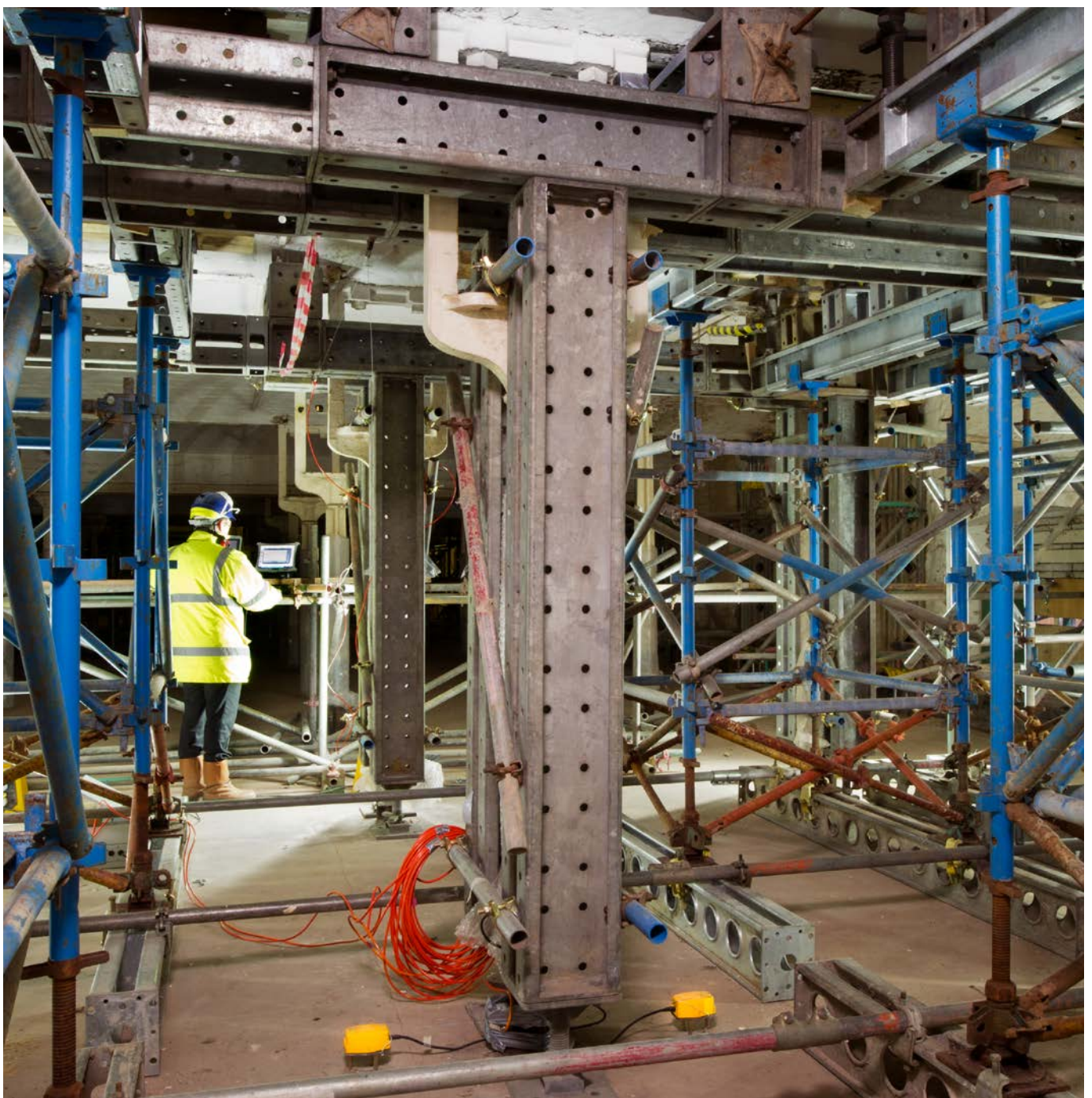




Historic England

# Research Agenda



# Summary

This document accompanies, and should be read alongside, the [Historic England Research Strategy](#), and [Historic England Corporate Plan](#), published separately.

The Research Strategy defines nine broad themes that describe our research interests. This Research Agenda sets out a series of more specific Research Topics organised under those nine high-level Research Themes. Each Research Topic sets out the importance of the topic, identifies the variety of ways in which research in this topic could have practical impact in supporting the work of Historic England, and gives a list of research questions to guide those looking to do research that will help us achieve our mission.

The Research Agenda will be kept under review by Historic England. Please see our website [HistoricEngland/research/agenda](https://www.historicengland.org.uk/research/agenda) for updates.

This document has been prepared by Edmund Lee, Dan Miles and Barney Sloane, who gratefully acknowledge the substantial contribution from subject matter experts across Historic England.

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[HistoricEngland.org.uk/research/agenda](https://www.historicengland.org.uk/research/agenda)

## Front cover

Research reveals the significance of historic sites, and guides decision-making. The 18th-century Grade I Shrewsbury Flaxmill Maltings is the world's first cast iron framed building (DP163696).



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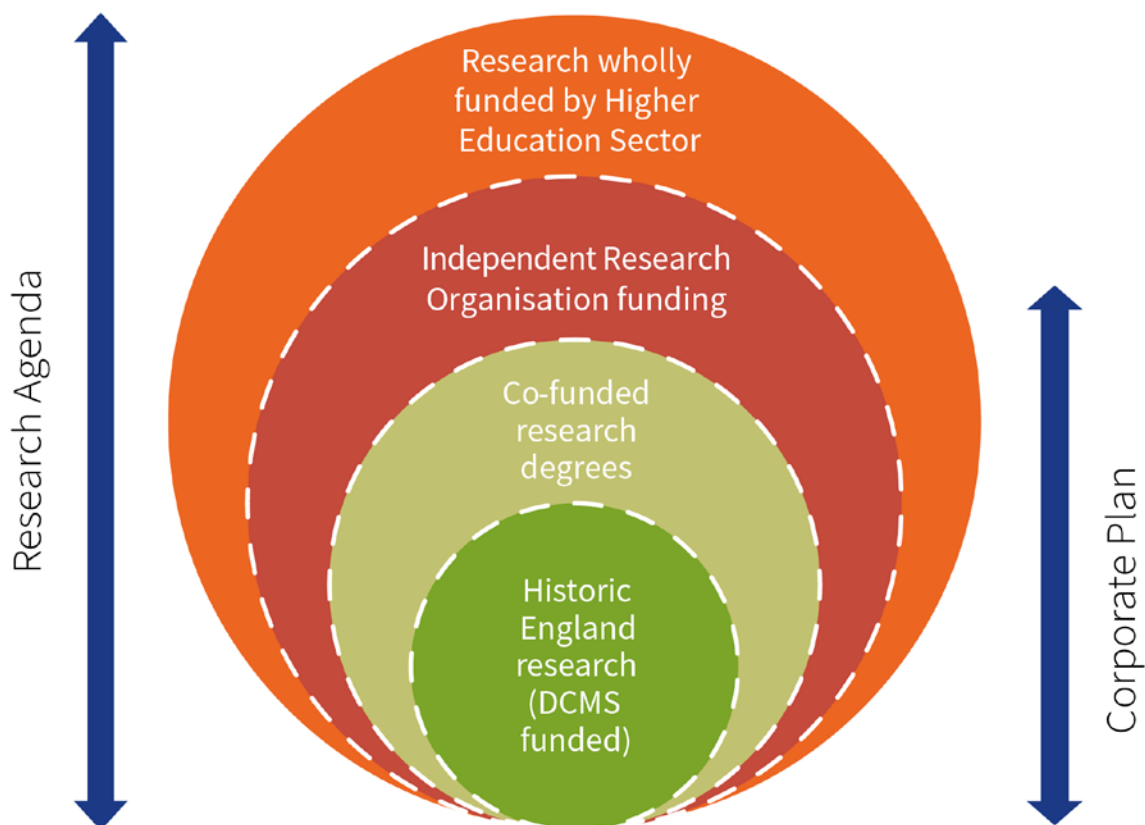


# Introduction

Historic England undertakes research, commissions it from third parties and contributes to other organisations' research where it supports our aims. Our current aims are set out in our [Three Year Corporate Plan 2017 to 20](#) and its focussed set of objectives are the immediate priorities for our funding.

However, the research needs of the heritage sector and our own long-term research requirements go far wider and we cannot deliver them alone. We therefore wish to encourage research by higher education institutions and others in the research community that delivers support for policy development and practice across the heritage sector, and enables their

research to have maximum impact. This Research Agenda highlights those research topics that we consider to have the greatest potential and which we believe offer exceptional opportunities for demonstrating research excellence at a national and international level, and the greatest real-world impact.



Historic England is recognised as a significant research organisation. We are a government-recognised Public Sector Research Establishment, and an Independent Research Organisation recognised by the [UK Research Councils](#). Our research work is informed by our [Corporate Plan](#) which responds to the Department of Culture, Media and Sport objectives set out in the [Culture White Paper 2016](#) and the [Digital Strategy 2017](#)), and also to the strategic aims of the Departments of Environment, Food and Rural Affairs, Communities and Local Government, and Business, Energy and Industrial Strategy. Our research is, in addition, cognisant of relevant Research Council strategic objectives.

Further information is available on our website: [HistoricEngland.org.uk/research](https://HistoricEngland.org.uk/research)

If you are interested in developing a joint project with Historic England relevant to the agenda set out here, please contact us via [research@HistoricEngland.org.uk](mailto:research@HistoricEngland.org.uk)

- 
- < The Historic England Research Agenda serves to encourage research beyond that which we will deliver through our Corporate Plan.



# Make a difference

The research undertaken, commissioned and supported by Historic England is ‘applied research’, planned with outcomes relevant to current real-world situations. The following types of research outcomes are those that we regard as delivering particular beneficial impact for the national and strategic mission of Historic England, and for the wider heritage sector.

Proposed research projects and partnerships that address the themes and topics covered in our Research Agenda should make clear how they will contribute to one or more of these outcomes:

- The positive effect of the historic environment on society, the economy and individual well-being is clearly demonstrated.
- The historic environment is better protected through achievable and affordable changes to public policy.
- Information is obtained that facilitates inclusion of new sites in the National Heritage List for England.
- Existing entries in the National Heritage List for England are **enriched with additional information**.
- The values communities attach to their heritage are better understood.
- New income streams or resources to protect or increase public engagement and appreciation are identified and facilitated.
- The definition of the historic environment is more inclusive.
- The significance of poorly understood or undervalued heritage assets is better understood.
- Harder-to-reach communities and demographics are more engaged in the heritage mainstream.
- The historic environment sector workforce is helped to become more diverse.
- The historic environment is demonstrated or enabled to be a catalyst for sustainable growth.
- Risks and liabilities for developers and owners of heritage are reduced.
- The harm, damage or loss to significant heritage assets – and the measures to reduce or mitigate these – are better understood.
- The reuse of historic buildings becomes more sustainable, practical and energy efficient.





- Records of the historic environment become more comprehensive, up-to-date, findable, accessible, interoperable, securely archived and reusable.
  - Local authority plan makers and decision takers are supported by better evidence.
  - The value of past and current public investment in heritage is secured.
  - The heritage workforce has appropriate capacity and capability.
  - Better public engagement with heritage is supported and promoted by digital research outputs.
  - New historical narratives are created, based on the results of historic environment research and investigations.
  - The speed, reliability and cost effectiveness of survey, analysis, investigation or conservation work is improved by the adoption of new methods.
- 
- ▲ The historic environment is the backdrop to daily life. Research has immediate practical application. London's Bethnal Green market (DP170212).

# Theme: #value

Heritage makes a significant contribution to our daily lives and reflects the diversity of both past and present communities. We need to be able to understand this better by researching how it contributes to a sense of identity; the value it has on our national and local economy; how it promotes wellbeing and how it strengthens, connects and empowers our communities. We need a better understanding of how heritage is meaningful to people in their everyday surroundings and why they engage with or feel excluded from their heritage.



< Heritage contributes to the rich sense of local identity. Research deepens that link. Rag market, Birmingham (DP195111).





## Social value

Heritage is a vital part of our society and contributes to social capital. It provides a link to the past, a sense of permanence, stability, and belonging. This in turn has many positive benefits, including increased individual and community sense of self-esteem and identity, and positively impacts on individual health and well-being. It fosters strong, resilient and more welcoming communities, and acts as a catalyst for involvement in shaping local areas.

Research into the complex relationships between heritage and society will have impact if it provides clear evidence for the real benefits the historic environment can offer society in terms of boosting pride in local areas, improving individual well-being and building better places to live and work. Innovative research data helping us to understand the range of values attributed to heritage by individuals and communities will help us shape our advice and policy, and will, in turn, ensure that more people can benefit from their heritage.

Research questions that will help our mission include:

- What is the contribution of heritage to individual and societal well-being and how does it work?
- How can we measure and capture the social contribution of heritage?
- What is the role of the historic environment in place-making and place-shaping?

See also:

[#understand – Faith and commemoration](#)

[#adapt – Societal change](#)

[#inspire – Audience research](#)

[Make a difference – read our guide to research outcomes with impact](#)



# Economic value

An important reason for looking after and investing in our heritage is that it makes a significant contribution to the national, regional and local economy in a variety of economic sectors and functions. These include the tourism industry; the construction sector; conservation services; economic activity within historic buildings; investment in the investigation, research and display of archaeological sites and structures; and education. This variety makes it difficult to capture the value of heritage using orthodox economic methods, such as price or cost arising from the use, purchase or ownership of goods and services. In contrast heritage typically has what economists refer to as ‘non-use value’ – the value that people assign to things even if they never have and never will use them. Our current economic research programme includes: economic impact studies; contingent valuation research; heritage accounting studies; surveys of heritage owners, the wider public and organisations managing heritage; and spatial impact assessments.

Research will have impact if it develops and deploys innovative economic methods and data sources to help us gain robust and up-to-date insights into this complex landscape. Work to gather evidence of the economic value of heritage to individuals, businesses, communities and the wider economy will help make the case for new fiscal policy, and champion the cause of sustained investment, broadening the resources for the sector.

Research questions that will help our mission include:

- What is the scale and value of the economic contribution of heritage to the national, regional and local economy?
- What methods best capture the total economic value of heritage?
- What central or local government fiscal measures could help prevent historic buildings from becoming redundant and vacant?
- How can the public, private and third sectors collaborate most efficiently to provide a sustainable base for heritage?

See also:

[#understand – Industrial and infrastructure](#)

[#adapt – Local planning](#)

[#adapt – National planning and infrastructure](#)

[#adapt – Land management](#)

[#skill – Developing the workforce](#)

[Make a difference – read our guide to research outcomes with impact](#)



## Contested values

Although we identify and celebrate our physical historic environment through historic buildings, archaeological sites and distinctive landscapes, our definition of heritage is itself influenced by current understanding, interpretations and attitudes. Different groups in society have different views on what heritage is, what it means and why it is important. Sometimes views on heritage (such as imperial, colonial or military heritage) and its preservation are passionately contested.

Research will have impact if it recognises and explores this complexity, and the disputed values that can sometimes result. It will help us gain a better informed approach to the appreciation and management of heritage. This will help us work more effectively with others, engage more widely, enrich the range of heritage assets deserving of protection and ensure that our National Heritage List for England, and all aspects of our work better reflect society as a whole.

Research questions that will help our mission include:

- How can we better understand the diversity of attitudes to heritage?
- How are hidden histories within society reflected in the historic environment?
- How can the potentially contested nature of heritage be best addressed, and reflected in the National Heritage List for England?
- How can new approaches to interpretation, including digital technologies, be used to provide multiple narratives, and to help arbitrate when heritage is contested?
- How do we best acknowledge difficult or uncomfortable histories?

See also:

[#understand – Military and defence](#)

[#diversify – Exploring diversity](#)

[#inspire – Audience research](#)

[#inspire – Research media](#)

[Make a difference – read our guide to research outcomes with impact](#)



# Theme: #understand

Much of England's heritage remains to be discovered or recognised. Important terrestrial or maritime archaeological sites are still hidden or hard to reach; even familiar buildings and landscapes may be known about but poorly understood or undervalued. Our research includes identifying, defining and communicating the most significant aspects of the historic environment.



< Much remains to be discovered. Research makes new discoveries and assesses their significance. Preserved Bronze Age timbers on the foreshore at Mersea, Essex (Historic England personal collection).

# Urban and public realm

More than 80% of the population live in urban areas. Towns and cities have extraordinary historical depth and associations. Their landscapes, buildings and archaeology are an invaluable source of evidence for how people have lived and worked for centuries. Archaeologists working in advance of redevelopment have extensively investigated many towns. Heritage is a powerful force for the sustainable development and regeneration of towns and urban centres as places with authenticity and meaning. Some urban places and public spaces deserve particular attention and support from Historic England, to gain a better understanding of heritage significance, or to help respond to change. We do this through our [Heritage Action Zone programme](#), and application of our [Constructive Conservation](#) approach. However, the sheer scale of our urban centres, and the rate of change means that there is still much to understand and urgency to do so.

Research will have impact if it assesses the significance of urban environments most subject to change. It will help us to ensure that the National Heritage List for England has up-to-date information, that statutory protection is appropriate where warranted, and advice on design approaches and planning decisions based upon an understanding of the historic character and distinctive values of streetscapes, buildings and public spaces.

Research questions that will help our mission include:

- How can we better understand the scale and pace of change that affect the significance of historic town centres, individual buildings and open spaces?
- How can we better understand the capacity for historic town centres to change while retaining their historic character?
- How can we best define the character of urban areas to help others plan sustainable growth, greater densities and tall buildings?
- How can we use historic local character and distinctiveness of urban areas to inspire and guide future land use, development and design?
- How can we best respond to the change of ownership of major civic and public buildings in urban centres?
- What particular urban building and townscape types are most poorly understood, least protected and most at risk from change? What is their capacity to adapt to new uses?
- How much unrecognised medieval building form and fabric is hidden within later redevelopment of structures in historic towns?
- How can we best encourage participation of urban communities in work to record, and plan for the future of their heritage?
- What contribution do historic parks and open spaces make to urban environments?
- Are there important questions that can be answered from backlogs of unpublished archaeological investigations?

See also:

[#value – Social value](#)

[#inspire – Research media](#)

[#adapt – Heritage crime](#)

[Make a difference – read our guide to research outcomes with impact](#)



# Rural landscape

Rural communities and places are crucial to an understanding of England. People's harnessing of natural resources over millennia has created the character and beauty of today's countryside. That character can be threatened or enhanced by our use and management of land. Rural places are changing at an accelerating rate, driven by demands for new housing and infrastructure; the opportunities of better IT connectivity; the redundancy, disposal and reuse of buildings; from changes to the climate, farming practice and rural development policy. Despite these changes, heritage assets in rural landscapes may be isolated and so more vulnerable to heritage crime.

Research will have impact if it captures the significance of rural heritage, ensures that informed statutory protection is in place, where warranted, reflected in the National Heritage List for England. It will help owners, local authorities and other agencies consider land-use change that maintains rural character. Work on sharing approaches to significance with the natural environment sector will help integrate land-use management.

Research questions that will help our mission include:

- How can we better understand the scale and pace of change affecting the significance of historic farm buildings, functionally redundant vernacular buildings and small estates?
- How can we better understand the capacity for rural landscapes and buildings to change while retaining their heritage significance?
- How can we use historic local character and distinctiveness of rural areas to inspire and guide future land use, housing development and design?
- How can we better integrate approaches to heritage and ecological assessments of significance?
- How can we use and communicate enhanced understanding of our rural historic environment to encourage communities to engage more actively with the character of their rural places and landscapes?

See also:

[#adapt – Land management](#)

[#adapt – Heritage crime](#)

[#inspire – Research media](#)

[Make a difference – read our guide to research outcomes with impact](#)



## Marine and maritime

England, as part of an island nation, has a rich marine heritage of historic wrecks and submerged prehistoric landscapes. The marine zone is being exploited with increasing intensity, yet our current knowledge reflects only a fraction of what lies beneath the waves. Our coastal heritage is fragile, and threatened by coastal erosion and flooding in many places. Although erosion presents a threat, and we need to know what we may lose, it can also provide an opportunity since erosion often reveals unknown archaeological deposits on the coastline.

Research that draws together heritage surveys with information from other sources will create a more complete picture of our marine and maritime historic environment. This will have impact as it helps us put appropriate statutory protection in place, provide essential evidence for management, enriches the National Heritage List for England, and provide a rich source of educational material and inspiration for both local communities and tourism. That inspiration can in turn lead to better reporting of discoveries, a resource for further research.

Research questions that will help our mission include:

- How can we maximise the use of survey and prospection data collected for renewable energy, aggregates and fishery projects to help us better understand our marine heritage?
- How can we mobilise volunteers and community groups to help assess the significance of identified historic wrecks, and coastal or submerged archaeological sites?
- How can we develop reliable models for predicting the presence of unrecorded marine heritage assets in advance of development and change?
- How can we use the distinctive coastal heritage of England to help create vibrant and economically viable coastal communities?

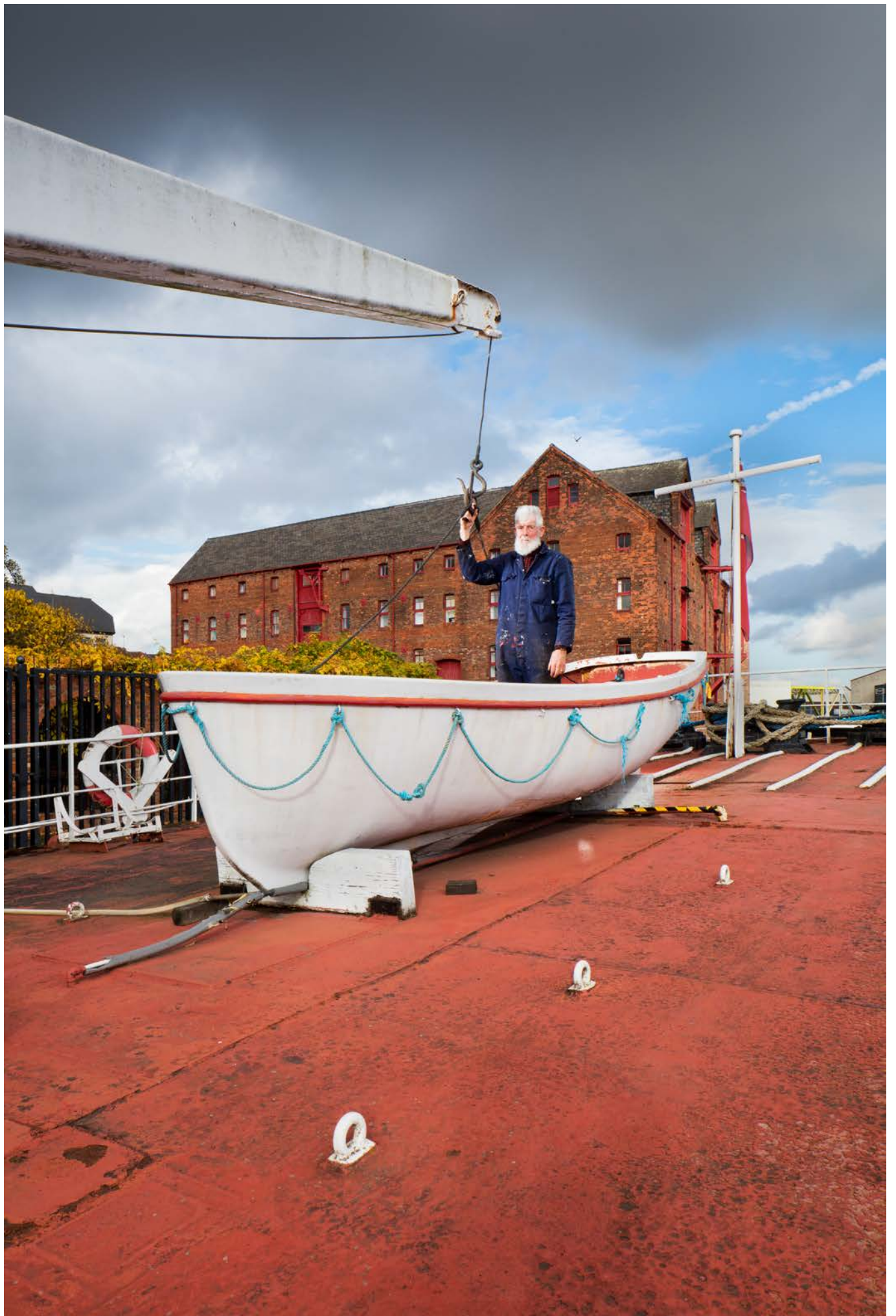
See also:

[#adapt – Heritage crime](#)

[#inspire – Research media](#)

[Make a difference – read our guide to research outcomes with impact](#)







# Water, wetlands and waterlogged

Wetlands and inland waterways make up as much as 3% of England's land surface. Over 10% of this is internationally designated RAMSAR wetland. To these need to be added the 'below-ground' waterlogged environments (such as around Nantwich, Boston or York), or localised waterlogged deposits such as those found in river gravels. Water and wetland heritage covers three categories. First, waterlogged archaeological deposits - the challenges of detection, characterisation and preservation of heritage in these environments are intense, while the quality of the evidence found at sites such as Must Farm or Star Carr can be internationally important. Secondly, heritage associated with water bodies – the structures and landscapes directly associated with the exploitation of floodplains, river valleys and lakesides. Finally, the heritage of water management and water use – fords and crossing points, dams, weirs, mills, bridges, meadows, canals, and similar that have shaped our history from the earliest human occupation to their role in the Industrial Revolution. Each of these categories is under pressure from, for example, the need to: exploit aggregate reserves, actively manage catchment systems, preserve water and land quality, and flood prevention.

Research will have impact if it expands our understanding of the nature, extent, significance and character of our heritage associated with water, wetlands and waterlogged sites, and contributes significantly to its sensitive management and appreciation by owners.

Research questions that will help our mission include:

- How can we fill the gaps in our understanding of the distribution, character and value of wetland and waterlogged archaeology?
- How can we improve prospection techniques for, and gauge the urgency of recording, wetland and waterlogged archaeology?
- What aspects of water management heritage are most at risk of loss and least understood?
- How can we improve our understanding of the value and significance of individual sites or integrated landscapes associated with the exploitation of water?

See also:

[#adapt – Climate change](#)

[#conserve – Preserving archaeological remains](#)

[Make a difference – read our guide to research outcomes with impact](#)

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< Heritage enriches the stories of local communities. Research brings out the richness. Fisherman Colin Silvert Screepton with a lifeboat on the deck of the trawler Arctic Corsair, launched in 1960. Hull, East Yorkshire (DP174275).



# Industrial and infrastructure

Britain has outstanding international importance as the birthplace of the Industrial Revolution. Historic industries define the character of many English cities and towns, landscapes and villages. Many industries have shaped particularly strong regional and local identities. The infrastructure and machinery built to support trade and communication – roads, railways and canals – is now a hugely valued heritage. Industrial sites are also visitor attractions, forming an important element of our tourist economy. They can be a catalyst for regeneration and renewal, often by new, creative industries, as new industrial infrastructure takes the place of the old. As industry and infrastructure sites change rapidly in response to technological development and economic cycles, buildings, structures and whole landscapes are being put to new use, or are facing abandonment or destruction.

Research will have impact if it helps to improve our techniques, to understand in detail the origin, range and diversity of our industrial and infrastructural heritage and its influence and effect on the wider landscape. It will establish the most significant elements, which we should try to preserve as part of new development where change is inevitable.

Research questions that will help our mission include:

- How can large and complex 20th-century industries, transport and infrastructure, including ports and harbours best be recorded and understood if they cannot be preserved?
- Which extractive industries and their associated communities are less-well understood and under-represented in heritage records?
- What is the distribution, character and significance of workers housing related to different industries, and how much of it is under threat?
- What has worked well and less well where industrial heritage has inspired the regeneration of buildings and places for housing and retail? How can similar approaches be successful where market prices are depressed?
- What will the impact be of the transition from carbon-based to renewable energy on, existing sites for coal, oil and gas extraction and processing, power generation, and transmission?

See also:

[#value – Economic value](#)

[#adapt – Heritage crime](#)

[#adapt – National planning and infrastructure](#)

[Make a difference – read our guide to research outcomes with impact](#)



## Military and defence

The robust and functional architecture of castles and coastal forts dominate their surroundings. Dockyards, drill halls, barracks and airfields evoke vivid histories and a strong sense of place. Prisoner of war camps and poison gas factories provide a different perspective. In 1945, one fifth of the country was being used for military purposes. Today, many historic facilities and training areas are being decommissioned by the armed forces, providing opportunities to create new and distinct places based on a military past. Former military sites of all periods act as a focus for the local tourist economy.

Research will have impact if it helps us understand the extent to which the armed forces have adapted historic places. In turn, it will help reveal how much of their work remains, its condition, and the management regimes or statutory protection measures that will best ensure the survival of the most significant places either in military or civilian use.

Research questions that will help our mission include:

- What is the character and significance of poorly understood classes of military building types and sites?
- How have past and current military land use, military towns and settlements shaped local character and how can this inspire reuse and regeneration?
- What has worked well and less well where historic military buildings and places have been adapted to meet the needs of the 21st century armed forces or to act as the foundations for new distinct civilian places?

See also:

[#value – Contested values](#)

[Make a difference – read our guide to research outcomes with impact](#)



# Faith and commemoration

Places of worship and commemoration are at the heart of their communities. They are created and maintained by and for those communities, and so their use and adaptation tells of social change at a local and national level. Many places of worship have already endured for a long time – they are often the places with the longest continuous use of any local building. Burial grounds perhaps represent the diversity of our entire population more completely than any other single type of heritage. They provide a rich and complex resource for communities, as places of peace, green open spaces, centres of biodiversity, evidence of past society and of family histories. Some sites, especially those of minority faith groups, are under-recognised and poorly understood. The day-to-day care of all these sites may be undertaken solely by dedicated volunteers, and they face marked decline where they cannot find economic reasons to be sustained.

Researching these places will have impact if it helps us to find and celebrate our diverse and fascinating landscape of faith and commemoration sites, promote their continued use, and better understand their significance. It will help better understand their condition and vulnerabilities, inform statutory protection, and find new ways to support communities caring for them.

Research questions that will help our mission include:

- What does 21st century faith heritage look like and how are sites distributed?
- What gaps exist in the National Heritage List for England for burial grounds, and how are these best addressed?
- How do we ensure under-represented faith heritage is visible, through work with local congregations to understand what they value and why?
- How do we decide what might change inside churches with many historic fittings and fixtures, while retaining their significance?
- How can we help others to understand and enhance the significance of historic burial grounds?

See also:

[#value – Social value](#)

[#diversify – Exploring diversity](#)

[#adapt – Heritage crime](#)

[#adapt – Societal change](#)

[#inform – Information systems and services](#)

[Make a difference – read our guide to research outcomes with impact](#)

- 
- > Heritage research uses advanced techniques. Chris Redgrave, photographer, using digital camera and iPad. Studley Royal, North Yorkshire (DP184909).





# Archaeology of the deeper past

The archaeology of the deeper past in England – prehistory, the Romans and the early medieval periods - can be elusive and ephemeral, but it is all around us, and is the sole source of evidence for 99% of human history in England. We rightly celebrate the exceptional discoveries like Must Farm or well-known sites like Hadrian's Wall or Sutton Hoo. However, our understanding is inevitably partial and we need better information to manage future change, affecting less well-known sites. We support research to identify, understand and communicate the importance of these aspects of the deeper past of England. These early traces survive as cropmarks, scatters of artefacts in plough-soil, buried deposits, subtle earthworks or ruined buildings. Aerial survey over the last 50 years has resulted in the discovery of tremendous numbers of previously lost sites. Developer funding in the last 25 years has supported a great expansion in archaeological excavation. However, this represents a tiny fraction of what is there.

Research will have impact if it helps us bring together and synthesise the evidence recovered both from a quarter century of archaeological reports, and from the 4,000-5,000 new investigations each year. It will examine the breadth and diversity of monument and settlement types and help to establish new priorities for fieldwork within the wider context of cultural research into past societies.

Research questions that will help our mission include:

- What is the grand narrative of the first 99% of human habitation of what is now England?
- What new settlement or monument types are being discovered through survey or field investigation, and what should be there but has not yet been identified?
- How can the sector ensure better co-ordination of our understanding to aid in the conservation and management of an irreplaceable resource?
- How can we better investigate, understand and apply existing statutory protection to more challenging types of monument, such as those lacking defined structures or only surviving as ephemeral evidence, and which are most vulnerable?
- How can we improve public understanding of the archaeology of the prehistoric, Roman and early medieval periods in a way that inspires a modern audience, and helps its protection and management?

See also:

[#adapt – Heritage crime](#)

[#adapt – Land management](#)

[#conserve – Preserving archaeological remains](#)

[#innovate – Materials](#)

[#innovate – Human environment](#)

[#innovate – Dating and chronology](#)

[Make a difference – read our guide to research outcomes with impact](#)



# Understanding the Historic England Archive

The [Historic England Archive](#) is a unique national archive of the historic environment of England. It represents over 100 years of recording and collecting activity in different contexts and by a wide range of organisations and individuals. Not all the records were created with a documentary role in mind, but in gathering these records together and preserving them for the nation there has been a consistent focus on creating a record of our shared archaeological, architectural and landscape heritage. The Historic England Archive holds over 12 million pieces of archive on 16km of shelving in a dedicated archive store in Swindon. Our holdings include files, reports, drawings and plans, but 75% of our collections are photographic negatives, prints and transparencies. We store our collections in environmentally controlled archive vaults which ensure that these records will be available for future generations.

Research on the collection in its own right will have impact if it offers insights into the history of heritage documentation and recording of the historic environment. It will unlock new narratives of engagement with the past. It will also help inform our future collecting, documenting and access strategies.

Research questions that will help our mission include:

- Can we better understand the creation and purpose of individual collections by researching the individuals and companies who created them? And how do their stories fit into the broader history of British photography, and record photography in particular?
- Can we analyse collection data in new ways, for example to look at patterns of recording and commissioning geographically and over time?
- What kinds of crowdsourcing project will be popular for online engagement and virtual volunteering?
- How does use of our holdings and other historic environment archives by researchers inform and influence conservation of buildings and sites?

See also:

[#conserve – Collections and archives](#)

[#inspire – Audience research](#)

[Make a difference – read our guide to research outcomes with impact](#)



# Theme: #diversify

We aim to increase the number of people from diverse communities and cultures who actively engage with, and support, the historic environment. Our research includes developing and testing new ways to promote the past in a way that is inclusive to all and that celebrates the cultural diversity of England's heritage.



< Traditional symbols of heritage take on meaning to new communities. Research helps make that connection. Leeds town hall (DP174187).





## Exploring diversity

England's heritage tells the stories of countless diverse individuals, communities and groups who have travelled here from overseas, settled here and whose lives are reflected in the archaeological record, or have influenced and enhanced the built environment. Groups that may be marginalised in traditional historical narratives can have their stories read in England's archaeological and built heritage. We want to ensure that these different voices and histories are heard, and that the heritage we value and protect reflects the diversity of modern day England.

Research will have impact if it helps us to share and to understand the different heritage values of diverse groups and cultures, and the best ways to research and record their heritage. It will find the best ways to share this research with different communities. It will identify the experts among them with whom we should be working and learning. It will also help enrich the National Heritage List for England, and to inform our priorities for statutory protection to ensure we keep abreast of 21st century values.

Research questions that will help our mission include:

- What are the influences of colonialism, globalisation and migration on English architecture?
- What has been the contribution of women architects, designers and builders as well as women with hidden or unacknowledged roles?
- What has been the influence of individual tradespeople (for example builders, gardeners and craft workers) on the historic environment?
- How should we record and value the heritage of transient groups such as Roma/ travellers or new immigrant groups who have passed through and changed history but left little tangible trace?
- How do we value the intangible heritage of the ordinary? How do we recognise the significance of commonplace buildings where extraordinary things happened?
- What is the impact of new immigrant groups on historic rural locations?
- What is valued as heritage by young people?
- How does the historic environment reflect the diversity of subcultures and contested spaces such as squats, nightclubs and carnivals or sites of protest?

See also:

[#value – Contested values](#)

[#skill – Developing the workforce](#)

[#inspire – Audience research](#)

[Make a difference – read our guide to research outcomes with impact](#)





# Workforce diversity

A heritage workforce that reflects the diversity of society will enable Historic England and the wider sector to become and remain relevant. We wish to use our influence in the sector to create a more diverse heritage and cultural workforce. We have published our [Workforce Diversity Strategy](#) and accompanying Action Plan. Research underpins this plan, providing a better understanding of the present situation, setting out ways to improve it and plan for the future.

Research will have impact if it helps us identify under-representation at all areas and levels of the heritage sector, identify the cause(s) for the lack of diversity to complement existing quantitative studies, develop plans to promote diversity within the workforce and, ultimately, achieve and show evidence for a more balanced representation across the sector workforce.

Research questions that will help our mission include:

- What does a synthesis of existing research that profiles the heritage sector workforce and its level of diversity tell us in aggregate?
- What are the perceived barriers to employment in the heritage sector and how do education choices relate to subsequent employment decisions?
- What works? What case studies of current good practice and role models exist within the heritage sector?
- How can organisations develop better recruitment policies, corporate governance, and better targeted programmes of diversity awareness and advice?
- How can we build stronger links between heritage sector organisations and diverse communities?
- How can we develop forecasts and scenarios of heritage in the future based on current profile and local, regional and national demographic forecasts?

See also:

[#skill – Developing the workforce](#)

[Make a difference – read our guide to research outcomes with impact](#)

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< Heritage has meaning to a diverse audience. Research brings out that richness. Bisi Alimi, Nigerian gay rights activist, public speaker, writer and HIV and LGBT advocate at Tower Bridge, London (DP183337).

# Theme: #adapt

We need to be able to understand the world that we live and work in today and how this might change in the future. We need foresight to anticipate and prepare for the impact and opportunities this could have for the historic environment so we can manage change more effectively and make our heritage more resilient. We research and analyse current and future trends in social, political and economic change; environmental and climate change science; land use, property and infrastructure development; as well as technological and technical innovations.



- < The historic environment must adapt to change. Research secures its significance as it is adapted. Tea-room of the former Wallis department store off Oxford Circus, now an IT service office (DP183530).

## Local planning

Change to the nation's heritage is managed most significantly, in terms of numbers, through strategic land-use planning by local authorities, along with the process for obtaining planning permission and agreements on particular developments. Planning policy for local authorities, set by national government, aims to sustain and enhance the significance of heritage assets for future generations while allowing them to be adapted to meet the needs of today's owners and occupiers. Historic England plays a direct role in maintain the National Heritage List for England, and advising on cases affecting some sites **which have statutory protection**. Getting this balance right needs informed judgment.

Research will have impact if it helps understand the effect that the tools at planners' disposal have now or might have in the future. It will provide an evidence base to inform plan making and decision taking in the local planning system. It will highlight the link between development that is sensitive to local character and improves outcomes for places, and ensure that the historic environment is seen as a benefit and not a barrier to economic growth.

Research questions that will help our mission include:

- How effective has non-statutory protection, for example through national Registers and Local Lists, been at preserving and enhancing the significance of heritage assets?
- What is the level and effectiveness of enforcement action under planning law on heritage issues?
- How can the public benefit of designating a Conservation Area be maximised?
- Can the 'value capture strategies' that have been pioneered in the United States be applied in English circumstances to support Conservation Area enhancement?
- What factors determine whether or not local councils use their powers to require owners to undertake urgent works to maintain listed buildings?
- What lessons can be learned from local authority Local Plans and Neighbourhood Plans which have effectively included an understanding of historic environment related issues?
- Does Neighbourhood Planning increase or decrease the protection of the historic environment?
- Is there a 'tipping point' in the lifespan of heritage assets, beyond which further incremental change arising from development will irrevocably damage their significance or their viability?

See also:

[#value – Economic value](#)

[#inform – Information systems and services](#)

[Make a difference – read our guide to research outcomes with impact](#)



# National planning and infrastructure

Central government set the overall policy direction and framework for the planning system operated by local government, and set regulation for specific issues, such as the redevelopment of former industrial or 'brownfield' development, and levels of housing development.

Government also support the renewal of national infrastructure beyond the control of individual local authorities. The current National Infrastructure Plan is a substantial programme of construction that will have profound effects on the historic environment. In the 2016 Autumn Statement the Government announced a series of measures designed to further stimulate housing growth and to catalyse the renewal of our national infrastructure. These included £2.6 billion for improvements in transport projects designed to reduce journey times; £740 million to support the roll out of fibre-optic broadband; and an increase in central government investment in infrastructure of 60% between 2016-17 and 2020-21. Together they represent a substantial programme of construction that will have profound effects on the historic environment.

Research will have impact if it provides an evidence base and toolkit to inform our response to planned infrastructure investment, projects and individual schemes.

Research questions that will help our mission include:

- What methods will assist the strategic assessment of the likely impact of planned infrastructure on the historic environment?
- How can we best make use of the development funding specifically available through major infrastructure projects, to enhance our understanding and management of the historic environment?
- How do we enable sustainable brownfield development while protecting archaeological interest and retaining local character?
- How can legal protection of sites through inclusion in the National Heritage List for England be national heritage list focussed on areas most likely to be affected by new infrastructure?
- What lessons can be learnt from past and current large infrastructure projects, such as Heathrow expansion, high-speed rail, and recent energy generation and road programmes, to ensure the significance of the historic environment is recognised in a timely manner, and opportunities seized to integrate the investigation of the old with the development of the new.

See also:

[#value – Economic value](#)

[#understand – Industrial and infrastructure](#)

[Make a difference – read our guide to research outcomes with impact](#)

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> Historic environment research within the planning system. Jay Carver, Crossrail, London (DP183428).





# Land management

Over 84% of England's scheduled monuments are on agricultural land. Farmers are the owners and managers of most of the nation's historic landscapes and archaeological sites. Changes to land use and land management practices, which in most cases do not need planning permission, continue to be the biggest cause of degradation and loss to our irreplaceable rural heritage. Central government agricultural policy also has an impact. For example, the target to increase the extent of woodland cover will have a particular impact on buried archaeological sites, the great majority of which are not protected by scheduling.

Research will provide foresight. It will have impact if it helps us anticipate where land management change is likely to occur in the medium term, develop improved protection and mitigation strategies and prioritise statutory protection for sites that are most at risk or under-represented in the National Heritage List for England. There are also great opportunities for research to provide evidence to influence and change land management practices to the benefit of the historic environment, wider environment, agriculture and the economy.

Research questions that will help our mission include:

- What is the impact of traditional and new cultivation techniques on the survival of archaeological sites?
- Where will significant changes to land use affecting the survival and setting of archaeological and above-ground heritage, such as new energy crops, new woodland, or new mineral extraction sites, occur?
- How can legal protection of sites through inclusion in the National Heritage List for England be focussed on areas most likely to be affected by land management change?
- What will be the impact of changes to agricultural policy and subsidy on the historic environment?
- What are the challenges to historic environment conservation arising from changing rural economies, particularly changes to farming policy in the light of Brexit?
- How can we assist farmers and land managers to better manage the heritage assets in their ownership as rural development policy changes?

See also:

[#value – Economic value](#)

[#understand – Rural landscape](#)

[#understand – Archaeology of the deeper past](#)

[Make a difference – read our guide to research outcomes with impact](#)





# Climate change

We know that our environment has always changed. The climate has fluctuated, coastlines have shifted, ocean currents moved, sea levels gone up and down and watercourses flooded. People have adapted to those changes and we see the traces of these adaptations in the archaeological record and in the structures and landscapes that make up our environment today. However, it is clear that current climate change, driven by human activity, is causing environmental changes at a rate that has not been seen for millennia. The speed of climate change is a ‘risk multiplier’ of the natural processes that have always affected heritage assets. Responses to climate change as people seek to slow or prevent some processes, and adapt to the changing environment can also have unintentional harmful effects. Conversely, finding new uses for historic buildings retains the embodied energy used decades or centuries ago in their construction, avoiding the additional carbon emissions needed to replace them with new buildings.

Research will have impact if it helps us assess and respond to the direct and indirect effects of climate change upon different sorts of heritage site. It will provide evidence of how people are adapting to environmental change and how that might affect heritage, how we can best conserve heritage in light of these effects; and the positive opportunities heritage can present in understanding, reducing, and adapting to environmental change.

Research questions that will help our mission include:

- What are the impacts of natural and environmental change on the historic environment?
- What are the likely impacts of climate change adaptation measures, such as flood prevention or managed coastal retreat, on the historic environment, and how can we mitigate the potential harm or make best use of these opportunities?
- How do we balance the need to sustain the historic environment and to reduce greenhouse emissions?
- What can an understanding of past changes to the environment and to human activity contribute to the wider discussion about environmental change, particularly climate change?

See also:

[#understand – Water, wetlands and waterlogged](#)

[#innovate – Human environment](#)

[#conserve – Buildings and landscapes](#)

[#conserve – Preserving archaeological remains](#)

[Make a difference – read our guide to research outcomes with impact](#)



## Heritage crime

The value of England's heritage is not judged in pounds and pence. The impact of theft or vandalism on our historic sites and buildings has far-reaching consequences over and above the financial cost of what has been stolen or damaged. 'Heritage crime' is any offence that harms the value of England's heritage assets, and their settings, to this and future generations. Examples include lead theft from church roofs, or illegal metal detecting on scheduled monuments. Our focus is heritage crime affecting listed buildings or other designated sites, or objects or material removed from them illegally. Heritage crime will often have both a direct impact, such as broken windows or stolen artefacts, and an indirect impact such as the sense of loss felt by the community through the damage to a familiar and loved place, or economic impact from loss of its amenity value.

Research will have impact if it helps us to: minimize the effect of heritage crime by providing a better understanding of the scale and extent of the problem; plan effective prevention and enforcement measures; improving crime prevention measures on heritage sites; and enhances the opportunities to investigate and identify offenders.

Research questions that will help our mission include:

- Where are the different types of crime that affect the historic environment occurring, and how often?
- What new and innovative techniques and products are available or under development for use on-site to help owners prevent crime?
- What is the particular nature of heritage crime in declining urban, rural or coastal areas?
- How can we raise awareness of heritage crime in local communities?
- How can new methodologies for studying crime and anti-social behaviour within the historic urban, rural and marine environments be applied to heritage crime cases?

See also:

[#understand – Urban and public realm](#)

[#understand – Rural landscapes](#)

[#understand – Marine and maritime](#)

[#understand – Industrial and infrastructure](#)

[#understand – Faith and commemoration](#)

[#understand – Archaeology of the deeper past](#)

[Make a difference – read our guide to research outcomes with impact](#)



# Societal change

We live in a society which is changing with increasing rapidity. Many aspects of societal change will drive change to and adaptation of the historic environment in response. These large-scale drivers include the size and demographic profile of the population, migration into and within the country, broadening diversity of faith and belief, the sense of personal identity, changing technology, governance and the strength of community and civil society.

These are large-scale and wide-reaching influences, so we must be realistic in our expectations to manage their impacts on heritage. However, research to understand and anticipate change will have impact if it can help us to plan for the future, and predict where the greatest and most imminent risks and opportunities might be, and to assess the sector's capacity to respond.

Research questions that will help our mission include:

- What are the challenges and opportunities of a changing demographic profile and an increasingly diverse population on the historic environment?
- What broad cultural and social trends are evident which will help us set priorities for the future?
- How might social change driven by technological innovation affect the historic environment, either broadly such as transformation of patterns of consumerism, or information consumption, or more specifically, such as new building materials or the introduction of driverless vehicles,?
- How might changing patterns of work and provision of services affect the design of cities, transport, infrastructure, or particular heritage asset types, such as office space in historic buildings?
- How do specific changes, such as faith profile, impact on the historic environment?
- How can the sustainability of reuse solutions for historic buildings and places be best evaluated?

See also:

[#value – Social value](#)

[#understand – Faith and commemoration](#)

[Make a difference – read our guide to research outcomes with impact](#)



# Theme: #conserve

We need research to inform the conservation of places, sites, buildings, archives, collections and materials. Research includes monitoring and development of measures to mitigate against natural or man-made damage; buildings science aimed at improving energy efficiency of traditionally constructed buildings through retrofitting; understanding the causes of deterioration and performance of materials, buildings and sites; and identifying and sourcing appropriate materials and techniques for repair.



< Heritage needs active conservation. Research leads to better repair work. Harley Street, London (DP185673).

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# Buildings and landscapes

Historic buildings and designed landscapes are vulnerable to a range of destructive agencies, including long-term physical and chemical decay of materials; human activities of maintenance, repair, adaptation or modification; and environmental changes as a result of climate and weather and/or biological agents.

Research will have impact if it advances good practice in technical conservation. This might include by developing, refining and evaluating interventions that will be effective, practical, and sustainable. It will provide vital information on the performance of materials; practical solutions for the continuing care and conservation of historic buildings and designed landscapes; assess the energy performance of historic buildings; and mitigate harm to heritage assets from catastrophic threats.

Research questions that will help our mission include:

- How can good practice in early intervention and routine repair be best promoted?
- How can we identify building materials used and understand their performance, causes and rates of deterioration, and develop non-destructive techniques for assessing condition and diagnosing faults in building fabric and structures?
- How do we assess which repair and conservation materials, techniques or treatments will be most beneficial both now, and over the long-term?
- How do we best balance the conservation needs of historic buildings and sites (particularly ruined sites) with those of the flora and fauna that might inhabit them?
- What is best practice in the design, installation and use of modern building services in historic buildings?
- How do we ensure the continued supply of traditional building materials?
- How do we ensure the mitigation of harm to heritage assets from catastrophic threats and emergencies, such as fires, flooding, or structural failure?

See also:

[#adapt – Climate change](#)

[#innovate – Materials](#)

[Make a difference – read our guide to research outcomes with impact](#)



# Collections and archives

Collections of artefacts, documents and images present particular conservation issues. The materials may be very unstable – archaeological artefacts, or sensitive historical photographic material – and need conservation for the future. However, understanding the past function or association of a wide range of objects often depends on the close investigation of their components, composition and/or construction while retaining their overall physical state. Remedial conservation research therefore informs how we can best use active treatments to stabilise materials and preserve archaeological collections and archives for the future. Investigative conservation research explores the use of a broad range of scientific techniques, imaging and analytical tools to reveal information on manufacture, use, and for archaeological objects, deposition and preservation, to enhance our understanding of the past.

Research will have impact if it ensures that the materials and methodologies currently used in conservation are the most appropriate, helps us evaluate and adopt new practices and technological innovations, or sustains the significance of artefact collections for future researchers.

Research questions that will help our mission include:

- What treatments are the most effective in both preserving information value and ensuring the long-term stability of artefacts? Are there barriers to them being used more widely?
- How do we develop tools and models to support the preservation of large collections and predict decay trajectories? Can we predict which collections are most at risk of rapid deterioration?
- Are our current conservation approaches sustainable in terms of climate change or in their environmental impacts (for example regarding changes to environmental legislation), cost, availability of materials and skills?
- Because of pressure on museum storage space, how can we become more selective in choosing what to retain in archaeological archives and can digital technologies enable greater selectivity?

See also:

[#innovate – Materials](#)

[Make a difference – read our guide to research outcomes with impact](#)



# Preserving archaeological remains

Preserving archaeological remains in the ground is often a better alternative to excavation on cost or ethical grounds. It requires an understanding of how different materials survive or decay, either rapidly or slowly. Research is important to the management of all types of sites, but is particularly relevant for those where the absence of oxygen has led to the preservation of a greater range of archaeological materials, especially organic materials. Changes to those conditions will likely cause rapid degradation of rare, vulnerable, irreplaceable and therefore highly significant archaeological evidence.

Research will have impact if it can provide the evidence and the tools to help planning and decision making and to ensure prioritised and practical action is taken. It could help predict the likely presence of well-preserved archaeological remains; or provide an understanding of the level of their preservation when found; or characterise the preservation potential of the environment in which archaeological materials are buried. It may model how archaeological materials will react to changes in their burial environment over different timescales, and monitor those sites where we are less confident about what those impacts will be.

Research questions that will help our mission include:

- How can we better understand the tolerance of specific archaeological materials such as bone, pollen, plant macro-fossils, wood or metals to change in different soil and water environments?
- What are the effects and loss of significance due to specific construction processes such as loading/compression from buildings or machinery, vibration, drainage and boring?
- How do we assess the impact of large scale land-use/environmental changes, such as re-wetting of wetlands; increasing salinity in freshwater coastal wetlands; ocean warming and acidification, on *in situ* sites?
- What particular periods or types of archaeology are most at risk when preserved *in situ*?
- How do we ensure that the requirements for preservation in situ of historic assets complements and is balanced against the needs of environmental conservation?

See also:

[#understand – Water, wetlands and waterlogged](#)

[#adapt – Climate change](#)

[#innovate – Human environment](#)

[Make a difference – read our guide to research outcomes with impact](#)



# Theme: #inform

In a world of big data and records born digitally, we need to manage information to manage the historic environment. Our digital humanities research includes technologies, systems and services, and developing the standards that underpin these. We will improve access to datasets, the analysis of information, and its communication, preservation, use and reuse.



- < Heritage becomes digital. Research develops the systems and services we need to make best use of that information. Laser scanning at Stonehenge (DP136899).

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# Information systems and services

Records are the body of knowledge for the heritage sector. Where sites have been excavated, demolished, or lost through other means, records may be the only evidence of the past. Historically, the development of multiple overlapping recording systems, incompatible standards and formats, under-investment in information systems and skills in the sector, have made it difficult to share that evidence. Emerging technologies offer the opportunity to develop services that will make the sectors information more accessible and inspiring, better suited to the effective management and protection of sites, and a more reliable resource for research. Our flagship activity, designed with partners to simplify and improve public access and professional use, is the [Heritage Information Access Strategy \(HIAS\)](#) detailed on our website. In addition, we contribute to and support initiatives to improve the quality of specialist heritage information management through the [Forum on Information Standards in Heritage \(FISH\)](#). We have supported work on the trans-national definition of the [Seven Grand Challenges for Digital Archaeology](#) for the European Archaeologiae Consilium (EAC).

Research will have impact if it helps us to understand who uses heritage information, how they make use of it and what they need from information services. It could apply new technological developments to the management and dissemination of heritage information; or develop and apply existing data standards to facilitate management, dissemination and reuse as digital technologies change. It needs to build a commitment to sector-wide sharing, long-term preservation and reuse of information and data.

Research questions that will help our mission include:

- What sort of information will be most useful to those who plan and take decisions affecting the historic environment?
- How can we encourage the sharing, linking and interoperability of historic environment data and information, particularly information derived from the commercial sector?
- How can we ensure the consistent development, application and enforcement of existing technical information and data standards and their promotion to others?
- What is the most beneficial way of providing services for the public and heritage professionals to access and use heritage information?
- How can we harness the enthusiasm of the general public to help update and improve the record of the nation's heritage through developments such as crowdsourcing?

See also:

[#skill – Working more effectively](#)

[#understand – Urban and public realm](#)

[#understand – Marine and maritime](#)

[#understand – Faith and commemoration](#)

[#understand – Archaeology of the deeper past](#)

[#adapt – Local planning](#)

[#inspire – Research media](#)

[Make a difference – read our guide to research outcomes with impact](#)



# New narratives from ‘big data’

The commercial heritage sector (heritage consultancies and archaeological practices etc) are the largest generators on new information on the historic environment, generally through investigations undertaken to prepare a planning application or mitigate its impact. The scale of this development-led fieldwork now has the potential to radically change our understanding of the past. It has been estimated, for example, that over 75,000 archaeological interventions, ranging from trial trenching to full-scale excavation, have taken place since developers were first required to fund recording work in 1990.

Arguably, the full research potential of developer-funded archaeological recording work can be fulfilled only when its results are incorporated into larger-scale syntheses of the outcomes of multiple excavations and surveys and resultant new narratives are presented back to the public. While planning policy requires developers to bear the reasonable costs of the analysis and publication of the archaeological work they commission, retrospective synthetic studies require other sources of funding. In the last ten years or so, a number of synthetic studies have begun to draw together this enormous body of archaeological investigation and the initial results are compelling. But far more remains to be done.

Research will have impact if it draws together and interrogates ‘big data’ to create new historical narratives for large areas, for types of archaeological site and for whole historical periods. It will allow us to pose a new and more refined set of research questions for the future. It will allow us to understand the strengths and weaknesses of current fieldwork and analytical methodologies and it will provide better information to support the land-use planning and statutory designation processes.

Research questions which will help our mission include:

- Which areas, types of site and historical periods would most benefit from the synthesis of commercially derived ‘big data’?
- What new narratives can we generate from synthesis?
- What can we learn about current fieldwork and analytical approaches and how can they be improved?
- What can synthesis tell us that will improve protection through the planning and statutory listing systems?
- How can we best engage the public in the creation of new historical narratives from commercially generated information?
- How can we secure maximum public value from commercially generated information?

See also:

[#understand – Archaeology of the deeper past](#)

[#skill – Working more effectively](#)

[Make a difference – read our guide to research outcomes with impact](#)



# Theme: #skill

We need to understand our sector, its strategic aims, composition, organisation, capacity and threats. Research includes understanding the profile of those employed in the heritage professions, labour market intelligence, and training and knowledge needs analysis, as well as understanding commercial practice and community engagement. This will inform and focus our support for our sector and the services it delivers.



< Heritage needs skilled workers. Research helps identify and shape the future workforce. Andrew Osmond, thatcher, Dorset (DP195134).

## Developing the workforce

The sector needs a workforce with the right skills – skills to investigate the nation’s heritage, so its significance can be identified; to manage it, so the right decisions can be taken about the future of heritage assets; and to maintain them in good condition, or repair them when required. If these skills are absent, or if they are in short supply, we need to know. ‘Labour market intelligence’ is the study of the supply of and demand for the heritage workforce to see who is doing what, how many are working in the sector, and whether there are any shortages or gaps in skills available. It also highlights the benefit the heritage sector provides to the national economy as an employment sector, providing a wide range of roles including practical and craft-based roles, as well as specialist graduate and postgraduate employees in consultancies, sole traders, commercial practice, local and national government roles. Existing reports set out the composition, skills gaps and recommendations for various subsectors.

Research will have impact if it provides foresight and evidence about skills supply, and demand, to inform forward planning across the sector, so appropriate action may be taken.

Research questions that will help our mission include:

- What is the composition of the historic environment and broader heritage workforce?
- What are the trends in employment and the key skills gaps or shortages for the different areas of historic environment employment and activity?
- What are the best models for ensuring clear career pathways into the heritage sector?

See also:

[#value – Economic value](#)

[#diversify – Exploring diversity](#)

[Make a difference – read our guide to research outcomes with impact](#)



## Working more effectively

The heritage sector benefits from the varied and profound expertise of many organisations and individuals. They are the owners of heritage assets, the commercial specialists in private practice, the researchers and educators in higher education, the officers in local and national government, and volunteers in the third sector. They may be heritage sector specialists, or work within much larger activities such as construction, agriculture, planning and tourism. This remarkable diversity offers both a massive strength and significant challenges of integration. There is scope for improving the effectiveness and efficiency of the sector as a whole to make the best use of the resources available and maximise the benefit to society.

Research will have impact if it improves processes, management, delivery and articulation of historic environment work both within the heritage sector and as part of related sectors. It will support decision-making, increase cost-effectiveness, maximise research value and enhance public benefit. We will see a more effective, cohesive and robust sector.

Research questions that will help our mission include:

- What commercial and fiscal models exist which could provide increased market sustainability, encourage investment, provide client benefit, and reduce risk?
- How can we improve the research infrastructure to support knowledge transfer across the heritage sector and improve partnership working?
- What benchmarks and approaches can be developed to improve standards of work where needed and demonstrate the impact of investigative research in the historic environment?
- How can we develop a sustainable and productive future for archaeological archives?
- What are the implications for local government decision-making of changing and reduced funding? What models for service delivery will be most sustainable?

See also:

[#value – Economic value](#)

[#Inform – Information systems and services](#)

[#inspire – Research media](#)

[Make a difference – read our guide to research outcomes with impact](#)



# Theme: #inspire

Our research inspires and promotes public understanding and enjoyment. To develop new and improved ways to communicate our research, we need to understand our audiences better, to define what they use our research for and what format they want it in. This will allow us to use the right approaches, technologies and media to communicate and engage with more people through our research.



< Heritage needs to inspire new audiences. Research helps find and reach those audiences. Schoolchildren at Ashby-de-la-Zouch, Leicestershire (DP185888).



## Audience research

Heritage sector research has a wide and diverse audience, including owners of heritage assets, and their advisors, decision-makers and planners, those working in other industries such as construction, power generation and agriculture, as well as other researchers, research groups, funding bodies and the general public. Each has differing requirements of research from the heritage sector, whether it is in a professional capacity, or more for enjoyment and recreation. Engaging audiences is about raising awareness and demonstrating the benefits of heritage to society – showing that across England, heritage gives people a sense of place, a sense of belonging, a sense of beauty, a sense of pride and a sense of well-being. Sector research must resonate with people so they in turn see heritage's benefit to society.

Research will have impact if it helps us better understand the needs of our audiences – who they are, how they receive information, how they want to use it and how it inspires them – and look for evidence to show what impact the stories we can tell has on people. Better communication will engage a broader audience in all aspects of our work.

Research questions that will help our mission include:

- What is it about heritage that inspires peoples' interest?
- How do people, in a personal or a professional capacity, receive and use information, knowledge and insights which emerge from the study and care of the historic environment?
- How can we provide multiple narratives that reflect the diversity of modern society and attitudes, and meet the needs of many audiences?
- How do we include the different perspectives of the audience in defining and explaining significance?

See also:

[#value – Social value](#)

[#value – Contested values](#)

[#diversity – Exploring diversity](#)

[Make a difference – read our guide to research outcomes with impact](#)



# Research media

Heritage research, stories, insights, and case studies are made publically available through a rapidly growing number of different channels. Established routes such as conferences, journal articles, monograph publications and record systems, have been in continuous use for over a century, and retain great authority. Broadcast media and websites have been used to publicise heritage research for decades but new approaches, including social media, blogs, wikis, apps, webinars and podcasts, are now becoming increasingly common. Leading edge technologies such as augmented and virtual reality, 3D modelling and printing, and haptic interfaces to provide touchable digital content are available. Adopting and adapting these approaches to publishing the results of heritage sector research may change the nature of the interaction between researchers and audiences in exciting and unanticipated ways.

Research will have impact if it helps us to keep abreast of developing media appropriate to reach the many audiences for heritage sector research and to develop innovative ways of providing high quality material, while ensuring the longevity of our research results and archive.

Research questions that will help our mission include:

- What new technologies can be deployed to unlock access to our historic environment and how can they best be brought to bear?
- How can we learn from other organisations and sectors that produce content for public audiences?
- How do we track the impact of new methods of communication?
- How can innovative publication routes develop the archival and authoritative quality of established routes?

See also:

[#value – Contested values](#)

[#understand – Rural landscape](#)

[#inform – Information systems and services](#)

[#skill – Working more effectively](#)

[Make a difference – read our guide to research outcomes with impact](#)





# Theme: #innovate

We are always looking to develop or refine our research methods, tools and science-based approaches. Our research includes developing innovative and smarter technologies, techniques and tools, or finding new applications for those developed elsewhere. This will enable us to do our existing research better, or to do entirely new types of research, and to do so more cost effectively.



- < Historic environment research needs new techniques. Research develops and applies these. Portable X-ray fluorescence used to analyse Roman lead sample, Fort Cumberland, Portsmouth (DP184491).

# Materials

From prehistoric earthworks to post-War concrete buildings, the materials used in the past have shaped what we now see as the historic environment. Understanding the character of these materials is an essential part of understanding past societies - how raw materials were selected, what technologies were used to extract, produce or recycle them, and how they were transformed into useable products.

Research will have impact if it underpins understanding and help us better assess, interpret, manage and present our heritage. It may also lead to new marketable technologies or techniques, and will build a richer knowledge of the crafts, industries and manufacturing techniques of past societies.

Research questions that will help our mission include:

- What materials should we be focusing our efforts on as priorities, either as part of investigative research to establish date, origin, function and degree of preservation, or conservation priorities?
- What new methods can be devised to support faster, more cost-effective characterisation of materials and how can we help get them to the market effectively?
- How can we enhance our understanding of production, provenance, and chronology of artefacts and residues encountered in archaeological investigations to help refine the interpretation of remains discovered?
- Can we synthesise from existing reports chronological or spatial changes in different types of material that may reveal technological innovations, patterns of supply, and cultural differences in use, adaptation, discard and recycling?

See also:

[#understand – Archaeology of the deeper past](#)

[#conserve – Buildings and landscapes](#)

[#conserve – Collections and archives](#)

[Make a difference – read our guide to research outcomes with impact](#)



# Human environment

Without people and an understanding of how they lived, shaped and, in turn, were shaped by their environment, historic places lose most of their meaning and value. Human health, the diseases we suffer from, the food we eat, the places we live in and the way in which our planet is changing are all part of our intimate relationship with the environment, both now and throughout our history. Environmental archaeology uses the natural sciences to investigate these complex interactions. The application of techniques such as proteomics, isotopic analysis, and next generation DNA sequencing is transforming our knowledge of past environments and the people who lived in them.

Research will have impact if it delivers better ways of understanding the past environment. It could increase the value for money and cost-effectiveness of archaeological investigations, providing new narratives of our shared past, and unlocking new resources for agricultural, medical and environmental research. This in turn will engage and inform people about the use of science in understanding and conserving the historic environment.

Research questions that will help our mission include:

- How can the further study of human skeletal biology from archaeological specimens unlock new insights into past societies, environments and disease?
- What new insights can be developed from an understanding of past animal and plant species represented in the archaeological record?
- What new techniques for identification and recording of past environmental indicators and species can be developed?

See also:

[#understand – Archaeology of the deeper past](#)

[#adapt – Climate change](#)

[#conserve – Preserving archaeological remains](#)

[Make a difference – read our guide to research outcomes with impact](#)



# Dating and chronology

When events took place, and the development, from multiple events, of a common chronology is fundamental to our understanding of the past. The application of Bayesian statistical modelling for the interpretation of scientific dates provides timing and tempo, revealing the sequence and pace of change. This allows us to see the connections between past events, compare contemporary sites, and trace the choices people made in building and maintaining their environment. Scientific dating is a key element of our knowledge of the past, and underpins many of today's decisions about protecting and conserving our historic environment.

Research will have impact if it results in new scientific dating techniques; enhancement of existing scientific dating methods, and synthetic applications of scientific dating that explore the timing and pace of major changes in the past. Through this our knowledge of our archaeological sites and historic buildings will be significantly deepened.

Research questions that will help our mission include:

- What new methods of scientific dating, such as rehydroxylation kinetics for dating fired ceramics, can be developed and brought into reliable and cost-effective use?
- How can we extend the range of sites and structures that can be dated using dendrochronology (tree-ring dating), for example by extending the network of oak reference chronologies?
- What can we do to address the calibration and radiocarbon reservoir issues which affect the accuracy of radiocarbon dating?
- How can we more effectively amass and synthesise key dating data to help our understanding of the past?

See also:

[#understand – Archaeology of the deeper past](#)

[Make a difference – read our guide to research outcomes with impact](#)



# Measuring and sensing

To understand and manage the historic environment researchers need good, up-to-date information about the location, extent and shape of heritage assets. Cutting-edge approaches for aerial investigation, geophysical survey, remote sensing, geospatial measurement and 3D image and data capture offer new ways to obtain this.

We are interested in the practical cost-effective use of technologies, such as: visible and non-visible spectrum imaging – across the full multi, hyperspectral and electromagnetic spectrum; range based sensors - using laser, structured light or other electromagnetic radiation bands for point based measurement and sensing; image based measurement including photogrammetry and ‘structure-from-motion’ technologies; drones as survey platforms; Building Information Modelling (BIM); remote monitoring solutions - for active and passive monitoring of changes to historic fabric through time.

Research will inform the choice of the best approaches to work at a wide range of scales from whole landscapes, to individual sites, or single artefacts, and across wetland, marine and both above and below ground. It could make the cutting-edge commonplace and support better and cost-effective integration of new measurement and sensing technologies into existing heritage management practice.

Research questions which will help our mission include:

- How can we improve prospection, modelling and evaluation techniques for challenging environments where heritage is obscured from view, such as intertidal, wetland and waterlogged, or woodland?
- How can we build on current remote monitoring methods to assess the condition of heritage assets, especially archaeological field monuments? Can predictive models be extended and used to monitor change?
- How can information derived from different measurement and remote sensing technologies (eg geophysics and air photo mapping) be better combined?

See also:

[#understand – Archaeology of the deeper past](#)

[Make a difference – read our guide to research outcomes with impact](#)



# Key Resources

Three Year Corporate Plan 2017 - 2020: Historic England's aims and objectives for the next three years.

[HistoricEngland.org.uk/about/what-we-do/corporate-strategy/](https://historicengland.org.uk/about/what-we-do/corporate-strategy/)

Heritage Protection Commissions: funding for research projects

[HistoricEngland.org.uk/services-skills/grants/our-grant-schemes/hpc/](https://historicengland.org.uk/services-skills/grants/our-grant-schemes/hpc/)

Collaborative Doctoral Partnerships: our partnership with the Arts and Humanities Research Council

[HistoricEngland.org.uk/research/support-and-collaboration/researchopportunities/collaborative-doctoral/](https://historicengland.org.uk/research/support-and-collaboration/researchopportunities/collaborative-doctoral/)

Research Reports: search the database of over 6,500 research reports from Historic England, including those published by English Heritage before 2015.

[HistoricEngland.org.uk/research/research-results/research-reports/](https://historicengland.org.uk/research/research-results/research-reports/)

Historic England Archive: access to over 12 million photographs, drawings, reports and publications from the 1850s to the present day, covering the whole country.

[HistoricEngland.org.uk/images-books/archive/](https://historicengland.org.uk/images-books/archive/)

The National Heritage List for England: the definitive statutory record of nearly 400,000 legally protected buildings and sites in England

[HistoricEngland.org.uk/listing/the-list/](https://historicengland.org.uk/listing/the-list/)

Historic England Research magazine: popular presentation of our research results.

[HistoricEngland.org.uk/images-books/magazines/historic-england-research/](https://historicengland.org.uk/images-books/magazines/historic-england-research/)

Advice and guidance: highlights recent guidance and a list of current guidance covering technical research techniques, research project management, designation research and planning matters.

[HistoricEngland.org.uk/advice/latest-guidance/](https://historicengland.org.uk/advice/latest-guidance/)

Training and Skills: details of courses and continuing professional development offered to the sector.

[HistoricEngland.org.uk/services-skills/training-skills/](https://historicengland.org.uk/services-skills/training-skills/)







# Historic England

We are the public body that looks after England's historic environment. We champion historic places, helping people understand, value and care for them.

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