Institution: University of EXETER

Unit of Assessment: ARCHAEOLOGY

Title of case study: The sustainable management of wetland environments

1. Summary of the impact

Research by Exeter's Wetland Archaeology group has transformed our understanding of the significance of wetlands as exceptionally well-preserved but highly vulnerable records of past human achievement. **By informing public policy and advising planning and conservation bodies it has played a major role in shaping management practices in the UK and internationally**. This includes Van de Noort's co-authorship of the *English Heritage Strategy for Wetlands,* which informed the multi-agency *Vision for Wetlands* that has distributed £8m of English Nature funding for wetland conservation (2008-11), and £462k of English Heritage (EH) grants (2011-15). The *Vision for Wetlands* emphasizes the need for multi-agency working and as an example of this Rippon's AHRC KTF and consequential contract research have involved collaborating with Essex County Council, Southend-on-Sea Borough Council, RSPB, and Wessex Archaeology in developing a major *c.*1,500ha nature reserve, informing policies to increase public access to the countryside, and planning for the future of the 2012 Olympic Mountain Bike venue.

2. Underpinning research

Wetlands contain remarkably well-preserved archaeological sequences, as well as complex historic landscapes which are still in use today that together provide a detailed record of past human endeavour. Exeter's wetland expertise stems from a research group that included **Coles** (Exeter 1972-2008), **Rippon** (Exeter 1996-present), **Van de Noort** (Exeter 2000-present), and large number of PhD students. From the 1980s Exeter played a leading role in the expansion of government-funded survey, excavation and protection of previously neglected wetland landscapes in Britain & Ireland. The 1996 RAE 'flagged' Exeter's 'Archaeology of Wetlands' group and formal feedback from the 2001 RAE stated 'the research group on the Archaeology of Wetlands is of undoubtedly high international standing'. The group has undertaken strongly inter-disciplinary research across Europe that embraced not only archaeological and palaeoenvironmental evidence, but also historic landscapes that remain in use today. Following the pioneering Somerset Levels Project co-directed by Coles (1973-1988; British Archaeology Awards Best Project 1976-1998), key field-based work has included the Humber Wetlands Survey (completed while Van de Noort was at Exeter in 2001) **[1]** and subsequent major excavations at Sutton Common (2001-2007) **[2]**. Excavations such as these have revealed the importance of wetlands for the preservation of archaeological sites, and the significance of wetlands for past societies as economic resources and places of ritual and refuge. Major comparative analyses of wetland landscapes include Rippon's *The Transformation of Coastal Wetlands* (2000) that revealed the contrasting patterns of human exploitation, modification and transformation of wetlands across Britain and mainland NW Europe, and included a case-study of the distinctive traditional grazing marshes in SE England **[3]**. The Wetland research group at Exeter also established the international *Journal of Wetland Archaeology*.

Exeter's profile led in turn to a long-standing commitment to research into the preservation and management of wetland archaeological sites and landscapes. This included Coles' *Wetland Management: A Survey for English Heritage* **[4]** which led to an international conference organised by Coles and Adrian Olivier of EH (published as *The Heritage Management of Wetlands in Europe* **[5]**). In 2000 EH funded Van de Noort to undertake a survey of *Monuments at Risk in England's Wetlands.* This revealed that at least 50% of lowland peatland in England was lost during the last 50 years and that an estimated 2,930 wetland monuments have been totally destroyed, but that

72% of local authorities had no policy for the identification, assessment or management of wetland archaeology **[6]**. Following on from the development of this survey, the Exeter group has carried out further research targeted at specific issues. For example, Van de Noort's major programme of survey and excavation at the Iron Age 'marsh-fort' at Sutton Common in Yorkshire included pioneering work on the *in situ* monitoring of waterlogged deposits **[2]**. Following Rippon's initial research into traditional grazing marshes, the RSPB and Essex County Council invited him to research the landscape archaeology and history of South Essex Marshes where a substantial *c.*1500 ha nature reserve is being developed (which resulted in an AHRC KTF 2009-11: see Section 4).

3. References to the research

Key field-based research

[1]. Van de Noort, R. 2004: *The Humber Wetlands; the Archaeology of a Dynamic Landscape* (Macclesfield; Windgather Press) (book proposal underwent anonymous peer review, and a draft of the complete text sent to an anonymous reader; included in the 2008 RAE. The publication of this book was supported by a grant of £40k from English Heritage in 2003).

[2]. Van de Noort, R., Chapman, H. and Collis, J. 2007: *Sutton Common: the Excavation of an Iron Age 'Marsh-Fort'* (York: Council for British Archaeology Research Report) (book proposal underwent anonymous peer review, and a draft of the complete text sent to an anonymous reader; included in the 2008 RAE. Project was supported by £450k from English Heritage in 2000-7).

Key work of comparative analysis and analysis

[3]. Rippon, S. 2000: *The Transformation of Coastal Wetlands: Exploitation and Management of Marshland Landscapes in North West Europe During the Roman and Medieval Periods* (London: British Academy) (book proposal underwent anonymous peer review, and a draft of the complete text sent to an anonymous reader; included in the 2001 RAE. Funded through British Academy Postdoctoral Fellowship the final year of which was at Exeter, and a £2.2k British Academy small personal research grant in 1997 when Rippon was at Exeter).

Management related studies

[4]. Coles, B. 1995, *Wetland Management: A Survey for English Heritage* (London: English Heritage and WARP) (included in the 1996 RAE. This project was supported by £30k from English Heritage. Research awarded the Institution of Civil Engineers' George Stephenson Medal in 1995).

[5]. Coles, B. and Olivier, A. (eds) 2001: *The Heritage Management of Wetlands in Europe* (Brussels: Occasional papers of the Europae Archaeologiae Consilium No. 1) (included in the 2008 RAE; supported by £33k from English Heritage, 2000-1).

[6]. Van de Noort, R., Fletcher, W., Thomas, G., Carstairs, I., and Patrick, D. 2002. *Monuments at Risk in England's Wetlands* Project (Exeter: University of Exeter for English Heritage; http://hdl.handle.net/10036/29596) (funded by grants to from English Heritage of £92k (2001-03) to undertake the research that underpins the *Strategy* and implement its key actions).

4. Details of the impact

Exeter's research has raised awareness of the importance of wetland archaeology within public bodies in Britain and internationally, and influenced policy with regard to landscape management practices. Following English Heritage's (EH) commissioning of Van de Noort to produce its survey of *Monuments at Risk in England's Wetlands* **[6 above]** he co-wrote their *Strategy for Wetlands* (2002) which was updated in 2011 **[A]**. This is a high-level policy for conserving and managing wetlands that has sustained EH's core activities of identifying, understanding, protecting, and managing the historic environment**.** These reports produced by Van de Noort led to a programme of EH research in 2011-present valued at *c.*£462k **[B; C].**

This *English Heritage Strategy for Wetlands*, and the research/data produced by Van de Noort

and his team at Exeter, provided the basis of the multi-agency (EH, Environment Agency, Natural England, RSPB, and Wildlife Trusts) *Wetland Vision*'s 'Map of Historic Environment Wetland Priority Areas' (2008) which characterises areas of England with high potential for waterlogged archaeology and palaeoenvironmental deposits **[D].** *Wetland Vision* has directed £8m of Natural England funding for the restoration of damaged peatlands and the (re-)creation of new peatlands (2008-11) **[E],** illustrating how Exeter's research has influenced public policy beyond professional archaeology**.** A follow-on project ('Wetland Vision – adapting wetlands to climate change', led by NERC's Centre for Ecology and Hydrology) was commissioned by the Environment Agency to produce a web-based tool (2012) designed for site managers concerned with the eco-hydrological status of their wetlands and to support adaptive planning and broader scale river corridor analysis and the delivery of England's *Wetland Vision*. EH sponsored a heritage strand within it, with Van de Noort as part of the consortium team, to ensure archaeological issues were included [**C; F**].

More widely, Van de Noort's expertise is reflected in his membership of the 'Core Expert Panel' of the International Union for Conservation of Nature UK Peatland Programme set up in 2009, and his co-authorship of its report *Peatlands and the Historic Environment: Scientific Review 2010* **[G]** that was debated and supported in the Scottish Parliament. He also acted as scientific advisor to the archaeological survey undertaken on peatlands milled by the Irish state company Bord na Mona (2007-09), and chaired the review of archaeological research in the Irish peatlands for Duchas (the heritage division of the Irish Department of the Environment). The recommendations of this review are reflected in the 2012 Code of Archaeological Practice between the Department of the Environment, the National Museum of Ireland and Bord na Mona. Van de Noort's pioneering research into *in situ* monitoring of waterlogged deposits at Sutton Common has been held up as an example of 'best practice' **[H]**. In 2013 DEFRA appointed Van de Noort Chair of the South West Regional Flood and Coastal Committee, which was established by the Secretary of State under the Flood and Water Management Act 2010. In this position, Van de Noort has a key role in engaging local communities and authorities, and external stakeholders appointed by the Environment Agency, in the sustainable flood protection and coastal management of the South West of England and, at a national level, in shaping policies in these areas as a member of the Regional Flood and Coastal Committee Chairmen's meetings.

The aim of the *Wetland Vision* is to 'show where new wetlands could be created and current wetlands restored ... [to] protect our heritage and reap the many benefits that wetlands can provide' **[D]**, while the EH *Strategy for Wetlands* (2002) stresses the importance of management at a landscape scale **[A]**. An example of the impact that Exeter's research has had in achieving this multi-agency landscape-scale approach is a sequence of projects where Rippon has been contracted by Essex County Council 'because of his distinctive, historic landscape focussed approach to research into wetland landscapes in Britain, and Essex' **[I]** to provide advice on the management of specific landscapes as a contribution to local and regional strategic planning initiatives (eg Thames Gateway Parklands Vision, Thames Gateway Local Nature Partnership, and South Essex Green Grid Strategy) that aim to create high quality green space within/between extensive urban areas **[I]**. In 2009 Rippon was invited by the RSPB and Essex County Council (ECC) to advise on the creation of a new *c*.1,500ha nature reserve in the South Essex Marshes. An AHRC KTF allowed Rippon to work in partnership with RSPB and ECC in the development of this reserve which now attracts 260,000 visitors a year (and which the RSPB expects to rise to 350,000 annually). The preparation of a report outlining the history and key character defining features of this landscape had an immediate impact, for example through Rippon's involvement in designing information provided for visitors and so enhancing their experience and understanding, and in shaping the design of the reserve in a way that protected key historic landscape assets that in previous plans were going to be destroyed **[I]**. One reflection of the positive impact this project had on planners and countryside managers is that Rippon was subsequently commissioned to prepare a report (2011) for Southend-on-Sea Borough Council to inform their Urban Habitats project to increase public access to the

countryside of coastal Essex) **[I; J]**. Subsequent work (2011-12) with Wessex Archaeology for the Olympic Legacy Company and ECC has ensured that the historic landscape is properly understood, protected and enhanced when providing a legacy for the 2012 Olympic Mountain Biking venue in the costal parish of Hadleigh that it is anticipated will increase annual visitor numbers to the existing Country Park by approximately 250,000 by 2017 **[I]**.

An important part of the wetland archaeology research group at Exeter has been its PhD students, of which many have gone on to use their research in a professional public policy environment including Will Fletcher (EH Inspector), Richard Brunning and Rebecca Loader (HER Officers in Somerset and Isle of Wight), and Jason Rogers (Research Director, Alaska Maritima).

5. Sources to corroborate the impact

A Original *English Heritage Strategy for Wetlands* (Van de Noort, R., Fletcher, W. and Thomas, G. 2002. *English Heritage Strategy for Wetlands* (Exeter: University of Exeter, http://hdl.handle.net/10036/3042), updated in the 2011 English Heritage Research Advisory Panel Report (RAP 2011/9) *Water and Wetland Strategy* (http://www.english-heritage.org.uk/content/imported-docs/p-t/rap-jul11meeting-wetland.pdf).

B: English Heritage National Heritage Protection Plan Activity 3A5 Wetland and Waterlogged Archaeology, through which EH research valued at *c*.£462k has been distributed (http://www.english-heritage.org.uk/professional/protection/national-heritage-protection-plan/plan/activities/3a5);

C Letter of support from Head of Strategic Planning and Management Division, English Heritage, 1 Waterhouse Square, 138-142 Holborn, London, EC1N 2ST, tel. 020 79733000.

D Wetland Vision (2008): *A 50-year Vision for Wetlands. England's Wetland Landscape: Securing a Future for Nature, People and the Historic Environment* (http://www.wetlandvision.org.uk/), and specifically its *Wetland Vision Map of Historic Environment Wetland Priority Areas* (http://www.wetlandvision.org.uk/dyndisplay.aspx?d=downloads).

E £8m funding (£2m annually) allocated by Natural England through the *Wetland Vision* in 2008-11 (http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/funding/wetlandvision/default.aspx and http://www.naturalengland.org.uk/Images/wetlandsvisionupdate_tcm6-13877.pdf).

F English Heritage sponsored module 'Wetland Tool for Climate Change: Projecting the impacts of climate change on wetlands' in the *Wetland Vision* partnership undertaken by the NERC-funded Centre for Ecology and Hydrology, on which Van de Noort was a member: http://www.ceh.ac.uk/sci_programmes/Water/Wetlands/ClimateChangeAssessmentToolforWetlands.html

G International Union for Conservation of Nature UK Peatland Programme report co-authored by van de Noort: *Peatlands and the Historic Environment: Scientific Review 2010*: http://www.iucn-uk-peatlandprogramme.org/commission/historicenvironment

H Discussion of Van de Noort's work on *in situ* monitoring of waterlogged deposits at Sutton Common: *English Heritage Conservation Bulletin* 43: http://www.english-heritage.org.uk/publications/conservation-bulletin-43/60yorkshireironagesite.pdf/

I Letter of support from Head of Place Services, Essex County Council, County Hall, Chelmsford, Essex, CM1 1QH, tel. 01245 437790.

J Southend-on-Sea Borough Council Urban Habitats Project (http://www.southend.gov.uk/info/461/parks_and_open_spaces-information_and_advice/396/urban_habitats) that includes Rippon's report on *Urban habitat Historic Landscape Character Assessment* (http://www.southend.gov.uk/downloads/download/722/urban_habitats).