

Institution: University of St Andrews



Unit of Assessment: 30 – History

Title of case study: Communities, Climate Change, Culture and the Coast

### 1. Summary of the impact



*Shorewatch community excavation of a sixteenth century saltpan in north-east Scotland (2011).*



*Same site, destroyed by a storm in 2012 but preserved by record - including 3D modelling.*

Dawson's research into climate-driven threats to coastal heritage has established a practical methodology for prioritising action and engaging communities in recording vulnerable sites. The work has been described as having '*a major impact on international archaeology, heritage, public engagement, and education for sustainability*' by the North Atlantic Biocultural Organisation (NABO), while the US National Parks Service has said that his work has been an invaluable source of '*both inspiration and practical how-to research in the analysis and protection of coastal cultural heritage*'. Dawson's research is cited in Scottish Government heritage policy and his commissioned reports have informed national archaeological frameworks. His collaborative community projects (Shorewatch and SCHARP) have directly impacted upon hundreds of participants throughout Scotland, often in distant and inaccessible places. Dawson's frequent public talks, use of mobile technology & video, and press and broadcast interviews mean that many thousands of people globally are more aware of the richness of coastal heritage and its vulnerability to climate change.

### 2. Underpinning research

Tom Dawson has been conducting research into the archaeological heritage of the coast in the context of past, present and future environmental change since joining the University of St Andrews in 2000. Much of his work has been in collaboration with the SCAPE Trust, a charitable organisation within the University which he helped to establish and continues to manage. He works with Joanna Hambly, a research fellow at St Andrews since January 2009 and Ellie Graham, a research assistant who joined in 2012.

Much of the research has been commissioned by *Historic Scotland*, an agency of the Scottish Government, which has used the reports to make strategic decisions concerning the built heritage of the coast (5.3, below). Dawson also works with other Government agencies and with Local Authorities throughout Scotland.

The research focuses on assessing the significance and potential of the coastal archaeological resource, developing analytic approaches to record the nature and scale of the threat from coastal processes, and undertaking research projects at some of the most vulnerable sites.

An important strand of the archaeological research is the involvement of the public, especially in the context of current and future resilience to climate change. The team has created and tested ways to capture public value and has developed new methods for presenting the results of investigation, including the creation of a mobile phone app that allows the public to report directly on coastal sites.

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In 2006 and 2007, Dawson reviewed all previous investigations undertaken at the Scottish coast, creating a picture of our current state of knowledge in order to make recommendations for future work and develop methodologies for recording threatened sites (3.1 & 3.2 below). In 2010, he employed a Geographical Information System to combine analysis of the 12,500 recorded sites with information on their topographic setting, devising a repeatable and defensible system for prioritising action which is now being adopted globally (3.3). He examined ways of capturing and integrating public opinion, demonstrating the importance of using 'public value' at a time when demand for action outstrips available resources. The findings of the research have been presented at international conferences and published as peer-reviewed articles which were widely distributed before final publication (3.4 & 3.5).

Dawson has also conducted research into individual sites by initiating archaeological projects in the Western Isles (2005-2011), Shetland (2003-2008) and East Sutherland (2004-2011). These community projects revealed a wealth of data about past lives and contributed to our understanding of the timing and pace of climate-driven coastal change and the human response.

The different strands of Dawson's work are brought together in the development of innovative methods of presenting the results of archaeological research for public benefit. This has been achieved by: physically moving threatened sites; designing museum displays; making videos; creating websites; and developing digital reconstructions which can be explored by the public and which act as portals to text, images and video arising from his excavations.

### 3. References to the research

Dawson has written and published three reports at the request of a Government Agency, *Historic Scotland* (HS). These reports were underpinned by grants from the same Agency.

3.1 Dawson, T 2006, *Archaeology and Coastal Erosion in Scotland: the current state of knowledge and future directions*, Commissioned Report for Historic Scotland, 52 pp.

3.2 Dawson, T 2007, *A review of the Coastal Zone Assessment Surveys of Scotland, 1996 - 2007: Methods and collected data*, Commissioned Report for Historic Scotland, 276pp.

3.3 Dawson, T 2010, *A system for prioritising action at archaeological sites recorded in the Coastal Zone Assessment Surveys*, Commissioned Report for Historic Scotland, 85pp.

As an indication that the above reports are 2\* or better, the Head of Archaeology Strategy at Historic Scotland has said, '**these three reports have had, and continue to have, a substantial impact on HS' decision making and discussions, internally and in relations with colleagues in other agencies'** (5.3, below).

3.4 Dawson, T (2013), 'Erosion and coastal archaeology: Evaluating the threat and prioritising action' in Daire, M-Y et al. (Eds) *Ancient Maritime Communities and the Relationship between People and Environment along the European Atlantic Coasts*, HOMER International Conference Proceedings, BAR International Series 2570 ISBN 978 1 4073 1191 3, 77-84 (article subjected to rigorous peer review process). <http://hdl.handle.net/10023/4183>

3.5 Dawson, T (2013), 'Eroding Archaeology at the Coast: How a Global Problem is Being Managed in Scotland, with Examples from the Western Isles', *Journal of the North Atlantic* (article subjected to rigorous peer review process).

<http://www.eaglehill.us/JONAonline/articles/JONA-Sp-X/XX-Dawson>

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

The impact of Dawson's research can be observed from citizen level through to government, nationally and internationally. The Climate Change Adaptation Coordinator for the National Park Service (the lead U.S. agency for cultural resource management) states that Dawson's work '*in identifying the problems of coastal erosion for archaeology, processing archaeological data for rapid assessment, and engaging the public in the documentation and care of threatened sites, is unparalleled internationally*' (5.1, below); and the coordinator of NABO, the international North Atlantic Biocultural Organization notes that '*Dawson and his team have had a major impact on international archaeology, heritage, public engagement, and in education for sustainability. His work is genuinely world-class and world-leading*' (5.2).

#### Influencing Public Policy

Dawson's research into identifying and quantifying Scotland's coastal archaeology and developing robust methods for prioritising the resource in the context of a changing climate has created

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manageable targets and protocols used by government. The Head of Archaeology Strategy at Historic Scotland notes that *'the evidence upon which to make more strategic decisions was largely lacking until the instigation of the work of Dawson and his colleagues at the University of St Andrews'* (5.3). An HS Board Report notes that Dawson's work has led them to *'move from excavating targets of opportunity... to excavating targets which have been prioritised by a reasonably objective process'* (5.5). The team's work was also used to review HS priorities for funding, resulting in a *'...focus on projects which help to mitigate threats posed by coastal erosion'* (5.6). His research projects have been included as completed deliverables in the Scottish Government's Adapting to Climate Change document (5.7).

Dawson's national community projects have tested and demonstrated the efficacy of meaningful collaboration with the public, contributing to a significant shift amongst heritage policy makers towards a wider definition of value which embraces local importance and community benefit. Referring to this shift, the HS Board Report notes that the final selection of sites for grant aid *'will factor in matters such as local community support'* (5.5). HS notes that *'engaging, sharing and celebrating our heritage with local communities is a key strategic priority for the Scottish Government... and the work of Dawson and his colleagues is a key element in aiding the delivery of this vision'* (5.3).

### Widening Public Access and Participation

Thousands of people have become directly engaged with coastal heritage through [Shorewatch](#), a national community project managed by Dawson. Multi-year *Shorewatch* excavations have combined rigorous archaeological research with public training. Working with island and rural communities in remote areas, four *Shorewatch* excavations (5.11) have had high direct impact on the regular volunteers who actively participated in the digs year after year (3% of the local population per project) and on the wider community (over 30% of the local population through open days, school visits and talks). Examples of other projects include the use of research evidence to reconstruct and interpret two Shetland sites for visitors, which combined a physical legacy with an educational benefit; and the installation of a ground-breaking 3D digital resource at Timespan Museum, Helmsdale, Scotland (13,000 visitors per annum), which presented scientific evidence within a computer gaming environment and has engaged a wide swathe of the community, young and old.

*Shorewatch* excavations are cited in the draft Strategy for Scotland's Marine Historic Environment, which states that they have demonstrated *'how to maximise recovery of information and community benefit from assets which will otherwise be lost to the sea'* (5.8). In 2012, the excavations won the [Rescue Dig of the Year Award](#), receiving over 50% of the public vote from the readers of Britain's leading popular archaeological magazine, *Current Archaeology* (subscription c. 20,000) (5.12).

Dawson's other national project has made his research results accessible to the public via an interactive website and smartphone app ([www.ssharp.co.uk](http://www.ssharp.co.uk)). The [Scotland's Coastal Heritage at Risk Project](#) (SCHARP) aims to enhance understanding of environmental issues and gives training and support to the public in updating records and contributing local knowledge. Between launching in August 2012 and July 2013, over 360 people registered to become citizen archaeologists, 500 people directly participated in training events and workshops and over 1,000 people attended public talks (5.13). Fiona Hyslop, Cabinet Secretary for Culture said SCHARP would *'give the thousands of Scots with a passion for archaeology the chance to help record important archaeological sites along our coastline'* and further noted that Dawson's research has *'led the field in highlighting the erosion of coastal sites'* (5.9). The U.S. National Parks Service noted that the project has *'provided an outstanding example of public engagement in cultural heritage education and protection'* (5.1).

### Providing Expert Advice

Dawson has influenced strategy by sitting on expert panels. He was appointed Commissioner on the Royal Commission on the Ancient and Historical Monuments of Scotland as a result of his research into coastal and community archaeology (as above, section 2). He sat on the BEFS Marine Taskforce guiding development of the Scottish Marine Bill. He was also a key member of the Marine and Maritime Panel which created the Scottish Archaeological Research Framework, and HS notes that *'the report from this panel has highlighted the challenges in dealing with Marine and Maritime archaeology, substantially informed by Dawson's 2010 [report]'* (see 3.3 above and

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5.3, below). His work was debated in the Scottish Parliament in April 2013, after which he was invited to join a taskforce established by the Cabinet Secretary for Culture to look into heritage and coastal erosion.

### Impact upon heritage managers beyond Scotland

The methodology created by Dawson and his team has been copied internationally. A senior heritage manager from Denmark's National Museum notes that the research '*has been an important reference and significant inspiration*' used by teams of archaeologists from Denmark and Greenland (5.4). *Shorewatch* directly impacted upon the development of the national Welsh community project, *Arfordir*, and the first *Arfordir* report noted that '*feedback received following a presentation by Tom Dawson... indicated there was a clear desire from communities in the region to set up the project*' (5.10).

The coordinator of NABO is also a US National Science Foundation (NSF) grant holder, and has worked to identify top-end examples of research that serve as international models. He noted that through the work of '*...Dawson's team, Scotland is genuinely a world leader in combining creative response to coastal erosion with effective community engagement and world class cyberinfrastructure*'. The grant holder has arranged for Dawson to speak at several international conferences, noting that the '*willingness to commit NSF grant resources to providing the widest possible visibility to the team's accomplishment may underline the sincerity of my high impact assessment - this is not empty praise but an actual commitment of international support to a project of world-leading significance*' (5.2).

## 5. Sources to corroborate the impact

- 5.1 Letter: Climate Change Adaptation Coordinator for Cultural Resources, United States National Park Service. Incorporation into US National Parks Service policy.
- 5.2 Letter: Coordinator of the North Atlantic Biocultural Organization and director of the archaeology doctoral program, City University of New York. Impact on international archaeology and heritage.
- 5.3 Letter: Head of Archaeology Strategy, Historic Scotland. Influence on strategic priorities.
- 5.4 Letter: Senior Scientist, National Museum of Denmark. Confirms international influence.
- 5.5 Document: *Historic Scotland Board Report 35/08* <http://www.historic-scotland.gov.uk/hsb-35-08-climate-change-paper.pdf>. Verification that Dawson's work has influenced the setting of national priorities.
- 5.6 Document: *Historic Scotland, Guidance for Grants for Archaeology Projects 2013-14* p5 <http://www.historic-scotland.gov.uk/archaeology-grants-guidance.pdf>. Verification that sites threatened by coastal erosion have become a priority for government funding.
- 5.7 Document: *Adapting to the Changing Climate: Consultation on the Environmental Impacts of Adaptation*. <http://www.scotland.gov.uk/Publications/2010/12/10140608/16>. Verification that Dawson's work has been used by the Scottish Government's climate change group.
- 5.8 Document: *Towards a Strategy for Scotland's Marine Historic Environment* <http://www.historic-scotland.gov.uk/marine-strategy.pdf>. Verification of the influence of Dawson's community projects.
- 5.9 Article: *Scotsman Newspaper* <http://www.scotsman.com/news/environment/citizen-army-urged-to-save-scotland-s-coastal-history-1-2463223>. Citation by journalist and verification that the Cabinet Secretary for Culture sees the importance of Dawson's projects for communities and for protecting heritage.
- 5.10 Document: *Arfordir Coastal Heritage 2009-2010* <http://www.dyfedarchaeology.org.uk/arfordir/reports/arfordir09-10.pdf>. Verification that Dawson's research and public talks had a direct influence on the creation of a community archaeology project in Wales.
- 5.11 Document: Data Structure Reports for the various fieldwork projects available on request. Reports contain volunteer numbers for each season of excavation.
- 5.12 Webpage: Award for Shorewatch excavations: <http://www.archaeology.co.uk/awards/archaeology-awards-2012/rescue-dig-of-the-year-2012.htm>
- 5.13 Document: Heritage Lottery Fund Quarterly reporting Forms. Contain numbers of volunteers taking part in projects.