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The Aggregate Landscape of Hampshire

Assessment of the Archaeological Resource

Historic Environment Service (Projects)

Cornwall County Council

The Aggregate Landscape of Hampshire

Assessment of the Archaeological Resource

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The views and recommendations expressed in this report are those of the Historic Environment Service projects team and are presented in good faith on the basis of professional judgement and on information currently available.

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Cover illustration

Bramshill Park in the Blackwater Valley, viewed from the northeast. Photo: NMR SU7660/1 (21856/28). 28-OCT-2002. © English Heritage. NMR

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Abbreviations

ADS	Archaeology Data Service
AHBR	Hampshire Archaeology and Historic Buildings Record
ALSF	Aggregates Levy Sustainability Fund
AMIE	Archives and Monuments in England
AONB	Area of Outstanding Natural Beauty
BGS	British Geological Survey
CCC	Cornwall County Council
CUCAP	Cambridge University Committee for Aerial Photography
DEFRA	Department for Environment Food and Rural Affairs
DTM	Digital Terrain Model
EH	English Heritage
GIS	Geographical Information System
HEEP	Historic Environment Enabling Programme
HER	Historic Environment Record
HES	Historic Environment Service
HCC	Hampshire County Council
HLC	Historic Landscape Characterisation
MDF	Minerals and Waste Development Framework
MLP	Minerals and Waste Local Plan
MPA	Minerals Planning Authority
MPG	Mineral Planning Guidance
NMP	National Mapping Programme
NMR	National Monument Record
NMRC	National Monument Record Centre
PDF	Portable Document Format
PPG	Planning Policy Guidance
OS	Ordnance Survey
RCHME	Royal Commission on the Historical Monuments of England
SM	Scheduled Monument
UID	Unique Identifier

Summary

This report outlines the results of an assessment of the archaeological resource threatened by the extraction of aggregate minerals within Hampshire.

The assessment was carried out between March 2006 and March 2008 by the Historic Environment Service of Cornwall County Council (CCC) in partnership with Hampshire County Council's Environment Department (HCC). The project was funded by English Heritage (EH) under Objective 2 of the Aggregates Levy Sustainability Fund (ALSF).

The assessment consists of a consideration of the archaeology within the aggregate producing areas of the county through analysis of data contained in the Hampshire Archaeology and Historic Buildings Record (AHBR). In nine of these areas AHBR data was enhanced through systematic mapping from aerial photographs as part of English Heritage's National Mapping Programme (NMP).

The project outcome includes the formulation of a Resource Assessment and Research Agenda for the aggregate landscapes of Hampshire. These highlight gaps in knowledge of the archaeological resource, the research potential of the resource, and the identification of prioritised research topics. The agenda will feed into the regional Solent Thames Research Framework, which is currently being formulated.

Summaries of the aims, methodology and results of the project can be found on the English Heritage, Hampshire County Council and the ADS ALSF websites.

1 Introduction

1.1 Project background

This project comprises a survey and assessment of the archaeology of the aggregate mineral producing areas within the county of Hampshire. It was carried out by the Historic Environment Service of Cornwall County Council (CCC) in partnership with the Environment Department of Hampshire County Council (HCC). It was funded under Objective 2 of the Aggregates Levy Sustainability Fund (ALSF) and was commissioned by English Heritage (EH) on the basis of a project design submitted in February 2006. It is based on the methodology developed for a similar project in Gloucestershire (Mullin, 2004). The project was carried out in two stages. In order to qualify for ALSF funding the first stage was completed at the end of the financial year 2006/2007; the second stage was completed at the end of the financial year 2007/2008.

The first stage comprised of identifying the areas that have, are, and might produce aggregate (over the next 50 years or more) and then a desk-based assessment of the data contained in Hampshire's Historic Environment Record (HER) for the aggregate producing areas of the county. In four pre-selected areas this information was supplemented by a programme of digital mapping of archaeological features from aerial photographs. The second stage consisted of further digital mapping in five additional areas. Mapping from aerial photographs was carried out as part of EH's National Mapping Programme (NMP). The objective of NMP, which has been ongoing since 1993 (EH, website), is to map all archaeological sites visible on aerial photographs in England to a consistent standard.

The main aim of this project is to improve the amount and quality of available archaeological information relating to the aggregate producing areas, and thus allow more informed advice regarding the archaeological impact of aggregates extraction to be given at:

- Future Minerals Local Plan reviews.
- Reviews of existing minerals planning permissions.
- Assessment of new applications for minerals planning permission.

1.2 Mineral extraction in Hampshire

The principal geological resources used for aggregates in Hampshire are superficial (drift) deposits of sand and gravel and solid (bedrock) deposits of sand, which occur in various parts of the county. Hampshire currently produces 2.7 million tonnes of land-won sand and gravel for use as aggregates per annum and this level of production is set to continue until late 2008 (Hampshire County Council, 1998).

Decisions on the release of land for mineral extraction are made by Mineral Planning Authorities (MPAs). There are four Minerals and Waste Planning Authorities in Hampshire: Hampshire County Council, Southampton City Council, Portsmouth City Council and the New Forest National Park Authority.

The Hampshire Minerals and Waste Local Plan (MLP) was adopted in December 1998. This plan was for the period up to the end of 2001, but the requirement for the provision of a landbank of permitted reserves sufficient for seven years production means that permissions have been granted for extraction up to the end of 2008. The plan identifies seven Preferred Areas for mineral extraction for the supply of aggregates.

As a result of the *Planning and Compulsory Purchase Act 2004*, HCC are currently in the process of replacing the existing MLP with a new Minerals and Waste Development Framework (MDF), which will run until 2020. The new Minerals Sites Plan (detailing preferred options for mineral provision) will be adopted in September 2008.

The main sand and gravel deposits are summarised in the MLP as:

- Lower terrace sand and gravel deposits occurring particularly in the Avon, Test, Itchen and Blackwater river valleys

- Upper terrace or plateau gravels, present within parts of the London and Hampshire Basin areas, especially in Ringwood Forest, adjacent to the coast and Southampton Water, around Romsey, and in the Eversley/Bramshill area

- Solid sand deposits, occurring within the Wealden Edge area and at locations within the Hampshire Basin, particularly in Ringwood Forest and around Romsey and Fair Oak

1.3 Mineral extraction and the historic environment

Historically the main focus of gravel and sand extraction has been in southwest Hampshire, in particular the Avon valley, and this situation is expected to continue as the largest reserves of sand and gravel occur in this part of the county. It is, however, seen as essential in the MLP that a spread of sand and gravel production is maintained across the county to enable local markets to be supplied and to limit long distance movements of aggregates by road. Therefore when considering the likely potential threat to the historic environment from future extraction it should be assumed that quarry sites may be distributed throughout *any* of the aggregate resource areas in the county.

For this reason a cornerstone of the philosophy behind the project is that all the aggregate producing mineral deposits should be seen as the potential resource, although they may not be treated as such in the MLP, which considers only the aggregate requirement for a limited time-span.

The existing legislative and advice framework comprises the 1979 *Ancient Monuments and Archaeological Areas Act*, Article 7 of the *Town and Country Planning (General Permitted Development) Order*, the *Archaeological Investigation Code of Practice for Minerals Operators* and a range of policies contained in the MLP which are drafted within the national guidance framework of Planning Policy Guidance notes (PPGs). The framework is aimed at protecting and mitigating the effect of development (extraction) on archaeological deposits threatened by quarrying. This protection is threat-based and there is no general provision for strategic overviews of the impact of quarrying on the historic landscape. As a result consideration of the archaeological implications of site allocation is difficult at a strategic planning level since it is often hampered by insufficient archaeological information. The majority of the strategic decisions about land allocations are therefore made on the basis of incomplete knowledge.

This project provides an opportunity to form a strategic overview of the extent of the aggregate deposits in the county, and the archaeological resource in these areas. The enhanced understanding will inform future decision making on priorities for the preservation of nationally important archaeological sites through designation and the management of archaeological sites through the minerals planning process. The project output also includes a research framework that will inform decision making and

an opportunity to develop a better awareness of archaeological issues within the minerals industry and the general public.

1.4 Aims and objectives

Project aims and objectives have been drawn up with reference to the priorities published on the English Heritage website for ALSF projects. The project is designed to fulfil three of the priorities listed against Objective 2 for the ALSF: *Promoting environmentally friendly extraction and transport*.

1 Threat definition: strategic research on the character, scale and geographical distribution of potential impacts of aggregate extraction on the historic environment, in particular the collection, mapping and analysis of data on aggregates permissions.

> By defining the aggregate resource area of Hampshire using geological data and information from the Mineral Planning Officers, including data on aggregate extraction permissions. By using the resource area as the study area for a desk-based archaeological resource assessment and enhancement of the Hampshire HER which will provide enhanced baseline data for future research and determination of mineral planning permissions in the area.

2 Research to enhance understanding of the scale and character of the historic environment in aggregate producing areas in order to provide the baseline information necessary for effective future management.

> By bringing together for analysis all available archaeological information contained in the Hampshire Historic Environment Record (HER) for the aggregate areas, and by increasing the amount and quality of this information through NMP mapping of archaeological features from aerial photographs.

3 Support for the development of management and conservation strategies for the historic environment in aggregate producing areas.

> By providing a strategic overview of the extent of the aggregate-producing areas in the county and of the archaeological resource of these areas. This will inform future decision making on priorities for the preservation of nationally important archaeological sites through designation and the management of the archaeological resource through the minerals planning process.

The project was commissioned by English Heritage on the basis of a project design submitted in support of an application for funding under the Aggregates Levy Sustainability Fund (project number 4766). The Project Design outlined the overall aim of the project.

> *To facilitate decisions regarding strategic planning, management, preservation and research of archaeological sites and historic landscapes in the aggregate producing areas.*

To meet this aim six objectives were identified.

1. Define the aggregates resource in Hampshire.
2. Identify the areas of past, present and future aggregate extraction.
3. Assess the state of knowledge regarding the archaeology of the aggregate areas.
4. Enhance the knowledge of the archaeology in the aggregate areas through NMP mapping.

5. Develop draft archaeological research agenda for the aggregate areas.
6. Increase public and industry awareness of the archaeology of the aggregate producing areas.

1.5 The project team

The project was carried out by the National Mapping Programme (NMP) team based at the Historic Environment Service (HES) of Cornwall County Council (CCC) in partnership with staff at Hampshire County Council's Environment Department.

Cornwall's NMP team have extensive experience and expertise in archaeological mapping from aerial photographs. The team have carried out surveys in Cornwall and Devon as part of EH's National Mapping Programme (NMP) and team staff have previously taken part in RCHME NMP survey projects, including the extensive survey of the Thames Valley gravels in the early 1990s (Fenner and Dyer, 1996).

The proposal for this project was initiated by Cornwall's NMP team with a view to undertaking the aerial photographic mapping element. Hampshire County Council were keen for the project to take place but current commitments meant that their input was limited to data provision and exchange, liaison, and contributing specialist local knowledge to the research agenda. Consequently the bulk of the work was carried out by Cornwall's NMP team.

1.6 Report Structure

This report is divided into the following sections.

1. *Introduction* providing the background and context for the project as a whole
2. *Methodology* outlining the approach used to capture data and describing the ways in which this data was categorised and interrogated
3. *The aggregate resource of Hampshire* describing the aggregates resource within the county
4. *The project area* describing each of the aggregate-producing areas of the county and identifying those areas targeted by NMP mapping
5. *Archaeological resource assessment: overview* containing an overview of Hampshire's archaeology on a period by period basis, and a period by period overview of the archaeological resource within the aggregate resource area as a whole
6. *Archaeological resource assessment: area characterisation* setting out a more detailed assessment of the nature and extent of the archaeological resource within each of the aggregate-producing areas of the county
7. *The impact of mineral extraction* comprising a summary account of the impact of mineral extraction on the archaeological resource
8. *The updated archaeological resource assessment: NMP mapping* presenting the results of the mapping and an updated archaeological resource assessment for each of the areas mapped
9. *Research Agenda* containing a discussion on potential areas for future research and identifying future research themes based on the archaeological resource assessment.
10. *References* listing all appropriate bibliographic references
11. *Project archive* containing a description of the material forming the project archive and the location of the archive depositories

2 Methodology

2.1 Introduction

To achieve the project aim - *To facilitate decisions regarding strategic planning, management, preservation and research of archaeological sites and historic landscapes in the aggregate producing area* - a clearly defined methodology was used.

The basic structure of the methodology is based on that developed during a similar type of project in Gloucestershire (Mullin 2004), with one significant addition. Some NMP projects had already been carried out in Gloucestershire and one important conclusion of their project was that NMP data was seen as an essential to understanding the archaeological resource. Therefore for the Hampshire project (no NMP work had been hitherto undertaken in Hampshire) a core element of the methodology was the systematic mapping of archaeological features from aerial photographs to NMP standards.

The project was carried out in two stages, over two years. The first stage was funded during round 2 of the ALSF (the financial year 2006/2007); the second by the extension of round 2 (the financial year 2007/2008). During the first year's work time constraints (in accordance with ALSF criteria the delivery date for the project was March 2007) and the size of the aggregate-producing area (Figure 4), meant it was not possible to carry out NMP mapping of the entire aggregate resource area. Therefore to produce the optimum amount of information in the time available the assessment was carried out at two levels. The archaeology of the overall aggregate resource area was analysed and characterised using data captured from the Hampshire HER. A pre-selected portion, or sub-unit, of the overall area was then mapped and the resulting NMP data analysed in more detail. Work during 2007/2008 comprised further NMP mapping of parts of the aggregate resource area not mapped during the previous year.

2.1.1 2006/2007

In 2006/2007 the archaeological resource assessment for the whole aggregate resource area was begun at an early stage. NMP mapping of the pre-selected sub-unit was undertaken simultaneously, and an updated assessment for the sub-unit produced once the mapping was completed. This rolling programme was designed to optimise project output within the limited time available.

There were eight stages to the methodology.

1. Define the extent of the aggregate resource in Hampshire
2. Define the sub-unit for NMP mapping
3. Produce an assessment of the archaeological resource in the overall aggregate-producing area
4. Produce an assessment of the impact of mineral extraction on the archaeological resource
5. Enhance existing knowledge of the archaeology in the sub-unit through NMP mapping
6. Update the archaeological resource assessment for the sub-unit
7. Produce a draft research framework and agenda for the aggregate resource area

8. Disseminate the project results and outcomes

The project was carried out in a completely digital environment using an ArcGIS 9 Geographical Information System (GIS). This was populated with data provided by HCC, comprising county and administrative boundaries, urban areas, the boundaries of Areas of Outstanding National Beauty (AONBs) and the New Forest National Park, OS 1:10,000 map tiles from 2002 mapping, First Edition OS 6" map tiles, and OS contour data. As work on the project progressed data from the British Geological Survey and from the Hampshire HER was uploaded onto the project GIS system.

2.1.2 2007/2008

One of the key elements of the research agenda arising from the assessment was further NMP mapping to enhance baseline data contained in the Hampshire HER. When further ALSF funding became available in April 2007 a variation to the project was secured (Young, 2007) enabling a secondary sub-unit to be defined and mapped to NMP standards (method stages 2 and 5). The archaeological resource assessment for the secondary sub-unit was then updated (stage 6) and the draft research framework and agenda were updated in the light of this new data (stage 7).

2.2 Define the extent of the aggregate resource in Hampshire (method stage 1)

It was crucial to identify *all* the potential aggregate-producing geological deposits within Hampshire, whether there are currently plans to extract them or not. By doing so, the project has provided baseline archaeological data for areas which may become subject to mineral extraction applications in the future, beyond the time frame of current mineral plans.

There are three sources of naturally occurring minerals used to supply Hampshire's aggregate apportionment under MPG6; terrestrial deposits of sand and gravel, offshore seabed deposits of sand and gravel, and chalk.

Dredging of sand and gravel from offshore seabed deposits is licensed by the Crown Estate and is not subject to planning control. The methodology for understanding threats and impacts on marine aggregate deposits differs from that applying to land won deposits. There are currently two ALSF projects considering marine aggregate deposits in Hampshire:

- England's Historic Seascapes: Solent and Isle of Wight (4728)
- Solent Aggregates to Outreach (3963)

For these reasons the marine resource was not included in the scope of this project.

In recent years some extraction of chalk as an aggregate has taken place in Hampshire, particularly in the southeast of the county. However the stated policy in the Minerals Local Plan (MLP) is that further proposals for the extraction of chalk for aggregate use will be opposed on environmental grounds. Because of the lack of threat posed by chalk extraction to the historic landscape, the chalk resource was excluded from the scope of this project.

Therefore, in defining the aggregate resource, only those areas containing terrestrial deposits of sand and gravel were considered (Figure 4).

2.2.1 Identify all sand and gravel deposits

This was done using 1:50,000 Digital Geology Maps purchased from the British Geological Survey (BGS). BGS data is digitally tagged at varying levels with data from the BGS *Lexicon of Named Rock Units*. The data includes general geological rock types (chalk, gravel) identified as a *ROCK type*, and specific lithologies (Tarrant chalk, River Terrace gravel 1), identified as a *LEX type*. The data is searchable at both levels and the results can be plotted on a background map of the county.

2.2.2 Identify aggregate-producing sand and gravel deposits

The model was refined using 1:100,000 Minerals Resource data (also purchased from BGS). The Mineral Resource data shows the broad distribution of those mineral resources which may be of current or potential economic interest. It shows the extent of inferred mineral resources, which have not been evaluated by drilling or other sampling methods, nor had their technical properties characterised on any systematic basis. The purpose of the data is to assist in the consideration and preparation of development plan policies in respect of mineral extraction.

2.2.3 Identify quarried deposits

The model was further refined by identifying the deposits and beds which are currently or have been historically exploited. To enable this, information regarding active and dormant quarries contained in the BGS Mines and Quarries database was collated. This was supplemented by digital data on mineral planning permissions held by the Minerals and Waste Planning Officers at HCC. The location of the quarries was plotted

against the geology and Minerals Resource mapping in the project GIS, and the geological deposits on which each quarry is located were identified (Figure 5).

In this way, the potential aggregate resource of Hampshire was defined as comprising those sand and gravel deposits identified by the BGS as being of current or potential economic interest and/or which have been historically quarried for aggregates.

2.2.4 Identify constraints on mineral extraction

Although formulated to assess the aggregate minerals present within the county, the methodology was not designed to take into account constraints on the extraction of this resource, such as the presence of major roads, the New Forest National Park, Areas of Outstanding Natural Beauty, and agricultural or other designations (Figure 6).

Urban areas, however, were excluded from the resource area, as mineral extraction is prohibited within such areas by Minerals Planning Guidance and legislation. The areas excluded are all those contained in the 'Urban Areas' layer on Hampshire County Council's GIS system.

2.2.5 Project outcome

The extent of the relevant aggregate mineral deposits identified during this stage of the project was copied as a shapefile onto a separate layer of the project GIS to form a 'resource map' on which the archaeological assessment was based.

A description of the aggregate resource and a series of maps were produced (section 3).

2.3 Define the sub-unit for NMP mapping (method stage 2)

One of the key objectives of the project (objective 4 in section 1.2) was to enhance the knowledge of the archaeology in the aggregate areas through NMP mapping. Due to time constraints during the first year of the project it was not possible to produce NMP mapping for the entire aggregate resource area, hence the need to define a sub unit.

2.3.1 Criteria for defining the NMP sub-units (2006/2007)

Having defined the extent of the aggregate resource area, the next stage was to identify those areas where NMP mapping might best be targeted. Four areas were selected as sub-units (Figure 14). The following criteria applied in the selection of the sub-unit areas for the NMP survey.

1. Each sub-unit should comprise coherent blocks of landscape based on 1km squares
2. Each sub-unit should comprise roughly contiguous areas of aggregate-producing geologies
3. Due to time constraints resulting from the project deadline, the total area covered by the sub-units should be limited to approximately 300 1km squares

The selection also took account of legal, practical and environmental constraints on mineral extraction.

- Mineral extraction is prohibited in urban areas so these were excluded from the survey
- Parts of 1km squares falling in other counties were excluded (the same, obviously, is true of parts of 1km squares which are in the sea).
- The principal environmental constraints are area designations – the New Forest National Park and Areas of Outstanding Natural Beauty (AONBs) - because future mineral extraction is far less likely to take place in these areas than elsewhere (HCC, 1998, 4.7). Although the New Forest National Park and the AONBs were not excluded from the study area, the defining of the sub-units consciously avoided these designated areas as far as possible (Figure 6).

One difficulty encountered when defining the NMP sub-units resulted from applying nationally agreed NMP methodology (EH forthcoming) to this project. NMP projects are normally conducted, recorded and monitored by OS 1:10,000 quarter map sheet. However, the sand and gravel deposits in Hampshire, even in the locations where they are most extensive, completely fill only a few whole quarter sheets and cover no more than a small portion of many more. Basing the mapping on quarter sheets would therefore result in the inclusion of many archaeological features located on geologies with no potential for aggregate mineral extraction.

On the other hand, strictly limiting the sub-units to the irregular-shaped boundaries formed by exploitable geological deposits would present time-consuming difficulties for NMP mapping, particularly with regard to the identification of relevant aerial photographs and arranging their loan from the various photographic collections.

For this project, focused on specific geological confines, it was agreed that the kilometre square would be the most appropriate geographic unit on which to base the mapping. In places the sand and gravel deposits cover many contiguous 1km squares. Despite using individual 1km squares as the basic mapping unit a small number of sites located outside the sand and gravel deposits have unavoidably been included in the NMP survey. Nonetheless, basing the sub-units on 1km squares rather than on

strict geological confines afforded a more practical approach and greatly facilitated the process of mapping from aerial photographs.

An ArcGIS shapefile for the NMP sub-units was created in the project GIS. The urban areas layer on the GIS was automatically excluded from this shapefile to ensure that any archaeological sites located within the urban areas were not included in the archaeological assessment.

2.3.2 Archaeological Resource Areas

The aggregate-producing deposits outside the NMP sub-units are widely scattered throughout the county. For the purpose of the archaeological resource assessment they were sub-divided into 10 discrete 'archaeological resource areas', ranging in size from 3 km^2 to 235 km^2 (Figure 7).

An ArcGIS shapefile for the archaeological resource areas was created in the project GIS system. This was then merged with the resource map shapefile (section 2.2.5) to create a new archaeological resource area shapefile displaying the extent of aggregate-producing geologies within each of the archaeological resource areas.

Use of this shapefile allowed only those archaeological features and monuments located specifically on sand and gravel to be included in the archaeological resource assessment. In this respect the methodology for the archaeological resource areas differs from that used for the sub-units outlined above in section 2.3.1.

The urban areas layer on the GIS was automatically excluded from this shapefile to ensure that any archaeological sites located within the urban areas were not included in the archaeological resource assessment.

2.3.3 Defining the secondary NMP sub-units (2007/2008)

A second year's work comprising further NMP mapping of the aggregate resource area was carried out. During 2006/2007 NMP mapping added a significant amount of information to that previously contained in the Hampshire HER. It was expected that further mapping would produce similarly positive outcomes and several areas containing substantial aggregate deposits were identified as suitable for further NMP survey.

On this basis five secondary sub-units were defined, totalling 283 1km squares in extent (Figure 19). These differ from the original NMP sub-units in that they were not pre-selected. They are formed by parts of the archaeological resource areas; some consist of the most aggregate-rich portions of one archaeological resource area; others are amalgamations of the aggregate-rich portions of two or more archaeological resource areas.

The secondary NMP sub-units were defined using the same criteria as the original sub-units (see 2.3.1 above). However the aggregate deposits in the secondary sub-units are generally more fragmented and less contiguous and, as a result, contain more areas of non-aggregate geology.

2.3.4 Project outcome

GIS shapefiles were created for the NMP sub-units, archaeological resource areas and secondary NMP sub-units. Written summaries and a series of maps showing the extent of the sub-units and the archaeological resource areas were produced (section 4).

2.4 Produce archaeological resource assessment (method stage 3)

2.4.1 Structure of the assessment

The archaeological resource assessment presented in this report is divided into two main sections.

Section 5 contains a summary overview of current knowledge of Hampshire's archaeology in order to provide background context for the assessment of the archaeology of the aggregate-producing areas of the county. Section 5 also presents summaries of the archaeology of each period for the overall aggregate resource area of the county.

By presenting the information in this way, data from the aggregate resource area can be compared with the overall pattern and an assessment made of to what extent it is representative of the county as a whole.

Section 6 describes in more detail the nature and extent of the archaeological resource for each of the NMP sub-units and archaeological resource areas. This enables variations in the archaeological character of each area to become apparent.

Both sections are organised on a period by period basis.

2.4.2 Sources of data

Background information on the archaeology of Hampshire was provided by a range of synthetic literature which is listed in section 10 of this report.

Archaeological data was derived from the Hampshire HER, and was provided to the project team as ArcGIS shapefiles to be used in conjunction with the project GIS system. The following shapefiles were used.

- Archaeology and Historic Buildings Record (AHBR)
- Scheduled Monuments
- Roman roads
- Cropmarks
- Historic Landscape Character (HLC)
- Water meadows

In addition the EH Register of Parks and Gardens and List of Battlefield Sites were consulted.

2.4.2.1 AHBR data

Searches of the AHBR data were made based on specific periods for sites and artefacts. Initially data was collected by period for the whole county, in order to provide the Hampshire overview, and subsequently for each of the aggregate-producing areas, to enable more detailed analysis.

In order for accurate AHBR searches of the NMP sub-units (section 2.3.1) to be made the AHBR shapefile was merged with the NMP sub-unit shapefile to create a new NMP sub-unit/AHBR shapefile in the project GIS. Searches of this shapefile displayed only those AHBR records located within the sub-unit areas.

To enable accurate AHBR searches of the archaeological resource areas (section 2.3.2) the AHBR shapefile was merged with the aggregate resource area shapefile to create a new resource area/AHBR shapefile. Searches of this shapefile displayed only those AHBR records located within the archaeological resource areas.

The data resulting from the period by period searches was exported from the GIS system into Excel tables to allow it to be sorted and analysed. To keep database sizes manageable, only data under the following headings were extracted from the AHBR.

- Site ID number
- Site name
- Record Type (Monument or Find spot)
- Site Type
- Period
- Summary site description
- Easting
- Northing

The date of sites recorded in the Hampshire AHBR is displayed numerically as *start date* and *end date* rather than by archaeological period. Dates BC are represented by a minus sign (e.g. -4000 = 4000BC). The following periods were used for the assessment and the corresponding start and end dates are set out below.

Period	**Start date**	**End date**
Palaeolithic	-500,000	-10,001
Mesolithic	-10,000	-4,001
Neolithic	-4,000	-2,201
Bronze Age	-2,200	-801
Iron Age	-800	42
Prehistoric (undated)	-500,000	42
Roman	43	409
Early medieval	410	1065
Medieval	1066	1539
Post medieval	1540	1900
Modern	1901	2007
Undated (unknown date)	9999	9999

When interrogating the AHBR shapefiles in GIS, the following queries were used to obtain data for sites for each period.

Period	**GIS query**
Palaeolithic	START DATE>= - 500000 AND END DATE<= - 10001
Mesolithic	START DATE>= - 10000 AND END DATE<= - 4001
Neolithic	START DATE>= - 4000 AND START DATE< - 2200 AND END DATE<= - 1501
Bronze Age	START DATE>= - 2200 AND START DATE< - 800
Iron Age	START DATE>= - 800 AND START DATE<43
Prehistoric (undated)	START DATE< - 2200 AND END DATE=42
Roman	START DATE>= 43 AND START DATE<410
Early medieval	START DATE>= 410 AND START DATE<1066
Medieval	START DATE>= 1066 AND START DATE<1540
Post medieval	START DATE>= 1540 AND START DATE<1901
Modern	START DATE>= 1901 AND START DATE<=2005
Undated (unknown date)	START DATE= 9999

A substantial number of sites are recorded in the AHBR which span chronological boundaries (such as Late Bronze Age/Early Iron Age). In the assessment these sites are considered only in the earliest period of their date range, so a Late Bronze Age/Early Iron Age site will be included in the Bronze Age sections of the assessment but not in the Iron Age sections.

Variable standards have been used to record finds and features from excavated sites in the AHBR. In some cases, for instance, one Iron Age settlement might be recorded as a single AHBR record, but another will be recorded as a series of features (e.g. pits, hut circles, post holes). In presenting lists of numbers of AHBR records in the assessment, no attempt was made to reduce finds and features from excavated sites to a single record for that site. However, for the summary discussions contained in the assessment further analysis of the AHBR data was undertaken and every effort was made to rationalise such multiple indexing of site records.

It is important to emphasise that the information collected from the AHBR represents only a snapshot of the data in the record at the time that it was collected for this project (April 2006) and that no data verification has been carried out as part of the project. It is also important to stress that this report does not constitute an assessment of the true number of sites and monuments but of the records made of them in the AHBR.

2.4.2.2 Scheduled Monuments

A version of the Scheduled Monuments shapefile was created based on points rather than polygons in order to produce distribution maps showing the monuments as dots. This shapefile was merged with the NMP sub-unit and archaeological resource areas shapefiles to create new shapefiles displaying only those Scheduled Monuments located within the sub-units or resource areas.

The Scheduled Monuments shapefiles contained the following information.

- Monument ID number
- Monument name (usually including a brief description)
- Easting
- Northing

2.4.2.3 Roman roads

The Roman road shapefile contains a series of polylines representing all known Roman roads in the county. The file contains the following data.

- Hampshire County Council number
- Route of road
- Section number
- Monument Unique ID
- Margary number
- Level of certainty (‘well established’, ‘uncertain’, ‘projected’)
- Condition

2.4.2.4 Cropmarks

The cropmarks shapefile contains a series of polylines representing cropmarks of archaeological features transcribed from aerial photographs by HCC staff over a number of years up to 1995. The transcriptions were originally made in ink and have

since been scanned as Raster data and subsequently automatically Vectorised. The shapefile contains no other attributes.

2.4.2.5 Historic Landscape Character (HLC)

Historic landscape Characterisation for Hampshire was carried out by Oxford Archaeology in 2000. The HLC shapefile contains the following information.

- HL Type number
- HL Group number
- HL Type name
- HL Group name

The shapefile was merged with both the NMP sub-unit shapefile and the archaeological resource areas shapefile to create two new shapefiles displaying the HLC of the sub-units and resource areas only.

This enabled the production of distribution maps showing the HLC for each of the aggregate-producing areas.

2.4.2.6 Water meadows

This shapefile shows the extent of water meadows in more detail than the HLC. It is based on the results of a survey carried out in 2000 by Oxford Archaeology. New shapefiles were created in the project GIS in order to display the extent of water meadows within each of the NMP sub-units and archaeological resource areas.

2.4.3 Project outcome

A series of shapefiles were created in the project GIS containing AHBR data, Scheduled Monument data, HLC and water meadow data for all of the aggregate-producing areas of the county.

Based on existing synthetic literature a summary overview of the county's archaeology for each of the twelve periods listed in section 2.4.2.1 above was produced. This overview is contained in section 5 of this report.

The results of the searches of the AHBR were tabulated and quantified in Excel. Statistics were produced based on location, period, site type and the nature of the archaeology. This information was then used to produce overviews of the archaeology of each period for the aggregate resource area as a whole. These overviews are contained in section 5 of this report.

The Scheduled Monument data and HLC and water meadow data was used to provide summaries of the distribution and character of Scheduled Monuments and a description of the HLC both of the wider county and of the aggregate resource area as a whole. This information is also presented in section 5 of this report.

The same datasets provided the basis for more detailed assessments of the extent and character of the archaeology and historic environment within each of the NMP sub-units and 10 archaeological resource areas. These detailed assessments are set out in section 6 of this report.

A series of distribution maps were produced in GIS showing the archaeology recorded in the AHBR, the distribution of Scheduled Monuments and the HLC both for the wider county and for the individual NMP sub-units and archaeological resource areas.

2.5 Produce an assessment of the impact of mineral extraction on the archaeological resource (method stage 4)

In order to make an assessment of the impact of mineral extraction on the historic environment, three datasets were used in conjunction with the AHBR shapefiles.

1. Digital data on mineral extraction planning permissions provided by Hampshire's Mineral Planners
2. The 'active and disused gravel workings' HLC type in the Hampshire HLC shapefile
3. BGS digital mapping of artificial geology, which shows areas of 'worked ground', 'made ground' and 'infilled ground'. In some cases these classifications refer to worked out mineral extraction sites

Reference was also made to the short descriptions contained in the AHBR records. In this way additional sites were identified which had been recorded as a result of mineral extraction. For the most part these additional sites were associated with small scale quarrying operations not recorded in the three datasets listed above.

A separate shapefile was created containing the AHBR data for all sites either discovered as a direct result of mineral extraction or which have been affected by mineral extraction operations.

2.5.1 Project outcome

Shapefiles were created in the project GIS showing the extent of areas affected by mineral extraction and AHBR data for sites in those areas.

The AHBR data for these areas was tabulated and quantified in Excel. Statistics were produced based on period, site type and the nature of the archaeology. This information was then used to produce an assessment of the impact of mineral extraction on the county's archaeology. The shapefiles form the basis for a distribution map showing the affected sites.

The assessment is presented in section 7 of this report.

2.6 Enhance existing knowledge of the archaeology through NMP mapping (method stage 5)

A key aspect of the project methodology was the Mapping of archaeological features from aerial photographs. This was done as part of English Heritage's National Mapping Programme (NMP) and was carried out to the current standards adopted by EH Aerial Survey and Investigation (EH forthcoming).

NMP mapping enabled the identification of archaeological deposits destroyed without record during aggregate extraction but which are visible prior to their destruction on aerial photographs. It also identified 2,305 previously unrecorded sites which still survive in the aggregate producing areas. As such the mapping made a vital contribution towards understanding the archaeological resource of the aggregate producing areas. In total 75% of the aggregate producing area was mapped. During 2006/2007 the survey targeted four NMP sub-units (described in section 4.2) comprising 302 square kilometres, and during 2007/2008 on five secondary sub-units (described in section 4.3) comprising 283 square kilometres.

The main elements of NMP methodology, as they relate to this project, are set out below.

2.6.1 Sources

2.6.1.1 Aerial photographs

All relevant aerial photographs housed at the two collections listed below were consulted during the project.

The NMR collection

The NMR collection contains a large number of vertical photographs. These were taken at various scales for non-archaeological purposes, such as military and cartographic reconnaissance and civil engineering projects. The collection also contains specialist oblique photography resulting from archaeological reconnaissance, and oblique photography taken by the RAF during the 1940s and 1950s for military purposes.

The CUCAP collection

The CUCAP collection contains a small number of vertical photographs taken for a range for non-archaeological purposes. The collection also contains specialist oblique photography resulting from archaeological reconnaissance.

The third major collection of relevant photographs is housed at the offices of Hampshire County Council. Due to timescale constraints it was not possible to consult these photographs during the 2006/2007 mapping of the NMP sub-units. This collection was, however, consulted during the mapping of the five secondary sub-units during 2007/2008. The collection consists of vertical prints dating from four Census Surveys (1971, 1984, 1991 and 1995).

In total 24,522 aerial photographs were consulted during the project. These consist of 21,517 vertical prints, 2,393 specialist oblique photographs, and 612 military obliques.

The numbers and types of photographs consulted for each of the nine areas mapped in are listed below.

Sub-unit	Verticals	Obliques	Military obliques	Total
Avon valley	2826	523	140	**3489**
East Hampshire	1971	97	16	**2084**
New Forest Coastal Plain	3194	98	282	**3574**
Lower Test valley	3138	244	33	**3415**
Hampshire Kennet	1702	479	0	**2181**
Blackwater catchment	2277	210	12	**2499**
Southwick	1968	121	0	**2089**
Eastleigh	2892	55	81	**3028**
Upper Test	1549	566	48	**2163**
Total	**21,517**	**2,393**	**612**	**24,522**

The main photographic collection is that at the NMRC; 20,050 verticals, 2,271 specialist obliques and 612 military oblique photographs were loaned during the project. A loan arrangement was put in place enabling the consultation of these photographs at Cornwall County Council's offices in Truro. Under the terms of this arrangement photographs were loaned to the project team one sub-unit at a time.

Photographs, 552 verticals and 122 obliques, contained in the collection held at CUCAP were loaned out at up to 100 photographs per loan.

Photographs, amounting to 915 verticals, in the HCC collection were consulted at the HCC offices in Winchester; scans were made of photographs as necessary and transcriptions made from the scanned images.

Full details of the photographs from these collections are contained in the project archive.

2.6.1.2 Archival sources

Three archival sources were consulted to further understand the archaeology of the project area and to aid interpretation of specific sites.

- Hampshire AHBR and HLC data
- First Edition Ordnance Survey map of 1870-1880
- The NMR Archives and Monuments in England (AMIE) database (containing monument, event and archive records

2.6.1.3 Previous Survey Work and Research

There are three elements to the previous survey work consulted during the project.

- The Hampshire cropmark ArcGIS shapefile (section 2.4.2.4) was consulted on an ongoing basis during the project.
- An aerial photographic transcription of the area around Silchester Roman town (RCHME 1995) formed the basis of NMP mapping of this area.

- Published transcriptions (Palmer 1984) resulting from the Danebury Project was consulted during mapping of the Upper Test valley.

2.6.2 Archaeological scope of the project

All visible archaeological features, dating from the Neolithic to the twentieth century (pre-1946), were recorded. These include both plough-levelled sites and those with upstanding remains. Sites appearing on OS maps which have not been photographed or which are completely obscured by vegetation were not recorded. Features still in use or fossilized by later structures that are still in use, e.g. buildings, field walls, canals, railways, leats and hedges, were not recorded.

- **Plough-levelled features and earthworks**

All cropmarks and soilmarks representing buried 'negative' features (i.e. ditches and pits) or plough-levelled earthworks were recorded. All upstanding earthwork sites visible on aerial photographs were recorded, whether or not they had been previously surveyed (including those marked on the OS maps), and whether or not they are still extant on the most recent photography.

- **Ridge and furrow**

All areas of medieval and post medieval ridge and furrow were mapped using a standard convention to indicate the extent and direction of the furrows. The same convention was used to map areas of pre-1945 cultivation marks. The standard convention distinguishes between plough-levelled and upstanding ridge and furrow but not differences in date. Suggested dates were, however, recorded in the project database.

- **Water meadows**

Areas of extensive water meadows thought to pre-date 1945 were transcribed and recorded. The lines of the main drains and leats were mapped in full, plus a sufficient sample of the minor water courses to give a true feel for the extent and pattern of the whole.

- **Buildings and structures**

The foundations of buildings and structures appearing as ruined stonework, earthworks, cropmarks, soilmarks or parchmarks were recorded. Standing roofed or unroofed buildings and structures were not, except in a few instances in which no other adequate map record existed. A specific exception was the recording of military installations (see twentieth century military features, below).

- **Industrial features and extraction**

All extractive features believed to pre-date 1945 were mapped. These included large-scale features such as quarries and pits, as well as small-scale extraction of resources for local use (e.g. minor stone quarries and gravel extraction).

- **Twentieth century military features**

Twentieth century military features were recorded to an appropriate level of detail. The extent of large military complexes such as airfields or camps was depicted using the 'extent of area' symbol. Major buildings and structures within military complexes as well as isolated structures, e.g. pillboxes or slit trenches, were fully mapped and recorded.

- **Field boundaries and field systems**

Removed field boundaries and field systems were plotted as long as they were considered to predate the OS First Edition map (1870-1880) and were not already recorded on that or any other OS map.

- **Parkland, landscape parks, gardens and country houses**

All park and garden landscape features (including deer parks) visible on aerial photographs but not previously recorded by the OS were plotted.

- **Transport features**

Major transport features (i.e. disused canals and main railways) are included in the Ordnance Survey sphere of interest and subsequently appear on OS mapping; these were therefore not mapped. Smaller features (e.g. local trackways associated with quarries) were mapped as were trackways, pathways and roadways considered to be post medieval or earlier in origin and not already recorded by the OS.

- **Natural features**

Geological, geomorphological, and other natural features were not mapped except in a few cases when alternative, archaeological interpretations were possible. In these cases the site records were double-indexed with both interpretations.

2.6.3 Transcription

The results of the mapping were produced entirely in digital format using AutoCAD 2002 and 2007. Transcription comprised the following processes.

1. Information was derived from the photographs available in the collections identified above.
2. Oblique and vertical photographs were scanned.
3. Rectified transformations of archaeological features visible on the scanned photographs were produced using AERIAL 5.2. Digital copies of current OS 1:10,000 maps were used for control information and as a base for mapping in AutoCAD. Where necessary digital terrain models (DTM) were created using digital contour data prior to rectification of the photographs.
4. The rectified images were imported into the relevant AutoCAD drawings.
5. Archaeological features were digitally transcribed in AutoCAD according to a specified layer structure and using agreed line and colour conventions (see Appendices 1 and 4).
6. Polygons were drawn around each separate monument to define its extent.
7. Quality assurance checks were carried out by each member of the project team on selected map sheets to ensure that all sheets were completed to NMP standards.

2.6.4 Data processing

2.6.4.1 Project database

A repurposed version of the Cornwall HER Access database was used as a stand-alone project database. A few minor changes were made to certain fields to bring it in line with current national standards and background tables were populated with Hampshire information, such as Parish and District lists.

Monument records with automatically generated unique site record numbers were created in the project database for each site mapped.

Where the site was already recorded in the Hampshire AHBR, the existing AHBR record number was recorded as were any relevant AMIE Hob UID numbers.

Fields recorded in the database are set out in Appendix 2.

2.6.4.2 AutoCAD attached object data

Three object data tables were incorporated into each AutoCAD drawing to enable concordance with the Hampshire GIS and to facilitate basic analysis of the drawings.

The Project ID number generated by the Project Database, the AHBR number of any site with an existing Hampshire AHBR record and the AMIE Hob UID of each site (where it existed) was recorded in the first table.

The second table recorded basic interpretative information and contained four fields; period, type, form, and photo number as well as including a comment field.

The third table recorded the date, surveyor, scale of survey, and copyright information.

These tables were attached to all plotted features and the relevant polygon defining the monuments. The content and structure of the tables is described in Appendix 3.

2.6.4.3 GIS shapefiles

Each AutoCAD drawing was exported as an ArcGIS shapefile to the project GIS. Each mapped site could then be linked to the project database through the attached Project ID number.

Selected fields in the project database were attached to the individual features within the shapefiles; these fields are set out below.

Project ID number

AHBR number

AMIE Hob UID number

Site type

Form (cropmark/earthwork)

Date

Short description

Photograph serial number

Easting

Northing

2.6.5 Data exchange

The data mapped during this stage of the project was provided to HCC as a series of ArcGIS shapefiles to be incorporated as a layer into the county GIS with the attributes contained in the Access database attached. This layer can function immediately as a data source in the Hampshire GIS. The creation of new records in the Hampshire AHBR will be carried out by HCC as part of a wider data entry programme in the future.

Copies of the shapefiles were provided to the NMR for incorporation in to the NMR GIS. A copy of the project database was sent to the NMR so that the data can be transferred to the NMR AMIE database. Proposed fields for data migration are in line with EH minimum standards for monument recording and are tabled in Appendix 2.

2.6.6 Project outcome

A series of AutoCAD drawings was produced showing all archaeological features visible on aerial photographs for each of the four sub-units.

The project Access database containing information and descriptions of all archaeological sites mapped during the project was populated with 2,576 records.

The AutoCAD drawings with Access data attached were exported as ArcGIS shapefiles.

2.7 Update the archaeological resource assessment for the NMP sub-unit (method stage 6)

2.7.1 Analysis of the Project Database

Once NMP mapping was completed, an updated archaeological resource assessment for each sub-unit was produced in the light of additional data provided by the mapping.

Stand-alone copies of the project database were created for each sub-unit and the data sorted and verified. Data was extracted by running queries within the Access database; these presented the data in the form of tabulated lists for each period. The lists include information on NGR co-ordinates for each site, site type, period, form, and whether the site is a new discovery or an updated AHBR record.

The results of each Access query were exported as dBase IV (.dbf) files. Distribution maps showing the new sites discovered during the mapping were created for each of the sub-units. These were compiled in ArcGIS 9 by importing the XY co-ordinate data from the .dbf files created in Access.

For each sub-unit, statistics derived from the queries relating to period and site type for new sites recorded from aerial photographs were analysed, as were the maps showing the distribution of new sites. Comparison of this analysis with that contained in the archaeological resource assessment (section 6) formed the basis for the updated archaeological resource assessment.

The same process was carried out for the five secondary sub-units. There is one significant difference in the way the updated assessment for the secondary sub-units is presented compared with that for the original NMP sub-units. Unlike the NMP sub-units, which were pre-selected at the start of the project, the secondary sub-units were created out of various portions of the archaeological resource areas (see section 4.3) after the archaeological resource assessment had been carried out. Therefore it was not possible to make a direct comparison of the updated analysis for the secondary sub-units with that contained in the archaeological resource assessment in the way that was done for the NMP sub-units.

2.7.2 Project outcome

Data derived from NMP mapping provided the basis for updated assessments of the extent and character of the archaeology and historic environment within each of the NMP sub-units and secondary sub-units. The updated assessments are set out in section 8 of this report.

These summarise the results of the mapping, on a period by period basis, in terms of numbers of new sites added, changes to the overall distribution patterns for each period and any enhancements to our knowledge of the archaeological character of each area.

As well as a series of distribution maps, the updated assessments for each sub-unit and secondary sub-unit are illustrated with examples of the new sites using extracts from the AutoCAD drawings and photographic images.

The updated assessment also includes a general appraisal of the effectiveness of the NMP mapping in the aggregate-producing landscape and, where possible, an examination of how far the character of the mapped archaeology differs to that previously recorded in the AHBR.

2.8 Produce a draft research framework and agenda (method stage 7)

Frameworks for our Past (Olivier, 1996) introduced the concept of a Research Framework which comprises a Resource Assessment summarising the current state of knowledge and understanding, and a Research Agenda highlighting gaps in knowledge, the potential of the resource, and possible research topics.

Production of a research agenda for the historic environment of the aggregate landscape is a key aim and outcome of this project.

The agenda considers the archaeological resource of the whole aggregate landscape; it takes account of the findings of NMP mapping, and considers these elements in the context of the wider archaeological record for the county. Priorities for further research are identified; these include issues not addressed under normal planning-led investigation.

Regional Research Frameworks have been completed or are underway for much of England; the Solent Thames Research Framework is currently at an early stage and is timetabled to be completed by the end of 2008. There is therefore the opportunity for the research agenda formulated by this project to feed into the regional research framework.

2.8.1 Project outcome

The research agenda is presented in section 9 of this report.

2.9 Disseminate the project results and outcomes (method stage 8)

Information generated by the project has been disseminated in a number of ways.

The data created by the project has been provided to the Hampshire HER and therefore the primary access to the data will be through the normal provisions of the HER.

A description of the project, its purpose and methodology as well as a brief analysis of the results are available on web pages associated with the Hampshire HER, EH, ALSF, and DEFRA websites.

In line with other NMP type projects a Liaison Group, consisting of representatives of organisations with an interest in aggregate extraction and the historic landscape, was established and presentations of the project outcomes were held in Winchester in March 2007 and May 2008. The project was also presented at the November 2007 annual NMP meeting in London.

This report is disseminated to EH Historic Environment Enabling Programme (HEEP), and a PDF version to Archaeology Data Service (ADS) so that it is available nationally.

The report is available to Minerals and Archaeological Planning Officers, representatives of the minerals industry and other interested parties, and to the local and professional communities through its deposition with the county HER.

A summary and discussion of the results of NMP mapping in the aggregate landscape is published in a report to English Heritage (Young 2008)

3 The Aggregate Resource of Hampshire

3.1 Introduction

The Aggregate Resource within Hampshire is defined as all those areas in which potential aggregate reserves occur, regardless of any future intention to exploit such reserves. In defining the resource, the locations where aggregate minerals occur were identified using data obtained from the British Geological Survey (BGS) and from Hampshire, Portsmouth and Southampton Mineral Planning Authorities.

There are three sources of naturally occurring minerals used to supply Hampshire's aggregate apportionment under MPG6; terrestrial deposits of sand and gravel, offshore seabed deposits of sand and gravel, and chalk.

Dredging of sand and gravel from offshore seabed deposits is licensed by the Crown Estate and is not subject to planning control. The methodology for understanding threats and impacts on marine aggregate deposits differs from that applying to land won deposits. Other current ALSF projects (section 2.2) are considering the marine resource in the Solent area. For these reasons the marine resource has not been included in the scope of this project.

Traditionally the small-scale extraction of chalk for use as agricultural lime has been carried out throughout the chalk areas of Hampshire (Figure 1). In recent years some chalk extraction for specialist industrial uses and as an aggregate has taken place, particularly in the southeast of the county. However the stated policy in the Minerals Local Plan (MLP) is that further proposals for the extraction of chalk for aggregate use will be opposed on environmental grounds. There are no preferred areas for chalk extraction identified in the MLP and there is a general presumption against the extraction of chalk for aggregate use. Because of the current lack of threat posed by chalk extraction to the historic landscape, the chalk resource has been excluded from the scope of this project.

Therefore, in defining the Aggregate Resource, only those areas containing terrestrial deposits of sand and gravel have been considered.

3.2 Sand and gravel geology in Hampshire

Deposits of sand and gravel are accumulations of rock fragments and mineral grains which have been derived from the weathering and erosion of hard rocks by glacial and river action. Therefore the properties of sand and, especially, gravel depend on the properties of the rocks from which they were derived.

The variability of sand and gravel deposits, coupled with the fact that they may sometimes be concealed by boulder clay (till), means that the identification of the location and extent of potentially workable resources can be both imprecise and influenced by the quality of available information.

Three levels of detail, dependant on available information, are used by the BGS to show the distribution of sand and gravel deposits.

- Where no detailed geological sampling has taken place the extent of deposits is *inferred* and only outcropping sand and gravel is shown. This data is presented in the form of a series of 1:100 000 scale Mineral Resource maps.
- Industrial Minerals Assessment surveys have been carried out in some locations to define *indicated* resources by drilling and sampling.
- *Measured* resources are defined by closely spaced drilling, an evaluation of the quality of the material, its market suitability and general economic viability

In Hampshire the locations of some of the sand and gravel deposits are inferred and the BGS Mineral Resource data was a principal source used to define the aggregates resource. However, numerous Mineral Assessment Surveys have been carried out in the Bournemouth, New Forest and Southampton areas and here more accurate data was available.

3.2.1 Superficial or Drift deposits

Sand and gravel deposits in Hampshire occur in a number of geological environments, each with different characteristics. They can be grouped into two main categories, Superficial deposits and Bedrock.

Superficial (sometimes known as ‘drift’) deposits comprise all those sediments laid down during the last two million years. Their overall extent is shown in Figure 2.

These deposits comprise three main groups:

- River sand and gravel
- Head gravel
- Storm beach gravel

3.2.1.1 River sand and gravel

River deposits are the principal source of aggregate sand and gravel in Hampshire. They occur extensively in river terraces - the eroded remnants of earlier river floodplains - associated with all the major rivers, including the ancient Solent River and its tributaries.

Sand and gravel occur both in raised river terraces flanking the modern floodplains, and in floodplain terrace deposits associated with, or underlying, present day alluvium. The deposits comprise sequences of sands and gravels laid in sheet-like formations of varying thicknesses.

The older terraces are higher above the present course of the river and are sometimes called plateau gravels. These are present in parts of the London and Hampshire Basin areas (especially in Ringwood Forest), along the New Forest and Solent coasts, adjacent to Southampton Water, around Romsey, and in north east Hampshire in the Eversley/Bramshill area.

Younger terraces, sometimes called valley gravel deposits, usually extend below the water table and can require wet working. Valley gravel deposits are particularly well developed in the Avon, Test, Itchen and Blackwater river valleys

The alluvium of the present day rivers, largely comprising silt and clay, is usually channelled into the lowest floodplain terrace. Alluvium frequently contains gravel-rich layers (referred to here as alluvial gravel) and a basal layer of gravel (sub-alluvial). Deposits of alluvial and sub-alluvial gravel occur in all the major river valleys and adjacent to the coast in the Lymington area.

3.2.1.2 Head Gravel

Head Gravel or Downwash Gravel is a complex periglacial deposit; gravel is commonly mixed with other rock types present on the slope over which it flowed and the resulting deposit often contains significant amounts of clay. Periglacial Head is associated with all the major river valleys and also occurs in extensive dendritic deposits throughout the chalk downland which forms a broad east-west band through the middle of the county.

3.2.1.3 Storm beach gravel

Storm beaches are formed by the action of storm waves depositing littoral gravel beyond the range of normal wave action, above the high water mark but below the cliffs. Such deposits are exploited at Dungeness in Kent (BGS Minerals UK website), but in Hampshire, limited deposits only are found on beaches on the Solent coast at Gosport, Portsmouth and Hayling Island.

3.2.2 Bedrock or Solid deposits

A variety of solid sand deposits dating from the Palaeogene and Cretaceous periods occur in Hampshire and are shown in Figure 3.

3.2.2.1 Thames Group

Eocene (33-54 mya) sand deposits forming part of the London Clay Formation occur in the London Basin in the north and northwest of the county. The Whitecliff Sand Member, part of the London Clay Formation, occurs as a discontinuous band in southern Hampshire from Romsey in the west to Havant in the southeast. There is also a less extensive band of Portsmouth Sand Member material running in a band roughly from Eastleigh in the west to Hayling Island in the south east.

3.2.2.2 Lower Greensand Group

Lower Greensand sand and sandstones of Early Cretaceous age (112-121 mya) occur in the Wealden Edge. These deposits comprise principally Folkestone, Sandgate and Hythe Formations.

3.2.2.3 Bracklesham Group

Bracklesham Group sands are of Eocene age. The most significant sands occur immediately to the east of the Avon Valley and in Ringwood Forest. These comprise Poole Formation, Selsey Formation and Branksome Sand Formation deposits, some of which consist of alternating layers of sand and clay. Camberley Formation sands occur in the London basin in the north east of the county and a band of Selsey Formation sand runs across the lower part of the county from east of Romsey to Gosport in the south east.

3.2.2.4 Lambeth Group

Lambeth Group sands, including the Reading Formation, are of Palaeocene age (54-65 mya) and outcrop to the northwest of Fordingbridge and also in the vicinity of Michelmersh, to the north of Romsey. These beds are predominantly clay-bearing so not all the deposits shown in Figure 3 will contain sand.

3.2.2.5 Barton Group

These Eocene age sands, comprising the Becton, Boscombe and Chama Formations occur exclusively to the immediate east of the lower Avon Valley and in the New Forest area.

3.2.2.6 Bagshot Formation

Deposits of these Palaeogene age (23-65 mya) sands occur in the London Basin in the far north east of the county to the west of Aldershot.

3.3 The Aggregate Resource

3.3.1 Identification of the potential resource

Sand and gravel are used as aggregates in a number of ways and are graded as coarse or fine according to relative particle size. Coarser grades of sand are known as 'sharp' sand and the main use of gravel and sharp sand is as coarse aggregate for making concrete and concrete products. Finer sands are known as 'soft' sand and are used as a fine aggregate in the manufacture of concrete, mortar and asphalt. Soft sand is derived from deposits of Solid (Bedrock) sand. Both sands and gravel may also be used as drainage material and for constructional fill. In some parts of Hampshire, Head gravel is worked for a gravel and clay mixture known as Hoggin, which is used as constructional fill and also for surfacing tracks and paths.

In Hampshire the most important use of sand and gravel is for concrete aggregate, and roughly 80% of production is sharp sand and gravel (including Hoggin), as opposed to 20% soft sand (HCC, 1998, 5.5).

By no means all the different sand and gravel deposits in Hampshire are suitable or economically viable to be exploited as aggregates. The properties which influence the economic potential of a deposit include the proportion of fine and oversize material, the thickness of deposit and overburden ratio, the possible presence of unwanted material such as clay, and the ease with which material can be accessed and processed to produce a saleable product.

In defining the Aggregate Resource (i.e. the extent of deposits with commercial potential) the following sources of information were considered:

- BGS 1:100,000 Minerals Resource Mapping
- BGS Minerals Information Online GIS database (BGS Minerals UK website)
- Hampshire Mineral Planners Resource map
- BGS Mines and quarries database
- Hampshire, Portsmouth and Southampton Mineral Planning Permissions
- Hampshire, Portsmouth and Southampton Minerals Local Plan

From these data sources, used in conjunction with BGS 1:50,000 geology mapping, the following sand and gravel deposits were identified as forming the Aggregate Resource (Figure 4).

3.3.2 Superficial deposits

3.3.2.1 River sand and gravel

River sand and gravel is currently and has historically been heavily exploited (Figure 5), and six of the seven Preferred Areas in the MLP include sites yielding this rock type.

BGS Mineral Assessment reports contain detailed surveys of the Avon valley, the New Forest area and the Southampton area. A series of 14 river terraces associated with the ancient Solent River are identified by the BGS (Bristow et al 1991, 84) and all bar terraces 11 and 12 have been quarried. However there are a number of active and dormant quarries exploiting sub-alluvial deposits and 'Undifferentiated' terraces, so it is reasonable to assume that all the River sand and gravel deposits are potentially

exploitable. Indeed all the sand and gravel deposits associated with Hampshire's major rivers are shown on the BGS Mineral Resource Map and on the Hampshire MPA resource map.

In the north and east of the county there are deposits of Godalmin, Blackwater, Rother, Beenham Grange, Surrey Hill, Caesar's Camp, and Silchester gravels. Of these the Godalmin, Silchester and Caesar's Camp deposits have been quarried, but, again, all are shown on the BGS Resource map and it is likely that all are potentially workable.

Further information on the river terrace gravels in Hampshire is contained in a summary in the report of The Southern Rivers Palaeolithic Project (Wessex Archaeology, 1993).

3.3.2.2 Head gravel

Head gravel frequently contains a high proportion of clay and is normally considered unsuitable for use as an aggregate. Some Head deposits, however, can be exploited for Hoggin. These deposits are identified on both BGS and MPA Resource maps; they are very limited in extent, confined to a small area to the west of Aldershot in the north east of the county, and an area to the north of Havant in the south east.

3.3.2.3 Storm beach gravel

Storm beach gravel in Hampshire is of limited commercial value, has not been exploited and is not included in the resource.

3.3.3 Bedrock deposits

Many of the solid sand deposits in Hampshire are not suitable for use as aggregates or are not economically important. Solid sand is currently only quarried in the Wealden Edge and specific locations within the Hampshire Basin, particularly in Ringwood Forest and around Romsey and Fair Oak. The MLP contains only a single preferred area for the extraction of solid sand; Blue Haze in the Ringwood Forest area.

Nonetheless the BGS Mineral Resource map shows several sand deposits with potential for working (Figure 4). These comprise:

3.3.3.1 Poole and Selsey Formation

Poole and Selsey Formation sands forming the Bracklesham Group deposits located to the west and north east of the river Avon. Bracklesham Group sands are not currently worked in Hampshire but have historically been an important source of aggregate in neighbouring Dorset (BGS Minerals UK website).

3.3.3.2 Folkestone Formation

Folkestone Formation sands in the Wealden Edge (the neighbouring Hythe Formation sand is too fine grained to be of economic importance).

3.3.3.3 Whitecliff sand member

Whitecliff sand member deposits produce fine-grained sands with limited commercial use, but the unit is worked at Eastleigh for construction sand.

3.3.3.4 Lambeth Group

Lambeth Group deposits including Reading Formation sands have been quarried in the Romsey area and are shown on the BGS Mineral Resource map where they outcrop to the west of Romsey and between Romsey and Eastleigh.

3.3.4 Constraints on mineral extraction

Government policy guidance for aggregates is contained in a series of Minerals Planning Guidance notes (MPGs). A number of constraints on mineral extraction are contained within the guidance. In defining the study area as part of this project, urban areas have been excluded from the aggregate resource as mineral extraction is prohibited from such areas. The excluded urban areas are shown in Figure 6.

Taking into account the exclusion of urban areas, the total extent of the aggregate resource in Hampshire is some 789 square kilometres, of which 682 comprise superficial sand and gravel deposits, and 109 consist of bedrock or solid sand (Figure 4).

4 The Project area

The project area comprises the entire extent of the aggregate resource (amounting to 789 km^2) defined in section 3. The assessment of the archaeological resource within this area was carried out in three stages.

1. An assessment of the entire aggregate resource area was undertaken based on analysis of data extracted from the Hampshire Archaeology and Historic Buildings Record database (AHBR).
2. Four pre-selected areas, or sub-units, were subjected to a more detailed survey. The detailed survey involved enhancement of the AHBR data through systematic mapping of archaeological features from aerial photographs to NMP standards (section 2). Once the mapping was completed for each of the sub-units, the archaeological resource assessment for that sub-unit was then updated to take account of the results of the mapping.
3. Based on the results of the initial AHBR assessment five additional areas or secondary sub-units, identified as suitable for further NMP mapping, were defined. NMP mapping of these secondary sub-units was carried out and the archaeological resource assessment was updated accordingly.

The archaeological resource assessment, mapping of the NMP sub-units (some 302 square kilometres), the subsequent updated resource assessment and a draft research framework were all completed by March 2007. Further NMP mapping in the aggregate resource was identified as a key objective in the research framework (section 9). The availability, from April 2007, of another round of ALSF funding enabled this mapping to be carried out as part of an extension to the project. Consequently the five secondary sub-units (some 283 square kilometres) were mapped between April 2007 and March 2008, and the archaeological resource assessment for those areas was updated at the same time.

For clarity the project area is treated as three separate entities throughout this report. The first is the wider area (termed throughout *the archaeological resource area*) in which only AHBR data was used to formulate the resource assessment. The second comprises the sub-units (termed throughout *the NMP sub-units*) in which the resource assessment was updated by the results of NMP mapping. The third consists of the secondary sub-units (termed throughout *the secondary NMP sub-units*), which comprise portions of the archaeological resource area and were defined and mapped after the initial resource assessment had been completed.

The archaeological resource area and NMP sub-units are described below in sections 4.1 and 4.2. The secondary sub-units, and the basis on which they were selected, are described in section 4.3.

4.1 The archaeological resource area

Within the wider archaeological resource area, as opposed to the sub-units, the archaeological resource assessment was based on analysis of AHBR data alone. Sand and gravel are distributed widely in a range of locations throughout the county and the archaeological resource area contains 605 km^2 of sand and gravel deposits.

Within the archaeological resource area towns and cities were excluded from the survey and assessment (for the reason outlined in section 3.3.4) effectively reducing the extent of the archaeological resource area to 488 km^2. No account was taken of environmental constraints on mineral extraction and, outside the urban areas, the entire extent of sand and gravel has been treated as the potentially exploitable resource.

Within the wider archaeological resource area only archaeological features and monuments located on sand and gravel were included in the resource assessment. The methodology for dealing with the NMP sub-units and secondary NMP sub-units was slightly different and is outlined in sections 4.2 and 4.3 below.

For the purpose of carrying out the resource assessment the archaeological resource area was divided into ten smaller geographical areas of manageable size (Figure 7). These are described below.

4.1.1 The New Forest

In total the New Forest resource area contains 235 km^2 of sand and gravel, of which 27 km^2 comprise Bracklesham sands, and 3 km^2 comprise Whitecliff sand deposits (Figure 8).

Extensive deposits of river valley sand and gravel occur in the New Forest area. For the most part these consist of plateau gravels comprising the upper terraces of the ancient Solent River. The deposits form a roughly continuous band running east to west, traversing the southern part of the forest and occupying the coastal plain to the south as well as the western banks of Southampton Water. Away from the coast there are deposits to the north and west of Brockenhurst, and in the northwest corner of the forest in the area east of Fordingbridge. In this latter location the gravels are accompanied by extensive deposits of Bracklesham Group sand.

Between the coast and the forest there have been a number of extraction proposals: there are currently two active quarries near Marchwood on the western banks of Southampton Water, and one active and two dormant quarries at Fawley. There are also two dormant quarries to the west of Brockenhurst within the New Forest itself, and a dormant quarry on outcropping Whitecliff sand to the north west of Totton

The New Forest National Park was constituted in April 2006 and its boundary is shown in Figure 6. The National Park status will act as a significant constraint on the future extraction of aggregates. At the time of the Hampshire MLP the New Forest was designated a Heritage Area (with boundaries broadly similar to that of the National Park). This designation effectively acted as a comparable constraint and a strong presumption against minerals and waste development in the forest is stated in the adopted MLP (HCC, 1998, 4.7). The whole of the New Forest National Park is within this resource area except the western fringes, which are in the Avon valley sub-unit, and the south western fringes, which are in the New Forest Coastal Plain sub-unit.

There are no Preferred Areas in the MLP for the New Forest; either in the forest area itself or on the coastal plain.

In planning for future extraction the Hampshire Minerals and Waste Development Framework divides the county into a number of roughly-defined zones. Broad guidelines as to the share of Hampshire's future aggregate production anticipated from each zone are indicated. The New Forest area falls within *Forest* zone from which 44% of future extraction might be expected.

4.1.2 The Solent Coastal Plain

In total the Solent Coastal Plain resource area contains 144 km^2 of sand and gravel, of which 4 km^2 comprise solid sand (Whitecliff Sand Member). However, much of the resource area is occupied by the cities of Southampton, Portsmouth and the large towns of Eastleigh, Fareham and Havant. These are excluded from the project remit and the actual extent of the aggregate resource for the purposes of the assessment comes to roughly 40 km^2. The areas between these major conurbations are included because they are designated as Strategic Gaps and this designation is not a constraint on mineral working (HCC, 1989).

The Solent Coastal Plain contains extensive areas of gravel terraces, mostly plateau gravel, associated with the drowned Solent River and its main tributary which today forms Southampton Water. There are also deposits of Whitecliff sand between Eastleigh and Waterlooville (Figure 9).

There are four dormant quarries and one quarry currently used for waste tipping on the Solent Coastal Plain and although no Preferred Areas are identified in the MLP, some locations on the Plain are considered in the Hampshire Minerals and Waste Development Framework as potential sites for future extraction.

The Solent Coastal Plain falls within *South Hampshire* zone from which 14% of future extraction might be expected.

4.1.3 The Upper Test valley

In total the Upper Test valley resource area contains 48 km^2 of sand and gravel, of which 2 km^2 comprise solid sand (Lambeth Group sand).

River gravel and sub-alluvial deposits are associated with the Upper Test valley. However the river runs through chalk downland and the gravel deposits are generally narrow, eventually becoming a ribbon confined to the valley bottom. Towards Whitchurch, there are some significant deposits of terrace gravel; further beyond this in the upper reaches there is a distribution of narrow dendritic deposit within the tributary valleys (Figure 10).

The only part of the Upper Test valley to have been quarried is the area immediately below Whitchurch where the river gravel terraces are more extensive. In this area there are two dormant quarries.

The narrow tributaries of the upper reaches of the Test lie within the North Wessex Downs AONB. This designation acts as a significant constraint on minerals extraction and a strong presumption against minerals and waste development in this area is stated in the adopted MLP (HCC, 1998, 4.7). There are no Preferred Areas within the Upper Test valley in the adopted MLP, nor is this part of the valley considered for potential future extraction in the Hampshire Minerals and Waste Development Framework.

The Test valley falls within *Downland* zone from which 24% of future extraction might be expected.

4.1.4 Kennet valley

The Kennet valley in Hampshire contains 41km^2 of river gravel deposits, of which approximately 1 km^2 is within the urban area of Tadley (Figure 11) and is excluded from the resource assessment.

The valley of the Kennet is associated with extensive river valley gravels on both the lower and upper terraces. The river itself lies within Berkshire to the north, but higher terrace plateau gravels lie within Hampshire in an east-west band, most extensively in the area around Silchester.

The Kennet gravels are extensively worked and there are two large quarries on the Silchester gravels to the north of Silchester one of which is still active. In the MLP there is a Preferred Area; Area 1 *Welshman's Road, Mortimer West End*

In the Hampshire Minerals and Waste Development Framework an additional site north of Silchester is identified for future extraction

The Kennet valley falls within *North East Hampshire* zone from which 16% of future extraction might be expected.

4.1.5 Blackwater valley

The valleys of the Blackwater and its tributaries in Hampshire contain 78 km^2 of river gravel deposits. A number of small areas, amounting to 4 km^2, are excluded from the assessment because they are within the urban areas of Farnborough, Fleet and Yateley.

The Blackwater terraces stretch in an east-west band of plateau gravels to the south of the valley. There are also a number of dendritic tributary valleys containing narrow ribbons of sub-alluvial deposits, and a more extensive deposit of valley gravel just to the north of Odiham. A small deposit of workable Periglacial Head is identified in the BGS Mineral Resource map between Fleet and Aldershot (Figure 11)

The Blackwater Valley has been and is currently heavily exploited. There are five active quarries on the river gravels in this area as well as one dormant and one restored. To the south there is a dormant quarry on Periglacial Head on the eastern outskirts of Fleet, whilst at Ewshot, to the west of Aldershot, there are two dormant quarries on Caesar's Camp gravels.

In the MLP there is one Preferred Area in the Blackwater valley; Area *2 Bramshill Plateau*.

In the Hampshire Minerals and Waste Development Framework additional sites on the plateau gravels above the Blackwater valley and a western extension to present quarrying in the valley are identified in plans for possible future extraction.

The Blackwater valley falls within *North East Hampshire* zone from which 16% of future extraction might be expected.

4.1.6 Itchen valley

The valley of the river Itchen contains roughly 20 km^2 of terrace gravel deposits (Figure 12). This resource area also includes part of the South Hampshire Lowland landscape away from the immediate river valley around Eastleigh and Fair Oak. Here there are a further 11 km^2 of solid sand deposits (Lambeth Group and Whitecliff Member). Some 6 km^2 of the aggregate deposits lie within the urban areas of Eastleigh and Winchester and are excluded from the assessment. In total, then, the extent of the aggregate resource for the purposes of the assessment is 25 km^2.

The Itchen feeds into the Solent and its associated gravel deposits are generally narrow and fragmented. Where it runs through the South Hampshire Lowland landscape, the narrow sub-alluvial deposits in the valley bottom are flanked by limited higher river terrace gravel deposits. Further upstream, where the river is within the chalk landscape the deposits become narrower, eventually forming a ribbon confined to the valley bottom, although there are some flanking terrace deposits in the north.

There is only a single dormant quarry on the Itchen; this is sited to the north of Eastleigh where the valley crosses the South Hampshire Lowland and the gravel terraces flanking the valley are at their most extensive. Away from the actual valley there is an active quarry exploiting Whitecliff sand at Fair Oak.

There are no Preferred Areas in the Itchen valley and it is not under consideration in the Hampshire Minerals and Waste Development Framework as a potential site for future extraction.

The Itchen valley falls within *Downland* and *South Hampshire* zones from which 24% and 14% respectively of future extraction might be expected.

4.1.7 Hamble valley

In total the Hamble valley resource area contains 5 km^2 of aggregate deposits, of which 1 km^2 is solid sand (Whitecliff Member).

The river gravel deposits associated with the Hamble are generally narrow and fragmented (Figure 12). Within the South Hampshire Lowland landscape, the narrow sub-alluvial deposits in the valley bottoms are flanked by higher river terrace gravel deposits of no great extent. Further upstream, in the chalk downland the deposits become narrower, eventually forming a ribbon confined to the valley bottom.

There are no quarries in the Hamble valley; there are no Preferred Areas in the MLP and it is not under consideration in the Hampshire Minerals and Waste Development Framework as a potential site for future extraction.

The Hamble valley falls within *Downland* and *South Hampshire* zones from which 24% and 14% respectively of future extraction might be expected.

4.1.8 Meon valley

The valley of the river Meon contains roughly 6 km^2 of terrace gravel deposits (Figure 12). This resource area also includes part of the South Hampshire Lowland landscape away from the immediate river valley. Here there are a further 3 km^2 of solid sand deposits (Whitecliff Member).

The Meon feeds into the Solent and some narrow and fragmented gravel deposits are associated with its valley. Where the river runs through the South Hampshire Lowland landscape, the narrow sub-alluvial deposits in the valley bottom are flanked by some higher river terrace gravels. Further upstream, in the chalk downland, the deposits become narrower, eventually forming a ribbon of sub-alluvial gravel confined to the valley bottom.

There is one dormant quarry in the resource area, sited on gravel deposits to the north of Wickham in the South Hampshire Lowland landscape.

The upper part of the Meon valley lies within the East Hampshire AONB. This designation acts as a significant constraint on minerals extraction and a strong presumption against minerals and waste development in this area is stated in the adopted MLP (HCC, 1998, 4.7). There are no Preferred Areas in the Meon valley and it is not under consideration in the Hampshire Minerals and Waste Development Framework as a potential site for future extraction.

The Meon valley falls within *Downland* and *South Hampshire* zones from which 24% and 14% respectively of future extraction might be expected.

4.1.9 Wey valley

The Wey valley, to the northeast of Alton, contains 9 km^2 of river valley gravel deposits. Approximately 1 km^2 lies within Alton (Figure 13) and is excluded from the resource assessment.

Sub-alluvial deposits in the valley bottom are flanked by terrace gravels but there are no quarries in the Wey valley, no Preferred Areas in the MLP, and the area is not under consideration in the Hampshire Minerals and Waste Development Framework as a potential site for future extraction.

The Wey valley lies within East Hampshire. This falls within *Downland* zone from which 24% of future extraction might be expected.

4.1.10 Rother valley

The valley of the Rother in Hampshire contains roughly 1 km^2 of associated river valley gravel. This resource area also includes 2 km^2 of Folkestone Formation solid sand (Figure 13).

There are no quarries in this resource area, no Preferred Areas in the MLP, and no sites under consideration in the Hampshire Minerals and Waste Development Framework for future extraction.

The Rother valley lies within East Hampshire. This falls within *Downland* from which 24% of future extraction might be expected.

4.2 The NMP sub-units

The methodology for carrying out the archaeological resource assessment in the sub-units differed from that in the wider project area. In the wider project area only those archaeological features located on sand and gravel were included in the assessment, whereas *all* features within the sub-units were included.

This difference in approach to the sub-units is a result of applying nationally agreed NMP methodology (EH forthcoming) to this project. NMP projects are normally conducted, recorded and monitored by OS 1:10,000 quarter map sheet. However, the sand and gravel deposits in Hampshire, even in the locations where they are most extensive, completely fill only a few whole quarter sheets and cover no more than a small portion of many more. Basing the mapping on quarter sheets would therefore result in the inclusion of many archaeological features located on geologies with no potential for aggregate mineral extraction.

On the other hand, strictly limiting the survey area to the irregular-shaped boundaries formed by exploitable geological deposits would present time-consuming difficulties, particularly with regard to the identification of relevant aerial photographs and arranging their loan from the NMR.

In a project such as this, focused on specific geological confines, the kilometre square is a more appropriate geographic unit on which to base the mapping. In places the sand and gravel deposits cover many contiguous 1km squares. Despite using individual 1km squares as the basic mapping unit a small number of sites located outside the sand and gravel deposits were unavoidably included in the NMP survey. Nonetheless, basing the sub-units on 1km squares rather than on strict geological confines afforded a more practical approach and greatly facilitated the process of mapping from aerial photographs.

Three criteria applied in the selection of the sub-unit areas for detailed aerial archaeological survey.

- Each sub-unit should comprise coherent blocks of landscape based on 1km squares
- Each sub-unit should comprise roughly contiguous areas of aggregate-producing geologies
- Due to time constraints resulting from the project deadline, the total area covered by the sub-units should be limited to approximately 300 1km squares

The selection also took account of legal, practical and environmental constraints on mineral extraction. Mineral extraction is prohibited in urban areas so these were excluded from the survey; parts of 1km squares falling in other counties were excluded (the same, obviously, is true of parts of 1km squares which are in the sea). The principal environmental constraints are area designations - National Parks and Areas of Outstanding Natural Beauty (AONB) - because future mineral extraction is far less likely to take place in these areas than elsewhere (HCC, 1998, 4.7). Although the New Forest National Park and the AONBs were not excluded from the study area, the defining of the sub-units consciously avoided these designated areas as far as possible.

Guided by these criteria, four sub-units were defined. These are shown in Figure 14. Together the sub-units cover a total area of 329 1km squares. After taking into account those parts of the area which are outside the county boundary, in the sea or in built-up areas, and therefore excluded from the survey, the overall survey area totals approximately 302 1km squares. Taken together, the sub-units provide a representative sample of both superficial and solid deposits, and reflect a variety of landscape contexts, including as they do two major river valleys, a coastal area and a tract of heathland.

4.2.1 Avon valley

This sub-unit consists of 122 1km squares in total. However some of these squares straddle the county boundaries with Dorset and Wiltshire, and only the area within Hampshire is included in the survey. Other squares include the towns of Ringwood and Fordingbridge which are excluded. In effect this means that the survey area comprises roughly 116 1km squares (Figure 15).

The Avon valley is a broad river valley running north-south and, in places, forms the county boundary with Dorset. It contains extensive contiguous deposits of river valley gravel and sub-alluvial deposits. The valley is flanked by higher level plateau gravel deposits both to the east and west, but more noticeably to the west. To the northeast of Ringwood, and in the southern part of Ringwood Forest, there are also extensive deposits of Bracklesham sand.

There has been extensive large scale quarrying in the valley to the immediate north of Ringwood and five quarries are still active here. To the northeast of Ringwood there are four dormant quarries on the edge of the New Forest and two more on the forest edge further north. To the west, in Ringwood Forest, plateau gravel has been extracted at a number of large quarries, three of which are still active.

There are extensive areas of river valley gravel to the south of Ringwood which are as yet unexploited, and also in the north where there is only a single dormant quarry east of Fordingbridge.

Three of the Preferred Areas identified in the MLP are in the vicinity of Ringwood

- Area 5: Bleak Hill, Harbridge
- Area 6: Plumley Wood and Farm, Ringwood Forest
- Area 7: Blue Haze (North), Ringwood Forest

Parts of the sub-unit, in particular the northwest quadrant, are within the New Forest National Park. Despite this constraint the forest edge area has been included in the sub-unit because there is a history of gravel extraction here, as evidenced by a number of dormant quarries at this location (Figure 15).

Planning for future extraction is currently ongoing as part of the Hampshire Minerals and Waste Development Framework and both Ringwood Forest and the Avon valley between Ringwood and Fordingbridge are under consideration as areas for future mineral extraction as part of this process.

The Avon valley falls within *Forest* zone from which 44% of future extraction might be expected.

4.2.2 East Hampshire

This sub-unit consists of 50 1km squares in total. However some of these squares straddle the county boundary with Surrey and only the area within Hampshire is included in the survey. Other squares include the town of Bordon, which is excluded

from the resource assessment. In effect this means that the survey area comprises roughly 44 1km squares (Figure 16)

The sub-unit contains extensive, contiguous deposits of Folkstone Formation sand and some deposits of river terrace sand and gravel (Godalmin/Wey terrace deposits).

Both types of geology have been, and are being, quarried. There are currently two active quarries exploiting the Folkstone sand deposits, planning permission for a further quarry and two dormant quarries. There are one active and three dormant quarries exploiting the Godalmin gravels associated with the river Wey.

In the MLP there are no Preferred Areas in East Hampshire but in the Hampshire Minerals and Waste Development Framework sites adjacent to existing sandpits in the Folkstone deposits are under consideration for future extraction.

East Hampshire falls within *Downland* from which 24% of future extraction might be expected.

Four 1km squares on the southwest corner of this sub-unit lie within the East Hampshire AONB. This designation represents a significant environmental constraint on mineral extraction. The sub-unit, however, is formed by a geographically well-defined deposit of aggregate-producing sand and the decision was taken to include all of the deposit as a coherent unit.

4.2.3 New Forest Coastal Plain

This sub-unit consists of 84 1km squares in total. However a significant percentage of some squares along the coast comprise sea, reducing the total area. Other squares include the towns of New Milton and Lymington which are excluded from the assessment. In effect this means that the survey area comprises roughly 70 1km squares (Figure 17).

The sub-unit contains extensive, contiguous deposits of river terrace sand and gravel, mainly plateau gravel associated with the ancient Solent River.

The northern part of the sub-unit lies within the New Forest National Park. Consequently there are no Preferred Areas in the MLP for the New Forest; either in the forest or the coastal plain. Nonetheless, there is a history of quarrying in the sub-unit and four quarries are currently active between New Milton and Lymington, and to the north of New Milton is a further active quarry. Two of these are within the boundary of the National Park (as are three dormant quarries at Bransgore to the west) and the coastal plain is under consideration as a potential target for future sand and gravel extraction as part of the Hampshire Minerals and Waste Development Framework.

The New Forest area falls within the *Forest* zone from which 44% of future extraction might be expected.

4.2.4 Lower Test valley

This sub-unit consists of 73 1km squares in total. However part of one square includes the town of Totton, and another straddles the county border with Wiltshire so, in effect, this means that the survey area comprises 72 1km squares (Figure 18).

The Lower Test valley lies within the South Hampshire Lowland landscape. Here the narrow valley bottom sub-alluvial deposits are flanked by higher river terrace gravels some of which are plateau gravel. The gravels are also accompanied by Lambeth sand deposits in the Romsey area.

There is a history of extensive quarrying in the sub-unit and the Lower Test valley has been heavily exploited. There are seven quarries, two of which are still active, in the area around Romsey and a further four, two of them active, towards Totton. Both superficial sand and gravel and Lambeth sands have been quarried.

There are two Preferred Areas to the west of Romsey identified in the adopted MLP.

- Area 3: Roke Manor, Shootash
- Area 4: Gardeners Lane, Ridge

In the Hampshire Minerals and Waste Development Framework the Lower Test valley is identified as an area to be considered for future aggregate extraction.

The Test valley falls within the *Downland* zone from which 24% of future extraction might be expected. There are no environmental constraints within the area included in the sub-unit.

4.3 The secondary NMP sub-units

Following analysis of the results of the overall archaeological resource assessment, three broad areas containing extensive aggregate deposits were identified as suitable for a further stage of NMP mapping.

Hampshire Kennet valley and Blackwater catchment

Extensive deposits of plateau gravel in the Blackwater catchment area in the northeast of the county, and river terrace gravel deposits in the Hampshire Kennet valley are currently under pressure from extraction. There are active quarries in both areas and in the MLP there are preferred areas at Mortimer West End, near Silchester, in the Kennet valley, and at Bramshill Plateau in the Blackwater catchment area.

Both the Kennet valley and the Blackwater catchment were identified in the archaeological resource assessment as being poorly represented in terms of numbers of site records in the AHBR (see sections 6.2.4 and 6.2.5). The research agenda resulting from the 2006/2007 stage of the project (section 9) recommended programmes of archaeological prospecting in both areas as an initial stage in an assessment of whether the low number of records represents evidence of absence or absence of evidence.

Upper Test valley

The Upper Test valley constitutes a substantial deposit of river terrace gravel. This part of the Test valley was identified in the archaeological resource assessment as being poorly represented in terms of numbers of sites from prehistoric and Roman periods (section 6.2.3). In contrast the surrounding downland landscape is rich in archaeological remains from these periods. The research agenda (section 9) proposed NMP mapping to shed light on the question of to what extent the low number of sites in the river valley is due to absence of evidence as opposed to evidence of different forms of activity and landscape exploitation within the river valley.

Eastleigh and Southwick

The two other remaining major river valleys in Hampshire are those of the Itchen and the Meon. The Cornwall NMP team are currently carrying out NMP mapping of the Hampshire South Downs National Park area and the upper valleys of both rivers lie within that project area. The lower valleys, where there are extensive gravel terraces are, however, outside the proposed National Park boundaries. The general prehistoric resource of the Meon was identified in the archaeological resource assessment as being unevenly represented in the AHBR (section 6.2.8).

In the corridor between the southern edge of the South Downs chalkland and the Solent coast there is a band of soft sand with a history of extraction. The archaeological resource on bedrock sand was identified in the archaeological resource assessment as being generally less well represented than that on the gravel deposits. For these reasons further NMP mapping of this corridor area was proposed as an appropriate objective.

Applying the same criteria used for defining the NMP sub-units five secondary NMP sub-units were defined (Figure 19).

4.3.1 Hampshire Kennet

The Hampshire Kennet NMP secondary sub-unit (Figure 20) covers approximately 41 1km squares (although it comprises an area of 53 1km squares in total, roughly a fifth of this area is within West Berkshire and is excluded from the survey). The sub-unit is formed by part of the Kennet valley archaeological resource area (section 4.1.4) and contains 2.5% of the total aggregate resource in Hampshire. Aggregate minerals in the sub-unit consist entirely of higher river terrace or plateau gravels.

Deposits of aggregate minerals are not contiguous throughout and the sub-unit contains tracts of geological deposits which do not form part of the aggregate resource. For the most part these consist of the clay, silt and sand of London Clay Formation deposits with occasional pockets of alluvium and Periglacial Head. Taken together, the non-aggregate rocks in the sub-unit cover roughly 20 1km squares. Although these deposits are not part of the aggregate resource, they were included in the NMP survey because they are contained within the boundaries of the sub-unit.

4.3.2 The Blackwater catchment

The Blackwater catchment NMP secondary sub-unit (Figure 21) covers 72 1km squares (although the sub-unit comprises an area of 81km^2 in total, part of this area is within Berkshire and was excluded from the survey). The sub-unit contains roughly 5% of the total aggregate resource in Hampshire. It is formed by the northern part (where the aggregate deposits are most extensive) of the Blackwater valley archaeological resource area. The aggregate minerals in the sub-unit consist entirely of river terrace gravels associated with the Blackwater and its tributaries.

Deposits of aggregate minerals are not contiguous throughout and the sub-unit contains tracts of geological deposits which do not form part of the aggregate resource. For the most part these consist of the clay, silt and sand of London Clay Formation deposits in the north and west, Windlesham Formation and Bagshot Formation sands in the centre and Camberley sand in the east. Taken together, the non-aggregate rocks in the sub-unit cover roughly 30 1km squares. Although these deposits are not part of the aggregate resource, they were included in the NMP survey because they are contained within the boundaries of the sub-unit.

4.3.3 Southwick

The Southwick NMP secondary sub-unit (Figure 22) covers 58 1km squares and contains approximately 3% of the total aggregate resource in Hampshire. It incorporates parts of four different archaeological resource areas; the Itchen Valley, Hamble Valley, Meon Valley and Solent Coastal Plain. The aggregate minerals in the sub-unit comprise roughly equal proportions of Whitecliff sand and river gravels associated with terraces of the Hamble, Lower Meon and Wallington River.

The Southwick secondary sub-unit lies in the corridor between the southern edge of the South Downs and the Solent coast (Figure 22), stretching from Hedge End east of Southampton to Southwick in the east. Deposits of aggregate minerals are not contiguous throughout and the sub-unit contains tracts of geological deposits which do not form part of the aggregate resource. For the most part these consist of the clay, silt and sand of London Clay Formation deposits in the north and Wittering sand elsewhere, although there is a small area of chalk in the south, around Fareham. Taken together, the non-aggregate rocks in the sub-unit cover roughly 25 1km squares. Although these deposits are not part of the aggregate resource, they were included in the NMP survey because they are contained within the boundaries of the sub-unit.

4.3.4 Eastleigh

The Eastleigh secondary sub-unit lies in the corridor between the southern edge of the South Downs and the Solent coast (Figure 23). It stretches from the outskirts of Romsey in the west to Fair Oak in the east and skirts around the town of Eastleigh on the northern outskirts of Southampton. The sub-unit covers 58 1km squares and contains approximately 3% of the total aggregate resource in Hampshire. It is formed by the southern part of the Itchen valley archaeological resource area (section 4.1.6), where it runs through the Southern Hampshire lowland zone. The aggregate minerals in the sub-unit are composed of one third bedrock sand and two thirds river gravels associated with terraces of the Itchen and Test. The bedrock deposits comprise roughly equal proportions of Whitecliff and Lambeth sand.

Deposits of aggregate minerals are not contiguous throughout and the sub-unit contains tracts of geological deposits which do not form part of the aggregate resource. For the most part these consist of the clay, silt and sand of London Clay Formation deposits and Wittering sand; there is a small area of chalk in the north. Taken together, the non-aggregate rocks in the sub-unit cover roughly 27 1km squares. Although these deposits are not part of the aggregate resource, they were included in the NMP survey because they are contained within the boundaries of the sub-unit.

4.3.5 Upper Test

The Upper Test NMP secondary sub-unit covers 54 1km squares and contains approximately 3% of the total aggregate resource in Hampshire. It is formed from the central part of the Upper Test valley archaeological resource area and comprises the valley of the Test itself but none of the tributaries (Figure 24). The aggregate minerals within it consist entirely of river terrace gravel associated with the Test. Deposits of aggregate minerals are not contiguous throughout and the sub-unit contains tracts of geological deposits which do not form part of the aggregate resource. These consist of various deposits of chalk and taken together, chalk in the sub-unit covers roughly 24 1km squares. Although the chalk deposits are not part of the aggregate resource, they were included in the NMP survey because they are contained within the boundaries of the sub-unit.

5 Archaeological Resource Assessment: Overview

5.1 Introduction

This section provides an overview of the archaeology of Hampshire based on analysis of the Archaeology and Historic Buildings Record (AHBR) and a limited amount of published background literature. It also provides an overview of the archaeological resource based on the AHBR.

5.1.1 Background

This section comprises 15 sub-sections. The first three summarise the Historic Landscape Character, the Scheduled Monuments, and the AHBR. The following sub-sections summarise the archaeological record for each of 12 periods (Palaeolithic – modern) arranged in chronological succession.

Each sub-section is further divided into two parts. The first part comprises a county-wide overview, in order to provide a wider context against which the archaeology of the aggregate resource can be considered. The second part summarises the archaeology of the aggregate resource and highlights its most significant components.

The county-wide overview was produced using data contained in the AHBR in conjunction with a limited amount of general background literature on the archaeology of Hampshire. The summary of the archaeological record for the aggregate resource was based entirely on period-based searches of the AHBR.

It should be stressed that the overview does not aim to provide a critical review of the Hampshire AHBR nor a review of latest thinking on the archaeology of the county. The aim is rather to present a summary of the data held in the AHBR at the time the dataset was provided to the project (April 2006), supplemented by background information contained in previously published syntheses of Hampshire's archaeology.

The dataset provided to the project by Hampshire County Council Environment Department (HCC) includes Historic Landscape Characterisation (HLC), Scheduled Monument data, and Hampshire AHBR data.

The AHBR dataset contains 19,284 individual records for archaeological sites and find spots. It does not include maritime sites, place-names, parks and gardens, or Historic Buildings. Nor is the entire county covered by the Hampshire AHBR; Southampton and Portsmouth, as unitary authorities, hold their own separate Historic Environment Records. Some records for Southampton and Portsmouth are contained in the Hampshire AHBR but not all. The AHBR for the Winchester area is fully developed although Winchester City Council also holds its own record. The incomplete coverage of Southampton and Portsmouth has no detrimental effect on the project because urban areas do not form part of the aggregate resource (section 3.3.4) and are not included in the assessment. .

The dataset also includes a cropmark layer. The source for this layer is the aerial photograph collection held at the English Heritage National Monuments Record Centre (NMRC) in Swindon. Over a number of years up to 1995, staff at HCC visited the NMRC and produced a series of ink transcriptions of archaeological sites visible as cropmarks on photographs held in the collection. These transcriptions were later scanned and incorporated into the HCC GIS as a Raster layer. This layer has since been automatically Vectorised.

5.1.2 Data standards

5.1.2.1 Archaeological periods

Period definitions used in the Hampshire AHBR are based on dates rather than terms and are outlined below.

Palaeolithic	500,000 – 10,001 BC
Mesolithic	10,000 – 4,001 BC
Neolithic	4,000 – 2,201 BC
Bronze Age	2,200 – 801 BC
Iron Age	800 BC – AD 42
Prehistoric (undated)	500,000 BC – AD 42
Roman	AD 43 – 409
Early medieval	410 – 1065
Medieval	1066 – 1539
Post medieval	1540 – 1900
Modern	1901 – present
Undated	-

Further sub-divisions of these broad date ranges are defined as necessary in the text of the archaeological assessment.

Whilst the great majority of archaeological sites recorded in the Hampshire AHBR fall within these date ranges, there are a considerable number which are interpreted as falling within two consecutive periods (for instance late Neolithic/early Bronze Age, or Iron Age/Roman). In the following assessment, sites interpreted as falling in more than one period are considered as belonging to the earliest period. Thus records for sites interpreted as Iron Age/Roman will be included in the assessment of the Iron Age, but not in the assessment of the Roman period.

5.1.2.2 Terminology

Throughout the following assessment the terms ‘site’, ‘record’, ‘monument’ and ‘find spot’ are used frequently when referring to the archaeology of the aggregate resource. In order to avoid confusion these terms are defined below.

‘Monument’ is a feature of archaeological significance which has structural remains (such as walls, banks, ditches, pits, post holes)

‘Find spot’ is the location of material of archaeological significance (such as pottery, flint, faunal remains) not found in association with any monument.

‘Site’ is used in its general, non-archaeological meaning of geographical or physical location. In other words ‘site’ can mean the site of a find spot or the location of a monument.

‘Record’ is a record in the Hampshire AHBR. It represents the record of a site, which can be either a monument or a find spot.

‘Site record’ is used in the same way as ‘record’

5.2 Historic Landscape Character

The nomenclature used in Hampshire's Historic Landscape Characterisation (HLC) classifies the various elements of the historic landscape as a series of historic landscape 'groups' (for example 'heathland'). Each group is further sub-divided into a series of historic landscape types (for example 'heathland' is sub-divided into *unenclosed heathland and scrub, enclosed heathland and scrub*, and *purlieus and other enclosed heathland pastures*).

In the text of this section, the historic character of the landscape is described with reference both to groups and to types. Throughout this description of Hampshire's HLC, all the types referred to are shown in italics. For clarity the maps (Figures 25 and 26) of the HLC of the aggregate resource show only the groups.

5.2.1 Hampshire Overview

The historic landscape of Hampshire is predominantly rural, with more than half its extent characterised by fields (Figure 25). The most abundant and most widespread field patterns in the county are 'Parliamentary type fields' (sub-divided into *large, medium* or *small Parliamentary type enclosures)*; the characteristics of fields of this type are straight, surveyed boundaries and regular shapes. In many cases they derive from the nineteenth century Parliamentary Enclosure Acts, but others derive from formal local agreements. The HLC refers to 'Parliamentary type fields' (rather than true Parliamentary type fields) because further documentary research would be necessary to distinguish between the two origins. 'Parliamentary type fields' make up 53% of the fields in the Hampshire landscape and occur throughout all areas of the county apart from the New Forest heartland. They are most abundant on the chalklands, especially in the western half of the county and are relatively less widespread in the north and east.

'Wavy fields' (sub-divided as *large, medium* or *small wavy-edged pre-Parliamentary type fields)* make up 24% of the fields in the county. The characteristics of fields of this type are generally sinuous boundaries; they are likely to derive from late medieval and early post medieval enclosure or rationalisation of earlier field patterns, and in some cases they fossilise the enclosure of former strips and furlongs. 'Wavy fields' are distributed widely throughout many parts of the county but they are most abundant in the area between Winchester and the county boundary with Surrey; around Basingstoke, and to the north of Andover. They are virtually absent from the New Forest heartland and from the chalk downland in the west between Winchester and Andover.

Fields classed as 'assarts' – those cut out of woodland or heathland - are locally extensive and form 15% of the fields in Hampshire. The characteristics of fields of this type are irregular shapes and wavy boundaries; they form irregular field patterns with no major common boundaries and frequently contain scattered copses and small woods. The distribution of 'assarts' indicates the location of former woodland and forests. They are very extensive in the northernmost part of the county in a band from Fleet, running north of Basingstoke as far west as the county boundary with Berkshire at Woolton Hill. 'Assarts' occur widely in a west – east band to the south running from West Wellow to Havant. They are also abundant in the area around Petersfield in the east, and, to a lesser extent, in the eastern part of the New Forest.

Assarting was widespread in the medieval period and assarts originating from this date are those classed as *large irregular assarts with wavy or mixed boundaries* or *medium irregular assarts with copses and wavy boundaries*. *Regular assarts with straight boundaries* are likely to be more recent.

‘Ladder fields’ consist of long parallel boundaries with the area between them sub-divided by regular straight boundaries. This type of field probably dates from the medieval period; in places Parish Boundaries follow the pattern of ladder fields (for example, Quarley, Amport, Thruxton, and Grateley). Sometimes the ladder fields were re-ordered in the eighteenth and early nineteenth centuries giving them a more formal and modern appearance. Their distribution is confined to the chalk downland in the west of the county.

‘Ex-downland fields’ are irregular in pattern and shape. Their principal characteristic is that their boundaries are defined by roads, tracks or paths. Fields of this type are distributed mainly on chalk downland in eastern parts of the county (east of the line between Winchester and Basingstoke). A variant of ‘ex-downland fields’, similarly defined by roads, trackways and paths, occurs in coastal areas, both on the Solent plain and the New Forest coastal plain.

Almost 10% of the landscape is covered by ‘heathland’ HLC types or recent (nineteenth century or later) plantations on former heathland (‘heathland plantations’). Three different ‘heathland’ types are identified in Hampshire’s HLC; *unenclosed heathland and scrub*, *enclosed heathland and scrub* (fields which contain heathland and scrub symbols on OS maps), and *purlieus and other enclosed heathland pastures.* Purlieus occur in the New Forest area; they are lands which were formerly afforested and part of the Royal Forest but which were disafforested as a result of Henry III’s *Charter of the Forest* of 1217. The HLC type refers to purlieus and other groups of small fields or paddocks without heathland or scrub symbols on OS maps. The most obvious, and by far the most extensive, area of ‘heathland’ is the New Forest. Elsewhere pockets of open ‘heathland’ occur in east and northeast Hampshire, and there are large areas of ‘heathland plantation’ around Fleet, between Alton and Petersfield, in Ringwood Forest as well as in the New Forest.

Woodland (excluding ‘heathland plantations’) covers 9% of the landscape in the Hampshire HLC. Eleven different *types* of woodland are identified in the HLC but, essentially, woodland is classed as pre-1810 or post-1810 based on its presence or absence on the First Edition OS map. Woodland types are further sub-divided based on land use or socio-economic associations.

‘Assarted woodland’ is subdivided into two types; *assarted pre-1810 woodland* and *replanted assarted pre-1810 woodland*. Assarted woodland consists of woods whose outline is sufficiently irregular to suggest they have been eaten away. Assarting took place during the late medieval period and ‘assarted woodland’ usually, although not always, occurs in association with assart field types. ‘Assarted woodland’ is distributed widely throughout many areas of the county, but especially in the north: in a wide band running west – east from Lockerley to Havant; around the fringes of the New Forest; and in the east. There are relatively few areas of ‘assarted woodland’ in the New Forest itself or in the western downland.

‘Hangers’ are also subdivided into two types; *pre-1810 hangers* and *post 1810 hangers*. They are identified on the basis of their topographic position (they are the name given locally to wooded escarpments) and are confined to steep hillsides on chalk or Greensand in east Hampshire and, to a lesser extent, in the northwest.

‘Plantations’ include a single type, *nineteenth century plantations*, which refer to post-1810 plantations. They are distributed throughout all areas of the county apart from the New Forest heartland (where they are classed as ‘heathland plantations’). Plantations are particularly abundant in the coastal area to the south of the New Forest, and between Southampton, Romsey and Eastleigh.

‘Other old woods’ includes pre-1810 woodland which cannot be assigned to any of these specific types. The HLC group is subdivided into two types; *other pre-1810*

woodland and *replanted other pre-1810 woodland*. It is distributed thinly throughout the landscape north of a line between Romsey and Havant, and also on the western chalk downs.

'Valley floor' HLC types cover roughly 3% of the county. Eight different 'valley floor' types are identified in the Hampshire HLC. *Water meadows* are the predominant type in the valleys of the Test, Itchen, Meon, and, especially, the Avon. Water meadows are found also to a lesser extent in the Hamble, the Wey and the Loddon. Other than water meadows, *miscellaneous valley bottom paddocks and pastures* is by far the most extensive of the eight types. Miscellaneous valley floor fields vary considerably in their morphology and this variability is an inherent characteristic; their form is influenced by natural channels, drainage ditches or imposed field patterns. This HLC type is especially predominant in the valleys of the north eastern rivers. *Unimproved hay meadows or pasture* occur principally in the Avon and Itchen valleys. *Marsh and rough grazing* is found in small pockets in many of the county's river valleys; the most extensive area of this type occurs in the Test valley between King's Somborne and Chilbolton. *Valley floor woodlands* make up roughly 5% of the river valley landscape and are widely scattered throughout the valleys.

'Parks' and other parkland and designed landscape types make up about 3% of the historic landscape. 'Parks' are widely distributed throughout the county, but are more abundant north of the Hampshire Basin; the most extensive areas of parkland occur around Basingstoke and Fleet. Three types of designed landscape are identified in the Hampshire's HLC: *Pre-1810 parkland* has a scattered distribution predominantly in central Hampshire, and virtually absent from the southwest; *nineteenth century and later parkland* is more prevalent in the north and also occurs in the Hampshire Basin; *deer parks* are identified throughout the county but particularly in the north.

'Coastal' HLC types form 2% of the historic landscape. In most places the coastline is characterised by a narrow strip of *shingle and dunes*, but the predominant landscape type is *mud flats*, which are particularly extensive around Hayling Island and Langstone and Portsmouth Harbours. *Salterns* occur most extensively along the New Forest coast and around Hayling Island. *Salt marsh* characterises the eastern part of the New Forest coast and much of the Solent coast. *Coastal wetlands* occur mainly on the Solent coast.

Very few areas of 'Downland' (and unimproved grassland associated with downland) are identified in the HLC; the only sizeable locations are in the far west to the southwest of Andover, and in the east to the southwest of Petersfield.

'Commons' are more widespread. *Common heathland* is included in this assessment with the 'heathland' HLC types; extensive areas of *common heathland* occur in the New Forest, to the northeast of Ringwood (Ibsley Common) and to the southwest of West Wellow. Otherwise the distribution of 'commons', most of which are classed as *wooded over commons,* is focused mainly in the east and northeast of the county.

Thirteen percent of the landscape is occupied by 'settlements', including the major urban areas. There are three other HLC groups which cover small areas of the county. 'Industry' includes extractive industries (chalk and gravel workings), factories and other complexes, reservoirs and dockyards and is mainly centred around Southampton Water. 'Defence' types occur primarily around Portsmouth and in the northeast of the county where they are associated with the army camps at Aldershot and in neighbouring Surrey. 'Recreation' includes racecourses, golf courses and sports complexes which are distributed throughout the county.

5.2.2 The Historic Landscape Character of the aggregate resource area

The historic landscape of the aggregate resource is characterised predominantly by fields, heathland, woodland and valley floors (Figure 26). Settlements make up 16% of

the landscape but most of the area occupied by these settlements is excluded from the aggregate resource because mineral extraction is not permitted in towns and cities (see section 3.3.4). There are, in addition, smaller areas of parkland and designed landscape, coastline, twentieth century defence areas, areas of active and disused industry, and recreation areas (mostly golf courses).

Fields are easily the most widespread feature of the aggregate resource landscape, covering half its total area. 'Parliamentary type fields' are the predominant field type, making up nearly 60% of the field pattern within the aggregate landscape. 'Parliamentary type fields' occur in all the resource areas and NMP sub-units but are particularly extensive in the coastal zone to the south of the New Forest, in the Avon valley, throughout the Test valley, along the Solent coast and in the East Hampshire sub-unit. A quarter of the fields in the aggregate resource area are classified as 'wavy fields'. These occur extensively throughout the Avon valley, the coast south of the New Forest, in the lowest reaches of the Test valley, along the Solent coast and down the western edge of the East Hampshire sub-unit. Between 15% and 20% of the fields are 'assarts'. These are most extensive in the South Hampshire Lowland zone (where this runs through the Lower Test, Itchen, Meon and Hamble valleys); in north Hampshire; in the northern part of the Avon valley, and the south eastern part of the New Forest resource area.

In places where the aggregate resource extends into areas which are predominantly chalkland, the historic landscape is characterised by field types associated with the chalk downs. This is the case in the tributaries of the Upper Test, where tracts of 'ladder fields' and 'ex-downland' fields occur along the valley sides. 'Ex-downland fields' are also found in some of the narrow chalk valleys in the Blackwater valley archaeological resource area. These fields represent the enclosure of downland by using trackways as boundaries. Some coastal fields appear to have been enclosed in the same way and tracts of this type of field occur along both the Solent and New Forest coasts.

'Heathland' landscape types make up 12% of the overall landscape of the aggregate resource area. Very extensive areas of 'heathland' occur in the New Forest archaeological resource area and in the northern part of the Avon valley NMP sub-unit, as well as in the East Hampshire sub-unit and in parts of the northeast of the county. The 'heathland' landscape is made up of a number of different HLC types (see section 5.2.1). The largest area of 'heathland plantation' is in the East Hampshire NMP sub-unit, but there are other smaller areas in the New Forest, in the northeast around Fleet, and in Ringwood Forest.

Woodland (excluding 'heathland plantations') covers 6% of the landscape in the aggregate resource area. 'Assarted woodland' is the most abundant type and mirrors the distribution of 'assarts' (see above). 'Other old woods' occur most extensively throughout the New Forest archaeological resource area, with smaller tracts in the Avon and Lower Test valleys and in places along the Solent coast (Figure 26). 'Plantations' make up less than a quarter of all woodland in the aggregate resource. 'Plantations' are most abundant in the southern part of the New Forest, throughout the Avon and Lower Test valleys and, to a lesser extent, in places on the Solent coast and the Kennet valley resource area.

'Valley floor' HLC types cover 4% of the landscape of the aggregate resource area. The predominant 'valley floor' types are *water meadows,* which are most abundant in the Avon, Test, Itchen and Meon valleys, and *miscellaneous valley bottom paddocks and pastures*, which are widespread throughout the valleys of the aggregate resource area.

'Coastal' landscapes cover 2% of the aggregate resource area and are typically *mudflats* and *saltmarsh*, with some areas of *salterns*, and *shingle and dunes*.

Other HLC groups occurring in the aggregate resource include 'parks', 'defence', 'industry' and 'recreation'. 'Parks' are distributed throughout the resource area, but particularly in the South Hampshire Lowland zone around Romsey and Eastleigh, in the Upper Test valley and in northeast Hampshire. *Deer parks* make up 43% of all parkland in the aggregate resource area, and are most abundant in northeast Hampshire in the Blackwater valley archaeological resource area; *pre-1810 parks* make up 32% of all parkland and are distributed throughout the aggregate resource; *nineteenth century parks* make up 25% of all parkland and are widely distributed, with the coastal area to the south of the New Forest containing extensive tracts of later parkland.

'Defence' is made up primarily of post medieval and twentieth century fortifications. These consist principally of the Portsmouth defences and the twentieth century installations associated with the army camps at Bordon in the East Hampshire NMP sub-unit and at Aldershot in the northeast.

The main areas of industrial activity occur along the Solent coast, in parts of the Avon valley, and in the far northeast of the county. There are several extensive areas of *active and disused gravel extraction* (the main one to the north of Ringwood in the Avon valley), but this HLC group also contains *industrial complexes and factories,* and *modern large-scale industry*, including oil refineries.

'Recreation' includes *major sports fields and complexes* and *golf courses*; the main concentration of these is in the Solent coastal area.

5.3 Scheduled Monuments

5.3.1 Hampshire Overview

There are 797 Scheduled Monuments (SMs) in Hampshire. The designated monuments are distributed fairly evenly throughout most parts of the county, with concentrations around Winchester, in the south eastern part of the New Forest area, on the Bracklesham sands to the north east of Ringwood, and on the eastern edge of the Cranborne Chase chalklands (Figure 27).

5.3.2 Scheduled Monuments in the aggregate resource area

There are 238 SMs in the aggregate resource area (Figure 27); this amounts to 30% of the total number of SMs in Hampshire. More than half are in the New Forest archaeological resource area, and more than 100 of these are barrows. There are lesser concentrations of monuments in the north western part of the New Forest (mostly associated with the Roman pottery industry), and in the East Hampshire NMP sub-unit (where all but one are barrows). The number of SMs in each archaeological resource area and NMP sub-unit is presented in Table 1 below.

Table 1 Number of Scheduled Monuments in Hampshire

Area		**No of SMs**
Archaeological resource areas	Blackwater valley	9
	Hamble valley	0
	Itchen valley	6
	Kennet valley	5
	Meon valley	4
	New Forest	137
	Rother valley	8
	Solent Coastal Plain	15
	Upper Test valley	5
	Wey valley	1
Total for archaeological resource areas		**190**
NMP sub-units	Avon valley	21
	East Hampshire	18
	Lower Test valley	4
	New Forest Coastal Plain	5
Total for NMP sub-units		**48**
Total for Hampshire's aggregate resource area		**238**

5.4 Hampshire Archaeology and Historic Buildings Record (AHBR)

This section provides a summary of the data held in the Hampshire AHBR at the time the dataset was supplied to the project (April 2006) – before any NMP mapping had been carried out.

5.4.1 Hampshire Overview

The distribution of records for archaeological sites in the AHBR, shown in Figure 28, covers all parts of the county. The archaeological resource in many areas is very rich. In Figure 28 the towns of Winchester, Andover and Basingstoke, for instance, are completely obscured by a dense layer of dots representing numerous archaeological sites. The chalklands in the west also host thousands of sites. Even on a map at this scale, however, gaps in the distribution of sites are apparent. This is clearest in the southwest; site densities are lower than elsewhere in the New Forest, the New Forest coastal area and the southern part of the Avon valley. The same is true of the extreme north of the county.

The distribution of sites visible only as crop marks and plotted in the Hampshire crop mark layer is overwhelmingly centred on the areas of chalkland (Figure 29). Site density is highest to the west of a line between Winchester and Basingstoke. There are few sites recorded in the London Basin area or in East Hampshire and virtually no sites in the Hampshire Basin. This distribution reflects the pattern of areas under arable cultivation and the fact that crop marks form more readily on well-drained chalk soils than on (for example) clays.

A period by period summary of the AHBR data is presented in Table 2 below. The periods are arranged according to numbers of AHBR records assigned to each of them.

Table 2 Number of records in the Hampshire AHBR

Period	No of AHBR records	% of total AHBR dataset
Undated	4,020	20
Bronze Age	3,175	17
Roman	2,319	12
Post medieval	2,259	12
Medieval	1,970	10
Iron Age	1,432	7
Modern	1,167	6
Prehistoric (undated)	1,056	6
Neolithic	665	3.5
Mesolithic	544	3
Early medieval	386	2
Palaeolithic	291	1.5
Total	**19,284**	**100**

5.4.2 AHBR records in the aggregate resource area

There are 3,772 AHBR records for archaeological sites in the aggregate resource area. Of these, 2,257 are located in the archaeological resource areas, and 1,515 in the NMP sub-units (Figure 30).

There are particular concentrations of sites in the northern part of the Avon valley, the north western part of the New Forest, in parts of the Lower Test valley and of the East Hampshire sub-unit, and on the Solent coast in the Hayling Island and Warsash areas.

AHBR records are less numerous in the southern part of the New Forest and on the New Forest Coastal Plain, in the southern part of the Avon valley, in the far north and northeast of the county and in the Upper Test valley between Longparish and Chilbolton.

Very few crop mark sites are recorded in the aggregate resource area on the Hampshire crop mark layer. They are most numerous in the Lower Test valley, in parts of the Upper Test valley (where they extend into the valley from the surrounding chalklands), and in the Kennet valley around Silchester.

A period by period summary of the AHBR data for the aggregate resource area is presented in Table 3 below. The periods are arranged according to numbers of AHBR records assigned to each of them.

Table 3 Number of AHBR records for the aggregate resource area

Period	**No of records in NMP sub-units**	**No of records in archaeological resource areas**	**No of records in aggregate resource**	**% of all records for period**
Bronze Age	239	401	640	20
Undated	210	407	617	15
Roman	211	328	539	23
Medieval	249	236	485	25
Post medieval	131	314	445	20
Modern	88	172	260	22
Prehistoric (undated)	133	94	227	21
Mesolithic	75	85	160	28
Iron Age	58	77	135	3.5
Neolithic	52	67	119	18
Palaeolithic	45	44	89	30.5
Early medieval	24	32	56	14.5
Total	**1,515**	**2,257**	**3,772**	

5.5 The Palaeolithic Resource

5.5.1 Hampshire Overview

The Hampshire AHBR contains 291 records for Palaeolithic archaeology, comprising 1.5% of the total number of records in the AHBR. The Palaeolithic archaeology of Hampshire, as in the rest of the country, is dominated by lithic find spots. Apart from an *in situ* working floor at Red Barns, Portsdown (ApSimon, Gamble and Shackley, 1977), an Upper Palaeolithic occupation site at Nea Farm, Somerley (Ford, 2002), and a major assemblage of Acheulean handaxes at Timsbury Manor, interpreted as a Lower Palaeolithic flint working site, all Palaeolithic records in Hampshire's AHBR are for find spots.

The AHBR records are characterised by a mixture of find spots of single artefacts or small assemblages and find spots of larger assemblages, such as those in the Dunbridge and Kimbridge areas, which have produced hundreds of artefacts. Their distribution is shown in Figure 31. The main concentrations are in the Solent Coastal Plain and in the lower valley of the Test, with other significant concentrations in the Avon valley, the southern fringes of the New Forest, and on the north Hampshire downs. This distribution replicates that presented in Roe's survey of Lower and Middle Palaeolithic sites (Roe, 1968) in which more than 1,500 individual find spots were listed (this total includes some finds from the gravel terraces around Bournemouth, which, following the boundary changes of 1974, are now part of Dorset).

Inevitably there is an inherent bias in this record towards those areas where there has been a history of research and collection. Pleistocene river deposits associated with the extinct Solent River and its tributaries, such as the Test, Avon and Itchen, for example, provide a key context for Lower and Middle Palaeolithic archaeology and there has been extensive collection in these areas over a long period. Many finds are also recorded from the cliff-face gravels and raised beaches around the Solent, notably between Warsash and Gosport (Wymer, 1993). Another rich area in the open-landscape Palaeolithic record is the north Hampshire downland where there is an impressive distribution of surface palaeoliths, especially in the Basingstoke area (Wymer, 1996).

Despite the relative lack of direct site-based evidence, the Palaeolithic open-landscape archaeology of Hampshire is remarkably rich compared with that of many other counties: a greater number of handaxes associated with Acheulean industries have been recorded from Hampshire than any other English county (Shackley, 1981).

It can be argued that the distribution of find spots reflects Palaeolithic activity in terms of general occupation patterns (e.g. Wymer, 1996, 3)). However, the fact that many lithic artefacts recorded from fluvial deposits are in secondary contexts suggests that the distribution primarily indicates those places where the vagaries of water flow allow the artefacts to accumulate. A further critical factor influencing the distribution is the existence of circumstances favourable to the recovery of finds. In particular most finds are recovered from the older, hand-dug gravel pits rather than from modern pits where mechanical extraction methods are employed.

The lack of faunal remains and organic deposits means that the chronology of Palaeolithic archaeology in the county is limited. Although much research has been carried out on the extensive series of river terrace deposits associated with the Solent River, where at least 14 gravel terraces have been identified (Bristow *et al*, 1991), the absence of absolute dating evidence has prevented this series of terraces being placed into a chronometric succession. In general it is likely that the higher the terrace, the older it is, although this is not always the case (Wymer, 1993, 75).

In Hampshire's AHBR there are three chronological divisions for the Palaeolithic period:

- Lower Palaeolithic 500,000–150,000 BP
- Middle Palaeolithic 150,000–40,000 BP
- Upper Palaeolithic 40,000–10,000 BP

The bulk of the records in the AHBR are interpreted as Palaeolithic (500,000–10,000 BP). Twenty are interpreted as Lower Palaeolithic: these include a flint working site at Timsbury Manor and a concentration of find spots on the beach at Browndown near Gosport. Eleven find spots are interpreted as Middle Palaeolithic. Records for Upper Palaeolithic archaeology are also rare; apart from the occupation site at Nea Farm, dating from 12500 BC – 10000 BC, there are four find spots in the area to the north of Romsey and one at Fareham.

Almost all these records are for flint artefacts associated with Acheulean and, to a lesser extent, Levalloisian industries (Roe listed 1,500 find spots for Acheulean industries and 150 find spots of the Levallois technique [Roe, 1968]). In contrast there is only a single possible site, Rainbow Bar, near Gosport, that has produced simple artefacts consistent with Clactionian industries. There is considerable doubt, however, as to the provenance of the flints at this site (Wymer, 1996).

The only record in the AHBR describing Mousterian type artefacts is at Gosport but assemblages containing Mousterian industry finds are known also at Cams and Warsash (Shackley, 1981).

5.5.2 The Palaeolithic archaeology of the aggregate resource area

In the Hampshire AHBR there are 45 records for Palaeolithic archaeology in the NMP sub-units and 44 records for the resource areas, giving a total of 89 records for the aggregate resource area as a whole. This represents 30.5% of the total number of Palaeolithic records for the whole county.

'The majority of palaeoliths found in Britain are within river terrace gravels. Hampshire is no exception' (Wymer 1996, 3). Given this, it is perhaps surprising that only 30.5% of Palaeolithic records in the county AHBR are from the sand and gravel deposits identified as the aggregate resource in section 2.

There are several factors contributing to this apparent contradiction.

- Firstly there are 60 find spots from urban areas built on sand and gravel deposits, especially the towns and cities on the Solent Coastal Plain; urban areas are excluded from the resource assessment (see section 3.3.4) so these records have not been considered.
- Secondly there are 39 records for find spots from cliff-face deposits or on beaches beyond the boundaries of river gravel deposits shown on BGS mapping. Almost all of these records are on the Solent coast between Warsash and Gosport.
- Thirdly there are six records for find spots from gravel pits at locations where no gravel deposits are shown on BGS mapping. In these instances the gravels have been completely worked out by quarrying operations.

In total this amounts to more than 100 AHBR records from sand and gravel deposits situated outside the potential aggregate resource in Hampshire. When this figure is taken into consideration, it can be said that two thirds of the Palaeolithic records in the AHBR are from sand and gravel deposits. Indeed this figure is likely to be a conservative assessment because there are a number of find spot records (mainly of artefacts belonging to private collections) whose exact provenance is uncertain. In

many cases the location of these find spots quoted in the AHBR lies just outside the aggregate resource and it is conceivable that these finds were actually made at locations within the aggregate landscape (one example is AHBR record 19314: *'hand axes of varying types…there are many references to finds of implements in this area'* [Warsash]).

What is clear is that there is a particularly rich Palaeolithic archaeology in Hampshire's aggregate resource area. The largest concentration of records is for the Lower Test valley sub-unit (25 records). These include the Lower Palaeolithic flint working site at Timsbury Manor, and major find spots in the Kimbridge and Dunbridge areas. Other than the early site at Timsbury Manor, all the records are assigned a broad date of 'Palaeolithic', apart from a record for six hand axes described as 'Lower to Middle Palaeolithic' found at Ashfield copse, to the south of Romsey, and a record for 'four mid-late Acheulean hand axes' from the Oakley area. The records are distributed throughout the sub-unit with a notable concentration in the Dunbridge area to the northwest of Romsey.

Another concentration of Palaeolithic records is located to the north of Romsey. They include the very productive find spot at Cupenham Lane gravel pit. Technically these records, and others in the Romsey area, are included in the Itchen valley resource area, although they all occur on terraces of the Lower Test. In total the Itchen valley resource area contains 20 Palaeolithic records. Three late Upper Palaeolithic tools are recorded from the Mesolithic excavation at Broom Hill, to the east of Braishfield, and implements described as Middle and Upper Palaeolithic are recorded from nearby. An Upper Palaeolithic hand axe is recorded from a location to the immediate north of Romsey; otherwise all the records for the Itchen valley resource area are assigned a broad Palaeolithic date.

There is a good distribution of Palaeolithic records in the Avon valley, covering an area roughly from Ringwood to the Wiltshire border in the north. The most significant record is for an Upper Palaeolithic occupation site at Nea Farm, Somerley; the remainder are all for find spots of either single artefacts or small assemblages. In terms of numbers of artefacts, the Solent Coastal Plain is more productive, although there are only nine AHBR records in this area. These are centred around Gosport but include a find spot for substantial amounts of material in a gravel pit on the outskirts of Southampton, and a record for Upper Palaeolithic artefacts on Long Island, Havant. There are many additional find spots along the Solent coast that are situated just outside the aggregate resource area, and more than 30 find spots within the towns and cities on the coastal plain. Although these finds are not included in the assessment they do underline the fact that the Palaeolithic resource of the Solent Coastal Plain is extremely rich.

There is a scattering of records, mostly for chance finds, in the New Forest and on the adjoining coastal plain. A further dozen find spots are located on cliffs and beaches or in the towns of Fawley, New Milton and Pennington and are not included in the assessment.

There are a few scattered find spots in the Upper Test valley, a single find spot in the Hamble valley and one in the Wey valley at Alton. A single Lower Palaeolithic hand axe is recorded from Longmoor Inclosure in the East Hampshire NMP sub-unit.

There are no records for the Meon and Rother valleys but the most striking gaps in the Palaeolithic record in the aggregate resource area are the Kennet and Blackwater valleys, where no sites are recorded. This is surprising given that there is a history of gravel extraction in both areas as well as extensive active exploitation. The lack of finds from these areas may be due to the fact that much of the extraction has been machine dug, making the recovery of artefacts more difficult than with earlier hand excavation techniques.

5.6 The Mesolithic Resource

5.6.1 Hampshire Overview

The Hampshire AHBR contains 544 records for Mesolithic archaeology, comprising 3% of the total number of AHBR records (Figure 32). The bulk of the evidence for Mesolithic activity is in the form of artefact scatters and stray finds, as is the case elsewhere in southern England.

There are a dozen flint working sites, some with associated hearths, but only two occupation sites with features interpreted as dwellings. These features, at Broom Hill, Braishfield (O'Malley and Jacobi, 1978) and Wakeford's Copse, Havant (Bradley and Lewis, 1974) consist of shallow hollows partially or completely surrounded by post holes. A third possible occupation site, at Bowman's farm, Totton, yielded many Mesolithic artefacts but the four hollows found there may be Neolithic in date (Wymer, 1996).

More than 90% of the records are for find spots, ranging from stray finds of individual artefacts to assemblages consisting of hundreds of items. All the records in the AHBR are interpreted as broadly Mesolithic in date (10,000–4000 BC), apart from a hearth exposed on the beach at Hayling Island (dated to 10,000–7000 BC) and three sites interpreted as late Mesolithic: Broom Hill (6600–4500 BC), Bowman's Farm (7000–4000 BC), and Grooms Farm (7000-4000 BC).

Hampshire is one of the richest counties in England for Mesolithic find spots (Wymer, 1996). The find spots have a fairly diffuse distribution throughout the county (Figure 32), influenced to some degree by field walking and collecting history: thus there are concentrations on the north Hampshire downs (collected by G. Willis, former Curator of Basingstoke Museum) and in the southwest of the county (collected by J.C Draper).

In addition to the evidence from find spots, excavations have provided a significant amount of information towards understanding the Mesolithic communities in Hampshire. The main ones are the complex of sites at Oakhanger, Selborne (Rankine, 1952, 1960, 1961A, 1961B); Longmoor Inclosure, Whitehill (discussed in Jacobi, 1981); Broom Hill, Braishfield; Wakeford's Copse, Havant; and Fort Wallington, Fareham (Hughes and ApSimon, 1978).

The most extensively studied area is the Wealden Edge in East Hampshire, where there is a concentration of sites located on the Folkestone Formation Greensand (Figure 32). The best known are the sites at Oakhanger, one of the richest sites of this period in Europe with more than a tonne of worked flint recovered. The assemblage is typical of the early Mesolithic (conventionally up to c7500 BC [Cunliffe, 1993]) and this date is confirmed by radiocarbon dates from wood charcoal and hazelnuts found on the site. Other early Mesolithic sites on the Greensand have been identified from surface collections at Kingsley Common, Petersfield Heath, Bentley and Trotsford Farm, Sleaford.

As a result of intensive study of the artefacts found on the Greensand, a distinctive phase has been identified in the Wealden Edge lying typologically between early and late assemblages. Surface scatters from this microlith technology, known as the Horsham phase, have been found at Oakhanger, and from excavated sites at Sleaford and Longmoor Inclosure (discussed in Jacobi, 1981). Radiocarbon dates from Longmoor Inclosure and typological comparisons suggest a date of c8000–7500 BC for the Horsham phase (Cunliffe, 1993). The main distribution of the Horsham phase in Britain is tightly concentrated within the Weald of East Hampshire and West Sussex.

Fewer late Mesolithic sites have been identified from the Greensand (the most notable of these is the flint working site at Grooms Farm, east of Kingsley). The late Mesolithic is generally seen as a time of population expansion in Britain (Cunliffe, 1993) and one

possible explanation for the apparent difference in the Wealden Edge is that locally a greater variety of environments than before were being exploited. Fieldwork in East Hampshire (Shennan, 1981) recorded flint scatters from this period in the chalk downs and on clay-with-flints in areas adjacent to the Wealden Edge, suggesting that by the later Mesolithic a greater use was being made of the wooded upland environment which lay nearby.

Find spots and surface scatters of late Mesolithic microlith types are recorded widely across Hampshire (as are early types). There are three late Mesolithic excavated sites in Hampshire; Broom Hill, Wakeford's Copse (both of which produced radiocarbon dates and evidence of possible dwelling structures), and Grooms Farm. The large assemblage at Broom Hill contained a high proportion of axes and axe-sharpening microliths suggesting specialised production activity at the site. A similar specialised assemblage was found at Wallington, Portsdown (Hughes and ApSimon, 1978).

There is some evidence in Hampshire for regional social interaction with late Mesolithic groups from elsewhere, in the form of artefacts and objects of non-local materials. These comprise microliths of Portland chert; blades made of Devonian slate from Devon and Cornwall, and elongated pebbles of Palaeozoic rock from southwest England (Jacobi, 1981).

5.6.2 The Mesolithic archaeology of the aggregate resource area

In the Hampshire AHBR there are 75 records for Mesolithic archaeology in the NMP sub-units and 85 records for the resource areas, giving a total of 160 records for the aggregate resource area as a whole. This represents 29% of the total number of Mesolithic records for the whole county.

Whilst the bulk of these records are for find spots the aggregate resource area does contain all the excavated sites on the Greensand and the late Mesolithic occupation site at Broom Hill.

The largest concentration of AHBR records (51 in total) is found in the East Hampshire NMP sub-unit. Most of these records are for large assemblages from the excavated flint working sites at Oakhanger and Longmoor Inclosure as well as the substantial surface collections at Kingsley Common, Petersfield Heath, Bentley, and Trotsford Farm, Sleaford. Other major flint scatters or working sites are recorded from Southam Common and Shortheath Common and Grooms Farm. Contemporary pollen sequences are available for the East Hampshire Greensand sites but the high acid content of the sands dissolves any faunal remains so that little evidence is produced for animal exploitation.

It is clear that the Greensand environment, characterised at this time by scrub woodland with local glades, provided favourable conditions for the Mesolithic communities. However, Jacobi suggests that the archaeological record is likely to be biased towards these areas because of their suitability for intensive research. This is because assemblages from the Greensand are less often mixed with later prehistoric artefacts, and that fine sieving techniques can be more successfully used on sand than other geological deposits, ensuring optimum recovery of material. He concludes that this has led to 'a necessary bias…..and the scale of the distortion cannot be overstated' (Jacobi, 1981, 15).

In terms of numbers of AHBR records both the Solent Coastal Plain (32 records) and New Forest (19 records) resource areas are rich in Mesolithic archaeology, although the majority of these records are for find spots of small assemblages (six of the New Forest records, for example, are for single find spots). The New Forest resource area does contain the possible occupation site at Bowman's Farm, to the northwest of Totton. Quantities of Mesolithic artefacts were recorded here but the four sunken dwellings found at the site are thought likely to be Neolithic in date. The Solent Coastal

Plain contains a number of larger assemblages, most notably from Portchester, Long Island, and at Walton Heath and Hipley Copse northeast of Fareham. Four of the sites in the Solent Coastal Plain are on Whitecliff sand, including both Walton Heath and Hipley Copse. One site of particular interest is that at Browndown, near Lee-on-the-Solent, where Mesolithic implements were found alongside oyster and winkle shells. Little more information is available on this site but no other shellfish accumulations have been identified in Hampshire (Jacobi, 1981).

The valleys of the Itchen, Avon, Blackwater and Lower Test all contain similar numbers of Mesolithic records (the Lower Test contains 12, the others eight). The majority of these records are for small assemblages or single find spots; of particular note is a record for a carved horn from Green Hill, to the west of Romsey. Each of these areas does, however, contain at least one more significant site; a possible occupation site on the 7.5m terrace of the Test at Great Testwoodhouse farm, Totton, in the Lower Test valley, a possible occupation site on the outskirts of Ringwood in the Avon valley, and a flint working site on the outskirts of Basingstoke in the Blackwater valley resource area. The late Mesolithic occupation site at Broom Hill lies within the Itchen valley resource area. This is one of only two sites in Hampshire where dwellings from this period have been recorded. Three sites, including Broom Hill, are situated on Lambeth sand; a further two sites to the southeast are on Whitecliff sand.

There are less than five records for the New Forest Coastal Plain and the valleys of the Kennet, Meon, Wey and Upper Test; all of these records are for find spots of small assemblages. There are also few records for the Hamble valley but the find spots here are all for more substantial assemblages. In particular the sand pit at Sandy Lane, Shedfield near Waltham Chase has produced large quantities of Mesolithic implements. This site, on Whitecliff sand, probably dates from the early Mesolithic (Jacobi, 1981).

The only record for Mesolithic archaeology in the Rother valley resource area is also for a significant assemblage, discovered during turf laying operations on the outskirts of Petersfield at the turn of the last century.

5.7 The Neolithic Resource

5.7.1 Hampshire Overview

The Hampshire AHBR contains 665 records for Neolithic archaeology, making up 3% of the total number of AHBR records (Figure 33). Their date range can be broken down further: seven records are interpreted as early Neolithic (4000–3000 BC) and 11 records as late Neolithic (3000–2200 BC). In addition, eight records are interpreted as Neolithic/early Bronze Age (4000–1500 BC), and 11 as late Neolithic/early Bronze Age (3000–1500 BC). The remaining records are all assigned a broad Neolithic date (4000–2200 BC). In total 569 records (85% of the total) are for find spots.

The most visible field remains of Neolithic communities in Hampshire are earthen long barrows. Forty three of these monuments are recorded in the county AHBR, of which 39 are included in a RCHME survey (RCHME, 1979). One probable long barrow (immediately to the south of Bentley), identified from aerial photographs, is situated on a gravel terrace associated with the river Wey, but all the others are located on the chalk downs. Only two of these monuments have been subjected to systematic excavation and the only radiocarbon date from a Hampshire long barrow is from Nutbane. Here a complicated structural sequence suggested use of the site over a long period (Cunliffe, 1993) and one of the later phases was dated to c3500 BC (Fasham and Schadla-Hall, 1981).

The other earthwork monument characteristic of the early Neolithic in southern England is the causewayed enclosure, but no examples have been found in Hampshire. The same is true of henges and cursus monuments, which are characteristic of the later Neolithic. The lack of these communal earthworks, which are relatively abundant in Wessex and in neighbouring Sussex, and thought to be indicative of the development of large territories and centralised organisation, suggests that in Hampshire there may have been a different type of social organisation (Fasham and Schadla-Hall, 1981).

Only one flint mine has been recorded from Hampshire, that at Martins Clump, Over Wallop, although further shafts to the west of the Martins Clump mine have been identified (Fowler, 1986). Analogy with the nearby mines at Easton Down in Wiltshire suggests a possible date of c3100 BC for the Martins Clump mine (Fasham and Schadla-Hall, 1981).

Remains of Neolithic settlement are also sparse. There is an early Neolithic interrupted ring ditch at Winnall Down, Winchester, with radiocarbon dates giving a date of c3550 BC (Fasham and Schadla-Hall, 1981), and possible late Neolithic settlement revealed during work along the route of the M3 at Easton Lane Interchange. A round house was found at this site, producing both Neolithic and Bronze Age pottery (Gardiner, 1996). Other possible settlement sites which may equally be early Bronze Age in date are recorded in the AHBR south of Chalton Down, at Timsbury, where two dwellings were found during a pipeline watching brief, and a complex of ditches, pits and gullies at Nursling. In addition traces of a possible wooden structure are recorded from beneath the Roman villa at Fullerton.

Neolithic settlement is implied by features such as hearths, pits and post holes. A small number of these features have been discovered in Hampshire as a result of watching briefs or excavations of later features. There are also the excavated sites at Broom Hill, Braishfield and Corhampton where the dating evidence is again ambiguous (Fasham and Schadla-Hall, 1981).

Given the comparative lack of settlement and monument evidence, flint scatters are an important indicator of Neolithic activity and, by implication, occupation in Hampshire. Vast quantities of Neolithic flint artefacts are recorded from the county representing

extensive occupation of the chalk areas and, to a lesser extent, of the coastal plain and river valleys (Gardiner, 1996). A survey from 1994 of County Council-owned properties demonstrated that later Neolithic and Bronze Age artefact scatters suggesting long-term occupation were concentrated in areas of chalk and clay-with-flints, whereas areas of short-term activity were identified mainly on the coastal plain or in river valleys (Boismier, 1994). These latter areas tended also to be of Mesolithic to Neolithic date.

One significant aspect of research into the Hampshire flint collections is that they are very utilitarian in character and that 'high status' artefacts, indicative of ritual activity, are rare. This appears to be consistent with the lack of monuments other than long barrows (Gardiner, 1996).

Although fieldwork in the Meon and Avon valleys (Schofield, 1995, and Light, Schofield and Shennan, 1995) has extended the known overall distribution by recovering finds from gravel spurs overlooking the rivers, no major scatters were identified. Likewise transect field walking in east Hampshire (Shennan, 1985) identified no discrete sites, and the find spots recorded were widely scattered with only a few clusters (Gardiner, 1996). In terms of overall distribution, the New Forest is an obvious blank area (Figure 33), due to the lack of arable land precluding systematic field walking and flint collection.

Environmental evidence suggests that the adoption of farming was a gradual process and that woodland clearance began in the later Mesolithic (Cunliffe, 1993, 41 and Gardiner, 1996, 10). Pollen evidence from the Itchen valley shows a decline in elm and a corresponding increase in herbs, grass and cereal occurring around 4400 BC (Cunliffe, 1993, 41). There was a move onto the Loessic soils of the chalk areas (Gardiner, 1996) and evidence of domestication of animals. In the later Neolithic period pollen evidence at Winnall Moors in the Itchen valley indicates a phase of forest regeneration (Cunliffe, 1993, 77). In contrast there is evidence of extensive woodland clearance during the period from 2000 to1500 BC, with deforestation taking place in parts of the New Forest (Cunliffe, 1993, 79).

5.7.2 The Neolithic archaeology of the aggregate resource area

In the Hampshire AHBR there are 52 records for Neolithic archaeology in the NMP sub-units and 67 records for the resource areas, giving a total of 119 records for the aggregate resource area as a whole. This figure includes records assigned a late Neolithic/early Bronze Age date and represents 18% of the total number of Neolithic sites for the whole county.

There are no records for the Hamble valley resource area and only one for the Rother valley. The New Forest also clearly has far fewer records per square kilometre than most of the other areas. Elsewhere the sites are distributed widely across the aggregate landscape. The main concentrations are in the Lower Test valley and, to a lesser extent, the northern part of the Avon valley, East Hampshire, and the Solent Coastal Plain.

Not surprisingly almost 90% of these records are for find spots (of assemblages of varying sizes). More than a third of the artefact finds include polished axes.

Four of the find spots are of sufficient size and density to represent possible occupation sites. Two of these occur at the northern limit of the Avon valley NMP sub-unit near Breamore and are likely to be early Neolithic in date, a third was discovered near Binstead during field walking in advance of pipeline operations, and the fourth is on the Solent Coastal Plain near Lee-on-the-Solent, at Sandhills Lane West.

There are three settlements, or possible settlements, in the aggregate resource area. Two possible dwellings and two double ditches were excavated prior to pipeline trenching at Fairbourne Copse, to the north of Romsey. The second site is at Nursling

and consists of a series of ditches, post holes and gullies, producing pottery and flint of late Neolithic/early Bronze Age date. The third site is at Broom Hill, Michelmersh. Excavations during the 1930s unearthed Neolithic pottery and flints and the remains of a hearth.

Another Neolithic hearth is recorded from beneath the ramparts of the Iron Age multivallate hillfort at Buckland Rings, Lymington. Neolithic occupation is also suggested by the chance discovery of pits containing pottery, flint, or other dating evidence. Two of these features occur in the aggregate resource area: the first is a randomly spaced group of pits at Crystal Hollow to the east of Fordingbridge in the Avon valley; the second is a pit containing a beaker at Nursling in the Lower Test valley.

There is one possible ceremonial monument: a long barrow near Bentley in the East Hampshire NMP sub-unit, which was identified from aerial photographs.

In *Archaeology in Hampshire: A Framework For The Future* (Hinton and Hughes, eds, 1996) two of the recommendations for future research into the Neolithic of the county have specific relevance for the aggregate resource area:

- Identification and analysis of assemblages from the coastal plain and Itchen and Test valleys.
- Another largely blank area on the distribution map is the New Forest. The identification and mapping of surface assemblages within the forest should be a priority as should obtaining environmental sequences.

5.8 The Bronze Age Resource

5.8.1 Hampshire Overview

The Hampshire AHBR contains more than 3,000 records for Bronze Age archaeology, making up 17% of the total number of AHBR records (Figure 34). Of these the vast majority are assigned a broad Bronze Age date, 13 are interpreted as early, 26 as middle and 15 as later Bronze Age. A Bronze Age/Iron Age date is assigned to 145 sites, and a further 195 (mainly field systems and lynchets) are interpreted as dating to somewhere between the Bronze Age and medieval periods.

There is little evidence for settlement and activity during the Beaker period (2800/2700–2100/2000 BC). The possibility of Beaker settlements is suggested by pottery at Easton Down (Fasham, 1985) and beneath the hillfort at Balksbury (Wainwright, 1970). Relatively few beaker burials are recorded from Hampshire leading to the suggestion that 'the Beaker Folk were just passing through' (Gardiner, 1996, 6).

Extensive activity during the earlier Bronze Age (2200–1500 BC) is indicated by the large number of barrows recorded in the county (Figure 35). There are more than 2,000 records for barrows in the AHBR (this figure includes more than 700 ring ditches interpreted as plough-levelled round barrows), and barrows form 65% of all records for Bronze Age archaeology in the AHBR.

Ninety one Wessex type 'fancy' barrows are recorded, comprising roughly equal numbers of *bell, disc*, and *saucer* barrows and a single record for a *pond* barrow. There are almost 1,000 *bowl barrows* and a further 300 described as either *round barrow* or simply *barrow*. Few of these barrows remain intact: more than half have suffered plough damage to some extent, or have been damaged in some other way (Tomalin, 1996, 15).

The distribution of Bronze Age barrows contrasts sharply with that of Neolithic long barrows, which are virtually confined to the chalk areas. An expansion during the Bronze Age from the chalk into new areas, such as the New Forest, the Avon valley and northeast Hampshire, is suggested by the presence of numerous barrows in these areas. This is consistent with environmental evidence suggesting that today's heathlands may have begun to be formed towards the end of the earlier Bronze Age as a result of woodland clearance (Fasham and Schadla-Hall, 1981).

Evidence of the wider sphere of activity during the Bronze Age is also provided by non-funerary features, especially burnt mounds. Sixty seven burnt mounds are recorded in the Hampshire AHBR and their distribution is confined almost exclusively to the Avon valley and New Forest areas (Figure 36).

The extent of Bronze Age activity is also indicated by the distribution of find spots. In total 415 records for Bronze Age find spots of bronze items, pottery and flint are contained in the AHBR. Some of these consist of large assemblages and they include 18 hoards. The find spots are distributed widely throughout all parts of the county but especially on the Solent seaboard between Warsash and Havant.

The middle and later Bronze Age (1500–800 BC) is characterised by changes in pottery style, notably the prevalence of Deverel-Rimbury assemblages, and the increasing availability of bronze and bronze tools (Fasham and Schadla-Hall, 1981). This period is also represented by a change from inhumation to cremation burials, including flat graves. There are 80 cremations or cremation cemeteries from this period recorded in the Hampshire AHBR (Figure 37) and their distribution replicates the expansion of activity from the chalk into the New Forest, river valleys and the Solent coastal area apparent in the distribution of barrows.

The number of known Bronze Age settlements is small. The AHBR contains eight records for *settlement*, another eight for *round house* or *hut circle*. In addition there are records for 14 rectilinear enclosures which may represent enclosed settlements, possibly dating from this period. Where Bronze Age settlements have been identified they are generally small, consisting of only a few buildings (the settlement at Chalton, for instance contained two hut circles [Cunliffe, 1970]). Some are represented by enclosures, such as that at Martin Down, Martin (Pitt-Rivers, 1898), but most are unenclosed, like the groups of round houses at Chalton (Cunliffe, 1970) or Winnall Down (Fasham, 1985). The main reason for the lack of identified settlements is the inherent difficulty in locating them, given their small size and the fact that they are often unenclosed (Fasham and Schadla-Hall, 1981).

It is likely that there was a mixed agricultural economy and a controlled layout of the landscape. Settlements are located close to field systems comprising rectilinear fields varying in size from 0.1ha – 0.5ha (Fasham and Schadla-Hall, 1981). Most of these field systems have been plough-levelled but evidence for large blocks of fields occurring extensively on the Hampshire chalk exists in the form of crop marks on aerial photographs. Field systems of this type were in use into the Roman period but dating evidence from, for instance, Barnet Copse, Chalton (Rudkin, 1980) demonstrates that some were developed during the early Bronze Age.

A distinctive feature of the later Bronze Age landscape is the presence on the downland of an extensive linear ditch system (Fasham and Schadla-Hall, 1981). These ditches, often referred to as 'ranch boundaries', are V-shaped and typically up to 3m wide and 2m deep. Their use appears to have extended into the Iron Age, when further boundaries were constructed during this period. In some instances the ditches cut across pre-existing field systems (Fasham and Schadla-Hall, 1981) and in others they are associated with field systems (Cunliffe, 1996, 143). Although their precise function is not known, they clearly act as boundaries, possibly marking territorial divisions.

5.8.2 The Bronze Age archaeology of the aggregate resource area

In the Hampshire AHBR there are 239 Bronze Age records for the NMP sub-units and 401 records for the resource areas, giving a total of 640 records for the aggregate resource area as a whole. This figure includes some records interpreted as late Bronze Age/early Iron Age and some records assigned a Bronze Age/Iron Age, Roman or Medieval date. It represents 20% of the total number of Bronze Age records for the whole county.

There are no records in the Hamble valley and only a single record for the Meon valley. Otherwise the Bronze Age resource is distributed widely throughout the aggregate resource area. Seventy six of the records are for sites located on solid sand deposits, mostly on Folkestone Formation and Bracklesham sand, but with five records from Lambeth sand.

The largest concentrations of sites are in the New Forest, especially in the area between Fawley and Lymington, and the northern part of the Avon valley, particularly to the immediate north of Ringwood. Smaller concentrations occur in East Hampshire, in the lowest reaches of the Test valley (between Romsey and Totton), and around Hayling Island.

Barrows are the predominant site type; 400 of these monuments are recorded, making up 62% of Bronze Age sites in the aggregate resource area. There are significant concentrations of barrows in the New Forest, the Avon valley, and in East Hampshire (Figure 38). The total of 400 barrows includes 25 examples of so-called 'fancy' barrows and these occur mainly in the New Forest area (Figure 39). Twenty cremations are recorded and their distribution is closely parallel to that of barrows, with concentrations in the New Forest and in the Avon valley (Figure 37).

There are also a substantial number of burnt mounds in the aggregate resource; 42 records, forming more than 60% of all records for burnt mounds in Hampshire's AHBR. Their distribution is focused on the New Forest and Avon valley areas (Figure 36).

Almost one fifth of records for the aggregate resource consist of find spots. These are distributed widely throughout the resource area with concentrations at Hayling Island, around Warsash and in the extensively quarried area to the north of Ringwood. The majority of these are for small assemblages or single artefact finds. There are, however, a small number of more significant finds. Two flint scatters in the Avon valley may represent occupation sites; three records are for beakers which are significant given the comparative rarity of beakers in Hampshire; two records are for founders' hoards on the Solent coast and these perhaps support the suggestion that metal-working centres may have been located in this area (Fasham and Schadla-Hall, 1981). Metal-working debris is also recorded from the Romsey area.

The sites mentioned so far are evidence of extensive Bronze Age activity throughout much of the aggregate resource area and, by inference, this might reflect settlement distribution. Tangible settlement evidence is less forthcoming and has been revealed mainly during the course of watching briefs and ensuing excavations. There is the late Bronze Age/early Iron Age site at Silchester, a settlement found in advance of gravel extraction on Rockford Common in the Avon valley, and that at Trotsford Farm near Kingsley in East Hampshire. There are a handful of possible settlement sites: round houses on Hayling Island and Long Island may date from this period or could possibly be later; a series of ditches and pits in the Nursling area may form part of a more extensive settlement, a rectilinear enclosure at New Milton and three similar enclosures elsewhere in the New Forest area may also be settlements from this period.

Bronze Age field systems are few and far between: there are four possible examples in the New Forest, one from the Upper Test valley, and one in the Romsey area.

There are three other noteworthy sites in the aggregate resource area. The first is a large circular enclosure at Hoult Pound, in the Wey valley area. This site, which measures 80m in diameter, is interpreted as a possible fortified enclosure. The other two site records are for finds of wood; the first the remains of a jetty at Testwood Lakes near Totton, the second a timber structure discovered on the north coast of Hayling Island.

5.9 The Iron Age Resource

5.9.1 Hampshire Overview

The Hampshire AHBR contains 1,432 records for Iron Age archaeology, making up 7% of all records in the AHBR (Figure 40). Of these, more than 90% are assigned a broad Iron Age date (800 BC–AD 42). An Iron Age/Roman (or later) date is assigned to 79 records, and fewer than 10 are interpreted as early Iron Age (800 BC–400 BC). The resource is made up of a wide range of site types including hillforts, settlements of various types, field systems, features such as pits, ditches and gullies, and a smaller number of burials. There are also many find spots which make up a quarter of the total number of AHBR records.

The richness of this resource reflects the extensive research which has taken place into the Iron Age in Hampshire. There have been many excavations, some of them as part of research programmes (although most have been 'rescue digs'), and several programmes of survey work, comprising aerial survey projects (Wessex, Danebury Environs) and field walking (Chalton, East Hampshire). A variety of site types have been studied: hillforts, settlements, the *oppida* at Silchester and Winchester, a range of burials and two temples.

The bulk of this previous work has been concentrated on the chalk areas of the county, and in non-chalk areas excavation has been largely restricted to sites with earthworks (Champion and Champion, 1981). This has influenced the known distribution of settlements in particular (Figures 40 and 41). It is possible that there are types of settlement which do not occur in chalk areas and which have not, therefore, been recognised. As an example few sites dating from the late Bronze Age/early Iron Age are known in the county, but considerable numbers of settlements of this date are recorded from the river gravels of the Thames and the Kennet outside Hampshire (Champion and Champion, 1981). It is also likely that unenclosed settlements or settlements lacking substantial pits and ditches – such as that on Wallington military road (Champion and Champion, 1981) – may have escaped notice. This point is illustrated by the results of the Danebury Environs Project (Palmer, 1984, 54): of 21 unenclosed settlements recorded from aerial photographs, all but four were adjacent to more substantial (and therefore more easily visible) features or were associated with ditches.

Despite the uneven nature of the knowledge base, in those areas where there has been research there exists a detailed appreciation of settlement form and variety, an indication of settlement density and a detailed knowledge of the material culture in the Iron Age. Cunliffe (1996) summarises the development of the Iron Age in Hampshire in four broad phases.

The first of these phases (roughly 1600–600 BC) overlaps with the late Bronze Age and sees the tradition of rectilinear field systems (so-called 'Celtic' fields) continued and expanded. In total 185 such field systems are recorded in the AHBR for the Iron Age period. Ranch boundaries also continue to be constructed during this early phase, and nearly 60 are recorded in the AHBR. The widespread planning of the landscape that seems to define this phase suggests 'a degree of coercive organisation' (Cunliffe, 1996, 28).

The characteristic structures of this phase are large hilltop enclosures such as Walbury. The only internal features found in analogous enclosures in Wessex are interpreted as fodder ricks. Settlements from this period took the form of large ditched enclosures containing circular houses and storage pits: examples are Old Down Farm and Houghton Down.

The second phase covers the period between c600 BC and 300 BC and saw the construction of hillforts. Forty one hillforts are recorded in the AHBR (Figure 42), most of them univallate enclosures. All excavated examples were built in the sixth and fifth centuries; some at locations in the landscape with prior significance (Danebury was built within an earlier enclosure, Quarley Hill at the junction of two ranch boundaries). It appears that more than one episode of fort-building took place and a variety of styles of rampart construction are evident. Levels of use and the range of activities taking place within hillforts varies quite dramatically and it is clear that not all were used in the same way, although morphological differences linked to variations in use have not been identified.

During this phase the number of rural settlements appears to have increased (at least the number of detectable settlements increased). Whilst sites such as Houghton Down remained in use, new ones were established (Little Somborne, Nettlebank Copse). Nearly 200 settlement sites and enclosures (presumed to be settlements) are recorded in the AHBR and many are likely to date from this period. Some impression of settlement density and variety is presented in the results of the Danebury Environs Project. In a 450sq km area nearly 130 settlements, most of them enclosed, were recorded, mainly from aerial photographs. These were subdivided into 10 distinct 'types' based on morphological characteristics (Palmer, 1984).

The third phase, from 300 BC to c100 BC appears to have been, in some places at least, a phase of settlement dislocation. There is evidence of violent upheaval at Danebury in c300 BC after which activity within the hillfort increased and intensified dramatically. At the same time many of the settlements in the Danebury area were abandoned and other hillforts, such as Balksbury, fell out of regular use. This suggests the development of a hierarchy of hillforts, with some – the 'developed hillforts' - becoming influential foci in the landscape. The extent of this system of developed hillforts is not clear; whether, for instance, it extended beyond the chalk areas. Nor is it clear why, in contrast to those at Danebury, some settlements (such as those around Basingstoke or at Chalton) flourished at this time.

The final phase of the Iron Age, c100 BC–AD 43, was a time of rapid change. The most notable development is that the hillfort system gave way to new large defended settlements – the *oppida* at Silchester and Winchester. The movement from developed hillforts into towns is not fully understood because although the earliest occupation at Silchester has been dated to the mid-first century BC the nature of the abandonment of hillforts such as Danebury is not clear. In the case of the Winchester *oppidum* later activity appears to have obliterated the earliest layers (Champion and Champion, 1981, 42).

The pattern of rural settlement changed during this period. Some sites in the Danebury area which had been abandoned after 300 BC were re-occupied. Complex systems of ditched enclosures appeared in the landscape; 36 were recorded during the Danebury Environs project (Palmer, 1984, 48-53). 'Banjo' enclosures were constructed in considerable numbers; 71 are recorded in the AHBR, all of them on the chalk.

Towards the end of this phase, new tribal groupings began to emerge in Hampshire. By the middle Iron Age a regional group can be identified from their ceramic style (typified by decorated saucepan pots). The territory of this group appears to have been Hampshire, Wiltshire and Berkshire (Cunliffe, 1993, 193). By the first century AD new tribal groupings had emerged. The names of these new configurations – the *Belgae* and the *Atrebates* – derive from first century BC immigrants, and are mentioned by later Roman historians, notably Ptolemy, who recorded that the *Belgae* occupied the area that is now central and southern Hampshire and had their capital at *Venta Belgarum* (Winchester). The capital of the Atrebates was at *Calleva Atrebatum* (Silchester) in northern Hampshire.

Despite the Roman conquest bringing changes, the overriding feature during the first century AD is continuity: *oppida* developed into towns and rural farmsteads were maintained – in some the timber round houses being replaced by stone-walled buildings.

5.9.2 The Iron Age archaeology of the aggregate resource area

In the Hampshire AHBR there are 58 Iron Age records for the NMP sub-units and 77 records for the resource areas, giving a total of 135 records for the aggregate resource area as a whole. This figure includes some records interpreted as Iron Age/Roman and some as Iron Age/Roman or later. It represents only 9% of the total number of Iron Age sites for the whole county.

'It is no exaggeration to say that the Hampshire Iron Age landscape is probably more extensively studied than any comparable region of Europe' (Cunliffe, 1996). This may be true of the Hampshire chalkland but the Iron Age landscape of the aggregate area is very poorly understood: 'our ignorance of the Iron Age off the chalk is remarkable' (Champion and Champion, 1981). The most striking feature of the Iron Age resource in the aggregate area is its apparent impoverishment in comparison with the county as a whole (Figure 40).

In particular little is known about the settlement pattern and the organisation of the landscape. AHBR records for settlements in the aggregate resource area make up only 7.5% of the total number recorded county-wide. Many enclosed settlements are recorded from the chalklands, but in the sand and gravel areas, only five enclosures are known – 4% of the county total. And the number of field systems identified in the aggregate resource area represent only 1.5% of the total number in the county.

It is likely that this disparity represents a failure to identify these features rather than a real gap in settlement pattern. This is suggested by the distribution of hillforts in the aggregate resource. Hillforts are substantial features in the landscape and generally survive as earthworks. The density of their distribution in parts of the aggregate resource area (particularly in the New Forest and the area to the north of Southampton) is at least equal to that on the chalk. In fact 30% of the county's hillforts are located in the aggregate resource area (Figure 42). The difficulty of locating smaller settlement sites whose remains are invariably denuded or totally levelled is illustrated by the fact that 80% of settlements in the aggregate resource area were discovered through development-led watching briefs or excavations.

The distribution of hillforts in the aggregate resource area is concentrated in the southwest part of the county. The main foci are the New Forest, the Lower Test valley, and, to a lesser extent, the northern part of the Avon valley. Beyond this area there is one in the far north, at Silchester, and one in the far southeast, at Hayling Island. Recorded settlements (Figure 41) are located in the northern part of the Avon valley, the Lower Test valley and some of the tributaries of the Upper Test, and two sites in the north eastern part of the county.

Apart from the hillforts and settlements the AHBR for the aggregate resource area contains a considerable number of find spots (43% of the records), a handful of field systems, and occasional records for features such as ditches, gullies and pits, most of which have been identified through watching briefs.

Areas with very few or no records include the valleys of the Hamble, Wey, Meon, Rother and Blackwater, large parts of the New Forest, and the southern part of the Avon valley below Ringwood.

Notwithstanding the relative lack of Iron Age archaeology overall, there are a number of important sites from this period in the aggregate resource area. The enclosed *oppidum* at Silchester is of national importance, not least because it developed into a

Roman town and was then abandoned; as a result it is undamaged by later urban development. There is a religious complex on Hayling Island, where the temple was constructed from timber during the first century BC and whose use continued into the Roman period, during which it was rebuilt with masonry walls. There are also the remains of a small number of salterns along the Solent coastal area.

In *Archaeology in Hampshire: A Framework For The Future* (Hinton and Hughes, eds, 1996, 30) one of the recommendations for future research into the Iron Age of the county has specific relevance for the aggregate resource area:

- Intensive field survey of selected environments, other than the chalkland, to establish the nature of the settlement pattern or land-use.

5.10 The Prehistoric (undated) Resource

5.10.1 Hampshire Overview

The Hampshire AHBR contains 1,056 records for prehistoric (undated) archaeology (sites interpreted as pre-Roman but to which a more specific date cannot be attributed with any certainty), making up 6% of all records in the AHBR (Figure 43). Of these, almost 90% are assigned a broad prehistoric date (500,000 BC–AD 42). A Neolithic or later date (4,000 BC–AD 42) is assigned to 114 sites (11%), two are interpreted as late Neolithic or later (3,000 BC–AD 42) and three as Mesolithic or later (10,000 BC–AD 42).

As might be expected the vast majority of these records (89%) are for find spots, the bulk of which are for undiagnostic flint flakes or burnt flint. The distribution of prehistoric (undated) find spots is shown in Figure 44. Very many of the find spots are the result of watching briefs, archaeological evaluations, and, in particular, field walking projects. The main concentrations of find spots are in areas where such projects have taken place. The east-west bands of find spot records in the eastern part of the county represent the field walking transects of the East Hampshire Survey (Shennan, 1981); the dense cluster in the Avon valley north of Ringwood reflect the Middle Avon Valley Survey (Light, Schofield and Shennan, 1995), and the smaller grouping to the north of Basingstoke reflects the Loddon Valley Survey (Thames Valley Archaeological Services, 1994).

There are smaller concentrations to the north of Winchester (resulting from field walking along the route of the M3), and in the Lower Test valley (resulting from small field walking projects, watching briefs and topsoil stripping operations).

One hundred and twenty prehistoric (undated) records are for monuments rather than find spots, most interpreted as Neolithic of later. Some are features recorded or excavated during watching briefs, such as pits, ditches, linear features and hearths that did not produce any dating material. At least half are features identified as cropmarks on aerial photographs. This is reflected in the distribution of prehistoric monument types (Figure 45) which is largely confined to the chalklands, particularly those in the west of the county, where cropmarks are most visible (Figure 29).

5.10.2 The prehistoric (undated) archaeology of the aggregate resource area

In the Hampshire AHBR there are 133 prehistoric records for the NMP sub-units and 94 records for the resource areas, giving a total of 227 records for the aggregate resource area as a whole. This figure represents 20% of the total number of undesignated prehistoric records for the whole county.

The bulk of the records (95%) are for find spots, mainly of flint flakes. The main concentration of sites is in the northern part of the Avon valley sub-unit (north of Ringwood). This area has produced 35% of all the undesignated prehistoric records in the aggregate resource area: a direct result of extensive field walking carried out as part of the Middle Avon Valley Survey. Lesser concentrations occur in the Lower Test valley (15% of all records) and the Solent Coastal Plain (13.5% of all records). In these latter areas the high number of records is largely the result of extensive evaluations and watching briefs, particularly in the Test valley area and around Hayling Island. The western fringe of the East Hampshire sub-unit has also produced a comparatively large number of find spots. These records result again from field walking: this area is on the eastern limit of the East Hampshire Survey study area.

A handful of find spot records are interpreted as being suggestive of more tangible activity. Spreads of burnt flint, perhaps indicative of burnt mounds, are recorded on Bracklesham sands in the New Forest area, on Yateley Common in the Blackwater

valley, and to the west of Eastleigh in the Itchen valley resource area. There is also a possible Mesolithic or Neolithic seasonal occupation site at Yateley Common.

There are a small number of records for monuments rather than find spots and these records, for the most part, are assigned a Neolithic or later date. These consist of a series of enclosures, linear features and pits to the north of Fordingbridge in the Avon valley; a pit and a ditch in the Nursling area of the Lower Test valley; a funerary urn containing bone at Alton in East Hampshire; a hearth at Kingsley in East Hampshire; hearths and a midden at Lee-on-the-Solent, and a hearth and possible evidence of salt-making at Hayling island in the Solent Coast area.

5.11 The Roman Resource

5.11.1 Hampshire Overview

The Hampshire AHBR contains 2,319 records for Roman archaeology, making up 12% of all records in the AHBR (Figure 46). Of these, almost 95% are assigned a broad Roman date (AD 43-409). A Roman/medieval (or later) date is assigned to 29 sites. Twelve sites are recorded as originating in the first century, 17 in the second, 44 in the third, 20 in the fourth and four in the fifth century.

This resource is made up of a wide range of monument types including settlements, cemeteries and burials, sites relating to the pottery manufacturing industry, roads, field systems, and assorted settlement features such as pits, ditches and gullies. There are also numerous find spots, which make up nearly 60% of the total number of AHBR records.

The overall distribution of records for Roman sites is shown in Figure 46. There are dense concentrations of sites around the towns of Winchester, Andover and Basingstoke, and also around the centres of the Roman pottery industry in the Alice Holt area east of Alton and in the north western part of the New Forest. There is also a concentration of records in the northern part of the Avon valley; the numbers of sites here are boosted by the results of field walking during the Middle Avon Valley Survey.

On a more general level Roman sites are widely distributed throughout the chalklands. The distribution extends beyond the chalk areas in places – in the northern part of the county and the lowland zone to the north of the Solent coast – but there are areas off the chalk which are relatively blank; parts of the New Forest, the Blackwater valley, the southern part of the Avon valley, and much of the Wealden Edge. The impression that in these areas the Roman resource is under-represented is strengthened when find spots are excluded from the record and only the distribution of monuments is considered (Figure 47).

Regardless of the uneven distribution of known Roman sites, Hampshire has a rich Roman archaeological resource of national and international importance. The most important Roman archaeological site in the county is the town at Silchester. The fact that there is no medieval or later development at Silchester means that the Roman remains are uniquely well preserved. The existing town was re-planned in the early 50s, became a flourishing *civitas capital* (*Calleva Atrebatum*), and underwent a number of phases of rebuilding and expansion. To the south, at Winchester, was Hampshire's other *civitas capital*, *Venta Belgarum*, which became the fifth largest town in Roman Britain. Its evolution is not as clear as that of Silchester, largely because of later medieval development. A third important centre in Roman Hampshire was the trading port of *Clausentum* at Bitterne in Southampton.

These centres, other settlements, and the whole region, were connected by a network of roads (Figures 46-49). Smaller towns are frequently sited at the road junctions. Such towns may have served as market centres for the surrounding villas and settlements. They often originated through the development of roadside settlements such as *mansiones* (inns which served the imperial postal service). One excavated town associated with a *mansio* is that at Neatham, where the Chichester–Silchester road is crossed by the Winchester–London road. The town was defended by a ditch and fence, contained a settlement of c 20ha, and was in use from the first century into the fifth (Johnston, 1981).

The most intensively researched Roman settlements in rural Hampshire (as elsewhere in the country) are villas. Villas are distinguished from other rural buildings by the use of Roman architectural styles and decoration, and they represent the expenditure of wealth. The distribution of villas (Figure 48) is largely confined to the chalk downland.

The most noticeable blank area in their distribution is the Hampshire Basin, with no records for villas in the New Forest or in the Avon valley.

A number of villas show evidence for continuity of settlement from the Iron Age: finds of late Iron Age/early Roman artefacts have been recorded from many villa sites (Cunliffe, 1993), and pre-conquest features were noted during the excavations at Rockbourne villa. Other examples are Grateley South (Palmer, 1984) where a complex of rectilinear enclosures was preceded by a banjo enclosure and was, in turn, followed by a phase of four masonry buildings in typical villa style; Bramdean, where a villa developed on the site of a middle Iron Age settlement; and at Houghton Down, where the villa was preceded by a ditched enclosure of Iron Age form (Cunliffe, 1993).

Villa development began soon after the Roman conquest and reached a peak in the fourth century. It has been estimated that villas housed only 1% of the population and, whereas 'the evidence of the [villa] distribution is reasonably well known, the location, density and character of other types of rural settlement is poorly understood' (Fulford, 1996). The distribution of known settlement sites other than villas is also heavily weighted towards the chalk areas (Figure 49, showing AHBR records for *settlement, enclosure, rectangular enclosure, rectilinear enclosure* and *village*), although there are a few settlements in the Avon and Lower Test valleys, which are two areas devoid of villas.

Fieldwork at Chalton and elsewhere has demonstrated the frequency of settlement continuity from the late Iron Age (Cunliffe, 1993). The excavated settlement at Chalton began during the pre-conquest Iron Age and continued to be occupied into the fourth century. By then it had developed and expanded into a small elongated village or hamlet, consisting of regularly laid out plots, some containing rectangular timber buildings. Fieldwork showed that three settlements of this type were spaced one to two kilometres apart in a landscape divided into small fields and connected by a network of trackways. In addition to the village settlements, 14 'farmsteads' and four masonry buildings were recorded.

Although continuity from the Iron Age may be an overriding theme, occupation was not always unbroken. The excavated settlement at Owlesbury showed that the development of a complex of enclosures, field boundaries and trackways from the third century BC was interrupted by the end of the first century AD when the site fell out of use, only for it to be re-occupied in the fourth century (Johnston, 1981).

A major feature of the Roman archaeological resource in Hampshire is the pottery industry. The industrial remains are very well preserved and are of regional and national importance: their distribution is shown in Figure 50. The two main centres were the New Forest (where a wide range of fine wares were produced) and Alice Holt, near Farnham (where coarse wares derived from native types were being produced by the middle of the first century). Pottery produced in the New Forest reached as far north as Chester, and across the Channel to Brittany and Normandy (Fulford, 1996). Alice Holt was a major production centre for domestic cooking and storage ware in southern and southeast Britain. There was also a third, locally important centre at Rowlands Castle, near Havant; coarse wares and grey wares were produced here from the Flavian period to the third century. Much of the output went to Chichester and the surrounding countryside.

Although the kilns and kiln structures are well understood and the distribution of the pottery produced has been traced, there has been little research on the landscape setting of the industry. In particular little is known about the nature, extent and pattern of associated settlements (Fulford, 1996).

There are few Roman military sites in Hampshire. In particular there is no evidence of temporary camps associated with invasion of AD 43. It is assumed that the campaign

to subjugate the Durotriges and Dobunni in Wessex began with Vespasian's Second Legion entering Hampshire from a supply base in the Chichester/Fishbourne area (Cunliffe, 1993). The location of the next probable base is in the Poole Harbour area of Dorset and there is nothing in between. A fort somewhere between Winchester and Old Sarum, possibly sited at Stockbridge, is listed in the second century Antonine Itinerary, and there is a cropmark enclosure to the west of Kingsley which could be a fort, but the date of these sites is not known.

A possible site of a Roman naval base is at Bitterne, on Southampton Water (Johnston, 1981) on the site of the port of *Clausentum* (Cotton and Gathercole, 1958). The waterside settlement here was enclosed with a masonry wall, possibly defended with bastions, during the Theodosian phase of widespread fortification following the Barbarian raids of AD 367.

The most visually impressive Roman remains in Hampshire are the walls and bastions of Portchester Castle. This Saxon shore fort was constructed between AD 286 and 296, when Carausius declared himself sole ruler of Britain. The Portchester fort was added to the existing system of shore defences and provided Carausius with a front line defence against Imperial attack (the decisive battle marking the recovery of the province took place at a site in northeast Hampshire in AD 296 [Cunliffe, 1993, 239]). The fort continued in occupation throughout the fourth century and into the fifth.

The archaeology of the early fifth century and the early post-Roman period is poorly understood. It is likely that there were Saxon landings on the Solent coast (Yorke, 1989) and the discovery of three *grubenhausen* within Portchester Castle hints at continuity of settlement. Continuity within the walled town at Winchester is suggested by the fifth century cemetery at Worthy Park (Cunliffe, 1993). The situation at Silchester is less clear cut;, an Ogham inscription, dated to around 500, hints at the survival of a sub-Roman community (Cunliffe, 1993), but recent excavations by Fulford indicate that some levels of occupation are later than previously assumed (Fulford et al, 2006). Evidence for possible continuity in terms of rural settlement is suggested by finds of grass-tempered pottery at the later Roman settlements at Chalton and the excavation of *grubenhausen* at Old Down Farm, Andover, on a site occupied in the early Roman period (Davies, 1980).

5.11.2 The Roman archaeology of the aggregate resource area

In the Hampshire AHBR there are 211 Roman records for the NMP sub-units and 328 records for the resource areas, giving a total of 539 records for the aggregate resource area as a whole. This figure represents 23% of the total number of Roman records for the whole county.

The Roman archaeological resource is not distributed evenly throughout the aggregate landscape (Figure 46). There are notable concentrations of records in the northern part of the Avon valley, the adjacent north western part of the New Forest, the northern edge of the East Hampshire sub-unit, and the middle and northern parts of the Lower Test valley. There are smaller clusters of records around Hayling Island on the Solent coast, and around Silchester in the Kennet valley.

Almost 60% of the records for Roman sites in the aggregate resource area are for find spots. There are particular concentrations of find spots in the Avon valley, the middle part of the Lower Test valley, and at Hayling Island, and these tend to give an unbalanced impression of the overall resource.

Notwithstanding this uneven distribution, the aggregate resource area as a whole contains a relatively rich Roman archaeological resource. The most important site is the well preserved *civitas capital* at Silchester, where the development of this major settlement can be traced from its origins as a pre-Roman *oppidum* through to its use in the early post Roman period. Another very significant site is the Saxon shore fort of

Portchester Castle, where some continuity into the Saxon period has been demonstrated. A third noteworthy site occurs at Neatham, in the Wey valley resource area. Here a small town was established at the junction of three Roman roads and evolved throughout the period from the first to fifth centuries. The network of roads in Hampshire is well recorded and most of these run through various parts of the aggregate resource area (Figures 46-49). This network links the main centres in Roman Hampshire (Winchester, Silchester, the port at *Clausentum*) with each other and with other parts of the country.

Rural settlement is represented by 13 villas, clusters of which are found in the Itchen valley area and around Havant on the Solent coast. An important feature of villa distribution (Figure 48) is that a large part of southwest Hampshire appears to be devoid of villas; this includes the Avon valley, New Forest and New Forest Coastal Plain areas. In addition to the villas, there are a small number of rural settlements (Figure 49). These are distributed throughout many parts of the aggregate landscape but the most substantial is the site of a village at Crystal Hollow in the northern part of the Avon valley. There are very few records for field systems, either associated with settlements, or generally.

One of the most important elements of the Roman archaeological resource are the extensive and well preserved remains of the pottery industry. The bulk of the records for pottery kilns, clay pits, waster tips and associated features are in the north western part of the New Forest (with some overlap into the Avon valley sub-unit), but there are also features along the northern edge of the East Hampshire sub-unit associated with the Alice Holt industries, and a small number of sites in the Solent Coastal Plain area associated with the smaller scale industry at Rowlands Castle. Evidence for other industrial activity takes the form of three tile kilns (in the Hamble and Blackwater valleys), occasional evidence for small scale metal working, and a small amount of evidence for salt making around Hayling Island.

There are a number of apparent gaps, or areas with low monument density within the aggregate resource area. The Hamble and Rother valleys have very low representation in the AHBR, but the most notable ‘blank’ areas are the southern part of the Avon valley, the Lower Test valley between Nursling (where there are several sites) and Romsey, and, especially, large parts of the New Forest. In fact, if the records relating to the New Forest pottery industry are disregarded, the New Forest resource area has very few records for Roman sites and almost all of these are for find spots.

In *Archaeology in Hampshire: A Framework for the Future*, Michael Fulford makes a number of observations and recommendations which are relevant to the aggregate resource area (Hinton and Hughes eds, 1996, 33 and 34):

- While the evidence of the distribution of villas is reasonably well known, the location, density and character of other types of settlement is poorly understood.
- Survey work needs to be developed further in the general area of the Tertiary of the Hampshire Basin where little is known about settlement, its character and its distribution.
- Hampshire has a long coastline which forms one side of the richly varied estuarine landscape of the Solent, yet we have very little idea of how and where settlement took advantage of that marine resource.
- There has been almost no work on the landscape setting and associated settlement (of the pottery industries). Indeed there has been a signal failure to locate and investigate the settlements of these industries.

- It should be a priority to investigate further patterns of settlement in the west of the county and along the Hampshire Avon which gives the impression of having served as some kind of boundary through the Roman period, possibly perpetuating Iron Age tribal divisions.

5.12 The Early Medieval Resource

5.12.1 Hampshire Overview

The Hampshire AHBR contains fewer than 400 records for early medieval sites, making up 2% of all records in the AHBR. Of these, 70% are assigned a broad early medieval date (410-1065), 5% are assigned an early Saxon date (410–700), 13% are assigned a late Saxon date (post–700), and 2% of sites are assigned an early eleventh century date. The remaining 10% are interpreted as being early medieval to post medieval in date.

The early medieval resource is made up of a wide range of site types including various types of settlements, assorted settlement features (such as pits, ditches and gullies), cemeteries and burials, boundaries, lynchets, and a small number of pre-Norman churches and other religious establishments. There are also numerous find spots, which make up nearly 45% of the total number of AHBR records.

The main distribution of early medieval sites is centred in the chalk areas of the county (Figure 51), with notable concentrations in the towns of Winchester, Andover and Romsey. The Hampshire Basin, which includes the New Forest and the southern part of the Avon valley, is the one area with noticeably fewer records than elsewhere.

The question of cultural continuity from the later Roman into the post Roman period is poorly understood, partly due to difficulties in dating early Saxon objects (Hinton, 1981). At Silchester recent excavations by Fulford (Fulford et al, 2006) indicate some occupation levels which are later than previously assumed. At Portchester uncertainty over dating raises doubts over whether the site remained in continuous occupation or whether there was a break between Roman abandonment and its use in the Saxon period. At Winchester evaluation of the pottery suggests that there is some continuity of occupation although many areas within the walled town were abandoned, and no evidence of fifth or sixth century buildings has been found. Uncertainty also surrounds the evolution of the defended site at Bitterne.

Nor is the question of continuity clear with regard to rural settlement patterns. No Roman villas have provided evidence for continued occupation in the fifth century, and some early medieval rural settlements, such as Old Down Farm, Andover, have no Roman predecessor (Davies 1980). To the northeast of Winchester, Roman fields appear to have been abandoned (Hinton 1981). At Monk Sherborne a Saxon buckle was found in a pit close to the site of a Roman building, but continuity could not be demonstrated (D Hopkins, pers. comm.). At Chalton, however, early Saxon pottery was found at Roman settlement sites suggesting that here there was some degree of continuity (Cunliffe 1972).

Evidence for early Saxon settlement is provided by the location of cemeteries as well as the settlement sites themselves. Fifth century sites include the cemeteries at Itchen Abbas, Worthy Park, Alton and Droxford, the occupation site at Portchester, and finds evidence from Winchester (Eagles 1994). Evidence for sixth and seventh century occupation is more widespread, probably as a result of expansion from existing settlements (Eagles 1994, 16). An early settlement is that at Abbots Worthy in the Itchen valley, containing several *grubenhausen* occupied from the late sixth century and throughout the seventh century. The settlement at Old Down Farm comprised six of these structures which were only occupied for a short time. More substantial settlements have been excavated at Church Down, Chalton, where a number of large timber buildings were occupied during four successive phases in the seventh century (Champion, 1977), and Cowdery's Down, Basingstoke, also consisting of large, rectangular timber buildings, with at least three occupation phases during the late sixth and seventh centuries (Millet and James 1983). Saxon buildings and grubenhausen,

contemporary with the Cowdery's Down site, have been found at Riverdene, Basingstoke (D. Hopkins, pers. comm.).

In the chalklands the distribution of cemeteries seems to be related to the rivers (Eagles 1994) and the overall distribution of cemeteries and settlements (Figure 52) implies that the chalk downland and the Test, Itchen, Wey and Meon valleys were all areas of occupation and farming. Cemeteries on Portsdown ridge and occupation at Portchester suggest the use of the fertile south coast plateau, and the finds from Chalton provide evidence for farming between the south coast and Petersfield (Hinton 1981). There is little evidence for settlement or agriculture either in the southwest of the county or in the north.

After the annexation of the Isle of Wight in the seventh century, Bede began to refer to the population of Hampshire as the West Saxons. Winchester became the royal and ecclesiastical capital of the West Saxon kingdom (Welch 1996), and the first church, the Old Minster, was erected here some time in the mid seventh century. The commercial, trading and manufacturing centre of the West Saxons was at *Hamwic*, in present-day Southampton. *Hamwic* was founded in the seventh century and quickly grew into a large town. Its creation marked a significant moment in the socio-economic development of Wessex (Cunliffe 1993). The port prospered until the mid ninth century after which it declined in population and importance. This period saw a growth in importance of Winchester which increased during the later part of Alfred's reign until, by his death, the town was effectively the capital of Wessex.

The land was divided between the monarchy, the church and the nobility. Little is known of the homes of the nobles (*thegns*), but one possible establishment is Portchester (Cunliffe 1993). Within the circuit of the Roman walls a series of substantial timber buildings were in use between the seventh and late ninth centuries. After this the settlement was acquired by the king from the Bishop of Winchester and the tenth century saw the construction of a new complex of buildings. It is possible the settlement was the home of a noble before its acquisition by the church. Other *thegn's* residences were located at Bishop's Waltham (Lewis, 1985) and Faccombe Netherton (Fairbrother, 1990)

By the end of the tenth century the countryside had begun to take on its familiar medieval aspect. Study of a group of parish boundaries within the Ceptune Hundred illustrates how the modern landscape had acquired its administrative skeleton during the Saxon period. Two Saxon settlements were identified (Church Down, Chalton and Catherington). A north-south boundary – later a parish boundary – divided the two estates. By the late Saxon period both estates had been subdivided into smaller units which became parishes (Cunliffe 1993).

Rural settlements of the late Saxon period are difficult to identify; sites where organic-tempered and other later styles of pottery are found hint at continuity of use (Hughes 1984), but the only late Saxon/early Norman rural settlement structure so far identified is a timber building excavated at Swaythling, Southampton, dating from around 900 (Crockett 1993).

5.12.2 The early medieval archaeology of the aggregate resource area

In the Hampshire AHBR there are 24 early medieval records for the NMP sub-units and 32 records for the resource areas, giving a total of 56 records for the aggregate resource area as a whole. This figure represents 14.5% of the total number of early medieval records for the whole county.

This total is the lowest number of sites from any period in the aggregate resource area. Given that more than 60% of these records are for find spots and that there are only 21 records for monument sites in the whole of the aggregate landscape, it is clear that the early medieval archaeological resource is poorly represented. There are no records for

the Hamble and Rother valleys, or for the New Forest Coastal Plain sub-unit, and only one record for the Wey valley, Kennet valley, and East Hampshire sub-unit. Only three areas – the Upper and Lower Test and the Avon valleys – contain ten or more records.

There are, however, a number of important monuments, foremost among these being the Saxon settlement at Portchester. Within the walls of the Roman town, occupation continued (possibly unbroken) from the fifth to eleventh centuries. The settlement went through several phases; at one point it may well have been an aristocratic residence. By the late ninth century the estate was owned by the Bishop of Winchester, and later by the monarchy.

There are records for two Saxon churches, at Boldre in the New Forest, and Warnford in the Meon valley; a monastery at Nursling and a grange at Hurstbourne Priors in the Test valley. There is also the site of a tenth century hospital on the outskirts of present day Winchester.

Other than Portchester there is evidence of possible settlement in the form of a building at Michelmersh, three timber buildings at Bentley Green in the Wey valley, and a deserted medieval village near Tadley which may have first been established in the late Saxon period. There is also a field system originating in the early eleventh century at Somerley in the Avon valley and a parish boundary bank at Romsey which may have a late Saxon origin.

There is an early Saxon cemetery at Breamore in the Avon valley and a cemetery and a single burial from the Upper Test valley.

Finally there are records for a small pottery kiln and a kiln clamp in the Michelmersh area in the Lower Test valley.

5.13 The Medieval Resource

5.13.1 Hampshire Overview

The Hampshire AHBR contains almost 2,000 records for medieval archaeology, making up 10% of the total number of records in the AHBR. Of these, 61% are assigned a broad medieval date (1066-1539), 1% are dated to the earlier part of this period (1066–1400 or earlier) and 6% are assigned a medieval or later date (1066–1540 or later). Forty five sites are recorded as originating in the twelfth century, 80 sites in the thirteenth century, 41 sites in the fourteenth century, 34 in the fifteenth century and 20 sites in the sixteenth century.

The medieval resource is made up of a wide range of site types including deserted or shrunken settlements, moated sites, manor houses, deer parks, park pales, holloways and ecclesiastical sites. There are also numerous find spots, which make up nearly 30% of the total number of medieval records in the AHBR.

Medieval sites are widely distributed throughout the county (Figure 53), with notable concentrations in the towns of Winchester and Andover, in the Avon valley north of Ringwood, around Basingstoke and Alton, and in the Lower Test valley. Records for medieval sites are sparser in the western chalklands and in the New Forest area.

The twelfth and thirteenth centuries were a flourishing period for towns. Southampton played a major part in the post-Conquest cross-Channel trade and became one of the country's leading ports. The French raid of 1338 and the loss of Normandy had a significant affect on the fortunes of the town and although it continued to be of regional importance as a trading port, by the sixteenth century it was no longer a centre of European commerce (Hughes 1981). The town of Winchester also experienced mixed fortunes. By 1066, it was a major commercial settlement, the site of a royal palace and important ecclesiastical precincts. During the eleventh and twelfth centuries major building projects, including the castle and cathedral, greatly enhanced the city's economy and status. However, the emergence of London as the centre of royal administration and, later, the effects of plague affected a decline in the city's importance.

Other centres, such as Alton, Andover, Basingstoke and Romsey grew during this time and new towns were founded, such as New Alresford, Fareham, Stockbridge and Odiham. One of these new centres, Newtown, founded on the border with Berkshire around 1218, suffered a later decline: by the seventeenth century documentary references to the town cease, and today the remains of the deserted town survive beneath parkland laid out around Newtown House. The most important new town was Portsmouth, granted a charter in 1194. Although the first dock was built around this time the town's potential as a naval base was not realised until after the decline of Southampton.

In contrast to other areas of the country, ridge and furrow and terraced lynchets are rare in Hampshire. This, coupled with a lack of large scale excavations of rural sites, means that the full complexity of Hampshire's medieval landscape cannot be fully appreciated (Hinton 1996). A range of village plans, however, can be identified. The broad distribution of rural settlement consisted of nucleated villages in the central chalklands and in the west, and elsewhere by a combination of villages, hamlets, and dispersed farmsteads (Hughes, 1981). Concentrations of these dispersed settlements occur in the area to the east of Southampton, around Basingstoke and Odiham, around Winchester, to the west of Andover and Stockbridge, and in the Avon valley.

The nucleated villages usually contained the parish church, a manor house and a cluster of farms and dwellings. Some, such as South Meon, were granted market and fair rights and have evidence of planned streets (Hughes 1981). Other villages

comprise one-street settlements with the occasional side street; many of this type of village occur along the banks of the Avon, Test and Itchen. There are numerous hamlets in Hampshire and they are found all over the county except on the central chalk downs (Hughes 1981). Many originated as individual farms and attracted further settlement through time. Hamlets are frequently found as satellites to larger villages and have sometimes been incorporated into villages that were expanding.

There is evidence for settlement contraction and change. Settlement mobility and shift is apparent in places where medieval churches or manor houses are located away from present day village centres, or where archaeological investigation provides the evidence. One example of settlement change is Meonstoke, where the Saxon settlement shifted to one of three possible new sites; another is Popham, a thriving manorial settlement in the fourteenth century whose centre appears to have gradually shifted to the east from the fifteenth century onwards (Hughes, 1994).

There are roughly one hundred records for deserted or shrunken medieval settlements in the AHBR and their distribution is shown in Figure 54. A variety of factors is likely to have caused this settlement contraction and, although some settlements may have been in decline towards the end of the medieval period, many became depopulated only in the second half of the sixteenth century or later (Hughes, 1981 and 1994).

A significant number of settlements were depopulated as a result of the creation of parks and the building of country houses between the fifteenth and eighteenth centuries. This is likely to have been a gradual process and in many instances, the settlements may already have been in decline. Examples of settlements which were emparked in the post medieval period are Bramshill in north Hampshire, Breamore in the Avon valley, and Little Somborne in the Test valley (Hughes, 1994). At an earlier date the creation of deer parks (there were nearly 80 by the end of the fourteenth century) may have affected a similar episode of depopulation, and in the New Forest 34 settlements are recorded as being depopulated, possibly as a result of forest law enforcement when the Royal Forest was created by William I (Hughes, 1994).

Another factor in the depopulation of settlements is the change from arable to a pastoral economy in the chalk downs that took place as the profits to be made from wool increased. This led, in some cases, to settlements being given over to sheep pastures, as happened at Chilton Chandover. A third possible pressure on settlement is the significant lowering of the water table in the area of higher chalklands, where roughly half of the deserted settlements are to be found. There is evidence that in places on the chalk the water table was 30-60m higher than today (Hughes, 1994, 211)). The effects of plague must also have contributed to the desertion of settlements – although some communities which had reduced in size recovered during the 1350s (Hughes, 1994). Some settlements, such as Hatch near Basingstoke, were already in decline before the plague epidemics.

Evidence of the extent and character of the field patterns associated with the rural settlements is sketchy compared with other parts of Wessex (Hare 1994). On the chalk downlands, agriculture was characterised by open fields and by mixed farming with large flocks of sheep. Away from the chalk, in the London Basin to the north and the Hampshire Basin to the south, the landscape was characterised by a combination of villages and dispersed settlements with enclosed fields (Hare 1994). This is borne out by the observations of Leland (*Itinerary*, pp 275, 284-5, 269), who noted in the 1530s the open field landscape between Salisbury and Winchester and the enclosed fields in south Hampshire.

One of the most distinctive types of medieval field monument is the moated site. Most of Hampshire's moated sites date from the thirteenth century onwards, such as Milton where the moat was dug in the fourteenth century (Stamper, 1996). Most (but not all) contained building complexes, such as the excavated example at Wickham, where a

twelfth century aisled hall was rebuilt in the late thirteenth century at the time of the digging of the moat. The distribution of moated sites (Figure 55) is largely confined to those areas of the county where heavy clay soils are found, firstly because of the need for the moat to hold water, and secondly because these areas were heavily wooded (Figure 56) and the moat would have provided a degree of security (Stamper, 1996)). Much of this woodland was heavily assarted in the thirteenth and fourteenth centuries, suggesting that the moated farmsteads were the settlements of freeholder farmers establishing new farms in areas of woodland clearance.

Rural castles were not needed to exercise authority after the twelfth century in Hampshire and most of the earthwork castles were short-lived. Sixteen ringwork or motte and bailey castles are recorded in the AHBR; most appear to be of twelfth century date (Hughes 1981). A few castles were maintained although 'some may have been castles in name rather than actuality' (Hinton 1996). French raids along the south coast during the fourteenth and fifteenth centuries put pressure on the coastal defences; in particular the need arose for fortifications in which guns could be used, and this period saw developments at both Portchester castle and Southampton. Unlike in the neighbouring counties, the Hampshire aristocracy do not seem to have fortified their residences and the only new castle built by the aspiring gentry was that at Warblington, dating from the early sixteenth century.

The hunting lodge is another type of monument of the medieval period generally surviving now as earthwork features. Generally hunting lodges are enclosed by sub-rectangular banks or palisades; 23 are recorded in the AHBR, most of them associated with royal forests (nine in total are located in the New Forest area). Hampshire was the most extensively afforested county in England (Bond, 1994) and as well as the New Forest, there were at least ten other royal forests. The main ones were Chute forest in the west and northwest, Pamber and Bagshot in the north, Woolmer and Alice Holt in the east and Bere-by-Portchester in the southeast. The extent of former forests is reflected to some extent by the distribution of assarts and assarted woodland in Hampshire's Historic Landscape Character (Figure 56).

The management of deer to supply quantities of venison and to provide hunting involved the creation of deer parks. Few parks are recorded in the Domesday Survey, but they are recorded in increasing numbers during the twelfth century and the peak period of park creation occurred in the later thirteenth century (Bond, 1994). In total 80 deer parks are recorded in the AHBR and their distribution is shown in Figure 57.

5.13.2 The medieval archaeology of the aggregate resource area

In the Hampshire AHBR there are 249 medieval records for the NMP sub-units and 236 records for the resource areas, giving a total of 485 records for the aggregate resource area as a whole. This figure represents 25% of the total number of medieval records for the whole county.

There are records for medieval sites in all the NMP sub-units and resource areas, with notable concentrations in the Lower Test valley, the northern part of the Avon valley and the western fringe of the East Hampshire sub-unit. In contrast the eastern part of this same sub-unit, the southern half of the Avon valley, and the New Forest Coastal Plain sub-unit all contain a poorly represented resource. Of the resource areas, the Wey valley contains only a single record, the Rother valley has only three, and large parts of the New Forest (particularly the coastal area between Pennington and Fawley) are poorly represented.

One hundred and sixty eight (35%) of the records are for find spots. The greatest concentrations of find spots are in the Lower Test valley (28 records) and the northern part of the Avon valley (69 records). The large numbers of find spots in both areas is due to the comparatively high levels of archaeological evaluation and fieldwork that

has taken place there. In particular, field walking during the Middle Avon Valley Survey has resulted in many records for find spots, and this explains why find spots make up more than half of all records in the Avon valley sub-unit as opposed to little more than a quarter in all the other sub-units and resource areas.

There are a number of sites of archaeological importance in the aggregate landscape. Ecclesiastical establishments include Beaulieu Abbey in the New Forest, Netley Abbey, Durford Abbey, Mottisfont Abbey, Hayling Priory, Pamber Priory, the priories at Breamore and Ellingham in the Avon valley, and the Cistercian nunnery at Wintney in the Blackwater valley resource area. Most of these establishments include associated monastic granges and some are enclosed by moats. The Bishop's Palace at New Alresford is within the Itchen valley resource area, as is the St Cross hospital. One other hospital is located within the aggregate resource - that of St John Baptist at Fordingbridge.

There are 25 records for manors or manorial complexes, some of which have visible archaeological remains and others which are identified through documentary references. Manor houses are recorded from all the sub-units and from all the resource areas except the Kennet and Rother valleys. Many of the manors are moated, and in total there are 19 records for moats in the overall aggregate resource area. Associated with the ecclesiastical and manorial sites are thirteen fishponds, and some also have associated chapels. Other remains of the estate infrastructure include 15 deer parks and eight hunting lodges, five of which are within the Beaulieu Abbey estate.

The most prominent fortified site is Portchester Castle. French raids on the south coast and the demands of the Hundred Years War saw the use of the castle intensify and it underwent several phases of building between the twelfth and fourteenth centuries. The other stone built castle in the aggregate resource area is at Odiham in the Blackwater valley. Odiham Castle was constructed between 1204 and 1214, and was surrounded by a bank and moat, but the standing remains date from the early fourteenth century. There are also four early earthwork castles; the motte and bailey at Apple Dumpling Bridge, Gosport; the mound at Badminston Plantation, south of Fawley; the ringwork at Silchester amphitheatre; and the ringwork and bailey at Castle Hill, Breamore in the Avon valley.

The most substantial depopulated site is the deserted town of Newtown in the Kennet valley, but there are 44 other deserted or shrunken settlements in the aggregate landscape. This is a significant aspect of the medieval archaeological resource, forming almost half of all the deserted or shrunken settlements in the county as a whole (Figure 54). There are also six records for buildings which appear to be forming part of more extensive settlements. Deserted settlements are distributed throughout the aggregate resource area with the exception of the Wey and Rother valleys and the New Forest Coastal Plain. The greatest concentration occurs in the northern part of the Avon valley, where 16 settlements are recorded.

Field systems and related agricultural features are rare, but this is true of the county as a whole. There is one record for a strip field system, one lynchet, one record for field boundaries and three instances of ridge and furrow. There are also four pounds and four enclosures. Evidence of industrial activity is also scarce; a pottery kiln at Breamore and four records for salterns along the Solent coastal area.

The medieval archaeological resource is notably rich in the northernmost part of the Avon valley, on the river gravels located in Breamore and Woodgreen parishes. In this small area (covering approximately twelve square kilometres) there are 10 deserted settlements or dwellings, a ringwork and bailey, an Augustinian priory, a monastic grange, a moated manor, a chapel, a deer park, cultivation terraces and a possible pottery kiln.

5.14 The Post medieval Resource

5.14.1 Hampshire Overview

The Hampshire AHBR contains more than 2,000 records for post medieval archaeology, making up 12% of all records in the AHBR (Figure 58). Of these, more than half are assigned a broad post medieval date (1540-1900), a further 2.5% originated in the later sixteenth century, 4.5% originated in the seventeenth century, 9% in the eighteenth century and almost a third originated in the nineteenth century. Nearly 10% of the sites remained in use into the twentieth century.

The AHBR contains a very wide range of site types. More than half are buildings of various kinds, ranging from Baptist chapels to workhouses; there are many military fortifications, notably the forts and batteries defending Portsmouth; there are industrial features including the remains of brick, iron and pottery making, as well as harbours, docks, quays and boatyards; there are canals and railways and numerous mills; ornamental features include the lakes, ponds, icehouses and other features associated with landscape parks; features of the farming landscape include water meadows in the river valleys and forest encroachment enclosures and bee gardens in the New Forest; there are also many find spots, which comprise nearly 20% of all post medieval records.

Records for post medieval archaeology are widely distributed throughout the county, with a particularly dense concentration in the Solent coast area. There are large numbers of sites in the valleys of the Test, Itchen, and, to a lesser extent, the Meon rivers. There are further concentrations around Andover, as well as around Basingstoke, Farnborough and Aldershot (the northeast of the county in general is well populated with post medieval sites). There are also many records in the Wealden area; this reflects the results of the field walking transects of the East Hampshire Survey (the transects can be seen in the distribution shown in Figure 58).

The later part of the medieval period saw a decline in importance of Winchester as a seat of temporal power and of Southampton as a trading port. The post medieval period is marked by the increasing influence of London in both the north and south of the county; central Hampshire has been less affected by this influence (Barton, 1981).

In the south the most significant development was the growth in importance of Portsmouth and its role as a primary military base for the Defence of the Realm. The continuing war with France which led to constant raids on the south coast, and the threat posed by piracy, had led to the demise of Southampton as a sustainable trading port. The lack of a tenable harbour on the Solent coast also meant that it was difficult to carry armies to France without sufficient support. These were the circumstances that led to the growth of Portsmouth.

The fortification of Portsmouth began seriously at the end of the fifteenth century and has continued apace ever since. The earliest fortifications are the Round Tower and the Square Tower, which provided defence against shipping trying to enter the harbour. An enclosing wall and ditches, defending the town as well as the harbour, sprang from these early defences. The role of Portsmouth was of paramount importance nationally: to secure the Fleet and to enable the patrol of the Channel. Portsmouth became ‘a Royal castle of enormous proportions and remained so up to the reign of Victoria’ (Barton, 1981, 78). Portsmouth was fortified and supported by Southsea castle – the first castle in England designed with a keep with gun emplacements on angled bastions defended by a glacis – and Fort Cumberland, the last self-contained fully bastioned fortress built in England (Saunders, 1989, 136). Refortifications included the towns of Portsea and, at the end of the seventeenth century, Gosport. The fortifications were modified in the eighteenth century by which

time the mouth of Portsmouth harbour had become enclosed by an extensive bank, ditch and emplacement system.

Rebuilding of the French fleet after the Napoleonic War, with steam-powered ships mounted with heavy, long range guns, led to the construction of a series of 'Palmerston Forts' in the 1860s along the top of Portsdown Hill and to the west of Gosport. These forts were established as a result of the Royal Commission report of 1859 calling for enhanced defences for the protection of the naval dockyards in the face of the perceived threat from France.

The military threat posed by France at this time led to the establishment of military lines to protect London. The sandy heathlands on the county border with Surrey, around Aldershot and Camberley were the focus for this activity and as the importance of Aldershot developed, the military influence, which had been centred around Portsmouth, began to move to the northeast.

The wars with France and establishment of Portsmouth as a primary naval base led to a huge demand for ships and this period saw the clearance of the Forest of Bere and the development of a ship building industry on the river Hamble. An even more important ship building industry developed on the Beaulieu River in the New Forest. The plentiful supply of wood was used not only for ship building, but also as fuel for the manufacture of gunpowder and iron smelting. Iron work sites are concentrated in the New Forest and the south Hampshire Lowland areas, with some foundries elsewhere, such as that at Kingsley in the east and, most significantly, the Waterloo Iron Works at Anna Valley near Andover.

Brick making was another industry carried out in the New Forest, but the main centres for the brick making industry in Hampshire were the southern lowland area, from Romsey to Hayling Island and in the northeast, between Basingstoke and Farnborough (Figure 59). The use of brick began in the sixteenth century and the range of red brick buildings of this date form a very visual legacy of the post medieval period (Barton, 1981).

Another important industry in the northeast of the county was pottery manufacture. A pottery industry was already established here in the medieval period, producing highly decorated 'Surrey Wares', and, later, plain wares. By the beginning of the post medieval period, the potteries around Farnham, Cove, and the Blackwater valley were producing Tudor Green wares with their distinctive green glaze. This type of pottery was manufactured in huge quantities, most of it for the London market (Barton, 1981). The industry consisted of numerous small kilns dispersed throughout the production area wherever there were suitable sites.

Canal digging was an important development in the early eighteenth century and one of the driving forces was the need to link Portsmouth to London to facilitate the transport of goods between the capital and the naval base. There are a number of canals in the county and the Wey and Arun were both canalised. These efforts were superseded to some extent by road improvements and the later railways. The influence of London had become enormous by the middle of the nineteenth century largely because of the rail system, and it was at this time that holiday resorts such as Southsea developed.

Many towns prospered during the post medieval period; Andover, Basingstoke, Petersfield, Farnborough and Romsey grew in importance during the eighteenth and nineteenth centuries and their prosperity was boosted by the coming of the railways. After the Napoleonic Wars much development took place along the south coast: Portsmouth and Southampton expanded, as did the towns of Emsworth, Havant, Fareham and Lymington, and the town of Waterlooville was established.

In central Hampshire the rate of change in the post medieval period was much slower. Industrial activity was largely confined to the production of cloth made from wool or silk. Over most of the county, the focus of agriculture shifted during this period: sheep, important in the medieval period, declined to little significance, and farming became primarily concerned with cereal production. Initially this was to some extent driven by the need to provide for the demand of the army and navy, but more recently cereals were used to fatten cattle. Large granaries and barns, as well as corn mills and windmills are evidence for the increase in cereal production throughout this period.

During the later post medieval period the field pattern in Hampshire underwent significant alterations in character. These alterations resulted largely from the Parliamentary Enclosure Acts of the late eighteenth and early nineteenth centuries, and are characterised by regular-shaped fields, of varying sizes, with straight surveyed boundaries. On the chalk downland other types of field reorganisation are apparent: *Fields defined by rights of way* are irregular in pattern and shape and derive from the enclosure of downland by the use of trackways as boundaries, they date mainly from the eighteenth and early nineteenth centuries; *Prairie fields* have at least one boundary over 1km in length, they are the result of very large Parliamentary enclosure or extensive boundary loss.

The distribution of these types of post medieval-derived fields is shown in Figure 60. In addition to the widespread reorganisation of the farming landscape of the downlands, Parliamentary type enclosures occur in the south Hampshire Lowland zone, in the southern part of the New Forest area, the Avon valley, and less extensively in the east and north of the county.

Figure 60 also includes areas of post medieval water meadow, which are found most notably in the valley floors of the Avon, Test and Itchen. These consist of arrangements of parallel ditches with sluices to control the flow of water, and often cover extensive areas.

There are a number of parks and gardens throughout the county and their distribution is shown in Figure 61. Most of these underwent significant development or were created during the post medieval period, and many of the ornamental features contained within them are recorded in the AHBR.

5.14.2 The post medieval archaeology of the aggregate resource area

In the Hampshire AHBR there are 131 post medieval records for the NMP sub-units and 314 records for the resource areas, giving a total of 445 records for the aggregate resource area as a whole. This figure represents 20% of the total number of post medieval records for the whole county.

There are records for post medieval sites in all the NMP sub-units and resource areas. There are particularly dense concentrations of sites in the Lower Test valley, the Itchen valley, and in parts of the Solent Coastal Plain, Avon valley, and East Hampshire sub-unit. There is only a single site record for the Rother valley and the New Forest Coastal Plain also appears to be under-represented with only seven site records.

The military importance of the Solent coast is reflected in the archaeological record. Although most of the defensive remains on the Solent coast are outside the aggregate resource area - either in the towns (the Portsmouth harbour and town defences, for instance) or on non-aggregate geologies (the Palmerston forts on Portsdown Hill) – the late eighteenth century Fort Monckton, the Stokes Bay Lines and their associated batteries are included in the assessment. In the East Hampshire sub-unit the military presence in the east and north of the county which began in the late nineteenth century is evidenced by a series of redoubts on Broxhead Common which probably date from the Boer War.

Remains of the post medieval industries of Hampshire occur in many of the resource areas and sub-units. There are brickworks, brick kilns, or brickfields recorded from the Solent area, the Itchen valley and the Avon valley. The highest number of brick working sites, however, occur in the both the upper and lower parts of the Test valley. The New Forest brickworks are all situated on non-aggregate geologies and are not included in the assessment, but both ironworks and salterns are recorded in the New Forest resource area. Salterns are also found in the Solent Coastal Plain and there is an ironworks in the Meon valley. Other industrial sites include the gunpowder works at Fritham in the New Forest, a gunflint factory in the Lower Test valley, three pottery kilns in the Avon valley, gravel pits in the Hamble valley, and a whiting works at Mottisfont (this site is actually situated on chalk but is included in the assessment because it lies within the boundaries of the Lower Test valley sub-unit).

Other industrial sites include the silk mill at Overton in the Upper Test valley, sawmills in the Itchen valley and a timber yard on the river Hamble at Curbridge, tanneries in the Avon and Wey valleys, fulling mills in the Wey and Itchen valleys, paper mills in the valleys of the Wey, Test, Hamble and Meon as well as in the East Hampshire area. There is also a lime kiln recorded in East Hampshire and five blacksmiths' workshops in the Lower Test valley.

There are a number of records for canals and railways and associated features such as locks, bridges and stations. The most notable is the Itchen Navigation canal; other canals occur in the Solent Coastal Plain, the Test valley, Blackwater valley and the canalised stretch of river Wey. Railways are recorded on the Solent coast and in the Meon, Itchen and Upper Test valleys.

The post medieval field pattern, mostly resulting from the Parliamentary enclosure of fields, is most extensive in the valleys of the Lower Test and Avon (particularly to the south of Ringwood) and along the southern fringe of the New Forest (Figure 62). There are extensive water meadows in the Avon, Test and Itchen valleys, and a single record for a water meadow in the Blackwater valley.

Relatively few agricultural features are recorded in the AHBR: there are a number of pounds, a sheep fold in the Meon valley, and a single record for ridge and furrow in the Blackwater valley. In the New Forest and in the north eastern part of the Avon valley sub-unit there is a range of features peculiar to this specific area. These consist of enclosed field systems and irregular enclosures representing late post medieval forest edge encroachment. There are also several bee gardens – small square banked enclosures, necessary to protect the straw hives from being eaten by cattle. These features are usually located on heathland; the best example in the aggregate resource is at Ibsley Common, where there are six of these bee gardens.

The importance of cereal cultivation during the post medieval period is attested by the large number of mills recorded in the aggregate resource area. There are four windmills, a tidal mill on the Solent coast, and more than 30 water-powered corn mills. These are distributed throughout most of the aggregate area, but especially in the Itchen and Meon valleys and in the southern part of the Blackwater valley, all located close to the main cereal growing areas of chalk downland.

There are six post medieval deer parks in the aggregate resource area and four hunting lodges. Five of the deer parks and three of the hunting lodges are in the New Forest area or the north eastern part of the Avon valley sub-unit. There are eight records for country houses, manor houses or post medieval phases of earlier houses, of which half are located in the Upper Test valley. In addition there are a number of parks and gardens and associated ornamental features (Figure 61), including ponds, lakes, a walled garden, a maze and a bowling green.

5.15 The Modern Resource

5.15.1 Hampshire Overview

The Hampshire AHBR contains more than 1,000 records for modern archaeology, making up 6% of the total number of records in the AHBR. Of these, three quarters are military sites, the vast majority dating from the Second World War. There are a small number of records for sites dating from the First World War and from the 1900s.

The non-military sites comprise a range of site types. There are the remains of brick and pottery making industries, railways, and a range of buildings including factories, power stations, gas holders, churches, chapels, schools and cinemas. There are also a small number of records for find spots.

There are 96 records for *negative evidence* – sites where archaeological evaluation or excavation has revealed no features.

Modern archaeological features are widely distributed throughout the county (Figure 63). There are dense concentrations of sites in the northeast of the county, in and around Winchester, in the Avon Valley around Fordingbridge and Ibsley, and in the Solent coastal area.

World War 2 sites dominate the record. These can be categorised as two main groups of sites; air defence features and anti-invasion features. Air defence features include airfields, of which eight are recorded in the AHBR, anti-aircraft batteries, air raid shelters and bombing decoy sites. There are 77 records for anti-aircraft batteries; these include both heavy and light batteries, positioned to defend the airfields and other military installations as well as the major towns and cities. There are many anti-aircraft batteries in the Solent Coastal area, the coastal area to the south of the New Forest, around Winchester, at Middle Wallop airfield to the southwest of Andover, and around Ibsley airfield to the north of Ringwood. Air raid shelters are recorded mainly in Winchester, but there are some around Southampton and at Ibsley airfield. Bombing decoys are recorded mainly in the Solent coastal area (especially around Langstone Harbour and Hayling Island), along the coast to the south of the New Forest, and around Basingstoke. There are also more than 50 records for searchlight batteries; these are most systematically recorded in the eastern part of the county, where they are sited in a regular grid layout.

Anti-invasion defences comprise pillboxes, anti-tank ditches, tank traps, barbed wire entanglements, mortar emplacements and machine gun posts. Pillboxes form a third of all modern records in the AHBR. The distribution of pillboxes and other anti-invasion defences is shown in Figure 64. The main concentration of defences is to the west of Fleet where the features formed part of the GHQ Line A; the defences around Fordingbridge formed part of the Ringwood Stop Line (Foot, 2006); there are also numerous pillboxes and other defences along the Solent coastal area and to the north of Winchester, where they formed the perimeter defences of Worthy Down airfield (D. Hopkins, pers. comm.).

There are a number of Second World War sites of national importance; these are associated with the D-Day invasion of 1944 and include seven embarkation hards in the Southampton area and on the New Forest coast, as well as three sites, at Marchwood, Southampton Water, and Cobbs Copse on the Beaulieu River, where the Mulberry Harbours used in the invasion were constructed and launched.

First World War sites and pre-1914 military sites include a series of coastal batteries on the Solent coast, a coastal battery at Stone Point on the New Forest coast, and a few buildings and training trenches.

There are also 33 Royal Observer Corps observation posts in the record; these date from the immediate post-war years are distributed fairly evenly around the county.

5.15.2 The modern archaeology of the aggregate resource area

In the Hampshire AHBR there are 88 records for modern sites in the NMP sub-units and 172 records in the resource areas, giving a total of 260 records for the aggregate resource area as a whole. This figure represents 22% of the total number of modern records for the whole county.

There are records for sites from the modern period in all the NMP sub-units and resource areas except in the Rother valley. Site records are particularly numerous along the Solent coastal strip and around Hayling Island, around Fordingbridge and to the north of Ringwood, in the New Forest coastal area, and in the northeast between Fleet and the county border with Berkshire.

The vast majority of the records are for sites in use or constructed during the Second World War. There are four D-Day embarkation hards at Marchwood, and there are other hards just outside the aggregate resource area (both on the Solent and along the New Forest coastal area), in addition to the construction and launch sites of the Mulberry Harbours used in the invasion. Also associated with the D-Day operations are a series of parking bays near Botley which were used by military vehicles en route to the embarkation points. There are in addition a number of parking bays, particularly in the New Forest area, which are not recorded in the AHBR (D. Hopkins, pers. comm.).

There are a number of airfields in the aggregate resource area, at Ibsley and Winkton in the Avon valley, at Hamble and Lee-on-the-Solent on the Solent Coastal Plain, and at Beaulieu Heath in the New Forest. There is also a radar station near Bransgore and an anti-submarine direction finding station on Ibsley Common.

Airfield defence involved anti-aircraft batteries and bombing decoy sites. These installations were also established around the main urban settlements. They are most obvious around the cities and towns of the Solent area, where there are nine anti-aircraft batteries and eight decoy sites. There is also a group of batteries around Ibsley airfield, and several in the coastal area of the New Forest. Bombing decoys are also situated in the coastal zone of the New Forest area. There are also records for searchlight batteries both on the Solent coast and in East Hampshire.

Anti-invasion defences are numerous on the Solent coast, where there are 25 pillboxes, and in the northeast, where pillboxes, anti-tank ditches, tank traps and a mortar emplacement formed part of the GHQ Line A between Heckfield and Ewshot (Foot, 2006). Another co-ordinated defensive line, the Ringwood Stop Line, was sited around Fordingbridge.

Other military sites of this period in the aggregate resource area include 10 Royal Observer Corps sites, mainly on the Solent coast, the New Forest coast, the Avon valley and the Lower Test valley. There are also a few pre-1920s features, which mainly consist of coastal batteries on both Solent and New Forest coasts.

There are few non-military sites recorded in the aggregate resource area: a small brickworks at Hayling Island, two records for ridge and furrow in the New Forest and one for steam ploughed rig at Hayling Island. Railway features are recorded in the Meon valley as is a lock on the Itchen Navigation. There are a handful of records for buildings and for features such as flood defences, wind pumps and power stations. There are also four find spots and 14 records for *negative evidence*.

5.16 The Undated Resource

5.16.1 Hampshire Overview

The Hampshire AHBR contains more than 4,000 records for archaeology of uncertain or unknown date, making up 20% of the total number of records in the AHBR.

A large number of these records are for sites such as enclosures or linear features which have been identified from aerial photographs and cannot be dated without further investigation. There are a similar number of records for isolated features such as ditches, pits and post holes uncovered during small scale excavation or evaluation, but with no associated dating material. Many other records are for features such as earthwork banks, or ill-defined earthworks noted during fieldwork to which no precise date or, in some cases, function, can be assigned. There is a range of features whose function is more closely interpreted, such as lynchet, holloway, wood bank, but whose date is uncertain. Five percent of the records are for *negative evidence* – where archaeological evaluation has taken place in advance of development and no features have been identified. Seven percent of the records are for find spots.

The resource comprises a range of site types, but most of the records fall into two broad categories: linear features and enclosures. Almost a third of the records are for *linear features*, most of them identified as cropmarks on aerial photographs. Whilst many of these linear features are not arranged in any discernable pattern and are of indeterminate function, others can be seen to be forming part of wider field systems or complexes of features. A further 17% of the undated records have been interpreted more precisely as *earthwork bank, linear earthwork, field system, holloway, lynchet, trackway or wood bank*.

Eleven percent of the records are for enclosures, almost all of them identified from aerial photographs. The majority are assigned the generic interpretation *enclosure* but there are also records for *circular enclosure, curvilinear enclosure, D-shaped enclosure, rectangular enclosure, rectilinear enclosure and square enclosure*.

Site records for undated sites are widely distributed throughout the county, but are concentrated primarily in the central and northern chalklands (Figure 65). This reflects the transcription of cropmark features from aerial photographs during the 1990s; the majority of the transcribed sites are located on the chalk downland and a high proportion of them are recorded as undated (Figure 29). There are fewer undated sites recorded in parts of the New Forest and to the north of Liphook in the far east of the county. There are relatively fewer undated sites in the area to the southwest of Andover, but here many cropmark sites were assigned more specific dates as part of the Danebury Environs Project (Palmer, 1984).

5.16.2 The undated archaeology of the aggregate resource area

In the Hampshire AHBR there are 210 records for archaeological sites of uncertain or unknown date for the NMP sub-units and 407 records for the resource areas, giving a total of 617 records for the aggregate resource area as a whole. This figure represents 15% of the total number of undated records for the whole county.

There are records for undated sites in all the NMP sub-units and resource areas. There are particularly dense concentrations of sites in the Upper and Lower Test valleys, and in parts of the Avon valley, particularly to the immediate north of Ringwood and on the fringes of the New Forest in the northeast of the sub-unit.

Many of the features which cannot be dated with any certainty have been identified from aerial photographs and include, most notably, linear features visible as cropmarks. The number of cropmark linear features as a proportion of the undated archaeological resource in the aggregate resource area is, however, considerably less

than that in the county as a whole (11% of the total number of records as opposed to 28%). The same is true of enclosures, which make up 4% of the undated sites in the aggregate resource as opposed to 11% in the county. Conversely there is a higher proportion of linear features surviving as earthworks, and of sites interpreted as *earthwork*. There are also records for find spots of undiagnostic material: these records make up roughly 10% of the total. Seven percent of the total is made up of records for *negative evidence* – where archaeological investigations have revealed no traces of remains.

For some features, possible interpretations are suggested in the AHBR, but dates cannot be assigned with any certainty. Notable amongst these are earthwork features, described as 'humps and bumps', and which in some instances may be the remains of former settlements. A high proportion of these records for earthworks are located in northern part of the Avon valley sub-unit and in the Upper and Lower Test valleys, where there are also a relatively large number of lynchets and field systems. There are a particularly high number of earthwork banks in the north western part of the New Forest, on or close to the Bracklesham sand deposits; many of these features are likely to be wood banks or remnants of forest edge encroachment. There are also good examples of possible field systems in the Blackwater valley resource area.

6 Archaeological Resource Assessment: Characterisation

6.1 Introduction

6.1.1 Background

This section comprises three major sub-sections. The first (6.1) is this introduction, the second (6.2) presents a detailed archaeological assessment of the 10 archaeological resource areas, and the third (6.3) presents a detailed archaeological assessment of the four NMP sub-units.

The second sub-section is further divided into 10 parts; one for each of the archaeological resource areas (6.2.1 – 6.2.10). The third sub-section is divided into four parts; one for each of the NMP sub-units (6.3.1 – 6.3.4).

Each part of subsection 6.2 contains five mini-sections (e.g. 6.2.1.1 – 6.2.1.5) comprising the following content.

1. A summary of the physical landscape of that archaeological resource area
2. A summary of the Historic Landscape Character of that archaeological resource area
3. A summary of the archaeological character of that archaeological resource area
4. A period by period description, based on the Hampshire AHBR, of the archaeological record for that archaeological resource area
5. A summary of the Scheduled Monuments in that archaeological resource area

The same format is replicated for each of the four NMP sub-units in the third sub-section (e.g. 6.3.1.1 – 6.3.1.5)

6.1.2 Data standards

6.1.2.1 Archaeological periods

Period definitions used in the Hampshire AHBR are based on dates rather than terms and are outlined below.

Palaeolithic	500,000 – 10,001 BC
Mesolithic	10,000 – 4,001 BC
Neolithic	4,000 – 2,201 BC
Bronze Age	2,200 – 801 BC
Iron Age	800 BC – AD 42
Prehistoric (undated)	500,000 BC – AD 42
Roman	AD 43 – 409
Early medieval	410 – 1065
Medieval	1066 – 1539
Post medieval	1540 – 1900
Modern	1901 – PRESENT
Undated	-

Further sub-divisions of these broad date ranges are defined as necessary in the text of the archaeological assessment.

Whilst the great majority of archaeological sites recorded in the Hampshire AHBR fall within these date ranges, there are a considerable number which are interpreted as falling within two consecutive periods (for instance late Neolithic/early Bronze Age, or Iron Age/Roman). In the following assessment, sites interpreted as falling in more than one period are considered as belonging to the earliest period. Thus records for sites interpreted as Iron Age/Roman will be included in the assessment of the Iron Age, but not in the assessment of the Roman period.

6.1.2.2 Terminology

Throughout the following assessment the terms ‘site’, ‘record’, ‘monument’ and ‘find spot’ are used frequently when referring to the archaeology of the aggregate resource. In order to avoid confusion these terms are defined below.

‘Monument’ is a feature of archaeological significance which has structural remains (such as walls, banks, ditches, pits, post holes)

‘Find spot’ is the location of material of archaeological significance (such as pottery, flint, faunal remains) not found in association with any monument.

‘Site’ is used in its general, non-archaeological meaning of geographical or physical location. In other words ‘site’ can mean the site of a find spot or the location of a monument.

‘Record’ is a record in the Hampshire AHBR. It represents the record of a site, which can be either a monument or a find spot.

‘Site record’ is used in the same way as ‘record’

6.2 Archaeological resource areas

***Table 4**. Summary of AHBR records in the archaeological resource areas*

Period	Blackwater valley	Hamble valley	Itchen valley	Kennet valley	Meon valley
Palaeolithic	0	1	20	0	0
Mesolithic	8	4	9	2	4
Neolithic	9	0	13	3	6
Bronze Age	17	0	17	10	1
Iron Age	2	0	9	14	1
Prehistoric (undated)	14	0	8	3	0
Roman	14	2	37	65	10
Early medieval	3	0	7	1	4
Medieval	22	5	29	7	12
Post medieval	31	7	49	5	20
Modern	43	5	12	2	4
Undated	54	3	20	22	10
Total	**217**	**27**	**230**	**134**	**72**

Period	**New Forest**	**Rother valley**	**Solent Coastal Plain**	**Upper Test valley**	**Wey valley**	**Total**
Palaeolithic	9	0	9	4	1	**44**
Mesolithic	19	1	32	3	3	**85**
Neolithic	6	1	15	10	4	**67**
Bronze Age	279	12	44	18	3	**401**
Iron Age	11	3	23	14	0	**77**
Prehistoric (undated)	21	5	32	8	2	**94**
Roman	105	1	36	36	22	**328**
Early medieval	3	0	3	10	1	**32**
Medieval	52	3	57	48	1	**236**
Post medieval	77	1	53	60	11	**314**
Modern	22	0	73	9	2	**172**
Undated	147	4	46	93	8	**407**
Total	**751**	**31**	**423**	**313**	**58**	**2257**

6.2.1 New Forest

6.2.1.1 The New Forest landscape

The New Forest resource area covers 235 square kilometres and represents 30% of the total aggregate resource in Hampshire. All of this area – apart from its most northerly and westerly edges – is within the boundary of the New Forest National Park (Figure 8).

The aggregate-producing geologies in the resource area include both superficial gravel deposits and bedrock sand. In the northwest there are roughly 27 square kilometres of Bracklesham sand and in the northernmost part of the area there are roughly 3 square kilometres of Whitecliff sand deposits. The other 205 square kilometres are formed by river gravels, predominantly plateau gravels associated with the ancient Solent River.

The central core of the resource area is characterised by heathland and forest, with bands of heathland-derived pasture and woodland around its perimeter. This is predominantly a landscape of broad unenclosed treeless heaths and extensive woodland. The perimeter comprises an enclosed landscape of unintensively grazed pasture in a well-wooded setting.

The coastline is characterised by mudflats, low eroding cliffs and (especially at Lymington) by saltmarsh. Immediately behind the coast is an enclosed landscape of arable farmland with wooded valleys with some areas of open arable farmland. Between Brockenhurst and Fawley there are extensive areas of mixed arable and grazing land interspersed with woodlands and numerous hedges and hedgerow trees. This landscape of mixed farmland and woodland also characterises the northernmost part of the resource area, where it is outside the New Forest National Park.

There are active and dormant gravel quarries along the western side of Southampton Water (focused on the area to the south of Fawley).

6.2.1.2 Historic Landscape Character

The Historic Landscape Character (HLC) of the New Forest archaeological resource area is dominated by heathland (Figure 79). Heathland HLC types occupy all of the western and central parts of the resource area, and encroach to a large extent on the southern part, between Lymington and Hythe. Only on the southern coastal zone and in the very far north (north of West Wellow) is the landscape character one primarily of fields.

Extensive areas of nineteenth century plantations occur in the New Forest heathland, particularly in the northwest and in the central zone, north of Brockenhurst. Also to the north of Brockenhurst is an extensive area of assarted woodland, and smaller pockets of assarted woodland occur elsewhere in the resource area. At several locations in the northwest and central areas there are tracts of heathland enclosed woodland, the most extensive being at Rhinefield, to the west of Brockenhurst. In places, particularly in the northwest, the open heathland is interspersed with nineteenth century wood pasture, enclosed heath and scrub, purlieus and other enclosed pasture.

In the southern part of the resource area, on the coastal plain between Lymington and Fawley, the landscape is predominantly one of fields. These are a mixture of fields with wavy boundaries (those to the west of the Beaulieu River tending to be small as opposed to the large fields occurring to the east of the river) and Parliamentary type fields, with straight surveyed boundaries, of medium or small

dimensions. The fields in this area are interspersed with small tracts of recent (no earlier than nineteenth century) woodland plantations.

More Parliamentary type fields occur along the western side of Southampton Water. In the northernmost part of the resource area, the valley of the river Blackwater is characterised by miscellaneous valley bottom paddocks and pastures. North of the river the fields consist mostly of irregular assarts of varying dimensions.

To the south of Lymington part of the coastline is included in the aggregate resource area and this is characterised by salt marsh and salterns. In the east there is a large industrial area, comprising Fawley oil refinery, and a number of parks are scattered throughout the New Forest resource area.

6.2.1.3 Character of the archaeology

In the Hampshire AHBR there are 751 records for this resource area, representing roughly 20% of archaeological records for the aggregate resource as a whole (Figure 66).

Although this figure is considerably higher than any of the other resource areas or NMP sub-units, it should be pointed out that the New Forest is by far the largest resource area in the project. In fact the total of 751 site records equates, in broad terms, to roughly three sites per square kilometre, which is well below the average density of five sites per square kilometre in the overall aggregate resource.

Twelve of the sites are located on Whitecliff sand and 171 are on Bracklesham sand; the remaining 568 sites are on river gravels.

There are 137 Scheduled Monuments in the resource area, making up more than half of all Scheduled Monuments in the aggregate landscape (Figure 67). A breakdown of the archaeological resource is shown below in table 5.

Table 5. AHBR records for the New Forest resource area

New Forest	**Number of records**	**% of aggregate resource**
Size (sq kms)	235	30
Scheduled Monuments	137	58
Palaeolithic	9	10
Mesolithic	19	12
Neolithic	6	5
Bronze Age	279	43.5
Iron Age	11	8
Prehistoric (undated)	21	9
Roman	105	19
Early medieval	3	5
Medieval	52	11
Post medieval	77	17
Modern	22	8
Undated	147	24
Total no of records	**751**	**20**

There is a particularly rich Bronze Age archaeology in the New Forest resource area; nearly half of all Bronze Age sites in the aggregate resource as a whole. There are a large number of barrows; many survive as earthworks and more than 100 are

designated Scheduled Monuments. There are also significant numbers of burnt mounds (Figure 36).

The remains of the New Forest Roman pottery industry are another significant aspect of the archaeological resource. The kilns, waster tips, clay pits and sandstone quarries of this nationally important industry make up the bulk of Roman records in the New Forest resource area (Figure 50).

A third notable aspect of the archaeological resource of the New Forest is the influence of the unique nature of the forest landscape on the character of the archaeology. This is most apparent in the post medieval resource which includes many records for enclosed field systems and enclosure banks representing forest edge encroachment, and records for wood banks, coppice banks and plantations.

In general, though, given the extent of sand and gravel deposits, the archaeological resource of the New Forest is represented by few records of sites for most periods and there is much potential for further archaeological survey. This is especially true for the prehistory of the area, even for the Bronze Age. Despite the abundant evidence for activity in the form of barrow cemeteries, no definite Bronze Age settlements have been identified. The same can be said of the Iron Age; hillforts indicate an organised landscape but the settlement pattern is unknown. Evidence of early prehistoric activity is limited largely to find spots of single artefacts or small assemblages. A similar incomplete picture of the settlement pattern applies also to the Roman period; apart from the relict pottery industry in the northwest, the Roman archaeological resource in the New Forest is not well represented.

6.2.1.4 Archaeological resource

Palaeolithic

In the Hampshire AHBR there are nine records, equating to 10% of all Palaeolithic records for the aggregate resource (Figure 68). Two of these are located on gravel terraces of the river Avon, four are in the area south of Brockenhurst, and three are from the northern part of the Forest.

All the records are for find spots of single artefacts or small assemblages and all are assigned a broad Palaeolithic date.

Nationally river gravels are an important source of finds of Palaeolithic artefacts and within Hampshire, two thirds of the Palaeolithic records in the AHBR are from gravel deposits. The New Forest resource area contains the most extensive river gravel deposits of all the areas considered in this project (208 km^2, forming 26% of the total in the county). The AHBR records for Palaeolithic find spots in this area, however, make up only 10% of the total number from the aggregate resource area as a whole.

This apparent contradiction can be partly explained by the fact that some of the New Forest deposits (the higher plateau gravels) are the oldest in the county and it can be assumed that these are older than the earliest human occupation (Wymer, 1993). Nonetheless it is likely that there is good potential for further discoveries of Palaeolithic material in some of the New Forest gravels.

A further dozen find spots are located on cliffs and beaches just outside the boundaries of the aggregate resource, or in the towns of Fawley, New Milton and Pennington and are not included in the assessment.

Mesolithic

In the Hampshire AHBR there are 19 records, equating to 12% of all Mesolithic records for the aggregate resource (Figure 69). The site records are distributed sparsely around the whole of the resource area. Four are located on Bracklesham sand, one on Whitecliff sand, and the remaining 14 on river terrace gravels.

All the records are assigned a broad Mesolithic date and all are for find spots of single artefacts or small assemblages, apart from a possible occupation site at Bowman's Farm, north of Totton. The Bowman's Farm site was discovered during a gas pipeline watching brief. Many Mesolithic flint implements were found as well as four possible dwellings, whose dating is inconclusive.

Jacobi (1981, 15) identifies the New Forest as one area which may be under-represented because of a lack of local research and where surface finds hint at the potential to produce much information.

Neolithic

In the Hampshire AHBR there are 6 records, equating to 5% of all Neolithic records for the aggregate resource (Figure 70). Five records are on river terrace gravels and the sixth on Bracklesham sand.

The recorded sites are all assigned a broad Neolithic date and are distributed sparsely around the edges of the resource area. This represents an extremely limited resource, especially when one considers that all these records are for single find spots.

Gardiner (1996) identifies the New Forest as a 'largely blank area on the distribution map' where future research needs to be prioritised (Gardiner, 1996) and these figures certainly bear this out.

Bronze Age

In the Hampshire AHBR there are 279 records equating to 43.5% of all Bronze Age records for the aggregate resource (Figure 71). In terms of numbers of sites this represents an extremely rich resource, comprising almost 10% of all Bronze Age records in the county AHBR (Figure 35).

Seven of the sites are located on Bracklesham sand, one on Whitecliff sand, and the remainder on river terrace gravels. The main concentrations of recorded sites occur on the gravels between Lymington and Fawley.

The resource is dominated by barrows, which form roughly 80% of recorded sites. The majority (188) of these are *bowl barrows*, but there are examples of 'fancy' barrows: ten *bell barrows*, four *saucer barrows* and three *disc barrows* (Figure 39). Thirteen barrows are described as *round barrows* and a further four are described simply as *barrow*. Many of these monuments survive as earthworks and there are only five records for *ring ditch* (interpreted as plough-levelled barrows).

Ten cremations are recorded, of which seven were discovered during the excavation of barrows; one of these was contained in a stone cist. There is also a single record for a 'mortuary house' on Beaulieu Heath, although few details of this site are available.

Barrows reflect the nature and extent of Bronze Age activity and possibly occupation in the absence of identified settlements. The same is true of burnt mounds, of which 20 are recorded from the New Forest resource area (Figure 36). The main concentration of these monuments is in the northwest, where seven mounds occur on the Bracklesham sand (burnt mounds are the only Bronze Age site type recorded on Bracklesham sand).

There are no definite records for settlements but there are rectilinear enclosures at three locations: Homy ridge, near the Wiltshire border; Hinchelsea Moor, to the west of Brockenhurst; and Lower Erbury, near the mouth of the Beaulieu River. Some or all of these may be enclosed settlements dating from this period. There are also a few rectilinear field systems, notably at Crockford, Ridley Plain and Lower Erbury.

Iron Age

In the Hampshire AHBR there are 11 records equating to 8% of all Iron Age records for the aggregate resource (Figure 72). One site is located on Whitecliff sand, the other 10 on river terrace gravels. The sites are distributed sparsely within the resource area, with one group in the south east around Fawley and a second in the far north.

The most significant sites are the three, possibly four hillforts. Two of these, at Dark Hat Wood on the Wiltshire border, and Castle Hill to the east of Ringwood, are univallate enclosures; Malwood Castle, towards the north of the resource area, is a multivallate fort. The fourth, at Crockford near the south coast is a possible hillfort and was partially excavated in the 1960s. There are three further hillforts elsewhere towards the northern part of the forest which are on clay, and a fourth (Ampress camp) within the town of Lymington; none of these sites are included in the assessment. What this distribution does demonstrate is that the density of hillforts in the landscape of the New Forest is comparable with that found anywhere on the chalkland (Figure 42).

The other records are all for find spots apart from a midden discovered during pipeline-laying operations at Stone on the south coast, and a bloomery from West Wellow in the very north of the area. This latter site is of importance because evidence for Iron Age metalworking in Hampshire is scarce (Champion and Champion, 1981).

Prehistoric (undated)

In the Hampshire AHBR there are 20 records equating to 9% of all undated prehistoric records for the aggregate resource (Figure 73). Seven of these sites are located on Bracklesham sand deposits, the remainder are on river terrace gravels. The sites are dispersed throughout the resource area, apart from the coastal zone, and there are broad concentrations on the Bracklesham sand in the northwest and around Brockenhurst.

All the records are for find spots of flint flakes or burnt flints, and four are for flint scatters. One find, an accumulation of burnt flint, is interpreted as a possible burnt mound. This site is located on Bracklesham sand at Sloden Inclosure, in an area where other burnt mounds are recorded (see Bronze Age, above).

Roman

In the Hampshire AHBR there are 105 records equating to 19% of all Roman records for the aggregate resource (Figure 74). Of these, 68 sites are located on Bracklesham sand deposits, the remainder are on river terrace gravels. The sites on Bracklesham sand form the main concentration in the resource area; elsewhere the distribution tends to focus on the western part of the forest (west of Lyndhurst) and along the western side of Southampton Water.

The most significant Roman remains in the resource area are associated with the New Forest pottery industry, which is of national importance. There are 51 individual records for sites for *pottery works, pottery kilns, clay pits, waster tips, floors* and *structures* associated with kiln complexes, and one record for an *occupation site* interpreted as a possible potter's hut. All bar two of these sites are on, or close to, the Bracklesham sand (Figure 50). In the same area there are 25 records for find spots of Roman pottery, many of them pottery scatters or substantial assemblages.

Also on, or in the vicinity of, the Bracklesham beds are three records for platforms or building platforms which are likely to be associated with pottery production sites. There is also a group of sandstone quarries probably of this date, and ditches and pits at the later Amberwood enclosure. This latter site is thought to be a medieval

pound comprising a large rectangular enclosure; the ditches and pits were dated from pottery found in them and presumably predate the enclosure.

Away from the north western part of the resource area and the Bracklesham sand, there are only 20 records for Roman archaeology. Seven of these relate to the three roads running through the New Forest (Figure 74). The other 13 are for find spots consisting of small assemblages. Notable among these is a cluster of seven find spots for a range of metal artefacts at Stone Farm, near the south coast at Lepe.

Early medieval

In the Hampshire AHBR there are 3 records equating to 5% of all early medieval records for the aggregate resource (Figure 75). One site is located on Whitecliff sand; the other two are on river terrace gravels.

One record is for the possible site of a pre-Norman (950) church at Boldre near Lymington, one is for the site of a *Witengendt* (or moot) held in 931 near West Wellow, and the third is a find spot of a copper pendant.

Medieval

In the Hampshire AHBR there are 52 records equating to 11% of all medieval records for the aggregate resource (Figure 75). Seven records are for sites located on Bracklesham sand, three for sites located on Whitecliff sand and the remainder on river terrace gravels.

There are two main concentrations of sites; the first is in the southeast of the resource area, roughly between Lymington and Fawley, the second in the northwest. A number of sites in the first area are associated with Beaulieu Abbey and include four monastic granges, a deserted settlement belonging to the abbey and an earthwork bank enclosing the western side of the abbey demesne. The north western concentration is within the Royal Forest area and includes five hunting lodges, as well as two pounds and a rectilinear enclosure.

A sixth hunting lodge is recorded to the immediate north of Brockenhurst close to a deer park and the deserted settlement of Barreford. There are three other deserted or shrunken settlements; at Boldre, South Baddesley and Hartford, all of which are in the south eastern part of the resource area.

There are two moated sites, one on Whitecliff sand at West Wellow near the Wiltshire border; the second in the far south east, to the south of Blackfield and Langley. In the same area is a large mound at Badminston Plantation which is interpreted as a possible motte and bailey.

Eight records are for find spots.

Post medieval

In the Hampshire AHBR there are 77 records equating to 17% of all post medieval records for the aggregate resource (Figure 76). Thirteen records are for sites located on Bracklesham sand, two for sites located on Whitecliff sand and the remainder for sites on river terrace gravels. The sites are distributed fairly evenly throughout the resource area, but with a minor concentration on the Bracklesham sand in the northwest.

There are 11 enclosed field systems, some with traces of narrow ridge and furrow. These are concentrated in the area between Lymington and Fawley and, in the main, represent forest edge encroachment dating from the eighteenth and early nineteenth centuries. There are nine rectilinear enclosures and earthwork banks interpreted as possible remnants of enclosures and these are also interpreted as forest edge encroachments. All except one of these – that at King's Copse to the west of Hardley – are located on or close to the Bracklesham sand in the northwest of the resource

area. There is also a possible pound in this area, at Coopers Hill, and a second pound to the northeast, on Whitecliff sand near West Wellow.

Two enclosures of the Holmsley Ridge type (small sub-square or sub-rectangular banked enclosures found on heathland and interpreted as 'bee gardens') are recorded from the central part of the resource area, at Matley Bog and near Wilverley. Other features characteristic of the New Forest area are those resulting from woodland management: these include a pre-1775 plantation at Sloden Inclosure, the Hampton Ridge earthwork, which may mark the former extent of Amberwood, and a coppice bank surrounding Ridley wood to the east of Ringwood.

There is one record for a country house; the site of Cadland House at Fawley. There are four records for a lodge or keeper's lodge, all in the northern part of the resource area. There is also a record for a hunting lodge, at Bolderwood, two deer parks, at Holmesley and Rhinefield to the northwest of Brockenhurst, and a duck decoy pond at Foxhill Farm, west of Hythe. Two parks are recorded, at Brockenhurst and Pylewell as well as a number of ornamental features.

Industrial features include Fritham gunpowder factory, the iron works at Sowley, east of Lymington, salterns on Pennington marsh and the nearby oyster beds and dock at Oxey.

There is also a series of military earthworks dating from the late nineteenth and early twentieth centuries at Fritham Cross, a Semaphore Station at Bramshaw, and three records for find spots.

Modern

In the Hampshire AHBR there are 22 records equating to 8% of all modern records for the aggregate resource (Figure 77). One record is for a site located on Bracklesham sand, two for sites located on Whitecliff sand and the remainder for sites on river terrace gravels. The sites are distributed fairly evenly throughout the resource area.

There is an airfield on Beaulieu Heath, built in 1910 and used during both World Wars, five heavy anti-aircraft batteries (one of them was never armed), six Second World War bombing decoys and an extensive bombing range at Ashley Walk. There is a coastal battery at Stone Point which was in operation during both wars, a military earthwork enclosure at Coopers Hill and two Royal Observer Corps observation posts.

Non-military sites include an example of post-1945 ridge and furrow, a record for ponds at Exbury Gardens, two find spots and a single record for negative evidence.

Undated

In the Hampshire AHBR there are 147 records equating to 24% of all records for sites of unknown or uncertain date for the aggregate resource (Figure 78). Sixty three records are for sites located on Bracklesham sand, one for a site located on Whitecliff sand and the remainder for sites on river terrace gravels. The sites are distributed throughout the resource area, but with a major concentration on the Bracklesham sand, and smaller clusters around Brockenhurst and to the west of Hythe.

Roughly one third of the records are for earthwork banks, of which a number are interpreted as wood banks or coppice banks. There is a concentration of these sites in the northwest of the resource area and most of the sites located on Bracklesham sand are woodland enclosure features such as these. There are also a small number of enclosed field systems interpreted as forest edge encroachment. Other field monuments of a type specific to the New Forest are three bee gardens, two of them oval rather than square in shape.

Five pounds are recorded and ten other types of enclosures; two circular enclosures, the first surviving as an earthwork on Fritham Plain, the second visible as a ditch on aerial photographs of Ocknell Plain; an oval enclosure at Sloden Wood which is tentatively suggested as being Iron Age in date; three rectilinear enclosures and four sites interpreted simply as 'enclosures'.

There are two records for sandstone quarries from Sloden Inclosure which are possibly Roman in date. Also in this area there are seven records for clay pits around Sloden Inclosure and Amberwood Inclosure which are possibly associated with the Roman pottery industry.

There is a single record for ridge and furrow cultivation, five records for lynchets some of which are considered to be the remains of pre-woodland field systems, and two records for house platforms, one of which may be the deserted medieval settlement of Slacham. There are also two records for brickworks to the south of Lymington derived from Tithe map references, and one record for place-name evidence indicating the site of a lime kiln nearby.

Other features of uncertain date include ditches, holloways, linear earthworks and linear features. There are also seven records for undiagnostic find spots.

6.2.1.5 Scheduled Monuments

There are 137 Scheduled Monuments in the resource area (Figure 67). A breakdown of monument types is presented below in table 6.

Table 6. Scheduled Monuments in the New Forest resource area

Site type	Number of SMs
Round barrow/bowl barrow	97
Roman pottery kiln	17
'Fancy' barrow	5
Bell barrow	5
Hunting lodge	3
Abbey (all SMs refer to Beaulieu Abbey)	3
Hillfort	2
Roman road	1
Moated site	1
Chapel	1
Barn	1
Well house	1

6.2.2 Solent Coastal Plain

6.2.2.1 The Solent Coastal Plain landscape

The Solent Coastal Plain resource area covers 40 square kilometres and represents 5% of the total aggregate resource in Hampshire.

To the northwest of Portsmouth there are roughly four square kilometres of Whitecliff sand; the aggregate resource in the remainder of the area is made up of river terrace gravels associated with the ancient Solent River.

The Solent Coastal Plain is dominated by the conurbations of Southampton, Portsmouth, Gosport and Havant. The coastal landscape – mainly comprising coastal wetlands, mudflats and saltmarsh - is most extensive in the eastern part of the area, around Hayling Island, Langstone Harbour and Portsmouth Harbour. Towards Southampton, the coastal strip is more built up, although there are stretches of low eroding cliff face.

Large parts of the inland area are characterised by a wide expanse of open, arable farmland in a generally flattish landscape, interspersed with pockets of market gardens and areas of horticulture. In places the farmland is more enclosed and is cut by wooded valleys.

The band of land running east – west from Waterlooville to the north of Farnham is characterised by an undulating landscape of mixed arable and grazing land with numerous woodland, hedges and hedgerow trees.

There are several active and dormant gravel quarries, particularly around Gosport and to the immediate east of Southampton.

6.2.2.2 Historic Landscape Character

The Historic Landscape Character of the Solent Coast archaeological resource area comprises a disparate range of types (Figure 93). The most abundant type is Parliamentary type enclosures, mostly of medium size. These occur especially around Netley and Hill Head, on Hayling Island and to the east of Havant. Fields with wavy boundaries are found in the same areas but are far less common. To the north of the Wallington River, around Southwick, there is an extensive area of large and medium-sized irregular assarts.

Coastal HLC types are included at a number of locations; notably at Hayling Island, Langstone Harbour, parts of Portsmouth Harbour, and between Warsash and Hill Head. The main types are coastal wetlands, and mudflats, but there are large areas identified as salterns at all these locations.

The area around Portsmouth and Portsmouth Harbour is characterised by twentieth century defence, and there are several areas of industrial activity throughout the resource area, including gravel extraction. There are also a number of parks and golf courses, particularly around Langstone Harbour.

6.2.2.3 Character of the archaeology

In the Hampshire AHBR there are 423 records for this resource area, representing roughly 11% of archaeological records for the aggregate resource as a whole (Figure 80). This total equates, in broad terms, to more than 10 sites per square kilometre, which is well above the average density of five sites per square kilometre in the overall aggregate resource.

Nineteen sites are located on Whitecliff sand deposits and the remaining 404 sites are on river gravels.

There are 15 Scheduled Monuments in the resource area, making up 6% of all Scheduled Monuments in the aggregate resource as a whole (Figure 81). A breakdown of the archaeological resource is shown below in table 7.

Table 7. AHBR records for the Solent Coastal Plain resource area

Solent Coastal Plain	**Number of site records**	**% of aggregate resource**
Size (sq kms)	40	5
Scheduled Monuments	15	6
Palaeolithic	9	10
Mesolithic	32	20
Neolithic	15	12.5
Bronze Age	44	7
Iron Age	23	17
Prehistoric (undated)	32	13.5
Roman	36	7
Early medieval	3	5
Medieval	57	12
Post medieval	53	12
Modern	73	28
Undated	46	7
Total no of records	**423**	**11**

The terms of reference for this survey have perhaps produced a more unbalanced view of the archaeology of this area than for any of the other resource areas. Cities and towns occupy roughly 100 square kilometres of the gravel deposits along the Solent coast. Because urban areas are excluded from the aggregate resource (see section 3.3.2) numerous sites from, in particular, Portsmouth, Gosport, Havant and Southampton, are not included in the assessment (Figure 28). A smaller number of sites located in the cliff face, mudflats and saltmarsh along the coastline are similarly excluded. Thus only a proportion of the archaeological resource of the wider Solent coast is considered in this assessment.

The number of Solent coast sites from some specific periods which are covered by the assessment has thus been drastically reduced. For example, almost 70 records for Palaeolithic find spots are excluded in this way. In some cases individual sites of national importance are not included, such as the Roman port of *Clausentum* at Bitterne, Southampton. The most profound effect relates to post medieval and modern military sites: the vast majority of the nationally important sites forming the Solent coastal defences are, for one reason or another, outside the aggregate resource.

It is important that those features that are included in the assessment are seen in this context.

Notwithstanding these observations, the Solent Coastal Plain resource area has a rich archaeological resource, both in terms of numbers of sites and the nature and significance of the remains. Compared with other areas in the aggregate landscape, sites from all periods are well represented and sites from the Mesolithic, Iron Age and twentieth century are especially abundant.

The most noteworthy aspect of the resource is the archaeology of defence. As well as the complex of post medieval and twentieth century military features (in particular

the Portsmouth defences) there are extensive civil defences dating from Second World War, a motte and bailey at Gosport and, of course, Portchester Castle. There was a fortification at this site from the third century until the late medieval period.

The early prehistoric resource includes occupation sites from the Mesolithic and Neolithic periods, and there are also possible Bronze Age settlements. Whilst the Iron Age and Roman resource are well represented (temples, a hillfort, one or possibly more villas, and a Roman pottery kiln), the settlement pattern from neither of these periods is well understood.

One location of particular importance is the Langstone Harbour area, particularly Hayling Island. A range of important sites are recorded from here, including evidence for early prehistoric activity, a possible Bronze Age settlement, Iron Age temples and a hillfort, a Roman temple complex, Hayling Priory, and evidence for salt production from the Bronze Age (in the form of hearths and briquetage) up to the post medieval period.

6.2.2.4 Archaeological resource

Palaeolithic

In the Hampshire AHBR there are 9 records equating to 10% of all Palaeolithic records for the aggregate resource (Figure 82). These are concentrated in the area around Gosport and are mostly for find spots of artefacts assigned a broad Palaeolithic date.

There is, however, a find spot for a substantial Lower Palaeolithic flint assemblage, interpreted as a possible flint working area, in a gravel pit on the outskirts of Southampton, and a record for Upper Palaeolithic artefacts on Long Island, Havant (Wymer, 1996).

Although there are only nine records for Palaeolithic archaeology in the AHBR, in terms of numbers of artefacts, the Solent Coastal Plain has a rich Palaeolithic resource.

There are 36 additional find spots along parts of the Solent coast situated just outside the aggregate resource area, and more than 30 find spots within the towns and cities on the coastal plain. Although these finds are not included in the assessment they do underline the richness of the Palaeolithic resource in the Solent Coastal area.

Mesolithic

In the Hampshire AHBR there are 32 records, equating to 20% of all Mesolithic records for the aggregate resource (Figure 83). The sites are all assigned a broad Mesolithic date and are distributed diffusely throughout the resource area, with the main concentration occurring in the Warsash area. Three sites are located on Whitecliff sand around Southwick; the remaining 29 sites are on river terrace gravels.

Most of these records are for find spots of small flint assemblages, but there are a few more substantial ones. These include a large surface scatter of flints at Portchester in which debitage concentrations were identified, perhaps indicating a long period of occupation, and one of the Whitecliff sand find spots, that at Hipley copse, which is considered to be a possible flint working site.

Of particular note are eight sites, some yielding substantial assemblages of flint, on the present-day coast around Portsmouth Harbour, Langstone Harbour, Long Island, North Binness Island, Bakers Island and Portchester Sea Banks. These sites are discussed in Jacobi, 1981, 20-23; all were situated in dry-land environments in the Mesolithic period.

One possible Mesolithic coastal site is that at Lee-on-the–Solent where oyster and winkle shells are recorded in addition to flint implements.

A further 20 sites are recorded in the towns and cities within the resource areas and are not included in the assessment.

Neolithic

In the Hampshire AHBR there are 15 records, equating to 12.5% of all Neolithic records for the aggregate resource (Figure 84). The sites are confined to the eastern part of the area, mainly along the coast between Warsash and Gosport and in Portsmouth and Langstone Harbours. All are sited on river terrace gravels, and some (such as the sites in Langstone Harbour) are in the intertidal zone.

All the records are for find spots. Some consist of substantial assemblages, in particular the finds from Sandhills Lane West at Lee-on-the-Solent, where the density of the artefacts indicates an occupation site from the late Neolithic/early Bronze Age. All the other records are assigned a broad Neolithic date.

Bronze Age

In the Hampshire AHBR there are 44 records equating to 7% of all Bronze Age records for the aggregate resource (Figure 85). All the records are for sites located on river terrace gravels. There are two main concentrations: between Warsash and Lee-on–the-Solent, and in the Langstone Harbour area.

There are two round house settlements possibly dating from the Bronze Age; at Gosport and on Hayling Island. Further evidence of activity is provided by the discovery of hearths at Hayling Island and Long Island and possible salt working debris in the form of briquetage at North Binness Island.

There are seven barrows, and middle and later Bronze Age activity is evidenced by cremations, particularly from Hayling Island and from Hook, near Warsash.

The sites of the Hayling Island cremations are opposite each end of ‘The Wadeway’, a track linking the island to the mainland. Several Bronze Age timbers were found close to ‘The Wadeway’ during the construction of a sea wall on the island’s north coast; implying that the trackway itself may be of Bronze Age origin.

More than half of the records are for find spots. There are suggestions (Fasham and Schadla-Hall, 1981) that there were metal-working centres around the Solent coast and the find spots include founders’ hoards (comprising items of metal waste to be re-smelted) at Hayling Island and Fleetend, Warsash. There is also a relatively high number of hoards of bronze implements from urban areas along this stretch of coast which are not included in the assessment.

Iron Age

In the Hampshire AHBR there are 23 records equating to 17% of all Iron Age records for the aggregate resource (Figure 86). All the sites are located on river terrace gravels.

There are two temples – both on Hayling Island. The first is a single room in which traces of plaster were found, the second was dated to the latter part of the first century BC. This is the most significant Iron Age site in the resource area and is of national importance.

Another significant site is the univallate hillfort at Tournerbury, Hayling Island. There are also three salterns and associated hearths; at Hill Head, Havant, and Hayling Island. The remainder of the Iron Age resource comprises ditches, gullies, post holes and find spots of pottery.

There are a further 14 records, mostly for find spots, within urban areas on the Solent coast which have not been included in the assessment.

Prehistoric (undated)

In the Hampshire AHBR there are 30 records equating to 13.5% of all undated prehistoric records for the aggregate resource (Figure 87). One of these sites is located on Whitecliff sand deposits to the north of Portchester, the remainder are on river terrace gravels. The sites are dispersed throughout the resource area, with concentrations at Hayling Island and between Warsash and Hill Head.

Three of the records are assigned a date of Neolithic or later; these are for hearths and a midden from a gravel pit at Chark Common, Lee-on-the-Solent, and a hearth on Hayling Island. There is also a record for a layer of burnt material from the east coast of Hayling Island which may represent salt making, and a find of briquetage and burnt flint nearby.

The other records are for find spots, all of flint apart from one record for bone on the shoreline south of Portchester Castle. A concentration of find spots around Hook results from systematic field walking in this area.

Roman

In the Hampshire AHBR there are 36 records equating to 7% of all Roman records for the aggregate resource (Figure 88). Of these, three sites are located on Whitecliff sand deposits, the remainder are on river terrace gravels. Sites are distributed fairly evenly throughout the resource area although there is a concentration around Havant and Hayling Island.

The most significant site is the temple and ritual complex at Hayling Island. This is the largest temple in Roman Britain (Johnston, 1981). It was established during the later Iron Age, was rebuilt in stone around AD 60 and fell out of use towards the end of the second century.

Another nationally important site is Portchester, one of the best preserved Saxon shore forts in England. Excavations at Portchester have demonstrated that the fort originated in the late third century and that occupation may have continued into the fifth century (Cunliffe, 1975). Geophysical survey has suggested defensive works lying beyond the massive masonry walls of the fort.

There is a villa site at Warblington, near Havant, and the site of two further villas in the same area is suggested by chance finds of building remains and brick and tile fragments. There are three roads in the resource area (Figure 88), the main one of which runs from Chichester in West Sussex to the site of the Roman port of *Clausentum* at Bitterne.

Another important site is the probable pottery kiln at Rowlands Castle. This is one of several in the area (the others are not located on gravel deposits and so are not included in the assessment). Although the Rowlands Castle industry was not on the same scale as those of the New Forest or Alice Holt, it was, nonetheless, of local importance.

There are records for a concentration of sites around Hayling Island, including many find spots, traces of briquetage, a midden, a building and a group of inhumations.

There are 22 records for find spots, which include coin hoards at Netley and Southwick.

Early medieval

In the Hampshire AHBR there are 3 records equating to 5% of all early medieval records for the aggregate resource (Figure 89). All three sites are located on river terrace gravels.

Portchester is one of the most important Saxon sites in the aggregate landscape. The Roman walls remained intact throughout the Saxon period, and within the fort there is a sequence of phases spanning the period. The earliest occupation dates from the fifth century and consists of a group of sunken-floored houses and small post-built structures. Whether these represent continuous occupation from the later Roman phase, or whether the first Saxon occupation was established in the later fifth century is unclear. It is again unclear whether occupation during the sixth and seventh centuries was continuous but pottery scatters point to some use in this period. In the late seventh and early eighth centuries a series of more substantial timber buildings appeared, associated with a rich assemblage of finds, possibly representing the establishment of a noble's residence. By the late ninth century the estate was owned by the church and was acquired by the monarchy in 904. In the mid-late tenth century a new complex of substantial buildings appeared and a masonry tower was added by the early eleventh century.

The other two records in this resource area are for finds of pottery from Hayling Island.

Medieval

In the Hampshire AHBR there are 57 records equating to 12% of all medieval records for the aggregate resource (Figure 89). Eight records are for sites located on Whitecliff sand and the remainder on river terrace gravels. The recorded sites are distributed fairly evenly throughout the resource area.

The development of Portchester as a castle began in the twelfth century and it occupied a front-line position during the Hundred Years War. The castle was largely rebuilt by Richard II at the end of the fourteenth century and was used as a departure point for the battle of Agincourt in 1415. With the rise of Portsmouth the importance of Portchester diminished. Also recorded in the AHBR are an Augustinian monastery within the castle and two limekilns excavated within the outer bailey.

Other sites of major significance are the early motte and bailey at Apple Dumpling Bridge, Gosport; Netley Abbey, founded in 1239, with two associated aqueducts served by a system of ponds and dams, and with traces of a possible moat; Warblington Castle, a fortified manor house and an associated deer park near Waterlooville; and Hayling Priory. There are five records for moats in the AHBR, one surrounding Warblington castle, one at Netley Abbey, another at the probable monastic grange associated with Hayling Priory, one surrounding the monastic grange associated with Netley Abbey and one associated with the manor house at The Brunes, Gosport, where there is also a fishpond. Another fishpond is recorded at Lodge Farm, to the south west of Denmead.

There are three records for deserted settlements and two for shrunken villages. These are distributed throughout the resource area; the settlement of Upton near Rownhams, the shrunken village of Old Netley, two records for a deserted village at Wanstead, near Southwick, and the deserted village at Warblington. There is also a record for a strip field system at North Hayling. On Hayling Island there is a record for a windmill mound uncovered during excavations

In the coastal strip there are four records for salterns; at Portchester, Portsea Island, and Hayling Island. At Hill Head there are two records for shell middens of this period.

There are, in addition, 14 records for find spots.

Post medieval

In the Hampshire AHBR there are 53 records equating to 12% of all post medieval records for the aggregate resource (Figure 90). One record is for a site located on Whitecliff sand deposits; the remainder are on river gravels.

Military sites make up the most important component of the post medieval archaeological resource; most of the sites, however, belonging to the complex network of historic military activity along the Solent coast are situated within the coast's towns and cities and are therefore excluded from this survey.

The sites that are included form only a tiny proportion of the Solent military heritage and should be seen in this context. The most prominent of these are the fortifications associated with Stokes Bay Lines, a rampart and ditch with five associated batteries built in the 1850s along the coast at Gosport. This defensive line ran in the east from Fort Monckton, built in the 1780s, to Browndown Battery in the west. There are records for other batteries at The Point (one of a number of fortifications around the entrance to Portsmouth harbour), and the Napoleonic fortification at Hamble Common. Nearby is the site of St Andrews Castle, likely to have been built in the early 1540s. Other military features include the eighteenth century barracks and Napoleonic prisoner of war camp at Portchester castle, the military cemetery at Forton, Gosport, and the mid nineteenth century military hospital at Hamble.

There are a number of sites associated with industry and communications, including three salterns and a brick kiln at Hayling Island; a boatyard and slipway at Ferrol Road, Gosport; Titchfield canal; a jetty at Portchester; Lee-on-the-Solent light railway and Stokes Bay railway. There are also several mills; a tidal mill and tower mill at Hayling Island, a windmill at Portchester, and water mills at Bedhampton Springs, Langstone and Titchfield.

There are two records for pounds; a manorial pound at Hayling Island and a destroyed site at Gosport. There are also a number of records for buildings, houses and barns, a beacon at Telegraph Woods, Null, and three find spots.

Modern

In the Hampshire AHBR there are 73 records equating to 28% of all modern records for the aggregate resource (Figure 91). All the records are for sites located on river terrace gravels, and all are on or close to the actual coastline, apart from in the easternmost part of the resource area, where some sites occur inland of Havant.

There are Second World War airfields at Hamble and HMS Daedalus, Lee-on-the-Solent; this latter site was originally established as a seaplane base in 1917. There is a single record for an air raid shelter at Havant, eight heavy and one light anti-aircraft batteries along the coast, eight bombing decoy sites and three records for searchlight batteries.

Anti-invasion defences comprise 25 pillboxes, one of them linked to a series of mines in the Solent, six tank traps, and a coastal battery (the saluting battery at Portsmouth, which was armed in both World Wars). Features associated with the D-Day invasion include four embarkation hards in Stokes Bay.

There is a Picket Hamilton fort at Portsmouth Aerodrome. The Picket Hamilton Fort was a specially designed pillbox sited on airfields which could be lowered to be flush with the ground so as not impede the movement of aircraft. There is also a gun emplacement at Hamble Common, and two Royal Observer Corps observation posts.

Non military sites include a brickworks, a duck decoy pond, and a record for steam ploughed rig, all at Hayling Island.

Undated

In the Hampshire AHBR there are 46 records equating to 7% of all records for sites of unknown or uncertain date for the aggregate resource (Figure 92). Three records are for sites located on Whitecliff sand and the remainder for sites on river terrace gravels. The sites are distributed fairly evenly throughout the resource area.

There is a record for an earthwork enclosure which may be the site of East Boarhunt Manor, and a series of earthworks possibly associated with the hamlet of Higworth. There are four records for undated hearths in salt marshes at Hayling Island and two salterns nearby. There is a record for a gravel pit in the north of the area and a record for ridge and furrow near Southwick.

The remainder of the records are for ditches, banks, gullies, pits, 'sites', and seven find spots. There are three records for negative evidence.

6.2.2.5 Scheduled Monuments

There are 15 Scheduled Monuments in the resource area (Figure 81). A breakdown of monument types is presented below in table 8.

Table 8. Scheduled Monuments in the Solent Coastal Plain resource area

Site type	Number of SMs
Abbey (Netley) and associated features	4
Post medieval fortifications	4
Castles (Portchester and Warblington)	2
Hillfort (Tournerbury)	1
Beacon	1
Barn (Warblington)	1
Pickett Hamilton fort	1
Heavy anti-aircraft battery (Sinah Common)	1

6.2.3 Upper Test valley

6.2.3.1 The Upper Test valley landscape

The Upper Test valley resource area covers 48 square kilometres and represents 6% of the total aggregate resource in Hampshire.

In the southernmost part of the resource area there are roughly two square kilometres of Lambeth sand deposits. The aggregate resource in the remainder of the area is made up of river terrace gravels associated with the Test and its tributaries.

The valley of the Upper Test is relatively broad and is characterised in the main by water meadows, with some miscellaneous pasture, marshy ground and woodland.

In the middle of the resource area the valley cuts through chalk downland and the surrounding landscape comprises a gently undulating landform supporting arable farming in a broad and open setting, which is accentuated by trimmed hedges and few hedgerow trees (HCC, 1993).

In the northernmost part of the valley, and in the far south, the countryside is more enclosed. In the north it is characterised by steep, well-wooded hills; in the south by more gentle slopes and a landscape of farmland, woodland and hedgerow.

In the southwest, where Lambeth sand outcrops, the countryside is one of mixed arable and grazing land interspersed with woodland, hedges and hedgerow trees.

6.2.3.2 Historic Landscape Character

The Historic Landscape Character of the Upper Test valley archaeological resource area is dominated by valley floor landscape types (Figure 108). Throughout the area as a whole the valleys of the Test and its tributaries are characterised chiefly by extensive water meadow systems. Otherwise the predominant HLC type is miscellaneous valley bottom paddocks and pastures. In the Test valley south of Chilbolton there are a number of areas of marsh and rough grazing, and also some tracts of valley floor woodland. North of Chilbolton there is a small number of watercress beds, and in the Andover area some fishponds are identified.

The valley of the Test and its tributaries are flanked by a variety of field types. In the main these consist of Parliamentary type enclosures, but there are some areas where the landscape is characterised by fields with wavy boundaries. Where the northern tributaries run through chalk downland, the valley sides are often characterised by ladder fields, and, in one area (to the north of Lockerley) the valley is characterised by ex-downland fields. The most extensive gravel terraces are between Chilbolton and Whitchurch, where there are fields with wavy boundaries and pre-nineteenth century woodland as well as Parliamentary type enclosures. There is also a small area of assarts here, and along the southernmost tributary of the Upper Test.

There is a significant tract of recent (nineteenth century or later) woodland plantation at Overton.

6.2.3.3 Character of the archaeology

In the Hampshire AHBR there are 313 records for this resource area, representing roughly 8% of archaeological records for the aggregate resource as a whole (Figure 94). This total equates, in broad terms, to more than 6.5 sites per square kilometre, which is above the average density of five sites per square kilometre in the overall aggregate resource.

Four sites are located on Lambeth sand deposits and the remaining 309 sites are on river gravels.

There are five Scheduled Monuments in the resource area, making up 2% of all Scheduled Monuments in the aggregate resource as a whole (Figure 95). A breakdown of the archaeological resource for the resource area is shown below in table 9.

Table 9. AHBR records for the Upper Test valley resource area

Upper Test valley	**Number of records**	**% of aggregate resource**
Size (sq kms)	48	6
Scheduled Monuments	5	2
Palaeolithic	4	4.5
Mesolithic	3	2
Neolithic	10	8
Bronze Age	18	3
Iron Age	14	10
Prehistoric (undated)	8	3.5
Roman	36	7
Early medieval	10	18
Medieval	48	10
Post medieval	60	13
Modern	9	3
Undated	93	15
Total no of records	**313**	**8**

In terms of numbers of sites the Upper Test valley can be said to contain a relatively rich archaeological resource. Analysis of the nature of the resource is made problematic by the large proportion (almost one third) made up of undated sites.

There are more records for early medieval sites than in any other resource area (and only marginally fewer than the Lower Test and Avon valley NMP sub-units), and these include two possible Saxon burials, which are rare in the aggregate resource area (Figure 50).

The medieval archaeological resource is particularly rich. In addition to high status sites (manor houses, moated sites and deer parks, for example), there is a large number of deserted or shrunken settlements. There are also many undated earthworks, some of which might be further examples of deserted medieval settlements.

Post medieval sites are also numerous; many are related to the river itself, such as water mills (including the silk mill at Overton) and water meadows, but there are also brickworks and a number of ornamental features, such as a lily pond designed by Lutyens.

In contrast, knowledge of the prehistoric and Roman resource is less complete. The Palaeolithic, Mesolithic, Bronze Age and prehistoric (undated) periods are all poorly represented in terms of site numbers. The Neolithic is represented solely by find spots of single artefacts or small assemblages. The Roman resource is also largely made up of find spots, although there are two villas and two possible buildings.

The apparent absence of prehistoric monument sites contrasts with the richness of the prehistoric resource of the surrounding chalk downland and the ways in which the valley of the Upper Test was used in prehistory are unclear.

The exception to this general observation is the Iron Age: the resource includes two settlement sites, possible enclosure settlements and rectilinear field systems. There are also a number of enclosures and linear features of uncertain date which could be Iron Age in origin.

Generally speaking the sites are distributed fairly evenly throughout the Upper Test and its tributaries. One area which is relatively blank in the distribution map is the extensive gravel terrace downstream of Whitchurch (Figure 94).

6.2.3.4 Archaeological resource

Palaeolithic

In the Hampshire AHBR there are four records, equating to 4.5% of all Palaeolithic records for the aggregate resource (Figure 96).

The records are all for single artefact find spots and are assigned a broad Palaeolithic date. One is from the valley of the Test itself to the north of Stockbridge; the other three are all from northern tributaries.

The relatively small number of site records can be seen as consistent with the limited extent of the gravel deposits, which are confined to the floor of the valley where it cuts through the chalk downs. It might be expected, however, that the more extensive terrace deposits downstream of Whitchurch (which have a history of mineral extraction) would be a productive source of find spots, whereas no artefacts have been recorded from this area.

Mesolithic

In the Hampshire AHBR there are three records equating to 2% of all Mesolithic records for the aggregate resource (Figure 97). All three records are for find spots consisting of small assemblages on river terrace gravels and are all assigned a broad Mesolithic date. One is near Chilbolton in the main valley of the Test; the other two are in its northern tributaries.

Neolithic

In the Hampshire AHBR there are 10 records equating to 8% of all Neolithic records for the aggregate resource (Figure 98). All are for find spots of single artefacts or small assemblages on river terrace gravels and all have been assigned a broad Neolithic date.

The records are all for flint artefacts apart from one record for a sherd of Peterborough ware. The main distribution of the sites is towards the upper reaches of the Test and in its northern tributaries.

Bronze Age

In the Hampshire AHBR there are 18 records equating to 3% of all Bronze Age records for the aggregate resource (Figure 99). All the sites are located on river terrace gravels.

The sites are widely distributed along the Test valley and its tributaries with a notable concentration around Huntsbourne Priors. This concentration consists of seven ring ditches or plough-levelled barrows, and ring ditches form the bulk of the resource for the Upper Test valley area: 13 of the site records are for barrows, of which 10 survive only as ring ditches.

There is a possible Bronze Age field system (although it may be later) to the south of Stockbridge, a pit recorded from the terrace gravels near Kimpton, and a cremation at Broughton.

Iron Age

In the Hampshire AHBR there are 14 records equating to 10% of all Iron Age records for the aggregate resource (Figure 100). All the records are for sites located on river terrace gravels. The sites are located upstream of Chilbolton and on tributaries of the Test.

There are two settlement sites; nine hut circles containing hearths and occupation material at Hurstbourne, and a site near St Marybourne comprising a pit, ditches and other features discovered during gas pipeline construction. There are also two enclosures representing possible settlement: the first is 'Old Pound', a large irregular earthwork to the south east of Andover which could originate from the Iron Age but whose date is uncertain, the second is an enclosure complex surviving as a series of cropmarks at Fyfield.

Elsewhere there are two rectilinear field systems extending off the chalk downs at Chilbolton and at Litchfield and a crouched inhumation found during pipeline trenching at Stoke, to the northwest of Whitchurch.

Prehistoric (undated)

In the Hampshire AHBR there are 8 records equating to 3.5% of all undated prehistoric records for the aggregate resource (Figure 101). All the records are for sites located on river terrace gravels.

The records are evenly distributed along the Test valley and some of its tributaries; all are for find spots of flint items or assemblages.

Roman

In the Hampshire AHBR there are 36 records equating to 7% of all Roman records for the aggregate resource (Figure 102). Of these, a single site is located on Lambeth sand, the remainder are on river terrace gravels associated with the Test and its tributaries. Sites are distributed fairly evenly throughout the resource area although there are relatively fewer in the south.

Twenty five of the records are for find spots, distributed along the Test and its tributaries around Andover. The 'monument' records consist of a villa on the Wiltshire border, a possible villa to the west of Andover suggested by a scatter of building materials, a building at Kimpton and building foundations (possibly Roman) at St Marybourne, a lynchetted field system at Chilbolton Down, accompanied by possible settlement evidence, and three inhumations, all to the east of Andover. There are also four roads running through the resource area (Figure 102).

Early medieval

In the Hampshire AHBR there are 10 records equating to 18% of all early medieval records for the aggregate resource (Figure 103). All the records are for sites located on river terrace gravels. The records are distributed widely throughout the valley of the Upper Test and its tributaries.

There is a record for a grange at Hurstbourne Priors from a ninth century documentary reference. Two records are for burials, from Chilbolton and Whitchurch. There is also a record for a Saxon pit at Broughton.

All the other records are for find spots.

Medieval

In the Hampshire AHBR there are 48 records equating to 10% of all medieval records for the aggregate resource (Figure 104). There is a single record for a site located on Lambeth sand in the southern part of the resource area; the remainder are on terrace gravels associated with the Test and its tributaries.

The sites are fairly evenly distributed, but there are small concentrations of sites around Overton, downstream of Whitchurch, and around Kimpton.

The most prominent site is Wherwell Priory, an important medieval nunnery site. There are three records for manor houses; that at Stoke Charity, Laverstoke manor near Overton, and a manor in Micheldever – possibly the site of a grange – belonging to Hyde Abbey. There are two records for moats; the first at Cranbourne Farm, to the north of Sutton Scotney, and the second at Great Shoddesden, near Kimpton.

There are four records for medieval fishponds, one associated with the manor at Stoke Charity, one probably associated with Wherwell Priory, the third possibly associated with the manor at East Tytherley, and the fourth situated near Little Sombourne, close to a deer park which belonged to John of Gaunt. There are two other deer parks in this resource area; the Freefolk deer park at Laverstoke manor, which was first recorded in 1501, and the Huntsbourne Priors deer park, emparked in 1332.

There are eight records for deserted or shrunken settlements. Two of these are at Deane, near East Oakley; a shrunken village is recorded at East Aston and nearby there are earthwork remains – possibly of a deserted settlement – at Longparish; there are also earthwork remains at Stoke Charity, another deserted settlement at Fyfield and a shrunken village at Penton Grafton (both to the west of Andover). Earthwork remains may represent a further deserted settlement at Laverstoke.

There is a record for a lynchet associated with the settlement at Penton Grafton. The only other agricultural feature recorded from the resource area is a series of plough marks near Broughton.

There are 13 records for find spots.

Post medieval

In the Hampshire AHBR there are 60 records equating to 13% of all post medieval records for the aggregate resource (Figure 105). Two records are for sites located on Lambeth sand deposits; the remainder are on river gravels and are distributed evenly throughout the valley of the Test and its tributaries.

A number of sites are directly associated with the river Test. There is a silk mill and worker's cottages at Overton, paper mills at Clatford, Hurstbourne Priors and Laverstoke, corn mills at Egypt near Sutton Scotney and Tufton, and records for water mills at Abbots Ann, Southington and Longparish. There are three records for water meadows, at Stockbridge, Longstock and Tufton.

In East Dean there is a flood relief canal (part of the Salisbury – Southampton canal) and a lock. There are also records for Stockbridge railway station on a disused section of the London and South Western railway, and for Hurstbourne Viaduct. Industrial remains comprise the brickworks at Spearywell and a brick kiln to the north at Bunny Copse, and a series of small quarries in Harewood Forest to the south east of Andover.

Garden features are recorded at Wherwell Priory and post medieval phases are recorded at a number of manor houses and country houses; these include a stable at Fyfield House, eighteenth century building features at Kimpton Manor, an outbuilding at Deane Hill House and a brick-built phase at Micheldever Manor. There are also

records for parks at Laverstoke and Hurstbourne and for a lily pond designed by Lutyens at Marsh Court, North Houghton. Close to this latter site is Houghton deer park, recorded on John Speed's map of 1611.

There are a few records for rural settlement and agricultural features, the most notable site being Spearywell, where a pound and a drove road are recorded.

There is a single record for a windmill, at Stoke Charity, and five records for find spots.

Modern

In the Hampshire AHBR there are 9 records equating to 3% of all modern records for the aggregate resource (Figure 106). All the records are for sites located on river terrace gravels. Four records are for sites along the valley of the Test and there is a concentration of sites to the west, below Andover.

The most important site in the AHBR from this period is Laverstoke mill, which housed the Bank of England during the Second World War. There is a record for loopholes in the wall of the turnpike road by the Test, which formed part of the defence of this site. To the south there is a light anti-aircraft battery near Chilbolton. This is one of several in the area which were presumably defending Chilbolton airfield.

All the records around Andover are for non-military features. There are two sites of houses, a record for a turbine, and four records for negative evidence.

Undated

In the Hampshire AHBR there are 93 records equating to 15% of all records for sites of unknown or uncertain date for the aggregate resource (Figure 107). All the records are for sites located on river terrace gravels.

The sites occur throughout the resource area, with concentrations around Chilbolton and Huntsbourne Priors and along the western tributaries of the Test, especially to the south of Andover.

There are four records for house platforms, two for buildings recorded as earthworks, and 21 records for earthwork sites described as 'humps and bumps'; many of these sites are possible medieval or post medieval deserted or shrunken settlements, and they occur mainly along the western tributaries of the Test. There are also five records for lynchets on the western tributaries as well as a record for earthwork cultivation terraces at Piper's Hill to the south west of Andover.

A number of sites whose date cannot be specified are recorded from aerial photographs; these include many linear features, linear earthworks, enclosures (including a square enclosure and a circular enclosure) ditches and pits.

There are three records for water meadows, a possible burnt mound, four find spots and 15 records for negative evidence.

6.2.3.5 Scheduled Monuments

There are five Scheduled Monuments in the resource area. These include two separate designations for West Dean Roman villa, the possible Iron Age enclosure known as Old Pound, an undated moated site at Longstock, and a bowl barrow.

6.2.4 Kennet valley

The archaeological resource of the wider Kennet valley is remarkably rich. Only a small portion of the southern margins of the valley fall within Hampshire, and this assessment refers only to the archaeology of the Hampshire Kennet as distinct from the wider Kennet valley.

6.2.4.1 The Kennet valley landscape

The Kennet valley resource area covers 40 square kilometres and represents 5% of the total aggregate resource in Hampshire.

The aggregate resource of the Kennet valley in Hampshire area is made up entirely of river terrace gravels associated with the Kennet and its tributaries. The gravels occur predominantly in the eastern part of the resource area, where there are extensive deposits around Silchester, and in the west, around Burghclere. Elsewhere the deposits are confined to a narrow band running along the county border with West Berkshire.

The northern part of the resource area is characterised mainly by heath associated pasture and woodland – a mixture of unintensively grazed pasture in a well wooded landscape derived from former heathland. Around Silchester there is an area of heathland and forest which is intensively wooded. Further south the landscape takes the form of an undulating terrain of mixed arable and grazing land with many woodlands, hedges and hedgerow trees.

There is a history of mineral extraction in the area and there is currently an active quarry at Silchester.

6.2.4.2 Historic Landscape Character

The Kennet valley archaeological resource area can be sub-divided into three loosely defined areas when considering its Historic Landscape Character (Figure 122). The first area, in the east around Silchester, is characterised by heathland, nineteenth century heathland plantation, and assarts with both regular and irregular fields. A large area classified in the HLC as ‘defence’ contains the Iron Age hillfort and other earthworks.

The second area comprises the narrow strip of the Kennet valley running along the county boundary with West Berkshire. This is characterised in the east by large, regular fields with wavy boundaries, and in the west by a mixture of regular assarts with straight boundaries and small Parliamentary type enclosures.

The third area is centred round Burghclere and is characterised by medium sized Parliamentary type enclosures, assarted woodland, and wooded-over commons.

Small tracts of recent plantation are found throughout the resource area.

6.2.4.3 Character of the archaeology

In the Hampshire AHBR there are 134 records for this resource area, representing roughly 3.5% of archaeological records for the aggregate resource as a whole (Figure 109). This equates, in broad terms, to roughly three sites per square kilometre, which is well below the average density of five sites per square kilometre in the overall aggregate resource.

There are five Scheduled Monuments in the resource area, making up 2% of all Scheduled Monuments in the aggregate resource as a whole (Figure 110). A breakdown of the archaeological resource is shown below in table 10.

Table 10. AHBR records for the Kennet valley resource area

Kennet valley	Number of records	% of aggregate resource
Size (sq kms)	40	5
Scheduled Monuments	5	2
Palaeolithic	0	0
Mesolithic	2	1
Neolithic	3	2.5
Bronze Age	10	1.5
Iron Age	14	10
Prehistoric (undated)	3	1
Roman	65	12
Early medieval	1	1.5
Medieval	7	1.5
Post medieval	5	1
Modern	2	1
Undated	22	3.5
Total no of records	**134**	**3.5**

The most significant site in the Kennet valley archaeological resource area is the nationally important Iron Age and Roman settlement at Silchester. Nearly two thirds of all site records in the resource area are centred on this location (Figure 109). Despite the obvious significance of Silchester in the historic landscape, little is known about the contemporary settlement pattern of the surrounding environs (see, for example, Figure 41). Away from Silchester the most notable site of the Iron Age or Roman periods is the Roman villa at Eastcott.

Other noteworthy sites are the late Bronze Age/early Iron Age settlement at Silchester, the deserted medieval town at Newtown and the medieval ringwork at Silchester. In general, however, the archaeological resource in valley of the Hampshire Kennet is poorly represented for most periods. In particular this is true of the Palaeolithic resource, for which there are no site records, despite extensive past and present mineral extraction in the east of the resource area (Figure 5).

6.2.4.4 Archaeological resource

Palaeolithic

There are no records for Palaeolithic archaeology in the Kennet valley resource area. This is surprising given that there is a history of gravel extraction in the area as well as extensive active exploitation of the Silchester gravels on Mortimer Common.

Mesolithic

In the Hampshire AHBR there are two records, both assigned a broad Mesolithic date, equating to 1% of all Mesolithic records for the aggregate resource (Figure 111). Both records are for find spots of small assemblages. One is on Beenham Grange gravels, the other on Silchester gravels.

Neolithic

In the Hampshire AHBR there are 3 records, equating to 2.5% of all Neolithic records for the aggregate resource (Figure 112). All are for find spots of single artefacts or small assemblages including a saddle quern from a gravel pit, and flint artefacts

uncovered during the excavation of Roman Silchester. All have been assigned a broad Neolithic date in the AHBR.

Bronze Age

In the Hampshire AHBR there are 10 records equating to 1.5% of all Bronze Age records for the aggregate resource (Figure 113). The main concentration of sites is in the Silchester area, and these include a settlement of late Bronze Age/early Iron Age date identified during an archaeological evaluation. Nearby are the remains of a field system which might be from this period. The other sites consist of two pits, two barrow cemeteries and a small number of find spots.

Iron Age

In the Hampshire AHBR there are 14 records equating to 10% of all Iron Age records for the aggregate resource (Figure 114). Apart from a single find spot at Headley, all the sites are concentrated in the Silchester area.

The most important site in the resource area is the *oppidum* at Silchester. The late Iron Age settlement was defended by two systems of banks and ditches, the outer bank defending an inner enclosure of 32ha. Occupation of the site covered three distinct phases dating back to the middle of the first century BC.

To the west of the oppidum is a univallate hillfort at Pond Farm and there are extensive remains of ditched field systems. These appear to form two distinct patterns and perhaps one is associated with the Pond Farm hillfort and the other with the *oppidum*.

Prehistoric (undated)

In the Hampshire AHBR there are three records equating to 1% of all undated prehistoric records for the aggregate resource (Figure 115). One record, to the east of Tadley, relates to linear features which may be prehistoric in origin; the other two records are for find spots.

Roman

In the Hampshire AHBR there are 65 records equating to 12% of all Roman records for the aggregate resource (Figure 116). The resource area is dominated by the *civitas capital* at Silchester. Fifty eight of the records are for sites within and around the Roman town. The other seven sites are concentrated in the Headley area.

Twenty five of the records are for find spots and four for roads, including Ermine Street. There is a record for a fourth century villa at Eastcott; otherwise all the monument records are associated with the town at Silchester. These include urban features such as a forum, amphitheatre, buildings, bath houses, temples, a small church and town walls, as well as sites outside the town walls, including cemeteries and a field system.

Early medieval

In the Hampshire AHBR there is 1 record equating to 1.5% of all early medieval records for the aggregate resource (Figure 117). This is a find spot for a coin at Silchester.

Medieval

In the Hampshire AHBR there are 7 records equating to 1.5% of all medieval records for the aggregate resource (Figure 118). The records are concentrated in two locations; at Silchester and the area around Burghclere in the west.

At Silchester the most important site is the ringwork established on the site of the Roman amphitheatre. The outer earthwork of the Iron Age *oppidum* was also re-used in the medieval period as a boundary ditch.

In the western part of the resource area the most important site is the deserted town at Newtown, on the county boundary with West Berkshire. There is also a rare survival of ridge and furrow at Burghclere.

There is a single record for a medieval find spot in the resource area.

Post medieval

In the Hampshire AHBR there are five records equating to 1% of all post medieval records for the aggregate resource (Figure 119). All five records are located close to the county boundary with West Berkshire in the western part of the resource area.

Two of the records are for water mills, one for a pit found during a watching brief, and the other two are for find spots.

Modern

In the Hampshire AHBR there are 2 records equating to less than 1% of all modern records for the aggregate resource (Figure 120). Both records are for negative evidence.

Undated

In the Hampshire AHBR there are 22 records equating to 3.5% of all records for sites of unknown or uncertain date for the aggregate resource (Figure 121). The sites are concentrated in the Silchester area.

There are five records for linear features, all recorded from aerial photographs and mostly interpreted as field systems. There are two records for enclosures; one of these is circular in form and appears to be associated with some linear features – it is likely that this enclosure is pre-Roman in date. There is also a boundary ditch which may relate to the Iron Age phase at Silchester.

Other features include wood banks at Lambden, a series of plough marks, two pits, a drove road and an earthwork bank, as well as two find spots and two records for negative evidence.

6.2.4.5 Scheduled Monuments

There are five Scheduled Monuments in the resource area. These are for two Bronze Age barrow cemeteries, the *oppidum* and Roman town of Silchester, the nearby hillfort, and the deserted medieval town of Newtown.

6.2.5 Blackwater valley

6.2.5.1 The Blackwater valley landscape

The Blackwater valley resource area covers 74 square kilometres and represents 9% of the total aggregate resource in Hampshire.

The aggregate resource in the Blackwater valley area is made up entirely of river terrace gravels (a mixture of younger terraces and plateau gravels) associated with the Blackwater and its tributaries. The gravels occur predominantly in the eastern part of the resource area, where there are extensive deposits of plateau gravel (Figure 11). In the west, the gravels are largely confined to the river valley floors. The tributaries here cut through chalk in the southwest quarter of the resource area, and through London Clay, which occurs in a broad band to the north of Basingstoke.

The western tributaries for the most part cut through an undulating landscape of well-wooded mixed arable and grazing land over loamy or clayey soils. There are two areas of open arable landscape; the first in the chalklands around Basingstoke, and the second in the clay lands north of Loddon.

In the east the predominant landscape types are heathland and forest, and heath associated pasture and woodland. There are quite extensive areas of plantation, especially in the area to the north and northwest of Fleet. The heathland areas in the resource area are extensively used by the army as a training area.

There is a history of extensive mineral extraction in the eastern part of the resource area and there are currently a number of active gravel pits in the area (Figure 5).

6.2.5.2 Historic Landscape Character

The Historic Landscape Character of the Blackwater valley archaeological resource area is formed, in the main, by heathland types and field types (Figure 124). The landscape along the county boundary with Berkshire between Eversley and Yateley is dominated by small fields, both Parliamentary type enclosures and fields with wavy boundaries, some of which are a rare survival of enclosed strips and furlongs. The area to the south of the county boundary is dominated by heathland and, in particular, nineteenth century heathland plantations. Commons (especially wooded-over commons) also occur widely in this resource area, particularly around Yateley and Hook.

Three rivers, the Loddon, Whitewater and Broadwater, cut through the resource area from north to south. The Loddon valley is characterised by a mixture of water meadows and miscellaneous valley bottom paddocks and pastures; the predominant type in the Whitewater and Broadwater valleys is miscellaneous valley bottom paddocks and pastures, with a small amount of woodland. The valley of the Blackwater itself is characterised by miscellaneous valley bottom paddocks and pastures at Yateley and by water meadows to the northwest of here.

The area between the Whitewater and Broadwater rivers contains Parliamentary type enclosures and small areas of irregular assarts. The tributary of the Loddon running south and west of Bramley is characterised by fields with wavy boundaries and, further to the west, by irregular assarts.

There are a number of deer parks in the north eastern part of the resource area, and areas of active and dormant gravel extraction in the north. There are also army camps to the east of Fleet and south of Bramley, and an airfield – Blackbushe airport – to the south of Yateley.

6.2.5.3 Character of the archaeology

In the Hampshire AHBR there are 217 records for this resource area, representing roughly 6% of archaeological records for the aggregate resource as a whole (Figure 123). This equates, in broad terms, to roughly three sites per square kilometre, which is well below the average density of five sites per square kilometre in the overall aggregate resource.

There are nine Scheduled Monuments in the resource area making up 4% of all Scheduled Monuments in the aggregate resource as a whole (Figure 110). A breakdown of the archaeological resource is shown below in table 11.

Table 11. AHBR records for the Blackwater valley resource area

Blackwater valley	**Number of records**	**% of aggregate resource**
Size (sq kms)	74	9
Scheduled Monuments	9	4
Palaeolithic	0	0
Mesolithic	8	5
Neolithic	9	7.5
Bronze Age	17	2.5
Iron Age	2	1.5
Prehistoric (undated)	14	6
Roman	14	2.5
Early medieval	3	5
Medieval	22	4.5
Post medieval	31	7
Modern	43	16.5
Undated	54	9
Total no of records	**217**	**6**

In terms of numbers of sites the archaeological resource in the Blackwater valley is poorly represented for most periods. In particular this is true of the Palaeolithic resource, for which there are no site records, despite extensive past and present mineral extraction in the east of the resource area (Figure 5).

The only period which can be said to be well represented is the twentieth century. Part of the GHQ Line A, an important component of the Second World War defences of London, ran through northeast Hampshire and the remains of these defences form a significant aspect of the archaeological resource.

Although the overall distribution of sites is fairly even throughout the resource area (Figure 123), there are variations within the individual periods; for instance Bronze Age sites are confined to the extensive terraces in the east of the area (Figure 113), whereas Roman sites are concentrated along the tributary valleys in the west (Figure 116).

Despite the relatively low numbers of site records there are a range of sites of archaeological significance. The Iron Age settlement at Tongham, for instance, is one of only a handful of settlements of this date recorded in the aggregate landscape (Figure 41), but otherwise the Iron Age resource of the Blackwater valley area is poorly understood. Mesolithic records include two flint working sites and a possible occupation site (interpreted as prehistoric unknown in date). The Bronze Age resource includes a cremation cemetery, an urnfield at Yateley (again interpreted as

unknown in date) and a record for cinerary urns at Bramshill. The Roman resource includes two villas and a settlement, and the medieval resource includes Odiham castle and the twelfth century *Festaen Dic* earthwork; this is a substantial ditch and bank to the south west of Yateley, which acted as a Hundred boundary.

6.2.5.4 Archaeological resource

Palaeolithic

There are no records for Palaeolithic archaeology in the Blackwater valley resource area. This is surprising given that there is a history of gravel extraction of the extensive gravel terraces, especially in the Bramshill and Eversley areas.

Mesolithic

In the Hampshire AHBR there are eight records, all assigned a broad Mesolithic date, equating to 5% of all Mesolithic records for the aggregate resource (Figure 111). There is a concentration of sites on the terrace gravels south of Yateley.

Two of the records are for single artefact finds but the others are for larger assemblages. They include three flint working sites, two on the Yateley gravels and one at Heath Brow near Ewshot.

Neolithic

In the Hampshire AHBR there are 9 records, equating to 7.5% of all Neolithic records for the aggregate resource (Figure 112). All are for find spots of single artefacts or small assemblages. All have been assigned a broad Neolithic date in the AHBR.

Bronze Age

In the Hampshire AHBR there are 17 records equating to 2.5% of all Bronze Age records for the aggregate resource (Figure 113). The sites all occur in the eastern part of the resource area.

Barrows are the predominant site type with 13 recorded. There is also a cremation cemetery west of Yateley and three find spots, one of which, at Bramshill, consists of three cinerary urns.

Iron Age

In the Hampshire AHBR there are 2 records equating to 1.5% of all Iron Age records for the aggregate resource (Figure 114).

Both records refer to the same site; a settlement near Tongham on the Surrey border. The site was discovered during road construction and consists of 18 round houses and two four-post structures.

One other substantial site is the multivallate hillfort known as Caesar's Camp, to the west of Aldershot. This hillfort is sited on a gravel terrace forming a promontory on the Hampshire/Surrey border. The grid reference for the site in the AHBR refers to the eastern rampart (which was later re-used as a park pale). The rampart is not on gravel and so is technically outside the aggregate resource area. However, the fort should be seen as part of the archaeological resource of the aggregate area.

Prehistoric (undated)

In the Hampshire AHBR there are 14 records equating to 6% of all undated prehistoric records for the aggregate resource (Figure 115). All the records are classed as find spots, although one, at Yateley Common, is interpreted as a short-term or seasonal occupation site – probably Mesolithic or Neolithic in date.

Half the sites result from fieldwork at Yateley Common. As well as the possible occupation site recorded here, two flint scatters in the area were interpreted as

possible burnt mounds. The other find spots are distributed sparsely but widely throughout the resource area. One, to the north of Basingstoke was recorded during the Loddon Valley Survey.

Roman

In the Hampshire AHBR there are 14 records equating to 2.5% of all Roman records for the aggregate resource (Figure 116). These sites all occur in the western part of the resource area.

There is a courtyard villa to the south of Hook and a possible villa to the northeast of Basingstoke. A settlement is recorded in a waterlogged area at the confluence of the Blackwater and Whitewater rivers on the county boundary with Berkshire. Another significant site is the tile kiln to the south east of Hook. This is one of only four such kilns recorded in the AHBR.

Four Roman roads cross through the resource area. Otherwise all the other AHBR records are for find spots.

Early medieval

In the Hampshire AHBR there are 3 records equating to 5% of all early medieval records for the aggregate resource (Figure 117). These comprise a possible deserted medieval village to the south of Tadley, a series of earthworks (which may, alternatively, be a Roman road) to the north of Fleet, and a find spot from Odiham.

Medieval

In the Hampshire AHBR there are 22 records equating to 4.5% of all medieval records for the aggregate resource (Figure 118). These records are evenly distributed throughout the resource area apart from in the Aldershot/Fareham area where no sites are recorded.

The most prominent site in the resource area is Odiham Castle. The earliest buildings on the site are probably those dating from the eleventh century; the castle itself was constructed between 1204 and 1214, and was surrounded by a bank and moat, but the standing remains date from a subsequent early fourteenth century phase.

To some extent the resource in the Blackwater valley reflects the fact that much of this area was afforested in the medieval period. There are four moated sites (in addition to Odiham castle) and three deer parks. The moats are at Pamber Priory, to the north of Basingstoke; a building marked as a lodge on a 1613 map of Beaurepaire Park, which lies to the west of Pamber; Turgis Court, Stratfield; and Holdshott Farm, Heckfield, where a chapel stood within the moated enclosure.

The three deer parks probably reflect an association with the former Royal Forests of Pamber, Eversley and Bagshot. The parks are at Eversley (emparked in 1336), Odiham, and Old Basing.

There is one record for a deserted village, that at Minley, to the north of Fleet. There is also a substantial linear earthwork, known as *Festaen Dic*, which is dated to the twelfth century; this consists of a ditch and bank and acted as a Hundred boundary. Other single records include the site of a beacon at Ewshot and a small priory of Cistercian nuns, founded during the twelfth century at Wintney, west of Fleet.

There are five records for medieval find spots in the resource area.

Post medieval

In the Hampshire AHBR there are 31 records equating to 7% of all post medieval records for the aggregate resource (Figure 119). The records are distributed fairly evenly throughout the resource area.

There are some notable ornamental landscape features in the resource area; Vyne Park, Sherborne, contains a late eighteenth century serpentine lake and walled garden; at Bramshill Park there are a bowling green and a maze dating from the late seventeenth/early eighteenth centuries; and at Warbrook House to the north there is a sunken garden with an octagonal pond and associated canal. Two lodges at Dogmersfield Park, to the west of Fleet, are recorded but the park itself lies outside the aggregate resource area.

There are records for six mills; at Andwell, Yateley, Beaupaire, Odiham, Old Basing, and Basingstoke. The Basingstoke canal runs through part of the resource area and there is an associated aqueduct recorded at Odiham castle.

There are few records for agricultural features; field boundaries were found during excavations at Watmore farm, Yateley; ridge and furrow at Hatch Farm, Hazeley; and a water meadow north of Heckfield.

There are four records for find spots in the resource area.

Modern

In the Hampshire AHBR there are 43 records equating to 16.5% of all modern records for the aggregate resource (Figure 120). The records are all for sites occurring to the east of Basingstoke.

One record is for negative evidence; all the rest are for sites associated with Second World War anti-invasion defences, including a spigot mortar emplacement, five anti-tank ditches, eight tank traps and 26 pillboxes. These features formed part of GHQ Line A, which at this point runs between Heckfield and Ewshot, from the county boundary with Berkshire in the north to the county boundary with Surrey in the south east.

Undated

In the Hampshire AHBR there are 54 records equating to 9% of all records for sites of unknown or uncertain date for the aggregate resource (Figure 121). The sites occur throughout the resource area, but most notably in its north eastern part, with fewer in the west.

Sixteen of the records are for linear features, all identified from aerial photographs. Some of these form quite extensive complexes of features, the most notable being that near Lower Binfield Copse, Heckfield, which consists of a number of irregular enclosures and a network of associated linear features, part of which appears to be a rectilinear field system with a double-ditched trackway. To the north of here is a small rectangular enclosure with one or possibly two associated pits. To the south a group of linear features is likely to be a series of wood banks. There is also a single record for a water meadow.

Two records are for earthworks, one of which may be a park boundary; there are also records for an earthwork bank, a linear earthwork, and two mounds which are interpreted as parish boundary mounds. Two building platforms are recorded as earthworks, one associated with a manor house near Eversley, where there is also a record for a fishpond. Another fishpond is recorded at Winchfield Hurst. Nine other buildings marked on the 1842 Tithe map are also recorded.

An important record is for an urnfield cemetery discovered during gravel extraction on the outskirts of Yateley in the early twentieth century.

There are also two find spots and one record for negative evidence.

6.2.5.5 Scheduled Monuments

There are nine Scheduled Monuments in the resource area. Four of these are Bronze Age barrows or barrow cemeteries, one is the Roman villa at North Warnborough, one is the Caesar's Camp hillfort, one the medieval *Festaen Dic* earthwork, and there are two entries for Odiham Castle.

6.2.6 Itchen valley

6.2.6.1 The Itchen valley landscape

The Itchen valley resource area covers 25 square kilometres and represents 3% of the total aggregate resource in Hampshire.

The resource area encompasses the whole of the Itchen valley upstream of Southampton, as well as extensive tracts of land on either side of the river valley in the southern Hampshire lowland zone. This area includes tributaries of the Itchen, deposits of Whitecliff sand between Romsey and Eastleigh, and a band of Lambeth sand just to the north.

As a result of the necessity to limit the size of the Lower Test valley NMP sub-unit (section 4.2), a small area of river gravel associated with the Test in the Romsey area, rather than the Itchen, is included in the Itchen resource area (Figure 12).

River terrace gravels associated with the Test make up roughly two square kilometres of this aggregate resource area; terraces associated with the Itchen and its tributaries make up 15 square kilometres. Solid sand deposits cover roughly eight square kilometres; four each of Whitecliff sand and Lambeth sand.

In the northern part of the resource area (north of Twyford) the valley cuts through chalk downland and here the gravel terraces are largely confined to the valley floor. In the south the gravel terraces are more substantial and extend into the southern lowland landscape zone. This is a varied landscape characterised by an undulating terrain of mixed arable and grazing land within a backdrop of numerous woodlands, hedges and hedgerow trees. The Whitecliff and Lambeth sand deposits are also located in the southern lowland zone and the landscape associated with them is 'heathy' in character (HCC, 1993).

6.2.6.2 Historic Landscape Character

The Historic Landscape Character of the Itchen valley itself can be considered separately from the character of the south Hampshire Lowland landscape in the southern part of the resource area (Figure 140).

The Itchen valley and its tributaries are characterised by extensive water meadow systems. In the southern stretches of the Itchen there are a few miscellaneous valley bottom paddocks and pastures and unimproved hay meadows, whilst in the New Alresford area there are pockets of valley floor woodland. There are also fishponds and watercress beds in this area.

In the south Hampshire lowland area, the Lambeth sand deposits are characterised primarily by large irregular assarts, assarted woodland and, near Otterbourne, by small fields with wavy boundaries. The river gravels around Romsey are characterised by medium-sized Parliamentary type fields. The area to the northwest of Eastleigh contains assarts, assarted woodland and some nineteenth century plantations. In the eastern part of the area there is a mixture of Parliamentary type enclosures and fields with wavy boundaries.

A number of parks, including a deer park, are included in the resource area, as are several locations characterised by industrial activity including active and dormant gravel extraction.

6.2.6.3 Character of the archaeology

In the Hampshire AHBR there are 230 records for this resource area, representing roughly 6% of archaeological records for the aggregate resource as a whole (Figure 125).

Relative to the size of the Itchen valley resource area this is a very high number of sites. It equates, in broad terms, to roughly nine sites per square kilometre, which is well above the average density of five sites per square kilometre in the overall aggregate resource.

Forty four sites are located on Lambeth sand, 39 on Whitecliff sand and 19 on river terrace gravels associated with the Lower Test. The remaining 128 are on river gravels associated with the Itchen.

There are six Scheduled Monuments in the resource area making up 2.5% of all Scheduled Monuments in the aggregate resource as a whole (Figure 126). A breakdown of the archaeological resource is shown below in table 12.

Table 12. AHBR records for the Itchen valley resource area

Itchen valley	**Number of records**	**% of aggregate resource**
Size (sq kms)	25	3
Scheduled Monuments	6	2.5
Palaeolithic	20	23
Mesolithic	9	6
Neolithic	13	8.5
Bronze Age	17	2.5
Iron Age	9	7
Prehistoric (undated)	8	3.5
Roman	37	7
Early medieval	7	12.5
Medieval	29	6
Post medieval	49	11
Modern	12	4.5
Undated	20	3
Total no of records	**230**	**6**

The Itchen valley resource area contains a rich archaeological resource, both in terms of numbers of sites and significance of the archaeology.

Numbers of sites are particularly high for the Palaeolithic period, although a large proportion of these sites are, in fact, recorded from gravel terraces associated with the Lower Test rather than the Itchen (Figure 127). There are also relatively high numbers of early medieval, post medieval, Neolithic, Iron Age and Roman sites.

A significant aspect of site distribution within the resource area is the lack of prehistoric archaeology in the Upper Itchen valley. Sites from the Palaeolithic to Iron Age (including undated prehistoric sites) are largely confined to the southern lowland zone (Figure 128). This distribution contrasts with that on the chalklands flanking the upper reaches of the valley, which are rich in prehistoric sites (see Figures 33, 34, and 40), and it is unclear how the Upper Itchen was used in prehistory.

Notwithstanding this uneven site distribution, there are a number of important prehistoric sites in the resource area. These include the late Mesolithic and Neolithic

occupation site at Broom Hill, Braishfield, the record for two beakers from the same area, and two Iron Age hillforts. These latter sites form part of a cluster of hillforts in the area to the north and northwest of Southampton (Figure 42), which perhaps suggests an intensive use of the lowland landscape in this period.

The Roman resource is notably rich and includes records for four villas – almost a third of the total number of villas in the aggregate landscape - and two rural settlements.

Sites from the medieval and later periods occur throughout the resource area. There is much more evidence of use of the river valley itself, particularly in the post medieval period (Figure 137). This increased use is evidenced by water meadows, fishponds, watercress beds, and numerous water mills.

6.2.6.4 Archaeological resource

Palaeolithic

In the Hampshire AHBR there are 20 records for Palaeolithic archaeology. These records equate to 23% of all Palaeolithic records for the aggregate resource (Figure 127).

This figure is somewhat misleading as it is inflated by a concentration of 11 records in the immediate vicinity of Romsey. These records all occur on gravel terraces associated with the Lower Test valley rather than the Itchen (see section 6.2.6.1). A further four records are for sites located on Lambeth sand and seven sites are on Whitecliff sand.

Most of these records are assigned a broad Palaeolithic date. Some are for single finds while others are for larger assemblages, such as the very productive find spot at Cupenham Lane gravel pit, Romsey.

There are four records for sites in the area to the north of Romsey. These include three late Upper Palaeolithic tools recorded during the excavation of the Mesolithic site at Broom Hill, Braishfield, and implements described as Middle and Upper Palaeolithic found nearby. There is also a record for an Upper Palaeolithic hand axe found during field walking near Ganger Common.

Between Romsey and Eastleigh further hand axes are recorded from Whitecliff sand deposits, and there are two records for Palaeolithic find spots from the gravel terraces of the river Itchen itself.

Mesolithic

In the Hampshire AHBR there are nine records, equating to 6% of all Mesolithic records for the aggregate resource (Figure 129). Eight are assigned a broad Mesolithic date and one is interpreted as late Mesolithic.

Two sites are on terrace gravels associated with the Itchen, one is on terrace gravels to the north of Southampton, three are on Whitecliff sand, and three on Lambeth sand to the northeast of Romsey. There are no records for Mesolithic sites in the upper valley of the Itchen where it cuts through the chalk downs.

Seven of the AHBR records are for find spots, generally consisting of small assemblages. One site, on Whitecliff sand at Fair Oak, is a probable occupation site. The ninth record is for the late Mesolithic occupation site at Broom Hill, Braishfield. This site, excavated in the 1970s, contained pits, hearths and a post-built structure interpreted as a possible dwelling. Radiocarbon evidence suggested a date of 6600 - 4500 BC (O'Malley and Jacobi, 1978). This is one of only two sites in Hampshire where Mesolithic dwellings have been recorded.

Neolithic

In the Hampshire AHBR there are 13 records, equating to 8.5% of all Neolithic records for the aggregate resource (Figure 130). Three sites are located on Lambeth sand, three on Whitecliff sand, one on gravel terraces of the Lower Test, five on gravel terraces of the Lower Itchen and one on Upper Itchen gravels.

There are two concentrations of sites; one to the north of Romsey, the other is in the Eastleigh area. The most significant site recorded is the possible occupation site at Broom Hill, Braishfield. Excavations unearthed flints, pottery (including a Hembury style bowl) and a hearth. A possible flint working site is recorded on the Lower Itchen gravels at Brambridge, north of Eastleigh and a large flint assemblage is recorded from the Lower Test gravels north of Romsey. All the other records are find spots of single artefacts or small assemblages.

Bronze Age

In the Hampshire AHBR there are 17 records equating to 2.5% of all Bronze Age records for the aggregate resource (Figure 131). Five records are for sites located on Whitecliff sand around Eastleigh, five to the north on Lambeth sand, three are on gravels associated with the Lower Test and the other four on river terrace gravels associated with the Itchen.

The sites are widely distributed throughout the southern part of the resource area, with only two site records for the Upper Itchen. Six of the sites are barrows; the remaining 11 are find spots. These include three records for beakers, two of which are in close proximity to the Neolithic site at Broom Hill.

Iron Age

In the Hampshire AHBR there are 9 records equating to 7% of all Iron Age records for the aggregate resource (Figure 132). Three sites, all of them find spots, are located on Lambeth sand, there is one site on Whitecliff sand, and one on gravel terraces associated with the Lower Test. The other four records are for sites on river terrace gravels of the Itchen.

There is a record for a hoard of staters at Alresford; all the other records are for sites located in the lower part of the resource area, in the Eastleigh/Romsey/Southampton area.

There are two hillforts; Cranbury, to the north of Eastleigh, and Toothill, to the north of Rownhams. A third earthwork is the circular enclosure at Castle Hill, near Chilworth on the northern outskirts of Southampton.

Two ditches and a pit are recorded from Stubbington Copse near Colden Common during work on the Twyford to Highbridge road. The other five records are all for find spots.

Prehistoric (undated)

In the Hampshire AHBR there are 8 records equating to 3.5% of all undated prehistoric records for the aggregate resource (Figure 133). Two of the records are located on Lambeth sand, two on Whitecliff sand, and the others on the Itchen terrace gravels.

All the records are for sites in the Romsey/Eastleigh area. One record, assigned a Neolithic or later date, is for a broad, shallow depression at Breach Farm, Eastleigh. This feature has been suggested as the site of an Iron Age promontory fort, but is more likely to be an ox-bow of the river Itchen.

At Zionshill Farm, to the west of Eastleigh, scatters of burnt flint are interpreted as two possible burnt mounds. Otherwise all the records are for find spots of undiagnostic flints.

Roman

In the Hampshire AHBR there are 37 records equating to 7% of all Roman records for the aggregate resource (Figure 134). Fifteen sites are located on Lambeth sand deposits and four on Whitecliff sand. The remainder are located on river terrace gravels associated with the Itchen.

The bulk of these sites are in the area around Romsey and Eastleigh, whilst there is a smaller group of five site records to the north and west of Winchester.

There are four villas recorded in the resource area. Three of these are on Lambeth sand in the area north of Romsey. One was discovered through aerial photography and trial trenching, the other two through finds of building material. The fourth villa is on the Itchen gravel terraces to the south of Eastleigh.

Two settlements are recorded (although no further details are provided) to the north of Eastleigh; one on Lambeth sand, the other on Itchen terrace gravel. There is a cremation recorded from Hursley, a villa at Bramdean, and a ditch at Fair Oak. All the other records (26 records in total) are for find spots.

Early medieval

In the Hampshire AHBR there are 7 records equating to 12.5% of all early medieval records for the aggregate resource (Figure 135). One record is for a site located on Whitecliff sand, the others are all on terrace gravels of the Itchen in the Winchester area.

One record is for the site of a tenth century hospital at St Cross, Winchester, the others are all find spots.

Medieval

In the Hampshire AHBR there are 29 records equating to 6% of all medieval records for the aggregate resource (Figure 136). Five records are for sites located on Whitecliff sand, three on Lambeth sand, and the remainder are on terrace gravels associated with the Itchen.

The records include sites occurring throughout the resource area but concentrated mainly in the Upper Itchen valley around New Alresford and Winchester, and in the South Hampshire lowland landscape to the north of Eastleigh.

There are a number of high status sites. These include the Bishop's palace at Bishops Sutton, New Alresford; the St Cross hospital, south of Winchester, with its associated house platforms, boundary bank and dovecote; and the fishery at Woodmill – one of the two held by the Bishop of Winchester in his manor of South Stoneham in the late eleventh century. There are three manor houses; at Otterbourne, where there is a record for a moat; at Cranbury Park; and at Titchbourne House, south of new Alresford, where there is also a fishpond.

Elsewhere there is a late twelfth or early thirteenth century weir built to form Old Alresford pond, a possible fishpond at Headbourne Worthy, a record for a fishpond within Morden deer park, Hursley, and a park pale at North Stoneham.

There is a single record for a deserted settlement at Otterbourne, and a number of landscape features including water meadows possibly dating from this period at Twyford Meads; a copse bank at Hocombe Upper Plantation, Hiltingbury; and an assart boundary a short distance to the north.

There are seven records for find spots in the resource area.

Post medieval

In the Hampshire AHBR there are 49 records equating to 11% of all post medieval records for the aggregate resource (Figure 137). Four records are for sites located on Whitecliff sand deposits, two are for sites on Lambeth sand and the remainder are for sites on river terrace gravels; two sites associated with the Test and 41 sites associated with the Itchen.

The sites are distributed evenly along the lower course of the Itchen, less densely in the upper reaches, and sparsely in the lower western part of the resource area where it is within the South Hampshire lowland zone.

Many of the sites recorded in the resource area are associated with communications. Principal among these is the Itchen Navigation, a canal running between Southampton and Winchester which was constructed during the late seventeenth and early eighteenth centuries. There are records for nine locks, a weir and a lock-keeper's cottage. There is also the line of the Didcot, Newbury and Southampton railway which was closed in 1966.

A number of mills associated with the Itchen are recorded: there are sawmills at Catherine Hill, to the south of Winchester; at Avington; and at Allbrook; a fulling mill at Kings Worthy; and watermills at Bishops Sutton, St Cross, Abbotstone, Abbots Worthy and Cheriton. Away from the river there is the possible site of a windmill at Ladwell.

There are only two agricultural features; the site of a water meadow at Old Alresford and a brick-built animal pound dating from the late nineteenth century near Twyford. There are several ornamental landscape features. These include two sites in the upper reaches of the Itchen; an eighteenth century serpentine lake in Avington Park and a fishpond near Arle Bury. In the South Hampshire lowland there are records for a nineteenth century fishpond at Wooley Green farm, a lake and a pond at Cranbury Park, two icehouses – at North Stoneham Park and Lakeside Country Park, a lake at Chilworth Manor Park, and a gate lodge at Avenue Park, Eastleigh.

There are also records for the site of the mid-sixteenth century St Elizabeth's College at Winchester, a brickworks in Hursley Forest, and a duck decoy pond near Chandler's Ford.

There are two records for find spots.

Modern

In the Hampshire AHBR there are 12 records equating to 4.5% of all modern records for the aggregate resource (Figure 138). One record is for a site located on Whitecliff sand, one on terrace gravel associated with the Test, and the other 10 for sites on the Itchen gravels.

There are two records for air raid shelters in Winchester, two records for pillboxes, one in northern Southampton and the other south of Eastleigh. There are records for a lock on the Itchen Navigation canal, a number of buildings, a memorial for the First World War, and a single record for negative evidence.

Undated

In the Hampshire AHBR there are 20 records equating to 3% of all records for sites of unknown or uncertain date for the aggregate resource (Figure 139). Four records are for sites located on Lambeth sand, three for sites on Whitecliff sand, and the remainder on the Itchen gravels.

The sites occur sparsely throughout the resource area, but are concentrated mainly in the South Hampshire lowland landscape and in the upper reaches of the Itchen, north of Winchester.

There are records for a possible Roman villa near Braishfield, a possible moated site at Ampfield Hill, a rectangular enclosure which could be another moat at Yavington Farm, a pound near Hursley and a wood bank near Bishops Waltham. There are also four records for earthwork features including two banks.

There is a single record for linear features identified from aerial photographs, one record for an undated hearth, two records for negative evidence and seven find spots.

6.2.6.5 Scheduled Monuments

There are six Scheduled Monuments in the resource area, including the Iron Age hillfort at Toothill, the Iron Age enclosure at Castle Hill, and four medieval sites; the moated manor at Otterbourne, a chapel and two park pales.

6.2.7 Hamble valley

6.2.7.1 The Hamble valley landscape

The Hamble valley resource area covers 5 square kilometres and represents less than 1% of the total aggregate resource in Hampshire.

River terrace gravels associated with the Hamble make up four square kilometres of this aggregate resource area; the other square kilometre comprises an outcrop of Whitecliff sand near the town of Waltham Chase in the east of the resource area.

In the northernmost tip of the resource area the valley cuts through chalk downland, but the bulk of the area lies within the South Hampshire lowland landscape. This is characterised by an undulating terrain of mixed arable and grazing land within a backdrop of numerous woodlands, hedges and hedgerow trees (HCC, 1993).

6.2.7.2 Historic Landscape Character

The Historic Landscape Character of the Hamble valley archaeological resource area is formed primarily by Parliamentary type enclosures with some small rectilinear fields with wavy boundaries. The Whitecliff sand deposits in the eastern part of the area are characterised by medium irregular assarts, which also occur in the south (Figure 142). In the valley of the Hamble itself there are a number of water meadows between Bishop's Waltham and Botley, and tracts of marsh and rough grazing at Bishop's Waltham.

6.2.7.3 Character of the archaeology

In the Hampshire AHBR there are 27 records for this resource area, representing roughly 0.7% of archaeological records for the aggregate resource as a whole (Figure 141).

Given the small size of the Hamble valley resource area the low number of sites is not surprising. However, this equates, in broad terms, to roughly 5.5 sites per square kilometre, which is just above the average density of five sites per square kilometre in the overall aggregate resource.

One site is located on Whitecliff sand; the remainder are all on river gravels.

There are no Scheduled Monuments in the resource area. A breakdown of the archaeological resource is shown below in table 13.

Table 13. AHBR records for the Hamble valley resource area

Hamble valley	Number of records	% of aggregate resource
Size (sq kms)	5	0.5
Scheduled Monuments	0	0
Palaeolithic	1	1
Mesolithic	4	2.5
Neolithic	0	0
Bronze Age	0	0
Iron Age	0	0
Prehistoric (undated)	0	0
Roman	2	0.5
Early medieval	0	0
Medieval	5	1.5
Post medieval	7	1.5
Modern	5	2
Undated	3	1
Total no of records	**27**	**0.7**

There are fewer site records in the Hamble valley than in any of the other resource areas or sub-units. The most significant gap in the archaeological record is the lack of later prehistoric sites: there are no records for sites from the Neolithic, Bronze Age or Iron Age, and no records for prehistoric (undated) sites.

In contrast there is a relatively rich Mesolithic resource, including a significant assemblage from a sand pit at Shedfield.

The Roman archaeological resource also includes a significant element in the form of sites relating to the tile production industry.

Sites dating from the medieval period or later are more numerous and are evenly distributed throughout the Hamble valley.

6.2.7.4 Archaeological resource

Palaeolithic

In the Hampshire AHBR there is a single record assigned a broad Palaeolithic date. This equates to 1% of all Palaeolithic records for the aggregate resource. The record is for a single artefact find to the northeast of Botley (Figure 127).

Mesolithic

In the Hampshire AHBR there are four records all assigned a broad Mesolithic date. These four records equate to 2.5% of all Mesolithic records for the aggregate resource (Figure 129).

The records are all for find spots of relatively large assemblages, and include the extensive collection of early Mesolithic material at Sandy Lane pit, Shedfield (Jacobi, 1981). The Shedfield site is located on Whitecliff sand; the other three sites are on gravel terraces of the Hamble situated both upstream and downstream of Botley.

Neolithic

There are no records for Neolithic archaeology in the Hampshire AHBR for the Hamble valley resource area.

Bronze Age

There are no records for Bronze Age archaeology in the Hampshire AHBR for the Hamble valley resource area.

Iron Age

There are no records for Iron Age archaeology in the Hampshire AHBR for the Hamble valley resource area.

Prehistoric (undated)

There are no records for undated prehistoric archaeology in the Hampshire AHBR for the Hamble valley resource area.

Roman

In the Hampshire AHBR there are 2 records equating to less than 1% of all Roman records for the aggregate resource (Figure 132). Both sites are on river terrace gravels and are associated with the tile production industry. The first, to the east of Boorley Green, is a first century tile kiln excavated in 1956; the second, to the south west of Bishops Waltham, is a heavy scatter of tiles including wasters. These records are significant because only four Roman tile kilns are recorded in the AHBR.

Early medieval

In the Hampshire AHBR there are no records for early medieval archaeology in the Hamble valley resource area.

Medieval

In the Hampshire AHBR there are 7 records equating to 1.5% of all medieval records for the aggregate resource (Figure 136). These records are all for sites located on terrace gravels associated with the Hamble between Botley and Bishop's Waltham.

The sites comprise Calcot House, a country house first documented in 1208; a hunting lodge at Brooklands farm to the south of Bishop's Waltham; a farmstead and associated watermill at Maddoxford farm to the north of Botley; a deserted settlement identified from aerial photographs to the north of Bishop's Waltham; and a find spot on the outskirts of Botley.

Post medieval

In the Hampshire AHBR there are 7 records equating to 1.5% of all post medieval records for the aggregate resource (Figure 137). One record is for a site located on Whitecliff sand deposits, the remainder are for sites on river terrace gravels. The sites are all in the central part of the resource area, to the north and south of Botley.

The records are for a seventeenth century paper mill and a water mill near Boorley Green, an eighteenth century timber yard at Curbridge, gravel pits and a riverside hard at Droxford, and a barn at Maddoxford farm.

Modern

In the Hampshire AHBR there are 5 records equating to 2% of all modern records for the aggregate resource (Figure 138). All the records are for sites on terrace gravels associated with the Hamble.

One record is for negative evidence at Lower Swanwick. The other four are all clustered to the east of Botley and consist of three pillboxes and a parking bay for military vehicles en route for the D-Day embarkation points.

Undated

In the Hampshire AHBR there are 3 records equating to less than 1% of all records for sites of unknown or uncertain date for the aggregate resource (Figure 139). The sites all occur on terrace gravels in the lower part of the valley, around Botley.

One record is for a series of linear features identified on aerial photographs and possibly Roman in date. The other records are for find spots of flint artefacts; one of these find spots is interpreted as a possible occupation site.

6.2.7.5 Scheduled Monuments

There are no Scheduled Monuments in the Hamble valley archaeological resource area.

6.2.8 Meon valley

6.2.8.1 The Meon valley landscape

The Meon valley resource area covers nine square kilometres and represents slightly more than 1% of the total aggregate resource in Hampshire.

River terrace gravels associated with the Meon make up six square kilometres of the resource area; three square kilometres comprise outcrops of Whitecliff sand away from the river valley in the southern part of the area.

In the north the valley cuts through chalk downland. Here the associated gravel terraces are narrow and fragmented, rarely extending beyond the confines of the valley floor. Further south the gravel terraces are more substantial, and both the terraces and the Whitecliff sand deposits extend into the South Hampshire lowland landscape. This is characterised by an undulating terrain of mixed arable and grazing land within a backdrop of numerous woodlands, hedges and hedgerow trees (HCC, 1993).

6.2.8.2 Historic Landscape Character

The Historic Landscape Character of the Meon valley archaeological resource area can be considered in three parts (Figure 145).

Firstly the river valley itself is characterised predominantly by water meadows. In the valley to the north of Corhampton the water meadows gradually give way to miscellaneous valley bottom paddocks and pastures, which dominate the upper stretches of the river between West and East Meon. Here and there are small areas of valley bottom woodland, especially around Wickham.

Secondly the gravel terraces in the upper reaches of the Meon are characterised by Parliamentary type enclosures.

Thirdly in the southern part of the resource area, in the south Hampshire Lowland zone, the landscape, particularly on Whitecliff sand deposits, is characterised mainly by irregular assarts and assarted woodland.

Other HLC types are pre-1810 parkland and, in the southern part of the resource area, golf courses.

6.2.8.3 Character of the archaeology

In the Hampshire AHBR there are 72 records for this resource area, representing roughly 2% of archaeological records for the aggregate resource as a whole (Figure 143).

Given the small size of the Meon valley resource area the low number of sites is not surprising. However, this equates, in broad terms, to roughly eight sites per square kilometre, which is well above the average density of five sites per square kilometre in the overall aggregate resource.

Fourteen sites are located on Whitecliff sand; the remaining 58 are on river gravels.

There are four Scheduled Monuments in the resource area making up 1.5% of all Scheduled Monuments in the aggregate resource as a whole (Figure 126). A breakdown of the archaeological resource is shown below in table 14.

Table 14. AHBR records for the Meon valley resource area

Meon valley	Number of records	% of aggregate resource
Size (sq kms)	9	1
Scheduled Monuments	4	1.5
Palaeolithic site records	0	0
Mesolithic site records	4	2.5
Neolithic site records	6	5
Bronze Age site records	1	0.5
Iron Age site records	1	1
Prehistoric (undated) site records	0	0
Roman site records	10	2
Early medieval site records	4	7
Medieval site records	12	2.5
Post medieval site records	20	4.5
Modern site records	4	1.5
Undated site records	10	1.5
Total no of site records	**72**	**2**

In terms of numbers of sites the Meon valley resource area contains a rich archaeological resource relative to its size. This is particularly true of the Neolithic, early medieval and post medieval periods.

The Neolithic resource can be seen as significant in that there are generally few records for sites from this period in the lowland zone between Eastleigh and Havant (Figure 33).

The distribution of Neolithic sites in the Meon valley reflects that of sites from the other prehistoric periods in that it is confined to the southern part of the resource area (Figure 144). The river valley where it narrows upstream appears, on this evidence, to have been peripheral to prehistoric activity, which has left abundant traces in the neighbouring chalk downland (see, for example, Figures 33 and 34).

To some extent the same is true of the Roman resource; there are nine records for sites, including two occupation sites, in the southern part of the resource area but only a single chance find in the northern reaches of the Meon valley. In the adjacent chalkland areas, however, a considerable number of Roman sites are recorded (Figure 46).

There are four records for sites from the early medieval period. These are part of a significant cluster of sites from this period in the wider Meon valley (Figure 51).

There are few records for later prehistoric archaeology, with the Bronze Age and Iron Age each being represented only by a single find spot.

6.2.8.4 Archaeological resource

Palaeolithic

There are no records for Palaeolithic archaeology in the Meon valley resource area.

Mesolithic

In the Hampshire AHBR there are four records, equating to 2.5% of all Mesolithic records for the aggregate resource (Figure 129). The records are all assigned a

broad Mesolithic date and are for find spots of single artefacts or small assemblages. Two are located on Whitecliff sand and two on gravel terraces of the Meon.

Neolithic

In the Hampshire AHBR there are 6 records, equating to 5% of all Neolithic records for the aggregate resource (Figure 130). Four of these records are from Whitecliff sand and two from gravel terraces of the Lower Meon. There are no records for the upper reaches of the river where it cuts through downland. Two of the records are for find spots of single artefacts; the others are for more substantial assemblages.

Bronze Age

In the Hampshire AHBR there is a single record equating to less than 0.5% of all Bronze Age records for the aggregate resource (Figure 131). The record is for a find spot of flint artefacts.

Iron Age

In the Hampshire AHBR there is a single record equating to less than 1% of all Iron Age records for the aggregate resource (Figure 132). The record is for a find spot of pottery in a sand pit located on Whitecliff sand.

Prehistoric (undated)

There are no records for undated prehistoric archaeology in the Hampshire AHBR for the Meon valley resource area.

Roman

In the Hampshire AHBR there are 10 records equating to 2% of all Roman records for the aggregate resource (Figure 134). Three of these records are located on Whitecliff sand (two of these are for the Chichester to Winchester Roman road), the other seven are on terrace gravels of the Meon.

There is evidence of settlement activity close to the Chichester to Winchester road, both to the east and west of Wickham, discovered during small scale excavations in advance of development in the area. Also at Wickham is a pottery production site consisting of two kilns and another structure, discovered in advance of pipeline operations.

There are three records for the Chichester to Winchester and Chichester to Bitterne roads, and five records for find spots.

Early medieval

In the Hampshire AHBR there are 4 records equating to 7% of all early medieval records for the aggregate resource (Figure 135). These records are confined to the northern section of the river valley.

One is the site of the pre-Norman church at Warnford. The remainder of the records are for find spots.

Medieval

In the Hampshire AHBR there are 12 records equating to 2.5% of all medieval records for the aggregate resource (Figure 136). These records are all for sites located on terrace gravels associated with the Meon apart from a single site on Whitecliff sand. The sites are distributed evenly along the length of the Meon throughout the resource area.

Near the head of the Meon is the deserted settlement of Westbury and an associated chapel. Another significant site is the moated manor at Wickham. The moat belongs to the later phases of occupation during the thirteenth century; the earliest construction phases date from the eleventh century.

There are two records for ponds, the first is for two fishponds associated with St John's House, Warnford, and the second, nearby, is interpreted as a mill pond.

Other records include 'ancient meadows' at Meonstoke, a medieval bridge near Fareham, a 'chalk floor' found near Shedfield House to the west of Wickham, and five find spots.

Post medieval

In the Hampshire AHBR there are 20 records equating to 4.5% of all post medieval records for the aggregate resource (Figure 137). Two records are for sites located on Whitecliff sand; the remainder are for sites on river terrace gravels. Site distribution is concentrated in the southern and northern parts of the resource area, whilst the centre, around Droxford, is devoid of sites.

The most numerous sites from this period are water mills. There are records for corn mills at Funtley Dell, Exton, East Meon and Soberton, a paper mill at Warnford, and the site of a mill at Funtley. There is also the possible site of a windmill at Shirrell Heath near Waltham Chase.

There are two records for manor houses; the first at Wickham is the site of a medieval manor which was rebuilt in brick in the mid-seventeenth century, the second is Warnford Park House which dates from the late sixteenth century. There is also a sheep fold at Shedfield House and a hunting lodge at Soberton.

There is a record for the Meon Valley railway at Wickham, and for an iron works at Funtley. In addition there are three records for find spots.

Modern

In the Hampshire AHBR there are 4 records equating to 1.5% of all modern records for the aggregate resource (Figure 138). One record is for a site located on Whitecliff sand, the other three are on river terrace gravels.

All the sites are in the Wickham area; they comprise the site of a toll house, a railway station and bridge and a single record for negative evidence.

Undated

In the Hampshire AHBR there are 10 records equating to 1.5% of all records for sites of unknown or uncertain date for the aggregate resource (Figure 139). The sites are located on terrace gravels in the lower and upper parts of the valley, less so in the middle.

Apart from two records for linear features, all the sites are water-related. There are two records for water meadows, a drainage system (or possibly a moat), a conduit, a fishpond, a bank (possibly a levee), an oxbow lake and a well-preserved watercress bed at Soberton.

6.2.8.5 Scheduled Monuments

There are four Scheduled Monuments in the resource area. These are the deserted settlement and chapel at Westbury, the medieval bridge at Stony Bridge, Titchfield, St John's House, at Warnford Park, and the Funtley iron works.

6.2.9 Wey valley

6.2.9.1 The Wey valley landscape

The Wey valley resource area covers 8 square kilometres and represents 1% of the total aggregate resource in Hampshire. The aggregate resource in this area is composed entirely of river terrace gravels associated with the Wey.

The valley of the Wey in Hampshire forms a narrow ribbon running through chalk and clay geology. The associated gravel terraces for the most part are small, and are generally most extensive on the northern side of the river. More substantial terraces are located well to the south of the river valley, at Bucks Horn Oak on the county border with Surrey (Figure 13).

Beyond the gravel terraces, the partly wooded valley sides rise steeply to the downs to the north and more gently onto Greensand in the south. Much of the area is characterised by a landscape of farmland, woodland and hedgerow. The Bucks Horn Oak terrace on the Surrey border is heavily wooded (HCC, 1993).

6.2.9.2 Historic Landscape Character

The Historic Landscape Character of the Wey valley archaeological resource area is characterised predominantly by miscellaneous valley bottom paddocks and pastures in the valley itself, with water meadows at Upper Froyle, and by Parliamentary type enclosures in the flanking landscape (Figure 163).

In the easternmost part of the resource area, the extensive gravel terrace around Bucks Horn Oak is characterised by assarted woodland.

6.2.9.3 Character of the archaeology

In the Hampshire AHBR there are 58 records for this resource area, representing roughly 1.5% of archaeological records for the aggregate resource as a whole (Figure 146).

Given the small size of the Wey valley resource area the low number of sites is not surprising. However, this equates, in broad terms, to roughly 7 sites per square kilometre, which is above the average density of five sites per square kilometre in the overall aggregate resource.

There is one Scheduled Monument in the resource area making less than 0.5% of all Scheduled Monuments in the aggregate resource as a whole (Figure 163). A breakdown of the archaeological resource is shown below in table 15.

Table 15. AHBR records for the Wey valley resource area

Wey valley	Number of records	% of aggregate resource
Size (sq kms)	8	1
Scheduled Monuments	1	0.5
Palaeolithic	1	1
Mesolithic	3	2
Neolithic	4	3
Bronze Age	3	0.5
Iron Age	0	0
Prehistoric (undated)	2	1
Roman	22	4
Early medieval	1	1.5
Medieval	1	0.5
Post medieval	11	2.5
Modern	2	1
Undated	8	1
Total no of records	**58**	**1.5**

In terms of numbers of sites the Wey valley resource area contains a rich archaeological resource relative to its size. This is particularly true of the Roman period and, to a lesser extent, the post medieval and Neolithic periods. The resource includes a number of archaeologically significant sites.

The most important site in the resource area is the Roman town at Neatham, which is designated a Scheduled Monument. Nearby is a villa. These features form part of a dense cluster of Roman sites in this wider area of east Hampshire (Figure 47).

Two other noteworthy sites are the very large circular enclosure at Holt Pound, which is described in the AHBR as 'a high status Bronze Age ring fort', and a possible Neolithic long barrow at Bentley Green. This latter site is the only long barrow so far located on non-chalk geology in Hampshire. It is one of a cluster of Neolithic sites in this wider area of east Hampshire (Figure 33).

6.2.9.4 Archaeological resource

Palaeolithic

In the Hampshire AHBR there is one record, equating to 1% of all Palaeolithic records for the aggregate resource (Figure 147). The record is for a find spot of Palaeolithic flint artefacts from river terrace gravels just outside Alton.

Two further find spots from the town of Alton are not included in the assessment.

Mesolithic

In the Hampshire AHBR there are three records, equating to 2% of all Mesolithic records for the aggregate resource (Figure 148). The three records, all assigned a broad Mesolithic date, are for find spots of small assemblages.

Neolithic

In the Hampshire AHBR there are 4 records, equating to 3% of all Neolithic records for the aggregate resource (Figure 149).

The most significant site is a probable long barrow identified as a crop mark from aerial photographs. This feature is situated on a gravel terrace at 90m OD overlooking the Wey to the south of Bentley Green. If this feature is a long barrow then it is the only one in Hampshire that is not located on chalk downland.

The other three records are for find spots, two of them single artefact finds, and the third a 'significant' concentration of flints near Binsted, discovered during field walking in advance of an oil pipeline.

Bronze Age

In the Hampshire AHBR there are three records equating to less than 0.5% of all Bronze Age records for the aggregate resource (Figure 150).

The most significant site is a large ring ditch to the north of Holt Pound, which is 80m in diameter, and whose function is uncertain. There is also a pit at Bentley Green and an axe head from the same area.

Iron Age

There are no records for Iron Age archaeology in the Hampshire AHBR for the Wey valley resource area.

Prehistoric (undated)

In the Hampshire AHBR there are 2 records equating to 1% of all undated prehistoric records for the aggregate resource (Figure 151).

One of these records is for a cinerary urn containing human bone, found at Holybourne, Alton, and is assigned a Neolithic or later date. The second record, assigned a broad prehistoric date, is for a flint assemblage from Bentley Green.

Roman

In the Hampshire AHBR there are 22 records equating to 4% of all Roman records for the aggregate resource (Figure 152).

Nineteen records are clustered around the junction of three roads. The small town of Neatham was established at this site and evidence of both stone and timber buildings and other features (for instance 10 wells), dating from the first to fifth centuries occurs on either side of the river Wey at this location.

At Neatham is the site of a *mansio* along the line of the Chichester to Silchester road. To the west of the town the site of a villa was discovered during gardening operations at Neatham Manor, and an unusual site from the vicinity of the town is a possible Roman fish trap in the river Wey consisting of a series of post holes.

In addition to these features, there are five find spots in the Neatham area, and three further find spots in the eastern part of the valley.

Early medieval

In the Hampshire AHBR there is 1 record equating to 1.5% of all early medieval records for the aggregate resource (Figure 153). This record is for three rectangular timber structures uncovered during an archaeological evaluation at Bentley Green.

Medieval

In the Hampshire AHBR there is 1 record equating to less than 1% of all medieval records for the aggregate resource (Figure 153). This record is for Neatham Manor, near Alton, which is probably on the site of the grange belonging to Waverley Abbey.

Post medieval

In the Hampshire AHBR there are 11 records equating to 2.5% of all post medieval records for the aggregate resource (Figure 154). The site distribution is concentrated

in the western and eastern parts of the resource area, whilst the centre is largely devoid of sites.

There is a corn mill at Holybourne, a fulling mill to the south of Upper Froyle, and a corn and paper mill at Groveland. Other sites associated with the river Wey are a series of watercress beds at Alton, and the site of a tannery nearby.

There is a record for an icehouse at Marelands House and a hunting lodge at Alice Holt. Nearby is a late nineteenth century pumping house, and there are, in addition, three records for find spots.

Modern

In the Hampshire AHBR there are 2 records equating to less than 1% of all modern records for the aggregate resource (Figure 155).

One record is for a shed built in 1948 to house General Montgomery's military campaign caravans at Islington Mill. The other record is for a find spot of a coin.

Undated

In the Hampshire AHBR there are 8 records equating to 1% of all records for sites of unknown or uncertain date for the aggregate resource (Figure 156).

One record for a field system identified on aerial photographs is located in the eastern part of the resource area; all the others are immediately to the west of Alton.

These sites comprise a linear feature, a square enclosure, a wall, a path and three find spots.

6.2.9.5 Scheduled Monuments

There is one Scheduled Monument in the resource area. This is the Roman town at Neatham.

6.2.10 Rother valley

6.2.10.1 The Rother valley landscape

The Rother valley resource area covers 3 square kilometres and represents less than 0.5% of the total aggregate resource in Hampshire. It is the smallest archaeological resource area in the assessment.

Two square kilometres of the aggregate resource are formed by Folkestone sand and the remainder by river terrace gravels.

To the east of Petersfield the landscape is an undulating terrain of mixed arable and grazing land with numerous woodlands, hedges and hedgerow trees. Elsewhere in the resource area the landscape is largely derived from former heathland and consists of enclosed, unintensively grazed pasture in a well-wooded setting (HCC, 1993).

6.2.10.2 Historic Landscape Character

The Historic Landscape Character of the Wey valley archaeological resource area is characterised by miscellaneous valley bottom paddocks and pastures and valley bottom woodland in the valley itself, and by a mixture of Parliamentary type enclosures, fields with wavy boundaries and irregular assarts in the flanking landscape (Figure 160). There is also a small area of heathland east of Petersfield.

6.2.10.3 Character of the archaeology

In the Hampshire AHBR there are 31 records for this resource area, representing less than 1% of archaeological records for the aggregate resource as a whole (Figure 158).

Given the very small size of the Rother valley resource area the low number of sites is not surprising. However, this equates, in broad terms, to roughly 10 sites per square kilometre, which is well above the average density of five sites per square kilometre in the overall aggregate resource.

There are eight Scheduled Monuments in the resource area making up roughly 3.5% of all Scheduled Monuments in the aggregate resource as a whole (Figure 163). A breakdown of the archaeological resource is shown below in table 16.

Table 16. AHBR records for the Rother valley resource area

Wey valley	Number	% of aggregate resource
Size (sq kms)	3	0.5
Scheduled Monuments	8	3.5
Palaeolithic	0	0
Mesolithic	1	0.5
Neolithic	1	1
Bronze Age	12	2
Iron Age	3	2
Prehistoric (undated)	5	2
Roman	1	0.5
Early medieval	0	0
Medieval	3	0.5
Post medieval	1	0.5
Modern	0	0
Undated	4	0.5
Total no of records	**31**	**1**

There are a small number of sites from most archaeological periods, although no Palaeolithic, early medieval or modern features are recorded.

The most important site is the Bronze Age barrow cemetery at Petersfield Heath pond.

6.2.10.4 Archaeological resource

Palaeolithic

In the Hampshire AHBR there are no records for Palaeolithic archaeology in the Rother valley resource area.

Mesolithic

In the Hampshire AHBR there is 1 record, equating to less than 1% of all Mesolithic records for the aggregate resource (Figure 148). The record is for a find spot consisting of a relatively large flint assemblage on river terrace gravel on the outskirts of Petersfield.

Neolithic

In the Hampshire AHBR there is 1 record, equating to less than 1% of all Neolithic records for the aggregate resource (Figure 149). This record is for a find spot consisting of a small flint assemblage on a gravel terrace of the Rother.

Bronze Age

In the Hampshire AHBR there are 12 records equating to 2% of all Bronze Age records for the aggregate resource (Figure 150). Nine of the records are located on Folkestone Formation sand, and three on river gravels.

Other than a single find spot in the north of the resource area, all the records are for barrows and are centred on Petersfield Heath Pond. This group of monuments includes a high proportion of so-called ‘fancy’ barrows: one bell barrow, one disc barrow, and four saucer barrows. They are part of a larger cemetery consisting of 22 barrows (11 barrows to the north of the pond are on Upper Marehill clay and are not

included in the assessment). This distribution suggests spatial links between early Bronze Age burial sites and major sources of water (Tomalin, 1996). If it is accepted that the presence of barrow groups is evidence of Bronze Age settlement, then the group on Petersfield Heath suggests the existence of a waterside community. It is possible that the pond sediments may have potential to provide environmental evidence for this community, but as the pond is a relatively recent creation this is by no means certain.

Iron Age

In the Hampshire AHBR there are 3 records equating to 2% of all Iron Age records for the aggregate resource (Figure 159).

The records are all located on Folkestone Formation sand to the west of Liss and all refer to the same site. This consists of Iron Age/Roman ditches, gullies and pottery discovered during an improvement scheme to the A3 road.

Prehistoric (undated)

In the Hampshire AHBR there are 5 records equating to 2% of all undated prehistoric records for the aggregate resource (Figure 151).

All of the records result from field walking carried out as part of the East Hampshire Survey (Shennan, 1981). All are located on Folkestone Formation sand in the Liss area, and all are find spots of flints.

Roman

In the Hampshire AHBR there is a single record equating to less than 1% of all Roman records for the aggregate resource (Figure 152). This site, which is located on Folkestone Formation sand, is for Roman finds in conjunction with Iron Age material, ditches and gullies uncovered during an improvement scheme to the A3 road.

Early medieval

In the Hampshire AHBR there are no records for early medieval archaeology in the Rother valley resource area.

Medieval

In the Hampshire AHBR there are 3 records equating to less than 1% of all medieval records for the aggregate resource (Figure 153). One site (a find spot) is located on Folkestone Formation sand; the other two are on river terrace gravels in the Petersfield area.

The most important site is a series of earthworks forming part of Durford Abbey, the other is a ‘wishing well’, St Mary’s well, at Sheet near Petersfield.

Post medieval

In the Hampshire AHBR there is 1 record equating to less than 1% of all post medieval records for the aggregate resource (Figure 154). The record is for a find spot of pottery sherds near Liss.

Modern

In the Hampshire AHBR there are no records for modern archaeology in the Rother valley aggregate resource area.

Undated

In the Hampshire AHBR there are 4 records equating to 0.5% of all records for sites of unknown or uncertain date for the aggregate resource (Figure 156). One record is for a site located on river gravels, the other three are on Folkestone sand.

Three sites occur in the southern part of the resource area, the fourth is in the far north. This site consists of a series of drainage channels, or it may be a water meadow: in this area a number of water meadows are recorded which consist of a single ditch running down one edge of a field from which flooding of the meadow is achieved and this site could be an example of this simple type of water meadow. The other site records are for a linear earthwork, an area of narrow ridge and furrow and a water meadow south east of Petersfield.

6.2.10.5 Scheduled Monuments

There are eight Scheduled Monuments in the Rother valley resource area. One is Durford Abbey, and the other seven are barrows forming part of the Petersfield Heath barrow cemetery.

6.3 NMP sub-units

Table 17. *Summary of AHBR records in the NMP sub-units.*

Period	Avon valley	East Hampshire	Lower Test valley	New Forest Coastal Plain	Total
Palaeolithic	15	1	25	4	45
Mesolithic	8	51	12	4	75
Neolithic	15	10	20	7	52
Bronze Age	124	50	36	29	239
Iron Age	24	10	19	5	58
Prehistoric (undated)	78	17	33	5	133
Roman	88	55	62	6	211
Early medieval	11	1	12	0	24
Medieval	120	38	80	11	249
Post medieval	40	31	53	7	131
Modern	53	6	13	16	88
Undated	78	29	77	26	210
Total	**654**	**299**	**442**	**120**	**1515**

6.3.1 Avon valley

6.3.1.1 The Avon valley landscape

The Avon valley NMP sub-unit covers 116 1km squares and represents 15% of the total aggregate resource in Hampshire. More than a third of this area falls within the boundary of the New Forest National Park (Figure 15).

The sub-unit contains small tracts of geological deposits which do not form part of the aggregate resource; most notably London Clay Formation clay and silt, Broadstone clay, Parkstone sand and clay, Reading Formation sand, and Tarrant chalk. Taken together, the non-aggregate rocks in the sub-unit cover roughly eleven 1km squares, and occur principally in the northeast and in the Ringwood Forest area. Although these deposits are not part of the aggregate resource, they are included in this assessment because they are contained within the boundaries of the sub-unit (see section 4.2).

Aggregate-producing geologies in the sub-unit comprise both superficial deposits and bedrock sand. There are roughly 11 square kilometres of Bracklesham sand deposits; these occur in the eastern and north eastern parts of the sub-unit and in the Ringwood Forest area. Elsewhere there are roughly 94 square kilometres of river gravels, consisting of both valley gravel deposits and older plateau gravels (Figure 15).

For the most part the Avon has a broad, flat flood plain flanked by similarly wide flat terraces only a few metres higher. Only in the northeast of the sub-unit, especially between Ringwood and Fordingbridge, are the valley sides steep; here the land rises abruptly to the New Forest plateau.

Much of the Avon valley is a farmed landscape, with grazing on the flood plain and arable on the terraces. In many areas, particularly to the north of Fordingbridge, the flood plain is characterised by extensive systems of water meadows.

There are a number of active gravel quarries and there has been a long history of mineral extraction in the Avon valley; this is most notable immediately to the north of Ringwood where there is a series of lakes resulting from former gravel workings.

The eastern part of the sub-unit, where it includes part of the New Forest, is characterised by heathland. This generally unenclosed landscape comprises a diverse range of habitats: open, treeless heaths with areas of ancient woodland, and a mosaic of grassland, mires, ponds, and the fringes of encroaching scrub. The heathland landform comprises flat or undulating plateaux with steep-sided valleys, especially at Rockford, Gorley and Hyde Commons. The heathland in the Ringwood Forest area is characterised by extensive conifer plantations (HCC, 1993).

6.3.1.2 Historic Landscape Character

The Historic Landscape Character of the Avon valley NMP sub-unit is formed by a range of landscape types (Figure 178). The river valley itself is dominated by water meadows. These occur throughout the length of the valley but are most extensive to the north of Fordingbridge. Between Fordingbridge and Ringwood the water meadows are intermingled with unimproved hay meadows or pasture. South of Ringwood water meadows are still the predominant HLC type but there are pockets of unimproved hay meadows and pasture, miscellaneous paddocks and pasture, and marsh and rough grazing.

The landscape flanking the Avon is best considered in sub-divided zones in terms of its historic character. To the south of Ringwood the predominant HLC type is small Parliamentary type enclosures, although there are extensive tracts of small fields with

wavy boundaries. In the eastern part of this zone, on the edge of the New Forest, these field types give way to tracts of heathland, heathland plantations, small pockets of old woodland and scattered settlements with paddocks. In the central part of the zone, around Bisterne, there is a large nineteenth century plantation and an extensive area of parkland.

The Ringwood Forest area is characterised by extensive heathland plantation with some areas of purlieus and other heathland enclosures.

Between Ringwood and the county boundary with Wiltshire the historic character of the landscape differs on either side of the Avon. To the west of the river the character is predominantly of irregular assarts and fields with wavy boundaries, interspersed with tracts of small Parliamentary type fields. To the east there is an extensive area of open heathland and Common heathland, with some heathland plantation in the north. On the edge of the New Forest there are several pockets of irregular assarts and assarted woodland. Between Ringwood and Fordingbridge and between the Avon and the forest edge, there is a band of small Parliamentary type enclosures.

To the immediate north of Ringwood there is a very extensive area of active and dormant gravel extraction; other areas of extraction occur in the Ringwood Forest to the west.

6.3.1.3 Character of the archaeology

In the Hampshire AHBR there are 654 records for this NMP sub-unit, representing roughly 17% of archaeological records for the aggregate resource as a whole (Figure 164). In broad terms this equates to 5.5 sites per kilometre square, which is slightly above the average density of 5 sites per kilometre square in the overall aggregate resource.

Thirteen of the sites are located on non-aggregate geologies. Of the remainder, 32 sites are located on Bracklesham sand, and 609 on river gravels.

Twenty three sites are designated Scheduled Monuments (SMs), making up 9% of the total number of SMs in the aggregate resource (Figure 165). A breakdown of the archaeological resource is shown below in table 18.

Table 18. AHBR records for the Avon valley sub-unit

Avon valley	**Number of records**	**% of aggregate resource**
Size (sq kms)	116	15
Scheduled Monuments	23	9
Palaeolithic	15	16
Mesolithic	8	5
Neolithic	15	13
Bronze Age	124	19
Iron Age	24	18
Prehistoric (undated)	78	35
Roman	88	16
Early medieval	11	19
Medieval	120	25
Post medieval	40	9
Modern	53	20
Undated	78	12.5
Total no of records	**654**	**17**

The Avon valley contains a rich archaeological resource in terms of numbers of sites. This is true particularly for sites of prehistoric (undated), medieval and modern periods, and also for Bronze Age, Iron Age and early medieval sites. The archaeology of the Mesolithic and post medieval periods is poorly represented.

A very obvious feature of the distribution of these sites (Figure 164) is the contrast between the north and south of the valley. The vast majority of sites are located in the northern part of the sub-unit, whereas few sites are recorded south of Ringwood. This contrast is even more pronounced when the archaeology of specific periods is considered: there are no records in the southern part of the Avon valley for the Neolithic, Iron Age, prehistoric (undated), Roman or early medieval periods, only two records for post medieval archaeology and no Scheduled Monuments. The Bronze Age is the only period for which significant numbers of sites have been recorded in the Lower Avon valley.

The overarching reason for this disparity is that more archaeological survey, evaluation, and other activity has taken place in the north. Particular attention must be drawn to the Middle Avon Valley Survey, a field walking survey carried out during the 1980s in part of the Avon valley north of Ringwood (Light, Schofield and Shennan, 1995). In the context of this assessment the Middle Avon Valley Survey has dramatically boosted the numbers of AHBR records for the western side of the Avon north of Ringwood. Almost 90% of prehistoric (undated) records, for instance, are flint scatters recorded during the survey; more than half the records for medieval archaeology and almost half of all Roman records are pottery find spots from the survey, and a significant result of the survey was the recovery of chaff-tempered pottery from several locations, indicating early medieval occupation.

Another significant result of the Middle Avon Valley Survey is an increased understanding of the Roman settlement pattern in the northern part of the sub-unit (Figure 49). During the survey a number of Roman settlement sites were identified through spreads of pottery, and the rural settlement pattern (excluding villas, whose distribution in the chalklands is well known) is consequently better appreciated in this area than in many other parts of the county. Even so the nature of these settlements, other than the village at Crystal Hollow, Godshill, which has been excavated (Light, 1990, 1991), remains unclear.

The large number of sites dating from the Bronze Age is a significant feature of the archaeological resource. These are characterised mainly by barrows and burnt mounds. Many barrows are recorded as earthwork monuments on heathland in the east of the sub-unit and along the western edge of Ringwood Forest (Figure 38); barrows at these locations make up 21 of the 23 Scheduled Monuments in the sub-unit (Figure 165).

Other barrows are visible only as cropmarks and are recorded as ring ditches; these occur both in the Lower Avon valley and just to the north of Ringwood (Figure 38). The countywide distribution of burnt mounds is focused in the Hampshire Basin and 25 are recorded from the sub-unit. The mounds are located mainly on the fringes of the New Forest and to the north of Ringwood Forest (Figure 36).

In terms of numbers of sites, the sub-unit contains a rich archaeological resource from the medieval period and from the twentieth century. A significant aspect of the medieval resource is the large number of deserted settlements, particularly in the area around Breamore (Figure 54). The twentieth century resource is characterised by Second World War sites. Many are features associated with Ibsley airfield, to the north of Ringwood (Figure 176). A second group of sites occurs in the Fordingbridge area; these consist of anti-invasion defences forming part of the Ringwood Stop Line (Foot, 2006).

In terms of the character of the archaeology it is convenient to divide the sub-unit into five geographical areas.

1. River Avon flood plain

The predominant archaeological features of the Avon flood plain are water meadows. These are often very extensive, much more so in the northern part of the sub-unit, particularly to the north of Fordingbridge. Most are interpreted as post medieval, although one, at Sopley, is dated as medieval and those at Bickton are interpreted as of unknown date (presumably medieval or post medieval).

2. New Forest fringe

The New Forest fringe, running up the north eastern side of the sub-unit, is predominantly heathland in character. Its archaeological resource includes many elements typical of the archaeology of the New Forest.

Most of the characteristic forest features are post medieval in date and include irregular enclosures or enclosed field systems representing forest edge encroachment, and a number of Holmsley Ridge type enclosures (so-called 'bee gardens').

Bronze Age barrows and burnt mounds are numerous and form an important element of the archaeological resource; another significant site from this period is the settlement on Rockford Common. The Roman resource is also of great significance as it includes three kilns forming part the nationally important New Forest pottery industry.

The steep-sided boundary between the New Forest plateau and the river valley provides a number of natural promontories and these are utilised by two Iron Age hillforts, at Frankenbury and Gorley Hill. A third hillfort may underlie the ringwork and bailey at Breamore to the north. Close to Frankenbury hillfort is the important site of Crystal Hollow. Here a Roman village was preceded by an Iron Age round house settlement and there is also evidence of possible Neolithic occupation.

3. Ringwood Forest

Ringwood Forest is characterised by heathland and extensive woodland plantations and few sites are recorded in this area. There are a number of earthwork barrows, some of which are scheduled, and several features of unknown date. One important site in this area is Nea Farm, Somerley, where an Upper Palaeolithic occupation site, a Roman building and early medieval field system are recorded.

4. Northern Avon valley

There is evidence of activity from the Palaeolithic period to the present day in the Avon valley north of Ringwood. There is a particularly rich medieval archaeological resource and a large number of Bronze Age sites – notably plough-levelled barrows and find spots, but also including two likely occupation sites.

Early prehistoric occupation is indicated by the distribution of find spots, and is discussed in the Middle Avon Valley Survey report (Light, Schofield and Shennan, 1995). On the basis of AHBR records, there is good evidence for Neolithic activity, including two likely occupation sites in the Charford area. Records for Mesolithic activity are poorly represented, but there is a possible occupation site.

There is some evidence for Iron Age occupation which, although well represented in comparison with other areas in the aggregate resource, is poorly understood when compared with the county as a whole. There are two likely occupation sites and a number of find spots but, for instance, none of the various enclosures

recorded elsewhere (see Palmer, 1984) in Hampshire (although three records for enclosures are dated as 'prehistoric' and could be Iron Age).

In the Roman period this part of the Avon valley appears to have been densely occupied, with a number of settlement sites identified during the Middle Avon Valley Survey. In addition, settlement features including a building, pits and ditches are recorded from three separate locations.

5. Southern Avon valley

Few archaeological sites are recorded in the Avon valley south of Ringwood and the archaeological resource of this area is poorly understood.

6.3.1.4 Archaeological resource

Palaeolithic

In the Hampshire AHBR there are 15 records for Palaeolithic archaeology in the Avon valley, equating to 16% of all Palaeolithic records for the aggregate resource (Figure 166). The records are all for sites located on river gravels and their distribution is centred on two areas: one to the immediate north of Ringwood, and the second to the north of Fordingbridge. There is only a single site record in the sub-unit for the area below Ringwood.

The most significant record is for a late Upper Palaeolithic occupation site at Nea Farm, Somerley, where more than 900 flint tools, characterised by 'long blades', were found during evaluation work in advance of gravel extraction (Ford, 2006). The site is thought to be contemporary with the Upper Palaeolithic site at Hengistbury Head, Dorset. This is one of only three in situ Palaeolithic sites currently known in Hampshire, and the only one dating from the Upper Palaeolithic.

All of the other records are assigned a broad Palaeolithic date. The majority are for find spots of single artefacts or small assemblages and one artefact is thought to be derived from gravels brought in from elsewhere. There is a more substantial assemblage from Blashford quarry, where a number of flint items have been found over a period of thirty years or more.

There are three records from urban areas which are not considered in the assessment. One of these, at Fordingbridge, is a record for 'a number of artefacts from the Fordingbridge area', and is likely to include find spots from within the NMP sub-unit.

In terms of numbers of records Palaeolithic find spots are well-represented, but most of these are for small quantities of material. Given the extensive mineral extraction that has taken place in the Avon valley, it might be expected that more and larger assemblages would have been recovered from this area.

Mesolithic

In the Hampshire AHBR there are eight records, equating to 5% of all Mesolithic records for the aggregate resource (Figure 167). The records are all assigned a broad Mesolithic date and all are for find spots. Seven are on gravel terraces associated with the Avon; the eighth is on Bracklesham sand. Their distribution comprises two broad foci; the first in the vicinity of Ringwood, and the second to the north and northwest of Fordingbridge.

The density and type of material from one of the find spots, on the outskirts of Ringwood, indicates that it may represent an occupation site. The other seven records are for small flint scatters or for a few artefacts only, and in general terms there are few records for Mesolithic archaeology in the Avon valley compared with other areas of Hampshire.

Neolithic

In the Hampshire AHBR there are 15 records, equating to 13% of all Neolithic records for the aggregate resource (Figure 168). One record is on Bracklesham sand, the remainder on gravel terraces of the Avon. The sites are distributed evenly throughout the northern part of the sub-unit, between Ringwood and the Wiltshire border. There are no records for sites to the south of Ringwood.

At Crystal Hollow, to the east of Fordingbridge, is a possible occupation site consisting of a number of randomly grouped pits. In the northernmost part of the sub-unit are two substantial flint scatters close to each other in the Charford area; the density and type of material found indicates that the scatters may represent occupation sites.

The remaining records are for single artefact find spots, apart from a scatter of late Neolithic/early Bronze Age flints at Ellingham farm, north of Ringwood.

Bronze Age

In the Hampshire AHBR there are 124 records equating to 19% of all Bronze Age records for the aggregate resource (Figure 169). Eight sites are located on Bracklesham sand in the northeast part of the sub-unit; the remainder are on river terrace gravels. The sites are distributed throughout the sub-unit, with a significant concentration between Ringwood and Fordingbridge. This is one of the most extensively quarried areas of the county (section 7) and a high proportion of the sites here were discovered during, or in advance of, gravel extraction.

More than half of the records are for barrows, one third of which are plough-levelled and survive only as ring ditches. Most are interpreted as bowl barrows or round barrows and there is only one record for a ‘fancy’ barrow – a saucer barrow on Ibsley Common. Later Bronze Age burials are represented by four cremations, all just to the north of Ringwood (Figure 37).

Further Bronze Age activity is reflected by 21 records of burnt mounds, all situated in the northern part of the sub-unit (Figure 36); 17 are located on river gravel and four on Bracklesham sand.

There is some evidence for Bronze Age settlement. The most substantial is a settlement on Rockford Common revealed by topsoil stripping prior to gravel extraction. This site has since been destroyed. There are two surface scatters of material sufficiently dense to be interpreted as occupation sites, one of which was excavated as part of the Middle Avon Valley Survey (Light, Schofield and Shennan, 1995). There are also a number of pits and post holes in the area immediately north of Ringwood.

There are 25 records for find spots, mostly for single artefacts or small assemblages.

Iron Age

In the Hampshire AHBR there are 24 records equating to 18% of all Iron Age records for the aggregate resource (Figure 170). Two of these records are for sites located on Bracklesham sand; the remainder are on river terrace gravels. All the records are for sites in the northern part of the sub-unit: there are no sites recorded to the south of Ringwood.

There are two records for hillforts (or promontory forts); at Frankenbury, to the east of Fordingbridge, and at Gorley Hill, between Fordingbridge and Ringwood (Figure 42). Another significant site (producing 5 AHBR records) is the settlement at Crystal Hollow, just to the south of Frankenbury hillfort, consisting of eight round houses associated with ditches, gullies and pits. There are two records for occupation sites. The first, to the north of Fordingbridge, is close to a kiln of late Iron Age/Roman date;

the second, to the south of Fordingbridge, is indicated by the density of finds in the area.

On Bracklesham sand near Pitts Wood, in the northwest of the sub-unit, there is a record for a lynchetted field system which may be of Iron Age origin.

The remaining 10 records are for find spots, several of which resulted from field walking as part of the Middle Avon Valley Survey.

Prehistoric (undated)

In the Hampshire AHBR there are 78 records equating to 35% of all undated prehistoric records for the aggregate resource (Figure 171). Distribution of these records is confined to the northern part of the sub-unit, all the sites being located on river terrace gravels to the north of Ringwood.

The marked bias in this distribution pattern is a direct result of the Middle Avon Valley Survey: 68 of the records are of flint scatters found by field walking as part of this project. Of the remaining sites, seven are also find spots of flint items. All the records for find spots are assigned a broad prehistoric date.

Three records are for cropmark features recorded from aerial photographs in the Fryern Court area, to the north of Fordingbridge. These are all assigned a date range of Neolithic or later and comprise a series of ditched enclosures, linear features (possibly field boundaries and a trackway) and pits associated with the linear features.

Roman

In the Hampshire AHBR there are 88 records equating to 16% of all Roman records for the aggregate resource (Figure 172). Seven records are for sites located on Bracklesham sand on the western fringe of the New Forest, and one for a site on the sand to the north of Ringwood Forest. Two sites in the northwest of the area are outside the aggregate resource area (one on Reading Formation sand, the other on chalk) but are included in the assessment because they are within the boundaries of the sub-unit. All the other sites are located on terrace gravels of the Avon. Distribution of the records is confined to the northern part of the sub-unit, all the sites occurring to the north of Ringwood (Figure 172).

Three quarters of the records are for find spots, the bulk of them resulting from field walking during the Middle Avon Valley Survey. Of the 22 other records, three are for kilns sited on the Bracklesham sand at Pitts Wood Inclosure and forming part of the New Forest pottery industries. There is also a fourth kiln on Reading Formation sand at Allen's Farm to the west of Fordingbridge.

There are four Roman settlements, the most important of which is the village site at Crystal Hollow, east of Fordingbridge. This consists of an enclosed settlement occupied until the late third or early fourth century, comprising building platforms and tofts lining both sides of a street. The remains of timber buildings were recorded on the west side of the street and a *grubenhaus* or sunken structure dating from the third century was also recorded. The second settlement site consists of a Roman building at Nea Farm, near Ellingham, on the eastern edge of Ringwood Forest. This site was located in advance of gravel extraction; it has not been excavated as there has been a decision to preserve it (D. Hopkins pers.com.). To the east of here, at Ibsley, a series of ditches and pits of Roman date suggests a third settlement. The fourth site is at Breamore in the north of the sub-unit, where pits and other features were found, together with dense scatters of pottery. Two Roman wells and burnt clay floors are also recorded from a separate site in the Breamore area.

There are five records for dense pottery scatters or structural remains in the area north of Fordingbridge which indicate the sites of settlements; these were all revealed during the Middle Avon Valley Survey.

Despite the evidence for the settlement pattern, the character of Roman settlement is unclear and features characterising Roman rural settlement elsewhere in the county - such as enclosure complexes (Palmer, 1984) – have not been identified in the Avon valley.

Early medieval

In the Hampshire AHBR there are 11 records equating to 19% of all early medieval records for the aggregate resource (Figure 173). These records are all for sites located on river terrace gravels of the Avon.

All the sites are situated in the northern part of the sub-unit, to the north of Ringwood. Nine are for find spots, some of which are the result of field walking during the Middle Avon Valley Survey. The most significant early medieval site in the sub-unit is the sixth century early Saxon cemetery at Breamore, to the north of Ringwood. The other monument is a medieval field system at Nea Farm, Somerley, dating from the early eleventh century.

Medieval

In the Hampshire AHBR there are 120 records equating to 25% of all medieval records for the aggregate resource (Figure 174). Three records are for sites located on chalk bedrock, two are for sites on Parkstone sand, and one for a site on Reading Formation sand. None of these geologies are included in the aggregate resource but the sites are included in the assessment because they are within the boundaries of the NMP sub-unit. One record is for a site located on Bracklesham sand and the remainder are on river terrace gravels associated with the Avon. The site distribution is concentrated predominantly in the northern part of the sub-unit, with only seven sites located south of Ringwood.

In part the very high number of records in this sub-unit is explained by the results of field walking as part of the Middle Avon Valley Survey, during which many find spots were recorded: 69 of the AHBR records are for find spots. The incorporation of the results of the Middle Avon Valley Project has also contributed to the weighting of site distribution towards the northern part of the sub-unit.

There are a number of important sites in the sub-unit, including the ringwork and bailey castle at Breamore which may overlie an Iron Age promontory fort; also at Breamore is the site of an Augustinian priory founded around 1130, and the site of a nearby grange; to the north of Ringwood is the site of a Benedictine priory founded in 1160 at Ellingham. On the southern outskirts of Fordingbridge are the remains of a St John Baptist hospital for poor travellers which was founded in 1271 and dissolved in 1546. There are also three records for chapels, at Ellingham, Breamore (part of the priory), and South Charford, and an early church at Ibsley.

There are five records for manors in the sub-unit; at South Charford, with a possible moat; at East Mill farm, Fordingbridge; at a site a short distance to the north on the northeast outskirts of Fordingbridge; at Moyles Court, on the edge of Rockford Common; and in the very far south of the sub-unit, at Sopley. There are two records for deer parks; at Breamore (first recorded in 1239) and at Burgate (first recorded in 1361) and one record for a fishpond, on the southern outskirts of Fordingbridge.

There are a total of 16 deserted settlements in the sub-units, recorded variously in the AHBR as *settlement, deserted settlement, earthwork*, *house platform* or *building.* Only one of these settlements – at Bisterne – is located south of Ringwood, and there is a concentration of ten settlements in the Breamore area towards the county

boundary with Wiltshire. The other five deserted settlements are situated in the area to the east of Ringwood Forest. In addition to these sites a series of toft boundaries was discovered during development work at Ringwood cattle market.

There are a handful of agricultural sites, including cultivation terraces at Breamore and Crystal Hollow, ridge and furrow nearby at Avonside, and water meadows which may be Medieval at Sopley. In addition to these sites there is also a windmill mound at North Charford, close to the county boundary with Wiltshire; and a possible pottery kiln at Breamore.

Post medieval

In the Hampshire AHBR there are 40 records equating to 9% of all post medieval records for the aggregate resource (Figure 175). One record is for a site located on chalk bedrock and two are for sites on London Clay Formation clay and silt; these geologies do not form the aggregate resource but the sites are included in the assessment because they are within the boundaries of the NMP sub-unit. Eight records are for sites located on Bracklesham sand and the remainder are on river terrace gravels associated with the Avon. The site distribution is concentrated predominantly in the northern part of the sub-unit, with only two sites located south of Ringwood.

There are a variety of features characteristic of the rural landscape of this part of southwest Hampshire during the post medieval period. There are five records for enclosed field systems or irregular enclosures representing forest edge encroachment. Three of these are located on Rockford Common, to the northeast of Ringwood, the other two at Godshill Inclosure, to the northeast of Fordingbridge. There is also a record for an earthwork bank at Pits Wood Inclosure in the northeast of the resource area. There is a record for a small rectangular enclosure at Gorley Common, interpreted as a possible bee garden, and six other bee gardens – or Holmsley Ridge enclosures – are recorded from Ibsley Common. There are three records for water meadows, likely to date from the sixteenth and seventeenth centuries, at Ringwood, Ellingham and to the west of Bickton.

Designed landscape features are represented by two records for icehouses in parkland; at Breamore Park in the northern part of the area, and at Bisterne in the south. There is a pond recorded in Hale Park, and two records for deer parks; at Ashley Lodge and Searchfield. In the central part of the sub-unit a number of pillow mounds are recorded on Rockford Common.

Evidence for industrial activity in the sub-unit includes the site of a brickworks at Hale, a tannery at Redbrook to the south of Fordingbridge, and three pottery kilns, all in the Harbridge area. There are also four records for water mills, two at Ringwood one at Breamore, and the fourth at Sopley in the far south.

There are two records for find spots.

Modern

In the Hampshire AHBR there are 53 records equating to 20% of all modern records for the aggregate resource (Figure 176). Two records are for sites located on London Clay Formation clay and silt; these geologies do not form the aggregate resource but the sites are included in the assessment because they are within the boundaries of the NMP sub-unit. Three records are for sites located on Bracklesham sand and the remainder are on river terrace gravels associated with the Avon. The site distribution is concentrated predominantly in the northern part of the sub-unit, with only three sites recorded south of Ringwood.

Almost all the records are for sites dating from the Second World War. In the south there is a military airfield at Winkton and a radar station nearby at Bransgore. North

of Ringwood the most significant site is Ibsley airfield. There are a number of features associated with the airfield; these include 12 air raid shelters, four anti-aircraft batteries, an observation post and ten buildings, most notably control towers, military headquarters and officers' quarters. To the northeast of the airfield are records for the living accommodation and a blast wall associated with a Direction Finding station, whose purpose was to intercept radio communications from German U-boats.

The other main group of sites comprise anti-invasion defences both to the north and south of Fordingbridge. These consist of 12 pillboxes and a roadblock. There is also a bombing decoy in the north eastern part of the sub-unit, at Godshill Inclosure. Elsewhere there are two Royal Observer Corps observation posts.

Non-military sites include a 1920s hydro-electric power station, a milepost and a barn.

Undated

In the Hampshire AHBR there are 78 records equating to 12.5% of all records for sites of unknown or uncertain date for the aggregate resource (Figure 177). Eight records are for sites located on London Clay Formation clay and silt; these geologies do not form the aggregate resource but the sites are included in the assessment because they are within the boundaries of the NMP sub-unit. Eleven records are for sites located on Bracklesham sand and the remainder are on river terrace gravels associated with the Avon. The site distribution is concentrated predominantly in the northern part of the sub-unit, with only ten sites located south of Ringwood.

There are ten records for earthworks, seven of which are variously described as 'humps and bumps', 'scarp slopes', or 'hollows and ridges' and could be interpreted as possible building or settlement remains; These include earthworks on the possible site of a manor in Breamore Park. There are also two records for settlements, one of which consists of cropmarks identified on aerial photographs.

There are three records for enclosures, two on the eastern fringes of Ringwood Forest and the third to the south of Ringwood, all of which are identified from aerial photographs. A small rectilinear enclosure is recorded on Rockford Common and nearby is an oval enclosure which is possibly Iron Age.

A number of field boundaries or other linear features are recorded: there are eight linear features (one unearthed during a watching brief, the others identified on aerial photographs), two linear earthworks (one of which, to the north of Fordingbridge, is pre-medieval), a series of lynchets at Hale Park, possible Celtic fields identified on aerial photographs at Godshill, a possible wood bank and a possible encroachment enclosure near Rockford Common, and two water meadows at Bickton.

There are a number of undated excavated features: two ditches, four gullies, a hearth, a pit and a stone structure (probably a kiln or corn drier). There are also three possible burnt mounds (two on Ibsley Common and one at Godshill), a possible pillow mound at Hale Purlieu, and a fishpond at Ibsley.

Eleven buildings are recorded from documentary sources (eight of them from the First Edition OS map), and there are 12 find spots, mostly for flints.

6.3.1.5 Scheduled Monuments

There are 23 Scheduled Monuments in the sub-unit, making up 9% of all Scheduled Monuments in the aggregate resource area.

Twenty one of the Scheduled sites are barrows, located mainly in the new Forest fringe and on the western edge of Ringwood Forest. The other two sites are a medieval bridge at Fordingbridge and St Michael's Priory at Breamore.

6.3.2 East Hampshire

6.3.2.1 The East Hampshire landscape

The East Hampshire NMP sub-unit covers 44 one kilometre squares and represents 5.5% of the total aggregate resource in Hampshire.

The sub-unit contains small tracts of geological deposits which do not form part of the aggregate resource; most notably Gault Formation mudstone, Sandgate Formation sandstone, mudstone and siltstone, Bargate sandstone, and Marehill clay. Taken together, the non-aggregate rocks cover roughly nine 1km squares, and occur principally along the western and eastern edges of the sub-unit. Although these deposits are not part of the aggregate resource, they are included in this assessment because they are contained within the boundaries of the sub-unit (see section 4.2).

Aggregate-producing geologies in the sub-unit comprise both superficial deposits and bedrock sand. There are roughly 31 1km squares of Folkestone Formation Greensand deposits; these occur throughout the sub-unit. To the east of Bordon (and also in the Liss area) there are roughly four 1km squares of river terrace gravels (Figure 17).

Much of the landscape, especially in the central part of the sub-unit, is made up of broad expanses of heathland with woodland, scrub and forestry plantations. Extensive MOD ranges occur in this central area. In the north of the sub-unit, and around Liss, the landscape is formed from former heathland and comprises an undulating terrain of grazing land in a patchwork of small fields in a well-wooded setting.

There are a number of active and dormant sand pits in the northern part of the sub-unit.

6.3.2.2 Historic Landscape Character

The Historic Landscape Character of the East Hampshire NMP sub-unit is formed by a range of landscape types (Figure 162). The predominant type is heathland plantation; this, along with pockets of unenclosed heath and scrub, occupies much of the central part of the sub-unit. Within the heathland area there are four tracts of landscape taken over by the Army, and to the immediate north are extensive areas of wooded over Commons.

The western part of the sub-unit is dominated by large and small fields with wavy boundaries, interspersed with tracts of small Parliamentary type enclosures. In the north the valleys of the Kingsley and Oxney streams are characterised by miscellaneous valley-bottom paddocks and pastures, with a few water meadows in the far northeast. The historic character of the landscape in the far north and east of the sub-unit is very mixed. There are tracts of both Parliamentary type enclosures and fields with wavy boundaries, as well as smaller areas of irregular assarts and pockets of old woodland.

6.3.2.3 Character of the archaeology

In the Hampshire AHBR there are 299 records for this NMP sub-unit, representing roughly 8% of archaeological records for the aggregate resource as a whole (Figure 161). In broad terms this equates to 7 sites per kilometre square, which is above the average density of 5 sites per kilometre square in the overall aggregate resource.

Thirty nine of the sites are located on non-aggregate geologies. Of the remainder, 16 sites are located on river gravels, and 244 on Folkestone Formation sand.

Eighteen sites are designated Scheduled Monuments (SMs), making up 7.5% of the total number of SMs in the aggregate resource (Figure 163). A breakdown of the archaeological resource is shown below in table 19.

Table 19. AHBR records for the East Hampshire sub-unit

East Hampshire	Number of records	% of aggregate resource
Size (sq kms)	44	5.5
Scheduled Monuments	18	7.5
Palaeolithic	1	1
Mesolithic	51	32
Neolithic	10	8.5
Bronze Age	50	8
Iron Age	10	7.5
Prehistoric (undated)	17	8
Roman	55	10
Early medieval	1	1.5
Medieval	38	8
Post medieval	31	7
Modern	6	2
Undated	29	5
Total no of records	**299**	**8**

The East Hampshire sub-unit contains a relatively rich archaeological resource in terms of numbers of site records. This is particularly true for Mesolithic archaeology, but also for prehistoric archaeology generally, as well as the Roman, medieval and post medieval sites.

Two periods which are not well represented in the AHBR are the Palaeolithic and twentieth century. The lack of Palaeolithic records can be partly explained by the small extent of river gravels in the sub-unit and the fact that there is no history of gravel extraction. The low number of records for modern archaeology is, however, surprising, given the history of twentieth century military activity in this area.

The outstanding feature of the archaeological resource is the nationally important evidence for Mesolithic occupation in the Greensand of the Wealden Edge. A number of sites have been excavated and Mesolithic records in the sub-unit make up almost 10% of all records for Mesolithic archaeology for the whole county.

The Bronze Age resource is also comparatively rich in that there is a settlement as well as evidence for a waterside community at Woolmer pond. Despite the relatively high numbers of AHBR records, the archaeological resource for the other prehistoric periods is less well understood: there are no Iron Age records for a large part of the sub-unit (Figure 159), and the Neolithic period is represented mainly by chance finds.

The Roman resource is noteworthy largely because of features associated with the Alice Holt pottery industry, but other significant sites include a settlement and a possible villa.

Some features of the medieval resource reflect the former existence of Woolmer Forest (Figure 56), one of a number of Royal Forests in Hampshire (Bond, 1994): there are three records for deer parks and a possible hunting lodge in the sub-unit.

6.3.2.4 Archaeological resource

Palaeolithic

In the Hampshire AHBR there is one record, equating to 1% of all Palaeolithic records for the aggregate resource (Figure 147).

The record is for a find spot of a Lower Palaeolithic hand axe from Longmoor Inclosure, located on Folkestone sand.

This apparent gap in the archaeological resource is explained by the small extent of river terrace gravels (roughly 4km^2) and the fact that there has been no extraction of this gravel.

Mesolithic

In the Hampshire AHBR there are 50 records, equating to 32% of all Mesolithic records for the aggregate resource (Figure 148).

Of these records, 46 are located on Folkestone Formation Greensand, one is on river terrace gravel, one on Head, and two are on Gault Formation mudstone but are included in the assessment as they are situated within the NMP sub-unit.

Most of the records forming this extremely rich resource are for large assemblages from the excavated flint working sites at Oakhanger and Longmoor Inclosure as well as the substantial surface collections at Kingsley Common, Petersfield Heath, Bentley, and Trotsford Farm, Sleaford, and the late Mesolithic working site at Grooms Farm, east of Kingsley. Other major flint scatters or working sites are recorded from Southam Common and Shortheath Common.

Most of the sites in the East Hampshire sub-unit date from the early Mesolithic, whilst there are far fewer late Mesolithic sites. Several sites are from the Horsham phase, lying between the conventionally accepted early and late Mesolithic phases.

Neolithic

In the Hampshire AHBR there are 10 records, equating to 8.5% of all Neolithic records for the aggregate resource (Figure 149). Nine of these records are from Folkestone Formation Greensand. The tenth is from Gault Formation mudstone but is included in the assessment because it is situated within the NMP sub-unit.

Two of the records are for late Neolithic/early Bronze Age bowl barrows located to the south of Bordon. There is a working floor at Greatham Moor to the north of Liss forest. All the other records are for find spots of single artefact or small assemblages.

Bronze Age

In the Hampshire AHBR there are 50 records equating to 8% of all Bronze Age records for the aggregate resource (Figure 150). Forty six records are for sites located on Folkestone sand deposits, and four on river gravels. The sites are distributed throughout the sub-unit.

Three quarters of the records are for barrows, of which three are for a group of disc barrows. These form part of a wider concentration of barrows at Longmoor Camp. This concentration comprises the three disc barrows, two linear groupings of bowl barrows made up of five and nine barrows respectively, and five outlying barrows. All these monuments are located in the vicinity of Woolmer Pond and, like the comparable barrow group at Petersfield Heath (section 6.2.10) this distribution suggests spatial links between early Bronze Age burial sites and major sources of water and hints at the existence of a waterside community.

An important site is at Trotsford Farm, Kingsley, where excavation revealed settlement evidence in the form of an enclosure containing gullies, pits, post holes and a possible hearth. This site was dated to the later Bronze Age.

There is a record for a middle Bronze Age hoard of ornamental bronze items in Woolmer Forest, one of two such hoards in the sub-unit. There are also a number of pits recorded, and a site to the southeast of Kingsley where evidence of three ditches (probably forming a trackway) was recovered prior to sand extraction.

Iron Age

In the Hampshire AHBR there are 10 records equating to 7.5% of all Iron Age records for the aggregate resource. Nine sites are located on Folkestone Formation sand and one on the adjacent Gault mudstone (Figure 159).

Nine of the records are for sites concentrated in the northern part of the sub-unit to the east of Kingsley. The records refer to two enclosed settlements situated close to each other at Trotsford Farm. The most northerly is a D-shaped enclosure probably dating from the late Iron Age; during excavations, ditches, gullies, pits and post holes were recorded. The second is a univallate earthwork.

The tenth record is for a find spot of a single pottery sherd in the Liss area.

Prehistoric (undated)

In the Hampshire AHBR there are 17 records equating to 8% of all undated prehistoric records for the aggregate resource (Figure 151). All of these records are for sites located on Folkestone Formation sand.

The distribution of these sites is confined largely to the western edge of the sub-unit, reflecting the fact that many are find spots of flints recorded during the East Hampshire Survey. The field walking transects of this survey extended into the western extremity of the sub-unit (Figure 44). Three records for find spots represent flints found during watching briefs, including the site record at the northern edge of the sub-unit.

Sixteen of the records are for flint find spots and are assigned a broad prehistoric date. The only ‘monument’ recorded is a hearth found during evaluation excavations prior to sand extraction at Lode Farm, near Kingsley.

Roman

In the Hampshire AHBR there are 55 records equating to 10% of all Roman records for the aggregate resource (Figure 152). Six sites are located on Gault Formation mudstone but are included in the assessment because they are within the boundaries of the sub-unit. Three sites are located on river gravels; the remaining 46 sites are on Folkestone Formation sand.

Thirty six (65%) of the records are for find spots; most are finds of pottery but there are two records for coin hoards (one for a large number of coins found in Woolmer pond during a drought in 1740).

There is a dense concentration of records along the northern edge of the sub-unit and, for the most part, these sites are associated with the Alice Holt pottery industry, the main centre of which lies to the north, outside the sub-unit (Figure 50). The bulk of these are for find spots of pottery, but three pottery kilns are recorded and four waster tips, all in the vicinity of Osborne’s Farm, near Kingsley.

There is a fourth century settlement at Grooms Farm to the northeast of Kingsley, consisting of an enclosure, post holes, pits and two middens. There is a possible villa site near St Nicholas church, west of Kingsley, where building materials were found during excavations around the church and from a nearby sand pit. At the very south of the sub-unit, near Liss, field walking has produced evidence of a high status Roman building and possible industrial activity. This site is currently under excavation.

The main Chichester to Silchester road runs through the south western part of the sub-unit, and just to the east of the road is the possible site of the battle of Woolmer (or battle of Liss). This took place in AD 296 when insurgent forces under Allectus were defeated by an Imperial army.

Early medieval

In the Hampshire AHBR there is 1 record equating to 1.5% of all early medieval records for the aggregate resource (Figure 153). This record, for a sherd of early Saxon pottery found to the west of Kingsley, is located on Folkestone sand deposits.

Medieval

In the Hampshire AHBR there are 38 records equating to 8% of all medieval records for the aggregate resource (Figure 153). Ten of these records are for sites located on Gault Formation mudstone; although this does not form part of the aggregate resource, the sites are included in the assessment because they are situated within the boundaries of the NMP sub-unit. Of the remaining sites, one is located on river terrace gravels and the other 27 are on Folkestone Formation sand deposits.

The distribution of sites is very markedly confined to the western and northern fringes of the sub-unit; the only site recorded from the eastern area is Woolmer deer park, which originated in the fourteenth century.

To the west of Liss is the site of a monastic grange or manor and associated fishpond. This belonged to the Abbey of St Mary in Winchester. There is a manor house to the north of here, at Greatham, with an associated substantial earthwork boundary bank and ditch. A third manor house in the sub-unit is at Lode farm, Kingsley, where there is also a deer park and possibly a hunting lodge. Slightly to the east of this site several timber-framed buildings were recorded during excavations. There is a third deer park at Blackmoor, which was emparked in 1240, and nearby the site of a chapel in the grounds of Blackmoor House.

There is a single record for a deserted settlement, at Trotsford Farm in the northern part of the sub-unit. This site is dated to the thirteenth or fourteenth century and nearby is a rectangular enclosure representing another settlement. Just to the south, at Bagent, is the site of a house platform with associated medieval pottery. Further house platforms are recorded from Kinglsey, and from the area west of the Lode farm manor house; here two houses dating to the late thirteenth or early fourteenth centuries are located on either side of a holloway. A fifth house platform is recorded to the north of Greatham.

Also in this sub-unit are records for a dovecote to the north of the grange at Liss, and a watermill in the north surviving as a series of timbers protruding from the banks of the river Wey on the county boundary with Surrey.

There are 10 records for find spots, including some resulting from field walking as part of the East Hampshire Survey.

Post medieval

In the Hampshire AHBR there are 31 records equating to 7% of all post medieval records for the aggregate resource (Figure 154). One record is for a site located on Marehill clay, three are for sites on Bargate sandstone, and four are on Gault Formation mudstone; these geologies do not form the aggregate resource but the sites are included in the assessment because they are within the boundaries of the NMP sub-unit. Two sites are located on river terrace gravels and the remaining 21 are on Folkestone Formation sand. The sites are distributed throughout the sub-unit, with a slight concentration in the north.

Fourteen records are for find spots, most of them made as a result of systematic field walking. There are, in addition, a variety of 'monument' sites. There is a seventeenth century aqueduct at Headley Park forming part of a large irrigation system along this stretch of the river Wey. Other sites associated with the Wey include a paper mill at Bramshott and a corn mill at Headley Park. There are also two records for water meadows at Stanford.

There are a series of earthwork redoubts on Broxhead Common, likely to have been used for training exercises during the Boer War. There is a record for a lime kiln at Headley Park and two substantial boundary banks in the Liss area. There are two enclosures recorded; the first on Broxhead Common, and the second, consisting of a series of post holes, not far to the north at Grooms Farm quarry.

Modern

In the Hampshire AHBR there are 6 records equating to 2% of all modern records for the aggregate resource (Figure 155). Two records are for sites located on river terrace gravels; the other four are on Folkestone Formation sand. Five sites are clustered around Bordon, the sixth being to the south of these.

The most significant site is the army camp to the north of Bordon. There is also a light anti-aircraft battery, three searchlight batteries, and a Royal Observer Corps observation post.

Undated

In the Hampshire AHBR there are 29 records equating to 5% of all records for sites of unknown or uncertain date for the aggregate resource (Figure 156). Six records are for sites located on Gault Formation mudstone, three are for sites on Sandgate Formation sandstone and two are on Bargate Formation sandstone; these geologies do not form the aggregate resource but the sites are included in the assessment because they are within the boundaries of the NMP sub-unit. One record is for a site on river terrace gravels, the remaining 17 sites are on Folkestone Formation sand. The sites are distributed throughout the sub-unit but the majority are found in the northern part.

There are five sets of earthworks; at Liss Turney, Greatham, Hawkley Road, in the area east of Kingsley, and immediately to the south of Bordon. The latter site consists of two earthworks known as Walldown enclosures; their origin is uncertain but one is thought to date from the Civil War. There is also a record for a double-ditched enclosure to the north of Kingsley.

An aqueduct, probably post medieval, associated with water meadows, is recorded at Hatch Farm, Passfield Common; a clay pit and a waster tip are recorded in the Kingsley area; and a possible pillow mound was identified during a watching brief at Trotsford farm.

There are six fords recorded as well as features identified during excavation or from aerial photographs, including a boundary bank, a ditch, a linear feature and a hearth. There are four records for negative evidence and two for find spots.

6.3.2.5 Scheduled Monuments

There are 18 Scheduled Monuments in the sub-unit, making up 7.5% of all Scheduled Monuments in the aggregate resource area.

Sixteen of the designated monuments are barrows or barrow cemeteries. The other two are the seventeenth century aqueduct at Headley Park, and Walldown enclosures.

6.3.3 New Forest Coastal Plain

6.3.3.1 The New Forest Coastal Plain landscape

The New Forest Coastal Plain NMP sub-unit covers 70 1km squares and represents 9% of the total aggregate resource in Hampshire. More than half of this area falls within the boundary of the New Forest National Park (Figure 16).

The sub-unit contains some tracts of geological deposits which do not form part of the aggregate resource; for the most part these consist of the clay, silt and sand of the Headon Beds, which outcrop mainly along the Avon Water. Taken together, the non-aggregate rocks in the sub-unit cover roughly twelve 1km squares. Although these deposits are not part of the aggregate resource, they are included in this assessment because they are contained within the boundaries of the sub-unit.

The aggregate-producing geologies consist entirely of river gravels associated with the ancient Solent River, and are mostly plateau gravels.

The coastline is characterised by a combination of mudflats, saltmarsh, shingle beaches and low, eroding cliffs. The landscape beyond the coastline can be viewed as three distinct zones. Immediately inland the coastal plain comprises a wide expanse of open arable farmland, with some history of horticulture and market gardening. The zone is dominated by the towns of New Milton, Barton-on-Sea, Milford-on-Sea and Lymington; smaller settlements are widely scattered and isolated.

To the north is an enclosed undulating plain of mixed farming interspersed with areas of woodland which include a mixture of plantations and ancient woods. Along the northern edge of the sub-unit the land is heathland in character, comprising a well-wooded enclosed landscape of unintensively grazed pasture with small roadside settlements set in winding lanes.

The northernmost part of the sub-unit, where it includes part of the New Forest, is characterised by heathland. This generally unenclosed landscape comprises a mixture of open, treeless heaths with areas of woodland plantation.

There are a number of active and dormant gravel extraction sites on the coastal plain, the most extensive being to the south of Lymington.

6.3.3.2 Historic Landscape Character

The Historic Landscape Character of the New Forest Coastal Plain NMP sub-unit is formed by a range of landscape types (Figure 192). In the extreme north there is a band of open heath and scrub interspersed with heathland plantation marking the southern fringes of the New Forest. In the extreme south the coast is characterised by salt marsh and mudflats in the east and by shingle and dunes in the south. Between these two areas the rural landscape is predominantly one of small fields.

The central part of the sub-unit is occupied by the urban settlement of New Milton. To the west is a band of Parliamentary type enclosures interspersed with recent plantations and some older woodland. West of here is an extensive band of recent plantation and further to the west, in the Bransgore area, the landscape is characterised by small fields with wavy boundaries.

To the east of New Milton the predominant HLC type is small Parliamentary type enclosures. These are interspersed with small tracts of recent plantation and to the northeast of New Milton there is an extensive area of fields with wavy boundaries.

Near the coast there are several areas of irregular fields whose boundaries are defined by roads or tracks. The origin of these fields is likely to have been market

gardening or horticulture and some of the small fields with wavy boundaries may also reflect the extent of former market gardening.

In the east of the sub-unit there are two areas characterised by active or disused gravel extraction.

6.3.3.3 Character of the archaeology

In the Hampshire AHBR there are 120 records for this NMP sub-unit, representing roughly 3% of archaeological records for the aggregate resource as a whole (Figure 179). In broad terms this equates to less than two sites per kilometre square, which is significantly below the average density of 5 sites per kilometre square in the overall aggregate resource.

Twelve of the sites are located on non-aggregate geologies; the remaining 108 are on river gravels, alluvium or beach deposits of gravel.

Five sites are designated Scheduled Monuments (SMs), making up 2% of the total number of SMs in the aggregate resource (Figure 180). A breakdown of the archaeological resource for the sub-unit is shown below in table 20.

Table 20. AHBR records for the New Forest Coastal Plain sub-unit

New Forest Coastal Plain	Number of records	% of aggregate resource
Size (sq kms)	70	9
Scheduled Monuments	5	2
Palaeolithic	4	4.5
Mesolithic	4	2.5
Neolithic	7	5.5
Bronze Age	29	4.5
Iron Age	5	4
Prehistoric (undated)	5	2
Roman	6	1
Early medieval	0	0
Medieval	11	2
Post medieval	7	1.5
Modern	16	6
Undated	26	4
Total no of records	**120**	**3**

The New Forest Coastal Plain contains relatively few site records: the sub-unit covers 9% of the aggregate resource area but the number of sites forms only 3% of the overall archaeological resource. Nor does the number of sites in the sub-unit from any of the specific periods make up 9% of the overall resource for that period.

There are no early medieval sites, and Mesolithic, prehistoric (undated), Roman, medieval and post medieval sites make up less than 3% of the overall resource for those periods.

The twentieth century is the best represented period in that sites in the sub-unit form 6% of the total number of sites of this date in the overall aggregate resource: more than for any other period. For the most part these comprise anti-invasion features from the Second World War.

The Bronze Age is also relatively well represented, with evidence for settlement and a number of barrows. In contrast the record for the other prehistoric and the Roman periods comprises a high proportion of find spots.

A feature of the distribution of these sites (Figure 179) is the relative lack of sites in the western part of the sub-unit. There are, for instance, no records for Palaeolithic, Neolithic, Iron Age or modern sites west of New Milton and only a single record for sites dating from the Mesolithic, prehistoric (undated), Roman and post medieval periods.

There is a concentration of sites at Bashley Common on the fringes of the New Forest in the north of the sub-unit. This concentration is made up predominantly of sites of uncertain date. There is also a higher than average number of sites in the coastal area between New Milton and New Milford. This area contains small numbers of sites from many different periods.

In conclusion, the archaeological resource of the New Forest Coastal Plain is characterised by low numbers of sites from all periods. This is especially the case in the area to the west of New Milton. It is uncertain to what extent this perceived gap in the distribution reflects an actual lack of past human activity in the area rather than a lack of field survey and other archaeological research.

6.3.3.4 Archaeological resource

Palaeolithic

In the Hampshire AHBR there are four records for Palaeolithic archaeology, all assigned a broad Palaeolithic date (Figure 181). This equates to 4.5% of all Palaeolithic records for the aggregate resource. The records are all for sites located on river gravels; three in the coastal area between New Milton and New Milford, the fourth in the northeast, near Sway.

All the records are for find spots; three are for single artefacts and the fourth, at Barton-on-Sea, is the site listed by Roe (Roe, 1968) from which 197 implements were recorded.

There are three further find spots (small assemblages or single artefacts) which are just outside the sub-unit; one is in the cliff-face at Hordle, the other two from the town of New Milton.

Given the extent of terrace gravels in the area and its history of mineral extraction the recorded Palaeolithic archaeological resource is surprisingly limited.

Mesolithic

In the Hampshire AHBR there are four records for Mesolithic archaeology all assigned a broad Mesolithic date (Figure 182). These four records equate to 2.5% of all Mesolithic records for the aggregate resource. All the sites are located on river gravels.

Two sites are located towards the northern boundary of the sub-unit, one at Hordle and one on the coast at Sturt Point. All are for find spots, the largest of which is that at Hordle, consisting of 50 flints.

In general terms there are few records for Mesolithic archaeology in the sub-unit compared with other areas of the aggregate resource.

Neolithic

In the Hampshire AHBR there are 7 records, equating to 5.5% of all Neolithic records for the aggregate resource (Figure 183). One site is located on Becton Formation sand, silt and clay; although this geology does not form part of the aggregate

resource the site is included in the assessment as it is located within the boundaries of the sub-unit. The other sites are all on river gravels. The sites are widely scattered in the eastern half of the sub-unit with no records to the west of New Milton.

A Neolithic hearth was discovered beneath the Iron Age ramparts during excavations at Buckland Rings hillfort near Lymington. All the other records are for single artefact find spots.

The Neolithic archaeology of the sub-unit is typical of that of the aggregate resource as a whole (dominated by find spots) but with a relatively low number of site records given the size of the area.

Bronze Age

In the Hampshire AHBR there are 29 records equating to 4.5% of all Bronze Age records for the aggregate resource (Figure 184). All the sites are located on river gravels. The sites are distributed throughout the sub-unit although there are gaps between Lymington and Hordle and to the east of Bransgore.

Twelve of the records are for barrows, including a bell barrow. Four of the barrows survive only as ring ditches and another five are Scheduled Monuments. Cremations were found beneath three of the barrows. There is also a possible Beaker burial to the northeast of Milford-on-Sea.

Settlement evidence consists of a rectilinear enclosure (interpreted as Bronze Age/Iron Age) and associated linear features, and a possible smaller enclosure identified from aerial photographs at Beckley to the west of New Milton. There is also a record for a prehistoric (possibly Bronze Age) field system at Brondley Inclosure to the west of Sway.

Seven of the records are for find spots.

Although in terms of numbers in relation to the size of the sub-unit, Bronze Age sites in the New Forest coast are less abundant than other parts of the aggregate resource, the possible Beaker burial and the potential settlement evidence are significant aspects of the archaeological resource.

Iron Age

In the Hampshire AHBR there are 5 records equating to 4% of all Iron Age records for the aggregate resource (Figure 185). One site is located on the Headon Beds but is included in the assessment because it is within the boundaries of the sub-unit. The other sites are all on river gravels.

The recorded sites are situated in the southern and eastern parts of the sub-unit, around the towns of New Milton and Lymington. The most important site in the sub-unit is Buckland Rings, a multivallate hillfort at Lymington. The other four records are for find spots.

Buckland Rings is a significant site and is one of a number of hillforts in the aggregate resource in the Hampshire Basin (Figure 42). In general, however, the Iron Age archaeological resource of the New Forest coast is poorly understood.

Prehistoric (undated)

In the Hampshire AHBR there are 5 records equating to 2% of all undated prehistoric records for the aggregate resource (Figure 186).

The records are all for sites located on river gravels and are all for find spots of flints assigned a broad prehistoric date, and located in the New Milton/New Milford area.

The small number of records for prehistoric (undated) archaeology most probably reflects the limited amount of fieldwork that has been undertaken in this area.

Roman

In the Hampshire AHBR there are 6 records equating to 1% of all Roman records for the aggregate resource (Figure 187). One site is located on the Headon Beds; the other five are all on river gravels.

The records, which are all for find spots of single artefacts or small assemblages, are distributed sparsely throughout the eastern part of the sub-unit; there is only one site west of New Milton.

This is a small number of records and the Roman archaeological resource of the New Forest Coastal Plain is poorly understood.

Early medieval

In the Hampshire AHBR there no records for early medieval archaeology in the New Forest Coastal Plain sub-unit.

Medieval

In the Hampshire AHBR there are 11 records equating to 2% of all medieval records for the aggregate resource (Figure 188). Three of these sites are located on the Headon Beds; the remainder are on river gravels. The sites are distributed sparsely throughout the sub-unit.

There are two records for manor houses; at Ossemsley (first recorded in the early twelfth century), and Beech House, to the east of Bransgore, dating from the thirteenth century. There is also a record for a chapel to the west of Pennington.

Other records are for a deserted settlement on the coast to the west of New Milton and five find spots.

The number of medieval sites in the sub-unit is very low in comparison with other areas in the aggregate resource.

Post medieval

In the Hampshire AHBR there are 7 records equating to 1.5% of all post medieval records for the aggregate resource (Figure 189). One site is located on the Headon Beds and one on coastal mudflats; the other five sites are on river gravels. The site distribution is densest in the eastern part of the sub-unit.

The sites include a deer park and hunting lodge (Hinton deer park) near Bransgore, icehouses at Efford House and Ashley Clinton manor, Sturt pond at Milford, a water mill at Gordleton, and the post medieval harbour at Keyhaven.

The number of post medieval sites in the sub-unit is very low in comparison with other areas in the aggregate resource.

Modern

In the Hampshire AHBR there are 16 records equating to 6% of all modern records for the aggregate resource (Figure 190). One site is located on beach deposits of gravel; the others are all on river gravels. The sites all occur in the eastern part of the sub-unit, there being no records for sites west of New Milton.

There are two anti-aircraft batteries; the first at Milford-on-Sea, the second is to the north. Other Second World War defences include nine pillboxes and a tank trap. There are also two Royal Observer Corps observation posts. Non-military sites comprise ridge and furrow cultivation at Wooton, and a single record for negative evidence.

Undated

In the Hampshire AHBR there are 26 records equating to 4% of all records for sites of unknown or uncertain date for the aggregate resource (Figure 191). Four sites are located on the Headon Beds; the remainder are on river gravels or alluvium. The sites are widely distributed throughout the sub-unit, with a notable concentration at Bashley Common in the north.

A number of features are identified from aerial photographs; three records for linear features in the coastal area between Bransgore and Milford, and an enclosure (possibly a copse bank), and possible field system in the same broad area. Other features have been recorded during excavations or watching briefs; these include ditches, gullies, a midden, and a pit.

A cluster of sites is recorded from Bashley Common including a possible ring ditch surviving as an earthwork, a series of strip lynchets, and a pond.

There is also a single record for negative evidence and one for a find spot.

There are a low number of sites of uncertain date compared with some other areas in the aggregate resource.

6.3.3.5 Scheduled Monuments

There are five Scheduled Monuments in the sub-unit, making up 2% of all Scheduled Monuments in the aggregate resource area.

The Scheduled sites comprise the multivallate hillfort at Buckland Rings, near Lymington and a group of four barrows at Shirley Holms in the northeast of the sub-unit.

6.3.4 Lower Test valley

6.3.4.1 The Lower Test valley landscape

The Lower Test valley NMP sub-unit covers 72 1km squares and represents 9% of the total aggregate resource in Hampshire.

The sub-unit contains small tracts of geological deposits which do not form part of the aggregate resource; most notably Culver and Newhaven chalk in the northern part of the sub-unit, and London Clay and Wittering Formation clay, silt and sand in the south. Taken together, non-aggregate geologies cover roughly 22 1km squares. Although these deposits are not part of the aggregate resource, they are included in this assessment because they are contained within the boundaries of the sub-unit (see section 4.2).

Aggregate-producing geologies in the sub-unit comprise both superficial deposits and bedrock sand. There are roughly 10 1km squares of Lambeth Group sand; these occur in the central third of the sub-unit. River terrace gravels associated with the Test cover roughly 40 1km squares.

The Test valley in the southern part of the sub-unit has a broad flat flood plain. On its eastern side the associated terraces are similarly flat and wide and only a few metres higher. On the western side the terraces form a plateau which rises more steeply from the river valley. In the northern part of the sub-unit the valley narrows and is flanked by chalk downland and in places the valley sides are steep and abrupt.

The landscape comprises a gently undulating terrain of mixed arable and grazing land interspersed with woodland, hedges and hedgerow trees. In the areas on Lambeth sand there are tracts of former heathland, characterised by unintensively grazed pasture in a well-wooded setting.

There is a history of gravel and sand extraction in the Lower Test valley and there are a number of active gravel pits in the area (Figure 18).

6.3.4.2 Historic Landscape Character

The Historic Landscape Character of the Lower Test valley NMP sub-unit is formed by a range of landscape types (Figure 207). It is dominated by the river valley itself, running through the centre. The lower third of the valley is characterised predominantly by miscellaneous valley bottom paddocks and pastures, although there are water meadows, particularly in the valley's southernmost reaches. The middle third of the valley (running north from Romsey) is characterised almost entirely by extensive water meadow systems. In the river's northern stretches the valley is characterised by a mixture of water meadows and miscellaneous valley bottom paddocks and pastures, with a few pockets of valley bottom woodland.

There are a number of factory and industrial complexes on the northern outskirts of Southampton, otherwise the valley sides in the southern part of the sub-unit are characterised mainly by large fields with wavy boundaries, although there are also tracts of irregular assarts, assarted woodland and recent plantation to the west of the river Test. The central and northern parts of the sub-unit are characterised by irregular assarts, assarted woodland and Parliamentary type enclosures of various sizes.

There are also a number of parks in the central part of the sub-unit and some areas of active and disused gravel extraction.

6.3.4.3 Character of the archaeology

In the Hampshire AHBR there are 442 records for this resource area, representing roughly 12% of archaeological records for the aggregate resource as a whole (Figure 193). In broad terms this equates to 6 sites per kilometre square, which is above the average density of 5 sites per kilometre square in the overall aggregate resource.

Seventy six of the sites are located on non-aggregate geologies. Of the remainder, 287 sites are located on river gravels, and 78 on Lambeth Group sand.

Four sites are designated Scheduled Monuments (SMs), making up 1.5% of the total number of SMs in the aggregate resource (Figure 194). A breakdown of the archaeological resource is shown below in table 21.

Table 21. The archaeological resource of the Lower Test valley sub-unit

Lower Test valley	**Number of records**	**% of aggregate resource**
Size (sq kms)	72	9
Scheduled Monuments	4	1.5
Palaeolithic	25	28
Mesolithic	12	7.5
Neolithic	20	17
Bronze Age	36	5.5
Iron Age	19	14
Prehistoric (undated)	33	15
Roman	62	11.5
Early medieval	12	21
Medieval	80	16.5
Post medieval	53	12
Modern	13	5
Undated	77	12
Total no of records	**442**	**12**

The Lower Test valley contains a relatively rich archaeological resource, both in terms of numbers of site records and in the range of archaeological features recorded from all periods. This is especially the case with records for Palaeolithic, Neolithic, early medieval and medieval archaeology. The Mesolithic, Bronze Age, and modern periods are comparatively not so well represented in the AHBR. Even so there are 36 records for Bronze Age archaeology, for instance; more than in most of the archaeological resource areas.

In terms of site distribution, there are three main concentrations. The first is in the southernmost part of the sub-unit, in the Nursling area, the second is in the far north, around King's Somborne, and the third is in the upper central area, around Micheldever, Timsbury and Lockerley. In comparison, the western and south western parts of the sub-unit are less well populated with site records.

To some extent this distribution reflects the pattern of archaeological survey and fieldwork in the area. There have been a number of evaluations, watching briefs and excavations in advance of development in the Nursling area, gas pipeline trenching between Braishfield and Ower (in a line running northeast to southwest through Romsey), and gravel and sand extraction in the southern and central parts of the sub-unit.

The outstanding feature of the archaeological record is the very rich Palaeolithic resource. Not only are there more records for Palaeolithic archaeology in the Lower Test valley than in any of the other archaeological resource areas or NMP sub-units, but also the wealth of material recorded here exceeds that of any of the other areas. The assemblages from Kimbridge and Dunbridge, for example, include hundreds of Palaeolithic flints.

There are more records for early medieval archaeology in the Lower Test valley than for any of the other resource areas or sub-units. The medieval resource is also notably rich, comprising several high status sites, including Mottisfont Abbey, as well as a number of deserted settlements. As many as five records for earthworks of uncertain date may represent further deserted medieval settlements.

Prehistoric archaeology generally is well represented. There are more records for Neolithic archaeology, for instance, than in any of the other areas, and these include rare settlement evidence and a record for a beaker (this is unusual for Hampshire; see section 5.7.1). The Iron Age is also well represented with three hillforts (Figure 42) and four possible settlements (Figure 41).

The Roman resource includes a concentration of site records around the point where the Winchester to Old Sarum road crosses the Test. This consists of settlements and a possible bridge. There is also a large settlement in the southern part of the sub-unit at Nursling.

Despite the generally high numbers of site records, there are gaps in the distribution of site records for prehistoric, Roman and early medieval periods (Figures 195-202) which reflect an uneven knowledge of the resource for these periods.

More substantial 'gaps' in the resource are apparent for the Mesolithic period in the north and south of the sub-unit (Figure 196), for the post medieval period in the south(Figure 204), and for the modern period (Figure 205).

6.3.4.4 Archaeological resource

Palaeolithic

In the Hampshire AHBR there are 25 records, equating to 28% of all Palaeolithic records for the aggregate resource (Figure 195). All the records are for sites located on river gravels.

A further 11 records on the Test valley gravels are included in the Itchen valley resource area (section 6.2.6.4) and it is clear that, of all the parts of Hampshire considered in this assessment, the Lower Test valley has the richest Palaeolithic resource. Furthermore this resource also includes some of the richest find spots, such as those in the Kimbridge and Dunbridge areas.

The records are distributed throughout the sub-unit with a notable concentration in the Dunbridge area to the northwest of Romsey.

Most of the finds are assigned a broad Palaeolithic date. Early artefacts are, however, represented by the Lower Palaeolithic flint working site at Timsbury Manor and a record for six hand axes described as 'Lower to Middle Palaeolithic' found at Ashfield copse, to the south of Romsey. Later artefacts are represented by a record for four mid-late Acheulean hand axes from the Oakley area.

Mesolithic

In the Hampshire AHBR there are 12 records, equating to 7.5% of all Mesolithic records for the aggregate resource (Figure 196). Seven sites are located on Lambeth sand, four are on river terrace gravels and one site, at Kent's Oak, is on clay and silt but is included as it is within the NMP sub-unit.

One record is for an occupation site at Testwoodhouse Farm, Totton. The remaining 11 are for find spots.

Neolithic

In the Hampshire AHBR there are 20 records, equating to 17% of all Neolithic records for the aggregate resource (Figure 197). Four of the sites are on Lambeth sand, seven are on river gravel terraces, and the remainder are located on non-aggregate geologies but are included in the assessment as they are situated within the sub-unit.

There are two main concentrations of sites: the first immediately northwest of Southampton, the second to the north and west of Romsey.

The concentration of sites on gravel terraces to the northwest of Southampton includes a possible occupation site of late Neolithic/early Bronze Age date at Nursling comprising a series of ditches, post holes and gullies containing pottery and flints. There is also a record for a pit at Nursling containing a beaker. Another important site was revealed during topsoil stripping in advance of pipeline laying at Fairborne Copse, north of Romsey. This consists of two dwellings and two double ditches, dated to the late Neolithic/early Bronze Age.

The remainder of the records are for find spots of single artefacts or small assemblages.

Bronze Age

In the Hampshire AHBR there are 36 records equating to 5.5% of all Bronze Age records for the aggregate resource (Figure 198). The sites are distributed throughout the sub-unit; two are located on Lambeth sand, and 30 on river terrace gravels. Two sites are on London Clay and two are on chalk but are included in the assessment because they are within the boundaries of the sub-unit.

Almost half of these records are for find spots, mostly of single artefacts or small assemblages.

There is a concentration of site records in the lowest part of the Test valley, between Totton and Southampton. These include possible settlement evidence in the form of a number of ditches and pits (one of which contained middle-late Bronze Age pottery), discovered during watching briefs and excavation in the Nursling area. Slightly to the north, near Rownhams, there are traces of a possible middle Bronze Age field system consisting of a series of ditches found during excavation. Further to the north more pits are recorded, one of which contained metal-working debris, and a ditch.

Potential settlement evidence was discovered to the west of Romsey during work on the Braishfield to Ower gas pipeline in 1990. This also takes the form of ditches, and to the northeast of here there is a record for an enclosure possibly dating from this period. Further south a length of wattle fencing and a wooden jetty are recorded from Testwood Lakes.

One unusual aspect of the Bronze Age record, in comparison with other areas of the aggregate resource, is the low number of records for barrows, with only three being recorded in the AHBR.

Iron Age

In the Hampshire AHBR there are 19 records equating to 14% of all Iron Age records for the aggregate resource (Figure 199). Eight of the recorded sites are located on the sand, two are on London Clay, and nine are on the Test river gravels.

There are two main concentrations; in the south, to the north of Totton, and in the middle of the sub-unit, on and around the west-east band of Lambeth sand.

There are two records for univallate hillforts; Lockerley Camp, Lockerley, and a circular earthwork enclosure at Nursling which was destroyed before 1953. There is a third hillfort at Dunwood located on a very small gravel deposit.

Other than the hillforts, the most noteworthy sites are three settlements; the first, at Nursling, comprises a hut circle and associated features, to the south east of here the second settlement is suggested by extensive areas of occupation evidence revealed by evaluation trenching. The third possible settlement site is at Michelmersh brickworks, where a watching brief discovered Iron Age pottery and a Romano-British ditch.

Further settlement is suggested by the discovery of a series of pits during mineral extraction at Timsbury and late Iron Age post holes and a ditch along the route of the Braishfield to Ower gas pipeline to the west of Romsey.

Prehistoric (undated)

In the Hampshire AHBR there are 33 records equating to 15% of all undated prehistoric records for the aggregate resource (Figure 200). Five records are for sites located on Lambeth sand and 21 are on river terrace gravels. Three sites are located on London Clay, three are on Wittering Formation clay and silt, and one is on chalk; these sites are included in the assessment because they are within the boundaries of the sub-unit.

The sites are distributed throughout the sub-unit, with broad concentrations in the south (around Testwood Lakes), the far north and the middle of the sub-unit.

Thirty records are find spots of flints, many recorded as a result of watching briefs and field walking operations. There are three ‘monument’ features: a pit containing pottery, and a ditch (both since destroyed by gravel extraction) at Nursling, and a palaeo-channel at Testwood Lakes.

Roman

In the Hampshire AHBR there are 62 records equating to 11.5% of all Roman records for the aggregate resource (Figure 201). Six sites are located on chalk but are included in the assessment because they are within the boundaries of the sub-unit. Nine sites are located on Lambeth sand and the remaining 47 are on gravel terraces associated with the Test.

There are three main concentrations of sites; in the far south around Totton and Southampton, an east-west cluster in the middle of the sub-unit, where the Lambeth sand outcrops, and in the far north on valley gravels around King’s Somborne.

Two thirds of the records are for find spots, most of them from the northern half of the sub-unit. These finds include a coin hoard, and a Neronian lead pig at Bossington, near King’s Somborne. The Bossington pig is a significant find as it suggests a probable transport route for Mendip lead and silver; along the road from Charterhouse to Winchester, then down the Test to the port of *Clausentum* (at Southampton) from where it would have been exported (Cunliffe, 1993).

The main concentration of ‘monument’ records is in the King’s Somborne area of the valley (Figure 47). One of these is the Charterhouse to Winchester road including the crossing point of the Test. To the north, at Horsebridge, are the possible remains of a Roman bridge. Also in the Horsebridge area is a settlement site comprising two building platforms and a large rubbish pit. To the west, at Bossington, evidence of another settlement consisting of occupation layers was uncovered during gas pipeline-laying operations, and to the north of Bossington are the remains of a linear

earthwork. Further south at Brook Farm are the remains of a Roman (or possibly post Roman) causeway.

There are two sites on Lambeth sand in the central part of the sub-unit. Both were found as a result of sand extraction; the first is a large pit and a furnace at Lockerley and the second a ditch at Timsbury.

In the south of the sub-unit are two settlements. The first of these, at Nursling, is a rectangular enclosure containing pits and post holes with an associated field system. To the west two wells and a furnace and numerous pits were uncovered during gravel extraction. Other Roman features from the south of the sub-unit are a ditch at Nursling, and a wooden structure at Testwood Lakes.

Early medieval

In the Hampshire AHBR there are 12 records equating to 21% of all early medieval records for the aggregate resource (Figure 202). Five records are for sites located on Lambeth sand, three are for sites located on river terrace gravels of the Test and three are for sites on either London Clay or chalk but are included in the assessment because they lie within the boundaries of the sub-unit.

The resource includes the possible site of a monastery at Nursling, a parish boundary bank between Romsey and Ampfield which is possibly Saxon in date, a late Saxon building at Michelmersh, and a pit to the north of Nursling. Two relatively unusual sites are a clamp kiln and a small pottery kiln, both recorded on Lambeth sand in the Michelmersh area.

Medieval

In the Hampshire AHBR there are 80 records equating to 16.5% of all medieval records for the aggregate resource (Figure 203). Ten records are for sites located on chalk, five are for sites located on London Clay, and three are for sites on Wittering Formation silt and clay. These geologies do not form part of the aggregate resource but the sites are included in the assessment because they lie within the boundaries of the sub-unit. Five records are for sites located on Lambeth sand, the remaining 57 sites are on river gravels associated with the Test.

The sites are distributed fairly evenly throughout the sub-unit. One of the principal sites in the sub-unit is Mottisfont Abbey, founded around 1200. In the Nursling area there are two records for manor houses; the first is at Grove Place, where the remains consist of a house platform, the second is at Nursling farm, where the house was enclosed by a moat. At Moorcourt, to the west, there is another moated manor – possibly the manor house of Moor Abbess – and an associated fishpond. A fourth manorial site is suggested by the earthwork remains of a deserted settlement at Roke farm near Awbridge, with an associated fishpond to the north.

There are records for deserted settlements at Bossington, Pittleworth, Skidmore, Lee, and at Pauncefoot House to the south west of Romsey. In addition, buildings are recorded from Bossington, Timsbury and in the vicinity of Nursling church. Several boundary ditches are also recorded from this latter site. Other boundary banks are recorded from the northern part of the sub-unit; one within the John of Gaunt's deer park, and the other lying between the deserted village of Bossington and its fields to the north. A number of settlement features are recorded from excavations at Adannac farm, near Nursling, including a timber building.

Field boundaries and associated ridge and furrow are recorded from Lee, as well as a probable coppice boundary on the edge of woodland to the northeast. There is also a possible pound at Sherfield English and a record for Common land at Mottisfont.

Sections of park pale are recorded in the north of the sub-unit for King's Somborne deer park as well as the John of Gaunt's park. In addition there are 28 records for

find spots, mainly concentrated in the northern part of the sub-unit, including a substantial hoard of silver coins from Awbridge.

Post medieval

In the Hampshire AHBR there are 53 records equating to 12% of all post medieval records for the aggregate resource (Figure 204). Two records are for sites located on London Clay, four are for sites on Wittering Formation silt and clay, and four are on chalk; these geologies do not form part of the aggregate resource but the sites are included in the assessment because they are within the boundaries of the NMP sub-unit. Sixteen sites are located on Lambeth sand and the remaining 27 are on terrace gravels of the Test.

The sites are distributed throughout the sub-unit, although more sites have been recorded in the northern part.

There are a number of sites associated with industry and communications. There is the site of a gunflint factory at Dunbridge dating from the late seventeenth and eighteenth centuries. There are brickworks at Embley to the south east of Romsey, at Michelmersh, and a brick field and kiln a short distance to the south. There is the site of a whiting works at Mottisfont and a tannery with associated water wheel at Romsey. There are two canals, the Southampton to Salisbury canal and the Andover canal. The former was in use for only 30 years, from the 1790s to 1820s.

There are records for a watermill at Mottisfont and for corn mills at Timsbury and Dunbridge. A pumping station, dating from 1876 is recorded at Timsbury, as well as a water-powered pump next to the Andover canal. There are also two records for wind pumps near Awbridge, one of them associated with a reservoir.

There is a record for a post medieval manor house at Sherfield English, probably built in the eighteenth century. There are also a number of ornamental features including the lake in the grounds of Awbridge Danes House, two ponds and a fish farm at Mottisfont Abbey, and a pond at Michelmersh House. There is an icehouse and a ha-ha at Eastwood House on the outskirts of Southampton.

There are three records for water meadows, all in the southern part of the sub-unit, five records for blacksmiths workshops and two Baptist chapels. There are also five records for find spots.

Modern

In the Hampshire AHBR there are 13 records equating to 5% of all modern records for the aggregate resource (Figure 205). Two records are for sites located on London Clay, one for a site on Wittering Formation silt and clay, and one for a site on chalk. These geologies do not form part of the aggregate resource but the sites are included in the assessment because they are within the boundaries of the NMP sub-unit. The other sites all occur on the Test river gravels.

There are flood defences to the north of Romsey, a chapel, a country house, two wind pumps and a well, in addition to two records for negative evidence and a single record for a find spot.

There are a number of sites from the Second World War: a heavy anti-aircraft battery (one of the Southampton group), a Starfish bombing decoy to the north of Totton, a tank trap at Nursling, and a Royal Observer Corps observation post at Lockerley Green.

Undated

In the Hampshire AHBR there are 77 records equating to 12% of all records for sites of unknown or uncertain date for the aggregate resource (Figure 206). Seven records are for sites located on chalk, three are for sites on London Clay Formation silt and

clay, and three are for sites on Wittering Formation silt and clay: these geologies do not form part of the aggregate resource but the sites are included in the assessment because they are within the boundaries of the NMP sub-unit.

Seventeen sites are located on Lambeth sand deposits and the remaining 47 are on the terrace gravels of the Test.

The sites are distributed fairly evenly throughout the sub-unit, although they are less frequent in the west.

There are a number of records for sites which may represent former settlement; five earthwork sites are described as 'humps and bumps' and there are three records for house platforms. Three of these sites are in the Lockerley area; two are near Bossington, and one at Braishfield. Other earthwork sites include three mounds in the Lockerley area, two of which are likely to be tree mounds. There are also a number of earthwork field boundaries and associated features; these include lynchets at Broughton, Braishfield, Mottisfont and Lockerley, and field boundaries at Awbridge and Sherfield English. There are in addition traces of ridge and furrow cultivation to the west of Rownhams, three records for water meadows around Romsey and a further two possible sites in the Broughton area.

There is a range of other types of sites including linear features and an enclosure identified from aerial photographs, a possible pit alignment at Braishfield, and ditches, pits, gullies and post holes discovered through excavations and watching briefs. There is also a record for a timber structure, possibly a dock or, alternatively a feature associated with fishing, in the river Test at Bagnells.

There are also 12 records for negative evidence and 14 records for find spots.

6.3.4.5 Scheduled Monuments

There are four Scheduled Monuments in the sub-unit, making up 2% of all Scheduled Monuments in the aggregate resource area.

The monuments are the Iron Age hillfort at Dunwood, a moated site and two fishponds at Moorcourt, a deserted medieval settlement, and Chalk Hill lock on the Andover to Redbridge canal.

7 The impact of mineral extraction on the historic environment

7.1 Overview

In order to make an assessment of the impact of mineral extraction on the historic environment, mineral extraction site data provided by Hampshire's Mineral Planners, the areas classed as 'active and disused gravel workings' in Hampshire's HLC and BGS digital mapping of artificial geology were cross referenced with the AHBR data. In this way a list was generated of records for archaeological sites in locations which have been quarried. These are the sites defined below as being affected by mineral extraction.

In the Hampshire AHBR there are 349 records for archaeology affected by mineral extraction. Of these 123 are for sites located in the archaeological resource areas and 226 for sites in the NMP sub-units. This equates to 9% of all records for the overall aggregate resource area; 5% of all records for the archaeological resource areas, and 15% of all records for the NMP sub-units.

A period by period summary of AHBR records for sites affected by mineral extraction is presented in table 22. Compared with the total number of records for each period in the aggregate resource area (table 3 in section 5.4.2) there is a disproportionately high number of records for prehistoric sites affected by mineral extraction. Almost two thirds of records of affected archaeology are for prehistoric sites: 73% of the records are for prehistoric or Roman archaeology, 17% for medieval or later, and 10% for features of unknown date.

Table 22. *Period by period summary of AHBR records for sites affected by mineral extraction*

Period	No of records in NMP sub-units	No of records in archaeological resource areas	No of records in aggregate resource
Palaeolithic	25	22	47
Mesolithic	8	14	22
Neolithic	5	8	3
Bronze Age	45	27	72
Iron Age	24	11	35
Prehistoric (undated)	10	8	18
Roman	37	10	47
Early medieval	5	0	5
Medieval	19	2	21
Post medieval	7	3	10
Modern	17	3	20
Unknown date	24	15	9
Total	**226**	**123**	**349**

A breakdown showing numbers of AHBR records for affected sites in each of the archaeological resource areas and NMP sub-units is presented in tables 23 and 24 below.

Table 23. *AHBR records for sites in the archaeological resource areas affected by mineral extraction*

Period	Blackwater valley	Hamble valley	Itchen valley	Kennet valley	Meon valley
Palaeolithic	0	0	9	0	0
Mesolithic	2	1	1	0	1
Neolithic	0	0	2	2	1
Bronze Age	2	0	4	1	0
Iron Age	0	0	2	0	1
Prehistoric (undated)	0	0	4	0	0
Roman	0	0	7	2	0
Early medieval	0	0	0	0	0
Medieval	0	0	0	0	0
Post medieval	2	0	0	0	0
Modern	2	0	0	0	0
Undated	3	0	2	4	0
Total	**11**	**1**	**31**	**9**	**3**

Period	New Forest	Rother valley	Solent Coastal Plain	Upper Test valley	Wey valley	Total
Palaeolithic	7	0	5	1	0	**22**
Mesolithic	4	0	5	0	0	**14**
Neolithic	0	0	3	0	0	**8**
Bronze Age	12	0	6	2	0	**27**
Iron Age	6	0	2	0	0	**11**
Prehistoric (undated)	0	0	4	0	0	**8**
Roman	0	0	1	0	0	**10**
Early medieval	0	0	0	0	0	**0**
Medieval	0	0	2	0	0	**2**
Post medieval	0	0	0	1	0	**3**
Modern	0	0	1	0	0	**3**
Undated	4	0	2	0	0	**15**
Total	**33**	**0**	**31**	**4**	**0**	**123**

Table 24. *AHBR records for sites in the archaeological resource areas affected by mineral extraction*

Period	Avon valley	East Hampshire	Lower Test valley	New Forest Coastal Plain	Total
Palaeolithic	9	0	16	0	**25**
Mesolithic	3	2	3	0	**8**
Neolithic	3	0	1	1	**5**
Bronze Age	28	9	6	2	**45**
Iron Age	8	7	9	0	**24**
Prehistoric (undated)	4	1	5	0	**10**
Roman	14	9	13	1	**37**
Early medieval	3	1	1	0	**5**
Medieval	10	4	5	0	**19**
Post medieval	3	2	2	0	**7**
Modern	16	0	0	1	**17**
Undated	16	4	4	0	24
Total	**117**	**39**	**65**	**5**	**226**

Obviously the main concentrations of affected sites are in the most extensively quarried areas (Figure 206). In particular many sites are recorded from the area to the immediate north of Ringwood in the Avon valley, and around Totton and Romsey in the Lower Test valley NMP sub unit. There are also many records from quarry sites on Folkestone sand in the northern part of the East Hampshire NMP sub-unit, and from a concentration of gravel pits in the Itchen valley resource area where it borders on the Lower Test valley sub-unit.

The records can be broadly categorised as three types.

1. Finds of archaeological material made during mineral extraction, or recovered from disused sand and gravel pits
2. Previously recorded archaeological features which have subsequently been destroyed or damaged by mineral extraction
3. Archaeological features recorded as a result of mitigation in advance of mineral extraction

7.2 Finds of archaeological material made during mineral extraction, or recovered from disused sand and gravel pits

Nearly 40% of the records are for chance finds of artefacts or, occasionally, monument features uncovered during mineral extraction, or which have been found in disused quarries. Whilst the source of many of these finds is not specified in the summary descriptions contained in the AHBR (the project resources and timescale did not allow an analysis of the full AHBR records, as outlined in section 2.4.2.1), a significant number are part of private collections, and others were found and reported by quarry workers.

The interests of private collectors and the perceptions of quarry workers of what type of material constitutes a find of interest or importance is probably reflected in the fact that three quarters of the chance finds from quarries are of prehistoric date. In contrast there are only two records for medieval archaeology and only a single post medieval record (table 25 below).

More than 80% of the records are for find spots; some for substantial assemblages, such as the Palaeolithic implements from Dunbridge and Kimbridge in the Lower Test valley. Finds of Palaeolithic material from disused quarries are a particularly significant aspect of the archaeological resource, making up almost half of all records for Palaeolithic archaeology in the overall aggregate resource area.

Monument sites revealed by mineral extraction include a Mesolithic occupation site, two Bronze Age cremations and a barrow, building material indicating the site of a Roman villa, a bloomery possibly dating to the Iron Age, three Roman wells, a medieval shell midden, and pits and ditches containing Iron Age, Roman, Saxon, and medieval dating evidence.

***Table 25**. Finds made during mineral extraction, or recovered from disused sand and gravel pits*

Period	No of find spots	No of monuments	Total
Palaeolithic	41	0	41
Mesolithic	12	1	13
Neolithic	6	1	7
Bronze Age	23	3	26
Iron Age	11	4	15
Prehistoric (undated)	2	2	4
Roman	19	7	26
Early medieval	1	1	2
Medieval	0	2	2
Post medieval	0	1	1
Modern	0	0	0
Unknown date	4	1	5
Total	**119**	**23**	**142**

7.3 Archaeological features which have subsequently been destroyed or damaged by mineral extraction

A third of the records are for archaeological features or material identified from a variety of sources but which have since been destroyed or damaged by mineral extraction. There are difficulties in extracting from the AHBR dataset details of the precise nature of the events leading to the recording of some of these sites. For this reason a few of the records listed below in table 26 may refer to sites revealed during mineral extraction or to sites which were discovered as a result of investigation in advance of mineral extraction. From available data, however, it was judged that all the sites referred to in this table can best be categorised as previously known sites which have been subsequently affected by quarrying.

***Table 26.** Records for archaeological features subsequently affected by mineral extraction*

Period	No of find spots	No of monuments	Total
Palaeolithic	2	0	2
Mesolithic	4	1	5
Neolithic	3	1	4
Bronze Age	0	26	26
Iron Age	0	9	9
Prehistoric (undated)	5	3	8
Roman	3	3	6
Early medieval	2	0	2
Medieval	5	9	14
Post medieval	0	6	6
Modern	0	20	20
Unknown date	2	14	16
Total	**26**	**92**	**118**

This category includes chance finds in areas subsequently quarried, sites recorded during excavations unconnected with mineral planning applications, sites recorded

from documentary sources, from aerial photographs or as a result of field work, such as the Middle Avon Valley Survey.

In contrast to archaeological finds revealed during mineral extraction, the great majority of records (four fifths of the total) falling in this category are for monument features and only 22% are for find spots. Another difference is that the date range of the recorded sites is far more evenly spread for records in this category. Less than half the records are for prehistoric sites, and more than a third are for medieval or later sites.

A range of sites of notable archaeological significance are included in the list. There are, for instance, records for a Mesolithic occupation site, a Beaker burial, 11 Bronze Age barrows, eight ring ditches, four hillforts, a Roman settlement enclosure, a Roman pottery kiln, three deserted medieval settlements and 20 sites associated with the Second World War airfield at Ibsley.

7.4 Archaeological material recorded as a result of mitigation in advance of mineral extraction

A quarter of all the records for archaeological sites affected by mineral extraction are for sites identified and recorded in advance of quarrying. The records result from geophysical surveys, topographical surveys, trial trenching, watching briefs and excavations.

Table 27. *Records for archaeological sites identified in advance of mineral extraction*

Period	No of find spots	No of monuments	Total
Palaeolithic	2	2	4
Mesolithic	3	1	4
Neolithic	1	1	2
Bronze Age	0	20	20
Iron Age	1	10	11
Prehistoric (undated)	6	0	6
Roman	2	13	15
Early medieval	1	0	1
Medieval	2	3	5
Post medieval	1	2	3
Modern	0	0	0
Unknown date	2	16	18
Total	**21**	**68**	**89**

Three quarters of the records for sites identified in advance of mineral extraction are for monument sites. Roughly half are of prehistoric origin, 17% are Roman, less than 10% are medieval or later, and 20% are of unknown date.

The sites listed in table 27 include a number which are archaeologically significant. There are two important Palaeolithic sites; the Lower Palaeolithic flint working site at Timsbury Manor (Lower Test valley sub-unit) and the in situ Upper Palaeolithic occupation site at Nea Farm, Somerley (Avon valley sub-unit). Two Bronze Age settlements have been excavated in advance of gravel extraction, and the list also includes three Bronze Age cremation cemeteries and two ring ditches. The multi-phase settlements at Grooms Farm, Kingsley (East Hampshire sub-unit) and at Crystal Hollow (Avon valley) were excavated in advance of mineral extraction, and an Iron Age settlement and Roman building were recorded at Nea Farm, Somerley during an evaluation.

7.5 Assessment of the impact of mineral extraction

Three main points arise from this assessment.

1. Mineral extraction carries a potentially adverse affect to the historic environment. A number of substantial archaeologically significant sites have been destroyed, including Bronze Age barrows, a Roman settlement and Iron Age hillforts.
2. Finds made during or as a result of mineral extraction have made a significant contribution to our knowledge of the archaeological resource. This is especially the case with prehistoric finds, most notably finds of Palaeolithic material.
3. Mitigation in advance of mineral extraction has provided important information on the archaeological resource of the aggregate landscape. Elusive sites such as Bronze Age settlement, Roman rural settlement and the in situ Upper Palaeolithic occupation site at Nea Farm were investigated through this mechanism.

In conclusion, whilst there are obvious gains in knowledge through mitigation work as a result of planning conditions it is still the case that the archaeologically rich aggregate areas are shrinking. There is an urgent need for an assessment of the significance of those areas as yet undisturbed; this survey represents an initial and vital step in that process.

8 Updated archaeological resource assessment

This section presents an updated assessment of the extent and character of the archaeology and historic environment within each of the four NMP sub-units and five secondary sub-units. The updated assessment is based on data derived from the NMP mapping phase of the project.

8.1 Introduction

8.1.1 Structure

The updated assessment is divided into ten sub-sections. The first provides a summary overview of the results of the mapping. This is followed by nine sub-sections detailing the results for each of the areas mapped; these sub-sections comprise period by period breakdowns of the results preceded by summary characterisations of the nature of the archaeology recorded during the project.

Attention is focused on the new sites discovered through NMP mapping. Unusual or unexpected sites are highlighted and consideration is given to the extent that previous perceptions of the archaeological resource of each of the sub-units is reinforced or challenged by the new data.

As well as a series of distribution maps, the updated assessments for each sub-unit are illustrated with examples of the new sites using extracts from the AutoCAD drawings and photographic images.

8.1.2 Dating issues

Precise dating of certain archaeological features is not possible from aerial photographic evidence alone. Cropmark ring ditches with a diameter of 15m or less, for example, may be interpreted as plough-levelled Bronze Age barrows, but may equally be the remains of Bronze Age or Iron Age round houses. In this particular example, small ring ditches have been classified in the assessment as prehistoric (undated) ring ditches, in order to cover both eventualities.

It is recognised, however, that for the purposes of assessment and analysis, generic interpretations such as prehistoric (undated) may not be as useful as specific date parameters such as Bronze Age, Iron Age, etc. Therefore every effort has been made to apply specific dating interpretations whenever possible without forcing the evidence.

Particular difficulties arise when features can be reasonably assigned to two overlapping periods. This issue arises most frequently with sites interpreted as Iron Age/Roman, or medieval/post medieval.

Few new site interpreted as incontrovertibly Roman were identified, and few as Iron Age. Some features, on the other hand, were interpreted as either Iron Age or Roman in origin. In order to avoid these sites being double indexed and counted twice in the updated assessment (as an Iron Age site and again as a Roman site), the decision was taken to classify them as Iron Age/Roman. Although this classification differs from that used in the archaeological resource assessment (sections 5 and 6), it is considered the most practical means of addressing this dating issue.

A considerable number of features (principally field boundaries and field systems) were interpreted as either medieval or post medieval in origin. Because of the numbers of features in question, it was considered inappropriate to classify them as medieval/post medieval. Instead they are listed in the earliest period of their date range (i.e. as medieval); this is in line with the procedure adopted in the

archaeological resource assessment for sites which span more than one period (section 2.4.2.1).

8.2 Overview of the NMP mapping

During the project, 2,576 records were created in the project database for sites identified from aerial photographs for the NMP sub-units and secondary sub-units. Of these, only 271 are for sites previously recorded in the Hampshire AHBR; the remaining 2,305 records are for new sites. In broad terms, this represents an average of four new sites per kilometre square and equates to an 89% increase in the total number of site records for the sub-units. This is a significant enhancement of the size of the known archaeological resource.

A breakdown of the number of new sites from each period for the MP sub-units and secondary sub-units is presented in tables 28 and 29 below.

Table 28. Summary of new sites recorded during the project in the NMP sub-units

Period	Avon valley	East Hampshire	New Forest Coastal Plain	Lower Test valley	Total
Palaeolithic	0	0	0	0	**0**
Mesolithic	0	0	0	0	**0**
Neolithic	2	0	1	0	**3**
Bronze Age	57	6	10	5	**78**
Iron Age/Roman	12	0	0	5	**17**
Prehistoric (undated)	66	6	23	18	**113**
Roman	0	1	0	0	**1**
Early medieval	2	0	0	2	**4**
Medieval	69	17	70	42	**198**
Post medieval	203	70	82	162	**517**
Modern	58	100	28	14	**200**
Unknown	45	5	2	7	**59**
Total	**514**	**205**	**216**	**255**	**1190**

Table 29. Summary of new sites recorded during the project in the NMP secondary sub-units

Period	Hampshire Kennet	Blackwater catchment	Southwick	Eastleigh	Upper Test	Total
Palaeolithic	0	0	0	0	0	**0**
Mesolithic	0	0	0	0	0	**0**
Neolithic	0	0	0	0	0	**0**
Bronze Age	2	4	12	7	26	**51**
Iron Age/Roman	2	10	0	9	15	**36**
Prehistoric (undated)	20	34	6	6	27	**93**
Roman	7	1	1	0	0	**9**
Early medieval	0	0	0	0	0	**0**
Medieval	53	39	69	70	36	**267**
Post medieval	73	75	121	36	63	**368**
Modern	8	62	10	73	6	**159**
Unknown	11	37	27	7	50	**132**
Total	**176**	**262**	**246**	**208**	**223**	**1,115**

Of the 2,305 new sites recorded during NMP mapping, 1,229 are located on river terrace gravel, 338 are located on solid sand, and 729 are on non-aggregate geologies.

Less than half of the sites have above-ground remains surviving, whilst 59% are plough-levelled and are visible only as cropmarks.

The great majority of the new sites date from the medieval and later periods. In particular it should be noted that more than a third of the sites are interpreted as post medieval in origin.

Records for medieval and post medieval archaeology are mainly for features of the agricultural landscape such as fields, field systems, water meadows and drains, and are consistent with the understanding and interpretation of Hampshire's HLC. A large amount of evidence for post medieval small-scale quarrying and sand and gravel extraction was also recorded, especially from the Avon valley, the western part of the Lower Test valley and from the Southwick secondary sub-unit.

The record for twentieth century archaeology is dominated by features from the Second World War. Twentieth century military features are especially prevalent in the East Hampshire sub-unit, in parts of which there is a substantial military presence associated with the long-established army bases on the Hampshire/Surrey border. There are also extensive Second World War remains in the Eastleigh secondary sub-unit (associated with Eastleigh airfield and the civil defence of Southampton), and in the Blackwater catchment (relating to the GHQ Line A stop line and to the former RAF fighter station at Blackbushe airport).

For NMP mapping of pre-medieval sites the best results was achieved with features interpreted as prehistoric (undated). The number of sites from this period recorded in the sub-units was almost doubled as a result of the project. Virtually all of the new sites are plough-levelled and are visible only as cropmarks. The prehistoric (undated) resource is characterised mainly by enclosures, some of which are likely to be enclosed settlements. A smaller number of ring ditches, either isolated examples or several together forming small groups, were identified whose small size led to their interpretation as either possible round houses or possible barrows. In some instances landscape features such as field boundaries and trackways were also identified.

In the main the prehistoric (undated) enclosures can be considered likely to be Iron Age or Roman in origin (and very likely in occupation); uncertainty over their dating arises because they may originally date from the late Bronze Age or have Bronze Age antecedents.

Uncertainty over precise dating also applies to sites interpreted as Iron Age or Roman in date. Only a handful of sites were confidently interpreted as Roman – in the main these are the visible remains of stretches of previously known or projected roads - and no new sites interpreted specifically as Iron Age. A number of settlements, however, from the Avon valley, the Upper Test valley and the Blackwater catchment were classified as Iron Age/Roman. These sites were interpreted in this way, rather than as prehistoric (undated), because the level of complexity and layout of the visible features is analogous with sites of this date elsewhere in the county (cf. Palmer, 1984, 48-53). A good example is the settlement at South Gorley in the Avon valley (Figure 224).

A significant number of new Bronze Age sites were identified. All bar one are interpreted as barrows, and most were recorded from the Avon valley and the Upper Test valley. Most of the barrows are visible as cropmark ring ditches, although some were recorded as plough-levelled mounds; only six have upstanding remains surviving. An important aspect of the results of the mapping is the widening of the

known distribution of ring ditches, particularly into the southern part of the Avon valley.

Four new sites tentatively dated to the Neolithic period are of particular significance; an oval barrow and a possible pit circle in the northern part of the Avon valley both extend the distribution range of these types of site in the county, and a possible long barrow recorded at Hordle on the New Forest Coastal Plain lies well outside the previously understood distribution of Hampshire long barrows. A second possible oval barrow was recorded near Silchester amphitheatre.

Four sites were interpreted as potentially early medieval in date. It should be emphasised that these interpretations are speculative. Three of the sites are groups of oval pits which may be *grubenhausen*, but could, alternatively, be of prehistoric origin; the fourth site is a plough-levelled building on the outskirts of Bossington in the Lower Test valley sub-unit and the dating of this feature should be seen as provisional.

8.3 Avon valley

8.3.1 Summary of mapping results

During the project, 585 records were created in the project database for sites identified from aerial photographs for the Avon Valley sub-unit. Of these, 79 are for sites previously recorded in the Hampshire AHBR; the remaining 506 records are for new sites (Figure 209). In broad terms, this represents an average of 4.5 new sites per kilometre square and equates to a 77% increase in the total number of site records for the sub-unit.

Of the 506 new sites, 26 are located on non-aggregate geologies, 40 are on Bracklesham sand and 440 are on river gravels.

Almost two thirds of the sites are plough levelled and survive only as cropmarks. Of these, only 21 (4%) were previously plotted on the Hampshire cropmark layer (Figure 210).

A breakdown of the updated archaeological resource for the sub-unit is shown below in table 30. This table presents the number of site records in the AHBR for each archaeological period, the number of new sites from each period recorded during this project and in the final column, a revised total of site records from each period. Alongside the revised totals, the percentage increase in numbers of site records (as a result of the project) is shown in parenthesis.

Table 30. The updated archaeological resource of the Avon valley sub-unit.

Avon valley	Number of existing AHBR records	Number of new sites in project database	Revised total (% increase)
Palaeolithic	14	0	14 (0)
Mesolithic	8	0	8 (0)
Neolithic	15	2	17 (13)
Bronze Age	124	57	181 (46)
Iron Age/Roman	112	12	124 (11)
Prehistoric (undated)	78	66	144 (86)
Early medieval	11	2	13 (18)
Medieval	120	69	189 (58)
Post medieval	40	203	244 (508)
Modern	53	58	111 (109)
Undated	78	45	123 (58)
Total	**653**	**506**	**1,159 (77)**

8.3.2 Characterisation of the new sites

Prior to the mapping project the archaeological resource of the Avon valley was recognised as being rich in terms of numbers of sites. These numbers have nearly been doubled as a result of the aerial survey; the average site density is now 10 sites per kilometre square, as opposed to 5.5 (see section 6.3.1.3).

New sites have been identified for all archaeological periods from the Neolithic onwards. The largest numbers of new records are for the medieval and later periods; for instance the number of known twentieth century sites has been doubled and that of known post medieval sites has increased fivefold. The size of the Bronze Age resource and that of the generic prehistoric (undated) period have also been significantly enhanced.

Other than the notable increase in the number of post medieval site records, there are several significant results from the survey. New prehistoric settlements were recorded; particularly from the Iron Age or Roman periods, although most are interpreted as prehistoric undated. Two possible Neolithic sites were identified; an oval barrow and a possible pit circle. Both are unusual; the barrow because of its location off the chalk, and the pit circle because of the rarity of this site type in Hampshire. Two possible grubenhaus settlements were recorded; again this is significant given the comparative lack of records for this type of settlement in the AHBR.

NMP mapping has changed the perceived distribution of archaeological sites within the Avon Valley. Prior to the project, the vast majority of known sites were located in the northern part of the sub-unit with few sites recorded south of Ringwood (section 6.3.1.2). The sites recorded during the project are much more evenly spread (Figure 209). Most of the new sites mapped in the southern half of the valley are interpreted as prehistoric undated or of uncertain date, although all periods bar the Neolithic and Iron Age/Roman periods are now represented in this part of the sub-unit.

The results of NMP mapping demonstrate that the archaeological research potential of the area to the north of Ringwood (as indicated by evaluations, excavations and field walking) extends throughout the entire valley of the Hampshire Avon.

In the analysis of the archaeological resource of the sub-unit (Section 6.3.1.2), the Avon valley was divided into five geographical areas. As a result of NMP mapping our knowledge of the archaeology of each of these areas has been enhanced to a greater or lesser degree.

8.3.2.1 River Avon flood plain

Prior to the project, the predominant archaeological feature recorded in the Avon flood plain was the extensive system of post medieval water meadows. NMP mapping has not significantly altered this perception; 24 water meadows were recorded. However, the detailed mapping of these systems may allow a greater degree of accuracy in their relative dating. The curvilinear nature of the leats and drains of systems at Wood Green near Breamore, for instance, contrast sharply with the highly uniform nature of the rectilinear systems to the north (Figure 211) and may indicate an earlier origin.

There is significant new evidence for Bronze Age activity: on the flood plain to the north of Fordingbridge a group of plough-levelled round barrows showing as cropmark ring ditches were recorded. These are situated close to the river bank (Figure 221) on alluvium overlying gravel terrace four (as identified by the BGS). Riverine barrows are known from elsewhere in southern England (e.g. Taylor and Woodward, 1985) but there are currently few other examples in Hampshire.

8.3.2.2 New Forest fringe

NMP mapping has identified a number of new sites on the heathland running up the north eastern side of the sub-unit. To a great extent the new sites are consistent with previous perceptions of the archaeological resource of the New Forest fringe (section 6.3.1.2).

Many are of sites types previously recorded, such as Bronze Age barrows and post medieval pillow mounds and bee gardens. However, some site types not previously recorded from this area were identified, most notably a possible prehistoric enclosure (Site ID 168313) and boundary bank (Site ID 168314) on Rockford Common.

Large areas of heathland have been affected by twentieth century military activity and many Second World War features were mapped. For example, an extensive

system of previously unrecorded anti-aircraft obstructions protecting the High Frequency Direction Finding station on Ibsley Common.

Small and large scale aggregate extraction dating from the nineteenth and early twentieth centuries is common, particularly along the western edge of the heathland, most notably on Hyde, Gorley and Rockford Commons. This is significant because many of these quarries are not included in the BGS data used to define the history and extent of mineral extraction during the project (section 3.3.1). Although the BGS data is effective in showing the main areas of mineral extraction, the mapping of these quarries has added a considerable amount of detail to the overall picture.

8.3.2.3 Ringwood Forest

The Ringwood Forest area is heavily wooded and NMP mapping was less effective here than in other parts of the sub-unit. Although few new sites have been recorded there are some important discoveries.

On the eastern fringe of the forest, the site of a possible Iron Age/Roman settlement was recorded on arable land between the Ringwood Forest proper and Hamer Copse (Site ID 167973). The presence of a potentially earlier prehistoric enclosure (168205) and a scatter of pits (Site ID 167972) were also mapped. This group of sites (Figure 222) is of particular significance because it is indicative of prolonged settlement activity in an area where few prehistoric sites were previously recorded.

In the west a sixth Bronze Age round barrow (Site ID 168238) has been added to a previously known group of five scheduled barrows. In the central part of Ringwood Forest two short sections of ditch, interpreted as post medieval field boundaries (Site ID 168207-8) were mapped.

8.3.2.4 The Northern Avon Valley

Prior to the mapping project, the archaeological resource of the northern Avon Valley was recognised as being particularly rich with evidence of activity from the Palaeolithic to the twentieth century. Even so, a large number of new sites were recorded here as result of NMP mapping.

Many of the new sites are consistent with previous perceptions of the archaeological resource of this area. For example, the AHBR contains many records for Bronze Age barrows and 44 new examples were recorded during the project.

However, NMP mapping has greatly enhanced our knowledge of the archaeology of this area for all periods from the Neolithic onwards, and has produced a number of significant discoveries.

One of the most exciting of these is a possible pit circle. This is a significant finding because only one other pit circle is recorded in Hampshire; that found during excavations at Winnal Down (D. Hopkins, pers com). Of comparable importance is an elongated barrow identified at Upper Burgate (Figure 223). This may be a long barrow (if so, it is one of only two in Hampshire not located on chalk) or, more likely, an oval barrow (few oval barrows are recorded in Hampshire and all are on the chalk).

Evidence for the Iron Age and Roman periods, whilst restricted to a small number of sites, has been significantly augmented by the project. Four completely new settlement sites have been recorded, including a rectilinear enclosure complex at South Gorley (Site ID 167820). Enclosure complexes such as the South Gorley site (Figure 224) are recorded in considerable numbers on the Hampshire chalklands (Palmer, 1984) but none had been previously identified in the Avon valley.

These findings are significant because the nature of Iron Age and Roman settlement in the northern Avon valley was unclear prior to the mapping project. The only Iron Age settlement previously identified was at Crystal Hollow; evidence for Roman settlement was limited to the later phases at Crystal Hollow, a building at Nea Farm, Ellingham, and a number of settlement sites inferred from pottery scatters.

Significant detail has been added to previously recorded sites, allowing their reappraisal. Cropmarks at Fryern Court, for instance, had previously been recorded as prehistoric (undated) enclosures. As a result of being systematically and accurately plotted the features have been reinterpreted as an Iron Age or Roman settlement enclosure complex with associated trackways and fields (Figure 225).

The addition of new detail to previously recorded sites is the principal way in which the project has enhanced understanding of the medieval archaeological resource. Earthwork remains of the deserted settlement at South Midgham in the grounds of Breamore Park are a case in point, as are those relating to the site of the Augustine Priory at Breamore; here a rectilinear banked enclosure to the north (Site ID 168504) may be part of an associated grange (Figure 226).

New medieval sites include fragments of strip fields, which are comparatively rare in Hampshire. A good example is the field system at Bickton, where the remains of toft boundaries (Site ID 167856) are also visible as cropmarks to the north of the village.

Many post medieval features were recorded during the project, particularly to the north of Fordingbridge. Mostly these consist of field boundaries, drainage features and small gravel pits or quarries.

8.3.2.5 The Southern Avon Valley

Prior to the project, the archaeological resource of the southern part of the Avon valley was poorly understood. Very few sites were recorded south of Ringwood in comparison with the north. Most periods were poorly represented in terms of numbers of sites, and for several periods there were no site records in the AHBR (section 6.3.2.1). NMP mapping has gone some way to altering this perception: in broad terms a large number of new sites were recorded from this area (Figure 209).

Many new Bronze Age round barrows were recorded and, although no features could be confidently interpreted as Iron Age or Roman, many prehistoric (undated) enclosures and a smaller number of possible round house settlements were mapped which are likely to date from these periods.

One site possibly dating to the early medieval period was recorded; it consists of a group of elongated pits tentatively interpreted as Saxon *grubenhausen*. Few *grubenhaus* settlements are recorded in the AHBR so this is a potentially significant finding.

Numerous medieval field systems and field boundaries were recorded, but it is the appreciation of the post medieval resource which has been most enhanced. Only two sites were previously recorded from this part of the sub-unit; as a result of NMP mapping the distribution of post medieval sites here can now seen to be comparable with that in the north. The great majority of these are agricultural features such as field boundaries, drainage systems and ridge and furrow.

8.3.3 Updated archaeological resource

Palaeolithic

No new Palaeolithic sites were identified during the mapping project.

Mesolithic

No new Mesolithic sites were identified during the mapping project.

Neolithic

Two new sites, tentatively interpreted as Neolithic in origin, were identified during the mapping project (Figure 211). These are an elongated barrow and a partially visible pit circle, both situated in the very north of the sub-unit (Figure 223).

The pit circle (Site ID 168130) consists of a crescentic arrangement of pits visible as cropmarks. It is part of a larger complex of pit features (interpreted as prehistoric undated) at North Charford Down Farm. These features are located on Tarrant chalk, but are included in the assessment because they are within the boundaries of the sub-unit. Pit circles are generally interpreted as late Neolithic/early Bronze Age in date and this feature is tentatively dated to the Neolithic period. The location of this site is close to the Cranborne Chase area, where a much wider range of Neolithic sites are known, and this isolated feature perhaps represents an extension of a distribution pattern centred outside the project area.

The barrow (Site ID168092) is among a group of enclosures lying on gravel terrace four (as identified by the BGS) at Upper Burgate. Many of the enclosures are interpreted as Bronze Age round barrows. This feature is more elongated that the rest and may be a long barrow (only the second identified on non-chalk geology in Hampshire) but is more likely to be an oval barrow. Oval barrows are regarded as being slightly later in date (mid to late Neolithic) than long barrows (e.g. Bradley, 1992). Other oval barrows are recorded on chalk downland in Hampshire and are frequently found in association with round barrows (Palmer, 1984).

Bronze Age

Fifty seven new Bronze Age sites were identified during the mapping project (Figure 212). The sites include 54 barrows, two barrow cemeteries and a burnt mound.

Almost all the barrows are located on river terrace gravels and are plough-levelled sites showing as cropmark ring ditches. Five records for barrows are double-indexed in the project database as prehistoric round houses, and one cemetery as a round house settlement, because of the small size of the ring ditches

NMP mapping has added to our understanding of the distribution of Bronze Age sites in the Avon Valley. Prior to the project, the largest concentration of known sites occurred between Ringwood and Fordingbridge. Most of the new sites are located in the area to the north of Fordingbridge, and a significant number are situated in the southernmost part of the sub-unit, around Sopley.

One significant discovery is a group of three barrows located on the fourth gravel terrace on the west bank of the river at Fordingbridge (Site ID 167879). They were overlain by an extensive post medieval water meadow; this has recently been plough-levelled and the barrows are visible on recent aerial photographs as cropmark ring ditches (Figure 221).

The burnt mound (Site ID 168165) is located on Bracklesham sand in the northeast of the sub-unit at Hale Purlieu.

It is possible that further research will demonstrate that some of the enclosures mapped during the project and interpreted as prehistoric (undated), including those in the southern part of the valley, are associated with Bronze Age material suggesting continuity of occupation from this period or Bronze Age origins.

Iron Age/Roman

Twelve new Iron Age sites were identified during the mapping project. All of these have been double-indexed in the project database as Iron Age or Roman in date (Figure 213).

All the sites are located in the northwest of the sub-unit on river valley terraces and are visible on aerial photographs as cropmarks. The sites include five settlements, two enclosures, two field systems and three groups of field boundaries. The settlements include groups of enclosures, trackways and associated field systems (Figures 222, 224 and 225).

One particularly extensive settlement is that at Breamore (Site ID 168186), where a complex of cropmarks is visible on aerial photographs. The complex comprises a trackway, round houses, enclosures and a field system with a second trackway and field system immediately to the north (Site ID 168137 (Figure 227)).

To the north of Fryern Court another extensive settlement, comprising a complex of conjoined rectilinear enclosures associated with trackways and field boundaries, had previously been recorded in the Hampshire AHBR and interpreted as undated prehistoric. NMP mapping has provided significant additional information concerning the extent and layout of the site, particularly to the north of Fryern Court Road (Figure 225). As a result, this settlement has been reinterpreted as Iron Age or Roman in origin.

Another site to which significant new detail was added during the project is a field system 200 metres to the northwest of Frankenbury hillfort. This system was interpreted in the AHBR as of unknown date. The site was reinterpreted as a Celtic field system with associated pits, probably Iron Age/Roman in origin.

The distribution of sites from this period (all located in the northern part of the valley) reinforces the current perception that there appears to be a lack of Iron Age settlement in the southern part of the valley. It is possible that the distribution of Iron Age settlements in the Upper Avon valley is a continuation of distribution patterns centred outside Hampshire; in Wiltshire to the north and Dorset in the west.

On the other hand the apparent absence of sites in the southern part of the sub-unit may reflect different types of Iron Age and Roman activity within the Avon valley. A number of enclosures interpreted as prehistoric (undated) were recorded (see below). The generic date assigned to these enclosures was done so on the basis that they appear to be simple discrete enclosures lacking the diagnostic complexity of those interpreted as Iron Age/Roman. Many of these discrete enclosures may well prove to be from this period. Their apparent simplicity may be a result of the vagaries of cropmark formation; alternatively it may be due to a functional rather than chronological distinction. In other words their form might reflect different agricultural, cultural or economic activity from the complex enclosures. Their distribution, whilst still favouring the upper valley, clearly extends into the southern part of the sub-unit.

Prehistoric (undated)

Sixty six new undated prehistoric sites were identified during the mapping project (Figure 215). Sixty are located on river gravels, five on non-aggregate deposits, and a single site on Bracklesham sand. This is a rectilinear banked enclosure (Site ID 168280), possibly forming part of a field system to the northeast of Gorley Common.

NMP mapping has altered the perception of prehistoric site distribution in the Avon valley; prior to the project the distribution of known undated prehistoric sites did not extend south of Ringwood. The new sites are widely distributed throughout the sub-unit with concentrations to the north of Fordingbridge but also to the south of Ringwood (Figure 214).

All but two sites are plough-levelled features, visible only as cropmarks. The earthwork features comprise an interrupted linear bank (Site ID 168314), possibly a boundary bank, on Rockford Common, and a small section of curved bank which may form part of a larger enclosure on Whitemoor Bottom (Site ID168454).

Many of the new sites relate to settlement activity; these include two round house settlements, eleven round houses, and five ring ditches interpreted as possible round houses (Figure 228). Twenty five enclosures were also recorded, many which may also be the remains of settlements.

Other sites of note include a field system and five trackways. Two of the trackways, to the southwest of Breamore, are in close proximity to each other. They are on similar alignments and are associated with two groups of pits which are indicative of possible settlement activity close by (Figure 229).

Early medieval

Two new sites of possible early medieval date were identified during the mapping project (Figure 215). Both are located on the river terrace gravels and are visible on aerial photographs as cropmarks.

Both sites consist of groups of elongated pits which may be the remains of sunken-floor buildings or *grubenhausen*, although a prehistoric origin cannot be ruled out. They are located at opposite ends of the sub-unit, one (Site ID 67909) in the far south at Parsonage Farm, Sopley; the other (Site ID168138) in the far north at North Street near Breamore (Figure 230).

If these features are *grubenhausen*, then they are an important finding; in the AHBR there are only 16 records for *grubenhaus* settlements for the county as a whole. On a national level, however, Saxon settlements associated with river gravels commonly include high proportions of sunken huts to ground-level buildings (Hamerow, 1992) and *grubenhausen* are recorded from the Crystal Hollow settlement.

Medieval

Sixty nine new medieval sites were identified during the mapping project (Figure 216). Of these, 55 were double-indexed in the project database as being of alternatively post medieval origin. Three sites are located on Bracklesham sands, the remainder on river valley gravels.

The sites relate predominantly to agriculture or subsistence; they include a large number of field systems and field boundaries and four records for ridge and furrow (comparatively rare in Hampshire). There are also records for cultivation marks, two enclosures and two trackways, as well as a holloway, a pond, and a drain.

The distribution pattern of the new sites is broadly similar to that of sites previously recorded in the AHBR; whilst spread throughout the sub-unit, there is a heavier concentration of sites in the north, with only seven new sites to the south of Ringwood (Figure 216).

The most significant site is the Augustinian Priory of St Michael at Priory Meadow, Breamore. Here a number of linear banked features are visible as cropmarks on aerial photographs taken in 1947 and these were interpreted as enclosures and building foundations connected with the priory. To the north of the main priory complex, a new rectilinear banked enclosure with adjacent linear banks was identified (Site ID 168504). This enclosure is tentatively interpreted as part of the grange associated with the priory (Figure 226).

The site of a possible deserted settlement at Kingston Farm, Sopley (Site ID 168037), consisting of rectilinear ditched enclosures and associated field boundaries, was recorded. The site has been plough-levelled and is only visible as cropmarks.

Fragments of a number of strip fields have been plotted in the northern Avon valley between North Gorley and Bickton where the remains of medieval toft boundaries are also visible as cropmarks to the north of the village (Site ID 167856).

Post medieval

Two hundred and three new post medieval sites were identified during the mapping project (Figure 217). Ten records are for sites located on Bracklesham sand and twenty are on non-aggregate geologies; the remainder, 173, are located on river valley gravels.

This represents a huge increase when compared to the 40 sites previously recorded in the AHBR (section 6.3.1.3). Furthermore the sites are relatively evenly distributed throughout the sub-unit (Figure 217). Thus NMP mapping has significantly extended the known distribution of sites of this period; prior to the project only two post medieval sites were listed in the AHBR for the area south of Ringwood.

The majority of the sites relate to agricultural activity, there are 46 field boundaries or groups of field boundaries, eight field systems, and 24 new water meadows. In addition, four enclosures, a number of cultivation marks, drains and drainage systems, and a ditch were plotted.

There are systems of water meadow adjacent to the river and tributary streams throughout the Avon valley although the most extensive of these lie in the north, particularly to the north of Fordingbridge. Most of are very regular and rectilinear in form and are dated to the mid eighteenth and nineteenth centuries. However some systems are more irregular with curving elements and may be of earlier origin. A good example is that to the northwest of Woodgreen (Figure 220).

Six bee gardens or Holmsley Ridge enclosures were plotted during the project, five of which were previously unrecorded. Four are situated on Ibsley Common and one on the northern edge of Rockford Common.

Thirteen pillow mounds or groups of pillow mounds were mapped, of which nine were previously unrecorded. The mounds lie in two distinct groups in the north of the sub-unit. The first is on Rockford Common where large numbers of pillow mounds were know prior to the mapping project. Not all of these previously recorded sites were identifiable on the aerial photographs, but an additional 21 new mounds were plotted (Site IDs 26744, 168328-30 and 168334). Thirteen of these form two linear groups running along the inside of the eastern and northern edges of a large banked enclosure (Site ID 168465) which is probably a post medieval encroachment enclosure (Figure 231).

The second group is on Hale Purlieu. Two of the group were previously recorded; one as a pillow mound and one as a Bronze Age burnt mound. These two form the northern end of a curved formation of six mounds, of which the remaining four are newly discovered and are recorded as pillow mounds (Site ID's 168167-9 and 168204).

These sites represent important additions relating to the recent exploitation of common and heathland of the New Forest fringe, suggesting that such exploitation is currently under-represented in the AHBR.

New sites relating to post medieval industrial activity in the sub-unit include a brickworks, an extractive pit, three gravel pits and 43 quarries. Other new records include eleven trackways, a garden, and a path.

The deserted post medieval settlement of Tweed Farm had been previously listed as being of unknown date in the AHBR. Fields, trackways and enclosures associated with the settlement are visible as cropmarks and were plotted during the project (Figure 232).

Modern

Fifty eight new twentieth century sites were plotted during the mapping project. Seven records are for sites on Bracklesham sand, 49 are on river terrace gravels, and two are on non-aggregate geologies.

The sites are widely distributed throughout the sub-unit although the greatest concentrations are to the north of Ringwood (Figure 218).

The majority of the records are for sites dating from the Second World War. They include the airfield at Bisterne, a bombing range at Hampton Ridge (Site ID 167882), five clusters of bomb craters, five military camps and four groups of slit trenches.

An irregular grid pattern of structures on Ibsley Common were recorded and interpreted as possible anti-aircraft obstructions (Site ID 168284). A series of military features, possibly markers or targets, were also recorded running in a line across the west end of Ibsley Common (Site ID 169373).

Other Second World War sites include an enclosure on the promontory at the western end of Newlands Plantation which is associated with the Battle Headquarters of Ibsley Airfield (Site ID 168459); a firing range to the south of the cricket ground on Godshill Ridge (Site ID 167881); a Ground Control Intercept (GCI) radar station 1km to the northeast of Sopley (Site ID 167937).

A Second World War site was recorded on the western end of Summerlug Hill where several features are visible, including possible slit trenching and a circular base, probably a gun emplacement. The entire site appears to be enclosed by a barbed wire obstruction or similar (Site ID 168375).

Non-military sites include building platforms, drainage systems, paths or trackways and quarries as well as other miscellaneous features such as mounds, hollows and pits.

Undated

Forty five new sites of uncertain date were identified during the mapping project. Three sites are located on Bracklesham sand and three on non aggregate geologies; the remainder are on river valley gravels. The sites are fairly evenly distributed throughout the sub-unit (Figure 219).

Undated sites include 21 enclosures, many of which are likely to be prehistoric in origin and are further evidence of prehistoric settlement activity in the Avon Valley.

Other sites include 11 field boundaries, seven pits or groups of pits, three trackways, a hollow and a ditch. A watercourse, which may be of natural origin, was also recorded.

8.4 East Hampshire

8.4.1 Summary of mapping results

During the project, 233 site records were created in the project database for sites identified from aerial photographs for the East Hampshire sub-unit. Of these, 28 are for sites previously recorded in the Hampshire AHBR; the remaining 205 records are for new sites. In broad terms, this represents an average of four new sites per kilometre square and equates to a 69% increase in the total number of site records for the sub-unit.

Of the 205 new sites, 22 are located on non-aggregate geologies, 12 are located on river terrace gravels and 171 on Folkestone Formation sand.

More than 80% of the new records are for sites with extant earthwork remains; only 18% are plough-levelled cropmark sites and none of these were previously plotted on the Hampshire cropmark layer.

A breakdown of the updated archaeological resource for the sub-unit is shown below in table 31. This table presents the number of existing site records in the AHBR for each archaeological period, the number of new sites from each period recorded during the project and in the final column, a revised total of recorded sites from each period. Alongside the revised totals, the percentage increase in numbers of site records resulting from the project is shown in parenthesis.

Table 31. The updated archaeological resource of the East Hampshire sub-unit.

East Hampshire	Number of existing AHBR records	Number of new sites in project database	Revised total (% increase)
Palaeolithic	1	0	1 (0)
Mesolithic	51	0	50 (0)
Neolithic	10	0	10 (0)
Bronze Age	50	6	56 (12)
Iron Age	10	0	10 (0)
Roman	55	1	56 (2)
Prehistoric (undated)	17	6	22 (35)
Early medieval	1	0	1(0)
Medieval	38	17	55 (45)
Post medieval	31	70	101 (226)
Modern	6	100	104 (1637)
Undated	29	5	34 (17)
Total	**299**	**205**	**504 (69)**

8.4.2 Characterisation of the new sites

Prior to the mapping project the archaeological resource of the East Hampshire sub-unit was recognised as being rich in terms of numbers of AHBR records, having a higher than average density of sites compared with the aggregate resource as a whole (section 6.3.2.3). Many new sites were recorded by NMP mapping and the average site density in the sub-unit is now 11 sites per kilometre square, as opposed to 7.

It was not anticipated that any new Palaeolithic or Mesolithic sites would be identified and this was indeed the case. Nor were any new sites of the Iron Age or early

medieval periods recorded. However significant numbers of new sites were plotted for all other periods, in particular the post medieval and modern periods.

The most significant outcome of the mapping is the substantial number of records for twentieth century sites. Prior to the project modern sites were poorly represented in the AHBR with only six records. The number of records for twentieth century archaeology has been dramatically increased during the project by the identification of 100 new sites; this represents more than a fifteen-fold increase. For the most part the records are for military sites associated with Bordon Camp which is situated in the centre of the sub-unit. Many of the sites are associated with long-term use of the landscape around the camp complex as a training area and as a storage and redistribution centre for troops and equipment for a limited period during the Second World War.

Modest numbers of new sites were identified for the Bronze Age and Roman periods, both of which were previously well represented in terms of AHBR record numbers. Six potential new Bronze Age barrows were identified, three of them surviving as low earthworks. A single new Roman feature was recorded; a stretch of the Silchester to Chichester road at Longmoor visible as a cropmark. Although stretches of this road (Margary, 1967, no. 155) to the north and south were already well established, no traces of this particular stretch had previously been identified and its route was projected.

More substantial numbers of new sites were recorded for other periods already well represented in the archaeological resource. For example the number of records for prehistoric (undated) sites has been increased by 35% and for medieval sites by 45%. The increase in the number of records for the post medieval period is even larger; the number of known sites being more than doubled by the identification of 70 new sites.

Prior to the mapping, there were few AHBR records for sites on the river gravels in the east central part of the sub-unit. A small number of new sites have been plotted in this area (Figure 233), mainly water meadows to the southeast of Bordon, but site density here remains lower than elsewhere.

Whilst the overall distribution of sites within the East Hampshire sub-unit has not been extended as a result of the project, it is now more evenly spread throughout the sub-unit (Figure 233). This is mainly due to the large numbers of new records for sites of the post medieval and modern periods. This is particularly true of the area immediately to the north of Bordon and to the southeast on the heathlands at Woolmer, Weaver Downs and Longmoor Inclosure. Almost without exception, the new sites in these areas relate to extensive military use of the area during the twentieth century.

8.4.3 Updated archaeological resource

Palaeolithic

No new Palaeolithic sites were identified during the mapping project.

Mesolithic

No new Mesolithic sites were identified during the mapping project.

Neolithic

No new Neolithic sites were identified during the mapping project.

Bronze Age

Six new Bronze Age sites were identified during the mapping project (Figure 234). All six sites are interpreted as potential round barrow mounds. Three survive as low

earthworks; the other three are completely plough-levelled and are visible only as lighter coloured cropmarks. All of the barrows are located on Folkestone Formation sand.

A significant discovery is a group of three barrows to the west of Woolmer Down. The southern of the three (Site ID 168824) forms part of a previously known linear cemetery, the other two (Site ID's 168826-7) are new outliers to the linear group.

One of the remaining three new barrows lies immediately to the west of Hogmoor Road, Bordon, on the edge of the heathland known as Slab. The other two are located to the northeast of Bordon at Broxhead Common.

Iron Age

No new Iron Age sites were identified during the mapping project.

Prehistoric (undated)

Six new undated prehistoric sites were identified during the mapping project. All but one of the sites are located in the northeast of the sub-unit (Figure 236). Four sites are on Folkestone Formation sand and the fifth is on non-aggregate geology.

Four of the sites are enclosures. Three are ring ditches visible as slight earthworks and may be Bronze Age barrows. The fourth (ID 169151) consists of a curving ditch visible as a cropmark at Blackmoor, to the southwest of Bordon. It may be a field boundary of medieval or later date. However, the line of the ditch appears to form the western side of a larger curvilinear enclosure which is partially fossilised in the present day field pattern and this enclosure may be prehistoric in origin.

The fifth site (Site ID 168546) is a group of field boundaries visible as cropmark ditches to the east of the late Bronze Age and early Iron Age settlement at Trotsford Farm (Site ID 39743). This site is shown in Figure 241.

Roman

One new Roman site (Site ID 168784) was identified during the mapping project (Figure 235). It is located on Folkestone Formation sand in the south of the sub-unit at Longmoor Camp.

The site comprises a formerly projected section of the Silchester to Chichester road (Site ID 29682). It is visible as linear cropmark 134m long, comprising an inner raised area representing the roadway itself, flanked on either side by ditches. To the south a further stretch of the road is visible as a linear bank 500m long.

Early medieval

No new early medieval sites were identified during the mapping project.

Medieval

Seventeen new medieval sites were identified during the mapping project. Of these, 13 were double-indexed as of alternatively post medieval origin. Four sites are located on non-aggregate geologies; the remainder on Folkestone Formation sand (Figure 237).

The sites relate predominantly to agriculture or subsistence and include ten field systems and field boundaries. Four sites were recorded as probable ridge and furrow (comparatively rare in Hampshire) although all but one were double indexed as post medieval ridge and furrow or cultivation marks. There are also three new records for a road, a holloway, and a trackway.

The distribution pattern of the new sites shows a marked concentration of sites in the south western quarter of the sub-unit (Figure 237), although two are recorded in the Wey valley in the north.

Post medieval

Seventy new post medieval sites were identified during the mapping project. This is a large increase when compared to the 31 sites previously recorded in the AHBR (Figure 238).

Eight records are for sites located on valley gravels and 11 are on non-aggregate geologies. The remainder, 51, are located on Folkestone Formation sand.

The distribution pattern of the new sites is broadly similar to that of sites previously recorded in the AHBR; whilst spread throughout the sub-unit, there is a heavier concentration of sites in the northern, north eastern and southern fringes. A small number of sites have been plotted along the eastern and southern edges of Bordon; an area where previously no post medieval sites were known (Figure 238).

The majority of these sites relate to agricultural activity. There are 14 field systems and boundaries and 11 water meadows. In addition, three tree rings, six drains and 12 drainage systems were recorded. The water meadows are less extensive than those in the Avon Valley and are confined to a narrow band flanking the River Wey and its tributaries (Figure 242).

Of note is the extensive system of drainage ditches underlying the modern plantation in Woolmer Forest which appears to pre-date the twentieth century military features (Figure 243).

Nineteen post medieval extractive pits and quarries were plotted, nine of which were double-indexed as possibly modern (early twentieth century) in origin. In addition a small rectilinear banked enclosure of probable post medieval origin was plotted on Shortheath Common (Site ID 168667).

Modern

One hundred new twentieth century sites were identified during the mapping project. As only six sites had been previously recorded in the AHBR, this equates to a very significant increase in the known number of modern sites. For the most part, the sites are located in two extensive areas, the first towards the north of the sub-unit, to the north and west of Bordon, and the second in the south, in the vicinity of Woolmer Forest and Longmoor Inclosure (Figure 239).

Three records are for sites located on valley gravels and six are on non-aggregate geologies. The remainder, 91, are located on Folkestone Formation sand.

The vast majority of sites relate to modern military activity associated with the camps and training areas centred on Bordon Camp. Features related to target practice include four firing ranges, one rifle butt, three targets, one wall (probably a target) and nine groups of bomb craters.

Extensive areas of land surrounding Bordon Camp were used as storage and redistribution centres for troops and equipment during the Second World War. A large number of sites associated with this activity have been identified including nine camps, three railway sidings and a timber pond (Figure 244).

Eleven features are of modern military origin but are of uncertain function, they were therefore indexed as ‘military site’. The sites include a group of thirteen small circular hollows with surrounding banks each approximately 3.5m across. They lie in three linear groups to the northwest of the playing fields associated with Prince Philip Barracks, Bordon and may be bomb craters.

The most abundant site type recorded is the slit trench; in all 33 trenches or groups of trenches were identified within the sub-unit. These include short sections of straight, zigzag and crenulated trenching often close to accommodation and administrative blocks. Longer stretches of trenching, often forming parts of more

extensive trench complexes, were identified. These are usually located in more open areas and are considered likely to be associated with troop training exercises (Figure 245).

Other new modern military sites plotted include two enclosures, two gun emplacements, three mounds and two trackways.

The only non-military sites plotted within the sub-unit are quarries; in all eight were recorded although three of these may have had military origins.

Undated

Five new sites of uncertain date were identified during the mapping project. The sites are located in the north and east of the sub-unit (Figure 240). One site is located on river valley gravels, one on non-aggregate geologies, the remaining three on Folkestone Formation sand.

The sites comprise cultivation marks, a field boundary and three enclosures. One of the enclosures (Site ID 168528) lies on Broxhead Common in close proximity to a number of barrow sites and two potentially prehistoric enclosures. It is morphologically similar to these enclosures and may also be of prehistoric origin.

The second enclosure (Site ID 168535) is situated on arable land immediately to the north of Sleaford. It is visible as a rectilinear cropmark bank, 89m across. The third enclosure (Site ID 168839) lies on Passfield Common and is visible as an extant earthwork. It is 52m across and may be of post-medieval, medieval or earlier origin.

8.5 New Forest Coastal Plain

8.5.1 Summary of mapping results

During the project, 237 records were created in the project database for sites identified from aerial photographs for the New Forest Coastal Plain sub-unit. Of these, 21 are for sites previously recorded in the Hampshire AHBR; the remaining 216 records are for new sites. In broad terms, this represents an average of three new sites per kilometre square and equates to a 180% increase in the total number of site records for the sub-unit.

Of the 216 new sites, 64 are located on non-aggregate geologies (the clay and silt of the Headon Beds) and 152 are on river gravels.

More than two thirds of the sites are plough levelled and survive only as cropmarks. Only six sites were previously plotted on the Hampshire cropmark layer (Figure 247).

A breakdown of the updated archaeological resource for the sub-unit is shown below in table 32. This table presents the number of site records in the AHBR for each archaeological period, the number of new sites from each period recorded during this project and in the final column, a revised total of site records from each period. Alongside the revised totals, the percentage increase in numbers of site records (as a result of the project) is shown in parenthesis.

Table 32. The updated archaeological resource of the New Forest Coastal Plain sub-unit.

New Forest Coastal Plain	Number of existing AHBR records	Number of new sites in project database	Revised total (% increase)
Palaeolithic	4	0	4 (0)
Mesolithic	4	0	4 (0)
Neolithic	7	1	8 (14)
Bronze Age	29	10	39 (25)
Iron Age/ Roman	11	0	11(0)
Prehistoric (undated)	5	23	28 (475)
Early medieval	0	0	0 (0)
Medieval	11	70	81 (636)
Post medieval	7	82	89 (1171)
Modern	16	28	44 (175)
Undated	26	2	28 (7)
Total	**120**	**216**	**336 (180)**

8.5.2 Characterisation of the new sites

Prior to the mapping project, the archaeological resource of the New Forest Coastal Plain was recognised as being poorly represented in terms of numbers of AHBR records when compared with that of the aggregate resource area overall (section 6.3.3.3). NMP mapping has resulted in an almost threefold increase in the total number of known sites. Site density in the sub-unit is now equal to the average of 5 sites per kilometre square for the aggregate resource area as a whole.

It was not anticipated that any new Palaeolithic or Mesolithic sites would be identified and this was indeed the case. Nor were any new sites of the early medieval period recorded. However new sites were plotted for all other periods, in some cases in significant numbers. The number of known post medieval sites, for instance, was increased more than tenfold and that of medieval sites by almost seven times.

Considerable numbers of undated prehistoric sites were identified, some of which are interpreted as possible enclosed settlements. This is a significant outcome of the mapping because prior to the project the only records for undated prehistoric archaeology in the sub-unit were for artefact find spots.

Arguably the single most important site discovered in the sub-unit during the project is the possible long barrow at Hordle. This site is well outside the previously understood distribution of long barrows in Hampshire, which was confined almost exclusively to the chalk downland.

The total number of records for Bronze Age archaeology in the sub-unit was increased by a third through NMP mapping and the archaeology of the twentieth century is well represented, with the majority of new sites from this period being associated with the two World Wars.

New sites recorded during the project are evenly distributed throughout the sub-unit (Figure 246), with considerable numbers of archaeological features identified in each of the landscape zones described in section 6.3.3.1. Knowledge of the archaeological resource of the coastline was enhanced by the recording of salterns at Keyhaven, and Second World War anti-invasion defences between here and Barton on Sea. In the arable land of the coastal plain, Bronze Age barrows and prehistoric and medieval settlement remains were recorded. Most of the prehistoric enclosed settlements were recorded from within the undulating plain characterised by mixed farming interspersed with areas of woodland to the north. Features ranging from Bronze Age barrows to Second World War airfields were recorded in the heathland area on the New Forest fringe.

NMP mapping has filled in many of the gaps in the distribution of archaeological sites within the sub-unit noted in section 6.3.3.3. For instance many new sites were recorded in the area west of New Milton and the updated distribution of sites (Figure 246) includes a notable concentration in the far west of the sub-unit, in the area to the north of Christchurch. The new sites identified in the western part of the sub-unit include significant numbers dating from the prehistoric (undated) and post medieval periods; records for sites of both periods were virtually absent from the AHBR prior to the project. Concentrations of sites were also recorded along the Avon Water in the east.

8.5.3 Updated archaeological resource

Palaeolithic

No new Palaeolithic sites were identified during the mapping project.

Mesolithic

No new Mesolithic sites were identified during the mapping project.

Neolithic

One new site, potentially Neolithic in origin, was identified during the mapping project (Figure 248). The site (Site ID 168705) is a possible long barrow partially visible as a cropmark ditch on river terrace gravel (recorded as ‘undifferentiated’ by the BGS) at Hordle in the eastern part of the sub-unit. The feature is 11m wide and at least 36m long; its eastern end is obscured by modern cultivation marks (Figure 255).

This is a significant finding; only two other elongated barrows are recorded from non-chalk areas of Hampshire. Both of these are also located on river gravel – a probable long barrow at Bentley Green in east Hampshire, and the oval barrow recorded during this project at Upper Burgate in the Avon valley (section 8.3.3). The only other long barrows on the Hampshire coast are those on Portsdown Hill, a very prominent topographical location overlooking the Solent coastal plain. The barrow at Hordle is

particularly unusual in that it is located neither on chalk nor in a notably prominent landscape position.

Bronze Age

Ten new Bronze Age sites were identified during the mapping project. All these sites are barrows and all are located on river terrace gravels (Figure 249).

One of the barrows (Site ID 168388), survives as an earthwork near Bransgore, all the others are plough-levelled. Of these two are visible as ring ditches, the other seven as cropmark mounds.

The ring ditches form part of a small barrow cemetery at Elkham's Grave on the New Forest fringe, and three barrows between Bransgore and Burton Common (Site ID 168388, 168397) may be forming part of a larger group recorded as part of the Avon valley sub-unit.

Two ring ditches at Milford-on-Sea, interpreted as prehistoric (undated) may be the plough-levelled remains of further barrows.

Iron Age/Roman

No new Iron Age/ Roman sites were identified during the mapping project, although some of the features interpreted as prehistoric (unknown) may date from this period.

Prehistoric (undated)

Twenty three new prehistoric (undated) sites were identified during the mapping project. Four of these sites are located on non-aggregate deposits; the remaining 19 sites are on river terrace gravels.

The sites comprise 17 enclosures, three ring ditches, a field system, and two field boundaries. The most significant features are the enclosures, all of which are plough-levelled and are visible only as cropmarks. Four of these (Site ID 168492, 168487, 168479, 168478), to the north of New Milton, can be interpreted as forming part of a more extensive rectilinear field system. Some of the others are likely to be enclosed settlements. No settlements of this period were recorded from the sub-unit prior to the project, the only records for prehistoric (undated) archaeology in the AHBR being for find spots.

Figure 256 shows prehistoric features on a gravel terrace to the north of Milford-on-Sea, comprising a ring ditch 24m in diameter (Site ID 16853) and a rectilinear, three-sided enclosure and associated pit (Site ID 168585).

NMP mapping has extended the distribution of prehistoric (undated) sites; previously only one was recorded in the AHBR to the west of New Milton. Eleven new sites were mapped in this area; all of these are enclosures. Three are sited close to one another in the area to the north of Christchurch; one is a fragmented curvilinear enclosure, the other two are sub-circular enclosures, one of which is cut by a medieval field boundary.

On the eastern edge of the sub-unit one enclosure (Site ID 168721), comprising a ditch and internal bank, and a smaller ring ditch (Site ID 168684) are visible following tree removal at Springhill Plantation.

Early medieval

No new early medieval sites were identified during the mapping project.

Medieval

Seventy new medieval sites were identified during the mapping project (Figure 251). Nine are located on non-aggregate geologies; the remaining 61 are on river terrace gravel.

The majority of these records are for field boundaries and field systems, with the greatest number occurring in the western part of the study area. The remains of field boundaries in this area are characterised by sinuous or wavy banks and ditches, suggesting a likely medieval date.

At Elkham's Grave a fragmented system of small fields, likely to be medieval, was recorded. Overlaying this is a later, probably post medieval, system of narrow ridge and furrow cultivation.

The remains of a possible medieval settlement (Site ID 168595) were identified to the north of Keyhaven. This site comprises two rectangular enclosures and the remains of boundary ditches. It is on the same alignment as field boundaries and small field enclosures that are marked on the 1880 OS First Edition map.

Post medieval

Eighty two new post medieval sites were identified during the mapping project; the largest number of new sites recorded for any period. Twenty of the sites are located on non-aggregate geologies; the remaining 62 on river terrace gravel (Figure 252).

Many of the new sites are related to agriculture; they include field systems, field boundaries, a small amount of ridge and furrow, drainage systems and trackways (Figure 257).

The greatest number of field remains occurs in the eastern part of the sub-unit. The field pattern in this area is characterised by Parliamentary type fields, and many of the removed boundaries fit into this field pattern. The eastern part of the sub-unit is also the area that has seen the most recent re-structuring, both in terms of built development and field pattern. For instance, the small enclosed field systems recorded between Milford-on-Sea and Lymington (Site ID 168673, 168609 and 168572) are likely to be the remains of small-scale market gardening which have been destroyed by the Efford Experimental Horticulture Station.

Within the area of cultivated heath at Elkham's Grave a system of narrow ridge and furrow cultivation was recorded. Further ridge and furrow was mapped immediately to the west of here (Site ID 55855). This is also likely to be of post medieval date, possibly late nineteenth and early twentieth century attempts to cultivate areas of heath on the edge of the New Forest.

One significant result of the mapping project was the recording of two possible salterns at Keyhaven, on either side of a lane marked as 'Salt Grass Lane' on current OS 1:10,000 maps. One consists of two small rectilinear cropmark enclosures and the other is a group of three rectangular banked enclosures surviving as earthworks with the remains of a possible further three abutting them. Although salterns are known on the east bank of Avon Water, none were recorded on the west side prior to the project (Figure 258).

Another significant result of the mapping is a series of simple water meadows along the west bank of the Avon Water. No water meadows had been recorded from the sub-unit before the project; either in the AHBR, in Hampshire's HLC, or in the water meadow survey carried out by Oxford Archaeology.

Two circular features were recorded in the grounds of Flexford House which are likely to be the remains of ornamental garden structures. They are the only features within the sub-unit interpreted during the project as being part of a designed landscape.

Evidence for small-scale gravel extraction was also recorded, mainly from the heathland of the New Forest fringe.

Modern

Twenty eight new twentieth century sites were identified during the mapping project (Figure 253).

Four sites are located on non-aggregate geology, one is located on beach gravel deposits and the remaining 23 are on river terrace gravel.

Twenty of the sites date from the Second World War and two are likely to date from the First World War. Non-military sites comprise five gravel quarries and a drainage system.

Second World War features include beach defences between Barton on Sea and Keyhaven, two airfields (one of which, Holmsley South Airfield, was previously recorded in the AHBR) and associated camps and other features, and a number of bomb craters.

The most substantial of the new military sites is the temporary airfield or landing ground at Sway (Site ID 168424) in the northeast part of the sub-unit. Remains of features associated with the landing ground are visible on aerial photographs from 1941. There are no visible remains of the site after that date. A number of small military encampments in it proximity were also recorded (Site ID 168710, 168715, and 168713).

Holmsley South airfield is still partially in existence. Its eastern half has however been reclaimed by the heath. A series of small camps immediately to the southwest of the airfield were identified during the project.

In the coastal area around Barton on Sea evidence of possibly earlier military activity was recorded from aerial photographs taken between 1945 and 1947. A group of features at Rook Cliff are likely to be the remains of rifle butts and gun emplacements (Site ID 168566). There are also short sections of slit trench close by. The nature of these features suggests a training area as well as a potentially defensive site. The features show signs of long disuse and cliff erosion and it is likely that they and surrounding features are pre-1939 and may date to the First World War.

Most of the larger quarries (Site ID 168245, 168559, 168725) recorded within the sub-unit are in the arable farmland area between New Milton and Lymington. All of those visible in the 1940s have since been abandoned. Small-scale quarrying, some of which is likely to be of twentieth century date was recorded along the edges of the New Forest in the north.

Undated

Two new undated sites were identified during the mapping project (Figure 254). Both are located on river gravel terraces.

One is a group of three small pits or hollow, the other a single pit.

8.6 Lower Test valley

8.6.1 Summary of mapping results

During the project, 278 records were created in the project database for sites identified from aerial photographs for the Lower Test valley sub-unit. Of these, 23 are for sites previously recorded in the Hampshire AHBR; the remaining 255 records are for new sites (Figure 259). In broad terms, this represents an average of 3.5 new sites per kilometre square and equates to a 57% increase in the total number of site records for the sub-unit.

Of the 255 new sites, 43 are located on non-aggregate geologies, 72 are on Lambeth sand and 140 are on river gravels.

Almost two thirds of the sites have above-ground remains surviving, whilst 100 are plough levelled and survive only as cropmarks. Previously only 23 sites were plotted on the Hampshire cropmark layer (Figure 260).

A breakdown of the updated archaeological resource for the sub-unit is shown below in table 33. This table presents the number of site records in the AHBR for each archaeological period, the number of new sites from each period recorded during this project and in the final column, a revised total of site records from each period. Alongside the revised totals, the percentage increase in numbers of site records (as a result of the project) is shown in parenthesis.

Table 33. The updated archaeological resource of the Lower Test valley sub-unit.

Lower Test valley	Number of existing AHBR records	Number of new sites in project database	Revised total (% increase)
Palaeolithic	25	0	25(0)
Mesolithic	12	0	12(0)
Neolithic	20	0	20(0)
Bronze Age	36	5	41 (14%)
Iron Age/Roman	81	5	86 (6%)
Prehistoric (undated)	33	18	51 (55%)
Early medieval	12	2	14 (17%)
Medieval	80	42	122 (53%)
Post medieval	53	162	223 (305%)
Modern	13	14	26 (107%)
Undated	77	7	84 (9%)
Total	442	255	697(57)

8.6.2 Characterisation of the new sites

Prior to the mapping project the archaeological resource of the Lower Test valley was recognised as being relatively rich in terms of numbers of sites. These numbers have significantly increased as a result of the aerial survey (Figure 259); the average site density is now 9.5 sites per kilometre square, as opposed to 6 (see section 6.3.4.3).

New sites have been identified for all archaeological periods from the Bronze Age onwards. The largest numbers of new records are for the post medieval period; significant numbers of new medieval sites and, to a lesser extent, sites interpreted as prehistoric (undated) were also recorded. Although only a modest number of new twentieth century sites were identified, this represents a doubling of the known resource for sites of this date.

Many new cropmark sites were identified (Figure 260). This is especially the case in the northern part of the sub-unit: an area where there has been a considerable amount of field boundary removal since the war and where an increasing portion of the landscape is under an arable regime.

NMP mapping has significantly enhanced knowledge of the extent of the later prehistoric archaeological resource of the Lower Test valley. Sixteen possible enclosed settlements of the Iron Age, (or Roman) or undated prehistoric periods were identified, as well as groups of ring ditches which may be the remains of prehistoric open settlement sites. This represents a substantial increase in the number of potential settlements of this period: prior to the project the AHBR contained records for three Bronze Age and three Iron Age settlements.

Knowledge of the prehistoric and Roman archaeological resource of the Nursling area has been enhanced. Prior to the project settlements from the Bronze Age, Iron Age and Roman periods were known from excavation in advance of gravel extraction and other major developments. Two rectilinear cropmark enclosures were recorded at Nursling during the project, as well as two ring ditches which could represent the remains of an open settlement.

Overall the distribution of prehistoric settlements in the sub-unit has been extended through NMP mapping. In particular a number of new sites were recorded from the northern part of the sub-unit, where previously AHBR records were sparse (Figures 262 and 263).

The same is true of the distribution of Bronze Age barrows, albeit to a lesser degree (Figure 261); several new barrows were mapped, all of them in the northern part of the sub-unit.

The post medieval resource was identified as being poorly represented (section 6.3.4.3) and NMP mapping has added much new information in this regard (Figure 266). New sites were identified throughout the sub-unit with a particular concentration on the Lambeth sand in the west. This concentration is made up largely of numerous small quarries. Because Lambeth sand often contains high clay content, it is uncertain whether the quarries were exploiting sand or clay.

8.6.3 Updated archaeological resource

Palaeolithic

No new Palaeolithic sites were identified during the mapping project.

Mesolithic

No new Mesolithic sites were identified during the mapping project.

Neolithic

No new Neolithic sites were identified during the mapping project.

Bronze Age

Five new Bronze Age sites were identified during the mapping project (Figure 261). All the sites are barrows, four located on river terrace gravels and one on Newhaven chalk.

Three of the barrows are in the northern part of the valley where it cuts through chalk downland, at Bossington (Site ID 168947), Park Farm, Michelmersh (Site ID 168931), and Oakley (Site ID 168889). One is in the west, near Lockerley (Site ID 168869) and one is near Awbridge (Site ID 169027) in the central part of the sub-unit. At Bossington and Park Farm, the barrows are visible as cropmark ring ditches, the remaining sites as cropmark mounds.

NMP mapping has added to the known distribution of Bronze Age sites in the Lower Test valley in that prior to the project the majority of records for Bronze Age archaeology were located to the south of Romsey.

It was noted (section 6.3.4.4) that few barrows were recorded from the Lower Test valley in comparison with other parts of the aggregate resource area. The results of the mapping project can be seen to have redressed this imbalance to a degree.

Four sites interpreted as prehistoric (undated) ring ditches (see below) may be further examples of plough-levelled barrows.

Iron Age/Roman

Five new Iron Age or Roman period sites were identified during the mapping project (Figure 262). Four are located on river terrace gravels and one on non-aggregate geology. All are sited in the northern half of the study area.

Three of the records are for enclosures, two at Bossington (Site ID 168958, 168941) and the third at Spearywell (Site ID 168893). These sites are likely to be enclosed settlements. Those at Bossington are single-ditch rectilinear enclosures, whilst the Spearywell is different in character, the enclosed area being defined by a curvilinear bank with traces of a concentric outer bank. All three enclosures are plough-levelled and are visible only as cropmarks.

The two remaining records are for a trackway and field system, possibly associated with one another, at Awbridge.

It is probable that some of the sites interpreted as prehistoric (unknown) and described below are Iron Age or Romano-British in origin.

Prehistoric (undated)

Eighteen new prehistoric (undated) sites were identified during the mapping project (Figure 263). Eleven are sited in the northernmost part of the study area, one in the middle section and six in the south. Four sites are located on non-aggregate geology, one is on Lambeth sand and the remaining 13 are on river terrace gravels. None of the sites has above-ground remains surviving: all are visible only as cropmarks.

Four of the sites are ring ditches: at Gambledown Farm, Sherfield English; Lee Park Farm, south of Romsey; Bossington and Nursling. It is possible that these sites are the remains of round houses and represent the vestiges of Iron Age or Roman settlement, but alternatively they may be the remains of Bronze Age barrows.

Thirteen of the sites are enclosures and some may be settlements. There are concentrations of these in the northern part of the sub-unit, in the Nursling area, and in the west, where two enclosures (Site ID 168897 and 168991) are sited close to the Hillfort at Lockerley. The northern concentration includes three enclosures (Site ID 168880, 168883 and 168879) in the area around Pittleworth.

Two of the Nursling enclosures have been destroyed by development since the date of the photographs from which they were plotted. The rectilinear enclosure (Site ID 169129), shown in Figure 269 was destroyed during the construction of the M27. A second enclosure and the fragmented remains of trackways and a possible field system (Site ID 169134 - 1691347) were destroyed during the development of Nursling Industrial Estate (Figure 270).

As well as the ring ditches and enclosures, a trackway of likely prehistoric date (Site ID 168933) was mapped at Park Farm, Michelmersh. It is visible as a cropmark and appears to be cut by later linear features.

The new sites represent a significant increase in the number of undated prehistoric records in the AHBR. The high percentage of enclosures – potential settlements - is also significant. Prior to the project evidence for prehistoric settlement sites in the sub-unit amounted to three Bronze Age and three Iron Age sites (section 6.3.4.4).

Early medieval

Two new early medieval sites were identified during the mapping project. Both are located on river terrace gravels in the northern part of the sub-unit (Figure 264).

Both sites can only be tentatively assigned an early medieval date, but are highlighted as being potentially from this period. The sites comprise a building, at Bossington and three small rectilinear pits visible as cropmarks interpreted as possible *grubenhausen* near Clapgate Copse, Pittleworth.

The building (Figure 271) is visible as a cropmark enclosure measuring 16m by 5m, but with no discernible entrances. No associated features are apparent but the feature is situated on the edge of the present-day village of Bossington and it is possible that further buildings or other settlement features have been built over.

Medieval

Forty two new medieval sites were identified during the mapping project. Twenty three are located on non aggregate geology and 19 on river terrace gravel.

The new sites are distributed fairly evenly throughout the sub-unit apart from the central area where no sites were recorded (Figure 265).

For the most part the sites relate to agriculture: 28 new field systems or field boundaries were recorded, and four enclosures, most probably small fields (or possibly pounds), were identified. Two survive as earthworks at South Lodge Farm to the northwest of Romsey (Site ID 169059 and 169061), and two as cropmarks at Broadlands Park, south of Romsey (Site ID 169109), and at Lee, near Nursling (169120).

One significant finding was traces of settlement remains in the form of plough-levelled enclosures and field boundaries at Lee to the south of Romsey.

Three quarries identified in the central part of the sub-unit may date from this period; there are three trackways in the north; and three pits. The pits, all in the vicinity of Park Farm, are likely to be the remains of grubbed-up trees; perhaps part of a designed landscape.

Post medieval

One hundred and sixty two new post medieval sites were identified during the mapping project. Thirty eight of the sites are located on non-aggregate geology, 67 on river terrace gravel and 57 on Lambeth sand (Figure 266).

One striking aspect of the post medieval resource recorded during the project is the high number of small scale quarries or pits exploiting Lambeth sand deposits in the central west part of the sub-unit, in Lockerley and Sherfield English parishes. Ninety three of the records for post medieval archaeology in the sub-unit are for quarries, extractive pits or spoil heaps, the majority of them in this area.

Another particular aspect of the post medieval archaeological resource in this general area is the relatively high number of dew ponds: eight were identified in the landscape, characterised by a mixture of small woods and pasture between Bossington and Lockerley.

Apart from the area dominated by small-scale quarrying, the distribution of sites is fairly even throughout the sub-unit.

A modest number of agricultural features were identified: these comprise three field systems, eight field boundaries and six areas of ridge and furrow cultivation.

Thirteen new water meadows were recorded, most in northern part of the sub-unit, above Romsey. Records were also created for 16 drains or drainage systems.

Other new sites of this date include a parterre garden at Lower Brook near Mottisfont (Site ID 168886), four tree rings and a pond.

Modern

Fourteen new twentieth century sites were identified during the mapping project. Three of the sites are located on non-aggregate geology; nine are on river terrace gravel and three on Lambeth sand (Figure 267).

Six are military sites. These include two firing ranges at Squabb Wood, Romsey; a military camp at Ridge Farm, to the west of Romsey; a depot at Lockerley Hall; a bomb crater at Hillyfields, on the outskirts of Southampton; and a group of buildings likely to be a military site at Testwood.

The firing ranges (Site ID 169049, 169050) are not marked on the OS First Edition map of 1878 and are interpreted as early twentieth century. All the other military sites date from the Second World War.

Six quarries and two gravel pits were also recorded. The gravel pits are located at Michael Johns Wood, Romsey and Nursling. All of the quarries are situated in the central part of the sub-unit.

Undated

Seven new sites of uncertain date were identified during the mapping project. Three are located on non-aggregate geology, two on Lambeth sand and two on river terrace gravel (Figure 268).

The sites comprise a pit and a trackway visible as cropmarks at Nursling Industrial Estate; a ditch and a quarry visible as cropmarks at Gambledown Farm, Sherfield English; an earthwork hollow at Pauncefoot Hill, Romsey: an earthwork mound at Green Hill, Romsey; and a field boundary at Abbotswood.

8.7 The Hampshire Kennet

8.7.1 Summary of mapping results

During the mapping project, 206 records were created in the project database for sites identified from aerial photographs in the Hampshire Kennet secondary sub-unit. Of these, only 30 are for sites previously recorded in the Hampshire AHBR; the remaining 176 records are for new sites (Figure 272). In broad terms, this represents an average of three new sites per kilometre square and equates to a 92% increase in the total number of site records for the sub-unit.

Of the 176 new sites, 96 are located on the river terrace gravels associated with the Hampshire Kennet and its tributaries; the remaining 80 are on non-aggregate geology. Slightly more than half the records are for sites with extant earthwork remains; 84 are plough-levelled cropmark sites, of which 15 were previously recorded on the Hampshire cropmark layer (Figure 273).

A breakdown of the updated archaeological resource for the sub-unit is shown below in table 34. This table presents the number of site records in the AHBR for each archaeological period, the number of new sites from each period recorded during this project and in the final column, a revised total of site records from each period. Alongside the revised totals, the percentage increase in numbers of site records (as a result of the project) is shown in parenthesis.

Table 34. The updated archaeological resource of the Hampshire Kennet sub-unit.

Hampshire Kennet	Number of existing AHBR records	Number of new sites in project database	Revised total (% increase)
Palaeolithic	0	0	0 (0)
Mesolithic	3	0	3 (0)
Neolithic	7	0	7 (0)
Bronze Age	13	2	15 (15)
Iron Age	16	2	18 (12.5)
Roman	77	7	84 (8)
Prehistoric (undated)	3	20	23 (633)
Early medieval	1	0	1 (0)
Medieval	19	53	72 (278)
Post medieval	13	73	86 (561)
Modern	2	8	10 (400)
Undated	35	11	46 (31)
Total	**189**	**176**	**365(92)**

8.7.2 Characterisation of the new sites

Prior to the mapping project the archaeology of the wider Kennet Valley was known to be remarkably rich. However the Kennet Valley archaeological resource area within Hampshire was recognised as having a lower than average density of sites compared with the aggregate resource as a whole - roughly three sites per kilometre square, compared to the average of five (see section 6.2.4.3). Within the Hampshire Kennet sub-unit, however, site density was somewhat higher at 4.5 sites per kilometre square. Many new sites were recorded during NMP mapping and average site density in the sub-unit is now almost nine sites per kilometre square (Figure 272).

Prior to the project nearly two thirds of all site records in the resource area were centred on the vicinity of Silchester Roman town. The sites recorded during the

project are much more evenly spread and gaps in the overall distribution pattern have been filled, particularly in the area between Tadley and Newtown. This is largely due to the identification of large numbers of sites for the medieval and post medieval periods.

The most significant site in the Hampshire Kennet sub-unit is the nationally important Iron Age and Roman settlement at Silchester. An air photographic transcription of the area around Silchester Roman town was carried out by the RCHME in 1995 (RCHME 1995) and a copy of the survey plan, provided to the project by English Heritage, formed the basis of the mapping in this area (Figure 282). Two Iron Age and six Roman sites recorded on the RCHME survey are new to the Hampshire AHBR and were added as part of this project.

One of the significant results of NMP mapping in the environs of Silchester Roman town is the identification of a number of previously unrecorded enclosures interpreted as prehistoric (undated) which may be Iron Age or Romano-British in date. Also significant is an oval enclosure to the east of Silchester Roman town, (Site ID 169396). The enclosure is morphologically similar to some Neolithic oval barrows known elsewhere in the south of Britain and although it was indexed as a prehistoric (undated) enclosure in the project database, a Neolithic origin is possible.

It was not anticipated that the mapping project would locate any new Palaeolithic or Mesolithic sites and this was indeed the case, in addition, no new sites of the Neolithic or early medieval periods were recorded. Modest numbers of new sites were identified for the Bronze Age, Iron Age and Roman periods, each of which were previously well represented in terms of numbers of AHBR site records. Large numbers of new sites were recorded for the medieval period as were large numbers of undated sites, even though medieval and undated sites were already well-represented in the AHBR. Even greater numbers of post medieval sites (73 new sites) were identified, most of which are associated with agriculture and subsistence.

8.7.3 Updated archaeological resource

Palaeolithic

No new Palaeolithic sites were identified during the mapping project.

Mesolithic

No new Mesolithic sites were identified during the mapping project.

Neolithic

No new Neolithic sites were identified during the mapping project although an oval enclosure, indexed as prehistoric (undated), may be a Neolithic oval barrow.

Bronze Age

Two new Bronze Age sites were plotted during the mapping project (Figure 274). Both are probable round barrows, visible as cropmark ring ditches located on gravel terraces associated with the River Enborne (Site IDs 169311 and 169332).

Iron Age

Two new Iron Age sites were identified during the mapping project (Figure 275). Both are located on the Silchester Gravel deposits. The first is a substantial cropmark bank underlying the street plan and buildings of Silchester Roman town (Site ID 169497) and is considered to be the remains of an earlier earthwork enclosure, possibly the remains of the defences of the Later Iron Age *oppidum* of Calleva.

The second is a small group of irregular pits situated immediately outside and to the south of the western entranceway into Silchester Roman town, (Site ID 169418).

Both sites were first plotted during the 1995 RCHME air photographic interpretation and transcription project.

Prehistoric (undated)

Nineteen new prehistoric (undated) sites were identified during the mapping project (Figure 276). This represents a significant result as prior to the mapping project only three prehistoric undated sites were recorded in the AHBR for the Hampshire Kennet sub-unit. All but one of the new sites are located in the eastern part of the sub-unit, within the environs of Silchester Roman town (Figure 282). Fourteen sites are located on river gravel deposits and six on non-aggregate geologies.

The new sites include 16 enclosures or groups of enclosures, two ring ditches, one round house, a group of pits and two groups of field boundaries which are fragmentary remains of formerly more extensive field systems.

Immediately to the north of Silchester Roman town is a group of ditched enclosures all visible as cropmarks. These include a sub-oval ditched enclosure with an internal ring ditch which is possibly a round house (Site ID 169404). The oval enclosure is abutted to the north by a second enclosure (Site ID 169405) and is associated with a number of contemporary field boundaries. To the southwest are two smaller curvilinear enclosures (Site IDs 169406 and 169407). This complex of enclosures lies to either side of the road leading north from the Roman town and may predate it.

A little to the east of the Roman amphitheatre an oval ditched enclosure was identified (Site ID 169396). The enclosure is 47m by 27m in size and closely resembles oval barrows which date to the Neolithic period. Although these are usually found in the chalklands in Hampshire this could be a new example from the Kennet gravels.

Roman

Seven new Roman records, all in the vicinity of Silchester Roman Town, were identified during the mapping project (Figure 277). Six are located on river gravel deposits; the seventh on non-aggregate geology.

The new sites include four stretches of the known Roman roads, running north, south, southwest and east from Silchester. To the east of Silchester is a wide linear bank and ditched feature (Site ID 169395) running in a straight line across a field just to the south of the line of the Devils Highway Roman road (Margary No 4a). The feature may be Roman or is possibly a later field boundary following the line of the Roman road.

Other sites include two field systems to the northwest of Silchester probably associated with a Roman settlement already recorded in the AHBR (Site ID19967).

Early medieval

No new early medieval sites were identified during the mapping project.

Medieval

Fifty three new medieval sites were identified during the mapping project (Figure 278).

Of these, 43 were double-indexed as of alternatively post medieval origin. Twenty seven sites are located on river terrace gravels and the remaining 26 on non-aggregate geologies.

Of the sites interpreted as exclusively medieval, eight are ridge and furrow fields. The remaining two are medieval park pales; the first (Site ID 169252) forms part of the boundary of Burghclere Deer Park and the second, to the east, (Site ID 169397) is associated with Silchester Deer Park.

The 43 sites of medieval or later origin relate predominantly to agriculture or subsistence and include 30 field boundaries, two field systems, a farmstead and two groups of cultivation marks which may be medieval ridge and furrow or post medieval features. There are also three new records for holloways and two trackways.

The distribution pattern of new medieval site records is marked by a lack of sites in the area around Tadley; this is mainly due to the modern expansion of Tadley and the presence of an extensive woodland plantation.

Post medieval

Seventy three new post medieval sites were identified during the mapping project (Figure 279). This is a large increase when compared to the 13 sites which had previously been recorded in the Hampshire AHBR for this area. The sites are evenly spread throughout the sub-unit. Thirty three records are for sites located on river gravels and 41 on non-aggregate geologies.

The majority of the new sites relate to agricultural activity or extraction. There are seven field boundaries, eight water meadows and 24 drains or drainage systems. The water meadows are associated with the River Enborne and its tributaries and are far less extensive than those plotted in other parts of the aggregate landscape (for instance those in the Avon Valley).

In addition, five extractive pits and 21 quarries were plotted during the project, eight of which were also double-indexed as possibly early twentieth century in origin.

Modern

Eight new modern sites were identified during the mapping project (Figure 280). Six are located on valley gravels and two on non-aggregate geologies. All the sites date from the Second World War; they include six military camps, a sewage works associated with a camp and an airfield.

One military camp lies to the east of Sydmonton Common towards the west of the sub-unit; the remaining seven sites are clustered in the Tadley area and relate to Aldermaston airfield.

Undated

Eleven new sites of uncertain date were identified during the mapping project (Figure 281). The sites are mainly in the east of the sub-unit in the vicinity of Silchester. Four are located on river gravels and four on non-aggregate geologies.

Undated sites include a sub circular mound of uncertain origin, five field boundaries and groups of field boundaries representing fragmented field systems, a group of two pits and two parallel linear ditches which may follow the line of a trackway. In addition, three new undated enclosures were identified. One enclosure (Site ID 169408) is close to Silchester and is morphologically similarly to other enclosures of prehistoric origin.

8.8 Blackwater catchment

8.8.1 Summary of mapping results

During the project, 277 records were created in the project database for sites identified from aerial photographs in the Blackwater catchment secondary sub-unit. Of these, only 15 are for sites previously recorded in the Hampshire AHBR; the remaining 262 records are for new sites (Figure 283). In broad terms, this represents an average of 3.5 new sites per kilometre square and equates to a 145% increase in the total number of site records for the sub-unit. Of the 262 new sites, 184 are located on river terrace gravels and the remaining 78 on non-aggregate geology.

Fewer than 20% of the records in the project database are for sites with extant earthwork remains; 219 are plough-levelled cropmark sites, of which 15 were previously recorded on the Hampshire cropmark layer (Figure 284).

A breakdown of the updated archaeological resource for the sub-unit is shown below in table 35. This table presents the number of site records in the AHBR for each archaeological period, the number of new sites from each period recorded during this project and in the final column, a revised total of site records from each period. Alongside the revised totals, the percentage increase in numbers of site records (as a result of the project) is shown in parenthesis.

Table 35. The updated archaeological resource of the Blackwater catchment sub-unit.

Blackwater catchment	Number of existing AHBR records	Number of new sites in project database	Revised total (% increase)
Palaeolithic	0	0	0(0)
Mesolithic	5	0	5(0)
Neolithic	4	0	4(0)
Bronze Age	15	4	19(26)
Iron Age	1	10	11(1000)
Roman	3	1	4(33)
Prehistoric	16	34	50(212)
Early medieval	1	0	1(0)
Medieval	18	39	57(216)
Post medieval	24	75	99(302)
Modern	38	62	100(163)
Undated	56	37	93(66)
Total	**181**	**262**	**443(145)**

8.8.2 Characterisation of the new sites

Prior to the mapping project the archaeological resource of the Blackwater valley (from which the Blackwater catchment sub-unit is formed) was recognised as being poorly represented in terms of numbers of AHBR records, with an average density of only three sites per square kilometre compared with five for the aggregate resource as a whole (section 6.2.5.3). The only period well represented was the twentieth century. Part of the GHQ Line A, an important component of the Second World War defences of London, ran through northeast Hampshire and the remains of these defences form a significant aspect of the archaeological resource. Within the sub-unit, average site density was even lower, at 2.5 sites per square kilometre. Many new sites were recorded by NMP mapping and the average site density in the sub-unit is now six sites per kilometre square.

It was not anticipated that any new Palaeolithic or Mesolithic sites would be identified and this was indeed the case. Nor were any new sites of the Neolithic or early medieval periods recorded. However significant numbers of new sites were plotted for other periods. In particular, understanding of the later prehistoric and Romano-British resource has been significantly enhanced. Medieval and post medieval agricultural features are also well represented along with post medieval mineral extraction. A substantial amount of new data relating to the two twentieth century conflicts was also recorded.

New sites were mapped throughout the sub-unit apart from in a 1.5km band running northwest to southeast through its central area (Figure 283). This zone is characterised by heavily wooded heathland including Bramshill Plantation and Eversley Common. Large numbers of new sites were identified in the area to the south of Yateley, mostly dating from the Second World War, but the highest concentrations of sites were recorded along the Whitewater River in the west of the sub-unit.

At two locations on the banks of the Whitewater River complex multi-phase cropmark landscapes were mapped and recorded. The first is at the confluence of the Whitewater and the Blackwater on the county border. Here there are extensive traces of later prehistoric or Romano-British settlement consisting of enclosures, ring ditches, pits and field boundaries. These features are adjacent to the Silchester to London Roman road (The Devil's Highway)where it crosses both rivers and the cropmark complex extends northwards into Berkshire around Riseley and Swallowfield.

The second location is to the south at Heckfield Place. As well as enclosures, ring ditches, pits and field boundaries which are probably later prehistoric or Romano-British, this complex contains elements - notably field boundaries, trackways and woodland enclosure boundaries - which are likely to be medieval in origin. The apparently good survival of cropmark features at Heckfield Place is probably due to the fact that they are located in parkland where there has been less intensive ploughing than in the surrounding agricultural land. Cropmarks in the surrounding landscape are more fragmentary but the number of field boundaries recorded as well as occasional enclosures and ring ditches hints at a densely populated prehistoric and Roman countryside.

In parkland to the west, at Stratfield Saye, the remains of an extensive medieval landscape were mapped. This comprises a bank and ditched field system containing traces of ridge and furrow cultivation as well as trackways and woodland enclosure boundaries. Further woodland enclosure boundaries were recorded elsewhere in the sub-unit, as was a possible moat at Park Farm on the southern edge of Heckfield Place.

The post medieval resource mapped during the project is characterised mainly by extensive drainage systems. The most substantial occur along the Blackwater but they were also recorded along the Whitewater River. A range of ornamental and garden features were mapped, particularly at Stratfield Saye Park and one notable record is for a possible charcoal burning site near Eversley Cross; only four such sites are currently recorded in the Hampshire AHBR.

The landscape of the sub-unit contains extensive military and defensive features, mainly dating to the Second World War. The two principal installations are a fighter airfield near Yateley (now Blackbushe Airfield) and the GHQ Line A, which formed part of the integrated defences of London established in 1940. Two important new Second World War sites recorded during the mapping project are an anti-tank ditch forming part of the GHQ Line visible on 1940s photographs, and extensive anti-aircraft obstructions at Blackbushe which pre-date the use of the site as an airfield.

Perhaps the most significant twentieth century feature mapped in the sub-unit, however, is a series of First World War training trenches at Blackbushe; very few First World War sites are recorded in the Hampshire AHBR.

8.8.3 Updated archaeological resource

Palaeolithic

No new Palaeolithic sites were identified during the mapping project.

Mesolithic

No new Mesolithic sites were identified during the mapping project.

Neolithic

No new Neolithic sites were identified during the mapping project.

Bronze Age

Four new Bronze Age sites were identified during the mapping project (Figure 285). All four sites are interpreted as possible barrows; all are plough-levelled and visible only as cropmarks.

Three of the barrows are located on river gravels in the area between Yateley and Eversley Cross, the fourth is on London Clay Formation silt, clay and sand at Dipley, to the north of Hartley Wintney.

The three Yateley barrows are all visible as cropmark ring ditches; the barrow at Hartley Wintney (Site ID 16790) is a cropmark mound contained within an enclosure of uncertain date.

Eleven ring ditches were interpreted as prehistoric (undated) and it is possible that some may, in fact, be Bronze Age barrows

Iron Age

Ten new Iron Age sites were identified during the mapping project, all of which were double-indexed as Iron Age or Romano-British (Figure 286). Nine of the sites are located either on or very close to river gravel deposits; the tenth is on London Clay Formation silt, clay and sand to the south of Stratfield Saye on the western edge of the sub-unit. All are completely plough-levelled and are visible only as cropmark ditches. A further 34 sites were interpreted as prehistoric (undated) in origin and it is likely that some of these may, in fact, date to the Iron Age (see this section Prehistoric undated).

The Stratfield Saye site (Site ID 170414) is a rectilinear enclosure with possibly associated field boundaries and it extends beyond the boundary of the sub-unit. Another rectilinear enclosure (Site ID 170521) was recorded in the eastern part of the sub-unit, at Eversley Cross immediately west of Yateley. Numerous cropmark field boundaries of uncertain date were recorded in the vicinity of this enclosure and some may be associated.

The other new Iron Age sites are all situated to the east and west of Riseley Common in the northern part of the sub-unit. Their location is of significance, close to the line of the Silchester to London Roman road known as The Devil's Highway (Margary no. 4a).

West of Riseley Common there are two small rectilinear enclosures (Site IDs 170420 and 170421) and a fragmentary field system. East of Riseley Common, on either side of the Whitewater River near its confluence with the Blackwater, is an extensive cropmark landscape consisting of field boundaries, enclosures, ring ditches and pits (Figure 293). Many of these features were interpreted as being prehistoric (undated) and double-indexed as possibly Romano-British in origin (see this section below,

Prehistoric undated). It is likely that these features represent a multi-phased occupation of the area, but five of the enclosures were provisionally interpreted as Iron Age/Romano-British. On the east bank of the Whitewater are three rectilinear enclosures, one of which (Site ID170485) is built into a field system. This enclosure is polygonal in shape, measures 43m x 26m, contains a number of internal pits, and has an east-facing entrance. On the west bank of the river are two further enclosures and one of these (Site ID 170478) is also built into a field system and contains internal pits. The most prominent cropmark feature in this area is a complex rectilinear enclosure previously recorded in the Hampshire AHBR as of uncertain date (Site ID 35206); during the mapping project this enclosure was provisionally interpreted as being Iron Age or Romano-British.

If these features are Iron Age in origin they represent a significant result of the NMP mapping. In the Blackwater catchment sub-unit there is only one Iron Age site currently recorded in the Hampshire AHBR; this is for two Early Iron Age cremations found at Darby Green gravel pit in Yateley.

Prehistoric (undated)

Thirty four new undated prehistoric sites were identified during the mapping project, of which 24 were double-indexed as being possibly Romano-British in origin (Figure 287). All 34 sites are completely plough-levelled and are visible only as cropmarks.

Twenty six of the sites are located on river terrace gravels. The remaining eight are on non-aggregate geologies; London Clay Formation silt, sand and clay, or Bagshot sand deposits.

The sites include 16 enclosures, 11 ring ditches (some of which may be round houses or, alternatively, Bronze Age barrows) and six field systems. This represents a significant result of the NMP mapping; prior to the project the Hampshire AHBR contained only 16 records for prehistoric (undated) features in the Blackwater catchment sub-unit. All the AHBR records are for flint scatters found during field walking, and all but two are from Yateley Common in the eastern part of the sub-unit (some of these scatters are interpreted as possible burnt mounds).

There are two notable concentrations of new prehistoric (undated) sites along either side of the Whitewater River as it runs from north to south through the eastern part of the sub-unit. A number of features form part of the complex cropmark landscape close to the Devil's Highway Roman road mentioned above (Figure 293). On the east bank of the Whitewater at this location is an extensive rectilinear field system (Site ID 170487) and a possible settlement consisting of a ring ditch and a group of pits (Site ID 170486). On the west bank of the Whitewater are the fragmentary remains of a field system (Site ID 170481), two ring ditches (Site IDs 170473 and 170480), a small enclosure (Site ID 170477) and a possible multivallate enclosure (Site ID 170474). One site of particular interest on the west bank is a possible rectilinear pit enclosure (Site ID 170475). This enclosure is only partially visible and measures c30m x c17m.

To the south the second concentration is focused on the western side of the Whitewater. On the east bank the remains of features are fragmentary, although four ring ditches were recorded here. West of the river the features are within parkland at Heckfield Place and, although plough-levelled, appear to be much better preserved (Figure 294). Here there is a very dense concentration of cropmarks dominated by a multi-period complex of linear features. Some elements of this complex are likely to be woodland enclosure boundaries (see below this section, Medieval) whilst others are probably part of a rectilinear prehistoric field system (Site ID 170458), including a double-ditched trackway previously recorded in the Hampshire AHBR as of unknown date (Site ID 35201). The linear features are accompanied by several enclosures. The largest of these (Site ID 170453) measures 50m x 38m and appears to have a

smaller secondary enclosure appended to its western side. Of interest is a possible rectilinear pit enclosure, partially visible and measuring 50m x 28m (Site ID 170451). Elsewhere in the complex a group of possible ring ditches and small enclosures (Site ID 170455) is set within the prehistoric field system and overlooking the Whitewater River is a further ring ditch and a group of pits (Site ID 170456). These features are all likely to be evidence of prehistoric settlement.

Another substantial complex of features interpreted as prehistoric is located towards the centre of the sub-unit to the southwest of Eversley Centre. This complex comprises a field system with an associated double-ditched trackway (Site ID 170509) and three possible enclosures (Site ID 170506, 7&8).

Roman

One new Roman site (Site ID 170405) was identified during the mapping project (Figure 288). It consists of a 520m stretch of the Roman road from Silchester to London (Margary no 4a) visible as a discontinuous cropmark bank and ditch running through the grounds of Stratfield Saye House near Fair Cross in the westernmost part of the sub-unit. This stretch of the road is located on non-aggregate geology (London Clay Formation silt, sand and clay).

Early medieval

No new early medieval sites were identified during the mapping project.

Medieval

Thirty nine new medieval sites were plotted during the mapping project. Of these, 29 were double-indexed as of alternatively post medieval origin. The sites are concentrated mainly in the western part of the sub-unit, with most located west of the Whitewater River (Figure 289). Thirty of the sites are completely plough-levelled and are visible only as cropmarks.

Twenty one sites are located on river gravels; the remaining 18 are on non-aggregate geologies comprising London Clay deposits, Bagshot sand and Camberley sand.

The sites relate predominantly to agriculture or subsistence and include eight field systems and 19 field boundaries, and five sites were recorded as medieval ridge and furrow which is comparatively rare in Hampshire. The most substantial remains are those in parkland at Stratfield Saye Park in the far west of the sub-unit (Figure 295). Here there are earthwork and cropmark remains of a very extensive field system containing traces of ridge and furrow cultivation and a series of trackways (Site ID 170419). In the southern part of the park there are also remains of woodland enclosures; these were previously recorded in the Hampshire AHBR as linear features of unknown date (Site ID 35202).

Extensive multi-phased cropmark features were recorded two kilometres west of Stratfield Saye at Heckfield Place. Many of these features were interpreted as prehistoric in origin, but some of the field boundaries here may be of medieval date and two woodland enclosures were recorded (Site IDs 170445 and 170450). The complex of cropmarks at Heckfield Place was previously recorded in the Hampshire AHBR as of unknown date (Site ID 35200).

A further woodland enclosure, possibly of medieval origin, was recorded near Holdshott Mill, on the Whitewater River (Site ID 170430). Nearby at Holdshott Farm a moat is shown on the 1st Edition OS 1:2500 map of c1880 and was previously recorded in the Hampshire AHBR (Site ID 20325). New detail was added to the OS depiction of the moat during the mapping project. The majority of Hampshire's moated sites are found in the northeast of the county (section 5.13) and a possible new moat (interpreted as an enclosure of unknown date, because a prehistoric origin

is possible) was recorded at Park Farm on the southern edge of Heckfield Place Park (Site ID 170448).

Post medieval

Seventy five new post medieval sites were identified during the mapping project (Figure 290). Of these 29 were double-indexed as of alternatively modern origin. Fifty eight of the sites have above-ground remains surviving as earthworks; 17 are only visible as cropmarks. The sites are distributed fairly evenly throughout the sub-unit, but with concentrations to the south of Yateley and along the Whitewater River northwest of Hartley Wintney.

Fifty seven records are for sites located on river terrace gravels; the remaining 18 are on non-aggregate geologies; London Clay Formation silt, clay and sand, Bagshot sand, Windlesham sand and Camberley sand.

The majority of the sites relate to agricultural activity or extraction. In particular a series of extensive drainage systems were recorded throughout the Blackwater valley and, to a lesser extent, along the valley of the Whitewater. Other agricultural features recorded include six field systems or field boundaries, two areas of ridge and furrow cultivation and three areas of cultivation marks. Of interest is a group of 30 possible charcoal burning platforms visible as cropmarks at Up Green Farm, near Eversley Cross to the west of Yateley (Site ID 170518). Features associated with mineral extraction include 17 quarries, six extractive pits, a spoil tip and a disused gravel pit.

Nine garden or parkland features were recorded. At Stratfield Saye the ornamental features include an avenue, 470m long and visible as a triple ditched cropmark, approaching Stratfield Saye house from the southeast.

Modern

Sixty two new modern sites were identified during the mapping project (Figure 291). Fifty three have above-ground remains surviving whilst nine are only visible as cropmarks. Forty one are located on river gravels the remaining 21 are on non-aggregate geologies; London Clay Formation silt, clay and sand, Bagshot sand, Windlesham sand and Camberley sand.

Almost all of the new sites are Second World War features. There are three main concentrations of sites. The first is in the east at the site of what is now Blackbushe Airfield on Yateley Common (Figure 296). The earliest phase of earthworks here are a series of trenches visible as cropmarks (Site ID 169992); these are likely to be First World War training trenches. These were superseded by an extensive arrangement of anti-aircraft obstruction trenches, pits and mounds deployed in a zigzag pattern (Site ID 169978). The final phase at this site was the establishment of a fighter station, RAF Hartfordbridge, in 1942. To the west of the airfield, on Hazeley Heath a possible decoy airfield was recorded (Site ID 169949).

The second concentration of sites is along the line of the Whitewater River. The river forms the focal point for GHQ Line A, a fortified Stop Line established in 1940 and consisting of a series of pillboxes and gun emplacements, many of which were previously recorded in the Hampshire AHBR. More pillboxes were recorded during the project as well as the cropmark remains of an anti-tank ditch which runs through the sub-unit from north to south (Site IDs 170533&34).

The third concentration is in the western part of the sub-unit and consists of two substantial camps or bases. The first is at Heckfield Heath (Site ID 170423) and comprises numerous Nissen type buildings arranged around crescentic concrete trackways which still survive in the landscape. The second is in the grounds of Stratfield Saye House and Park. This site covers a very extensive area and contains

many groups of small buildings or huts arranged in regular square patterns. The precise function of this site is uncertain but it has the appearance of a depot or a temporary holding camp.

Undated

Thirty seven new sites of uncertain date were identified during the mapping project (Figure 292). Twenty seven are located on river terrace gravels; the remaining 10 are on non-aggregate geologies; London Clay Formation silt, clay and sand, Bagshot sand, Windlesham sand and Camberley sand.

Field systems (13 records) and field boundaries (12 records) make up the bulk of the new sites, but nine enclosures were also recorded. The distribution of these features is centred on the area around Yateley and along the line of the Whitewater River. In both areas, but particularly around the Whitewater, extensive field systems and a number of enclosures were interpreted as prehistoric, Iron Age or Romano-British in origin, and some, or all, of the undated features may also date from these periods.

8.9 Southwick

8.9.1 Summary of mapping results

During the project, 249 records were created in the project database for sites identified from aerial photographs in the Southwick secondary sub-unit. Of these, only three are for sites previously recorded in the Hampshire AHBR; the remaining 246 records are for new sites (Figure 297). In broad terms, this represents an average of four new sites per kilometre square and equates to a 111% increase in the total number of site records for the sub-unit.

Of the 246 new sites, 44 are located on river terrace gravels, 26 on Whitecliff sand and the remaining 177 on non-aggregate geology. Only a third of the new records are for sites with extant earthwork remains; 156 are plough-levelled cropmark sites.

A breakdown of the updated archaeological resource for the sub-unit is shown below in table 36. This table presents the number of site records in the AHBR for each archaeological period, the number of new sites from each period recorded during this project and in the final column, a revised total of site records from each period. Alongside the revised totals, the percentage increase in numbers of site records (as a result of the project) is shown in parenthesis.

Table 36. The updated archaeological resource of the Southwick sub-unit.

Southwick	**Number of existing AHBR records**	**Number of new sites in project database**	**Revised total (% increase)**
Palaeolithic	1	0	1 (0)
Mesolithic	20	0	20 (0)
Neolithic	7	0	7 (0)
Bronze Age	13	12	25 (92)
Iron Age	3	0	3 (0)
Roman	55	1	56(2)
Prehistoric (undated)	3	6	9 (200)
Early medieval	6	0	6 (0)
Medieval	49	69	118 (140)
Post medieval	31	121	152 (390)
Modern	14	10	24 (71)
Undated	39	27	66 (75)
Total	**241**	**246**	**487(102)**

8.9.2 Characterisation of the new sites

Prior to the mapping project the archaeological resource of the Solent Coastal Plain, the Hamble valley and the Meon valley (from which the Southwick sub-unit is formed) were recognised as being rich in terms of numbers of AHBR records, all having a higher than average density of sites compared with the aggregate resource as a whole (sections 6.2.2, 6.2.7 and 6.2.8). Average density of sites in the sub-unit, however, was only four per kilometre square; below the average of five per square kilometre in the aggregate resource area as a whole. Many new sites were recorded by NMP mapping and the average site density in the sub-unit is now eight sites per kilometre square.

The later prehistoric resource in the Hamble and Meon valleys was poorly understood, there being few records for Bronze Age, Iron Age or prehistoric undated sites. This is reflected in the low number of AHBR records for sites of these periods in the sub-unit (table 36). Although no new sites interpreted as Iron Age were identified during the project, the numbers of Bronze Age and undated prehistoric site

records have been increased, and it is likely that some prehistoric (undated) sites may originate or have been in use in the Iron Age.

It was not anticipated that any new Palaeolithic or Mesolithic sites would be identified and this was indeed the case. Nor were any new sites of the Neolithic or early medieval periods recorded. However significant numbers of new sites were plotted for other periods; in particular medieval and post medieval agricultural features are well represented along with post medieval mineral extraction.

Whilst the overall distribution of sites has not been extended by the project, concentrations of sites were mapped in the southern part of the sub-unit (Figure 297). Large numbers of new sites, many dating from the post medieval period, were identified in the area between Wickham and Fareham, but the highest concentrations are in the vicinity of the confluence of the river Hamble and Curbridge Creek, south of Botley, where new Bronze Age, prehistoric (undated) and post medieval sites were recorded.

The confluence of the Hamble and Curbridge Creek is known to have been a focus for Roman activity; there is a village at Fairthorne (Site ID18090), a number of possible tile kiln sites, several pottery scatters and a possible Roman river crossing identified during field walking in the area. NMP mapping has demonstrated the importance of this area in pre-Roman times by recording a possible prehistoric settlement and field system on the northwest bank of the Hamble along with two Bronze Age barrow cemeteries.

8.9.3 Updated archaeological resource

Palaeolithic

No new Palaeolithic sites were identified during the mapping project.

Mesolithic

No new Mesolithic sites were identified during the mapping project.

Neolithic

No new Neolithic sites were identified during the mapping project.

Bronze Age

Twelve new Bronze Age sites were identified during the mapping project (Figure 298). All twelve sites are interpreted as potential round barrow mounds and all are completely plough-levelled and are visible only as cropmarks. Eleven of the barrows are located in the vicinity of a gravel terrace of the Hamble south of Botley in two closely associated groups or cemeteries. The first comprises a cluster of four mounds ranging from 18m to 28m in diameter (Site IDs 169683-6). The largest is surrounded by a berm and fragments of an outer ring ditch. The second group, 250m to the southeast, consists of four mounds and three ring ditches arranged in a linear formation roughly following the line of the river (Site IDs 169689-93 and 169698-9). The mounds and ring ditches range in size from 8m to 25m. They are situated within a fragmented field system which is associated with three enclosures considered to be of prehistoric origin.

The twelfth site is a cropmark mound interpreted as a possible barrow (Site ID 169709). It is 17m in diameter and is surrounded by a berm and an outer bank 31m across. It lies close to a small tributary stream of the Hamble at Biddenfield, northwest of Wickham, on the edge of a large deposit of Whitecliff sand.

Iron Age

No new Iron Age sites were identified during the mapping project.

Prehistoric (undated)

Six new undated prehistoric sites were identified during the mapping project. Five are located near Botley in the eastern part of the sub-unit on or close to gravel terraces of the Hamble. The sixth is on London Clay deposits at Shirrell Heath, southeast of Waltham Chase (Figure 299).

Four of the sites near Botley form a group consisting of a fragmented field system and three small enclosures (Site IDs 169688 and 169695-7) and may comprise a settlement. They are in close association with the linear barrow cemetery described above (see this section, Bronze Age).

A little distance to the north a small ring ditch, 9.5m across (Site ID 169664), is situated close to the east bank of the Hamble in the grounds of the YMCA Training Centre at Fairthorne Manor. It has been indexed as prehistoric (undated) and may be a round house, although an alternative interpretation as a Bronze Age barrow cannot be ruled out given its proximity to the Hamble barrow cemeteries described above.

The final site is also a possible round house. It lies in the northeast part of the sub-unit at Shirrell Heath and comprises a sub-circular enclosure, 10m across, with a northeast facing entrance (Site ID 169965).

Roman

One new Roman site (Site ID 169625) was identified during the mapping project (Figure 300). It consists of a 700m stretch of the Roman road from Winchester to Wickham (Margary, 1967, no 420) and is visible as a discontinuous cropmark bank and ditched feature.

Early medieval

No new early medieval sites were identified during the mapping project.

Medieval

Sixty nine new medieval sites were plotted during the mapping project. Of these, 63 were double-indexed as of alternatively post medieval origin. The sites are spread more or less evenly throughout the sub-unit (Figure 301), with eight located on river terrace gravels, 12 on Whitecliff sand and 49 on non-aggregate geologies.

The sites relate predominantly to agriculture or subsistence and include nine field systems and 39 field boundaries. Nine sites were recorded as probable medieval ridge and furrow (comparatively rare in Hampshire) although five of these were double-indexed as post medieval ridge and furrow or cultivation marks.

Post medieval

One hundred and twenty one new post medieval sites were identified during the mapping project. This is a large increase when compared to the 31 sites previously recorded in the Hampshire AHBR (Figure 302).

Twenty nine records are for sites located on river terrace gravels, 12 for sites on Whitecliff sand and 80 are on non-aggregate geologies.

The sites are distributed throughout the sub-unit area but the greatest concentrations are in the south between Wickham and Fareham, with fewer in the northeast around Waltham Chase.

The majority of the sites relate to agricultural activity or extraction. There are 10 field boundaries, two field systems, two water meadows and 24 drains or drainage systems. In addition six post medieval extractive pits, 48 quarries and five spoil heaps were plotted during the project.

Eleven groups of pits were identified as being of probable post medieval origin. Of these, eight have been interpreted as tree-removal pits or the bases of charcoal burning platforms associated with woodland marked on the OS 1st Edition Map; the largest group is located immediately northeast of Dimmock's Moor, to the west of Wickham, and comprises roughly 40 large ovoid pits (Site ID 169715). These findings are significant because only four such sites are currently recorded in the Hampshire AHBR.

Modern

Ten new modern sites were identified during the mapping project (Figure 303). One is located on Whitecliff sand and one on river terrace gravels at Botley. The remaining eight sites are on non-aggregate geology.

The majority of the new sites are Second World War features; a circular pit to the southwest of Bishop's Waltham (Site ID 169632) is probably associated with a bombing decoy previously recorded in the AHBR (Site ID 38289). There are two sets of bomb craters and a military camp in the grounds of Southwick House. Also in the vicinity of Southwick are two installations (Site IDs 169611 and 13) interpreted as possible radio or radar stations.

In the far south of the sub-unit in the vicinity of Wallington Fort, a small area of slit trenching was plotted in addition to a rectilinear enclosure which may be modern or of nineteenth century origin (Site IDs 169555-6).

Undated

Twenty seven new sites of uncertain date were identified during the mapping project (Figure 304). Three are located on river terrace gravels, one on Whitecliff sand and the remaining 23 on non aggregate geologies. Few new sites were recorded in the eastern part of the sub-unit, with the greatest concentration being to the south of Botley.

The sites include four mounds, three ditches, four pits or small groups of pits and six field boundaries or groups of field boundaries representing fragmented field systems. Ten enclosures were interpreted as undated, some of which may be prehistoric in origin. These include a 34m diameter ring ditch at Crockerhill, south of Wickham, (Site ID 169517) which may, alternatively, be associated with post medieval extraction.

8.10 Eastleigh

8.10.1 Summary of mapping results

During the project, 218 records were created in the project database for sites identified from aerial photographs in the Eastleigh secondary sub-unit. Of these, only eight are for sites previously recorded in the Hampshire AHBR; the remaining 210 records are for new sites (Figure 305). In broad terms, this represents an average of 3.5 new sites per kilometre square and equates to a 68% increase in the total number of site records for the sub-unit.

Of the 210 new sites, 49 are located on river terrace gravels, 10 on Lambeth sand, 20 on Whitecliff sand and the remaining 131 on non-aggregate geology. Just less than half the records are for sites with extant earthwork remains; 119 are plough-levelled cropmark sites, none of which were previously recorded on the Hampshire cropmark layer.

A breakdown of the updated archaeological resource for the sub-unit is shown below in table 37. This table presents the number of site records in the AHBR for each archaeological period, the number of new sites from each period recorded during this project and in the final column, a revised total of site records from each period. Alongside the revised totals, the percentage increase in numbers of site records (as a result of the project) is shown in parenthesis.

Table 37. The updated archaeological resource of the Eastleigh sub-unit.

Eastleigh	Number of existing AHBR records	Number of new sites in project database	Revised total (%increase)
Palaeolithic	29	0	29 (0)
Mesolithic	17	0	17 (0)
Neolithic	30	0	30 (0)
Bronze Age	22	7	29 (31)
Iron Age/ Roman	74	9	83 (12)
Prehistoric (undated)	17	6	23 (35)
Early medieval	3	0	3 (0)
Medieval	31	70	101 (225)
Post medieval	47	36	83 (77)
Modern	9	73	82 (811)
Undated	27	7	34 (26)
Total	**306**	**208**	**514 (68)**

8.10.2 Characterisation of the new sites

The Eastleigh secondary sub-unit is formed by part of the Itchen valley archaeological resource area. The Itchen valley is recognised as having a rich archaeological resource (section 6.2.6), but prior to the project site density within the sub-unit was consistent only with the average for the aggregate resource as a whole (five sites per kilometre square). Many new sites were recorded by NMP mapping and the site density in the sub-unit is now nine sites per kilometre square.

It was not anticipated that any new Palaeolithic or Mesolithic sites would be identified and this was indeed the case. Nor were any new sites of the Neolithic or early medieval periods recorded. However significant numbers of new sites were plotted for other periods; in particular medieval and post medieval agricultural features are well represented along with post medieval mineral extraction and a large number of twentieth century military features.

Whilst the overall distribution of sites has not been extended by the project, concentrations of sites were mapped in the southern part of the sub-unit (Figure 305). Large numbers of new sites of twentieth century date, predominantly military or defensive features dating from the Second World War, were identified in the area immediately east of Eastleigh and centred around Eastleigh airfield (now Southampton International Airport). The high number of such features reflects the strategic importance of Southampton during the war.

Eastleigh airfield was established as a military airfield in 1917, became a civilian airport during the 1920s and was used by the RAF during the Second World War. It is famous in aviation history as the base from where the Spitfire made its maiden flight and where Spitfires were test-flown.

8.10.3 Updated archaeological resource

Palaeolithic

No new Palaeolithic sites were identified during the mapping project.

Mesolithic

No new Mesolithic sites were identified during the mapping project.

Neolithic

No new Neolithic sites were identified during the mapping project.

Bronze Age

Seven new Bronze Age sites were identified during the mapping project (Figure 306). All are possible round barrows; all but one are completely plough-levelled and visible only as cropmarks. Two are located on Lambeth sand, two on Whitecliff sand and the remainder on non-aggregate geologies. NMP mapping has extended the known distribution of barrows in the sub-unit, especially in the east.

Six of the barrows are visible as mounds and were double-indexed as unknown in date. The seventh, at Crowdhill on the outskirts of Fair Oak, is a ring ditch 25m in diameter.

Iron Age/ Roman

Nine new Iron Age sites were identified during the mapping project. All of these were double-indexed in the project database as Iron Age or Roman in date. Two sites are located on Lambeth sand, four on Whitecliff sand and the remaining three sites on non-aggregate geology (Figure 307). Six sites were interpreted as prehistoric (undated) and some of these may be Iron Age or Romano-British in origin.

All of the sites are enclosures and some are likely to be enclosed settlements. The most important are at Ampfield Wood, Micheldever, in the northern part of the sub-unit. Here two oval enclosures, which appear to butt each other (site ID 170089), and a possible double-ditched rectilinear enclosure (Site ID 170091) were recorded. At the same location small scale evaluative excavation had previously revealed the stone foundations of a Roman building (Site ID 24766). It is probable that these features taken together are evidence of continuity of occupation, with the stone walled building representing a later phase of settlement whose earlier phase took the form of ditched enclosures. Such instances of continuity have been noted elsewhere in Hampshire (for example Houghton Down, where the villa was preceded by a ditched enclosure of Iron Age form [Cunliffe 1993]).

A short distance to the north of the Ampfield site, at Slackstead, a curvilinear enclosure (Site ID 170136), was recorded. Elsewhere in the sub-unit four rectilinear enclosures, one (Site ID 170107) possibly double-ditched, were mapped near Ratlake, northwest of Eastleigh. A more complex settlement site was recorded on the

northwest outskirts of Fair Oak; this consists of a complex of small enclosures, a group of pits and fragmentary remains of a field system (Sites IDs 170221, 170223, 170228 and 170229).

Prehistoric (undated)

Six new undated prehistoric sites were identified during the mapping project (Figure 308). All six are plough-levelled enclosures. One is located near Fair Oak in the eastern part of the sub-unit on Whitecliff sand. The other five are on non-aggregate geologies.

The Fair Oak site (Site ID 170220) is a partially visible elongated rectilinear enclosure. To the south of Fair Oak is a possible oval enclosure (Site ID 170209) and at Broadgate, between Eastleigh and Romsey, a possible triple-ditched enclosure (Site ID 170099) was recorded along with a fragmentary field system which may be associated. To the south, in Broadgate Plantation, another enclosure may be prehistoric in origin (Site ID 170125).

A curvilinear enclosure was mapped to the east of Braishfield (Site ID 170077) and to the northeast a small oval enclosure, 28m long and 20m wide, which may be a Bronze Age barrow, was recorded near Slackstead farm (Site ID 170059).

Early medieval

No new early medieval sites were identified during the mapping project.

Medieval

Seventy new medieval sites were identified during the mapping project. Of these, 68 were double-indexed as of alternatively post medieval origin. The sites are distributed throughout the project area (Figure 309), with two located on river terrace gravels, six on Whitecliff sand, four on Lambeth sand and 58 on non-aggregate geologies.

The sites relate predominantly to agriculture or subsistence and include 16 field systems and 43 field boundaries. One possible settlement was recorded near Crowdhill on the eastern edge of the study area (Site ID 170155); this consists of two double banked trackways, the remains of field boundaries and a possible rectilinear enclosure.

Post medieval

Thirty six new post medieval sites were identified during the mapping project (Figure 310). Of these, 23 were double-indexed as alternatively of modern date.

Eleven records are for sites located on river terrace gravels, three on Whitecliff sand, two on Lambeth sand and 20 on non-aggregate geologies. The sites are distributed throughout the sub-unit area.

The majority of the sites relate to agricultural activity. These include a field boundary, one area of ridge and furrow cultivation, six dewponds, three water meadows and eight drains or drainage systems. Mineral extraction is also represented, with 12 extractive pits or quarries.

Five designed landscape features were identified. These included two extant parterre garden features (Site IDs 170285, 170253) and three plough-levelled tree banks (Site IDs 170137, 170123, 170086).

Modern

Seventy three new modern sites were identified during the mapping project (Figure 311). This is a large increase when compared to the nine sites previously recorded in the Hampshire AHBR for the sub-unit.

Two sites are located on Whitecliff sand to the north and east of Romsey. Thirty five are on river terrace gravels in the southernmost part of the sub-unit. The remaining 38 sites are on non-aggregate geology.

Around Eastleigh, on the northern outskirts of Southampton, extensive military and defensive remains dating to the Second World War were recorded. For the most part these features are related either to the defence of Southampton or to wartime activity at Eastleigh airfield. The features include 13 barrage balloon bases, eight pillboxes, two groups of anti-tank road blocks, six gun emplacements and an air-raid shelter (Site ID 170265), emergency water storage tanks (Site ID 170274) as well as aircraft hangars and dispersals on the airfield.

At Bassett Green, to the west of the airfield, is a heavily defended building (Site ID 170261). It is surrounded on three sides by anti-tank blocks, has pillboxes on either side of its main entrance and the road in front of it is guarded by road-blocks and stopping posts (Figure 313).

A large camp 1km east of Romsey that comprises a variety of buildings and structures including Nissen huts as well as rectilinear parchmarks is likely to have had a military function (Site ID 170127)

As well as military features, one area of large-scale quarrying has been recorded to the north of Romsey which is likely to be of modern date (Site ID 170071).

Undated

Seven new sites of uncertain date were identified during the mapping project (Figure 312). One is located on river terrace gravels, one on Whitecliff sand, one on Lambeth sand and the remaining five on non-aggregate geologies. The sites are distributed throughout the sub-unit.

The sites include two pits, two trackways, one fragmented field system and two enclosures, which may be prehistoric in origin.

One of the trackways (Site ID 170100), near Ampfield northeast of Eastleigh, is of particular interest. This is a linear feature comprising at least three parallel lengths of ditch, running northeast to southwest for more than a kilometre. It is visible as a series of fragmented lengths across four fields and a small plantation. Its origin is unclear, although it is possible that the trackway is prehistoric in origin.

8.11 Upper Test

8.11.1 Summary of mapping results

During the project, 294 records were created in the project database for sites identified from aerial photographs in the Upper Test secondary sub-unit. Of these, 71 are for sites previously recorded in the Hampshire AHBR; the remaining 223 records are for new sites (Figure 314). In broad terms, this represents an average of four new sites per kilometre square and equates to a 74% increase in the total number of site records for the sub-unit. Of the 223 new sites 113 are located on river terrace gravels; the remaining 110 are on chalk.

Only 75 of the records in the project database are for sites with extant earthwork remains; the remaining 219 are plough-levelled cropmark sites, of which 60 were previously recorded on the Hampshire cropmark layer (Figure 315).

A breakdown of the updated archaeological resource for the sub-unit is shown below in table 38. This table presents the number of site records in the AHBR for each archaeological period, the number of new sites from each period recorded during this project and in the final column, a revised total of site records from each period. Alongside the revised totals, the percentage increase in numbers of site records (as a result of the project) is shown in parenthesis.

Table 38. The updated archaeological resource of the Upper Test sub-unit.

Upper Test	Number of existing AHBR records	Number of new sites in project database	Revised total (% increase)
Palaeolithic	6	0	6(0)
Mesolithic	2	0	2(0)
Neolithic	8	0	8(0)
Bronze Age	44	26	70(60)
Iron Age /Roman	47	15	62(32)
Prehistoric (undated)	6	27	33(450)
Early medieval	10	0	10(0)
Medieval	30	36	66(120)
Post medieval	49	63	112(130)
Modern	9	6	13(85)
Undated	90	50	140(55)
Total	**301**	**223**	**524(74)**

8.11.2 Characterisation of the new sites

Prior to the mapping project the archaeological resource of the Upper Test valley was recognised as being relatively rich, with above average site density compared with that of the aggregate resource as a whole (section 6.2.3.3). Within the Upper Test sub-unit site density was 5.5 sites per square kilometre – just above the overall average. Many new sites were recorded by NMP mapping and the average site density in the sub-unit is now 9.5 sites per square kilometre.

It was not anticipated that the mapping project would locate any new Palaeolithic or Mesolithic sites and this was indeed the case, in addition, no new sites of the Neolithic or Early Medieval periods were identified. Significant numbers of new sites were plotted for other periods, however, particularly for the Bronze Age, prehistoric (undated), medieval and post medieval periods. In particular, evidence was recorded for later prehistoric and Romano-British Celtic field systems extending into the valley from the surrounding downland (Figure 323). Medieval and post medieval agricultural

features are also well represented along with post medieval mineral extraction and extensive water meadows.

New sites were mapped throughout the sub-unit apart from on the extensive gravel deposits flanking the western side of the valley between Chilbolton and Whitchurch (Figure 314). This zone is characterised by heavy woodland which forms Harewood Forest. Large numbers of new sites were identified on both sides of the valley between Chilbolton and King's Somborne but the highest concentrations of sites were recorded around Whitchurch in the northern part of the sub-unit.

In the northern part of the sub-unit there are two locations of particular interest. The first is the area to the north and west of Whitchurch. Here enclosure complexes dating to the Iron Age and Romano-British periods were previously recorded in the Hampshire AHBR and were plotted on the Hampshire cropmark layer. NMP mapping added a considerable amount of detail to existing plots of these complexes including three new enclosures as well as field boundaries and pits. The second location is to the southwest, at Hurstbourne Priors, where 10 new ring ditch barrows overlain by water meadows were identified close to the river.

In the southern part of the sub-unit new detail was added to previously-recorded Celtic field systems and some new fields were identified. Although for the most part the new information shows the fields extending into or towards the river valley, given the narrowness of the gravel deposits most of the field systems reach the edge of the gravel areas rather than continuing into them. The best example is on the east bank of the Test at King's Somborne.

Many new medieval and post medieval sites were mapped and recorded. These include a number of lynchetted field systems which are probably medieval, as well as earthwork remains of two medieval settlements. Of interest are seven records for dewponds, one of which is located in John of Gaunt's deer park. The post medieval resource is characterised mainly by extractive pits and quarries, and by very extensive water meadows.

8.11.3 Updated archaeological resource

Palaeolithic

No new Palaeolithic sites were identified during the mapping project.

Mesolithic

No new Mesolithic sites were identified during the mapping project.

Neolithic

No new Neolithic sites were identified during the mapping project.

Bronze Age

Twenty six new Bronze Age sites were identified during the mapping project (Figure 316). All are interpreted as round barrows and all are completely plough-levelled, surviving only as cropmarks. Fifteen are located on river terrace gravel and the remaining 11 on non-aggregate geology.

Twenty three of the barrows survive as ring ditches and 11 were double-indexed as being possible round houses of prehistoric (undated) origin. The other three barrows are visible as cropmark mounds; two on river gravel near Chilbolton, and one on chalk at Longstock in the southwest part of the sub-unit.

The sites are distributed throughout the sub-unit, but the largest group is located on a gravel terrace of the Test (described by the BGS as 'undifferentiated') to the southeast of Hurstbourne Priors. Here nine ring ditch barrows had been previously recorded in the AHBR. During the mapping project a further 10 ring ditches were

identified (Site IDs 169171, 169176-7, 169184-9 and 169203). This area was clearly a focus of prehistoric activity with nineteen ring ditches, ranging from 15m to 48m in diameter. Many of the barrows in this group are little more than 100m from the river and are overlain by an extensive system of post medieval water meadows (Figure 324). This is significant because few other riverine barrows have been recorded from Hampshire (see section 8.3.3).

To the southwest of Hurstbourne Priors a new barrow (Site ID 169159) is in close proximity to two other ring ditches previously recorded as undated in the AHBR (Site IDs 33364 and 33365). Together these features may form a small linear barrow cemetery.

Iron Age/Roman

Fifteen new Iron Age sites were identified during the mapping project, all of which were double-indexed in the project database as Iron Age or Romano-British in date (Figure 317). Eight of the sites are located on river gravels and the remaining seven on non-aggregate geology. The new records are for 10 enclosures of various types, four field systems and one group of pits. All are completely plough-levelled and are visible only as cropmarks.

There are two main concentrations of sites. The first is around Whitchurch (Figure 325). Here new information has been added to a complex settlement site at Bloswood Lane, where excavation produced material ranging from Iron Age to Saxon in date (Site IDs 37905, 39630 and 39648). To the west is a complex enclosure (Site ID 37952) with several apparently superimposed phases. NMP mapping has better defined the overall plan of these sites which consist of a series of rectilinear enclosures, pits, field boundaries and trackways.

The second concentration lies to the west of Chilbolton. Here, in addition to a rectangular enclosure (Site ID 169909) cropmarks of lynchetted field boundaries were recorded (Figure 326). These are forming part of Celtic field systems which survive as earthworks on Hazel Down (Site ID 24912) and in Longstock Park (Site ID 24914).

In addition to the 15 sites interpreted as Iron Age, 11 ring ditches recorded as Bronze Age barrows could alternatively be interpreted as possible round houses, some of which might date to the Iron Age. A further 27 sites were interpreted as prehistoric (undated) and it is likely that many of these were in use during the Iron Age.

Prehistoric

Twenty seven new prehistoric (undated) sites were identified during the mapping project (Figure 318), of which 22 were double-indexed in the project database as prehistoric or Romano-British in date. Eleven are located on river terrace gravel; the remaining 16 are on non-aggregate geology. The sites include two possible settlements, 10 enclosures, 10 field systems, three groups of pits and a trackway. Site distribution is concentrated on the northern and southern parts of the sub-unit, with few features recorded from the middle section.

The two possible settlements are close to King's Somborne and are remarkably similar to each other in form, consisting of partially visible small rectilinear enclosures with associated pits. The westernmost (Site ID 169885) contains a possible round house and is associated with a field system (Site ID 28589). To the east the second settlement is associated with a possible larger enclosure (Site ID 169936).

Prehistoric enclosures were recorded throughout the sub-unit. The majority of these are likely to date to the Iron Age or Romano-British period, although some may have earlier antecedents. Some probably housed settlements but the majority are relatively small and their function cannot be determined.

Some of the field systems recorded during the project are an important indicator of prehistoric activity in the Upper Test valley. This is particularly the case in the area between King's Somborne and Chilbolton, where there are instances of Celtic field systems on the surrounding chalklands extending into the river valley. Good examples occur around Stockbridge. On the west side of the valley a rectilinear field system (Site ID 169853) with a possible round house (Site ID 169854) and lynchets (Site ID 169856) are probably an extension of the field system at North Houghton (Site ID 29344). On the eastern side of the valley extensive remains (Site ID 169863) probably forming part of a Celtic field system (Site ID 55111) were recorded.

A further 10 lynchetted field systems were interpreted as being prehistoric or possible medieval in origin and are classed as Unknown in date (see below).

Roman

No new Roman sites were identified during the mapping project. However 15 sites were interpreted as Iron Age or Romano-British and 22 sites as prehistoric (unknown) or Romano-British in date (see above). Some features interpreted as unknown in date may also be Roman.

Early medieval

No new early medieval sites were identified during the mapping project. However 10 lynchetted field systems interpreted as unknown in date may be of early medieval origin, and some sites interpreted as prehistoric (unknown) may, in fact, date from this period.

Medieval

Thirty six new medieval sites were identified during the mapping project (Figure 319), all of which were double-indexed in the project database as medieval or post medieval in date. Half the sites are located on river terrace gravel and half on non-aggregate geology.

The sites are distributed throughout the sub-unit; most relate to agriculture or subsistence and include 24 field systems, field boundaries and lynchets and seven dewponds. A further 10 lynchetted field systems were interpreted as unknown in date and some of these may be medieval in origin (see below, Undated).

There are two possible settlements. The first (Site ID 169164) is close to the site of the Grange recorded in documents at Hurstbourne Priors (Site ID 17704) and consists of a series of small rectilinear enclosures or fields, possibly associated with the Grange. The second is a more extensive series of earthworks at Manor Farm, Chilbolton (Site ID 169840). Plough-levelled earthworks (Site IDs 169156 and 169157) on the north eastern edge of Harewood Forest between Whitchurch and Chilbolton were interpreted as being associated with woodland husbandry although their precise nature is uncertain.

At King's Somborne a series of earthworks comprising linear boundaries and small rectilinear enclosures were plotted at John of Gaunt's Palace (Site ID 25184) and these features are likely to be part of the fourteenth century manor house at the site.

Post medieval

Sixty three new post medieval sites were identified during the mapping project, of which 15 were double-indexed in the project database as post medieval or modern in date (Figure 320). The new sites are distributed fairly evenly throughout the sub-unit. Forty eight are located on river gravel deposits and the remaining 15 on non-aggregate geology.

A high proportion of the sites are associated with mineral extraction; there are 10 extractive pits, 16 quarries and nine sites indexed as pits (these are probably chalk pits).

Agricultural features are represented by 16 water meadows and eight drainage systems. In addition there is a single record for a field boundary, and 23 field systems classed as medieval were double-indexed as alternatively post medieval in date.

Modern

Six new modern sites were identified during the mapping project (Figure 321). Most of the sites lie in the area to the northeast of Chilbolton. Three are on river terrace gravels and three on non-aggregate geology.

Three of the sites date from the Second World War; including a large military camp at Drayton Down, to the southeast of Longparish (Site ID 169768) and a linear complex of small buildings and areas of recent demolition lying along the route of a well-used trackway on Houghton Down, northwest of King's Somborne (Site ID 169971). This site may possibly be associated with a temporary Starfish bombing decoy site recorded nearby (Site ID 24192).

Undated

Fifty new sites of uncertain date were identified during the mapping project. Ten are located on river valley gravels and the remaining 40 on non aggregate geology (Figure 322).

The sites include 15 fragmentary field systems and lynchets, some of which might be prehistoric or, alternatively, medieval in origin. There are also records for five enclosures. These include a possible enclosure to the east of Hurstbourne Priors containing a ring ditch which may be of prehistoric origin (Site ID 169205). At Tufton, to the south of Whitchurch, are two enclosures forming part of a complex of rectilinear enclosures and linear features and which are likely to be prehistoric or Romano-British in date (Site IDs 169432 and 169433).

There are 13 records for pits of various size and form. Some are in the vicinity of prehistoric enclosures or situated within prehistoric field systems; these pits might tentatively be interpreted as prehistoric in date because of their association with these neighbouring features.

9 Research Agenda

(Andrew Young and David Hopkins)

9.1 Introduction

This research agenda draws on the results of the archaeological resource assessment. It considers the resource for each period in the wider context of the county, in the specific context of the aggregate area, and in the context of the results of NMP mapping.

9.2 Period based agenda

9.2.1 Palaeolithic

Resource potential

In general terms the Palaeolithic archaeological resource of the aggregate landscape is very rich; roughly a third of all AHBR records for Palaeolithic archaeology are for locations within the aggregate resource area. At some of these locations substantial assemblages of material have been recovered.

Palaeolithic find spots in Hampshire are largely from the gravel terraces of the Solent River. Most artefacts have been recovered from quarries which were hand excavated prior to mechanised extraction. The catchments of the Blackwater and the Hampshire Kennet and much of the New Forest aggregate areas are poorly represented in the distribution.

The evidence is mostly limited to survival of stone artefacts, not generally in primary contexts. Some sites do produce artefacts in mint condition that may be in or close to their primary contexts, although their deposition in high energy contexts does not necessarily imply intact sites close by, merely minimal movement since the destruction of the primary context.

There have been a few sites of late Palaeolithic date which appear to have surviving primary contexts, such as Nea Farm, Somerley. Overall, however, there is a lack of in situ evidence.

Understanding of the chronology, intervals and numbers of population during the Palaeolithic is limited. It is important to clarify and improve the chronological and climatic framework within which the archaeological evidence is considered. The study of the sequences and chronology of the gravel terraces and relating these through marine oxygen isotope study to warmer and colder episodes may clarify variation in archaeological potential within gravel deposits.

We know little of lifestyle, culture and survival strategies; palaeo-environmental study, to establish the nature of the contemporary climate and environment, how these change through time, and their implications for occupation, culture and survival strategy is therefore important.

There is only a single tentative record for artefacts associated with Clactonian industries.

NMP mapping did not record any Palaeolithic archaeology. This was anticipated as evidence of Palaeolithic activity does not include substantial features likely to be visible on aerial photographs.

Aims and priorities

Refine predictive modelling for the location and state of preservation of Palaeolithic material within Pleistocene deposits.

A study of gravel terraces in relation to climate and implied human occupation, to establish our understanding of the archaeological potential of gravel deposits.

Develop understanding of the contemporary topography and environment and how this changes through time. Develop understanding of its potential impact on human occupation and survival strategies.

There is a need for a focus on the Blackwater and Kennet catchment areas and on the aggregate areas within the New Forest and an assessment of to what extent the apparent lack of Palaeolithic material here is evidence of absence as opposed to absence of evidence.

The apparent lack of Clactonian sites requires evaluation and assessment.

9.2.2 Mesolithic

Resource potential

Mesolithic evidence in Hampshire is prolific and extensive, mainly characterised by the recovery of chronologically distinctive lithics (although some is derived from carbon 14 dating of charcoal from hearths). How the artefacts reflect differential activity in different areas, and whether this evolved through time is a research aim to be addressed.

There have been some major excavations of Mesolithic sites; many of the sites investigated to date are on sandy/acidic soils that are not conducive to the survival of palaeoenvironmental data.

Evidence of structural remains is rare. Whilst this is partly a result of the nature of the Mesolithic lifestyle, the ephemeral nature of the evidence and its susceptibility to post-deposition destruction (particularly by agricultural activity) makes gathering evidence of associated structures a priority.

Where intact sites have been found it has been at locations where there has been no past ploughing, such as those areas which have most recently been heathland or plantation; or where Mesolithic evidence has been found deeper in the sequence than the topsoil. Whilst such intact sites are very important they are difficult to predict, and not easily revealed by evaluation.

Whilst it is clear from the distribution of the evidence that all the geologies were exploited during the Mesolithic period, the richest sites are located on the Greensands, such as Oakhanger, Kingsley Common and Petersfield Heath. There is good potential for encountering further sites during sand and gravel extraction on the Greensands.

Within the Greensand areas there is an apparent lack of late Mesolithic sites, whereas lithic scatters of this date have been found on chalk downland nearby. This suggests that greater use was being made of the upland landscape at this time, raising issues regarding mobility and the use of different topographical locations.

There is some evidence for regional social interaction with late Mesolithic groups from elsewhere in the form of artefacts and objects of non-local materials.

The archaeological resource assessment noted an undue emphasis on the Mesolithic archaeology of the Wealden Edge resulting from previous intensive studies of this area. There are several areas which may be under-represented in the

archaeological resource assessment because of a lack of local research but where surface finds hint at the potential to produce much information.

NMP mapping did not record any Mesolithic archaeology. This was anticipated as evidence of Mesolithic activity does not usually include substantial features likely to be visible on aerial photographs.

Aims and priorities

Understanding the contemporary environmental settings and survival strategies employed through direct archaeological evidence and through the palaeoenvironmental record.

Investigating intact archaeological sites, where structural evidence survives, is important to understand the lives, lifestyles, survival strategies of Mesolithic peoples.

Investigation into the use of lowland and upland environments around the Wealden Edge during the late Mesolithic, with the aim of developing landscape exploitation models.

The New Forest, New Forest Coastal Plain and the Avon valley are three areas poorly represented in the archaeological resource assessment where there may be potential to produce much information.

The Avon valley has the potential for palaeoenvironmental material to survive in waterlogged deposits and for providing the opportunity to study intact Mesolithic sites in or close to the floodplain.

An assessment of to what extent the distribution of lithic scatters is influenced by the history of research and collection, and consideration of issues regarding evidence of absence as opposed to absence of evidence.

9.2.3 Neolithic

Resource potential

Hampshire is noted for a narrower range of Neolithic monuments than neighbouring counties. Evidence of structures in Hampshire is largely limited to long barrows. This relative lack of monuments is reflected within the aggregate resource area.

NMP mapping identified four new monuments of possible Neolithic origin; a possible long barrow at Hordle, two oval barrows and a pit circle. All of these sites are outside their previously understood distribution range which was largely confined to the chalk areas of the county.

Late Neolithic monuments, such as henges and causewayed enclosures, are missing, or at least not yet recognised. A possible henge site has been suggested in the northeast of the county, but has yet to be confirmed. It is possible that further NMP mapping may identify such sites, although the fact that the current project has not identified a greater range of Neolithic sites appears to confirm the lack of later Neolithic monuments in Hampshire.

The study of the origins and development of agriculture is an important, even defining aspect, of the Neolithic period. The nature of earliest agriculture, its impact on the landscape, and its association with settlement and monuments is an important area for research.

There are difficulties with site prospecting; the majority of Neolithic sites are either unexpected discoveries (the hearth beneath Buckland Rings), or uncovered during archaeological evaluation ahead of development (Fairborne Copse). A few Neolithic

settlements are recorded from the chalklands, but within the aggregate resource area settlement evidence is scarce.

In the relative absence of settlement and occupation evidence flint scatters are an important indicator of Neolithic activity.

Flint scatters in Hampshire imply extensive occupation of the chalk areas, less so in the river valleys and coastal plains. The lower valleys of the Test and Itchen, and the upper stretches of the Avon appear to be the most productive of the river valleys.

There are suggestions that artefact scatters in the river valleys and coastal plains are indicative of short-term activity whereas those on the chalk downs represent long-term occupation.

This distribution may be influenced to some extent by research and collection history.

There is a lack of evidence for activity in the Beaker period.

Aims and priorities

Understanding the Mesolithic/Neolithic transition, the origins of agriculture, the continuation of mobile lifestyles, and the evolution of the landscape.

The development of predictive modelling as to the likely areas of early settled exploitation.

Modelling the evolution of the settled agricultural landscape, and the role or absence of land division in this period.

Examine the nature of the environment and the changes to it, particularly the likely impact of human activity including agricultural activity, through palaeoenvironmental study and through the study of alluvial and colluvial sequences.

Research into the nature of visible communal endeavours in, for instance, the creation of monuments in the landscape and what this might tell us about the evolution of the landscape as well as community, society and social hierarchy.

Further research into river valleys and coastal plains where there may be conditions of enhanced survival of archaeological deposits.

Investigation of whether the river valleys and coastal plains were utilised in a different way from the chalk areas in terms of mobility and sedentism.

Identification and analysis of assemblages within the New Forest and the obtaining of environmental sequences.

Identification and analysis of assemblages from the coastal plain and Itchen and Test valleys.

Synthesis of small-scale evidence such as pits and post holes to test whether cumulative patterns might be apparent.

Further NMP survey to investigate whether there are other monuments outside the previously understood Hampshire distribution, and whether there are monument types not currently represented in Hampshire.

9.2.4 Bronze Age

Resource potential

Few Bronze Age settlements are recorded from Hampshire, in contrast to adjacent areas (for instance the Kennet Valley in West Berkshire). There are a small number of enclosures thought to be of this date, but most excavated settlements consist of

small unenclosed groups of round houses; settlements of this type are difficult to locate so it is likely that many more remain to be discovered.

NMP mapping recorded a small number of ring ditches interpreted as possible round houses (on account of their small size), particularly in the Avon and Upper Test valleys. A larger number of enclosures were mapped and interpreted as prehistoric (unknown) and some of these may be Bronze Age in origin. It is also possible that enclosures interpreted as Iron Age or Roman may represent continuity from the Bronze Age.

The results of the NMP require supplementing with further survey to determine whether some of these features represent Bronze Age occupation activity.

The evolution of the agricultural landscape during the Bronze Age in Hampshire needs to be identified and described. This evolution involves the emergence of coherent field systems, and the role of linear boundaries in the organisation of the landscape.

Very few field systems within the aggregate resource area are interpreted as Bronze Age. Elsewhere in Hampshire (for instance at Twyford Down or Windy Dido) Bronze Age origins have been demonstrated for Celtic field systems. It is possible that some of the field systems mapped as part of this project and interpreted as Iron Age, Roman or prehistoric (undated) may also be Bronze Age in origin. The distribution of linear ditches or 'ranch boundaries' is centred in the west and on chalk and NMP mapping did not alter this pattern.

The bulk of the evidence for Bronze Age activity in the aggregate resource area is provided by barrows. Many new examples were recorded and in places the project has extended the known distribution of barrows.

The distribution of Bronze Age barrows provides a general understanding of the distribution of Bronze Age activity, and demonstrates that a 'value' can be ascribed to most if not all elements of the Hampshire landscape during the Bronze Age. However it is not clear where the communities responsible for the monuments were based and what form any occupation might have taken.

The extensive distribution of barrows may reflect areas of both settled occupation and areas of mobile and/or seasonal exploitation. Further research should recognise the possibility that some areas, particularly the sands and plateau gravels in the north and east, were exploited by mobile populations, or that these areas were utilised by seasonally mobile populations operating from settlement bases elsewhere. In these areas the burial mounds are signalling rights of access and exploitation rather than settled occupation. Exploitation of the New Forest by peripheral populations, such as from the Avon Valley, is a good model.

Burnt mounds or boiling mounds are frequently ascribed to the Bronze Age and are commonly noted in Hampshire, particularly in the New Forest. This distribution seems to be significant in terms of land use, but could be partly the result of uneven levels of survey and recognition of this type of monument. Understanding the distribution and function of these sites is important. There may be an association between the distribution of this monument type and areas of non-settlement exploitation, and there may be an association between their function and the nature of that exploitation. This relation may be direct, closely connected to exploitation, or indirect, perhaps socially or ritually connected to exploitation. Although NMP mapping only recorded one new burnt mound it does raise the possibility that further NMP or related survey (notably LIDAR) may extend our understanding of the zones in which these monuments occur.

There is the potential for archaeological evidence for salt production and associated structures. These are as yet unlocated, the earliest salt production so far recognised on the Hampshire coast being Iron Age in date. The burial mounds located between the New Forest and the coast may well represent a start to an understanding of the exploitation of both coastal and heathland zones by communities based in the coastal plain.

Human remains and the practices associated with their disposal are diverse in the Bronze Age. The disposal of human remains can offer insights into society, culture, religion and spiritual aspects of Bronze Age life. They also have the potential to illustrate ritual, spiritual and practical aspects of the landscape. The burial mounds identified by the NMP project increase the number of potential sites at which these issues can be investigated should disturbance become unavoidable through, for instance, gravel extraction.

Aims and priorities

Understand the extent, rate and nature of the evolution of agriculture (the spread of clearance, arable, and domestication of animals) and the way in which this is reflected in the development of the landscape. In particular the role of linear boundaries and Celtic field systems.

Understand the diversity of farming strategies (arable, grazing, herding, and hunting) both through time and within geographic areas, particularly how the gravel landscapes of the valley bottoms and the high plateau gravel may have been differentially exploited from the chalk uplands.

To describe the nature and range of settlement/occupation; whether permanent or intermittent/mobile, how settlement relates to the Bronze Age landscape, and the activities that are implied within different landscape types. In particular, further work to establish whether enclosures interpreted as prehistoric (undated) may be of Bronze Age origin, further work to establish whether groups of small ring ditches are round houses forming unenclosed settlements, and further work to establish whether field systems interpreted as prehistoric (undated) may be of Bronze Age origin.

Understand the relationship between the ritual landscape and the inhabited landscape.

To study the funerary practices of the period through the monuments, human remains, and associated activities for what these can tell us of the culture and lives of Bronze Age peoples. In particular by using the known locations of burial mounds and cemeteries (including those identified from aerial photographs).

To understand and where possible describe the nature, extent, and purpose of territories or land divisions.

Understand the relationship between oval barrows and round barrows.

To what extent is the currently known distribution of burnt mounds evidence of absence or absence of evidence, and what does the distribution reveal about differential forms of landscape exploitation?

9.2.5 Iron Age

Resource potential

The Iron Age resource in Hampshire generally is very rich and has been intensively researched. There has been both study of the central settlement evidence, the *oppida* and hillforts, as well as the wider context of these settlements, such as field systems and rural settlements.

Iron Age research has, however, been focused almost exclusively on the chalklands. In comparison the resource in the aggregate areas is less well understood.

Many of the patterns within the Iron Age landscape may evolve from the Bronze Age landscape. The landscape is clearly emerging as a farmed landscape, with field systems and farmsteads. Complex ditched enclosures are developed, the nature and purpose of which are clearly wide ranging but not well understood. NMP mapping identified several of these in the Upper Avon Valley and Upper Test valley; both areas which are close to highly developed chalk landscapes.

The role of some of those enclosures for the control of stock, and the implications of this for utilisation of some areas in a more mobile fashion than others needs to be considered. The nature of Iron Age agriculture needs to be better understood. Variations in the distribution of complex enclosures, consideration of the comparable distribution of simple discrete enclosures, study of associated features and artefacts, and study of faunal and palaeoenvironmental evidence is therefore an important research agenda.

During this project many simple discrete enclosures were mapped and interpreted as prehistoric (undated). Some of these enclosures are probably Iron Age in date but appear to lack the complexity and elements such as internal features and trackways which allow more precise interpretation based on analogy with firmly dated settlements. The differential distribution between complex enclosures in (for instance) the Upper Avon Valley, and the simple, undated enclosures of the lower Avon and New Forest coastal plain areas, means that establishing the chronology of the simple enclosures is an important agenda.

The apparent absence of Bronze Age and scarcity of Iron Age enclosures may be false perception: settlements of these periods may be represented by the simple discrete enclosures. On the other hand, the ‘complexity’ of the northern Avon valley as opposed to the ‘simplicity’ of the southern valley, may reflect different settlement and economics and not different chronologies.

The nature of coastal exploitation, including salt production, which clearly happened on the Hampshire coast, but whose methods, control, trading and extent are not well understood, has been touched on by existing studies. Further research might discern early salt production on coastal sites whilst such items as briquetage may describe the extent and nature of resulting trade.

Aims and priorities

Further research to establish the nature of the Iron Age settlement pattern, the diversity of settlement types, and the relationship between settlement types through time.

Further research to characterise and more precisely date the enclosures identified from aerial photographs.

Elucidate the variety and inter-relationship between different settlement types and to understand their distribution across the range of landscape zones.

In areas where gaps in the settlement pattern may be interpreted as evidence of absence (perhaps the East Hampshire heathlands), survey and evaluation objectives need to be devised to identify in what ways the landscape was exploited.

9.2.6 Prehistoric (undated)

Resource potential

The NMP mapping project has significantly increased numbers of recorded sites interpreted as broadly prehistoric date and has altered the make-up of the resource. Prior to the project AHBR records for prehistoric (undated) archaeology consisted almost entirely of find spots of undiagnostic flint artefacts and items. As a result of the project more than 200 monuments were recorded, most of them plough-levelled and visible only as cropmarks. Whilst this represents valuable information on the below-ground prehistoric archaeology of the aggregate resource area it also raises a number of questions.

Many of these sites are simple discrete enclosures and are interpreted as probable enclosed settlements. They may be Iron Age, Roman or perhaps Bronze Age in origin but have no apparent distinctive morphological characteristics which might enable more precise determination of date.

The lack of diagnostic features associated with these enclosures may, in some cases, be the result of soil conditions, land use history, and the vagaries of cropmark formation.

On the other hand these enclosures may represent different settlement types to the complex enclosed settlements confidently interpreted as Iron Age or Roman.

Such variation in settlement type raises issues regarding function, economic status and forms of landscape exploitation.

A number of cropmark ring ditches are interpreted as prehistoric (unknown). Whereas many ring ditches can be comfortably interpreted as plough-levelled round barrows, the dimensions of these particular examples are consistent with those of round houses, which could be Bronze Age or Iron Age in origin.

Aims and priorities

An assessment of soil conditions and land use history in a target area where simple enclosures are recorded, such as the southern part of the Avon valley, to form an appraisal of how these factors may affect the cropmark resource.

Further investigation into whether some apparently simple discrete enclosures may have more complex elements not recorded during this project. This investigation might take the form of continued aerial reconnaissance during periods of favourable conditions (dry summers), and geophysical survey of selected sites.

Further investigation in order to establish firmer dates for prehistoric (undated) sites. Initially this could be a synthesis of existing evidence for Bronze Age, Iron Age and Roman activity (from, for example, field walking surveys and PPG16 investigations), linked spatially to the specific locations of prehistoric enclosures and ring ditches.

Research to enhance understanding of possible differences in function or activity associated with complex enclosures and simple, discrete enclosures.

Further archaeological prospecting to extend the distribution of prehistoric sites throughout other parts of the aggregate resource area.

9.2.7 Roman

Resource potential

The Roman archaeological resource in the aggregate landscape is relatively rich. However the distribution of Roman sites is uneven. There are a number of nationally

important monuments or groups of sites; namely the town of Silchester, the Saxon shore fort at Portchester, and the pottery industries of the New Forest and Alice Holt.

Villas in Hampshire are confined largely to the chalk downland; although there are some in the aggregate landscape there are no examples in the south western areas. The distribution of rural settlement is patchy, with several blank areas, and there are very few field systems.

NMP mapping has not significantly altered perceptions of the Roman resource in that few sites specifically interpreted as Roman were recorded. However, a number of complex enclosure settlements were identified which were interpreted as Iron Age/Roman.

In addition a considerable number of simple discrete enclosures (interpreted as undated prehistoric) were identified, some of which may be settlements of Roman origin or which were occupied during the Roman period. If this is the case then the project will have extended the known distribution of rural settlement (into, for instance, the southern Avon valley, the New Forest Coastal Plain and the Blackwater valley).

To date there has been little research locally into the character, date and nature of rural settlement. Research, for instance, into how far rural settlement is based on estates, farmstead, or villas; and the extent to which these are economic agricultural units or a reflection of extra urban social status. The role of NMP mapping in identifying new chronologically distinct settlements and associated landscapes is important, as is the role of subsequent survey on undated sites which may be part of the Roman landscape. Additionally, with both definitively Roman and with undated sites, subsequent survey to identify the differential nature of the settlement and associated activity (agricultural, industrial or cultural) is a significant agenda.

Further investigation into Roman roads is needed. Roads are influenced by the distribution of settlement, deviating to link industry or settlement. Equally the road system can also influence the establishment of settlement such as crossings and crossroad sites. The study of the roads provides important insight and context to the attendant settlement patterns.

The Roman road network focuses onto the hubs that are Silchester and Winchester. However our understanding of these major networks is incomplete and needs to be furthered. In some areas the projected lines have yet to be traced on the ground (NMP mapping identified several of these); in others repeated intervention has failed to confirm the line of a road. In addition our understanding of the minor road network is largely absent, including the degree of continuity from the previous landscape and continuity into the existing landscape.

The degree to which the structured and organised Roman agricultural and industrial landscape can be recognised within our landscape today, including elements such as continuity of woodland, estates, farming units, tracks and transport, is an important research agenda. Further analysis of NMP data might allow the structure and organisation of the Roman landscape to emerge from the complexity of lost landscapes revealed by undated features identified by NMP mapping. Further mapping may identify dateable elements, such as tracks and roads as well as settlements in other parts of the aggregate landscape.

One specific aspect of the Roman resource previously noted (Fulford, 1996) as warranting further research is the lack of work on the landscape setting and associated settlement of the Roman pottery industry. One possible settlement was excavated at Grooms Farm on the southern edge of the Alice Holt area. This site consisted of a rectilinear enclosure (visible on aerial photographs) whose main phase of occupation was Iron Age, but which continued into the Roman period.

Salt working is known to have taken place in both the late prehistoric and in the medieval period, and it is not unreasonable to presume that salt production took place on the Hampshire coast in the Roman period possibly on a commercial/industrial scale. Further work may contribute to understanding the location and extent of that industry.

Aims and priorities

Further investigation in order to examine whether some prehistoric (undated) sites are, in fact, Roman.

Research into the diversity of settlement, the relationship between settlements, and their development and purpose through time. In particular to look at rural, dispersed, small scale and seasonal settlement.

Consideration of the degree to which the present landscape is derived from, or reflects, the Roman landscape; for instance the relationship of parish boundaries to the Roman estates, or of Royal Forest to Roman hunting ground.

The relationship of the Roman road network to the distribution of settlement and industry, in terms of both cause and effect. To understand the full extent, nature and range of the road network.

The relationship between the rural economy and the industrial economy, and how far some industries were seasonal and related to the agricultural cycle in an integrated landscape.

Further archaeological prospecting in areas which are blank in the rural settlement distribution.

Further investigation into the settlement pattern in the northern Avon valley.

9.2.8 Early medieval

Resource potential

The early medieval resource in the aggregate landscape reflects that within Hampshire generally; the distribution of sites is relatively sparse, there are a small number of high status sites, and there are concentrations of sites in some of the river valleys.

The distribution of known settlements, in particular, is patchy. This is due in part to the difficulty in locating and identifying Saxon timber buildings and associated features.

Four new sites were tentatively identified as being of this date during the project; three of these consisted of groups of oval pits interpreted as possible *grubenhausen*.

These features could equally be prehistoric pits. Conversely some of the features assumed to be prehistoric could be Saxon in origin.

There are significant gaps in the distribution of early medieval sites; in particular the east Hampshire heathlands and the Hampshire Basin are blank areas.

Beyond these general observations it is important to consider the degree to which the Saxon landscape is reflected within the present landscape, and the extent to which this in turn reflects a landscape inherited from earlier periods. Landscape studies can provide context to sites, and the use of place names and land unit boundaries, such as estates, parishes, hundreds, vills and fields needs to be explored. Several patterns of continuity or discontinuity can be discerned. There are those settlements that enjoy direct continuity, both prior to and after the Saxon period, and those that have no pre-Saxon origin.

There is a need to understand the nature and distribution of settlement, and its role in the landscape, economy and industry. Whilst settlement proved difficult to identify through the NMP project, as many Saxon settlements lie within and under later settlement, there clearly is a role for NMP mapping in identifying potential abandoned Saxon settlements (as the *grubenhausen* demonstrate). NMP mapping, in identifying lost landscape components (which although largely undated nonetheless reinstate some of the lost complexity of the landscape), helps provide the rural context for Saxon settlement. In the same way it may also shed light onto landscape evolution in this period by providing additional detail from pre-cartographic landscapes which may not be fully incorporated into the existing Historic Landscape Character Assessment.

The role of post Roman religions, before the re-establishment of Christianity, and the relationship of religion between different ethnic groups is an important agenda issue. The study and excavation of Pagan cemeteries is important in providing answers to questions regarding cultural similarities and differences, as well as the origin, health, diet and lives of the population. Although NMP mapping identified no cemeteries, it is a feature of the landscape which might be identified by further NMP projects.

Such cemetery studies can tell us much about the origins of populations, their lives and lifestyles, cultural and ethnic affinities, age, diet, health, sex, family relationships, disease, trauma, hardships, and differential exposure to hazards, and of social status. The role of grave goods in understanding ethnicity, status, sex, occupation and religion is important, as is the role of inhumation to cremation burial in this region in this period. Human remains may also reveal issues of punishment and execution.

Aims and priorities

Investigation to address the issue of the absence of evidence against evidence of absence in areas such as the East Hampshire heathlands and parts of the New Forest. This could be a multi-disciplinary approach, pulling together information from historical geography, historical study and landscape studies in addition to archaeological data.

In areas where there does appear to be a genuine lack of settlement, there is a need to devise survey and evaluation objectives that reflect the sort of exploitation which may have occurred in those landscapes.

Further work and dates are needed from sites interpreted as ‘prehistoric’, to explore the possibility that some of these may have phases of Saxon occupation.

The development of survey and investigation strategies to test the emphasis on valley exploitation apparent in the distribution of early medieval sites. The assessment of the archaeological resource suggests that the valleys of the Avon, Itchen and Meon have high potential to reveal further information.

The relationship of ethnicity to territorial units within the landscape, including *regiones* and *provincie*. The role of charter evidence in recognising Saxon landscape and settlement pattern, in its contemporary landscape and in the modern landscape.

To study the funerary practices of the period through the monuments, human remains, and associated activities. Within this to consider the development of Christianity.

To understand the population, their health, diet, lifestyle, death, religion and ethnicity, through the study of human remains. The burial practices, disposal or treatment of human remains and the context of the survival of human remains may shed light on ritual, religious, social, cultural and legislative processes.

To understand the diversity of settlement, the relationship between settlements, and their development and purpose through time. In particular to look at rural, dispersed,

small-scale and seasonal settlement and the degree of continuity or disruption between the Roman and Saxon periods as well as between the Saxon period and the present.

Consider the degree to which the present landscape is derived from, or reflects, the Saxon landscape, for instance the extent of parishes, hundreds, diocese, estates and territories, forest, woodland, field systems and settlement. Place-name evidence may have an important role to play in this regard.

To understand the full extent, nature and range of the road network. The relationship of the road network to the distribution of settlement and industry, both cause and effect, including the role of surviving elements of the Roman road system. To consider the decline and survival of Roman roads and other route ways through time.

9.2.9 Medieval

Research potential

The medieval resource of the aggregate landscape is relatively rich; a quarter of all AHBR records for medieval archaeology in the county are located in the aggregate resource area. This is particularly true for the northern Avon valley and the Lower Test valley, where there is, consequently, good research potential.

The distribution and layout of settlement give insights into social structure, social organisation, and medieval ideas on order, planning and the division between public and private space. A high proportion of medieval settlements are still inhabited; some however were abandoned in the early medieval period, or subsequently through the creation of parkland; others may have undergone sufficient shrinkage or shift to result in uninhabited settlement zones. NMP mapping during this project identified a small number of deserted or shrunken settlements and the investigation of deserted settlements ahead of mineral extraction meets a wide range of research agendas.

The origin, development and control of the Hampshire medieval rural landscape are topics requiring further research. There is a wide range of rural settlement form, from city to market town and rural settlement, whose origins and development need to be studied. The location, nature, distribution of, and relationship between settlements is critical to the study of this period.

Describing variations in village plan, with nucleated and dispersed rural settlement, and understanding the relationship of these to the landscape and the control of that landscape will shed light on the structure of society and organisation of the rural economy and agricultural industry. A number of individual village settlements have been excavated and have provided detailed insight into individual villages. The wider range of settlement plan has been looked at through the Medieval Villages Project, which has determined the location, plan and extent of the principal historic nucleated villages in the county. However due to the nature of this project, it did not look closely at the dispersed settlement pattern. The nature and cause of dispersed settlement in the Avon valley might be illuminated by otherwise ‘undated’ insights into landscape evolution and isolated evidence of buildings.

The distribution of farms and hamlets within the landscape is an important agenda. This includes the potentially important study of the direct relationships between these settlements and their landscape context via lanes, tracks, roads, droves and rights of way. The RCHME medieval settlements project for Hampshire looked at the wider distribution of medieval rural settlement. The context of these, the historic landscape, has also been characterised. The development of the landscape around settlement may to some extent reflect the territorial arrangements, manors and hundreds, which in turn may have more deeply rooted origins. Continuity within the landscape and the time-depth of features within the present landscape could be studied further. Further

analysis of the undated but 'lost' aspects of the landscape identified by NMP mapping may assist in disentangling the evolving landscape in relation to known and implied settlement.

The use and character of the landscape will have been fundamentally affected by the catastrophic episodes of plague with attendant drop in population. These episodes will be reflected in the use of the rural landscape, the investment in infrastructure, the choice of crops and stock, and in the shift, desertion and shrinkage of settlements. This process may have contributed to the change from labour, service and product payment to rents. The nature of this change, its implication for agriculture and for the evolution of the landscape needs to be explored.

There would have been competing contemporary calls on water, notably to power water mills, but also the use of water in settlement and associated industry (e.g. leather and cloth industries). Drains and leats identified by NMP may represent water management issues associated with the medieval period.

Monasteries, abbeys and nunneries could be large and wealthy establishments with distinctive lifestyle and moral purpose were often dependant on patronage. The location and extent of their estates will have had a profound effect on the character of the landscape and the nature of the agricultural production, both directly and indirectly. They may have produced particular features, such as fish pond complexes, or stimulated particular trade patterns, or accelerated or slowed down processes of change within their estates. Their location and distribution may reflect the nature of their patronage, their lifestyle, or other factors. Study of their populations is likely to show differential lifestyle to other populations, and will have had different exposure to hazards and diets. They are often associated with significant infrastructure investment and can provide insight into spiritual, cultural, political, technological and agricultural aspects of medieval life. They are also often associated with higher levels of historic documentation survival. The NMP project has identified aspects of St Michaels' Priory, a nationally important ecclesiastical site in the Avon Valley.

Aims and priorities

The location, nature, and distribution of rural settlements, and their relationship to their landscape.

The origin, development and control of the Hampshire medieval rural landscape, the historic landscape character, and the degree to which these reflect earlier landscape influences.

The impact on the landscape and settlement of catastrophic plague episodes is likely to be an area of significant study.

Study of ecclesiastical establishments, their distinctive lifestyle ethics, and patronage, the location and extent of estates, the nature of the agricultural production, including fish pond complexes, their effect on trade patterns and landscape evolution

9.2.10 Post medieval

Research potential

There is a rich post medieval resource, especially on the Solent coast, and in the valleys of the Test, Itchen and Meon.

The outstanding aspect of the post medieval resource is the nationally important military heritage of the Solent coast and, to a lesser extent, the northeast of the county. This is a result of the naval presence at Portsmouth and the importance of Aldershot in the defence of London.

Some of the important industries in Hampshire are represented in the post medieval resource of the aggregate landscape, in particular brick making and pottery manufacture.

Mixed farming predominated in the medieval period. The chalk downs became increasingly important for their sheep. In the sixteenth century there was a major impact arising from the break up of monastic lands. In the seventeenth and eighteenth centuries there was a growth in large farming estates with new land owners drawn from the merchant or professional classes. The late medieval legacy of land uses, of open field agriculture with an emphasis on grazing for sheep slowly dissolved through early post medieval enclosure by agreement, and then increasingly by parliamentary act, until, by mid nineteenth century, the land was largely enclosed. This created a new landscape of hedged and rectilinear fields, formal landscapes from common land, and farm land from 'waste' land. As sheep declined in favour of arable the transformation of the open upland areas of grazing to enclosure and conversion to arable took place.

The results of the NMP project reveal the archaeology both of the evolution of the agricultural landscape as well as lost elements, and support current understanding and interpretation of Hampshire's Historic Landscape Character Assessment.

Water meadows are one regionally important and distinctive historic landscape from this period. A recent study has identified from aerial photographs and map regression the water meadows of Hampshire (Oxford Archaeology 2000). The NMP project has identified new areas of water meadow, principally simple systems missed by the previous desk based assessments, and complexity in the evolution of water meadows not picked up by the previous desk based assessments. NMP mapping has demonstrated that the extent of water meadows and the range of form and the complexity of their development have yet to be fully explored.

NMP mapping also added new evidence for exploitation of commons and heathland on the western fringe of the New Forest.

Streams are a source of power. Initially there was spread of local mills which through time some developed into large establishments. Eventually many mills were abandoned, and collapsed or were converted to domestic use. There is a need for further work towards understanding the complexity of water management, with ponds, leats, races and other associated features.

On the New Forest coast the salt industry was important in the sixteenth and seventeenth centuries. There is a rich heritage of the salterns themselves, creating a distinctive landscape of evaporation pans and channels, with the sites of pump houses and salt-related industrial buildings, such as the houses that held the boiling pans. This is a landscape whose interpretation and intricacies may be revealed by further survey work.

Many quarries which were previously unrecorded in the AHBR were also mapped during the project. In most cases these are the result of small scale extraction supplying local building needs, including road surfacing.

Aims and priorities

NMP mapping highlighted the uneven nature of the post medieval record in the AHBR. Guidance should be agreed on the recording of monuments and landscapes of this period and means found of ensuring that resources are available to apply the guidance.

Further analysis of NMP mapping to enhance understanding of the evolution and full extent of water meadows.

Further NMP mapping, and related survey such as LIDAR, to enhance the archaeological record for post medieval exploitation of the New Forest heathland landscape.

9.2.11 Modern

Resource potential

The bulk of the modern resource is made up of features associated with the Second World War.

Archaeological interest in this period is of recent origin and much of the work has been carried out by volunteers and has been interest-driven.

For the most part professional involvement has been stimulated by threats to surviving structures.

The Defence of Britain Project did generate some records in the aggregate landscape but was generally weakly represented by field workers in Hampshire.

NMP mapping has recorded substantial numbers of new Second World War features and, in doing so, has highlighted the uneven nature of the record for twentieth century military archaeology in the AHBR.

There are a series of military camps around Hampshire. The nature of the associated archaeology and their inherent importance is far from clear. The open heath of the sands of northeast Hampshire was much used for training, and there is probably a greater range of archaeology of military training surviving in this landscape than has hitherto been identified, including camps, ranges and redoubts. Because of its open and agriculturally poor nature and its proximity to London this area developed as the nation's principal training ground (until it moved to Salisbury Plain), and various training establishments developed here, including Aldershot, Woolmer and Minley. The archaeology of the training in the area of Aldershot may prove to be of national importance when better understood. Studies such as NMP are important in improving our understanding of this under-researched resource.

The First World War, although an overseas conflict, is reflected by a legacy of camps and training grounds, although most were temporary and the archaeology can be difficult to interpret. Relatively few First World War practice trenches have been found in Hampshire to date, but it seems likely that, as the county is noted as an embarkation point with major training camps, more will be found or recognised. There are also some airfields, such as at Farnborough on the heaths in the north and Beaulieu in the New Forest. Generally the archaeology of this conflict is very poorly understood in Hampshire.

Aims and priorities

Guidance should be agreed on the recording of monuments and landscapes of this period and means found of ensuring that resources are available to apply the guidance.

Due consideration should be given to civilian and support activity such as logistics (such as depots and transport facilities), command and control resources, and civilian aspects (such as shelters, temporary housing, and allotments).

Further NMP mapping to increase the known extent of twentieth century military features.

For this period, buildings, landscapes, archives, and the availability of oral testimony all survive. The development of future research should take a holistic approach and include all of these.

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11 Project archive

The HES project numbers are **2007 6013** and **2008 7017**

The project's documentary and drawn archive is housed at the offices of the Historic Environment Service, Cornwall County Council, Kennall Building, Old County Hall, Station Road, Truro, TR1 3AY. The contents of this archive are as listed below:

1. A project file containing project correspondence and administration, including details of photographs loaned from NMRC and CUCAP.

2. Electronic drawings stored in the directory R\CAU\Drawings\CAD ARCHIVE\NMPArchive\Hampshire. Copies are deposited with HCC and at the NMR.
3. The project Access database stored in L\CAU\HES_PROJECTS\NEW-SMR\Hampshire NMP. Copies are deposited with HCC and at the NMR.
4. This report text is held in digital form as: C:\HAMPSHIRE\HAMPSHIRE REPORT\REPORT\FINAL REPORT\HAMPSHIRE REPORT.DOC. Copies are deposited at ADS, HCC and NMRC.

Appendix 1 AutoCAD layers

Layer name	Colour	Linetype

BANK 1 (red) CONTINUOUS

Outline of broad banks and thin banks defined by a single line.

BANKFILL 1 (red) CONTINUOUS

All bank outlines (created on "bankout" layer) will be filled with stipple, "dots", at a scale of 2.25 and an angle of 53 degrees. Thin banks will also go on this layer as a single line

DITCH 3 (green) CONTINUOUS

All features seen as ditches, including small area features e.g. ponds and pits

DITCHFILL

Solid fill

EXTENT_OF_AREA 8 (grey) DASHEDX2

Used to depict the extent of large area features e.g. airfields, military camps, mining/extraction

GRID 7 (white) CONTINUOUS

Grid at 1km intervals equivalent to one OS 1:10,000 scale quarter sheet.

HACHURE 30 (orange) CONTINUOUS

Hachures used to depict extant earthworks at 1:2500 scale

LARGE_CUT_FEATURE 5 (blue) ISO02W100

Used for large cut features such as large quarries and ponds.

MONUMENT_ POLYGON

Polygon defining the extent of a group of AutoCAD objects corresponding to a single monument in the Project Database.

RIGARRLEVEL 6 (magenta) ISO03W100

Arrow depicting direction of rigs in a single block ridge and furrow, seen as earthworks or cropmarks, but known to have been ploughed level.

RIGARREWK 4 (cyan) CONTINUOUS

Arrow depicting direction of rigs in a single block of ridge and furrow seen as earthworks on the latest available aerial photographs.

RIGDOTSLEVEL 6 (magenta) DOTX2

Outline of a block of ridge and furrow, seen as earthworks or cropmarks, but known to have been ploughed level.

RIGDOTSEWK 4 (cyan) DOTX2

Outline of a block of ridge and furrow still surviving as earthworks on the latest available aerial photographs.

SHEET 7 (white) CONTINUOUS

Used in conjunction with printing macros.

STONEWORK 8 (grey) CONTINUOUS

Used to depict exposed stonework e.g. walls, cairns, standing stones and could be used for building platforms that are concrete.

STRUCTURE 9 (grey) CONTINUOUS

Used to depict features which do not easily fit into other categories because of their form, e.g. tents, radio masts, painted camouflaged airfields

TRAMWAY 200 (purple) TRACKS

Used to depict tramways mainly associated with industrial areas

VIEWPORT 7 (white) CONTINUOUS

Used in conjunction with the printing macros

Appendix 2 Proposed fields for NMP data migration to the NMR AMIE database

PROJECT DATABASE FIELD(s)	AIME DATABASE FIELD(s)
OS Map	**Quarter Sheet**
AHBR no	**Assign other monument Identifiers** *Identity Method*: AHBR Number *Value*: AHBR monument HOB UID
Summary **Text**	**Summary** **Long Text**
District/Parish	Automatically generated by GIS
Period	**Period** NB tables will need to be correlated.
Site Type	**Class scheme** *Monument Type* **Term**
Form	**Class scheme** *Evidence* **Term** NB tables will need to be correlated.
NGR	Needs discussion to ascertain how to fill minimum fields
OS Number Populated with NMR number where one exists.	This field could be used to automate concordance, or pull out records which require concordance
Photos Date Source Serial Number	**General Archive References** Title: GAM number (may need some data concordance) Source number
	References of Archives to Monuments? Object Title and Object Number from NMR
	Associated Events: Generated from the NMR
Created By **Created**	**Roles attached to Monument** Name Date Organisation: automatically tag all records with Cornwall HES.
PRN	**Other Monument Identifiers**

Appendix 3 AutoCAD Attached Data Tables

RECORD:

Field	PRN	enter PRN from Project database
	AMIE Hob UID	enter AMIE Hob UID

INDEX:

Field	PERIOD	enter date e.g. BRONZE AGE
	TYPE	enter monument type e.g. ENCLOSURE
	EVIDENCE	enter form e.g. CROPMARK
	PHOTO REF	enter photo reference which feature was plotted from
	PHOTO DATE	enter date of photo reference (DD-MM-YY)
	COMMENT	any other information which may aid later analysis will be recorded in this field

SURVEY:

Field	AUTHOR	enter author e.g. Carolyn Royall
	DATE	enter date e.g. 6th September 2007
	SCALE	enter given scale of OS mapping used for plot e.g. 1:10,000
	LEVEL	enter level of survey e.g. 2
	COPYRIGHT	enter copyright holder e.g. EH/Hampshire CC

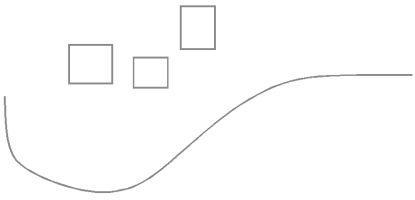
Appendix 4 AutoCAD drawing conventions

Standardised AutoCAD mapping conventions

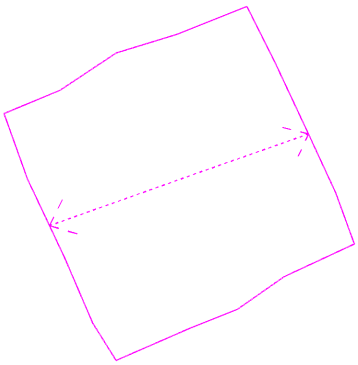
All cut features e.g. Ditches, hollow ways pits etc. (Using Ditch layer in AutoCAD)

Earthwork or Cropmark Banks (using Bank and Bankout layers in AutoCAD)

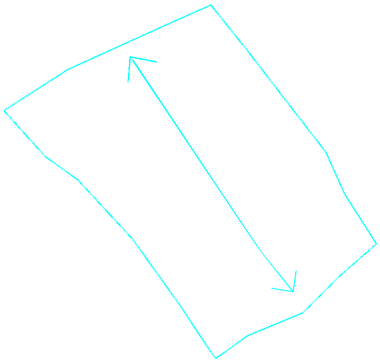
Buildings, walls etc. (Using stonework layer in AutoCAD)



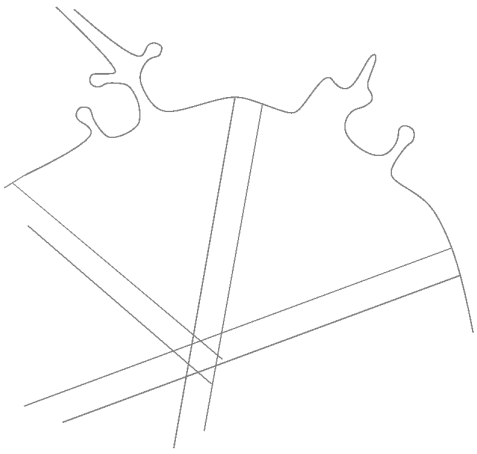
Ridge and furrow see as cropmarks, or seen as earthworks and known to be ploughed level (Using the Rigdotslevel and Rigarrlevel layers in AutoCAD)



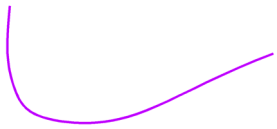
Ridge and furrow seen as earthworks on the latest available aerial photographs (Using the Rigdotsewk and Rigarrewk layers in AutoCAD)



Large area features, such as airfields, depicting the extent of the feature (using the Extent of area layer in AutoCAD), and the main features (using the Structure or Stonework layers in AutoCAD).



Railways and tramways (using the Tramway layer in AutoCAD)



Large cut features, such as quarries, ponds (using the Large cut feature layer in AutoCAD)