

sense and sensitivity

Earlier this year, the Countryside Character Network hosted a workshop to discuss the issues surrounding landscape sensitivity and capacity.¹ **Paul Mahony** draws on key themes from the day to outline current thinking in this area and explore the ways in which approaches to sensitivity and capacity are evolving

“**B**ritain is full. You can tell Britain is full because you can't find anywhere to build new houses, roads, railways, power stations, wind farms and incinerators. You can tell Britain is full because the Government has to change planning regulations to reduce the powers of communities to resist housing being imposed on them. You can tell Britain is full because the Government is forcing local authorities to build ever smaller houses, packed in more closely together, without gardens. Businesses complain that Britain is so full that there is nowhere to build factories or headquarters ... you can tell Britain is full because we have ruined almost all our natural habitat to make way for human activities.”

Anthony Browne, environment editor of *The Times* newspaper, touched upon the issues of landscape sensitivity and capacity. A somewhat dramatic perspective, yet consciously or not, it poses an increasingly important question – that is, how can the landscape accommodate social and economic expansion, while also retaining the aspects of the environment that we value?

At the heart of this lies the notion of landscape sensitivity and capacity. Put simply, sensitivity refers to the ability of the landscape to accommodate change or development – ie. it reflects how 'sensitive' an area is to change. Capacity refers to the amount of change, or development, that can be accommodated in the landscape. Hence, it involves a quantitative dimension, reflecting the limits to acceptable change.

These terms can be used to help define and understand how different types of development impact on different types of landscape. In such cases, potential impacts are judged according to their effect on both landscape visibility and landscape character. Character is defined as “a distinct and recognisable pattern of elements” in the landscape, involving particular combinations of geology, landform, soils, vegetation, land use, field patterns and human settlement.²

This article explores the 'character' side of sensitivity and capacity in order to capitalise on the inextricable link between sensitivity and capacity studies, and the approach to Landscape Character Assessment (LCA) taken in England and Scotland.

It's an approach that is already being widely employed to help guide decisions about the allocation and management of land for different types of development. It also guides their capacity to accommodate change and development. Consequently, LCA forms the basis of current work in this field, providing an established framework for finding solutions that allow essential development to take place. It also helps to maintain the diverse character and valued qualities of the landscape.

It is a difficult and challenging area of work, and one that is

developing rapidly as more studies are carried out. However, the downside to this wealth of interest and activity is a general lack of agreement over the language used. The terms themselves, sensitivity and capacity, have been used more or less interchangeably in the past, and as a result are difficult to define in a way that would be widely accepted. However, it has become apparent that the two are not the same.

In a recent topic paper for the Countryside Agency and Scottish Natural Heritage, Professor Carys Swanwick of the Department of Landscape, University of Sheffield, makes an excellent start in bringing clarity to the debate by tackling the complex issue of terminology.³

She suggests that landscape sensitivity can be defined as embracing a combination of, firstly, the sensitivity of the landscape resource, in terms of both its character as a whole, and the individual elements contributing to character. And secondly, the visual sensitivity of the landscape, assessed in terms of a combination of factors, such as views, visibility, the number and nature of people perceiving the landscape and the scope to mitigate visual impact.

One of the main debates about landscape sensitivity is whether it is realistic to consider landscapes to be inherently sensitive, or whether they can only be sensitive to a specific external pressure. It is useful to consider Swanwick's suggestion that sensitivity can be divided into two separate contexts. First, overall landscape sensitivity: used to refer primarily to the inherent sensitivity of the landscape itself, regardless of the type of change that may be under consideration. And secondly, landscape sensitivity to a specific type of change: defined in terms of the interactions between the landscape itself, the way that it is perceived and the particular nature of the type of change or development in question.

Swanwick argues that both approaches are valid and useful in different circumstances, suggesting that: “[W]hen the word sensitivity is used in other contexts, for example in describing the character of

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people, it is common and seems quite acceptable to describe someone as ‘a sensitive person’, without necessarily specifying what they are sensitive to.”

On the other hand some practitioners question the concept of inherent sensitivity. They argue that landscapes, like people, have different sensitivities to different stimuli. For example, Karen Scott of Newcastle University states that: “As sensitivity assessment is based on landscape character, one must be clear how a specific

development relates to a specific landscape character in order to justify judgements regarding sensitivity. I am unclear what the criteria would be for assessing 'inherent' sensitivity or how this layer of assessment would differ from or add to the strategic landscape designations already in place."

However, to progress from a sensitivity study to a capacity study attention needs to be given to experiential and perceptual aspects of the landscape. The key debate is whether aspects of landscape 'value' should be considered. The consensus is that it should, either by stakeholder engagement, or addressed by an approach like 'quality of life' assessment.

Assessments of sensitivity and capacity rely on professional judgements, although they should also include input from local stakeholders. Judgements about sensitivity are based upon how robust the landscape is. Is it able to accommodate change without adverse impacts on its character? As Swanwick notes: "This means making decisions about whether or not significant characteristics of the landscape will be liable to loss through disturbance, whether or not they could be easily restored, and whether important aesthetic aspects of character will be liable to change."

Studies of this type are likely to employ a geographical information system (GIS), as a convenient and relatively standardised means of tackling the sheer quantity of complex information involved. A common outcome of a sensitivity study is a map of different categories of sensitivity with either three or five hierarchies (for example, low, very low, medium, high, very high).

The map provides an overview of areas where there is relatively low sensitivity to the particular type of change or development. It does not indicate whether or to what extent such change would be acceptable. This requires consideration of other factors and is best tackled through a landscape capacity study.

By contrast, reaching conclusions about capacity means making a judgement about the amount of change of a particular type that can be accommodated. However, it must not have unacceptable adverse effects on the character of the landscape, or the way that it is perceived, and without compromising the values attached to it.

According to Swanwick: "This step must clearly recognise that a

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valued landscape, whether nationally designated or not, does not automatically, and by definition, have high sensitivity." Similarly, landscapes of low sensitivity do not automatically have high capacity to accept change and vice versa.

Without a doubt the best way to gain insight into landscape sensitivity and capacity is to explore the range of approaches that are currently being applied. In the Western Isles of Scotland, a landscape capacity study has been used to help target onshore wind energy development, whilst conserving the natural heritage of the area.

The study, undertaken jointly by the Universities of Newcastle and Northumbria, utilised the existing landscape character assessment as a spatial framework. They combined it with visibility maps, which provided a toolkit for assessment and evaluation. It was noted that no landscape character types show very low sensitivity, because any wind energy development will cause some change in the landscape. In addition, the diversity and dispersed distribution of landscape character types mean that capacities are distributed across the Western Isles. For example, commercial wind energy development such as Boggy Moor and Rocky Moor show relatively higher landscape capacities than Dramatic Mountain Massif and Coastal Mosaic.

A postal survey of the residents, used to assess their landscape values and opinions on wind energy, showed that a majority of local people attach a positive value to all of the landscape character types. However, the survey also showed 52 per cent of residents are strongly in favour of wind energy, but that only 32 per cent were in favour of development in their local area. This case study highlights the importance of landscape value in approaches to capacity, and goes on to recommend that: "The complexity and diversity of opinion needs to be recognised in strategy development and decision making".⁴

In Staffordshire, the Babbie Group and Diacono Associates have carried out a desk-based study to assess the potential impact of traffic on the landscape.⁵ In this instance, landscape sensitivity is examined as the degree to which the landscape character data implies that there will be ecologically significant habitats and cultural resources that contribute to the character likely to be at risk from impact.

The assessment was carried out separately for ecological sensitivity and cultural sensitivity, which together formed the basis for a character sensitivity index. The impacting source, in this case the traffic network, was then similarly characterised by reference to its place in the road hierarchy as well as traffic levels, to establish the magnitude of potential impact. This process was undertaken using GIS and the relationship between landscape sensitivity and potential road impact was then analysed: one of the crucial outputs at this stage was in mapping where the potential impacts were highest, coinciding with the most sensitive landscapes.

Although this method provides only a desk-based assessment, the results do highlight areas of concern for further examination. While site visits may be appropriate in follow up, effective targeting of action, monitoring and transparency of method are all positive outcomes from the process. In using GIS the method also provides the ability to map every aspect of the work, increasing accessibility of both the method and the findings.

One of the key debates in this field surrounds the issue of transparency. For example, strategic studies of overall landscape sensitivity are often enormously detailed and very transparent in describing the approach to making judgements. They are also very

demanding of time and resources, and also quite complex because of the desire to explain each step in the process. While this does result in a very thorough assessment, it could be argued that even experienced practitioners may struggle to fully

understand the terminology used, the subtleties of the definitions and the judgements, and the way that different factors are combined.

On the other hand, some studies of sensitivity and capacity rely solely on professional judgements, the basis of which can sometimes be unclear. In practice, such judgements are often made in the face of limited time and resources. So maybe it is unreasonable to expect complete transparency across all studies. However, when tackling the issue of landscape capacity it is important to ensure sufficient transparency to allow for the involvement of local stakeholders and their values. As Swanwick notes: "It could be argued that there has to be a trade-off between complete transparency in the methods used, and the accessibility of the findings to a non-specialist audience."

Approaches to landscape sensitivity and capacity are still in their infancy, and while there is a wide range of work tackling the issues involved, there remains a dire need for the landscape profession to achieve some form of consensus over the definitions and terminology used. ■

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References

1. Proceedings of the Countryside Character Network (2004) Landscape Capacity and Sensitivity Workshop can be accessed at www.ccnetwork.org.uk/ccnw4.htm
2. Countryside Agency and Scottish Natural Heritage (2002) *Landscape Character Assessment: Guidance for England and Scotland*. CAX 84. Countryside Agency, Cheltenham.
3. Swanwick, Carys (2004) *Topic Paper 6: Techniques and Criteria for Judging Capacity and Sensitivity*. Countryside Agency and Scottish Natural Heritage.

4. Benson, John F et al (2004) *Landscape Capacity Study for Onshore Wind Energy Development in the Western Isles*. Unpublished report to Scottish Natural Heritage (project reference AHLCO4020326).

5. Babbie Group and Diacono Associates (2003) *Assessing Traffic Impacts on the Countryside*. Unpublished report to the Countryside Agency.

Further information and discussion about landscape sensitivity and capacity is available on the Countryside Character Network (CCN). website at: www.ccnetwork.org.uk. The CCN is a free network, open to anyone with an interest in Landscape Character Assessment and its applications.