

Possible Research Projects and Activities

Below is a draft list of possible research projects and activities. The research projects and activities have been suggested by i) the initial data-gathering exercise, ii) suggestions from the consulting meeting in March 2004, iii) suggestions from the CHARM steering committee and other suggestions.

The list starts with suggestions about how to disseminate the findings of the research and is then ordered by the general themes identified by the CHARM steering committee.

Ideas for archaeological research funded by the HLF must pursue the overall goals for which the Heritage Lottery bid was successful, furthering understanding of the Harbour as a holistic environment. To be considered individual projects need to contribute towards this. The framework has identified a number of research projects, some of which may have to be considered as future research financed from other sources.

Dissemination

The following suggestions are in line with Chichester Harbour Conservancy's plans to disseminate HLF projects.

- A day conference to sum up the current state of knowledge of the archaeology of the harbour.
- A web-based project to disseminate information – important to combine this with similar initiatives from Chichester District Council and West Sussex County Council.
- A series of hands-on archaeology workshops to be convened in association with local museums for specific interest groups and possibly for family activities days. These would be aimed to introduce local groups carrying out activities in the harbour to the nature of archaeological finds in the region both as part of the HLF responsibility for public outreach and education but also to aid the recognition of new sites and to help in the identification of damage (for example by erosion) to the archaeological resource. The activities would include showing actual archaeological material from local museums and/or Museum of London handling collections and waterlogged wood and ship fittings etc. The workshops could be variously themed and targeted. There could be a workshop for Fishbourne Roman Harbour investigators. Other groups to be included could be many who spend a lot of time in the harbour area and some who might also disturb archaeology by their activities: bait diggers, fishermen and dredgers, sea wall and drainage contractors, nature conservationists, wildfowlers, farmers, landowners, walkers, yachtsmen, local archaeological and heritage societies, boatyard and marina owners.
- The production by CHC of a guide as to what volunteers should look out for and what to do if they find something of archaeological interest.
- The development by CHC of educational material for schools (ie when visiting the centre at Dell Quay, on CHC's outreach programme and on the internet).

Possible research projects

The possible research projects are listed thematically, the major themes being: *raised beaches and former shorelines, palaeoenvironment, settlement history, industrial, military, and subtidal archaeology, and the investigation of landscapes under threat.*

The changing landscape: raised beaches, former shorelines

For the Palaeolithic period, analysis of raised beach deposits, terrestrial land-surfaces and periglacial gravels has indicated that they may preserve a record of climatic and environmental change over the past half a million years. Future research should aim to build on these recent advances to improve our understanding of Pleistocene deposits in Sussex river valleys.

Former shorelines can also be fossilised in raised roads, earthwalls and similar structures. Survey of these would add to the historical knowledge of how the landscape has changed over time, as well as giving an indication of sea level and coastal changes. In London and the Thames estuary, survey of foreshore features has resulted in the level of such features being used for dating to some extent. This could also be done for the Chichester harbour region over a period of time.

The Wadeway is an important causeway that runs from Langstone to Hayling Island. Its date is not known, but may date to the Bronze Age when rising sea levels may have necessitated a route from the mainland to the island on which a number of important Bronze Age features are located. The Wadeway is first shown on maps in AD 1552. A survey on part of this feature has already been carried out by the Hants and Wight Trust for Maritime Archaeology (HWTMA); further survey could build on this work. There may also be the possibility of viewing a cross section of the Wadeway where it is truncated by New Cut, and for dating well-stratified timbers used in its construction by dendrochronology.

Extensive use could be made of the volunteer base associated with the Friends of Chichester Harbour and local Archaeological Groups to undertake both 'walkover' surveys along the shoreline and a structured programme of fieldwalking in order to identify new sites and provide more information for known sites. Fieldwalking should focus on areas around known sites and on fields adjacent to past and present shorelines. It will form part of a seamless approach to investigating changing landscapes. Previous shorewalks in the east of Chichester Harbour have yielded significant information.

Practical research projects:

- *investigation of raised beach deposits by coring, to supplement work already carried out on Thorney (results forthcoming), and incorporate results into work carried out elsewhere in Sussex;*
- *survey of foreshore structures to complement the historic knowledge of how the landscape has changed, sea level and coastal change;*
- *survey of the Wadeway, building on the work already carried out by the Hants and Wight Trust for Maritime Archaeology. Possible investigation of the date of the causeway by analysis of timbers used in its construction by dendrochronology, and an investigation of how the Wadeway was constructed by inspection of a cross section through the feature.*
- *Fieldwalking according to a structured programme and using volunteers in order to identify new sites and provide improved information at or near known sites.*
- *Shorewalking involving volunteers using a 'walkover' survey system especially in areas not covered by previous shorewalks.*

Palaeoenvironment

One area of work which has not had as much attention is a reconstruction of environmental conditions in prehistoric periods. Systematic coring of the AONB would help to build up such a picture. As a precursor to this a desktop study of existing geological borehole information should be undertaken. Work of this nature has been carried out in neighbouring Langstone Harbour. Analysis of pollen and diatoms would be a useful background against which to typify the Harbour through time. Diatoms and similar can indicate marine transgression/regression while pollen indicates landuse.

There is a need to search for and investigate *in situ* prehistoric sites throughout Sussex, especially those where environmental, faunal and botanical remains are likely to be preserved. Stratified sites on the Coastal Plain in general could reveal improved chronological sequences. Areas under or adjacent to alluvium in the lower stretches of river valleys would also provide useful information if targeted for investigation. Work in the AONB could complement studies about how raw material such as flint was procured, for example from the Downs. Research along these lines if incorporated into regional research frameworks for southeast England would lead to a considerable gain in information in the study of the prehistoric period.

Investigations into relative sea level change could lead to the production of broad period maps showing major channels, islands, promontories and coasts for different major periods. This could also be useful in the prediction of local sea level rise and flood defence work. Local archaeologists, historians and geologists could be involved, in conjunction with survey, and borehole work. In London and the Thames estuary, sea level change can be tracked with increasing precision using the tree ring and close finds dating of foreshore structures such as dated wharves. This has reached the point where the level of a foreshore feature can be used for dating to some extent. This could be done for the Chichester harbour region over a period of time.

For the Roman period, investigation into sea levels and obtaining evidence about the local environmental picture in the Roman period would be useful. This could be achieved by coring and could be part of the wider project to investigate these questions for prehistoric and other periods.

For the Roman period, charting of the deep water channel and understanding its water management and local environment to build a picture of the harbourside environment in the Roman period. Resistivity, magnetometer and ground penetrating radar surveys could be used.

Practical research projects:

- *desk-based study of existing borehole information contained within the British Geological Survey database, other public service records and previous studies; results from this study would be used to determine the scale and location of new coring.*
- *systematic coring of the AONB to build up a picture of environmental conditions for all periods; analysis of pollen and diatoms to indicate marine transgression and regression and landuse, leading to a better understanding of coastal changes.*
- *investigation of sea level change for all periods using tree ring and close finds dating of foreshore structures such as dated wharves;*
- *investigation of in situ prehistoric sites where environmental, faunal and botanical remains are likely to be preserved;*

- *investigation of the deep water channel at Fishbourne to understand its use through all periods, especially the Roman period, using resistivity, magnetometer and ground penetrating radar surveys.*

Military

The AONB includes a number of military features, including airfields, pillboxes, machine gun posts, and anti-tank defences. The historical significance of such features is not always fully appreciated, leading to such features are being lost across the UK.

Practical research projects:

- *survey to identify military remains in the AONB, building on the work carried out by the Defence of Britain project, but including military remains of all periods.*

Settlement history

The AONB offers an excellent opportunity to compare and contrast the inter-relationships between the palace, the villas and the rural economy and settlement in the Roman period.

Current knowledge of vernacular buildings could be synthesised into a cohesive unit before undertaking further research and field survey. This could lead to a booklet with guided walks. Some historic buildings such as the church at Bosham, are relatively well known, although they might benefit from more modern investigation. There are also many vernacular buildings of interest, including historic mills and inns.

Historical research and survey of the deserted medieval villages near Birdham and Warblington could be undertaken to gain an understanding of the changes in settlement patterns in the medieval period.

Practical research projects:

- *synthesise current knowledge of vernacular buildings into a cohesive unit, followed by further research and field survey of vernacular buildings as a second stage;*
- *historic research into the deserted medieval villages at Warblington and near Birdham to understand how settlement patterns changed in the medieval period.*

Industrial

Initial fieldwork into all industrial remains is needed to test the quantity and quality of the archaeological resource. This would include the systematic location and recording of extant structures of the period to ensure the long term preservation of information and to facilitate a secure database from which to formulate future strategies.

A number of rare tide mills are known in the AONB; generally in Sussex, tide mills, windmills and water mills have received little archaeological attention. It is important that all standing mills are surveyed. Little excavation has taken place on Sussex watermills, with the exception of those used in the iron industry. Whether the evidence from watermills in the iron industry is relevant to other industries remains to be tested by excavation.

Detailed fieldwork into the post-medieval brick industry is still in its infancy. The opportunity should be taken to record brick and tile kilns while they survive; surveys should also not neglect the remains of other structures, such as pug-mills and drying sheds that may lie nearby.

The salt industry has been important for the harbour from prehistoric times to the post-medieval period. A number of questions are unresolved, for example why Roman salt production seems to cease in the 2nd century when such production should be increasing.

The fishing and oyster industries have been important for the Harbour. Features associated with these industries include fish traps, oyster beds and the vernacular fishing craft detailed above. The identification and recording of such features would add to our understanding of the development of the fishing and oyster industries through time.

Historic boat yard and wharf archaeological and historical survey, perhaps leading to booklet and historical summary. Various quays of the harbour were once important nodal points of the harbourscape, but are now invisible.

Boat building training and community project. This would lead to keeping historic harbour crafts alive. Boat reconstruction of the oyster carrier *Terror* is already part of the programme; the restoration of a Langstone barge is also a possibility.

Restoration of Birdham Mill and other mills.

Practical research projects:

- *fieldwalking and survey to identify new industrial sites of all periods, especially those associated with the brick making industry, the salt industry, the fishing industry and the oyster industry;*
- *survey and recording of extant industrial remains such as the important tide mills and other mills, brick and tile kilns where they survive as well as associated structures, and structures associated with the oyster and fishing industries, for example fish traps;*
- *survey of historic boat yards and wharfs;*
- *boat building training and community project (already planned as part of the HLF programme).*

Subtidal

A number of possible maritime sites have been identified by surveys and other work in the Harbour. Investigation of these sites by divers (possibly on a voluntary basis) will identify whether the sites are real wrecks or geology/other features.

The harbour is a drowned landscape, and sites – especially prehistoric – are likely to continue below today's low water line. *In situ* Mesolithic remains have been found on the Isle of Wight at *c* – 10m OD. Some geophysical survey has already been carried out by the Hants and Wight Trust for Maritime Archaeology (HWTMA). Further geophysical survey would provide an overall view of the Harbour and would perhaps confirm that the landscapes as seen above low water continue, buried by tertiary muds and sand below the water line. Coring in the intertidal zone and perhaps even in the subtidal zone would also help confirm this continuity and add to the environmental record. These actions would also make the future management of the Harbour more effective.

A number of wrecks and hulks have also been identified which are more accessible from the shore. These could be surveyed, perhaps using volunteers.

Practical research projects:

- *investigate identified maritime sites by diving to confirm whether they are wrecks or geology or other features, perhaps using volunteer as well as professional divers;*
- *geophysical survey and coring in the intertidal and subtidal zone to investigate sites that continue below low water;*
- *survey and recording of wrecks/hulks accessible from the shore. Brief surveys of hulks have already been carried out in partnership with the Hants and Wight Trust for Maritime Archaeology (HWTMA).*

Investigation of landscapes under threat

This study has identified many sites, the existence or condition of which the Conservancy has been unaware. There could be a systematic programme to visit and investigate the condition of all SMR sites, to identify known and potential risks posed by sea level rise, changing land use and other threats. This would be accomplished using trained volunteers. A similar archaeological assessment of sea defences could also be undertaken to determine their age and current condition. This work would be closely allied to another HLF project on cleaning up derelict sea defences.

This framework study has also identified that several sites around the harbour are at risk from sea level rise, natural erosion and other threats. Further work is likely to identify more sites at risk. Work is needed to ensure these are recorded as fully as possible before the evidence is lost. This project would use trained and supervised volunteers.

Practical research projects:

- *A baseline condition survey of existing SMR sites and sea defences.*
- *An assessment of known sites at risk using trained volunteers.*

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