Institution: University of Winchester

Unit of Assessment: 17 (Business and Management Studies)

Title of case study: Safeguarding protected areas and maximising their benefits to people's health and wellbeing

Period when the underpinning research was undertaken: 2013 to 2020

Details of staff conducting the underpinning research from the submitting unit:

Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Professor Denise Hewlett	Professor of Knowledge Exchange	January 2011 – Present
Professor Keith Wilkinson	Professor of Geoarchaeology	Sept 1997 – Present

Period when the claimed impact occurred: 2014 – 2020

Is this case study continued from a case study submitted in 2014? N

1. Summary of the impact (indicative maximum 100 words)

Our research brings together diverse authorities with responsibilities for protected areas, local economies, and residents' health and wellbeing. Through this collaborative network our research has: strengthened protected area management and significantly refined how experiential and perceptual qualities, particularly of tranquillity, are managed; enhanced policy formulation, planning practices, green space designs and improved public services; increased public information on health and wellbeing properties of green spaces; and spearheaded what has become an established programme of wellbeing activities in these areas, enhancing public health and wellbeing.

2. Underpinning research (indicative maximum 500 words)

Successfully managed protected areas are essential for conserving biological diversity, maintaining ecosystem balance, building environmental and human resiliencies to climate change, maintaining water quality and controlling the spread of zoonotic diseases and pests. These iconic landscapes and their experiential and perceptual qualities, particularly of tranquillity, are central to economic strategies based on tourism development. Building on these multiple benefits, public access to these areas enhances our health and wellbeing.

Despite their importance, many protected areas are threatened. Their management is complex, often involving multiple authorities, whose diverse remits and working practices in silos, have resulted in natural resource-related conflicts. To overcome this, we began building a network around the application of research undertaken in the project Broadly Engaging with Tranquillity (BET) Research, Dorset, 2014 [3.1, 3.2]. Funded by a £95,000 ESRC Knowledge Exchange grant, BET from its inception, established a project design that forged co-working amongst a multidisciplinary team of academics with practitioners from managing authorities.

Common interests in understanding how tranquillity is experienced is derived from authorities' recognition that tranquillity is a much-sought after protected area quality and where achieved, enhances environmental and public wellbeing. Thus it is regularly promoted in tourism and managed through national planning policies and management plans. Yet tranquil experiences are highly subjective, interpretations are ill-defined and most commonly, are related simply to noise. Additionally, few previous attempts to define it by engaging the breadth of institutional stakeholders, visitors, and local residents were evident and thus, policy aims to preserve 'tranquillity' have been ambiguous and informed by expert opinion [3.2].

The BET team of academics and practitioners, led by Professor Hewlett, set out to address this issue through democratising the few approaches previously undertaken. Using mixed methods that exploited technological progress and encouraged broad public engagement, BET enabled knowledge transfer to enhance planning policy, management strategies, professional practice and delivery of public services [3.1, 3.2].

BET focused on 301 square kilometres of the 'Purbecks', within the Dorset Area of Outstanding Natural Beauty (AONB). Methods included focus groups with representatives from local businesses, institutions and community groups, a household survey and a series of visitor onsite surveys, resulting in nearly 22,000 views. Hewlett and colleagues then used GIS (Geographic Information Systems) modelling to create maps that showed high and low tranquillity zones in accordance with stakeholder views gathered. More than 100 tranquillity models were constructed in GIS at 5m resolutions: a significant advancement on the 250-500m course resolutions achieved in previous research. The findings demonstrated that whilst noise was one factor in describing the absence of tranquillity, all participants related tranquillity to the absence of people and man-made objects, except those associated with cultural heritage [3.2]. Specifically, views could be discerned by gender, age group and were influenced by participants' previous experiences of naturalistic environments and tranquillity was considered a much-valued quality for enhancing people's wellbeing. Visitors' interests were additionally determined as affecting how tranquillity was experienced in a second project, conducted in North York Moors National Park and Howardian Hills AONB, 2016, progressed in collaboration with Dr Christopher Brehme, Keene State College, New Hampshire, U.S. [3.3].

To extend BET's geographical reach and application of its methods, stakeholders commissioned refinements to the BET modelling process in 2018 so that assessments could be carried out faster. This led to an international research collaboration [3.4] and has inspired a national programme of enquiries, extending our research on subjective landscape qualities to maximise their benefits for public health and wellbeing, and focusing specifically on the views of those classed as chronically ill, to understand how greenspaces might be redesigned to encourage greater public interactions with nature. Our findings have challenged the notion that subjective qualities of landscape are too complex to influence policy and practice [3.1, 3.2].

3. References to the research (indicative maximum of six references)

3.1 *Hewlett, D., Brown, L. (2018). Planning for Tranquil Spaces in Rural Destinations through Mixed Methods Research. *Tourism Management*. 67. August 2018. pp 237-247. Submitted in REF2. https://doi.org/10.1016/j.tourman.2018.01.011

3.2 *Hewlett, D., Harding, L., Munro, T., Terradillos, A., & Wilkinson, K. (2016). Broadly Engaging with Tranquillity in protected landscapes: a matter of perspective identified in GIS. *Landscape and Urban Planning*. 158. pp.185-201. Submitted in REF2. http://dx.doi.org/10.1016/j.landurbplan.2016.11.002

3.3 Brehme, C, Wentzell-Brehme, S & Hewlett, D. 2018 Landscape values mapping for tranquillity in North York Moors National Park and Howardian Hills AONB. International Journal of Spa & Wellness https://doi.org/10.1080/24721735.2018.1493776

3.4 Guzman, V., Garrido-Cumbrera, M., Brace, O., Hewlett, D., Foley, R. (2020) Health & Wellbeing under Covid-19: The GreenCOVID Survey. Irish Geography. Vol. 53, No. 2. November 2020. DOI:10.2014/lgj.v53i2.1420. Commentary.

Outputs 3.1 and 3.2 were assessed for quality by anonymous external reviewers, scoring 3* and 4*.

4. Details of the impact (indicative maximum 750 words)

BET has spearheaded the construction of a transformative network of 65 members, collaboratively progressed 22 related projects, and produced a research programme on landscape qualities and their effects on people's health and wellbeing [5.1 & 5.2]. An

international audience has been achieved with Hewlett's expertise engaged in IUCN's Global Taskforce on Protected Areas and COVID19 and with their Health & Wellbeing Research Group. BET's influences on national bodies of knowledge are supported through: discussions on BET's findings at the Campaign for Protection of Rural England's (CPRE) policy seminar on Tranquillity in 2016 [5.3] and at Planning Officers' Forums, to embed wider ideas of tranquillity [5.4]; and BET's publication in: i) professionally peer-reviewed journals, 'Landscape' Summer 2018 [5.5]; ii) informing technical guidance on tranquillity planning, provided by Landscape Institute, March 2017 [5.6] audience reach <8,000; the National Association of AONBs' guidance documents to UK members (ca. 500), on best practice for the compilation of AONBs' statutory management plans (2017) [5.7].

BET's regional impacts are evident through the following examples which focus on **Areas of Outstanding Natural Beauty (AONB)**. AONBs oversee the conservation of nationally important landscapes and have directly benefitted from BET's research programme, described by the **Dorset AONB (DAONB)** as "broad and significant to our role and ongoing work" [5.1]. Impacts include:

a. Impact on organisational thinking and capacity

Since its inception, BET's approach has united experts from environmental, economic and public health disciplines in **Dorset Council** and the **DAONB** team. The implementation of BET's findings, *'hugely developed [DAONB's] thinking and understanding of theory and professional practice'* [5.1]. It inspired the development of a network of representatives from the public and charitable sectors, across the county, and through this network, multiple projects have been co-produced including 'Stepping into Nature' and 'Peaceful Paths' (see below).

Equally, following Hewlett's keynote presentation on BET and two workshops held by **South Devon AONB (SDAONB),** September 2016 and March 2017, BET and its applications, '*really inspired*' more than 70 delegates (comprised planning specialists, greenspace managers, charities, local borough and district councils) across Devon to '*explore tranquillity and its benefits, far further than we would have considered*' prior to Hewlett's presentation [5.2]. These events 'brought together for the first time' in Devon, representatives of National Parks, AONBs, economic development, public health and transport planning. Previously the planning process for property developments didn't adequately account for the impact of developments on the tranquillity of an area and the associated visitor experience. This work gave SDAONB increased insights and tools to inform and enhance planning decisions and help manage the impact of developments leading to the creation of new Technical Advisory Notes for planning processes [5.2]. **Devon's Landscape Policy Group** and **Devon AONB network** have committed to developing this work, including using data in developing Management Plans, policies, interventions and public campaigns [5.2].

b. Impact on delivery of national planning and land management policy

BET's findings have enabled AONBs to implement national planning policy [5.1] and informed the compilation of **SDAONB** and **DAONB's** Management Plans 2019-2025. The data coming from BET will be mapped by SDAONB and worked '*into our Landscape and Seascape Character Assessments'* for which '*tranquillity evidence is a key element*' [5.2]. **SDAONB** are using BET findings in their work to implement and monitor targets set in Defra's Environmental Land Management (ELM) scheme 'Test & Trials', (2020), 'as the cornerstone of the government's new agricultural policy' [5.2].

Based on insights from BET research, **DAONB's** Management Plan, and paragraph 9.2.1 [5.1] links tranquillity with beautiful locations, building on increased staff understanding that visual factors are important in experiencing tranquillity. Tranquillity as measured by BET, is used directly as a key indicator for monitoring the state of the DAONB in its Strategic Environmental Assessment 2018. This data accompanied the Management Plan and is actively deployed in directing the AONB's restorative environmental activities [5.1].

Findings from BET's application in **Howardian Hills AONB (HHAONB)** informed objectives formulated in its 2019-2024 AONB Management Plan [5.8], specifically to 'encourage the mitigation of intrusive features, to enhance the local landscape character and tranquillity of the AONB' [5.8]. BET's findings informed the AONB's maintenance of tranquillity by providing the rationale and strengthening the case for continued funding of a litter clearance programme and informed the AONB's responses to planning applications, particularly where noise and/or light pollution is a concern [5.8]. A senior representative of HHAONB states "*The results should make the Howardian Hills more attractive and tranquil for both residents and visitors, as our policies are underpinned by rigorous science*" [5.8].

c. Impact on professional practice

Our findings have directly affected the way **DAONB** staff are expected to understand the nature and value of tranquillity. Staff induction, performance review and personal development processes have, since 2016, included elements to embed tranquillity as a consideration in all employees' activities [5.1].

This increase in staff awareness and insight on the public value of tranquillity has increased staff capacities and understanding and between 2015 and 2020, as part of statutory remits on development control, the DAONB team made 246 advisory responses to planning applications referencing tranquillity, including ten for telecoms masts and ten for the installation of solar renewables. BET data were directly consulted in many of these assessments [5.1]. DAONB has no capacity to track outcomes of all decisions taken however, it can confirm, *'a proportion of those 246 cases which we recommended refusal because of unacceptable impacts on tranquillity, will have been refused planning permission by the relevant local authorities'* [5.1].

Increased insight from BET, enhanced **SDAONB** capacity in the design of their practical interventions to identify and maintain tranquillity in the AONB and to manage visitor pressure in sensitive areas, especially in relation to conserving their environmentally sensitive coastline [5.2]. Directly informed by BET, **DAONB** leisure management activities have been informed by BET in terms of their implementation of national planning policy on enhancing public access to nature, and their decisions taken on options assessments for new off-road cycling routes [5.1].

Snowdonia National Park Authority, the **Lakeside, Arnside and Silverdale, Solway Coast, and North Pennines AONBs** commissioned, in March 2020, BET modelling to help manage tourism and inform their local planning decisions [e.g. 5.9].

d. Impact on public health and well-being

The award-winning, *Stepping into Nature (SiN)* project, run by **DAONB** from 2017-2020, was inspired by BET and adopted BET's collaborative design and focus on experiential and perceptual qualities of landscapes to enhance public wellbeing, through which SiN has engaged with 14 additional healthcare and activity providers. SiN facilitates contact with nature for older people, particularly those with dementia and their carers, and has attracted £706,144 from National Lottery Community Funds, through which 2,646 nature-based activities for 827 people were created: 53% of which had no previous experience of connecting with nature, and 91% expressed their intentions to continue attending SiN activities and/or visit nature spots in Dorset [5.10]. Informed by BET's findings, SiN identified and enhanced 18 greenspaces for access by older people, through improvements in access and by enhancing green infrastructure, and with increased public information SiN has resulted in over 9,000 people engaged in 60 events, talks presentations and workshops and further enabled understanding of dementia awareness, with 214 front-line staff and volunteers receiving training [5.1]. SiN uses BET (refined and renamed for SiN as Peaceful Paths) to evaluate the chronically ill's experiences of accessing greenspaces and how this effects their wellbeing to provide more evidence for enhancing additional greenspace designs through the Dorset planning system [5.1]. SiN's successes are publicised as a national case study amongst AONBs and Public Health authorities alike, informing public health and nature based governmental reports, and have inspired a further county-wide health and nature collaboration among AONBs, resulting in 'Picnic in the Parks', promoting people's access to nature in urban greenspaces (attracting ca.1,200 people each year, 2017-2019) [5.1].

SiN received the 2016 Bowland Award at the Landscapes for Life National Conference for its work in Dorset [5.1].

In addition to SiN's promotions, BET's findings were presented in **DAONB** forums, 2014, 2018 and 2019: county-wide events, promoted to professionals and wider public, they attract more than 100 people each year. BET's findings have been widely promoted on DAONB's website on tranquillity [5.1], and informed an article written by a representative of DAONB for Dorset Magazine, December 2019 (circulation 40,000), describing tranquillity's importance for environmental and public wellbeing [5.11].

5. Sources to corroborate the impact (indicative maximum of 10 references)

5.1 Letter from a senior representative of Dorset Area of Outstanding Natural Beauty, January 2021.
5.2 Letter from a senior representative of South Devon Area of Outstanding Natural Beauty, December 2020.
5.3 CPRE Policy Seminar Agenda, July 2015.
5.4 SE, E & SW Protected Landscapes Planning Officers Group, Meeting Agenda, February 2016.
5.5 'Tranquillity baseline' Landscape, the Journal of the Landscape Institute, Summer 2018, p40. https://issuu.com/landscape-institute/docs/landscape_journal_2018_2_summer
5.6 Tranquillity – An overview, Technical Information Note 01/2017, Landscape Institute.
5.7 Letter from a senior representative of The National Association for Areas of Outstanding Natural Beauty, April 2020.
5.8 Letter from a senior representative of Howardian Hills Area of Outstanding Natural Beauty, March 2020.
5.9 Letter from a representative of Friends of the Lake District, March 2020.
5.10 Stepping into Nature Evaluation Report (2017-2020): Part 1 Impact, Public Health Dorset, September 2020.
5.11 'Love your landscape' Dorset Magazine, December 2019.