1.28 Also, the community and social value of the landscape matters greatly in land use planning, especially as this value is tied to the important role landscape plays in Quality of Life. The ELC states:
"It is because people have a perception of their territory (definition of landscape) that they are capable of evaluating it, namely, of applying to this area "as perceived by people" value systems which underlie landscape assessment. This evaluation by the population enables people to voice

their aspirations, the expression of which in the form of landscape quality objectives is the basic principle of landscape policies and of specific measures with a view to landscape protection, management and planning.

*“The landscape also bears within it a system of **social values**, which sometimes have to be highlighted through awareness-raising activities. The landscape’s social values are tied to its importance for quality of life, health, and to its contribution to the creation of local cultures.*

“Landscape identification, characterisation and assessment underlie landscape quality objectives. This is why such assessment should be done with the interested parties and population concerned, and not just with specialists in landscape appraisal and operations”.

- 1.29 Community values are often difficult to quantify. However, in order to arrive at objective conclusions, methods which are as objective and transparent as possible are used.
- 1.30 As with Quality (and the two are related), there will always be a degree of subjectivity in value judgements, but again, methods have been developed to quantify Landscape Value objectively, such as the Quality of Life Capital (QoLC) approach (see below).
- 1.31 In landscape assessment, judgements about a landscape’s value need to take into account environmental, social and economic issues and the values of the “common place”. ‘Landscape Value’ is usually factored in to LVIA through reference to designations and features of more than local significance; the value of places to *people* is not always considered to be a ‘landscape issue’, despite its lying at the heart of many planning policies and designations. In most LVIA’s, only effects on landscape character and visual amenity are considered. This means that places which may not be considered highly ‘sensitive’ to change (for example due to having low quality landscape characteristics, or limited visual amenity value) may appear to be good candidates for development. Yet the value of these places to people on a local level may be significant: **“A service that matters at national level is not necessarily more important than one that matters only locally.”** [Source: QoLC methodology]

QUALITY OF LIFE

- 1.32 ‘Quality of Life’ is relevant to this study as it is a term widely used in legislation and planning policy (for example NPPF paras. 9, 17, 58, 69 and 123).
- 1.33 ‘Quality of Life’ integrates both objective and subjective indicators; it covers a very broad range of life domains and individual values. Quality of Life is multidimensional, with the five key dimensions often being described as:
- a) Physical wellbeing;
 - b) Material wellbeing;
 - c) Social wellbeing;
 - d) Emotional wellbeing; and
 - e) Development and activity.
- Human well-being is assumed to possess multiple constituents, including:
- i) *Basic materials to support a good quality of life*, such as secure and adequate livelihoods, ample food, shelter, clothing, and access to goods;
 - ii) *Health*, including well-being, a healthy physical environment, such as clean air and water;
 - iii) *Good social relations*, which includes social cohesion, mutual respect, the means to assist others and provide for children;
 - iv) *Security*, including secure access to resources, personal safety, and protection against natural and human induced disasters; and
 - v) *Freedom of choice and action*, which are the opportunities that enable individuals to achieve what they value doing and being [source: <http://jncc.defra.gov.uk/page-6382>].
- 1.34 The more intangible aspects of culture, values, and spirituality are also key contributors to overall Quality of Life, to which ‘Landscape’ makes a very large contribution. *“Individual spiritual well-being is also associated with numerous links between the individual and landscape, taken to mean every aspect of the way in which nature is organised by societies: it can be the pleasure of enjoying the charms of nature, of directing it to satisfy one’s aesthetic or symbolic aspirations (designing and*

creating a garden, for example) or more simply the pleasure of observing natural processes: living creatures growing, the ecological processes that can be observed in the landscape, or even tectonic phenomena – all spectacles that provoke emotions, sentiments or sensations capable of contributing to spiritual well-being”. [Source: Landscape and sustainable development – Challenges of the European Landscape Convention Council of Europe Publishing (July 2006) p. 40]

- 1.35 These factors add to the complexity of evaluating and objectively quantifying Quality of Life; however, techniques have been developed which help to measure these multiple domains and how they relate to each other.
- 1.36 The Quality of Life Capital (QoLC) approach is an example of this. QoLC approach guidance was developed jointly by the Countryside Agency, English Nature, English Heritage and the Environment Agency to ‘provide a consistent and integrated way of managing for Quality of Life’. (<https://www.google.co.uk/#q=Quality+of+life+capital+overview+report+2001>).
- 1.37 Although this guidance concentrates on the benefits for human Quality of Life that come from the environment, the approach is as valid for social and economic as for environmental benefits.
- 1.38 The relationship between QoLC and landscape issues is set out in Landscape Character Assessment: Guidance for England and Scotland Topic Paper 2: *Links to other sustainability tools* (Scottish Natural Heritage / The Countryside Agency (2002)). Essentially characterisation describes, whereas QoLC evaluates and derives aims. The two are complementary. LCA can inform a QoLC exercise by indicating the benefits that individual features or areas provide in creating sense of place. Conversely, QoLC can be used to assess character areas and their ‘services’ as well as their capacity to accept further development such as housing.
- 1.39 The QoLC methodology assesses the value of an area, or site, by considering its context. It notes, for example, whether its features and habitats are common or rare, where it is visible from, and what it contributes to visual amenity. It assumes that the more people who use the site, the greater its value, “...particularly if they don’t have alternatives”.
- 1.40 Using the QoLC approach helps to identify (and subsequently protect, through planning policy for example) areas, or sites, which deliver the most benefits in environmental and social terms. It concentrates on “... *those benefits for human quality of life that come from the environment*”, based on the need for ‘stocks of assets’ to be safeguarded in order to ensure a ‘flow of benefits’. The QoLC approach “... *stands back from things or places and considers the **benefits or services** that they provide for human well-being (“what matters and why?”)*”. It is used as “... *a tool for identifying what matters and why, so that the consequences (both good and bad) of plans, development proposals and management options on quality of life can be better taken into account by practitioners and decision takers...*”.
- 1.41 The benefit of this approach is that it is ‘**consistent, systematic and transparent**’, providing a method for objectively evaluating factors such as ‘quality’ and ‘value’ which are often hard to quantify.
- 1.42 Part of the process of integrating the QoLC approach into LCA involves identifying the benefits provided by the landscapes / features / areas in question to people from the environment. “*The environmental benefits and services which QoL Capital manages are, to be precise, **social** and (in some cases) **economic** benefits to people which happen to depend on **environmental** assets*” [source: QoLC methodology]. These are often closely related to GI assets.
- 1.43 Key points of consideration are:
- Who does the benefit matter to, why, and at what scale (e.g. national, regional, local)?
 - How important is the benefit at that scale?
 - Do we have enough of it? (In other words, is it common or rare?)
 - Can it be replaced?
 - What (if anything) could make up for any loss or damage to the benefit - is it substitutable? (And, can it be ‘compensated’ for?).

NATURAL CAPITAL

- 1.44 'Natural Capital' refers to: *"...the planet's stocks of water, land, air, and renewable and non-renewable resources (such as plant and animal species, forests, and minerals). The term natural capital implies an extension of the economic notion of capital. Just as all forms of capital are capable of providing a flow of goods and services, components of natural capital interact to provide humans and other species with goods and services that are wide-ranging and diverse. The collective benefits provided by the resources and processes supplied by natural capital are known as ecosystem goods and services, or simply ecosystem services (see definition below). [Source: <http://www.dauidsuzuki.org/issues/wildlife-habitat/projects/natural-capital/what-is-natural-capital/>]*
- 1.45 The Natural Environment White Paper (NEWP) *The Natural Choice: securing the value of nature* (DEFRA 2011) is a statement of adopted government policy [<https://www.gov.uk/government/publications/the-natural-choice-securing-the-value-of-nature>]. It recognises that *"...a healthy natural environment is the foundation of sustained economic growth, prospering communities and personal wellbeing. It sets out how the value of nature can be mainstreamed across our society by facilitating local action; strengthening the connections between people and nature; creating a green economy; and showing leadership in the EU and internationally"*. It identifies 92 specific commitments for action. Under the heading 'Growing a Green Economy – Capturing the value of nature in our nation's accounts', commitment 35 states: *"We will put natural capital at the heart of government accounting."*
- 1.46 Natural Capital can be objectively quantified. The foreword to the NEWP states: *"Most people already recognise that nature has an intrinsic value. Over 500 scientists from around the world have now developed a tool by which we can assess more accurately the value of the natural world around us. The National Ecosystem Assessment has given us the evidence to inform our decisions. It makes clear that government and society need to account better for the value of nature, particularly the services and resources it provides"*.

ECOSYSTEM SERVICES

- 1.47 'Ecosystem Services' are the services provided by nature that benefit people and influence human health and well-being (see Quality of Life above). They are an integral part of the wider ecosystem approach, which is a key element of planning for sustainable development; it also advocates the involvement of people in the decision-making process.
- 1.48 *"These services are imperative for survival and well-being. They are also the basis for all economic activity.... The services that nature provides for free are often not accounted for and, therefore, not properly valued by decision-makers. We evaluate the benefits that nature provides and calculate the economic cost of these services if we had to provide them ourselves."* [Idem]
- 1.49 The NPPF makes explicit reference to the need for the planning system to recognise the wider benefits of ecosystem services, especially in conserving and enhancing the natural environment (see para. 109).

GREEN INFRASTRUCTURE

- 1.50 'Green Infrastructure' (GI) is defined in the NPPF as *"A network of multi-functional green space, urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits for local communities"* (see also Quality of Life above).
- 1.51 More specifically, it is *"... a strategically planned and delivered network comprising the broadest range of high quality green spaces and other environmental features. It should be designed and managed as a multifunctional resource capable of delivering those ecological services and quality of life benefits required by the communities it serves and needed to underpin sustainability. Its design and management should also respect and enhance the character and distinctiveness of an area with regard to habitats and landscape types."*

"Green Infrastructure includes established green spaces and new sites and should thread through and surround the built environment and connect the urban area to its wider rural hinterland. Consequently it needs to be delivered at all spatial scales from sub-regional to local neighbourhood levels, accommodating both accessible natural green spaces within local communities and often much larger sites in the urban fringe and wider countryside." (From Natural England, reported in *Green Infrastructure Strategy Herefordshire* Herefordshire Council (HC) February 2010).

- 1.52 Amongst its many benefits, GI has a vital role to play in peoples' health and wellbeing. Residents who live near nature generally cope better with the stress of everyday life and are considered happier than those who do not have easy access to green spaces. *"Proximity to greenspace is generally associated with increased levels of physical activity. This effect is particularly marked in the under 25s, who are more likely to be obese if they do not have access to greenspace. Regular participation in physical activities has been shown to improve physical and mental health. Increasing physical activity through access to high quality greenspace has the potential to save the NHS £2.1 billion a year... The green infrastructure approach therefore integrates consideration of economic, health and social benefits to ensure that delivery against both environmental and socio-economic objectives is central to the planning, management and delivery of these spaces."* (Worcestershire Green Infrastructure Strategy 2013 – 2018 Worcestershire County Council)
- 1.53 GI can improve the community's experience of natural and historic places. Integrating access to green spaces with natural, cultural and heritage value into the everyday lives of communities can help to develop a connection with the local area and increase community participation. It can provide learning opportunities, reduce crime and encourage social activity. Education involving the natural environment and green spaces can positively influence the functioning of communities through reducing anti-social behaviour, increasing self-esteem and improving skills. It can also benefit the natural and historic environment by creating and enhancing biodiversity, connecting wildlife corridors and networks, protecting and enhancing landscape character, and improving the quality of rivers and streams as well as conserving and enhancing heritage assets such as historic landscapes and archaeological features, and improving the setting of historic buildings and monuments.
- 1.54 It has great relevance in landscape assessment: GLVIA3 states: *"Green infrastructure is not separate from the landscape but is part of it... LVIA will often need to address the effects of proposed development on green infrastructure as well as the potential the development may have to enhance it."*
- 1.55 The Landscape Institute's position on GI is set out in its publication *Green Infrastructure An integrated approach to land use* (2013). It states: *"Landscape professionals work with stakeholders to create a common vision for places that makes the best use of the land, using GI to provide for character and beauty as well as multifunctionality"*. GI strategies are informed by LCA.
- 1.56 In February 2010, Herefordshire Council produced a Green Infrastructure Strategy as part of the Local Development Framework. This provides an evidence base of all the county's GI assets and establishes a vision for their sustainable future. It sets out guidelines for developers, planners and land managers to enable the successful integration, implementation and management of green infrastructure. It has informed this study.

LANDSCAPE SENSITIVITY

- 1.57 In terms of landscape character, *"Landscape sensitivity... relates to the stability of character, the degree to which that character is robust enough to continue and to be able to recuperate from loss or damage. A landscape with a character of high sensitivity is one that, once lost, would be difficult to restore; a character that, if valued, must be afforded particular care and consideration in order for it to survive."* [Source: LCA Guidance Topic Paper 6]
- 1.58 LCA Guidance also emphasises that *"A landscape is sensitive if it is likely to be adversely affected by the type of change proposed"*.
- 1.59 A judgement concerning sensitivity is an **outcome** resulting from the testing of proposals against natural, cultural and aesthetic factors and features which may be sensitive. It is not a 'baseline attribute' but a combination of the baseline factors.
- 1.60 Small changes in a landscape of high sensitivity could be very damaging, whereas large changes in a landscape of low sensitivity may be more acceptable.
- 1.61 In LVIA, in order to assess the significance of landscape effects, the landscape receptors (i.e. the landscape resources that would be affected) need to be assessed in terms of their sensitivity. This involves combining judgements about their susceptibility to the type of change or development proposed, and their Landscape Value.
- 1.62 'Overall Landscape Sensitivity' is a term usually used in LSCA. It refers to the outcome of the first part of the LSCA process. Once the levels of Landscape Quality and baseline 'desktop' Landscape Value are established, a judgement about Landscape Character Sensitivity is made. Then,

Landscape Character Sensitivity and Visual Sensitivity are combined to arrive at a judgement about Overall Landscape Sensitivity. Once this is done, the judgements are combined with those about overall Landscape Value to arrive at judgements about Landscape Capacity.

VISUAL SENSITIVITY

- 1.63 Visual Sensitivity refers to both places and people, but it is the people who are the receptors (i.e. those who would experience an effect), sensitive or otherwise.
- 1.64 Judging the visual sensitivity of the landscape involves considering its general visibility and the potential scope to mitigate the visual effects of any change that might take place. Visual sensitivity is also reflected in the numbers of people who are likely to perceive the landscape and any changes that occur in it, whether they are 'ordinary' residents or visitors. The more highly valued a particular view or viewpoint is, and the more people who visit it for the purpose of enjoying the view, the more sensitive it is likely to be.

LANDSCAPE CAPACITY

- 1.65 The term 'Capacity' can be defined as "the maximum amount that something can contain". If something has reached 'Capacity' it is full, and cannot take any more.
- 1.66 'Capacity' in this context refers to the amount of change a particular landscape type (or area, or zone, or individual site, or town / village) can tolerate without there being unacceptable adverse effects on its character, or the way that it is perceived, and without compromising the values attached to it (see also Effects below).
- 1.67 In LSCA, the assessment of the sensitivity of different types or areas of landscape to the type of change in question must be combined with an assessment of the more subjective, experiential or perceptual aspects of the landscape, and the value attached to it.
- 1.68 It is more likely, but not certain, that a landscape of low sensitivity will have a higher capacity to accept change.
- 1.69 It is important to note that the assessment of a landscape's capacity to accept change will vary according to the type and nature of change being proposed. The nature of the proposed form of change must be defined before undertaking an LSCA.
- 1.70 It is more likely, but not certain, that a landscape of low sensitivity will have a higher capacity to accept change.
- 1.71 Judgements about Capacity are made by combining Overall Sensitivity with Landscape Value (based on both 'desktop' and 'on-the-ground' assessment findings).

EFFECTS (AND IMPACTS)

- 1.72 The word 'effect' is often used interchangeably with 'impact', but I use the terms as defined in GLVIA3. 'Impact' is 'the action being taken'. 'Effect' is the 'change resulting from that action'.
- 1.73 Consideration of potential effects which could arise from new development is most often associated with LVIA, but it is also part of the process of determining a landscape's sensitivity, and its capacity to accept this change: judgements must be based on an understanding of how change could affect the landscape's character.
- 1.74 If the initial LCA does not adequately assess the landscape baseline, predictions about likely effects and their significance may be flawed.