Background

Description and status of The Heart of Neolithic Orkney World Heritage Site

Jane Downes

In December 1999 The Heart of Neolithic Orkney was inscribed by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) as a World Heritage Site (WHS). This inscription followed submission of a nomination in June 1998 by Historic Scotland (Historic Scotland 1998). The title Heart of Neolithic Orkney has been applied to six discrete sites in West Mainland, Orkney, all of which are in the care of the Scottish Ministers, through Historic Scotland. These sites are:

◆ the chambered tomb of Maeshowe (alternative spelling Maes Howe) (Fig 2)
◆ the stone circle and henge at Stones of Stenness (Fig 3) and nearby stone settings known as the Watch Stone (Fig 4) and the Barnhouse Stone (Fig 5)
◆ the stone circle, henge, adjacent standing stone and burial mounds at the Ring of Brodgar (Fig 6) (alternative spelling Brogar)
◆ the settlement of Skara Brae (Fig 7).

WHS are places or buildings of outstanding value – cultural and/or natural – which deserve protection for the benefit of humanity. The Heart of Neolithic Orkney is now one of the four WHS in
Scotland and one of just over 700 in the world. As such it ranks alongside some of the most famous heritage sites in the world, including Stonehenge and Avebury, the Pyramids and the Great Wall of China. It is the first archaeological site in Scotland to be honoured in this way since the other three Scottish sites are St Kilda (inscribed for its natural values), New Lanark, and the Old and New Towns of Edinburgh (inscribed for their cultural values).

The significance of the Orkney WHS was described thus in the Historic Scotland Nomination document:

i) Maes Howe, Stenness, Brogar and Skara Brae proclaim the triumphs of the human spirit away from the traditionally recognised early centres of civilisation, during the half millennium which saw the first mastabas of the archaic period of Egypt, the brick temples of Sumeria, and the first cities of the Harappa culture in India.

ii) Maes Howe is a masterpiece of Neolithic peoples. It is an exceptionally early architectural accomplishment. With its almost classical strength and simplicity it is a unique survival from 5000 years ago. It is an expression of genius within a group of people whose other tombs were claustrophobic chambers in smaller mounds. Stenness is a unique and early expression of the major ritual customs of the people who buried their dead in tombs like Maes Howe and lived in settlements like Skara Brae. They bear witness, with an extraordinary degree of richness, to a vanished culture which gave rise to the World Heritage sites at Avebury and Stonehenge in England. The Ring of Brogar is the finest known truly circular late Neolithic or early Bronze Age stone ring and a later expression of the spirit which gave rise to Maes Howe, Stenness and Skara Brae.

iii) Skara Brae has particularly rich surviving remains. It displays remarkable preservation of stone-built furniture and a fine range of ritual and domestic artefacts. Its remarkable preservation allows a level of interpretation which is unmatched on other excavated settlement sites of this period in Europe. Together, Skara Brae, Stenness and Maes Howe and the monuments associated with them demonstrate the domestic, ritual and burial practices of a now vanished 5000 year old culture with exceptional completeness. (Historic Scotland 1998, 5)

The Heart of Neolithic Orkney was therefore inscribed as a WHS based on the UNESCO criteria that the sites making up the WHS represent masterpieces of human creative genius, exhibit an important interchange of human values, bear a unique testimony to a culture which has disappeared and are an outstanding example of monuments which illustrate a significant stage in human history (von Droste et al 1995, Annex II). The component sites also meet the test of authenticity and integrity demanded by UNESCO, for, although all the monuments have undergone maintenance to differing degrees since the latter half of the 19th century, this work is recognisable and reversible (Historic Scotland 1998, 9). There are illustrated descriptions of the sites within the Nomination document (ibid).

The context and purpose of the Research Agenda
Jane Downes

ICOMOS guidelines for the management of WHS recommend that a research co-ordination committee be set up. The suggested role of this committee is to devise research programmes and promote and co-ordinate research in the area (Feilden and Jokilehto 1993). The need for research agendas in archaeology in general is seen to have become more pressing during the 1990s, since the publication of planning and policy guidelines (in Scotland National Planning and Policy Guideline 5: Archaeology and Planning (Scottish Office 1994a) and Planning Advice Note 42: Archaeology - the Planning Process and Scheduled Monument Procedures (Scottish Office 1994b)). These made developers responsible for the funding of archaeological work ahead of development. Research agendas are important in this respect both to inform curatorial decisions and to give relevance and context to archaeological work undertaken.
In 1996 Adrian Olivier produced *Frameworks for Our Past*, a survey of English Heritage research frameworks and an exploration of the definition, purpose and future of research frameworks. This document was part of an English Heritage initiative concerning the facilitation of regional research frameworks. It included a reconsideration of strategy in the light of what had been achieved since the production of their national research strategy: *Exploring our Past; Strategies for the Archaeology of England* (English Heritage 1991). This has been followed up by the production of a research agenda for the Archaeology Division of English Heritage, now published, together with an implementation plan, as *Exploring our Past* (English Heritage 2003). In 1997 Historic Scotland published *State-funded ‘Rescue’ Archaeology in Scotland*. As a contribution to discussions on future directions of Scottish archaeology this attempted to identify, on a period by period basis, gaps in knowledge. There have been moves towards developing a research agenda for Wales, the first stage of which was a conference held in September 2001 (Geary 2001). In England, some regional research frameworks have recently been developed or are in the process of being developed - for example for East Anglia, *East Anglia Research and Archaeology: A Framework for the Eastern Counties* (Brown and Glazebrook (eds) 2000) and for the East Midlands, *The East Midlands Archaeological Research Framework Project* (http://www.le.ac.uk/ar/east midlands research framework.htm, visited Dec 2003). Research agendas may also be used to look at specific themes in more detail. In 1999 the Prehistoric Society published a research framework for the Palaeolithic and Mesolithic of Britain (Prehistoric Society 1999) and a research agenda covering the Iron Age across Britain has been published (Haselgrove *et al* 2001).

Stonehenge and Avebury were inscribed in 1986 as a single UNESCO WHS known as the Stonehenge, Avebury and Associated Sites WHS. This is perhaps the most comparable WHS to the Orkney example, except that the designated area is much larger, comprising some 2000 ha. Avebury and Stonehenge each have their own management plans (English Heritage 1998; 2000). A research agenda has been published for Avebury by the Avebury Archaeological and Historical Research Group, publication funded by English Heritage (AAHRG 2001). English Heritage has commissioned Bournemouth University Department of Conservation Sciences to develop a research framework for Stonehenge (http://apollo5.bournemouth.ac.uk/conscl/stonehenge/, visited Dec 2003).

Olivier defines a *research framework* as a piece of work which incorporates a resource assessment - defined as ‘a statement of the current state of knowledge and a description of the archaeological resource’, an *agenda* - defined as ‘a list of the gaps in that knowledge, of work which could be done, and of the potential for the resource to answer questions’ and a *strategy* - defined as ‘a statement setting out priorities and methods’ (Olivier 1996, 5).

The overall aims of the Orkney WHS Research Agenda are to lead to an improved understanding of the WHS and its setting by:

◆ defining the scope of research around the WHS;
◆ outlining the potential of the area to answer research questions;
◆ identifying gaps in knowledge;
◆ encouraging inter-disciplinary research into a broad spectrum of topics within the WHS and its wider context;
◆ encouraging research which will contribute to enhanced management, preservation, conservation and interpretation;
◆ encouraging research with wider methodological and/or theoretical applications.

In seeking to address these aims it was decided to adopt a different structure to the majority of the research documents mentioned above. In particular, the period-by-period approach to the definition of the research themes has been eschewed in
favour of a more thematic approach. This avoids the problems of repetition common
to many who seek to provide a multi-
period view, it makes for a clearer
discussion of the main issues of
archaeological research and takes account
of the main trends of archaeological
thought and research today. The structure
of the document is set out in more detail
below (p 24).

**Formulating the Agenda - the Archaeological and Historical Research Co-ordination Committee**

*Jane Downes*

In 2001 an Archaeological and Historical Research Co-ordination Committee (AHRCC) for the Orkney WHS was established by Jane Downes of Orkney College, UHI Millennium Institute (UHIMI) with encouragement and funding from Historic Scotland and from Orkney Islands Council. The Committee’s membership is drawn from Orkney College, Orkney Archaeological Trust, Orkney Heritage (incorporating the museum service), Orkney Islands Council, Historic Scotland, the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS) and the Universities of Sheffield, Manchester, Bradford, Cambridge, Cardiff and Stirling.

The aims of the AHRCC are to promote, stimulate and co-ordinate research into all periods and relevant aspects of the World Heritage Area (WHA - see definition below). Rather than the AHRCC *devising* research programmes (Feilden and Jokilehto 1993), its job has been to work with a wider group to draw up this Research Agenda, which takes full
cognisance of national and international
curatorial and research considerations and
will help ensure that methods of research
are sustainable and compatible with the
protection of WHS values.

The principal mechanism for the
formulation of the Research Agenda was a
symposium which was held in April 2001.
The majority of the Committee attended
the symposium, as did a number of other
delegates from government agencies,
universities and independent specialists
(see list of contributors). The symposium
was seen as key to facilitating the
identification of the research issues.
Discussion and workshops were structured
around a number of pre-set research
strands into which participants were placed
according to their area of expertise. These
strands were: Landscape; Artefacts,
Monuments and Cultural Identity;
Temporality and Period-based Study;
Formation Processes and Dating;
Palaeoenvironment and Economy; and
Management and Interpretation. A member
of the AHRCC led each discussion group
and wrote up the outcome of the
discussions in consultation with the
members of the discussion group. The
emerging document was circulated for
comment among the Committee, to those
who attended the symposium and others
who had expressed interest in the
formulation of the Agenda.

Jane Downes (Chair AHRRC), Caroline
Wickham-Jones and Sally Foster edited the
texts, while Jude Callister (Assistant to
Chair) circulated further drafts and co-
ordinated responses. Further texts were
solicited from various authors for the
resource assessment, appendices of the
Research Agenda and the techniques
section of the strategy.

The process of producing this Research
Agenda has already served to stimulate
research in the WHS (eg the PhD
studentship of Angie McClanahan on
contemporary perceptions of the
archaeology, Manchester University,
funded by Historic Scotland, see below
Part 5; the PhD studentship on soil
analysis at Stirling University funded
jointly by Stirling University and Historic
Scotland, see Part 3; and large scale
gophysical survey in the Brodgar and
Stones of Stenness area by GSB
Prospection for OAT, funded by Historic
Scotland and Orkney Islands Council, Part
5). The work of the Committee will
continue, both in the implementation of
the strategy and in the periodic reviews of
this document so that the Agenda and strategy retain relevance and currency. In this way, information gained from research will be relayed back into future research and management strategies as well as presented to the public at every opportunity through a variety of media as appropriate.

**Structure of The Heart of Neolithic Orkney Research Agenda**

*Jane Downes and C R Wickham-Jones*

The Research Agenda presents and considers the WHS in its broader archaeological, historical and cultural context. It includes the research strategy which presents ways by which research aims might be achieved. Together these two provide a research framework, which is not intended to determine a programme of action, but rather to highlight issues and problems that could usefully be addressed.

In the process of pulling together the research strands, significant overlaps became apparent with the result that the strands were merged into just two broad themes:

- Artefacts, Monuments and Cultural Identity
- The Formation and Utilisation of the Landscape

These themes are discussed in detail below (Part 3).

Although this might, at first glance, appear to be minimalist, this approach has led to the identification of central research issues which cross both temporal and spatial boundaries, so that a flexible and non-prescriptive agenda can be produced. A period-by-period approach was felt to have the potential of being repetitive and confusing for discussion of research that aimed to cover the broad scope we intended. Period-based information has, however, a valid place in the resource assessment (Part 2). The resource assessment describes the history of research in the Orkney WHS, which is instructive in explaining how the monuments and interpretations were shaped by the interest of individuals and by various strategies in excavation and presentation. This is followed by a summary account of the current state of knowledge which is structured chronologically following the basis for most previous research. In this way the gaps in knowledge of the WHS can be highlighted. There are admittedly tensions between the static nature of the ‘time slices’ outlined in the resource assessment and the more dynamic nature of the research themes discussed in Part 3, but it is not difficult to move between the two approaches and this reflects the current trends of archaeological thought.

Each of the two general research themes is sub-divided into more specific fields from which sample research topics have been identified. These topics are by no means exhaustive. Specific research projects, extracted from the research themes, and with an indication of how these might be prioritised, have been incorporated in the strategy.

An extended bibliography has been included in the document. This comprises a substantial amount of sources in addition to those referred to in the text. Appendix 1 lists, by individual site, select investigations undertaken within the WHS. In Appendix 2 the nature and location of sources/materials pertaining to Orkney’s archaeology and history are described (eg museums, databases etc). Appendix 3 comprises a list of current postgraduate student research relating to the archaeology of Orkney. Between the resource assessment, the extended bibliography and the appendices, the Research Agenda will serve as an audit and a resource in itself for would-be researchers. Appendix 4 provides an exhaustive list of archaeological fieldwork (survey, geophysical survey, excavation) undertaken in Orkney since 1945, with bibliographic references where a site is published, location of finds, etc.
Management of the WHS

It is the responsibility of the government to nominate WHS. Historic Scotland carries out this work in Scotland on behalf of the Scottish Ministers. Historic Scotland is also responsible for the preservation, conservation, management and interpretation of sites in State care, which in this case includes all components of the Orkney WHS. WHS status brings no additional controls and no additional funds. It is, however, an accolade for the whole community and the country as a whole, and it is hoped that it will reinforce the international significance of Orkney’s archaeology. In doing so, the WHS status will undoubtedly also help to promote tourism. About 70% of tourists to Orkney choose to visit its archaeological monuments (Fig 8). Since tourism is the biggest source of income into Orkney, the local economy should benefit considerably from the enhanced prestige brought by World Heritage nomination, although care has to be taken to ensure that the Site does not suffer as a result of increased visitor pressure.

Boundaries of the Site and its buffer zones

Jane Downes and Sally M Foster

Any consideration of a research agenda has to take into account the boundaries of the Site and their relevance to this. The extent of the WHS is defined by the boundaries of the component monuments that are in State care (Figs 9, 10 and 11). All of these areas are protected as scheduled ancient monuments under the Ancient Monuments and Archaeological Areas Act 1979; however the boundary of the scheduled area may be larger than the property in (State) care (PIC). Additionally, buffer zones were defined around the monuments. The buffer zones were necessary for three reasons:

- Although the WHS comprises discrete sites, these are an integral part of a wider archaeological landscape of related sites (including non-WHS sites), both visible and invisible.
- The wider landscape is privately farmed and inhabited under disparate ownerships. The visual impacts of rural
development, together with the environmental and visual impacts of tourism, could impact adversely on World Heritage values and thus need some form of management or control.

◆ The Orkney landscape is open and treeless with wide vistas and views to and from the monuments. Inappropriately or badly sited development within the broad area could erode the World Heritage values of the sites, particularly cumulatively and over time.

The WHS comprises two, geographically separate areas (Fig 9). Each of these areas has its own tier of two buffer zones:

◆ an Inner Buffer Zone (IBZ) drawn fairly tightly around the principal sites themselves;

◆ a larger, more general Outer Buffer Zone (OBZ).

The intention of this layered approach was to protect both the immediate settings of the sites and areas of high archaeological value, as well as their wider landscape setting. Following advice from ICOMOS-UK, the boundaries of existing statutory designations were used to define the boundaries of these two levels of buffer zone. Built heritage, nature conservation

9. Map of Orkney showing the location of the World Heritage Site property maps (Figs 10 and 11) and extent of the National Scenic Area (NSA) © Crown Copyright reproduced courtesy of Historic Scotland
10. Map showing location of the Ring of Brodgar, Maeshowe, Stones of Stenness, Watch Stone and Barnhouse Stone components of the World Heritage Site, as well as sites in the vicinity (for wider context see Fig 9) © Crown Copyright reproduced courtesy of Historic Scotland.

11. Map showing location of Skara Brae component of the World Heritage Site (for wider context see Fig 9) © Crown Copyright reproduced courtesy of Historic Scotland.
and landscape designations already cover all or parts of the area containing the components of the Site. The buffer zones therefore contain many other scheduled and unscheduled archaeological sites, as well as areas of ground that are protected for cultural and natural purposes (on a scale of local to international significance).

In practice, the use of such designations to define buffer zones has not been found to offer a useful framework that works to provide a uniform, coherent approach to the management and development control issues which centre on the needs of the Site. The complexity of the various statutory aims and requirements, consultation mechanisms and agencies of control has been found to bring confusion rather than clarity to the process of protecting the World Heritage values of the Site. These statutory designations would perform their required functions whether or not they formed part of the buffer zones. ICOMOS guidelines issued in 2000 now suggest alternative ways of defining buffer zones that are better tailored to meet the needs of the Site, and in due course Historic Scotland will consider whether more appropriate boundaries for the Site and its buffer zones might be desirable and practical (Foster and Linge 2002). This could take into account the visual setting of the site as well as the management of archaeological monuments and landscapes (see below). In the meantime, Historic Scotland and others effectively treat the landward part of
Three types of setting were identified for the WHS:

- **Immediate** - where very small changes could markedly affect the intimate experience, ambience and enjoyment of the Site. This should be regarded as a flexible and changing area;
- **Intermediate** - where visible changes about the same size as a human figure (or larger) could affect the character, and people's perception and enjoyment, of the Site;
- **Wider** - where large scale built developments in the wider setting and/or approaches could affect people's image, perception and enjoyment of the Site.

Given the distance between Skara Brae and the rest of the WHS, two sets of intermediate settings were required. Since Skara Brae lies in the relatively visually confined Bay of Skaill and the rest of the Site is in a more open landscape, different methodological approaches proved necessary. At Skara Brae the intermediate setting was relatively easily defined, given the topography of the surrounding low hills, and there was naturally a close correlation with landscape character units (Fig 13).

In the case of the Ring of Brodgar/Stones of Stenness/Maeshowe, a single intermediate setting was created by amalgamating individual ZVIs. These boundaries were then adapted by continuing outwards until strong physical boundaries were encountered, wherever possible one that represented a boundary between LCA or HLA types.

The wider setting of the WHS was defined by a combination of visual envelope and ZVI. These closely relate to the LCA character types because all rely on landform to define their extent. Skara Brae was fitted into a single wider setting for the WHS for, over the low ridges which form the intermediate setting, there are views to more distant hills. The natural basins of the Lochs of Harray and Stenness topographically contain all elements of the WHS. The edges of the wider setting are

---

The IBZ as the Site, in the Brodgar area at least, in the sense that this is the focus of attention.

**Setting of the WHS**

_Jane Downes and Sally M Foster_

In 2000 Scottish Natural Heritage (SNH) and Historic Scotland became partners in a landscape capacity project that focussed on the setting of the WHS. Building on Landscape Character Assessment (LCA) and Historic Landuse Assessment (HLA), the aim of the project was to provide guidance on if, how and where new development could best be accommodated in the area (Tyldesley 2001). The study assessed both landscape and visual aspects. In doing so it also explored how the two processes of LCA (undertaken by SNH: Land Use Consultants 1998) and the HLA (undertaken by Historic Scotland and the RCAHMS: Dyson Bruce _et al_ 1999) might be integrated. One significant outcome of the project, of particular relevance here, was the definition of a hierarchical tier of settings for the WHS which has a predominantly visual relevance (Fig 12). These settings were largely created on the basis of visual envelopes (everything that can be seen from specific view points, key monuments in this instance) and Zones of Visual Influence (ZVI), areas which are visually sensitive to different scales of change.
therefore the lines of ridges along the moorland hills that define the outer rim of the basin, a significant part of West Mainland (Fig 14). However, there is one significant addition – the mountain skyline of north Hoy - an area which is exceptionally sensitive in terms of the winter solstice and Maeshowe (Fig 15). The wider setting therefore includes this mountain skyline but omits intervening land between it and the loch basin, as changes here would not affect the WHS.

It was concluded that the amalgamation of visual envelopes, ZVIs, HLA and LCA techniques produced integrated, rational and meaningful boundaries for the settings of the WHS.

The Management Plan
Jane Downes

Historic Scotland produced a Management Plan as an initial step towards the conservation of the Orkney WHS, as required by UNESCO (Historic Scotland 2001). This was prepared in liaison and consultation with a local Steering Group and Consultation Group. The Steering Group comprises Historic Scotland, Orkney Islands Council, Orkney Archaeological Trust and Scottish Natural Heritage. The Consultation Group is made up of other parties interested in the area, including the Orkney Tourist Board, RSPB, land owners, coach tour operators and others with a specific interest in the area. Project Groups have been established to take forward specific issues.

The Management Plan is intended to provide a framework for an integrated and consensual approach to the issues involved in the management of the WHS. The overall aims of the Plan are:

- To safeguard the important cultural (and natural) heritage elements of the Site by identifying conservation and enhancement works and projects with a sustainable and beneficial approach.
- To inform people about the cultural and educational value of the Site.
- To increase their enjoyment of the Site.
- To identify how the economic and cultural benefits of Inscription can be used to the advantage of the Orkney community and businesses.

(Historic Scotland 2001)
Encouraging the formation of a research committee is one of the cited objectives in the Management Plan and many of the specific aims of the Management Plan are relevant to the work of the AHRCC. The relevant aims are:

3: increase people’s recognition, understanding and enjoyment of the Site and their understanding and enjoyment of Orkney and the rest of Scotland’s past.

4: ensure that management of the Site is guided and informed by appropriate knowledge of development of the Site and its surroundings through time.

9: policies be directed towards positive measures for the enhancement of the Site and its Buffer Zones so that they benefit in character, appearance and setting, while continuing to support the economy of Orkney and the social well-being of those living there.

10: encourage appropriate and sympathetic land uses in the Buffer Zones in order to protect monuments from degradation and from potentially damaging works that do not require planning permission, and to protect and enhance their setting.

11: policies should recognise that cultural heritage is more than the visible upstanding structures in the Site and Buffer Zones.

12: establish an accurate picture of the condition and vulnerability of all monuments in the Site and Inner Buffer Zones.

13: all activities on the Site and all activities affecting the natural heritage in the vicinity of the Site should be based on principles of environmental sustainability.

14: every effort should be made to integrate and enhance the interests of the cultural and natural heritage, balancing the respective needs of each other.

15: policies for development on the Site and adjacent to it should reflect the international importance and the sensitivity of the Site and its setting.

16: ensure that the policies for development on the Site and adjacent to it should lead to benefits for the economy of local people and of Orkney as a whole.

17: help develop sustainable tourism by encouraging dispersal of visitors to more of the various visitor attractions in Orkney, and by evening out the concentrations of numbers at particular times and locations.

18: ensure that policies relating to visitors to the Site emphasise quality tourism and encourage longer stays and higher spending in Orkney.

19: ensure that there are good facilities for people with disabilities by including provision for their needs in all schemes for enhancement at the Site (ibid).

Management issues and threats
Sally M Foster and Interpretation and Management Group

Management of the WHS has many different facets of which the main ones can be broadly summarised as:

◆ protect the resource and maintaining it in its optimum condition;
◆ effectively and sympathetically presenting and interpreting the Site;
◆ facilitating visitor access in the most appropriate and safe manner;
◆ research to increase understanding of the resource and its management.

The first of these can equally be applied to those monuments in the wider landscape, beyond the formal boundaries of the Site, which are in private ownership and for which, unlike the Site, no formal public access exists. Here the land is used almost exclusively for agricultural purposes (although the possibility of underwater archaeology in the lochs and sea cannot be excluded). The question of how research fits into management strategies is discussed in the next section.

Protect and maintain
Put simply, protecting the Orkney WHS and maintaining it in its optimum
condition means avoiding ground disturbance or disturbance of the fabric of the monuments and attempting to postpone natural decay processes. Disturbance can be caused by humans, animals – cattle, sheep and rabbits – or the roots of inappropriate vegetation. Natural decay processes include decay of stone – a particular concern if these are carved - and coastal erosion. Any human interventions into the ground or fabric of the Site and protected monuments in the wider landscape require prior consent from the Scottish Ministers (scheduled monument consent) and can be controlled in this manner.

More difficult to prevent is the irreversible ground erosion caused by the large number of visitors (Fig 16), a problem exacerbated when conditions are wet. This is a serious problem at the Ring of Brodgar despite Historic Scotland’s repeated and regular efforts to manage visitor movements in a variety of different ways. Unlike the surrounding area where erosion by animals and ploughing is causing attrition of both the visible and sub-surface archaeology, the only agricultural use of any part of the Site is limited grazing by sheep (at the Stones of Stenness and Maeshowe). Active efforts are made to deter rabbits at each part of the Site and the situation is closely monitored because of the damage they could so easily cause. At Skara Brae coastal erosion remains the most acute threat, not least to the scheduled archaeology that survives on either side of the sea walls that protect the stone structures (Fig 17). Environmental conditions within House 7 at Skara Brae also need reviewing. At Maeshowe a pressing question is whether present levels of moisture within the tomb are having an adverse impact on its interior, most notably the Neolithic and late Norse carvings. If so, what is the source of this moisture and how can the problem be dealt with?

Yet preservation of a monument’s physical integrity and unrealised archaeological potential is still only one part of the equation. Of inestimable significance is the setting of monuments. Protecting this entails far more than ensuring that sightlines between (known) monuments are kept open, but involves preserving the characteristics of the present landscape that create, nurture and reinforce our appreciation of the monuments. Insensitive modern intrusions can all too quickly detract from this. Here David Tyldesley’s exploration of landscape capacity in the context of the setting of The Heart of Neolithic Orkney (Tyldesley 2001), not least its relationship to the techniques of LCA and HLA, is particularly germane (see above).
Much of the immediate and intermediate setting of the WHS is an archaeological landscape of high value in its own right. In the present context it is significant that Historic Scotland and others effectively treat the IBZ at the Brodgar area as the Site in the sense that this is the focus of attention. The WHS is best managed in a holistic sense that embraces the wider cultural and natural landscape, an approach that is more in accord with the Orcadian perception of what is significant (Foster and Linge 2002). Notably, most efforts to improve visitor access and interpretation will impact on land beyond the boundary of the Site proper. Historic Scotland’s responsibilities do not stop at the boundaries of the WHS. It has a responsibility to ensure that scheduled ancient monuments in private ownership are protected and seeks to encourage and, where possible, facilitate their improved management.

**Present and interpret**

Interpretation is an integral part of good heritage management (Fig 18; Australia ICOMOS 1999, Articles 1.17 and 25). Knowledge and understanding of the resource is a prerequisite of intelligent and effective presentation/interpretation and requires a practical approach that is sensitive to both the setting of a place and proportionate to the needs of the site and its visitors. Too often the site managers or other well-intentioned parties could pose a threat to a monument. In accordance with Historic Scotland’s mission statement and objectives for the nation’s heritage as a whole (‘safeguarding the nation’s built heritage and promoting its understanding’) we can see how important it is that this understanding is commensurate with the standards of the 21st century and invigorated by research, as appropriate.

**Access**

Alongside the ever-present threat of coastal erosion, facilitating visitor access in the most appropriate and safe manner is probably the most difficult of the immediate issues to be addressed at the WHS. Current issues include improving car and coach parking arrangements, improving road safety for drivers and pedestrians, and enabling better access and interpretation through the landscape for pedestrians and cyclists. Resolution involves the wider landscape, including archaeological interests around and between the different components of the WHS (Historic Scotland 2001; Parkin et al 2002; Historic Scotland 2002). Aside from the sub-surface archaeology which might be destroyed or compromised in the course of such works, the main consideration is if, and if so how, this can be achieved in a visually sensitive manner while still addressing the needs and demands of all interests, notably the coach operators, landowners, residents, visitors and archaeologists.

**Management and research**

*Sally M Foster and Management and Interpretation Group*

The strategies of good managers will be informed by all available knowledge and understanding of the archaeology in question. Of particular importance is the ability to assess the various types and levels of significance which accrue to the resource in question and this is likely to require research (Historic Scotland 2000, Articles 5.1-2; Australia ICOMOS 1997, Articles 26.1-2). All analyses inevitably lead to the recognition that we have significant gaps in our knowledge and it is important that these omissions are identified and acknowledged. By their very nature, these academic lacunae are not solely ‘archaeological’ or ‘academic’ in the traditional sense that more knowledge is always desirable. They relate also to the
management of the monuments and our understanding of the interplay of past and present perceptions of the landscape. Such understanding has to take on board the general theory and practice of heritage management and how and if this applies to the specifics of the resource in question. For instance:

◆ What is the relationship between what now survives/is visible and what was once here?
◆ What factors have influenced this and our ability to recover such information?
◆ What is the present condition and vulnerability of monuments?
◆ How does the modern visitor engage with what is here now and with what was happening here in the past?
◆ If we understand the behaviour of different categories of visitors at, and towards, the monuments, can we protect the monuments better?
◆ How can we discover and understand what visitors do, and do not perceive? Can this knowledge be used to inform interpretation strategies (cf Ucko 2000, 72)?

We can conclude that good site management requires ongoing, focussed research. The nub of the matter is how much destruction of the resource is acceptable to achieve this? Put another way: how much of the Site is a critical asset that should be conserved at all costs; how much is a constant asset that might be subject to change providing that the overall character of the resource, notably its appearance, is maintained; and how much is tradable, might be destroyed in return for other benefits? What is the ‘environmental threshold’ beyond which such an activity becomes unsustainable? (See English Heritage 1997, 3, 7-8 for helpful definitions of historic environmental capital.) Can we define and achieve a form of research that is necessary, satisfying and sustainable? Part 5 (pp 120-21) suggests some parameters. But before reaching that point we must explore further where the tensions reside.

In a highly stimulating and eminently quotable interview Bill Lipe, an American archaeologist, discusses the threat to knowledge that preservation can pose (Lipe 2001). While his topic was archaeology on state-managed land in America, his arguments have wider resonance. In summary, while excavation is destructive, judicious excavation is essential to realise a site’s potential information and hence to increase its value to the public. Excavation will always be the main archaeological research tool. Through research we can make connections between ‘them and us’, the people of the past and present, between the practice of archaeology and the wider public. The more we know about a site, the greater its perceived value. Research, by feeding interpretation, keeps the reason for stewardship alive and provides the intellectual context for interpretation. In effect, not to allow the destructive process of excavation is to cut off archaeology’s lifeline, to fail to fulfil archaeology’s social rôle. We cannot always postpone the future waiting for better techniques (how else do we develop them?) and to only ever excavate threatened sites trivialises archaeology’s contribution to society. If the research stagnates, so does our understanding of ourselves. Lipe argues that implementation of this is a two way process: the managing authority needs to put a higher value on knowledge; and researchers need to fit their interests within the constraints of what responsible management entails.

While Historic Scotland has never made a policy statement about research strategies at its PIC, it has indicated how it sees its Archaeology Programme funds being deployed (Barclay (ed) 1997, 27; presently being reviewed by Patrick Ashmore, responsible for Archaeology Programme). As such, it has to be recognised that funding excavations for research purposes, whatever their scale, whether on PIC or not, is for the moment an exceptional activity. However, Historic Scotland has since at least 1930 carried out research on its properties where improved understanding of the monument is essential and where there can be positive benefits for the visiting public (see for
instance Barclay 1990). In recent years these have been treated as a widely-advertised spectacle and have included a high educational component.

What does this mean for the Orkney WHS? There are a range of scenarios in which intervention may be considered appropriate:

◆ For its own sake, to understand better the history of a monument, its relationship to the surrounding environment and other sites.
◆ For its own sake, to understand better the conservation needs of a monument.
◆ As a consequence of conservation needs. What if, for instance, the modern roof of Maeshowe needed to be replaced?
◆ As a consequence of ‘development’, unavoidable intervention necessitated by the requirement to provide facilities for the public and/or address health and safety issues (revised access, car parks, walkways, etc).

It is essential to maximise the potential each opportunity presents for research across the inter-disciplinary spectrum of archaeology-heritage management and beyond. In addition, opportunities to involve the public are required. This has been rather neatly expressed by Tore Artelius of Göteborg University, Sweden (pers comm) as the ‘four kronor principle’ (for which read four pounds). In other words, using each unit of currency spent to explicitly benefit science, education, cultural resource and the public.

It should also be remembered that Historic Scotland as the state archaeological body has a vested interest in the research and development of improved tools for all aspects of site management, whether it be techniques of excavation or tools for conservation or interpretation. Model case studies can be a successful way of achieving such ends. The stated commitment of the government of looking into the possibility of providing training opportunities at UK WHS for those involved in conservation work overseas should also be noted (DCMS 2002, Article 4.41).

Defining the spatial and temporal research context of the WHS

The title of the WHS - The Heart of Neolithic Orkney - is very much site and period specific and a concern of the Research Agenda (or of those producing the Research Agenda) is to set any research into a meaningful and coherent framework. This involves exploration of the temporal and spatial boundaries of the individual components of the WHS and an identification of the intellectual frameworks that could be employed.

Researching the landscape

Dave Cowley, Jane Downes, Mark Edmonds and Landscape Group

In legal terms the WHS is made of discrete monuments, but we appreciate that there are problems with defining their extent and, as archaeologists, are uncomfortable with how this cuts them off from the other elements of the wider landscape. Landscape was a research theme that was discussed in the Symposium in its own right and which was found to be a unifying theme for all discussion, hence its consideration in more detail in Part 3. However, tensions were apparent in definitions and interpretations of the concept of landscape and consequently in its use as a theoretical framework or a research method. There are many perceptions of what constitutes landscape, including physical landforms, the interaction of natural processes and human influences, artistic depictions, mosaics of landuse or vegetation, patterns of social interaction and personal and group experience (Fig 19). Although it was felt that a fairly general view of landscape would provide a framework which could articulate other strands of research, the varying uses of the term and applications are explored here.

Firstly, there is a need to define the geographical scope of research centred on the WHS, given that there was a consensus that the scope needed to extend well beyond the designated areas in order to
place the WHS in context. This would allow, for example, consideration of local variation in settlement or landuse patterns in both space and time and inclusion of the maritime and marine margins. WHS status obviously acknowledges the international importance of the monuments and places research firmly in the international context. Furthermore, the location of Orkney on a broad Atlantic European canvas is clearly fundamental to many avenues of research. However, the archaeological and historic landscape is perhaps best studied at a more local level. A nested approach with varying scales and inputs can therefore be suggested.

Suggested geographical frameworks are listed below, in order of increasing resolution of study:

◆ **Orkney in the World** (Fig 1) - The size and shape of Orkney’s place in the world changes through time and circumstance - it is therefore not possible to describe a single boundary to Orkney’s world context.

◆ **Orkney** (Fig 9) - Orkney contains a diversity of landscape types and monuments appropriate to general research issues such as survival and recovery patterns, landscape development and monument distribution. Research centred on the WHS can be set in an Orcadian context and can add to knowledge of sites outside the WHS; conversely, research into areas outside of the WHS can help our understanding of the WHS.

◆ **Zones of Visual Impact** (see above) (Fig 12) - In these smaller areas issues such as local variation within the region (eg of settlements, artefacts) can be examined in order to build up a detailed landscape history and characterisation. In these cases a greater resource input is realistic.

◆ **Individual components of the WHS** (Figs 10-11) - It is appropriate to their designation that these small areas be studied in the greatest detail within the limits of what can be defined as sustainable research (see above). Much basic recording and research remains to be done, for example to establish detailed topographic and geophysical surveys of all the sites.

Secondly, methods need to be established for the identification of the *archaeological* or *historic landscape* by measuring or mapping. Throughout the process of developing the Research Agenda, the need to understand the development of the Orcadian landscape was identified as a priority. Our current understanding of the contemporary landscape is a key to this, as the patterns of earlier landscapes are articulated through the present. Unfortunately, the nature of the archaeological resource hinders deeper understanding of landscape development. Most records focus on unitary monuments and are essentially a product of 19th- and earlier 20th-century patterns of fieldwork - there is a clear need for systematic and extensive survey to redress this imbalance.

The development and character of the Orcadian archaeological or historic landscape is poorly understood, though there is now a body of data relating to the contemporary landscape (*Land Use Consultants 1998; Dyson Bruce et al 1999*). Evaluation and exploration is necessary to enhance the treatment of archaeological and historic landscapes. The establishment of a baseline of consistent data is seen as a priority for the WHS and buffer zones and, wherever possible, data should be assembled in a systematic fashion that is GIS compatible to allow the ready integration with other data. The production of maps as part of this process can be very eloquent in illustrating how the landscape has developed, for example in illustrating sea-level fluctuation or landuse change.
Thirdly, landscape is not merely a passive receptor and reflector of human activities, a series of sites and traces which can be measured and mapped; it is constructed socially and historically through practice. Landscape is also experiential; from it we extract our sustenance, within it we experience the seasons and the passage of time. There we find our families, friends, rulers and vassals; within it our ancestors are buried, and we gaze upon it. It is so large that changes in its character extend beyond our vision and occur either so fast or so slowly they seem unimaginable. As Christopher Tilley put it, ‘The landscape is redolent with past actions, it plays a major rôle in constituting a sense of history and the past, it is peopled by ancestral and spiritual entities, forms part and parcel of mythological systems, is used in defining social groups and their relationship to resources’ (Tilley 1994, 67). The creation of the monuments, in this instance that constitute the Orkney WHS, was undertaken in a landscape that was understood in its own day in terms of history and the past. Each subsequent generation ‘inhabited, interpreted and acted upon’ this landscape; each generation encountered its own archaeology (Barrett, J C 1999, 257), as we do today (Fig 20).

Landscape studies offer a rich vein of research potential which is wide in both geographic and temporal scope. Not only does research move beyond the site specific to the spaces between and far beyond the monuments, but in a consideration of movement, of experience and of occupying and inhabiting the landscape, the dimension of time is incorporated.

**Period-based research and temporality**

*Colin Richards and Temporality and Period-based Research Group*

The designation of particular sites as ‘The Heart of Neolithic Orkney’ instantly introduces questions of how we conceive the past as periods of discrete blocks of time and how we choose to value or privilege certain blocks over others. Within the WHS there is a contrast between the three monuments of Maeshowe/Stones of Stenness/Ring of Brodgar and the isolated Skara Brae settlement (Figs 2-7). The henge monuments provide a focal point for actions spanning thousands of years while Skara Brae was covered by sand in the Bronze Age and left buried until the mid-19th century, when a storm removed the sand and exposed the site to view. Equally, the attribution of WH status to the monuments themselves (in the case of Stenness, Ring of Brodgar and Maeshowe) could divorce them from the broader social conditions which led to their construction and use.

Clearly, we are interested in the social conditions which led to the construction of the henges and associated standing stones (which represent a truly monumental place in the Neolithic world and for ever after)
and their relationship to contemporary settlement and our attention should thus move far beyond the individual components of the WHS. Nevertheless, these monuments do deserve special attention because they were built in different ways to convey very specific meanings on a scale never seen before in Orkney. They are achievements of a very high order (and hence their selection as WHS).

On the whole, period-based research continues to define the archaeological profession in Britain today. Period-based courses remain popular in archaeology degrees in British universities and the archaeological literature is subdivided and characterised by period-based research. Indeed, the designation ‘The Heart of Neolithic Orkney’ for the Orcadian WHS brings such definition into sharp focus. However, there are a number of consequences inherent in such an approach and these are magnified by the different discursive strategies which have arisen within different archaeological periods. This situation gives rise to a partial breakdown of communication between researchers operating in different ‘blocks’ of time, eg Palaeolithic, Neolithic, Medieval, etc. Research questions and priorities differ between periods because of theoretical differences in approach. This can have the effect of creating entirely different forms of archaeology in adjacent and overlapping blocks of time (eg Iron Age/Roman periods in England, Scottish Iron Age/Later Iron Age). Furthermore, arbitrary disciplinary vogues occur where research projects into particular periods or parts of Scotland attract greater attention and more financial support than others. Some periods leave none or few upstanding remains and this has heavily biased our understanding of the past. In Orkney, examples of this are the contrast between the prominence of the Neolithic tombs and stone circles, and the Iron Age brochs, and the invisibility of Mesolithic and Bronze Age settlement.

It is clear that in the buffer zones that surround the designated monuments lie a number of sites of different construction date. On the basis of such construction dates these sites can be attributed a specific archaeological period. However, the problem arises of when was their ‘real’ time? Some sites and monuments represent ‘construction’ over enormous periods of time and right up to the present they have been used in a variety of ways. Indeed, in many cases, sites and monuments designated, for instance, as Neolithic or Bronze Age have had special meaning and significance throughout their histories (and for many continue to have such effect today, Fig 21). This realisation should provide an effective critique against ideas of purity and authenticity as applied to archaeological sites. Moreover, it produces a real and valid problem for the interpretation and presentation of archaeological sites because questions arise about what is actually being displayed and the validity of the interpretation offered.

Another point involves a perceived paradox in the archaeological research of the WHS. The designation of such status to this part of Mainland Orkney is based entirely on the presence of four well-preserved sites or monuments (plus two related standing stones). Yet, their understanding in terms of conception and construction lies elsewhere, in the other contexts of life that provided the social conditions under which these monuments (Ring of Brodgar, Stones of Stenness and Maeshowe) could be built. The inclusion of Skara Brae in the WHS represents an additional context, as it is a settlement site,
whose presence in the WHS is based on its high level of preservation (Fig 22). Qualities of preservation and the ‘spectacular’ are of obvious importance (not least in the presentation of the past to the public) but do not necessarily form a coherent basis for research.

We suggest research into the WHS requires a shift away from a site-orientated study to one more concerned with social practices and frameworks of understanding. We have to consider how people engaged with their world and the physical experiences which provided both the conditions under which ‘knowledge’ has been produced and the social relationships that allowed such material expressions as Maeshowe, etc. to be built.

Preceding experiences must be taken into account - it is very unlikely that the WHS monuments were set in a virgin landscape. There must be a history of Mesolithic or earlier Neolithic inhabitation that helped to make these places what they became and we must therefore consider whether these areas in West Mainland Orkney had any special significance before the monuments were constructed. Clearly an argument could be provided for a consideration of ‘place’ and ‘memory’ in terms of the situation of the monuments at a particular point in the Neolithic world. To recognise the basis for the ‘special’ nature of the WHS as simply the monuments themselves, denies the likely significance attached to the area by, for example, the Mesolithic inhabitants of Orkney.

Together these points and issues highlight the problems of research strategies that focus on archaeological objects as defined by their date or period of creation. Such strategies would remain falsely fossilised at some arbitrary point in time, totally divorced from the present and we wish to avoid this. Instead we would like to re-establish social practices and ‘people through the past’ as a central tenet of enquiry and to suggest some research themes which may counter some of the problems discussed above.

The Agenda that we have produced is an attempt to cross period-based boundaries and spread research priorities across time and space. Site specific and period specific research can be set within the broad research themes that have been identified and are detailed in Part 3.