

Flooding and the Historic Environment

Guidance for Partners in Worcestershire

Flooding and the Historic Environment

This guidance is aimed at organisations working in Worcestershire on flood related issues. It is targeted at planners, consultants, engineers, and environmental specialists involved in the development and design of both specific flood alleviation schemes and strategic plans for flood-risk management and response.

The purpose of the guidance is to provide key advice and contacts to help you ensure that historic environment assets are considered at an early stage in the planning process to ensure their protection and to minimise any costs, delays or risks in dealing with this historically and economically valuable resource.

The guidance will answer the following key questions...

Why is it essential to consider the historic environment?

How can doing so reduce impact, identify risks, minimise costs and highlight opportunities?

Who should I contact for advice?

Which historic environmental resources must I consult?

What guidance documents are available?

Who else can I contact beyond the historic environmental sector?

... and provide a roadmap to ensure you are able to acquire and utilise the resources available to you in a manner that facilitates efficient *and* effective planning and design for flood risk.

This guidance has been produced as part of an Historic England funded project undertaken by *Worcestershire Archive and Archaeology Service (WAAS)* in partnership with *Landscape Research & Management*. The project has aimed to: understand the threats to Worcestershire's historic environment through the impact directly from flood events and indirectly from measures of mitigation, adaptation, and response; provide guidance to make heritage more resilient to these threats; develop effective counter-disaster responses for heritage; inform the responses to these threats by other sectors and organisations; and to critically assess the roles of heritage specialists within governmental authorities and agencies in respect of flooding and flood risk.

This guidance is accompanied by similar documents for members of the public and historic environmental practitioners. A series of articles have been produced which: critically assess the recent flood alleviation schemes in respect of their historic environmental practices and impact; outline a mechanism devised by WAAS through which to better map historic environmental features for use within disaster planning and response (see 'FLOOD Mapping' text box); and a study of the impact of recent floods within the county and issues of community resilience, awareness, and capacity in respect of heritage matters. A full project report is also available.

All of these, and further information on the project can be located on the project website – www.worcestershire.gov.uk/archaeology/flooding, or by contacting the *Worcestershire Historic Environment Record and Advisory Service* on archaeology@worcestershire.gov.uk.

Why is it essential to consider the historic environment?

Reducing Impact

The impacts to the historic environment from flood events can be considerable. This includes substantial risks beyond the direct impacts of flood water, including degradation from under-informed, planned, and implemented flood mitigation or alleviation schemes.

Many of our historic towns are built within floodplains and those on the Severn, Avon and Teme have been particularly badly impacted. Historic towns are economically important in providing the infrastructure for regional business and act as significant tourist hubs. Any schemes to reduce or respond to flood risk must therefore be sensitive to the unique historic characteristics of the area. This also applies to the county's distinctive landscapes, and risk from poorly designed, large-scale alleviation schemes.

Ill-informed works can have major implications on both the integrity and sustainability of significant heritage assets, alongside their valued contribution to local economies and communities. For instance, programmes of work to mitigate, repair, or restore a historic building which does not appropriately respond to its unique requirements and sensitivities will inevitably result in substantial harm to the fabric of the structure; thus greatly reducing its value and lifespan.

Flood risk management schemes need to ensure that they provide appropriate mitigation measures to address potential damage to important below ground archaeological remains liable to be present. These may include former bridges, quaysides and remains associated with the development of medieval and post-medieval river frontages. In addition, earlier Roman and prehistoric activity is often present in such riparian environments along with important palaeoenvironmental remains.

Identifying Risk

The historic environment is inherently linked with the extent of flooding and flood risk. Only the county's geology and broad topography can be considered a wholly 'natural' component of the landscape, with almost all elements to some degree created or influenced by past human activity.

Historic water-management features such as drainage ditches, leats, sluices, weirs and various forms of pond are prevalent across the county, substantially influencing how water is collected and dispersed. Sub-surface features such as infilled examples of those aforementioned, alongside palaeochannels and palaeoenvironmental deposits also have a significant impact on local hydrology. Insights into how settlements and landscapes have been utilised across time can also provide invaluable perspectives on varying dynamics of flood water runoff and infiltration across the county.

Fully understanding the historic and archaeological landscape, and its component features, is therefore critical towards the ability to accurately predict and/or quantify risk from flooding across a particular area.

Minimising Costs

Flood alleviation schemes are highly sensitive projects in respect of the historic environment, with substantial potential to impact on important archaeological remains and historic assets. It is however essential to ensure that they can be constructed efficiently and with the minimum of delay to provide the protection that the communities affected so badly need.

Poorly planned works can result in a substantial additional cost. **Ensuring that the potential archaeological and historic environmental impact of any scheme is fully quantified and informed plans for mitigation have been established is therefore critical** to avoid unexpected financial and temporal constraints. Unexpected discoveries and/or the identification of additional impacts once construction is underway are liable to result in delays and considerable additional costs.

Management of flood water may also have unforeseen impacts on seemingly unrelated historic environment assets. For instance: changes to the water table may dry out important palaeoenvironmental deposits; increased flow in some areas may cause erosion to features further downstream; or the planting of woodland to capture run-off could have a significant detrimental impact on buried remains and/or landscape character. These impacts need to be assessed, and weighed against the expected benefits of a potential scheme at an early stage to ensure the scope of necessary mitigation is fully financed.

Highlighting Opportunities

Early consultation with appropriate historic environment specialists not only minimises risks and impact, but also regularly provides opportunities for good practice schemes, and positive public engagement.

There are often opportunities to restore and/or integrate historic water-management features into alleviation schemes. This is a common approach with Green Infrastructure or SUDS initiatives, often resulting in the enhancement of both the historic and natural environment, alongside the creation of local amenities. For instance, the enhancement of local wildlife sites which pertain to historic land-use, such as ponds or meadows.

Archaeological works pertaining to flood alleviation schemes can also have lasting benefits for the local community. Integrating community archaeology initiatives into the programme of works offers substantial opportunities to enhance local engagement with a scheme.

Good practice in respect of historic environment assets ultimately facilitates smoother and more efficient planning and construction of flood alleviation schemes, thereby helping to protect those communities affected by flooding as well as preserving and protecting our heritage. This can be achieved through early consultation of historic environment specialists, ensuring any archaeological works required can be built into the construction programme, and allowing informed decisions to be made in respect of design and implementation.

Conforming to Planning Policy

Consideration of the historic environment within development, including flood schemes, has been enshrined within the planning process for over 20 years. The responsibilities of local authorities, developers, and statutory agencies are clearly laid out in the National Planning Policy Framework and, where development falls outside the planning process, other guidelines and legal responsibilities often apply.

If an archaeological/historic site or structure is designated, then there is a need to apply for consent to the relevant authority (Historic England or local authority) for any works. Undesignated heritage assets also require careful consideration, and may be subject to conditions to ensure any impact is appropriately mitigated.



The Kempsey Flood Alleviation Scheme: An example of good practice

The Kempsey Flood Alleviation Scheme is an exemplar of good practice in respect of the historic environment. The scheme, undertaken by the *Environment Agency*, was planned and instigated in active partnership with both the local community and local authority archaeologists.

Not only was the identification and excavation of fifty-five burials dating to the Anglo-Saxon occupation of the area undertaken with efficiency and cost-effectiveness; but the discovery heightened the enthusiasm of the local community to understand and commemorate their forebears.

This was all largely facilitated by the early consultation of historic environmental stakeholders, ensuring that a well-informed programme of works could be established.

A full overview of the historic environmental approach to the Kempsey Flood Alleviation Scheme, alongside critical assessment of other schemes across the county, can be found within the '*Flood Risk Management and the Historic Environment*' document produced in association with this guidance.

Who should I contact for advice?

It is essential to establish contact with historic environmental specialists at the earliest opportunity in order to facilitate proactive discussion both before and throughout the scheme or activity in question. Consultation throughout processes of planning for flood events is highly likely to result in a more efficient and cost-effective programme of works, minimising risk, and ensuring positive outcomes are obtained for engaged authorities, agencies, contractors and communities.

Information on the **archaeology and historic environmental assets of the county**, and advice on the potential need for programmes of archaeological works, must be obtained by contacting the *Historic Environment Advisory Team, Archive and Archaeology Service* of *Worcestershire County Council* – 01905 845560, archaeology@worcestershire.gov.uk.

In respect of **Listed Buildings, Conservation Areas, Designated Parks and Gardens, and locally listed heritage assets** your primary point of contact should be your district council Conservation and Landscape specialists. In Worcestershire these are:

Bromsgrove District Council – 01527 881326, conservation@bromsgroveandredditch.gov.uk

Malvern Hills District Council – 01684 862335, developmentplans@malvern hills.gov.uk

Redditch Borough Council – 01527 534062, conservation@bromsgroveandredditch.gov.uk

Worcester City Council – 01905 722559, development.orchard@worcester.gov.uk

Wychavon District Council – 01386 565323, planning@wychavon.gov.uk

Wyre Forest District Council – 01526 732536, conservation@wyreforestdc.gov.uk

For professional guidance on **Grade I and II* Listed Buildings, Scheduled Monuments, Registered Parks and Gardens, and Registered Battlefields** you must contact the West Midlands regional team of *Historic England* - 0121 625 6870, west.midlands@historicengland.org.uk

Beyond governmental authorities, there are a wide array of private contractors and consultants who hold considerable expertise in managing historic environmental assets in respect of flooding. Many of these may be willing to offer their services. Commissioning professional surveys and assessments from specialists in advance of flood events may highlight means through which to save money in the longer term, particularly if done so in collaboration with the aforementioned statutory and governmental authorities. Regulatory organisations such as the *Chartered Institute for Archaeologists* (<http://www.archaeologists.net/>) or the *Institute of Historic Building Conservation* (<http://www.ihbc.org.uk/>) collate lists of services which are deemed to operate to adequate levels of professional standards.

Which historic environmental resources must I consult?

The following outlines a range of key resources that should be considered both in advanced of and during a flood event; when planning for flood risk; or during impact assessment of any scheme aimed at reducing it. **These resources should always be discussed with those who manage them to ensure the key issues, risks, and opportunities they may highlight are fully understood.**

The **Worcestershire Historic Environment Record (HER)** (<http://www.worcestershire.gov.uk/waas>) manages a database of the county's heritage assets numbering over fifty thousand records. These records hold information on many of the historic buildings, archaeological monuments, and historic landscape character of the county, alongside details on previous works undertaken in respect of such assets. The HER can also provide copies of a range of historic mapping and other documentary resources.

HER data and information can be requested by email or telephone (see the 'Who to contact...' section), or by visiting The Hive in Worcester. Many of the reports of previous archaeological works can be accessed through the **Worcestershire Online Archaeology Library** (www.worcestershire.gov.uk/archaeology/library).

The **Worcestershire HER** has created a bespoke GIS resource which outlines historic environmental features either at risk from, or of opportunity to flooding and flood-risk management schemes respectively. This is outlined in the 'FLOOD Mapping' text box.

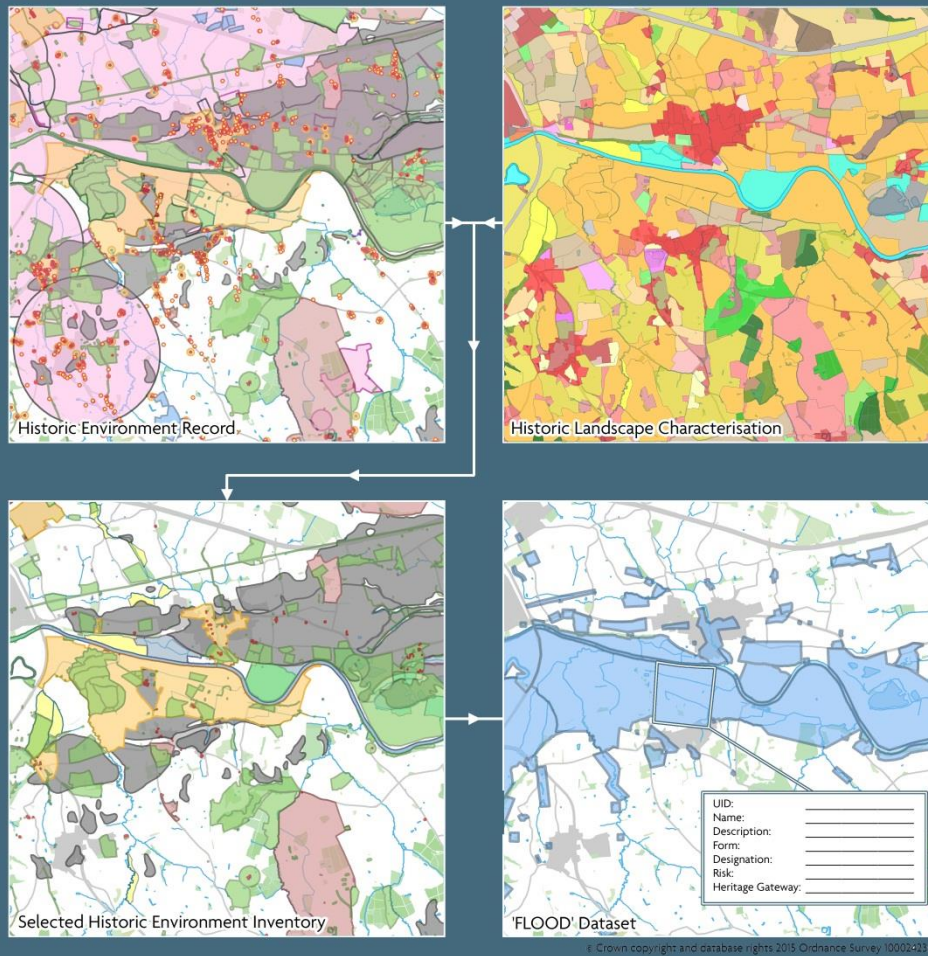
The **National Heritage List for England** provides information on the country's designated assets including Listed Buildings and Scheduled Monuments - <https://historicengland.org.uk/listing/the-list/>

Information on **Listed Buildings, Conservation Areas and Locally Listed Buildings** must be obtained from your local Conservation Team. In Worcestershire, there is a separate team for each of the six districts.

Large amounts of additional information are likely to be available through other sources, including libraries, local societies, and the local/county Records Office.

Records of heritage assets such as HERs are only as effective as the information provided to them. Providing copies of surveys and/or work undertaken in respect of heritage assets is therefore strongly encouraged, and is a statutory obligation for schemes which include programmes of archaeological works, or that effect designated heritage assets.

The 'FLOOD' Dataset



Worcestershire Archive and Archaeology Service has produced a digital resource which aims to highlight all known historic environmental assets either at risk from flooding, or that present opportunities for integration or enhancement within alleviation schemes.

The dataset synthesises and simplifies the complex and diverse information held within the Worcestershire Historic Environment Record* into a more accessible format. The broad form of the asset(s) in question is provided, along with a brief description of provenance, the type of flood risk, the presence of statutory designations, and the potential opportunity for environmental enhancement.

The GIS dataset is designed to 'flag' a potential historic environmental issue to those that are both planning for flooding, and those who must respond rapidly to flood events – facilitating early consultation with heritage specialists; therefore, a more informed and effective response.

The data is curated and supplied by the Worcestershire Historic Environment Record and Advisory Service, and can be requested via archaeology@worcestershire.gov.uk.

** NB. The dataset simplifies, but does not supersede the Historic Environment Record in respect of planning policy. A full Historic Environment Record search must still be undertaken in advance of any development application.*

What guidance documents are available?

The most important source of guidance for matters relating to the historic environment in respect of flooding will be the practitioners outlined above, there are however also a number of guidance documents available which should be obtained and consulted.

Historic England has produced a range of products on the impacts of climate change and climate change mitigation on the historic environment. This includes a number of guidance documents specifically pertaining to flood risk to historic buildings and archaeological assets. Although these documents are predominantly aimed at owners of historic buildings or other heritage assets, they contain invaluable detail of key issues affecting the historic environment and how they can be dealt with at a strategic and site-specific level. These documents can be obtained from the Historic England website - <https://historicengland.org.uk/advice/>.

Information on processes of planning for the mitigation of the impacts of development on Worcestershire's historic environment can be found here: www.worcestershire.gov.uk/archaeology/planning.



Historic England

Flooding and Historic Buildings

Climate Change and the Historic Environment

ENGLISH HERITAGE

Checklist

The following checklist is designed to ensure you have done the minimum required to ensure historic environment is appropriately considered within your scheme or plan. This is based on a framework of recommendations of good practice, established by *Worcestershire Archive and Archaeology Service*.

- We have consulted historic environment specialists at the earliest opportunity** to explore the key issues pertaining to the historic environment, and establish a framework through which programmes of environmental enhancement or archaeological mitigation can be effectively designed, appropriately scheduled, and efficiently implemented.
- We are aware of the form and level of any statutory designations pertaining to the initiative or scheme.** We understand our obligations to obtain consents and/or permissions from the relevant authorities. We understand the limited scope of statutory designations to inform locally contextual design.
- We have fully quantified the significance of undesignated historic environment assets and distinctive landscape characteristics within the locality in question.** These have been used to inform the objectives of the scheme or plan, ensuring the design responds appropriately to the local environment and its component assets.
- We have obtained and consulted key guidance** such as 'Climate Change and the Historic Environment' from *Historic England*.
- We have consulted our local Conservation Team, Historic Environment Record, and the National Heritage List for England** to obtain all available information and advice on known heritage asset(s) in respect of the initiative or scheme.
- We have explored opportunities to utilise the historic environment for the enhancement of the scheme or plan.** This may include integration of historic water-management features within an alleviation scheme, or through undertaking a programme of community archaeology.
- All efforts have been undertaken to minimise to risk of unexpected discoveries being made once construction has begun.** This is most readily achieved through early establishment of good lines of communication, and the design of archaeological fieldwork around a well-informed programme of investigative works.

Who else can I contact beyond the historic environmental sector?

The following is a non-exhaustive list of those in non-heritage disciplines who can aid you in planning for, or responding to flooding:

Environment Agency - 0800 80 70 60, enquiries@environment-agency.gov.uk

Environment Agency Flood Line (for local warnings and alerts) – 0345 988 1188 or 0845 988 1188

National Flood Forum – 01299 403 055, <http://www.nationalfloodforum.org.uk/>

The Flood and Water Management Team, Worcestershire County Council – 01905 765522, flooding@worcestershire.gov.uk

The Emergency Planning Unit, Worcestershire County Council – 01905 766171, emergencyplanningstaff@worcestershire.gov.uk

North Worcestershire Water Management (a shared District Council service covering Bromsgrove, Redditch & Wyre Forest) - 01562 732570, Kirsten.Huizer@nwwm.org.uk

The Lower Severn Internal Drainage Board - 01454 413340, admin@lowersevernidb.org.uk

Canals and Rivers Trust – 0303 040 4040, enquiries.westmidlands@canalrivertrust.org.uk

Severn Rivers Trust - 07817 622919, severnrivertrust@btconnect.com

Severn Trent Water – 0800 707 6600, www.stwater.co.uk

Natural England - 0300 060 6000 enquiries@naturalengland.org.uk

Planning, Economy and Performance, Worcestershire County Council - 01905 766723, sp@worcestershire.gov.uk

Minerals' Planning, Worcestershire County Council (advice on mineral resources) – 01905 766374, minerals@worcestershire.gov.uk

Woodland Trust – 01476 581111, england@woodlandtrust.org.uk

Worcestershire Wildlife Trust - 01905 754919, enquiries@worcestershirewildlifetrust.org

Herefordshire and Worcestershire Earth Heritage Trust – 01905 855184, eht@worc.ac.uk

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Contact

Worcestershire Archive and Archaeology Service

Worcestershire County Council

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Worcester
WR1 3PD

01905 845560

archaeology@worcestershire.gov.uk

www.worcestershire.gov.uk/archaeology/flooding
www.landscape-research-management.co.uk
www.historicengland.org.uk

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