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# Climate change and the historic environment: a summary of national policies



Damage at Plas Cadnant historic gardens, Anglesey, following excessive rainfall in 2017. Credit: Gwynedd Archaeological Trust

Climate change and heritage are policy areas devolved to the Scottish and Welsh governments, meaning that each UK nation approaches both independently. While there may be some subtle differences, certain key points remain the same. Similarities stem from the UK Climate Change Act 2008, which set a target for the UK to reduce targeted greenhouse gas emissions to 80 per cent of the 1990 baseline by 2050. It also established the Committee on Climate Change (CCC), an independent statutory body whose purpose is to advise UK government on emissions targets, and which includes an Adaptation Sub-Committee. The Committee publishes the Climate Change Risk Assessment every five years – the next will be in 2022.<sup>1</sup> In addition, each of the constituent countries derives information from the UK Climate Projections produced by the Met Office. The most recent were produced in 2018 and are referred to as UKCP18.<sup>2</sup>

All four countries are concerned with mitigation – to reduce greenhouse gas emissions that cause anthropogenic climate change, and adaptation – adapting to the changing climate

Where they tend to differ is the approach to the inclusion of heritage in the national climate change policy, and in the way the historic environment sectors have engaged with the subject of climate change. However, the heritage agencies of the UK nations, along with other UK-based heritage organisations, come together through the UK Historic Environment (Climate Change) Adaptation Working Group to share research and ideas and forge collaboration.

## England

Because of the thematic structure of the CCC five-yearly reports, the historic environment is not explicitly identified but is embedded within chapters on 'People and the Built Environment', to which Historic England has contributed. In 2016 Historic England submitted a 'Climate Change Adaptation Report' to Defra as part of the second 'Adaptation reporting' cycle. This looked at what climate change might mean for the organisation, both operationally and in terms of impact upon the historic environment and identified actions to support our adaptation to a changing climate. Historic England will submit an updated report in 2021 and is working with

Excavations at the buried village of St Ishmael's, Carmarthenshire, exposed by coastal erosion. Credit: Dyfed Archaeological Trust



The Climate Vulnerability Index workshop in April brought international experts and the local community together at the Heart of Neolithic Orkney World Heritage site to pilot this methodology on a cultural heritage site for the first time. The results were presented at the 43rd WHS Committee in Baku, Azerbaijan in June (see article on p21 for more about this). Credit: Historic Environment Scotland

Defra on a template to help other heritage organisations undertake their own reporting. We would encourage any organisations interested to do so and would be happy to share our experiences.

One of Historic England's commitments was to start to understand and map climate-change-related hazards for the historic environment. The main risks relate to changes in precipitation (eg increased flooding, increased intensity of rainfall, drought, shrink swell, desiccation of deposits), increased temperature (eg wildfire, changes in growing season, pests and disease distribution) and rising sea levels. As part of this 'hazard mapping' we recognise that in some instances climate change will result in the loss or significant transformation of heritage assets and we have an AHRC-funded PhD student at the University of Exeter working with us to look at how different stakeholders and communities can be included in conversations about how we manage this. We are

also about to review our Heritage At Risk programme to ensure that it takes account of current and future risks to heritage.

Another commitment in the Climate Adaptation Report was to explore how the historic environment can help us adapt to climate change. We have commissioned projects looking at ways in which the historic environment is valued for its environmental services – including the sequestration of carbon in field boundaries, parks and gardens – and the role of heritage assets in reducing flood risk and supporting biodiversity.

Currently Historic England is working on an environment-focused edition of 'Heritage Counts', on behalf of the Historic Environment Forum, which will include a report on the embodied carbon in the historic environment and the carbon saving associated with reuse of existing buildings. Other ongoing work is exploring how understanding the historic environment might help inform flood management, in terms of landscape history and by putting into practice the building conservation research on flooding, eg recording the refurbishment of a traditionally constructed house in Appleby, Cumbria, using materials such as lime-based mortars, through our Heritage Action Zone partners.

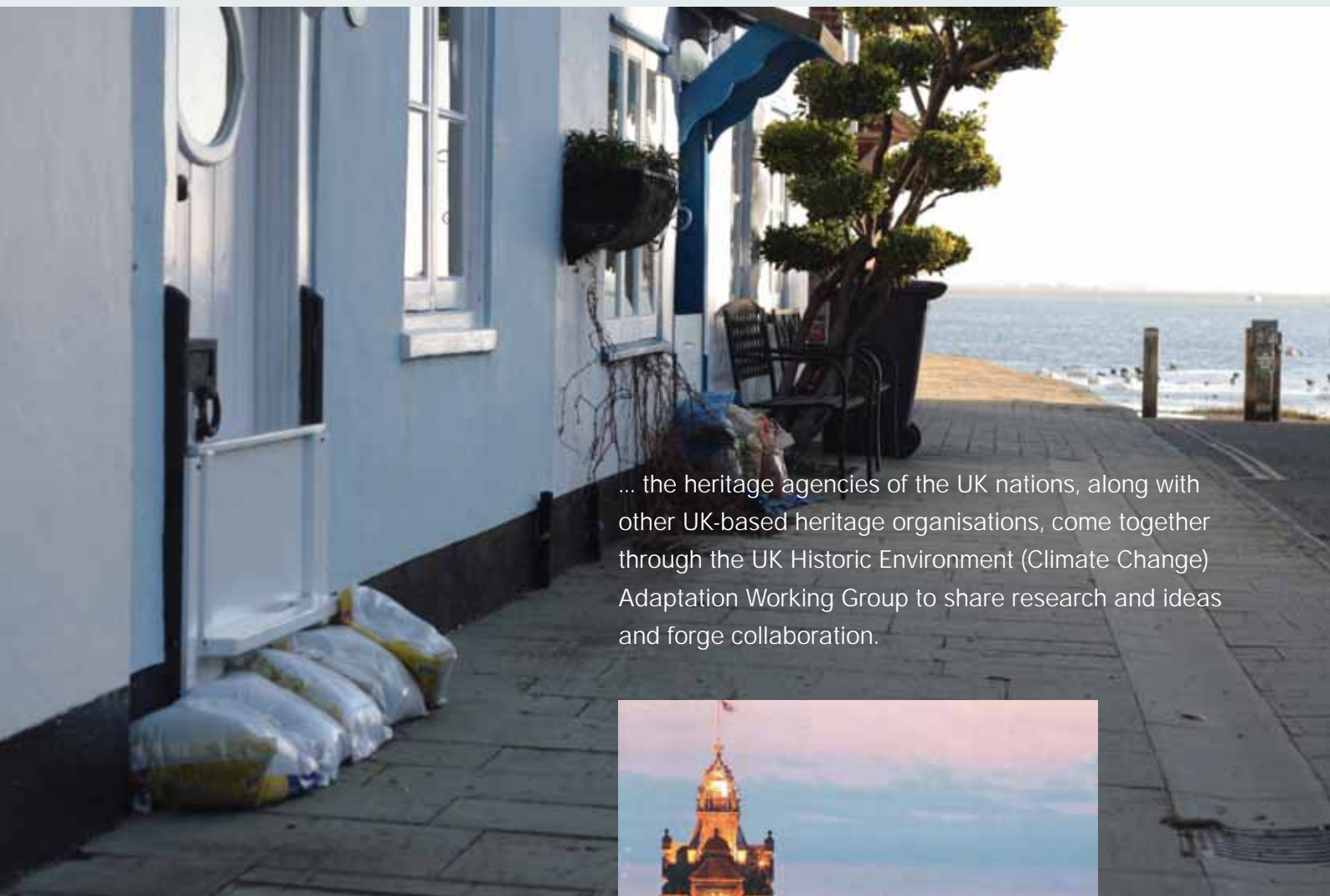
Historic England also champions the role of our parks and gardens and green heritage spaces in helping with urban heat island effects and flood risk reduction, and is also exploring the impact of pests and diseases on these green heritage assets.

Throughout this work two themes persist – the importance of maintenance in the resilience of our heritage to climate change, and the risk of maladaptation – by adapting to one climate change concern (eg energy efficiency) inadvertently reducing the capacity of an asset to adapt to another (eg overheating).

## Scotland

In Scotland, we are marking the tenth anniversary of the Climate Change (Scotland) Act 2009, one of the most ambitious pieces of climate change legislation in the world. As a large non-departmental public body (NDPB), Historic Environment Scotland (HES) has a duty under the 2009 Act to contribute to, and provide leadership in, climate change mitigation and adaptation, and sustainability. With a Climate Emergency having been declared in May, legislation to alter the targets set ten years ago to achieve net zero carbon emissions by 2045 is now progressing through the Scottish Parliament.

Our vision is that the historic environment is cherished, understood, shared and enjoyed with pride, by everyone. Rising sea levels and dramatically changing weather patterns will impact many of our most valued historic places. Around a fifth of Scotland's homes were built before 1919, and whilst inherently resilient and energy efficient, they can be adapted to the changing climate and contribute to energy efficiency and emissions-reduction targets. The historic environment



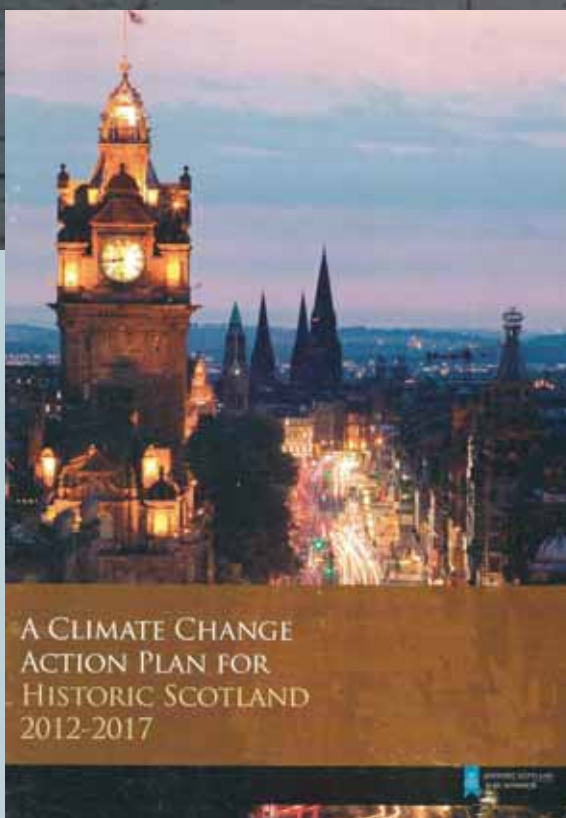
... the heritage agencies of the UK nations, along with other UK-based heritage organisations, come together through the UK Historic Environment (Climate Change) Adaptation Working Group to share research and ideas and forge collaboration.

Langstone, Langstone Harbour, Hampshire – preparation for a Spring tide. Credit: Hannah Fluck

sector is disparate, and its interface with the climate change agenda complex, for example through individual sub-sectors related to traditional buildings, archaeology, tourism, landscape, collections, materials and skills. In order to achieve our vision, we must ensure that the historic environment sector, including archaeology, plays its part in mitigating and adapting to climate change.

A working group has been established under Our Place in Time: the Historic Environment Strategy for Scotland, to enable the historic environment sector to coordinate action on climate change. The key deliverable for the Working Group is the 'Climate Change Impacts Guide for the Historic Environment'. This guide, to be published in the autumn, will provide an introduction to the direct physical impacts of climate change on various types of historic asset in Scotland. The guide aims to:

- raise awareness of the impacts of climate change on our historic environment
- improve the knowledge base of custodians/owners of historic assets
- form the foundations of a climate change risk assessment for specific assets
- prompt consideration of what possible climate change



- adaptation solutions may be most appropriate for certain historic assets
- identify gaps in knowledge and point people in the direction of relevant resources and research

Also in the autumn, we'll be hosting the launch of the global Climate Heritage Network ([climateheritage.org](http://climateheritage.org)) in Edinburgh,

and launching our Climate Change and Environmental Action Plan (CCEAP) 2019 to 2024. The Plan will set out the approach we will take to address the challenges and opportunities presented by climate change to our organisation and to the wider historic environment. It will detail how we will continue to work towards making HES and the broader historic environment more resilient to, and prepared for, changes in our climate, alongside playing a leading role in supporting Scotland in meeting its ambitious carbon emission reduction targets. Our knowledge and experience will be used to engage with those throughout the wider historic environment, and to support the transformational change necessary if society is to adapt to and mitigate the causes of climate change.

## Wales

In 2010, following the UK Climate Change Act of 2008, the Welsh government published its 'Climate Change Strategy for Wales', accompanied by a series of Delivery Plans. A series of sector adaptation plans is currently on hold, although a new Draft Climate Change Adaptation Plan is being produced by Welsh government, which incorporates adaptation within the historic environment in several of its chapters. An initial draft went out to consultation in December 2018, and work is ongoing to produce a final version.<sup>3</sup> New emissions targets are now set under the Environment (Wales) Act 2016.<sup>4</sup>

A sub-group was set up under the Welsh Historic Environment Group (HEG) to produce a Climate Change

Sector Adaptation Plan for the Historic Environment. HEG was set up in 2004 to advise Welsh Ministers on strategic issues and priorities, and includes a wide range of cross-sector organisations with an interest in the historic environment. An initial report was commissioned that examined the 'Strategic approach for assessing and addressing the potential impact of climate change on the historic environment of Wales' (2012).<sup>5</sup> The sub-group has since produced an adaptation report for consultation, and work is proceeding to finalise this. It will consist of two parts: the first is a strategic policy and explanatory document, which includes a wide range of case studies and incorporates key mapping of areas and assets at risk; the second is a strategic action plan divided into three categories.

Improve understanding actions are designed to increase our knowledge and understanding of the impacts, risks, opportunities and threats from climate change on the historic environment. The second category, build adaptive capacity, includes actions to develop the tools and processes needed to manage the risks and implement adaptive change in the historic environment, and work with others to support and build capacity through communication, guidance and training. The third category, increase resilience, contains actions that lead to reducing vulnerability, increasing adaptive capacity, lessening threats and maximising opportunities.

Publication of the plan will take place during the second half of 2019 and will complement the Welsh government's Adaptation Plan.



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Collapse of medieval masonry from coastal erosion at Gogarth Grange, Great Orme, Llandudno. Credit: Gwynedd Archaeological Trust

Other initiatives taking place within Wales include:

- the five-year 'CHERISH' project, reported on page 12
- participation in the UK-wide 'Fit for the Future' network of organisations who work together to provide practical support, events and workshops
- Shifting Shores, a National Trust-led initiative in partnership with RTPI Cymru to explore the challenges of managing future sea level rise
- publication of 'Flooding and Historic Buildings in Wales';<sup>6</sup> a technical report that provides guidance on establishing flood risk and preparing for flooding by installing protection measures

## Conclusion

With the launch of the global Climate Heritage Network in Edinburgh this autumn, and the World Monuments Fund 'Sea Change' conference in Blackpool in September, the coming twelve months will be increasingly important for climate change and heritage interests, and it is pleasing to see so many initiatives and projects taking place throughout the UK. The key to success will lie partly in the ability of the constituent parts of the UK and relevant organisations to work together to increase resilience of the historic environment to climate change, and to protect and manage the resource in a sustainable manner.

<sup>1</sup> <https://www.theccc.org.uk/tackling-climate-change/preparing-for-climate-change/uk-climate-change-risk-assessment-2017/>

<sup>2</sup> <https://www.metoffice.gov.uk/research/collaboration/ukcp/about>

<sup>3</sup> <https://gov.wales/climate-change-adaptation-plan-for-wales>

<sup>4</sup> <https://gov.wales/sites/default/files/publications/2019-06/environment-wales-act-2016-climate-change.pdf>

<sup>5</sup> <http://eprints.glos.ac.uk/2723/>

<sup>6</sup> <https://cadw.gov.wales/advice-support/historic-assets/listed-buildings/technical-advice#section-flooding-and-historic-buildings-in-wales>



Hannah Fluck

Louise Barker



Mairi Davies. Credit: Historic Environment Scotland



Andrew Davidson

### Louise Barker

Louise is a senior archaeologist with the RCAHMW and has worked as an archaeologist since graduating from Newcastle University in 1996. Louise specialises in landscape survey and interpretation and has worked on a wide range of sites and landscapes spanning prehistory to the present day. She is also part of a small inter-agency team leading the development of the Wales's Historic Environment and Climate Change: Sector Adaptation Plan.

### Hannah Fluck

Hannah is Head of Environmental Strategy in Historic England's National Strategy team, where she oversees work on climate change and the historic environment and the relationship between the historic and natural environments. Hannah wrote Historic England's Climate Change Adaptation Report, is a contributing author for the UK Climate Change Risk Assessment, and was a UK nominated reviewer for the IPCC Climate Change and Land report. She is also chair of the UK Historic Environment Climate Change Adaptation working Group and on the steering committee for the Global Climate Heritage Network. An archaeologist with a PhD in Palaeolithic archaeology prior to joining Historic England in 2015, she has worked in commercial, research and local authority archaeology and heritage management.

### Mairi Davies

Mairi has an MA (Hons) in Archaeology from The University of Edinburgh and a PhD in Archaeology from Durham University, focusing on later prehistoric settlement and society in Eastern Scotland. Previously an Inspector of Ancient Monuments, Mairi now manages the Climate Change Team at HES, supporting the organisation in meeting its obligations under the Climate Change (Scotland) Act 2009, providing leadership and acting as an exemplar. Mairi is on the Steering Groups for Dynamic Coast: Scotland's National Coastal Change Assessment and Edinburgh Adapts, which has brought together multiple partners to develop a vision and action plan for an adapted capital city. She is one of the principal authors of a major report published last year on climate change risk assessment on the Historic Environment Scotland Estate.

### Andrew Davidson

Andrew has been the Chief Archaeologist at Gwynedd Archaeological Trust since 2011, and before that managed the fieldwork section of the Trust. He is a member of the Climate Change sub-group of the Welsh Historic Environment Group and has worked closely with the group on developing an Adaptation Plan for the historic environment.