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Landscape and Change in Policy: Understanding Cultural Values

Memory is a cultural value, formed in part by people's experiences in landscapes. The importance of memory for a full understanding of a cultural landscape is addressed by many of the contributors to this volume. For those involved in influencing policy decisions directly, finding ways to incorporate public opinions into the management of ecological sites can be both challenging and rewarding. In this case study from Natural England, I explore ways that we have tried to work with local partners to create landscape management plans that draw on the local community and their relationship to place.

Policy Context and Rationale

Natural England has a statutory role to promote nature conservation by protecting biodiversity, conserving and enhancing the landscape, promoting access to the countryside and open spaces, encouraging open air recreation, and contributing in other ways to the social and economic well-being of the nation. It also now plays a part in implementing the UK Government's 25-year plan for the natural environment, *A Green Future*,[1] which sets the scene for Natural England's forward-looking conservation strategy, *Conservation 21*.[2] These strategies not only place an emphasis on working at a local level with partners, and joining up large-scale approaches to landscape and wildlife conservation, they also have the potential to reshape our future landscapes—and the public need to be able to influence change and how it is managed. Therefore, a better understanding is required of how people value the natural environment and the benefits they desire from landscape.

The broad underlying hypothesis is that public support for ecologically motivated and/or other types of landscape change will become more sustainable and acceptable where the public's cultural values and the cultural ecosystem services (CES) they benefit from are fully recognized, acknowledged, and integrated into the planning and design of pro-

1 Defra, *Green Future: Our 25 Year Plan to Improve the Environment* (Defra: London, 2018).
2 Natural England, *Conservation 21: Natural England's Conservation Strategy for the 21st Century*, NE642 (Natural England, 2016).

posals at the outset. The benefits of this approach are manifold: people feel that their beliefs and opinions about local landscapes are taken seriously, and they have the opportunity to participate in landscape management. This can lead to a greater sense of community and cohesion. Recognizing the cultural significance of the landscape can also result in improved designs, which might include "signals" of past events that need to be perpetuated in social memory. Embedding cultural memory in landscape management plans argues for the significance of landscapes as sites of remembering, as well as in terms of their ecological or aesthetic significance.[3]

The rationale for incorporating cultural values lies in delivering landscape and cultural services through ecological network ("econet") design, planning, and implementation. Econets will in turn support sustainable development by encouraging connectivity and biodiversity conservation, human well-being, and cultural-natural resilience.[4]

Approach and Methods

An initial study titled *Econets, Landscape, and People* implemented a few small-scale pilot projects to test whether it was possible to capture spatially organized data about people's cultural values—for example, in the context of a potential ecological network in Bedfordshire's Greensand Ridge Nature Improvement Area.[5] Using on-site questionnaires and mapping the findings obtained from these, the researchers showed that local participants could identify the highs and lows of cultural service delivery in geographic areas of different scales—and could separately identify the individual cultural services, such as inspiration, beauty, tranquility, and the presence of wildlife. Specifically, the public could locate these services spatially on paper maps.

Subsequently, research in the Morecambe Bay area of northwest England piloted practical tools and advice as to how cultural service information gathered from the public

3 Conversely, there are a series of potential risks from not building public perceptions into the design stage of econets, including: resistance to the design or its implementation; eventual failure of the econet through a lack of commitment and resources from local people (econets are not sustainable without their involvement); cultural alienation, leading to a decline in use of the landscape by local people and a loss of local identity; missed opportunities for education or recreation; and potential problems arising from actual or perceived negative aspects of the econet.

4 Paul Selman, *Sustainable Landscape Planning; The Reconnection Agenda* (London: Routledge, 2012).

5 H. Inwood, A. Fleming, G. Pungetti, P. Selman, R. Jongman, R. Rackham, and J. Makhzoumi, *Econets, Landscape, and People*, NECR180 (Natural England, 2015).

could be used alongside natural environmental data for the benefit of econet design and other landscape-change proposals. Three landscape focus areas were selected to provide the opportunity for going beyond current understanding by explicitly bringing together public perceptions data and natural science data in a mapped (GIS) form. The aim was that this integrated social and natural science evidence would form the basis for a demonstration of how such outputs could practically inform, guide, and influence future landscape-change policy and plans. The three chosen focus areas were:

- The Duddon Valley—to look at landscape change in the form of woodland planting;
- The Arnside and Silverdale Area of Natural Beauty (AONB)—helpful from a forward or development planning perspective and the relationship with wider green infrastructure and econet opportunities;
- The Lancaster/Morecambe/Heysham triangle—to look at urban and coastal fringe issues.

In each focus area, an extended participatory workshop was held with members of the public. Participants were invited beforehand to use one of two tools developed for the study for capturing their experiences of the landscape and for geolocating these "cultural services"—a participatory GIS tool (PGIS) and a smartphone landscape app. The PGIS tool operates as an interactive website that can be remotely accessed by the public; for example, in advance of participatory mapping sessions or (to extend the reach of sessions) by providing a means of capturing perceptions of other members of the public. The tool also captures simple information about the user, including respondent demographic profile details (age, gender, home postcode), the frequency and purpose of their outdoor visits, and their affiliations (e.g., memberships of wildlife organizations).

A series of zoomable maps is provided on which people can place digital pins that denote locations where they experience cultural services (leisure, solitude, tranquility etc.). People are able to place as many pins as they want within the map area. Ordnance Survey maps and satellite views of the area provide the background for this activity and also provide geographic context when capturing sites of interest on the map. Both maps and satellite are on a zoomable scale, so that people can identify both a detailed location or a more "fuzzy" general locality. In addition to placing pins on the PGIS map, people are able to write free text against the cultural service locations.

The website also provided the ability to upload pictures that users may have taken of the place of interest.

The cultural services examined in the tool comprised an agreed set of five themes:

- active outdoor recreation (walking, cycling, etc.);
- local history, heritage, and learning;
- solitude, calm, and tranquility;
- beauty and inspiration;
- wildlife and nature.

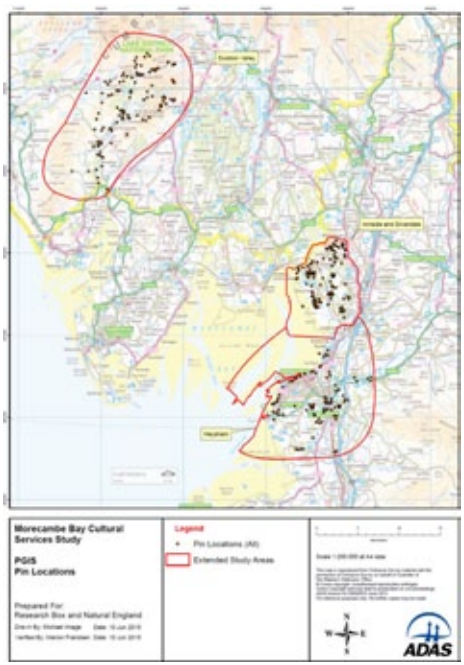

Figure 1: Morecambe Bay study PGIS pin locations. Source: H. Inwood, A. Fleming, M. Frandsen, H. Davies, M. Image, *Incorporating cultural values and services in landscape and ecological planning*; (Natural England: 2015)

The pilot study provided a total of 385 pins eligible for statistical and spatial analysis, placed by 46 users. A map of the pin locations in the three focus areas is shown in figure 1. Analysis of the PGIS data has revealed that the five cultural service themes listed above are enjoyed more in certain land-cover types. For example, of the 14% of overall pins that were allocated to "wildlife and nature," the proportion is noticeably higher for heather grassland (at 38%) and neutral grassland (20%) compared to other land-cover types. At the other end of the scale, and perhaps unsurprisingly, only 7% of pins in urban land cover were assigned to "wildlife and nature." Interestingly, a higher proportion of pins (17%) placed in broadleaf woodland were attributable to "wildlife and nature" compared with just 8% of pins in coniferous woodland. This suggests that quite subtle relationships between biodiversity and habitat type are recognized by the general public.

A number of separate environmental GIS datasets were mapped to identify their relationship with the users' pin locations. Datasets showing statistically significant positive correlation (at the 5% level) with pin location (i.e., those for which far more pins were placed than would be predicted by their surface area if all pins were placed randomly) are shown at the top of figure 2 (up to and including RSPB Reserve). Datasets for which far fewer pins were placed than would be expected (significant at the 5% level) are shown at the bottom (National Park onwards).

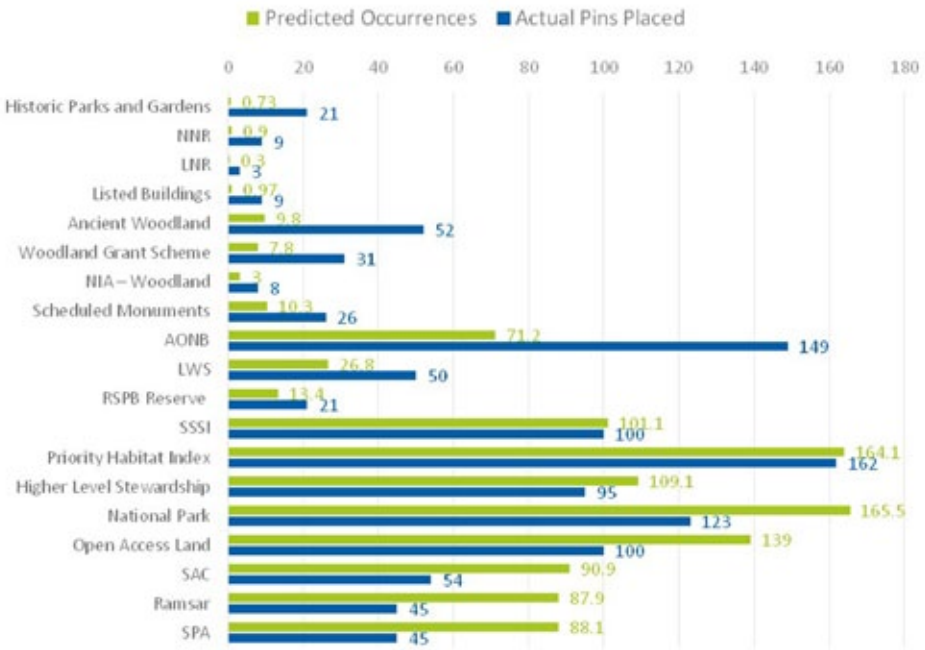

Figure 2: Predicted occurrences of PGIS pins compared to their actual presence in the focus areas. Source: H. Inwood, A. Fleming, M. Frandsen, H. Davies, M. Image, *Incorporating Cultural Values and Services in Landscape and Ecological Planning*; (Natural England: 2015)

Combining cultural and natural environment data is complicated by the fact that the latter are commonly associated with physical features on the ground, whereas the cultural values that people place on a particular landscape could also be influenced by family tradition, local history, memories, sounds, or smells, etc. and have generally not been considered by e.g. ecologists and landscape planners. This study has therefore sought to assign the cultural data spatially, at a similar scale and functional unit to the natural environment data. Given that respondents used pins to identify the locations where they experience cultural ecosystem services in the landscape,

this data has been integrated into a GIS environment as point data. The GIS tool then allows for the spatial integration and analysis of this information with other natural environment datasets. There is a strong correlation between CES benefits and certain specific natural and built environment data layers (land-cover types, environmental designations, or land under conservation management). People who took part in this study find particular importance or value in areas of land and/or designations relating to woodland (particularly ancient woodland), nature reserves, historic parks and gardens, listed buildings, scheduled monuments, and designated Areas of Outstanding Natural Beauty.

Some Key Findings and Conclusions

The spatial analysis revealed that there are a number of geographic areas or specific locations in the Heysham area that provide people with CES benefits that are not reflected through any environmental designation or land under conservation management. Without statutory or non-statutory protection, these special areas are more likely to undergo a change in land cover or land use (e.g., through development) that could reduce the CES benefits these areas can provide, potentially to the extent that their value is destroyed.

In particular, there are places that people find important for their beauty, tranquility, local history, and recreation benefits. In order to factor such areas into local decision making, it may be necessary for local authorities to add a CES evidence layer to their GIS database. It could then be used in much the same way as the other GIS data layers a local authority holds, for consideration in strategic-level planning and development management decisions.

The areas providing CES benefits would not necessarily have the same level of protection as formal designated sites, but should nevertheless be considered during decision making. Having a GIS layer for CES benefits presented alongside other GIS layers used in decision making would make its incorporation into land-use planning decisions feasible and transparent.

The study has shown that people can use web-based tools or smartphone apps in order to identify places that are important, or special, to them. And they can identify why these places are special—whether this is for recreation, or because they experience inspiration, beauty, tranquility or a sense of history at these places.

Many of the findings have shown that people's special locations are correlated with certain types of land cover—broadleaf woodland, for example, which echoes previous research that has shown the importance of woodland for tranquility and beauty.[6] In this research, the importance of broadleaf woodland for wildlife and nature has also been evident. The previously reported differences between broadleaf and coniferous woodland in generating CES has also been graphically shown in the findings—three times as many pins were placed in broadleaf woodland. There is also evidence from this study that confirms the importance of water as a generator of cultural services, particularly for delivering tranquility.

The PGIS is a versatile tool for gathering qualitative, spatial data on people's values associated with the landscape; however, it is an approach that requires active promotion to attract high levels of public participation and to include a representative sample of the population. Natural England continues to test the approach across a range of rural and urban landscapes, including areas of multiple deprivation. The systematic gathering of "hard" spatial evidence about people's values, including their memories and associations with places, has potential for informing a range of change scenarios. This includes building the evidence base in the context of disaster management—with the need to conserve and enhance those valued landscapes and features that help people understand how landscapes evolve and to help perpetuate memories of significant past events.

6 H. Inwood, A. Fleming, L. Cole, and R. Minter, *Experiencing Landscapes: Capturing the Cultural Services and Experiential Qualities of Landscape*, NECR024 (Natural England,2009); H. Inwood, A. Fleming, L. Cole, and R. Minter, *Experiencing Landscapes: Towards a Judgement-making Framework for Cultural Services and Experiential Qualities*, NECR04 (Natural England, 2011).