

# Assessment of archaeological resource in aggregate areas on the Isle of Wight

Final Report

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## Executive Summary

*This document details a project undertaken by MOLA and Isle of Wight Council, with funding from the Aggregates Levy Sustainability Fund administered by English Heritage with the aim of improving knowledge of the archaeological resource in aggregate producing areas of the Isle of Wight to facilitate strategic planning decisions and the management of historic environment assets within them.*

*The aggregates resource on the Island was identified from British Geological Survey mapping; extraction shown on historic maps and the BritPits Database; and current minerals permissions and divided into study areas based on the Isle of Wight Historic Environment Action Plan.*

*A project database of historic environment assets within the aggregates resource was extracted from the Isle of Wight Historic Environment Record and included additional assets from a Backlogs Project of archaeological investigations prompted by past aggregate extraction, National Mapping Programme survey of two areas of the Island and a very few additional entries from the National Monuments Record database. The HER data within the project database was then checked to ensure dating was consistent and enhanced with additional information on the nature of the assets. These changes to the project database resulted in a 27.5% increase in assets of known date, a 22% increase in total assets and the impact upon particular periods was even greater.*

*The enhanced and updated project database was used to generate asset density figures for an archaeological resource assessment and some clear patterns in the asset densities of different periods were revealed. The Bronze Age and Roman periods had particularly high asset densities and the migration, early medieval and modern periods had low asset densities. Spatially, the highest density study areas are associated with the southern and eastern coast and the central ridge and chalk geologies appear particularly associated with high density areas. However, there is no consistent association between high asset densities and particular geology types and the presence of a particular geology is not therefore sufficient to identify an area with a high density of archaeological assets. This is because asset density typically reflects current understanding of the archaeological resource, with lower density areas being less well understood than high density areas.*

*The asset densities and accompanying archaeological resource assessment provided the basis for a research strategy and agenda. This identified a number of general research priorities comprising; research into unmapped River Terrace Deposits; extension of the NMP survey across the Island, re-assessment of assets recovered by antiquarians (where possible); and targeted investigation of assets of uncertain date or nature. Further specific research priorities were identified to improve understanding of particular periods. This research framework would be appropriate to any investigation into the archaeology or heritage of the aggregates resource.*

*The process of historic environment assessment, evaluation (either invasive or non-invasive) and mitigation of any impacts was outlined in the report in terms of the development of future prospection, evaluation and mitigation strategies for assets under threat from proposed future aggregates extraction. In general it was noted that the preliminary desk-based study in the form of a historic environment assessment is likely to be the most effective means of identifying and assessing risk in high density study areas, while site-based invasive or non-invasive field investigation would almost certainly be required in lower density areas. Geoarchaeological, palaeoenvironmental and deeper trenches might be required to evaluate and mitigate impacts on remains within River Terrace Deposits and alluvium. Elsewhere fieldwalking, metal detecting, geophysical survey and trial trenching would be suitable evaluation techniques to determine the archaeological potential and significance of areas where impacts would occur. These impacts could be mitigated by watching brief for areas of low impact or low archaeological potential and significance; open area excavation for large areas of diffuse remains or targeted excavation of localised highly significant remains.*



# 1 Introduction

## 1.1 Background

- 1.1.1 This project is a survey of the archaeology of the Isle of Wight focussing on areas which produce aggregate. It is funded by the Aggregates Levy Sustainability Fund (ALSF) administered by English Heritage (EH) Historic Environment Enabling Programme (HEEP). Similar projects have been carried out in other counties across England, including Gloucestershire, Worcestershire, Warwickshire, Norfolk, Suffolk, East Sussex, Bath and North East Somerset and West Berkshire.
- 1.1.2 The primary aims of the project were to improve knowledge of the archaeological resource of the aggregate producing areas of the Isle of Wight and to facilitate more informed advice concerning the impacts and mitigation of present and future aggregates extraction on the Island. It is intended that this will provide input to;
- developing Minerals Development Documents;
  - reviews of future Minerals Development Documents;
  - reviews of existing minerals permissions;
  - assessments of new sites for future minerals permissions;
  - Archaeological Research Frameworks;
  - mitigation strategies for archaeological remains in minerals extraction sites.
- 1.1.3 The data may also be used for research.
- 1.1.4 The principal outputs of this project have been this report, the enhancement of the Isle of Wight Historic Environment Record (HER) and the database and associated report assessing past archaeological investigations resulting from aggregates extraction on the Island (Appendix 2).
- 1.1.5 Similar ALSF Resource Assessment projects have been completed in Gloucestershire, Worcestershire, Warwickshire, Norfolk and Suffolk.
- 1.1.6 Further copies of this report can be obtained from the Isle of Wight Council and English Heritage.
- 1.1.7 It is also available in the form of a CD-ROM and as downloadable -.pdf files on-line from the Archaeological data service.
- 1.1.8 This project is in accordance with ALSF Theme 1.1 Quarries:  
“Identification and characterisation of the historic environment in key existing or potential areas of terrestrial extraction”
- 1.1.9 It has been designed to meet published criteria for ALSF projects ([english-heritage.org.uk/server/show/nav.1315](http://english-heritage.org.uk/server/show/nav.1315)), in particular those highlighted in **bold**:
- **‘developing the capacity to manage aggregate landscapes in the future;**
  - ‘delivering to the public and professional audiences the full benefits of knowledge gained through past work in aggregates extraction;
  - ‘reducing the physical impacts of current extraction where these lie beyond current planning controls and normal obligations placed on minerals operators;
  - ‘addressing the effects of old minerals planning permissions;
  - **‘promoting understanding of the conservation issues arising from the impacts of aggregates extraction on the historic environment.’**
- 1.1.10 The project would be in accordance with English Heritage research themes;  
A ‘Discovering, studying and defining historic assets and their significance’; and  
D ‘Studying and assessing the risks to historic assets and devising responses’ (English Heritage 2005, 4).

- 1.1.11 The project would also be in accordance with the English Heritage Corporate Strategy which is integral to the Strategic framework for Historic environment Activities and Programmes in English Heritage (SHAPE 2008). In accordance with the SHAPE framework, the primary driver of the project can be identified as Corporate Objective 1A:  
‘Ensure that our research addresses the most important and urgent needs of the historic environment’.
- 1.1.12 This objective would be achieved through Research programme G2 ‘Defining the questions: Devising research strategies, frameworks and agenda’ within sub programme number 11172.110 ‘Supporting research Frameworks: national, regional, local, diachronic and thematic frameworks’.
- 1.1.13 The project can also be identified within Corporate Objective 4B:  
‘Develop and disseminate policies, principles, guidelines, standards and exemplars to promote better management of change in the historic environment’
- 1.1.14 This objective would be achieved through Empowerment programme D4 ‘Guidance for Local Government’. This would place the project within sub programme number 42244.110 ‘Promoting Characterisation in Strategic Planning’.

## 1.2 Report Scope

- 1.2.1 This report includes:
- A description of the origins, background, financing and personnel of the project (Section 1);
  - A description of the aims and objectives of the project and how they have been fulfilled (2);
  - A discussion of the methodology used to achieve those objectives, including its origins, problems encountered during the project and measure taken to resolve them (Section 3);
  - A description of the aggregates resource within the Island, including its geological origins, geology types and history of past and proposed future extraction (Section 4);
  - A discussion of the limitations placed upon the project by the nature of the data being used (Section 5);
  - A discussion of the effect of HER enhancement, including the impacts of NMP survey, the Backlogs Project, validation and cleaning and cross-referencing the HER with the NMR (Section 6);
  - The Resource Assessment, including discussion of the general trends visible in the asset densities (Section 7); the period summaries (Section 8) discussing the asset densities of individual periods in the context of the current understanding of those periods across the Island; the spatial distribution of assets across the Island by study area (Section 9), The Research Strategy and Agenda, including general research priorities and research priorities specific to individual periods and study areas (Section 10 below).
  - A discussion of approaches to mitigation including the likely impact of aggregate extraction on archaeological remains, the relevant Planning Policy, the types of invasive and non-invasive investigations undertaken to determine the likely potential and significance of any archaeological remains on site, and appropriate mitigation strategies for different types of geology and archaeological remains (Section 11).
  - A conclusion summarising the project origins, methods and results (Section 12) and Acknowledgements (Section 13).

- Bibliography (Section 14) and Appendices detailing additional information associated with the methodology (Section 15 and 17), the Backlogs report (Section 18, Appendix 4) and NMP report (Section 19, Appendix 5).

### 1.3 Management and Personnel

1.3.1 This report was managed by a partnership comprising Isle of Wight Council and Museum of London Archaeology and undertaken at Mortimer Wheeler House, 46 Eagle Wharf Road, London N1 7ED and Isle of Wight County Archaeology and Historic Environment Service, 61 Clatterford Road, Newport, Isle of Wight, PO30 1NZ

1.3.2 The English Heritage (EH) Project Officer was Barney Sloane. The EH Inspector with responsibility for the Isle of Wight is Dr Richard Massey and the EH ALSF advisor is Peter Busby.

1.3.3 The management team consisted of:

- Dr Ruth Waller, Isle of Wight County Archaeologist and David Bowsher, Senior Post-Excavation Manager Museum of London Archaeology (Project Executives).
- Jon Chandler, Assessments Manager, Museum of London Archaeology (Project Manager).

1.3.4 Project members in addition to the management team included Expert Team Leaders and Experts:

#### *Expert Team Leaders*

1.3.5 **Isle of Wight Historic Environment Record (HER) Officer (RL)** – Rebecca Loader, the Isle of Wight HER Officer had particular responsibility for issues around the HER.

1.3.6 **Isle of Wight Council Policy Planners (PP)** – the Isle of Wight Policy Planner Chris Mills provided information regarding the current state of Minerals Planning Policy and was consulted throughout the project.

1.3.7 **Project Officer (HP)** – Hannah Pethen, Museum of London Archaeology Senior Archaeologist (Assessments) undertook much of the project, wrote the Project Report and co-ordinated the work of other Assessments Team members.

1.3.8 **Geomatics Manager (SJ)** – Sarah Jones, Geomatics Manager at Museum of London Archaeology created a bespoke ArcGIS project, supervised GIS specialists and provided advice and feedback on GIS aspects of the project.

1.3.9 **Andrew Young NMP specialist Cornwall County Council (AY)** – Andrew Young co-ordinated and managed the NMP mapping component of the project.

1.3.10 **Graphics Manager (TW)** – Tracey Wellman, Museum of London Archaeology Graphics Manager was responsible for the supervision of the graphics team providing figures and illustrations for the report.

#### *Experts*

1.3.11 **Geoarchaeologist (GA)** - A member of the MOLA Geoarchaeology Team provided advice and assistance to the other experts on geological and geoarchaeological issues as necessary.

1.3.12 **Archaeological Research and Consultancy at the University of Sheffield (ARCUS) (A)** – ARCUS (now Wessex Archaeology Sheffield) provided a variant of the ARCUS database for the *Identification and Quantification of Past Archaeological Investigations resulting from Aggregates Extraction* which formed part of this project (see Appendix 2).

1.3.13 **Cornwall County Council NMP team (NP)** - The Cornwall County Council NMP team, including Carolyn Royall (CR) and Emma Trevarthen (ET), undertook NMP

under the direction of Andrew Young.

- 1.3.14 **Designers/Illustrators (D)** - Members of the MOLA Graphics Team created and edited the figures for the project.
- 1.3.15 **GIS Specialists (GS)** - The MOLA Geomatics team undertook GIS elements of the project including loading datasets and preparing GIS data for graphics and figures.
- 1.3.16 **Period experts (PE)** -Period experts (including Dr Ruth Waller; Rebecca Loader; Dr Francis Wenban-Smith; Malcolm Lyne and Dr Rob Scaife) commented on the period summaries of the Resource Assessment.
- 1.3.17 **Assessments Team** – Members of the MOLA Assessments Team undertook aspects of the project under the direction of the Project Officer (HP).

## 1.4 Project Area

- 1.4.1 The project area is located within the Isle of Wight, also referred to as the Island. The *Project Area* comprises those areas of the Island that contain aggregate geologies which are, have been or could potentially be extracted (i.e. are not within urban areas). For the purposes of this assessment the aggregate geologies include both solid and superficial geologies (see Section 4.1) typically sand and gravel deposits and hard rock outcrops. Urban areas and land below the low tide level are excluded from the project area. The aggregate geologies are complex and cover c 236km<sup>2</sup>, although their extent is not completely understood, particularly in the north. The Project Area comprised 181km<sup>2</sup>, or 47% of the Island. The Project Area was subdivided into 15 study *areas* based on the Isle of Wight Historic Environment Action Plan (HEAP) Areas (see Section 3.4 and 4.3).

## 1.5 Minerals Planning Context

- 1.5.1 The purpose of the project was to provide a strategic overview of the archaeological resources within the aggregate areas on the Isle of Wight. This was intended to inform strategic planning decisions and the management and preservation of archaeological sites and historic landscapes through the minerals planning process.
- 1.5.2 The Government Office for the South East South (GOSE) is currently conducting a review of Policy M3, the amount of primary aggregates that the region and its planning authorities should provide. The East of England's Regional Assembly (SEERA) has suggested changes to the policy in the *Partial Review of the Regional Spatial Strategy for the South East. Review of Policy M3: Primary land won aggregates and sub-regional apportionment*, which recommended that the region should provide 9.01 million tonnes per annum (mtpa) of primary land-won aggregate, and that the Isle of Wight should provide 0.09mtpa (or 1%) of this total. The planning authorities would be required to maintain a landbank of at least seven years of planning permissions sufficient to provide this quantity of aggregate each year (SEERA March 2009, 6). The report of the independent panel of the Examination in Public accepted SEERA's recommendation that the original regional apportionment (of 12.18 mtpa) was too high and recommended that the regional apportionment should be no more than 11.12 mtpa (GOSE November 2009, 16). At present it is not certain whether the apportionment will remain at 11.12mtpa, if it will be reduced further to the 9.01mtpa recommended by SEERA or what the apportionment for the Isle of Wight would be if the final apportionment is 11.12mtpa. However, if the percentage of the regional apportionment required of the Isle of Wight remains the same (i.e. 1% of the total) and the regional apportionment is set at 11.12mtpa, the Isle of Wight would be expected to provide 0.11mtpa of primary land-won aggregate.
- 1.5.3 The existing Isle of Wight Unitary Development Plan (UDP) was adopted 18 May 2001. Following the Planning and Compulsory Purchase Act 2004, the UDP will be replaced by the emerging Local Development Framework (LDF). While the LDF documents are developed certain policies of the UDP have been 'saved' and will

continue to inform planning determinations. The following 'saved' policies of the UDP currently govern the extraction of minerals resources on the Island:

**Policy M1** Land banks for sand and gravel will be maintained at levels which will ensure provision until the end of the Plan period, through extension to existing workings and phased extraction in appropriate locations.

**Policy M3** Other than allocations sites, the Council will only approve additional minerals workings where an overriding need can be shown, and provided the development will not have an unacceptable adverse effect on any of the following:

- a. Areas of Outstanding Natural Beauty;
- b. designated sites of Nature Conservation, geological and geomorphological interest;
- c. the best and most fertile agricultural land, except where this can be restored to its original standard;
- d. historic landscapes, parks and gardens;
- e. sensitive aquifer protection zones;
- f. ground water supplies and drainage;
- g. adjacent residents and properties, through noise and dust;
- h. countryside and coastal recreation.

- 1.5.4 The Core Strategy of the LDF is currently being developed as part of the emerging LDF. The Core Strategy has been withdrawn from Examination and will undergo further modification before the proposed submission consultation in October 2010 ([www.iwight.com](http://www.iwight.com)).
- 1.5.5 The sites/Areas of Search of proposed future minerals extraction for inclusion in the LDF are currently being reviewed by the environmental consultants Entec UK, who will report on their recommendations in March 2010 ([www.iwight.com](http://www.iwight.com)).
- 1.5.6 In view of this timing, it was considered appropriate to undertake this appraisal of the Island's aggregate resources from an archaeological perspective and to provide a tool for the identification of archaeological constraints on extraction and opportunities for further research.
- 1.5.7 The existing Isle of Wight UDP identifies 14 specific sites for the extraction of minerals. This includes 11 existing sites and three proposed sites. These include five sites for the extraction of chalk, four sites for the extraction of sand and gravel, two sites for the extraction of sand, one site for the extraction of gravel, one site for the extraction of limestone, and one site for the extraction of peat (IOW 2001, Appendix E).

## 2 Aims and objectives

### 2.1 Aims

2.1.1 The primary aim of the project, as set out in the Project Design, is to improve knowledge of the archaeological resource of the aggregate producing areas of the Isle of Wight. This would provide the appropriate tools to facilitate strategic planning decisions and the management and preservation of archaeological sites and historic landscapes within those areas. The project also aims to increase public, industry and other stakeholders' awareness of the archaeology and historic landscapes within the aggregate areas.

### 2.2 Objectives

2.2.1 The aims of the project were achieved through a series of objectives:

- 1) Produce baseline archaeological data to facilitate mineral planning decisions. For the methodology adopted to address this objective see 3.2, for the definition of aggregate geologies, 3.3 for the definition of the aggregates resource and 3.4 for the definition of the study areas.
- 2) Define all actual and potential areas of aggregate working (the 'aggregates resource'), creating a GIS-based database. For the methodology adopted to address this objective see 3.2 for the definition of aggregate geologies and 3.3 for the definition of the aggregates resource.
- 3) Collate all available archaeological data for aggregate producing areas, defined in 2). For the methodology adopted to address this objective see 3.5. The outputs for this objective formed the inputs into the Resource Assessment (Objective 7).
- 4) Enhance the Historic Environment Record (HER) in the aggregate producing areas defined in 2). For the methodology adopted to address this objective see 3.5 and for the impacts of this methodology see Section 6 on page 33. The outputs for this objective included enhanced HER data from the National Monuments Record (NMR) data, NMP survey and the results of the 'Backlogs Project' (Objective 5)).
- 5) Create a backlogs database of past archaeological investigations in aggregate areas to provide additional baseline information. For the methodology adopted to address this objective see Section 18, Appendix 4. The outputs for this objective formed the inputs into the enhanced HER (Objective 4).
- 6) Feed back enhanced data and data sets to the HER as shapefiles.
- 7) Assess the state of archaeological knowledge of each aggregate producing area (Resource Assessment). For the methodology adopted to address this objective see 3.6 and 3.7. For the Resource Assessment see Sections 7, 8, and 9 on pages 36–157.
- 8) Develop an archaeological Research Agenda and Strategy for aggregates areas. For the methodology adopted to address this objective see 3.8. For the Research Agenda and Strategy see Section 10 on page 158.
- 9) Develop historic environment policies and mitigation strategies for aggregates areas. For the methodology adopted to address this objective see 3.9. For a discussion of appropriate assessment, evaluation and mitigation strategies on the Island see 11 below 171.
- 10) Increase understanding of archaeology and aggregates and facilitate further dialogue between archaeologists, minerals planners, the public and aggregates industry. For the methodology adopted to address this objective see 3.10.

## 3 Methodology

### 3.1 Introduction

3.1.1 The project is based upon the methodology designed for 'Archaeological Resource Assessment of the Aggregates Producing Areas of Warwickshire and Solihull' (Alexander, Palmer and Chadd 2008). Similar projects have been undertaken in Somerset, and Gloucestershire.

3.1.2 The project entailed the following stages:

- Definition of the aggregate resource (including definition of aggregate geologies, identification of past extraction sites and exclusion of urban areas) and creation of study areas.
- A Backlogs Project to identify the level of dissemination of any past archaeological investigations associated with aggregates extraction.
- National Mapping Programme (NMP) survey of part of the aggregate resource
- Enhancing and cleaning of the extracted Project data (from the Historic Environment Record) within the study areas with data from the Backlogs Project, NMP survey and National Monuments Record (NMR) data.
- Creating asset densities for periods and study areas
- Creating an Archaeological Resource Assessment for the aggregates resource (in the form of period summaries).
- Developing a Research Agenda and Strategy for the aggregates resource
- Outlining recommendations for future research and mitigation of aggregates extraction.

3.1.3 Project data was managed by means of a geographical information system (GIS). The GIS used was ArcGIS (ArcMAP 9.1). The ArcGIS shows spatial data (the map) with underlying information on that data held in a table, which can be exported in various formats compatible with excel and other spreadsheet and database programmes. In this study the graphically plotted data and associated underlying table is referred to as a 'layer', 'table' refers to data extracted or exported from the GIS and contained within an excel database programme.

### 3.2 Exploitation of the resource

#### *Current extraction*

3.2.1 The geological situation on the Island is complex and it was recognised that both superficial and solid geologies can provide aggregate resources. The British Geological Survey (BGS) Directory of Mines and Quarries (BGS 2008), GIS polygons of existing minerals sites identified in the UDP and the BritPits Database (obtained under licence) were used to identify aggregate current extraction sites on the Island and determine their underlying geologies.

#### *Past Extraction*

3.2.2 Areas of past aggregate exploitation were then identified in order to determine if additional geologies had aggregate potential and to provide an understanding of the pattern and extent of historic quarrying on the Island.

3.2.3 Digital Landmark Epoch Ordnance Survey 6 inch to the mile (1:10,000) scale maps were obtained under licence from the Isle of Wight Council covering the period from the Ordnance Survey 1st edition in the late 19th-century to the present day. Quarries and pits shown on these maps were digitised in ArcGIS to provide a distribution map of past aggregate and hard stone extraction (Fig 2). Any quarry or

pit labelled as such was included except where these were specifically labelled 'Brick Pit' or 'Clay Pit' on the map (i.e. non aggregate). 'Chalk Pit' and 'Chalk Quarry' were included because it had been determined that chalk geologies would be included in their entirety because of the potential for the provision of 'crushed rock' aggregate from them. Similarly limestone and sandstone (hard stone rather than sand) quarries were included because of the potential for 'crushed rock' to be sold as aggregate.

3.2.4 A total of 856 historic extraction sites were identified (Fig 2), including aggregate quarries and quarries for 'hard stone' extracted as limestone or sandstone blocks and used for building materials and crushed aggregate. Appendix 1 contains a list of all past and current aggregate extraction sites within the aggregates resource.

3.2.5 The respective numbers of these sites used to extract different materials is shown in Table 1 below:

Table 1 Numbers of historic extraction sites on the Isle of Wight

<b>Material</b>	<b>No of Sites</b>
Aggregate (terrestrial)	654
Aggregate (marine)	4
<b>Total Aggregate (terrestrial and marine)</b>	<b>658</b>
Sandstone	119
Limestone	79
<b>Total Hard Stone (sandstone and limestone)</b>	<b>198</b>
<b>Total Historic Extraction sites</b>	<b>856</b>

### *Potential extraction*

3.2.6 At this stage proposed future minerals sites being developed for the emerging Minerals Development Plan Documents of the LDF were not within the public domain and could not therefore be used as a project resource. However, Chris Mills was consulted about which geologies were considered by the Minerals Planners to have aggregate extraction potential.

## **3.3 Definition of the Aggregate Resource (Project Area)**

3.3.1 The Aggregates Resource (Project Area) included the following components, minus Urban Areas:

- Aggregates geologies which are, have been or potentially could be exploited to produce aggregate buffered by 100m to allow for areas of low resolution in geological survey and to provide a wider context for the assessment of archaeological resources along the periphery of the aggregate geologies.
- Individual hard stone quarries and extraction sites between the low and high tide lines (buffered by 100m to allow to future expansion)

3.3.2 Urban Areas were excluded from the Aggregates Resource because, as stated in the Project Design, the nature of tenure (i.e. perpetual ownership of bricks and mortar) in urban areas makes future minerals extraction unlikely to take place. The extent of urban areas was based on mapping provided (under licence) by the Isle of Wight Council. In addition to the large towns, some of the larger villages were also included as 'Urban Areas' for the same reasons (i.e. the nature of tenure makes future minerals extraction unlikely to take place). The Urban Areas were buffered by 100m to allow for growth and development and because aggregate extraction is unlikely to be permitted in close proximity to such areas.



### *Aggregate geologies identified from BGS data*

- 3.3.3 The Aggregate Geologies were those areas of the Isle of Wight which are presently, have been or potentially could be exploited to produce aggregate. The extent of the Aggregate Geologies was determined using British Geological Survey (BGS) data at 1:50,000 scale, supplied in digital format under licence from the Isle of Wight Council (Fig 1).
- 3.3.4 With advice from the Isle of Wight Policy Planners, the following geologies were identified as having the potential to provide aggregate:
- Bracklesham Group and Barton Group
  - Blown Sand
  - Chalk (All types of chalk formation)
  - Clay with Flints
  - Ferruginous Sands Formation
  - Raised Marine Deposits
  - River Terrace Gravels
  - Sandrock Formation
- 3.3.5 These geologies were all included in the aggregate geology in their entirety, irrespective of whether they were of superficial (drift) or solid (bedrock) type. The entire geology was included (rather than individual extraction sites) for the following reasons:
- Extraction of these geologies is likely to be undertaken specifically to provide aggregate;
  - Extraction would potentially encompass larger areas of the geology than if building stone were the objective of the extraction;
  - Extraction would potentially occur at multiple locations within the geology, not necessarily related to existing extraction sites.
  - The geologies are of variable depth (and may potentially be relatively thin) and extraction would therefore need to encompass a wide area to be economic.

### *Aggregate geologies identified from historic maps*

- 3.3.6 The distribution of past extraction sites shown on historic maps and BritPits Database (Fig 2) broadly agreed with the list of aggregate geologies in 3.2.1, but there were some anomalies. Eight loci of historic aggregate extraction were identified which were not located within the known aggregate geologies. These eight loci were typically located in the north of the Island. Cross referencing these sites with the British Pits data added a further three loci where aggregates were extracted outside of the aggregate geologies as identified from the BGS mapping.
- 3.3.7 Almost all of these anomalies were located in the northern half of the Island, only one (at Sandown) was located to the south of the central east-west chalk ridge. Ideally the preferred approach would be to include all the geologies within which these anomalies were located. This would have resulted in the inclusion of the Hamstead Beds and Bembridge Marls in the aggregate geologies, which would therefore have included almost the entire Island, significantly increasing the cost and time required for the project to be completed. Furthermore the location of the anomalous extraction sites indicated that the simple inclusion of the Hamstead Beds and Bembridge Marls would not accurately reflect the aggregate geologies on the Isle of Wight. Rather it seems more likely that the anomalous extraction sites reflect previously unmapped areas of River Terrace Deposits.
- 3.3.8 Palaeolithic finds are typically located within Pleistocene sediments. The distribution of Palaeolithic finds across the Island (Fig 5) indicates that these assets (and the

River Terrace Deposits in which they originate) are present outside areas of River Terrace Deposits as delimited by the BGS data. It has therefore been suggested that some areas of superficial River Terrace Deposits have not been included on the BGS mapping (Wenban-Smith and Loader 2008, 3-5). The distribution of the historic aggregate extraction sites identified from the BritPits Database and historic maps would appear to support this hypothesis. Of the 11 anomalous loci of historic aggregate extraction, two were located close to known and mapped outcrops of River Terrace Deposits at Parkhurst and Barton, which represent areas of 'Plateau Gravel' (higher level River Terrace Deposits with minimal or unclear associations within modern drainage patterns). The two anomalous loci indicate that the known outcrops are likely to be larger than previously estimated by the BGS and should be extended. A further six anomalous loci were located close known watercourses (the Caulbourne at Shalfleet, Eastern Yar at Sandown, Palmers Brook at Wooton, the Gurnard Brook at Gurnard, the Western Yar at Wilmingham and the Monktonmead Brook at Ryde). These watercourses which could be expected to have deposited Terrace Gravels (lower deposits associated with modern drainage patterns) during the late Pleistocene when these rivers were tributaries of the Old Solent River. The remaining three loci at Totland, Havenstreet and East Ashley are located on higher ground and are likely to represent small areas of Plateau Gravel, similar to those shown nearby on the existing BGS mapping.

- 3.3.9 Ideally further site-based investigation would need to be undertaken to confirm the precise extent of these areas of River Terrace Deposits, but this has not proven possible within the scope of this project. It was therefore decided to use the evidence from the historic maps and British Pits data to estimate the extent of the River Terrace Deposits in each case. A layer called 'Likely\_gravel\_deposits' was created in the GIS, comprising polygons of the likely extent of aggregate geology for each of the anomalous loci. This layer is shown on Fig 2 as 'additional gravel deposits'. These deposits have been shown to be associated with the topography of the Island (4.2.6–4.2.10). They include both Plateau Gravels deposited by ancient rivers and only surviving as isolated outcrops on higher ground and River Terrace Deposits, laid down by the ancestors of modern rivers in surviving river valleys. In terms of their origins, the deposition of River Terrace Deposits is therefore directly associated with river valleys and the survival of outcrops of Plateau Gravel is associated with outcrops of higher ground. Consideration of the anomalous loci themselves indicated that they were also associated with either river valleys or outcrops of higher ground. It was therefore considered appropriate to make use of topography, in the form of contour lines, to estimate the possible extent of the Likely\_gravel\_deposits around the anomalous loci. In order to avoid possible over-estimation of the gravel deposits the extent of the historic aggregate extraction was examined and the next contour line outside the limit of historic extraction was taken as the estimated limit of the Likely\_gravel\_deposits polygon. In two of the loci (Totland and Havenstreet) there were no clear contours identifying an area of potential raised Plateau Gravel. These extraction sites were therefore buffered by 100m as there was no other evidence of where the aggregate geology was located. Table 2 details the loci, the probable nature of the aggregate resource (whether Plateau Gravel or Terrace Gravel), the associated watercourse (if applicable) and the relevant contour line:

Table 2 *Extent of estimated aggregates resource around anomalous loci*

Locus	Nature of Aggregate	Associated Watercourse	Extent of estimated aggregate
Parkhurst	Plateau Gravel	N/A	Existing deposit extended east between 50-60m contour
Barton	Plateau Gravel	N/A	Existing deposit extended west to 50m contour
East Ashley	Plateau Gravel	N/A	Area above 50m contour
Havenstreet	Plateau Gravel	N/A	Buffered by 100m

Locus	Nature of Aggregate	Associated Watercourse	Extent of estimated aggregate
Totland	Plateau Gravel	N/A	Buffered by 100m
Shalfleet	Terrace Gravel	Caulbourne	Caulbourne valley below 20m contour
Wooton	Terrace Gravel	Palmers Brook	Palmers Brook valley below 10m contour
Wilmington	Terrace Gravel	Western Yar	Existing deposits extended east to include land below 20m contour
Sandown	Terrace Gravel	Eastern Yar	Existing deposits extended north to land above 10m contour
Ryde	Terrace Gravel	Monktonmead Brook	Monktonmead Brook valley below 10m contour
Gurnard	Terrace Gravel	Gurnard Brook	Gurnard Brook valley below 10m contour

- 3.3.10 It is appreciated that this approach of estimating the likely extent of aggregate geologies is far from ideal. However, it has at least ensured the known areas of historical extraction are included in the project, and hopefully ensured a greater proportion of the associated aggregate geologies are included in the project than buffering these historic extraction sites by 100m would have permitted. Where the estimated extents have extended outside the actual aggregate deposits, the extent of the overestimation should be limited and will not affect aggregate extraction where no aggregate deposit is present.
- 3.3.11 In accordance with the Solent Thames Research Framework (Wenban-Smith and Loader 2008, 3-5), it is suggested that further geological and geoarchaeological investigation of the Island, particularly the northern part, should be made a research priority in order to establish the precise location of the aggregate producing geologies.

#### *Hard stone quarries*

- 3.3.12 Geological strata exploited by hard stone quarries were not included in the aggregates geologies. Although they may produce crushed rock for aggregate, hard stone quarries (limestone and hard sandstone) typically contain considerable depth of material. Their impact upon any archaeological resources therefore remains limited to the immediate surrounding of the quarry for considerable lengths of time. In view of this and in accordance with the Project Design, the individual hard stone extraction sites were identified from BritPits Database, the UDP and the historic Ordnance Survey mapping (i.e. the Landmark Epoch maps) and buffered by 100m (to allow for future expansion) and these polygons were added to the Aggregates\_Resource layer.

#### *Marine aggregate extraction sites*

- 3.3.13 Marine aggregate resources below the low tide line were scoped out of the project during the Project Design Stage. Marine aggregates extraction sites between low and high tide range were buffered by 100m and also added to the Aggregates\_Resource layer.

### **3.4 Definition of study areas**

- 3.4.1 The geology of the Isle of Wight is complex and in several areas superficial gravel geologies overly solid geologies (particularly Ferruginous Sands and Chalk) which can also be exploited for aggregate. It was not therefore felt to appropriate to differentiate the study areas by the type of aggregate geology (either solid or superficial).
- 3.4.2 In 2008 the Isle of Wight Historic Environment Action Plan (HEAP) was completed. The stated aim of the HEAP is 'to assist in the development of strategic planning policy, guidance and advice, to facilitate conservation and management of the historic environment (HEAP 2008b, 1)'. As part of the HEAP project the Island was

divided into 15 Areas based on the Historic Landscape Characterisation. (HLC) In developing the HLC the geology, topography and hydrology of the Island was taken into account as well as its archaeology, history and human geography. The HEAP Areas thus provided a pre-existing division of the Island based on geological and landscape type and designed to facilitate future projects to conserve and manage the historic environment. In consultation with the Isle of Wight County Archaeologist, it was decided that it would be appropriate to divide the Aggregates\_Resource into study areas based on the HEAP Areas (Fig 3). It should be noted that the study areas are not identical to the HEAP Areas as each individual study area comprises the Aggregates\_Resource within the HEAP Area (i.e. Urban Areas and non-aggregate geologies are excluded from the study areas but not from the HEAP Areas). The study areas have been named after the HEAP Areas. For clarity throughout the rest of this report specific references to HEAP study areas will be prefixed by HEAP in order to differentiate them from the study areas generated during this project. For example 'HEAP Arreton Valley' will denote the HEAP study area known as Arreton Valley; while 'Arreton Valley' will denote the project Arreton Valley study area (i.e. the aggregates resource within the HEAP study area). The nature and basis for the division of the original HEAP Areas can be found in each Area's HEAP report (HEAP 2008c-s).

### **3.5 HER Enhancement**

- 3.5.1 HER data was extracted and uploaded into the project GIS database. This data included all monuments, and buildings within the study areas.
- 3.5.2 Throughout the project monuments, findspots, or buildings recorded in HER entries, were described as 'Assets' to avoid the following issues:
- Confusion between 'monuments' (i.e. a form of HER entry) and 'Scheduled Monuments' (i.e. statutorily protected archaeological sites);
  - The distinction between archaeological sites and features (called 'monuments' in the HERs) and buildings (recorded separately in the HERs).

#### *The nature of the data*

- 3.5.3 Understanding the resource is dependent upon the quality of the HER and the resulting project database. The HER was generally found to be quite consistent, but a number of corrections were necessary to make the project database clearer and more consistent prior to the creation of the asset density figures.
- 3.5.4 It should be noted that these changes did not address the problems inherent in the nature of the HER itself (see 5.1.1). The HER remains a record of work done rather than the spatial distribution of archaeological evidence, and is subject to the limitations of the recording systems used its earlier incarnations.

#### *Duplicate entries*

- 3.5.5 A small number of assets were identified which appeared more than once on the HER (for example as a building record and a monument record). In order to ensure these dual entries did not affect the asset density figures, one entry was deleted from the project database GIS layer.

#### *Separating entries*

- 3.5.6 Some HER records needed to be separated. Where objects which were not associated by archaeological context (such as metal detected finds from the same field) and discrete periods of activity or occupation were recorded as one HER number this would result in an incorrectly low number of assets appearing in the asset densities for the periods concerned. This was a particular problem for metal detected finds recorded under the Portable Antiquities Scheme, where a collection of objects of different dates and functions were often recorded under one HER

number. In cases where an existing HER needed to be split, new records were created in the GIS layer of the project database for the additional assets. Each distinct asset was identified by a numerical suffix added after the HER number (e.g. MIW3896\_01 and MIW3896\_02) in order to differentiate it from other assets which had previously been included under the same HER number.

### *Refining dating*

- 3.5.7 There were a number of assets in the HER which were undated. This was particularly true of cropmarks and other aerial photograph evidence for which entries were often limited. Typically earlier assets were more likely to be undated. If a date or date range could be determined from the HER description or information on the general period of the object, this was included in the relevant date fields of the project database. In such cases the date range given in the 'Date\_from' and 'Date\_to' fields reflected the scientific or typological dating of the asset as accurately as was possible from the information given in the HER.
- 3.5.8 In many cases (particularly relating to cropmark evidence) the HER entries were very limited and provided no indication of date other than the 'Monument\_Type' (sometimes appearing as 'DC\_Subject' in excel tables). Where a Monument Type was sufficiently clear (e.g. Churn Stand) it could be researched using the NMR Monument Class Descriptions (<http://www.eng-h.gov.uk>) and thesaurus (<http://thesaurus.english-heritage.org.uk>) in order to determine the likely date range. Other Monument Types were insufficiently clear (e.g. Linear Feature) and could potentially date to a wide range of periods. It was not within the scope of the project to re-assess the dating of any asset from primary material, even where this would have been possible. In these cases, such assets were given a date range which was considered to represent the entire range within which the true date of that feature could fall (e.g. 'Linear Feature' could represent anything from a Neolithic cursus to a Post Medieval road and was therefore allotted the date range Neolithic, 4000 BC, to Post Medieval, AD 1900). A complete list of the Monument Types encountered and the agreed date ranges can be found in Appendix 2. In general, these are based on the NMR Monument Class Descriptions and thesaurus.
- 3.5.9 There was an overlap in date range between the Bronze Age and the Iron Age. The Bronze Age was recorded as ending in 750BC (recorded in the database as -750) and the Iron Age beginning in 800BC (recorded in the database as -800). Although this may accurately reflect the fluidity between these two periods it would have made querying the database for Bronze Age and Iron Age sites highly inaccurate. It was therefore agreed with the HER Officer, Rebecca Loader, that in the Project database entries dated to the Bronze Age or Late Bronze Age would be changed so that the end date was 751BC (recorded in the database as -751) and entries dated to the Iron Age or Early Iron Age would be changed so that the start date was 750BC (recorded in the database as -750). This would permit differentiation between the Bronze Age and Iron Age when the asset density figures were developed.
- 3.5.10 Similarly, the HER describes all assets dating from the end of the Roman occupation (AD 409/410) until the Norman Conquest in 1066 as 'Saxon'. In the project database, this period was divided into the Migration period (AD 410 to 800) and the Early Medieval period (AD 801 to 1065). This was undertaken to facilitate comparisons with other Resource Assessments and to provide a greater differentiation between the pagan and the Christian components of this period. There are a large number of known or possible migration period sites on the Island (including the re-use of prehistoric barrows and the construction of migration period barrows) which can be confidently dated to the earlier part of the period AD 410 – 1065 AD on account of their generally pagan connotations as described in the HER. It was agreed with the HER Officer and County Archaeologist, that this division would provide a more accurate picture of the archaeological resource across this complex time period and ensure assets which are clearly pagan (e.g. pagan

cemeteries) and therefore probably earlier Migration period assets are not included with Early Medieval sites (e.g. churches) associated with the re-emergence of Christianity, monasticism and subsequent parochial divisions. Again this work depended on the data contained within the HER. Where the HER was unclear, the date range of the asset was left to encompass both periods.

- 3.5.11 It is recognised that the necessary division of the Bronze Age/Iron Age and Migration/Early Medieval period in the project database is arbitrary, and (as with other chronological divisions) probably does not reflect the expected gradual changes by which society developed and which are represented by the archaeological features and material cultures of the respective periods. Nonetheless, for the purposes of the project it is necessary to divide the assets into a number of periods and these will all be, to a greater or less extent, the arbitrary and customary divisions in common usage. Consideration of how better to divide the customary periods of the archaeological timeframe is not within the scope of this project. However, the inclusion of precise date ranges (sometimes extending over more than one chronological period) established from scientific or typological dating and assigned to assets in the 'Date\_from' and Date\_to' fields will improve the overall accuracy of the asset densities and mitigate the effects of the otherwise arbitrary chronological divisions. At the same time greater precision in the division between periods enhances the precision of the project database by ensuring (for example) assets which have been dated to one period are not accidentally counted as belonging to the other period as well.

#### *Current Understanding*

- 3.5.12 With such broad date ranges assigned to some assets, it was felt necessary to develop a further field in the project database to allow the HER Officer to distinguish those entries which had a date based on information solely contained within the HER, and those entries which had been assigned a date range using the broad interpretative principles in Appendix 2. This field was entitled 'Current\_Understanding' and assets were either described as 'Sufficient' or 'Insufficient'. In order to be 'Sufficient' the HER entry had to contain information on the date of the asset. Insufficient assets were assigned dates (usually very broad ranges) based on the principles in Appendix 2.
- 3.5.13 The aim of the Current Understanding field was to ensure that when the data was returned to the HER, dates provided on the basis of the principles in Appendix 2, were recognised as such and were understood as being based on scientific or typological dating.
- 3.5.14 It should be noted that the Current Understanding field was not used to assess the accuracy of the HER entry itself, but only whether it contained sufficient information to allow a date to be assigned. A number of objects (particularly prehistoric flints) and sites recorded on the HER were originally dated in the early part of the 20th-century. A re-assessment of these assets may be necessary to confirm such dates and bring them into line with modern theories and typologies, but such re-assessment is not within the scope of this project.
- 3.5.15 As part of the NMP project, the NMP plotters provided dates for any assets they identified, and these date ranges were subsequently incorporated into the HER with any modifications thought appropriate by the HER Officer. These dates were treated as 'sufficient' because the NMP made use of additional resources (e.g. historic maps) as well as professional judgement in assigning them, but in some cases these date ranges will require refinement.

#### *Asset Type*

- 3.5.16 In order to facilitate querying the GIS for the production of distribution maps for the period summaries, an 'Asset\_Type' field was also added to the data. This field was based on the NMR Monument Class Descriptions. The following Asset Types were

identified in the Project Design:

- Agriculture and subsistence
- Civil
- Commemorative
- Commercial
- Defence
- Domestic
- Gardens and parks
- Industrial
- Maritime
- Object
- Recreation
- Religious, ritual or funerary
- Transport
- Unassigned
- Water and drainage
- Multiple

3.5.17 As the project progressed it was felt that it would benefit from the addition of two further Asset Types:

- HOARD – Hoard was used for greater clarity and because of the question of whether hoards should be considered ritual (i.e. Religious, ritual or funerary) or part of the operating activities of ancient metalsmiths (i.e. Industrial or Commercial)
- PALAEOENVIRONMENTAL – Palaeoenvironmental was added to cover records of pollen studies, palaeochannels and other natural features of interest to archaeology but not anthropogenic in themselves.

3.5.18 To allow for assets such as Castles, which have domestic and defensive purposes, two Asset Type fields were included in the database. The second field was only used where the HER entry specifically indicated that an asset had multiple asset types. Two fields were found to be sufficient.

3.5.19 To ensure consistency, Asset Types were assigned on the basis of the data within the HER entries, and according to specific principles (see Appendix 3).

#### *Incorporating the NMR*

3.5.20 A priority search of all monuments and events was requested from the National Monuments Record (NMR). The NMR and the HER originated from the same source, but as they have been maintained by different organisations the data within them can occasionally vary. The HER data is generally more comprehensive.

3.5.21 The NMR data was cross-referenced with the HER to identify any additional data which was present on the NMR, but not on the HER. NMR monuments and events which did not relate to any existing HER assets on the project database were checked against the HER by the Isle of Wight HER Officer.

3.5.22 Only five new assets were identified and 131 discrepancies were found between the NMR data and the HER data. Discrepancies between the HER and NMR data were assessed by the HER Officer and the Project Officer, they were normally attributable to one data source (normally the HER) having a more precise grid reference than the other. In most cases a positive determination could be made on the basis of the evidence, and the HER was found to be the more accurate source. In those few cases where it was unclear which source was more accurate (without further investigation of the original archive) the HER was assumed to be correct. Where

HER entries could be related to NMR data the NMR monument numbers, event numbers and Scheduled Monument numbers were cross referenced with the HER in the Project database for future reference.

### *The Backlogs Project*

- 3.5.23 A project was undertaken to identify any archaeological investigations resulting from aggregates extraction and quantify their present status with regard to completion of the investigation and the level of dissemination. The results of this project were recorded in a database and a project report (Appendix 4) which also contains the methodology for the project.
- 3.5.24 The outputs of this project include the project report and the two additional HER entries which resulted from it. In general the project found that the results of archaeological investigations in aggregate extraction sites were recorded in the HER in most cases (38 out of 40 such investigations identified).

### *NMP Sample Areas*

- 3.5.25 The National Mapping Programme (NMP) was initiated by the Royal Commission on the Historical Monuments of England (RCHME) in 1992 and has been run by English Heritage since the merger of RCHME and English Heritage. The NMP provides a consistent and systematic framework for the identification of archaeological remains through the identification, plotting and interpretation of archaeological remains visible in existing aerial photographs.
- 3.5.26 In terms of this project, NMP data provides a more consistent framework than HER data, as it is taken from a prescribed resource typically in one or two projects, rather than being comprised from a variety of sources collected over a number of years to variable levels of detail.
- 3.5.27 Two areas of the Isle of Wight were mapped to National Mapping Programme (NMP) standards (Fig 4) by Cornwall County Council NMP Team. Ideally the entire Island would have been mapped to NMP standards, but this was not possible during the life of the project. The NMP sample areas covered a combined area of 75km<sup>2</sup> (19% of the Island) in two sections:
- **Thorley Wellow Plain NMP Area** – The western sample area of 35km<sup>2</sup> covered most of the Thorley Wellow Plain and West Wight chalk Downland study areas and parts of the Northern Lowlands and West Wight Chalk Downland Edge and Sandstone Ridge study areas.
  - **Arreton Valley NMP Area** – The eastern sample area of 40km<sup>2</sup> covered most of Arreton Valley, Newchurch Sandown and East Wight Chalk Ridge study areas, and parts of the Northern Lowlands and South Wight Sandstone study areas.
- 3.5.28 The NMP report and methodology can be found in Appendix 5.
- 3.5.29 The NMP project recorded a total of 819 monuments, of which 533 were previously unrecorded. Prior to the NMP survey, the HER contained a total of 1287 records for the two NMP sample areas. The addition of 533 new records therefore represents a 41% increase in the HER within the two NMP sample areas.

## **3.6 Asset Density Figures**

- 3.6.1 The project database was queried to determine the number and distribution of assets of each period within each study area and across the aggregates resource as a whole. These asset density figures and associated asset information would form the backdrop to and basic information for the resource assessment and period summaries.
- 3.6.2 A set of asset density figures were generated using the unmodified HER data to form a benchmark against which the results of the validation and correction of the



HER and the NMP mapping could be compared.

- 3.6.3 The asset density tables provide the numbers of assets dated to each period across the aggregates resource as a whole and the raw numbers were converted to asset densities per km<sup>2</sup> in order to express the concentration of assets. The asset densities also include assets which may potentially belong to a given period, but which have not been dated with certainty. These assets were included to avoid them being entirely ignored by the study and ensure the asset densities included an indication of the maximum possible assets of a given period as well as the density of securely dated assets.

### **3.7 The Archaeological Resource Assessment**

- 3.7.1 An assessment of the archaeological resource in aggregate areas was created using the asset density figures and sources of existing knowledge about the archaeological resources across the Island. This summarised the known archaeology of each study area and each period in order to provide an overview of existing knowledge and, where possible, a predictive tool for assessing archaeological potential in areas of aggregate extraction. The Resource Assessment provided a baseline for the development of a research agenda and aggregate extraction related mitigation approaches, revealing gaps in current knowledge and opportunities for future research strategies and questions.

- 3.7.2 The period summaries were reviewed by Rebecca Loader and Dr Ruth Waller, who have considerable experience of the archaeology and history of the Isle of Wight and have particular knowledge of the Lower Palaeolithic and Mesolithic period (Rebecca Loader) and Iron Age, Anglo-Saxon and Medieval periods (Dr Ruth Waller). Other Individuals with particular local knowledge of periods or subjects reviewed drafts. These individuals included Dr Francis Wenban-Smith (Lower Palaeolithic), Malcolm Lyne (Roman), and Dr Rob Scaife (environmental archaeology).

### **3.8 Research Strategy and Agenda**

- 3.8.1 The Research Agenda and Strategy identified general research priorities and period specific research priorities. The general research priorities would have positive impact upon understanding of multiple periods across the aggregates resource. The period specific research priorities address specific needs associated with individual periods. The Agenda and Strategy reflects many of the research priorities of the Solent Thames Archaeological Research Framework ([http://thehumanjourney.net/Resource Assessment.pdf](http://thehumanjourney.net/Resource%20Assessment.pdf)) and the Isle of Wight HEAP, which sets out the aims and objectives for the future management of the Island's historic environment (HEAP 2008, 6).

### **3.9 Mitigation Strategies**

- 3.9.1 In order to achieve objective 2.2.1 9) the project team provided an overview of the mitigation strategies which are involved in the mitigation of the impacts of aggregate extraction on archaeological resources. The sections also included:
- A discussion of the specific mitigation strategies necessary for particular geological conditions;
  - Those areas where more work would be required to make confident predictions as to the likely impact of extraction; and
  - Where geological or archaeological factors made it likely that a particular mitigation strategy would be requested.

### **3.10 Review and dissemination**

- 3.10.1 The draft report was reviewed by Isle of Wight Council prior to submission of the

draft to English Heritage for editing. In order to meet objective 2.2.1 10) the agreed final report will be disseminated as Word and pdf documents to English Heritage and the Isle of Wight Council for dissemination to stakeholders including:

- English Heritage Inspector of Scheduled Monuments Dr Richard Massey
- English Heritage Historic Environment Field Advisor Alison Macquaid
- Local experts involved in reviewing the period summaries (Dr Francis Wenban-Smith, Duncan Brown, Malcolm Lyne, Vicky Basford, Frank Basford and Dr Rob Scaife)
- Isle of Wight Council Historic Environment team
- Isle of Wight Coastal Manager Peter Marsden
- Isle of Wight Coastal Environment Centre
- Isle of Wight Head of Planning Service
- Isle of Wight Policy Planner
- Isle of Wight ANOB team
- Consultants involved in minerals extraction on the Island
- Developers involved in minerals extraction on the Island
- Archaeological units operating within the Isle of Wight
- Local voluntary archaeological groups
- Local community groups

#### *Copies of the report*

- 3.10.2 MOLA retains copyright for the project report and Cornwall County Council retains copyright for the NMP component. Unconditional licences will be granted by MOLA to Cornwall and by Cornwall to MOLA and by both parties to English Heritage and the Isle of Wight Council.
- 3.10.3 Hard copies of the completed report will be disseminated to English Heritage (3 copies), the Isle of Wight Historic Environment Record and Isle of Wight Planning team.
- 3.10.4 CD copies of the report will be disseminated to English Heritage Isle of Wight HER and Planning teams. These will include a version to be sent to the Archaeological Data Service (ADS) website.

## 4 Description of the Aggregates Resource

### 4.1 Introduction

- 4.1.1 It is thought that the Isle of Wight was created during the late Pleistocene when rising sea levels and erosion split an area south of the Old Solent River from the south coast of England (Allan and Gibbard 1993, 503). As such, the Island is a topographically cohesive unit, although it has geological similarities with the mainland (particularly the coastal areas of Hampshire, Dorset and West Sussex).
- 4.1.2 Geographically the Isle of Wight is divided into two halves by a ridge of limestone and chalk which runs east-west across the centre of the Island. To the north are the 'northern lowlands' typically characterised by Palaeogene muds and sands on chalk bedrock. To the south of this ridge the solid geology is more diverse, with areas of Upper Greensand, Lower Greensand, Gault, Wealdon Clay and the southern Chalk downland (EA 9). In some areas these are overlain by gravel deposits in muddy sand matrix (the 'Clay with flints' strata) which were eroded from chalk and existing gravel formations over a long period of time from the Neogene to the Pleistocene (Greensmith *et al.* 1998).
- 4.1.3 Deposits of Pleistocene sediments (including river gravels, brickearths and intertidal and estuarine deposits) are present above the solid geology, and have been partially mapped by the British Geological Survey. These deposits were laid down by precursors of the current river systems on the Island and other rivers which have since become extinct. These rivers flowed north into the Old Solent River, which ran east to west to the north of the Island from the Tertiary period and throughout the Quaternary (Allan and Gibbard 1993, 503). Initially draining the now submerged land to the south-west of the Island as well as much of Hampshire and Dorset, the Old Solent River was largely obliterated when the sea broke through the Wight-Purbeck Ridge (to the south-west of the Isle of Wight) between the Ipswichian (135,000 – 73,000BC) period (Antoine *et al.* 2003, 235) and the early Flandrian (c 12,000BC) period (Allen and Gibbard, 1993, 526). The rising sea levels at the end of the Pleistocene flooded the lower levels of the Old Solent River, which effectively ceased to exist (Greensmith *et al.* 1998, 25).
- 4.1.4 The river systems (Fig 1) of the Isle of Wight were originally tributaries of the Old Solent River, flowing northwards across the Island. The largest is the Medina which flows northwards across the centre of the Island from chalk springs on St Catherine's Down to Cowes at the northernmost point of the Island. The Medina estuary extends as far south as Newport (EA 9).
- 4.1.5 The other major river system on the Isle of Wight is the Eastern Yar, rising on St Catherine's Down and flowing north and east, cutting through the central chalk ridge at Brading, to flow into the sea at Bembridge. Until the 16th century the Eastern Yar flowed into the sea at both Bembridge and Sandown, forming a tidal salt marsh between the Bembridge peninsula and the west of the Island which could only be crossed at low tide (HEAP 2008c, 1).
- 4.1.6 On the western side of the Island, the Western Yar was once a river with a well developed tributary system, much of which has since been destroyed by the erosion of the channel coast (EA 9). The originally large river formerly separated the land to the west (Freshwater Isle) from the rest of the Island (HEAP 2008e, 1).

### 4.2 Geological description

- 4.2.1 Aggregate minerals occur and have been extracted across the Isle of Wight (Fig 1 and Fig 2). These comprise various types of geologies, and can be divided into three types:
- Superficial (drift) aggregate deposits – quaternary sand and gravel deposits.

- Solid (bedrock) aggregate deposits – solid geologies extracted and crushed to produce aggregate products.
- Solid (bedrock) hard stone deposits – geologies extracted primarily for stone, but potentially producing crushed rock aggregate as a by product.

#### *Minerals Resource Classification*

- 4.2.2 The BGS has produced an assessment of the minerals resource within the Isle of Wight (BGS 2002) which details the extent and nature of the minerals resource, existing and former minerals extraction sites and current nationally designated planning constraints.
- 4.2.3 The report recognises that the level of knowledge regarding the aggregate resource varies across the Island from aggregate reserves (known aggregate resources which have been fully evaluated, are commercially viable and are the subject of current planning permission for extraction) to inferred aggregate resources (identified from geological maps, but which are likely to require further investigation to confirm their extent and commercial viability).
- 4.2.4 Aggregate resources may also be divided into those which are commercially viable for extraction and those where extraction would not be economic. The commercial viability of any given aggregate resource is likely to vary with time due to changes in demand, changes in use, development of new extraction methods, and the varying cost and availability of alternative aggregate resources.
- 4.2.5 The Project Area covered in this report generally represents an inferred aggregate resource, some has been subject to some further geological investigation and some is included in the Island's aggregate reserves.

#### *Superficial aggregate deposits*

- 4.2.6 **River Terrace Deposits** can be divided into:
- Plateau Gravels, representing older raised river terraces sequences.
  - Terrace Gravels, including younger, lower floodplain terraces associated with existing rivers and in some areas present beneath extant alluvium (Insole et al. 1998, 25).
- 4.2.7 Work undertaken as part of this project has revealed 11 areas of historic aggregate extraction which are likely to represent areas of River Terrace Gravels which have Deposits not previously been mapped by the BGS (see above 3.3.10 and Table 2).
- 4.2.8 **The Plateau Gravels** are typically located at c 30 to 100m Ordnance Datum (OD), forming the caps of flat-topped hills. They occur in patches with irregular boundaries and are clearly the remnant of much large spreads which have been cut and reworked by intervening millennia. The BGS map indicates that although small patches are scattered across the Island, the larger areas of Plateau Gravels occur mostly in the north and west of the Island. To the south of Newport, Plateau Gravels are worked for crushed rock aggregate, roadstone and concrete (BGS 2002) and there is evidence that in the past other deposits of Plateau Gravel have been worked to supply local requirements. Of the 11 additional areas of River Terrace Deposits identified in this project but not present on the BGS mapping, five were identified as probable Plateau Gravel on the basis of their location on flat topped hills, at a distance from known watercourses or in close proximity to known areas of Plateau Gravel (3.3.9 and Table 2). The Plateau Gravels were deposited during periods when hominins were also active on the Island and have been found to contain archaeological remains. In particular the important Palaeolithic site at Bleak Down is located upon a large strip of Plateau Gravel and has previously been subject to aggregate extraction.
- 4.2.9 **Terrace Gravels** are lower and younger and occur along the valleys of the Eastern and Western Yar. The loose, stony terraces of the Eastern Yar are up to 4m thick. Although the lower part of the Eastern Yar has no terraces, there is potential for sub-

alluvial gravel deposits around Sandown and into the Brading Gap. One of the 11 anomalous extraction sites recorded during this project was associated with the lower part of the Eastern Yar at Sandown, and may represent early exploitation of the sub-alluvial gravels (see above 3.3.9 and Table 2). The 2 to 8m thick gravel terraces of the Western Yar cap sea cliffs around Chale, Brook and Freshwater, on what was previously the southern watershed of the Western Yar, prior to the encroachment of the sea. The Terrace Gravels are frequently covered by alluvium and brickearth deposits (BGS 2002). The distribution of past aggregate extraction indicates that the Western Yar River Terrace Gravels possibly extend in the area of Wilmingham (3.3.9 and Table 2). River Terrace Gravels also occur along the Medina Valley, north of Shide, where they include deposits associated with the important Palaeolithic site of Great Pan Farm. Evidence of past aggregate extraction from four loci indicates that River Terrace Gravels (potentially including sub-alluvial deposits) are also located along the Caulbourne (Newtown river), Palmers Brook, Monktonmead Brook and Gurnard Brook (3.3.9 above and Table 2), although their extent (and hence their commercial viability) is unknown.

- 4.2.10 **Sub-alluvial River Terrace Deposits** of sand and gravel have been inferred to lie beneath modern river flood plains, but their nature, extent and economic viability is often unknown (BGS 2002) and the extent of the sub-alluvial River Terrace Deposits (as opposed to the alluvium) are not shown on BGS mapping. In accordance with the Project Design, areas of alluvium were not automatically included in the aggregate geologies, although buffering of exposed aggregate will have resulted in many sub-alluvial deposits being included. Sub-alluvial deposits were included where the assessment of past extraction sites revealed likely economic River Terrace Gravels associated with existing rivers. Four of the areas of Terrace Gravels (including the Caulbourne, Palmers Brook, Monktonmead Brook and Gurnard Brook areas) identified during this project are likely to include partially or wholly sub-alluvial deposits. The commercial viability of these deposits is not known, but their existence is indicative of the need for further work to be undertaken regarding the nature and extent of similar sub-alluvial deposits across the Island.
- 4.2.11 **Angular Flint Gravel (Clay with flints)** in a muddy sand matrix occurs in patches on the summits and upper slopes of the Chalk Downs in the central and southern parts of the Island (BGS 2002). It is likely that these superficial deposits were laid down between the Neogene and the Pleistocene periods and are a local variant of the 'Clay with Flints' found across southern England. They are considered to derive from the *in situ* dissolution of the White Chalk and the addition of clay colluvium (Insole *et al.* 1998, 22). The deposits have been worked to 3m below ground level (mbgl) on St Boniface Down, but may extend 10mbgl. Angular Flint Gravel is currently extracted at Cheverton Farm (BGS 2002). It has produced a limited number of Palaeolithic finds (Wenban-Smith and Loader 2008, 9).
- 4.2.12 **Blown Sand** occurs in two areas of the Isle of Wight. The largest area is in the south between Atherfield and Chale. It is located at c 50m OD and comprises up to 7m thickness of sand blown up from the Lower Greensand group (see Sandrock Formation and Ferruginous Sands formation below) in the cliff below. A second area of Blown Sand occurs at the mouth of the Eastern Yar, to the north-east of Bembridge harbour (BGS 2002).
- 4.2.13 **Raised Marine Deposits** occur only within the low lying land along the Eastern Yar at Bembridge. The deposit comprises sand and gravel some of which is clearly of marine origin. The precise extent of the raised marine gravel component is disputed and it is possible that some of the deposits identified as 'marine' are of fluvial origin (Wenban-Smith and Loader 2008, 5). This deposit is not included in the BGS (2002) *Mineral Resource Information*, as it is located wholly within an international nature conservation area.

### *Solid aggregate deposits*

- 4.2.14 **Sandrock Formation and Ferruginous Sands** are formations within the Lower Greensand group (BGS 2002). The formations of this group underlie much of the southern half of the Island and were deposited under marine conditions during the Lower Cretaceous period. They comprise mainly sands with some silty clays. The older Ferruginous Sands formation is up to 134m thick (Insole *et al* 1998, 9), while the Sandrock Formation is up to 50m thick. Although these formations are classed as 'solid' geologies, and have historically provided building stone, they can provide sand for use as aggregate (Chris Mills, IOW Planning Policy, pers comm) and have therefore been included in their entirety as though they were (superficial) aggregate. The Sandrock Formation is currently extracted at Haslet Farm, south of Shorwell and Knighton Sandpit, north of Alverstone (BGS 2002).
- 4.2.15 **Bracklesham Group and Barton Group** are Palaeogene strata primarily located in a strip along the central east-west spine of the Island. These deposits date from the middle and late Eocene and were laid down in alternating marine transgression (advances) and regressions (retreats). Unlike other Palaeogene groups, the Bracklesham Group and Barton Group contain a number of sand members (Insole *et al.* 1998 20–1). Although not identified in the BGS *Minerals Resource Information* (2002), a small number (19) of historic extraction sites (including some producing aggregate sand and gravel) were identified within the Bracklesham Group and Barton Group. Further work into the location of superficial deposits and the properties of solid deposits could confirm whether the Bracklesham Group and Barton Group are genuinely viable for aggregate production or if they underlie viable unmapped superficial deposits in any areas.
- 4.2.16 **Chalk Group** comprises a soft fine grained grey to white limestone laid down in marine conditions of the Lower Cretaceous and comprising the skeletal debris of planktonic algae. Virtually identical deposits (including the same fossils) occur across southern England, northern Europe and into western Asia as far as the Caspian Sea. The Chalk runs the length of the Isle of Wight from the Needles to Culver Cliff forming the east-west ridge of the Island, the Central Downs. An outlier of slightly inclined chalk forms the Southern Downs in the south-east of the Island (Insole *et al* 1998, 12–13).
- 4.2.17 The Chalk is c 500m thick on the Isle of Wight and is divided into grey chalk (Middle Chalk) and white chalk (Upper Chalk). The grey chalk (Middle Chalk) is of earlier date and contains a slightly higher proportion of clay. It is c 50–64m thick decreasing from east to west. The white chalk (Upper Chalk) is the thickest of the subgroups across the British Isles decreasing in thickness eastwards from 450m at the Needles to 370m at Culver Cliff (BGS 2002). The white chalk is of higher purity and commonly contains flints, formed as silica was precipitated in small burrows in the chalk sea floor (Insole *et al.* 1998, 15).
- 4.2.18 At present c 40,000 tonnes of chalk are produced annually from up to five quarries within the Central Downs. Most of the extraction is from white chalk at Arreton, Duxmore and Newbarn. At Cheverton and Shorwell chalk is extracted from both grey and white subgroups. Three quarters of the chalk is used as aggregate, and the rest for industrial and chemical purposes. In the past the chalk, and flints embedded within it, have been used as a building stone (*ibid*).
- 4.2.19 The large numbers of Bronze Age barrows on the Island cluster in the higher areas of chalk downland particularly across the centre of the Island (Waller 2006). The barrows are many cases associated with earlier and later archaeological remains, ensuring that the chalk downland is one of the richest areas of the Island for archaeological remains.

### *Solid hard stone deposits*

- 4.2.20 **Limestone** occurs on the Island as a freshwater limestone formation, called the Bembridge Limestone. It forms part of the Solent Group and dates to the early

Oligocene (Insole *et al* 1998, 21). The limestone is characterised by its whiteness, partly brecciated structure and molluscs. The c 3m thick deposit crops out between Scone Point and Calbourne in the west, at Cowes in the north and south of Bembridge in the east. In the past the limestone was used widely as a building stone (known as Quarr Stone) and was extracted at Quarr and Binstead, primarily for export to the mainland. The limestone was also used for cement making at Brading. It is currently extracted at Prospect Quarry for crushed rock aggregate (BGS 2002).

- 4.2.21 **Upper Greensand** comprises Lower Cretaceous fine grained sandstone of c 45m thickness overlying Gault clays. It was formed as a prograding shoreline as it moved from marine shelf deposits to shoreface sands (Insole *et al* 1998, 12). The upper greensand strata provide some of the best building stone on the Island. Quarries have been dug at numerous locations across the Island, but are mainly located in the area of Ventnor – St Boniface – Shanklin in the south-east and Whitcombe – Gatcombe to the north (BGS 2002).
- 4.2.22 **Barnes High Sandstone** is a member of the Wealdon Group and is amongst the oldest deposits on the Island and dates to the early Cretaceous period (Insole *et al* 1998, 4–6). It crops out at Redcliff and Sandown in the east and at Brighstone Bay in the west. The group contains the Wessex Formation, which is a non-marine formation laid down in ponds or flood events of an ancient river flowing across a low relief floodplain. The Vectis Formation contains the thick yellow to grey sandstones of the Barnes High Sandstone Member, representing a lagoonal delta environment between two lagoonal deposits (Cowleaze Chine Member and Shepherds Chine Member).

### 4.3 Overview of past and present aggregate extraction

#### *Arreton Valley*

- 4.3.1 The Arreton Valley study area south-east of Newport (Fig 3) contains known commercially viable superficial aggregate deposits in the form of a large area of Terrace Gravel associated with the Eastern Yar. This terrace was exploited for sand and gravel during the later 20th century at the Horryford Gravel Pit and Hale Manor Farm quarry. Aggregate is not currently extracted at either extraction site (BGS 2002), but Hale Manor Farm was identified as a possible future site of extraction in the UDP, where it was estimated that 500,000 tonnes of reserves were present on the site. The UDP noted that the area is rich in archaeological remains (IOW 2001). Local sand and gravel extraction sites dating to the mid-19th to early 20th centuries have been identified within smaller areas of Terrace Gravel in the north and south of the study area.
- 4.3.2 Arreton Valley also contains inferred sources of superficial aggregate potentially located in sand and gravel deposits beneath the alluvium of the Eastern Yar. The Ferruginous Sands have also been identified as an inferred resource for aggregate extraction. The commercial viability of these inferred resources is not currently known and will depend upon further investigation.

#### *Atherfield Coastal Plain*

- 4.3.3 The Atherfield Coastal Plain study area in the south part of the Island does not contain any known past or current aggregate extraction sites. It contains inferred sources of superficial aggregate deposits in the form of a large area of Blown Sand, a small area of Terrace Gravel and possible sub-alluvial Terrace Gravels along former tributaries of the Western Yar. The study area is also located upon an area of Ferruginous Sands solid geology, which has also been identified as an inferred aggregate resource. None of these resources have been investigated to determine their commercial viability.

### *Brading Haven and Bembridge Isle*

- 4.3.4 Brading Haven and Bembridge Isle in the eastern part of the Island contains a variety of aggregate bearing geologies which have undergone extraction in the past, although there are no current aggregate extraction sites, nor any sites proposed for extraction by the UDP. The BritPits Database indicates that in the 20th-century sand was extracted from the Blown Sand deposits at St Helen's Sand Pit and also from Longlands Sand Pit located in the Bracklesham Group and Barton Group geology. Ordnance survey maps indicate localised extraction of sand at St Helen's from the mid-19th century.
- 4.3.5 The BritPits Database indicates that Limestone was extracted east of Brading during the 20th century and Ordnance Survey maps indicate that sandstone was extracted from the Upper Greensand at Whitecliff north of Yaverland. Hard stone resources are inferred as a potential resource for crushed rock aggregate.

### *East Wight Chalk Ridge*

- 4.3.6 The East Wight Chalk Ridge study area in the central-eastern part of the Island contains two sites identified in the Isle of Wight UDP (2001) as commercially viable and subject to current Chalk extraction. Of these two sites only the Duxmore Chalk Pit on Mersley Down had ongoing chalk extraction in 2002 (BGS 2002), the planning approval for Downend Chalk Quarry having expired on 30 September 2000 (IOW 2001). The Ordnance Survey maps indicate that chalk was extracted all along the Ridge from the mid-19th century. Ordnance Survey maps also indicate that the Upper Greensand sandstone was quarried during the 19th and 20th centuries where it crops out along the southern edge of the chalk ridge.
- 4.3.7 Overlying the chalk bedrock along the ridge, the BGS mapping indicates there are some localised patches of Angular Flint Gravel, but there is no evidence that these have ever been extracted and there is no indication whether they are commercially viable.

### *Freshwater Isle*

- 4.3.8 There is no current or ongoing extraction in the Freshwater Isle study area on the western tip of the Island. Past extraction was also localised and of limited nature. The BGS report (2002) shows an inactive quarry located in the Bracklesham Group and Barton Group geology at Nodwell, and the Ordnance Survey maps indicate the presence of early 20th-century extraction sites in the same geology. The Ordnance Survey and BritPits Database indicate that a discrete area of River Terrace Deposits on Headon Hill were subject to intensive extraction of sands and gravels from a number of local pits of the late 19th and early 20th centuries, but none of the other small areas of river Terrace Gravels within the study area have been subject to extraction.

### *Newchurch Sandown*

- 4.3.9 Newchurch Sandown study area in the central-eastern part of the Island contains a variety of aggregate resources. Superficial deposits include Terrace Gravels associated with the Eastern Yar and possible sub-alluvial gravel deposits. Bedrock deposits include chalk and Lower Greensand Sandrock Formation in the north of the study area, adjacent to the East Wight chalk ridge, and Ferruginous Sands formation across the south.
- 4.3.10 Sand is currently being extracted from the Lower Greensand Sandrock Formation at Knighton Sand Pit (BGS 2002), where considerable reserves of sand (1,800,000 tonnes) were identified with scope for limited expansion (IOW 2001). Ordnance Survey maps indicate small local extraction in the mid-19th century.
- 4.3.11 The BritPits Database records sand and gravel extraction at Parsonage Farm, although the BGS report (2002) and the UDP indicate that peat was extracted. Sand



and gravel may have been extracted during an earlier phase of work.

- 4.3.12 Other than possible extraction at Parsonage Farm, the only extraction site for Terrace Gravels is a historic extraction site shown on Ordnance Survey maps in the east of the study area, within the Ferruginous Sands geology, adjacent to the alluvial deposits of the Eastern Yar. This extraction site probably exploited an unmapped area of Terrace Gravels.
- 4.3.13 Along the northern boundary of the study area chalk was exploited in a series of small local pits shown on Ordnance Survey maps from the mid-19th century. At least three of these pits (the Morton Marl Pit, Kern Marl Pit and Morton Chalk Pit) survived into the mid-20th century and were recorded on the BritPits Database.
- 4.3.14 Ordnance Survey mapping indicates that the hard stone of the Upper Greensand was also exploited locally from the mid 19th century where it crops out along the edge of the chalk ridge north-west of Knighton and west of Brading.

#### *Northern Lowlands*

- 4.3.15 Although the Northern Lowlands study area encompasses almost half the northern part of the Island, aggregate resources are very limited. They comprise Terrace Gravels along the Solent, isolated patches of Plateau Gravels, partially or wholly sub alluvial deposits beneath the main rivers and the Bracklesham Group and Barton Group adjacent to the chalk ridge. Past aggregate extraction (3.3.9) has revealed four small areas of probable Plateau Gravel and five areas of probable Terrace Gravel associated with current river channels. These included a very large extraction site at Shalfleet, possibly associated with records of extraction in the Newtown River bed (BGS 2002).
- 4.3.16 There is no current extraction within the Northern Lowlands, and former extraction sites are limited. The BGS (2002) identifies two sand and gravel extraction sites at Lynn (North and South), the Newtown River bed, Burnt Wood, Rew Street, Crokers Farm and Cothy Butts. Historic extraction sites from the mid-19th and 20th century are more extensive and occur sporadically within the Bracklesham Group and Barton Group as well as almost all patches of Terrace and Plateau Gravels.

#### *South West Wight Coastal Zone*

- 4.3.17 The only extraction site in the South West Wight Coastal Zone, along the south-western coast of the Island, is a sandstone quarry shown on Ordnance Survey mapping from the mid-20th century. The quarry was used to exploit the Barnes High Sandstone of the Wealdon Group. No other extraction has taken place, despite the presence of River Terrace Deposits associated with a former tributary of the Western Yar.

#### *South Wight Downland*

- 4.3.18 There are currently no active extraction sites in the South Wight Downland study area, in the area of chalk geology in the south-eastern part of the Island. There is evidence from Ordnance Survey maps that the superficial Angular Flint Gravel, and underlying Chalk and Upper Greensand sandstone deposits were exploited from the mid-19th century on Rew Down and St Boniface Down. The extraction of chalk during the same period was more diffuse, and spread out across the geology. Hard sandstone was extracted at a number of quarries where it cropped out around the periphery of the study area.

#### *South Wight Downland Edge*

- 4.3.19 There are currently no active extraction sites the South Wight Downland Edge study area, in the south-eastern part of the Island. Historically the Sandrock Formation which comprises much of this study area has provided aggregate resources. By the late 19th century aggregate was extracted at Sibbecks Farm and Smarts Cross

Sand Pit, at South Ford Farm Pits by 1912 and at Sandford Sand Pit by the mid-20th century. During the late 20th-century sand was also extracted at Sainham Farm. Hard stone was extracted from sandstone deposits on the edge of the study area at Appuldurcombe by the late 19th-century.

#### *South Wight Sandstone*

- 4.3.20 The South Wight Sandstone study area in the central-southern part of the Island, contains important reserves of aggregate, including a large band of north-south aligned River Terrace Gravels associated with the Medina river in the eastern part of the study area and a band of Sandrock Formation in the north-west. In the north east, the important aggregate deposits at St George's Down are amongst the most extensively and longest exploited on the Island.
- 4.3.21 The Terrace Gravels at St George's Down have a long history of extraction from the late 19th-century to the present day. Other late 19th-century extraction sites at Bleak Down are associated with Medina Terrace Gravels and the Rookley Sandpit may have extracted sand from the Medina Terrace Gravels or underlying Sandrock Formation.
- 4.3.22 Extraction continued at the important centres of St George's Down, Bleak Down and Rookley into the mid 20th-century and sands and gravels continue to be extracted on St George's Down at St George's Lane and Garrets Farm (BGS 2002). From the mid to late 20th century the Sandrock Formation was extracted as sand at Berry Copse Sand Pit and at Haslett Farm, south of Shorwell. Haslett Farm continued to be exploited until at least 2002 when it was recorded in the BGS *Mineral Resource Information*.
- 4.3.23 Deposits of chalk and sandstone are very limited and are primarily located in the north-western part of the study area. Chalk was extracted at Castle Pit and the Mount Joy Marl Pit by the late 19th century and early 20th century respectively and sandstone was extracted at Whitcombe during the 20th century.

#### *Thorley Wellow Plain*

- 4.3.24 Thorley Wellow Plain in the western part of the Island primarily comprises Bracklesham Group and Barton Group solid geologies, with some overlying superficial deposits of Terrace Gravels associated with the Western Yar in the western part of the study area. The distribution of historic extraction sites identified from Ordnance Survey maps (1912–1939) indicates that the Western Yar Terrace Gravels are more extensive, than indicated by the BGS mapping.
- 4.3.25 Historically aggregate has been extracted from the Bracklesham Group and Barton Group. Although these geologies have limited potential to provide economically viable aggregate in modern terms, three small extraction sites originated in the late 19th or early 20th century; at least two were active by 1912, and the third was active by 1939.
- 4.3.26 Thorley Wellow Plain also contains a large deposit of Bembridge Limestone, which has been exploited at several locations in the past. Limestone was extracted at a small pit south of Thorley by 1912 and during the 20th century three quarries at Tapnell quarry, Churchills Farm and Prospect Quarry had been opened west of Shalcombe. Limestone continues to be extracted for crushed rock at Prospect Quarry, but the other sites are no longer active.

#### *Undercliff*

- 4.3.27 The Undercliff study area along the southern coast of the Island primarily comprises Sandrock Formation, which has been extracted as a source of sand elsewhere on the Island. To the north-east and north-west, the study area includes some elements of the Upper Greensand formation on the edge of the South Wight Downland. There is no current extraction and there is no evidence of past exploitation, although in the

mid-20th century sandstone was extracted from the Upper Greensand at two sites at Niton, but these are no longer active.

#### *West Wight Chalk Downland*

- 4.3.28 West Wight Chalk Downland in the centre-west of the Island is located on chalk of the West Melbury and Lewis formations, with overlying deposits of superficial Angular Flint Gravel. The study area has a long history of localised, small-scale aggregate extraction from the late 19th-century onwards, mostly associated with chalk. A limited number (27 out of 163 or 17%) may also have exploited the Angular Flint Gravel.
- 4.3.29 Aggregate continues to be extracted as gravel from Cheverton Farm; as chalk from both Grey and White Chalk subgroups at Shorwell Chalk Pit and Cheverton near Shorwell; and from White Chalk subgroup at Newbarn Farm, Calbourne.

#### *West Wight Downland Edge*

- 4.3.30 West Wight Downland Edge study area in the central-western part of the Island, contains a variety of geologies outcropping along the edge of the downs. In the west, Ferruginous Sands are dominant; on the northern and western edge is the West Melbury chalk formation. The West Melbury chalk is underlain by successive layers of Upper Greensand, Gault Clay, Carstone (sandstone) and sandrock series, which outcrop to the south and east between the Melbury Chalk formation and the Ferruginous Sands. To the east, the study area comprises mainly West Melbury Chalk and Upper Greensand.
- 4.3.31 There are no active extraction sites within this study area, but the outcrops have historically been exploited for chalk from the West Melbury formation and sand from the Sandrock Formation, along the northern boundary of the study area. Many of these sites date to the late 19th or first half of the 20th century. Extraction sites at Garstons, Tolt Copse and Chillerton in the east of the study area subsequently developed into larger quarries of the mid 20th century.
- 4.3.32 Sandstone was also extracted from four sites on the Upper Greensand, where it outcrops along the edge of the scarp. The oldest site, at Rancombe, dates to the late 19th century or earlier, and continued to be exploited until the 20th century. During the 20th century sandstone was also extracted at Gatcombe, Vayres and Gat Cliff in the east of the study area.

## 5 Archaeological Resource Assessment: The Historic Environment Record

### 5.1 The nature of the HER

- 5.1.1 The Historic Environment Record (HER) provides the most comprehensive dataset for any desk-based investigation of archaeological remains within the aggregate areas of the Isle of Wight, but the origin and nature of HER data imposes certain limitations.
- 5.1.2 HERs and their predecessors are primarily a record of what has been found. It cannot record remains which have been lost without record or those which have yet to be identified. New assets are being recovered all the time and these are likely to change our understanding. The results presented in the rest of this report represent current understanding at the time of writing (2009–10), which is likely to change as future discoveries improve our understanding of the archaeology of the Island and the aggregate resource.

#### *History*

- 5.1.3 The HER was formed in 2005 from its predecessor the Sites and Monuments Record (SMR), which was created in 1981. SMRs were originally based on the Ordnance Survey field inspector's records and were subsequently developed by local councils with the addition of newly discovered sites and excavations. During these early stages technological limitations meant that objects were not often recorded in detail and aspects of the historic landscape were not recorded at all.
- 5.1.4 More detailed recording of archaeological fieldwork began in the 1990s, when changes to national Planning Policy Guidance (PPG15 and PPG16) increased the number of developer funded investigations and management of archaeological remains became embedded in the planning system. More recently the emphasis has been on a more holistic understanding of the Historic Environment comprising both built and buried remains within an entire landscape.
- 5.1.5 Under new national Planning Policy (PPS5) HERs now record diverse information about the archaeological landscape and the varied types of investigations which provide this data. They include a variety of archaeologically significant features from findspots of individual objects, to multi-period archaeological sites, Listed Buildings and Historic Landscape Characterisation (HLC). However, HERs do not have the resources to undertake exhaustive revisions of more simplistic entries, originally compiled under earlier systems. As a result the HER contains a variable level of detail and precision.

#### *Sources*

- 5.1.6 The HER only contains those assets which have been identified through investigation or found by chance and recorded. It is therefore a record of work undertaken rather than representing the spatial distribution of all archaeological remains present within the ground. Those assets within the HER (i.e. those which have been identified or found already) are therefore a sample of the total remaining archaeological evidence (i.e. those assets which have survived, have been found or could potentially be found in future), which is itself a sample of the totality of anthropogenic remains which were originally created by human activity (i.e. all archaeological remains which have ever existed including those previously lost to decay and past human activity).

#### *Date ranges*

- 5.1.7 The HER currently records as precise a date range as possible for new assets, but precise dates are often not available for older assets and a number of earlier HER

assets therefore have very broad date ranges. The following date ranges represent a variation of usual HER practice to facilitate querying the database. Negative dates (e.g. –4000) reflect a date ‘BC’. Date ranges do not overlap (e.g. Neolithic is –4000 to –2351, Bronze Age is –2350 to –750) to allow for simple period-based searches. As part of the project, the date ranges for the overlapping Late Bronze Age and Early Iron Age and undifferentiated Migration period and Early Medieval period assets were separated to improve the precision of the asset density figures (see above 3.5.7 to 3.5.11). Where possible, assets have been dated as tightly as possible using precise date ranges obtained from scientific or typological dating and recorded as such on the HER:

- Prehistoric (–500000 to 42)
- Early Prehistoric (i.e. Palaeolithic and Mesolithic) (–500000 to –4001)
- Palaeolithic (–500000 to –10001)
- Lower Palaeolithic (–500000 to –1500001)
- Middle Palaeolithic (–150000 to –40001)
- Upper Palaeolithic (–40000 to –10001)
- Mesolithic (–10000 to –4001)
- Early Mesolithic (–10000 to –7001)
- Late Mesolithic (–7000 to –4001)
- Late Prehistoric (i.e. Neolithic, Bronze and Iron Age) (–4000 to 42)
- Neolithic (–4000 to –2351)
- Early Neolithic (–4000 to –3251)
- Middle Neolithic (–3250 to –2851)
- Late Neolithic (–2851 to –2351)
- Bronze Age (–2350 to –751)
- Early Bronze Age (–2350 to –1501)
- Middle Bronze Age (–1500 to –1001)
- Late Bronze Age (–1000 to –751)
- Iron Age (–750 to 42)
- Early Iron Age (–750 to –401)
- Middle Iron Age (–400 to –101)
- Late Iron Age (–100 to 42)
- Roman (43 to 409)
- Migration (410 to 800)
- Early Medieval (801 to 1065)
- Medieval (1066 to 1539)
- Post Medieval (1540 to 1900)
- Modern (1901 to 2050)
- Unknown

### *Overview of Fieldwork within the Project Area*

- 5.1.8 The nature and origin of archaeological fieldwork across the Project Area has changed dramatically from its mid-18th century beginnings to the present day. The earliest reported investigations concerned chance finds, such as the Arreton Down Bronze Hoard, discovered during quarrying on Arreton Down in c 1735 and initially published by the Society of Antiquaries (Cooke 1735, 129). Subsequent late 18th-century and early 19th-century antiquarian investigations focussed on barrows and the migration period (c 410–800AD) cemetery at Chessell Down (Basford 1980, 7–

- 8). During the late 19th-century and early 20th-century excavations of six of the Island's Roman villas were undertaken and observations on a number of hoards and other features of archaeological interest were recorded. It has been noted (Lyne 2008, 1) that the published accounts of these investigations are of variable quality. This had an impact upon the data contained in the HER, particularly where unpublished notes are not available to supplement the published records.
- 5.1.9 From the 1920s, the amount of archaeological work on the Island began to increase with the work of individuals such as Ambrose Sherwin (curator of the Carisbrooke Castle Museum in the 1920s and 30s), Hubert Poole and G.C. Dunning. Dunning, a professional archaeologist, contributed much to the archaeology of the Island recording excavations at sites of many periods from the Bronze Age to the medieval period (Dunning 1927; 1931; 1932; 1933; 1939; 1947; 1951. Poole and Dunning 1937). Poole collected large numbers of flint implements (including many from quarries and sand and gravel pits) and wrote several articles on flint objects and industries from the Isle of Wight (Poole 1925; 1931; 1936; 1938). In addition to numerous articles on the archaeology of the Island (Sherwin 1926; 1929; 1930; 1931; 1933; 1936a; 1942), Sherwin produced the 'Archaeological Survey of the Isle of Wight', an unpublished manuscript in the Society of Antiquaries' library, which lists all the Bronze Age, Iron Age, Roman and Anglo-Saxon (migration and early medieval periods) antiquities of the Island as understood 1936–42. During the same period of time, interest in the archaeology of the Island increased, encouraged by the Isle of Wight Natural History and Archaeological Society (IWNHAS) and its publication the *Proceedings of the Isle of Wight Natural History and Archaeological Society (PIWNHAS)* from 1928.
- 5.1.10 Following World War II the level of archaeological activity on the Isle of Wight decreased, although some research excavations were undertaken by local archaeologists (Fennelly 1969a; 1969b; 1971) and some rescue excavations were conducted by archaeological organisations (Alexander and Ozanne 1960; Drewett 1970). In 1973, systematic professional investigation and management of the Island's archaeology began with the appointment of an assistant curator with responsibility for archaeology at Carisbrooke Castle Museum (Basford 1980, 8). In 1981 the Isle of Wight Council created the Isle of Wight County Archaeology Service, which took over responsibility for the historic environment from the Carisbrooke Castle Museum. In the same year, the Isle of Wight Sites and Monuments Record (SMR) was created and subsequently developed into the Isle of Wight HER in 2005.
- 5.1.11 Between 1973 and 1991, funding and manpower for investigation of Island archaeology was limited. Despite these issues, work was carried out on threatened sites wherever possible (*ibid*). With the introduction of PPG16 and the inclusion of archaeology as a material consideration within the planning process, archaeological excavation on the Island was increasingly funded by developers.
- 5.1.12 Although developer funding has increased the level of archaeological investigation on the Island it has naturally resulted in a geographical bias towards areas associated with residential or commercial development, road schemes and pipelines. This has had two effects on the distribution of archaeological investigations across the Island:
- Investigations in advance of development for residential, commercial and industrial purposes are typically located outside protected landscape. Protected landscape coincidentally often includes large areas of the aggregates resource.
  - Investigations are focussed on urban areas, which are excluded from the aggregates resource, but are foci for recent development.
- 5.1.13 Developer funded investigations can be required in advance of aggregates extraction, but the recently completed Backlogs project (see Appendix 4) has shown that since 1991 this has been limited and only three have proven necessary. Thus

neither general developer funded archaeological investigation nor aggregates extraction itself have added greatly to current archaeological understanding of the aggregates resource, and current archaeological understanding of the aggregates resource relies primarily on archaeological fieldwork undertaken during the early 20th-century and earlier.

- 5.1.14 Although most antiquarians and early excavators took trouble to record their work as well as possible at that time, they were hampered by the technology of the period and the lack of the scientific dating techniques that are commonly used today. Knowledge has also increased and relative dating techniques (including pottery and artefact typologies) refined. As a result the extant records of 19th and early 20th-century archaeological investigations do not necessarily provide the dating information that could be retrieved from more recent investigations and this has an impact upon the nature of the data available to the HER. At the same time, antiquarian and early 20th century investigations were typically included in the HER at a very early stage in its development. Due to the technological limitations, the early HER records relating to these investigations were often limited in scope and this continues to affect the nature of the HER record today.

#### *Individual finds*

- 5.1.15 The Isle of Wight HER contains large numbers of individual archaeological objects/artefacts found outside of stratified contexts. The numbers of such objects recovered has increased in recent decades with the increase in metal-detecting. Since 2003, improved recording resulting from the introduction of the Portable Antiquities Scheme (PAS) has ensured more metal-detected finds are recorded in the HER.
- 5.1.16 The relationships between individual objects or artefact scatters and the presence or absence of an underlying site is not clear. Chance finds or metal detected artefacts may reveal the location of significant and complex archaeological sites (including settlements, religious and funerary sites) but identifying these types of buried sites from individual chance finds is difficult. In some cases the high concentration of assets of a particular type or period may reveal that a complex site is nearby, but with individual chance finds or artefact scatters the issue is less clear.
- 5.1.17 Only where a systematic fieldwalking or metal detecting survey has been undertaken across an area is it possible to suggest the location of more complex settlement or funerary sites on the basis of relative artefact concentrations. Additional systematic fieldwalking and metal detecting surveys are therefore needed and future investigations would need to record the extent of the area surveyed as well as the locations of the finds. The location of the finds and the areas surveyed could then be plotted and locations with higher concentrations of artefacts identified and recorded in the HER as potential sites, with appropriate data on the likely date of the site extrapolated from the date of the finds recovered. This would allow potential sites to be identified with the confidence that the higher artefact concentrations represent archaeological remains and not the working pattern of the investigators. It would also avoid the over inflation of asset densities which resulted in the present project.

## 6 The effect of HER enhancement

### 6.1 Introduction

6.1.1 During 2009, four programmes took place to enhance the HER data within the project database.

- Cross-referencing the HER with the NMR and adding any additional assets from the NMR to the HER (see 3.5.20 to 3.5.22).
- NMP survey (see 3.5.25 to 3.5.28 and Appendix 5) to identify all assets visible as cropmarks, earthworks and soilmarks on aerial photographs within two sample areas on the Island. Assets identified during the NMP survey were cross-referenced with the HER and existing HER entries were updated and new assets added.
- A Backlogs Project to identify and quantify any archaeological investigations resulting from past extraction and include any unknown examples in the HER and project database (see 3.5.23 and 3.5.24 and Appendix 4).
- Cleaning and refining project database entries (see 3.5.1 to 3.5.19) to enhance resolution.

6.1.2 Table 3 provides the asset densities across the aggregates resource prior to the project and the percentage change in the asset densities after HER enhancement. The table shows significant increase in the number of assets across all periods, particularly the Mesolithic and migration and early medieval periods.

*Table 3 Effect of HER enhancement and NMP upon asset density*

Period	Number of assets		Percentage change
	Before	After	
Palaeolithic	29	38	31.03
Mesolithic	4	60	1400.00
Neolithic	82	114	39.02
Bronze Age	341	473	38.71
Iron Age	37	69	86.49
Roman	110	250	127.27
Migration	0	29	N/A
Early Medieval	0	11	N/A
Medieval	181	319	76.24
Post Medieval	1481	1607	8.51
Modern	287	421	46.69
Prehistoric and Roman	970	1424	46.80
Bronze Age and Iron Age	380	534	40.53
Migration and Early medieval	23	92	300.00
Medieval to Modern	1990	2242	12.66
Historic	2013	2381	18.28
Undated or Uncertain	662	642	-3.02
Total assets	3646	4447	21.97
Total assets of known date	2984	3805	27.51

### 6.2 HER Enhancement

6.2.1 HER enhancement comprised the modification of the HER within the project database. The rationale and methodology for this process is detailed in section 3.5 above and included:



### *The NMR*

- 6.2.2 The NMR database for the Isle of Wight was obtained and the assets in the project database cross-referenced with the NMR data (see above 6.2.1). This component had a very limited effect on the number and dating of assets in the project database. The NMR data was generally found to be much less extensive and less reliable than the HER data, including for example less precise grid references. Where discrepancies between the HER and NMR data were identified these were referred back to the HER Officer to investigate using the grey literature and project reports in the HER. These investigations revealed that the HER data was the more reliable dataset as well as containing a greater number of assets. Only five additional assets were identified which were not previously present in the HER. The incorporation of the NMR database has consequently had little effect upon the asset numbers, asset densities or asset dating within the project database.

### *NMP*

- 6.2.3 NMP survey was undertaken across two sample areas, comprising a total of 75km<sup>2</sup>. this is equivalent to 41% of the aggregates resource (Fig 4) and 19% of the Island. It should be noted that the NMP will only affect the asset densities within the study areas within which it was undertaken:
- Arreton Valley (90% included)
  - East Wight Chalk Ridge (100%)
  - Newchurch Sandown (70% included)
  - South Wight Sandstone (30% included)
  - Thorley Wellow Plain (60% included)
  - West Wight Chalk Downland (80% included)
  - West Wight Downland Edge (33% included)
- 6.2.4 The results reveal that NMP has had a significant effect upon the asset densities.

## **6.3 Effects upon asset densities**

### *Number of assets*

- 6.3.1 The number and therefore the density of assets increased across all periods. This was due to the identification of additional assets through the NMP and the inclusion of newly dated assets during HER enhancement.

### *Undated assets*

- 6.3.2 The unmodified Isle of Wight HER contained a large number of undated assets (662 across the aggregates resource). These represented 18% of the total assets across the aggregates resource. Excluding buildings (which are rarely undated and usually relate to the Medieval to Modern periods), the undated assets represent 25% of the assets across the aggregates resource. The number of undated assets has been reduced by the project. In some cases the HER contained a date for the asset (in the description for example), but this was not present in the date columns of the database. Including relevant dates within these columns resulted in an increase in the number of dated asset.
- 6.3.3 The NMP had a limited impact upon the number of dated assets because many of the assets identified during the survey cannot be dated precisely without further investigation. To provide precise dates for assets and refine understanding of the development of the Island, further targeted investigation of identified assets will need to take place.

### *Separation of periods*

- 6.3.4 During the HER enhancement the overlap between the Bronze and Iron Ages was removed to facilitate the accurate identification of assets of these different periods. This had a positive impact, increasing the number of dated assets of both periods with the greatest increase in Iron Age assets. Following this modification to the expression of the data, those assets which had genuinely been dated to the transitional period between the Bronze and Iron Age and those assets which were dated to one period or the other could be identified with confidence.
- 6.3.5 The HER enhancement also involved the separation of pagan migration period assets from Christian early medieval assets in order to demonstrate more accurately the relative asset densities of these periods. Following HER enhancement, the separation of migration and early medieval assets resulted in a large percentage increase in the asset densities of these periods.

### *Specific effects*

- 6.3.6 The following specific effects of the NMP and HER enhancement were noted during the project:
- The creation of separate asset numbers for each chance find or metal detected artefact particularly increased the asset densities of later periods (i.e. Roman to modern) to which most metal artefacts belong. This has allowed particular groups of assets of given periods to be identified and improved our ability to identify areas of associated activity. The actual relationship of such concentrations of finds to underlying archaeological sites needs to be confirmed by further archaeological investigation.
  - The HER enhancement and NMP had a less pronounced effect upon assets of the post-medieval period, mainly because these were already well understood and there are well established parameters as to which assets should be included in the HER. Older assets are more difficult to date and so are more likely to appear as uncertain, while consideration continues to be given as to which modern assets should be included.
  - It was noted that NMP had less impact on those periods which had previously been relatively well understood (e.g. Bronze Age, Roman or Modern period). NMP provides a systematic approach identifying previously unrecorded assets. Where a larger proportion of visible assets have already been recorded, NMP had less impact on asset densities.
  - NMP also had a limited impact on earlier prehistoric (i.e. Palaeolithic and Mesolithic) periods. Assets of these periods are typically deeply buried and do not comprise large earth based features (such as barrows, long ditches, mounds, henges and earthwork banks) which are visible to NMP survey. Although some large earthworks are dated to the Neolithic period, these are limited in number and range than in later periods.

## 7 Archaeological Resource Assessment: Asset Densities

### 7.1 Introduction

- 7.1.1 Asset densities for the entire aggregates resource and each study area were compiled from the Isle of Wight HER in the form of assets per km<sup>2</sup> for the Island, broken down by period. A calculation of asset density by study area and period was made after the completion of the NMP project in 2010. The number of assets in each study area is shown in Table 4 and the asset densities in Table 5.
- 7.1.2 The assets include 'monuments' (comprising archaeological sites as well as other features of interest), findspots of individual objects, natural features and buildings. Of these types, standing buildings typically date from the medieval period onwards and are a more commonly occurring type in the post-medieval and imperial periods. As the HER records the current state of archaeological work and knowledge, even monuments need not represent sites on a one to one basis. A single entry may comprise several 'sites' if there is currently insufficient information to distinguish between the different sites. Similarly, what is in reality a single site can be represented by multiple HER entries if there is insufficient evidence to indicate the separate elements of the site form coherent whole and they have therefore been entered individually. Where there is generally less information available (as in earlier periods), there is therefore likely to be an overall underestimation of the number of assets; and where there is more information available (as in later periods) there is likely to be an overall overestimation of the number of assets.

### 7.2 Asset Densities

- 7.2.1 The asset density for all periods across the entire aggregates resource for assets of known date was 21.0 assets per km<sup>2</sup>. The density of all assets across the entire aggregates resource was 24.54 assets per km<sup>2</sup>.

#### *Chronological trends*

- 7.2.2 As would be expected of the earliest and most remote period, the Palaeolithic period has the lowest asset density (0.21 assets per km<sup>2</sup>). The density of assets then increases as the periods become more recent until the Bronze Age (2.61 assets per km<sup>2</sup>). The asset density rises slightly from 0.38 assets per km<sup>2</sup> in the Iron Age to 1.38 assets per km<sup>2</sup> in the Roman period, before dropping again to reach its lowest point in the early medieval period (0.06 assets per km<sup>2</sup>). Asset densities then rise in the medieval period (1.76 assets per km<sup>2</sup> for all assets), with the highest density of all during the post-medieval period (8.87 assets per km<sup>2</sup>). Asset density drops again in the modern period to 2.32 assets per km<sup>2</sup>.
- 7.2.3 The general trend is thus a steady rise in asset density from the earliest period to the most recent historic periods. Older assets are more likely to be removed by past activity, they may be deeply buried (precluding discovery) and are therefore less likely to be present in the HER. Older assets are also more likely to suffer from dating uncertainty.
- 7.2.4 There are some anomalies in the general trend of increased asset density with increased proximity to the present, and these may indicate anomalies within the data resulting from investigation practices or genuine aspects of past occupation and activity:

Table 4 Raw Figures. Number of assets within the aggregates resource (by ALSF study area) after HER enhancement and NMP

Period	AV	ACP	BHBI	EWCR	FI	NS	NL	SWWCZ	SWD	SWDE	SWS	TWP	Undercliff	WWCD	WWDE	Entire aggregate resource
Palaeolithic	2	2	7	0	1	2	6	11	0	0	3	1	1	2	0	38
Mesolithic	1	1	2	0	0	2	10	21	0	0	11	2	0	4	6	60
Neolithic	7	2	7	7	1	17	14	5	6	0	15	5	2	15	11	114
Bronze Age	5	9	8	85	9	6	28	10	42	1	24	12	3	223	8	473
Iron Age	3	2	8	15	1	16	5	7	2	0	1	1	2	10	4	69
Roman	9	5	7	48	4	46	15	12	1	1	8	7	4	59	26	250
Migration	0	0	1	5	0	0	0	0	0	0	0	3	0	11	9	29
Early Medieval	1	0	0	3	0	1	2	0	0	0	0	0	0	4	0	11
Medieval	19	9	24	12	1	27	59	17	20	9	32	10	6	46	28	319
Post-medieval	112	48	81	73	54	87	90	117	70	55	286	55	68	337	74	1607
Modern	25	5	42	40	14	8	45	15	22	11	25	9	5	142	13	421
Prehistoric and Roman	65	47	60	170	19	108	143	85	61	3	109	40	27	415	72	1424
Bronze Age and Iron Age	19	8	9	97	10	18	30	13	44	1	25	11	5	232	12	534
Migration and early medieval	1	0	1	14	0	2	20	1	1	0	2	5	0	26	19	92
Medieval to Modern	158	53	129	117	73	120	180	127	92	132	336	79	47	478	121	2242
Historic	162	56	132	136	74	125	170	134	103	138	347	85	49	518	152	2381
Uncertain	67	19	13	65	5	52	120	49	34	13	79	28	2	310	70	642
Total assets	294	122	205	371	98	285	433	268	198	154	535	153	78	1243	294	4447
Total assets of known date	227	103	192	306	93	233	313	219	164	141	456	125	76	933	224	3805

Table 5 Asset Density across the aggregates resource (per km2 by ALSF study area) after HER enhancement and NMP

Period	AV	ACP	BHBI	EWCR	FI	NS	NL	SWWCZ	SWD	SWDE	SWS	TWP	Undercliff	WWCD	WWDE	Entire aggregate resource
Palaeolithic	0.13	0.53	0.86	0.00	0.38	0.18	0.20	2.19	0.00	0.00	0.09	0.13	0.79	0.07	0.00	0.21
Mesolithic	0.06	0.27	0.25	0.00	0.00	0.18	0.33	4.18	0.00	0.00	0.33	0.26	0.00	0.14	0.82	0.33
Neolithic	0.44	0.53	0.86	1.56	0.38	1.56	0.46	1.00	0.52	0.00	0.45	0.64	1.57	0.52	1.49	0.63
Bronze Age	0.31	2.39	0.98	18.93	3.38	0.55	0.92	1.99	3.66	0.11	0.72	1.54	2.36	7.69	1.09	2.61
Iron Age	0.19	0.53	0.98	3.34	0.38	1.46	0.16	1.39	0.17	0.00	0.03	0.13	1.57	0.34	0.54	0.38
Roman	0.56	1.33	0.86	10.69	1.50	4.21	0.49	2.39	0.09	0.11	0.24	0.90	3.15	2.04	3.53	1.38
Migration	0.00	0.00	0.12	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.38	1.22	0.16
Early Medieval	0.06	0.00	0.00	0.67	0.00	0.09	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.06
Medieval	1.19	2.39	2.95	2.67	0.38	2.47	1.93	3.39	1.75	0.95	0.96	1.28	4.72	1.59	3.80	1.76
Post Medieval	7.00	12.77	9.96	16.26	20.30	7.96	2.94	23.31	6.11	5.81	8.59	7.06	53.54	11.62	10.05	8.87
Modern	1.56	1.33	5.17	8.91	5.26	0.73	1.47	2.99	1.92	1.16	0.75	1.16	3.94	4.90	1.77	2.32
Prehistoric and Roman	4.06	12.50	7.38	37.86	7.14	9.88	4.68	16.93	5.32	0.32	3.28	5.13	21.26	14.32	9.78	7.86
Bronze Age and Iron Age	1.19	2.13	1.11	21.60	3.76	1.65	0.98	2.59	3.84	0.11	0.75	1.41	3.94	8.00	1.63	2.95
Migration and Early medieval	0.06	0.00	0.12	3.12	0.00	0.18	0.65	0.20	0.09	0.00	0.06	0.64	0.00	0.90	2.58	0.51
Medieval to Modern	9.88	14.10	15.87	26.06	27.44	10.98	5.89	25.30	8.03	13.94	10.10	10.14	37.01	16.49	16.44	12.37
Historic	10.13	14.89	16.24	30.29	27.82	11.44	5.56	26.69	8.99	14.57	10.43	10.91	38.58	17.87	20.65	13.14
Uncertain	4.19	5.05	1.60	14.48	1.88	4.76	3.93	9.76	2.97	1.37	2.37	3.59	1.57	10.69	9.51	3.54
Total assets	18.38	32.45	25.22	82.63	36.84	26.08	14.16	53.39	17.28	16.26	16.08	19.64	61.42	42.88	39.95	24.54
Total assets of known date	14.19	27.39	23.62	68.15	34.96	21.32	10.24	43.63	14.31	14.89	13.70	16.05	59.84	32.18	30.43	21.00
Area km <sup>2</sup>	16	3.76	8.13	4.49	2.66	10.93	30.57	5.02	11.46	9.47	33.28	7.79	1.27	28.99	7.36	181.18

**Notes**

Low density values are **red** (more than 10% below the density for the entire aggregates resource).

Lower asset densities are in **red italics** (more than 20% below the density for the entire aggregates resource)

Very low asset densities are in **red bold italics** (more than 50% below the density for the entire aggregates resource)

High density values are **blue** (more than 10% above the density for the entire aggregates resource).

Higher asset densities are in **blue italics** (more than 20% above the density for the entire aggregates resource)

Very high asset densities are in **bold blue italics** (more than 50% above the density for the entire aggregates resource)

- **High Bronze Age asset density** – The density (2.61 assets per km<sup>2</sup>) is very high in comparison to other late prehistoric Neolithic and Iron Age periods (0.63–0.38 assets per km<sup>2</sup>). This is due to the large number of Bronze Age barrows (burial mounds) within the HER. These assets are very likely to be identified and recorded in the HER due to their visibility and attraction for investigators. Like remains of the Neolithic and Iron Age periods, other Bronze Age assets are likely to be underrepresented because they remain buried and are therefore harder to identify and date.
- **High density of Roman assets** – The Roman period exhibits a higher asset density (1.38 per km<sup>2</sup>) than the Neolithic (0.63 per km<sup>2</sup>) and Iron Age periods (0.38 assets per km<sup>2</sup>). This is due to the numbers of archaeological investigations into Roman remains in the 19th and 20th-centuries. The distinctive nature of Roman artefacts makes them likely to be recorded as chance finds and during metal detection and fieldwalking surveys. The high density is therefore an indication that the Roman assets present within the HER are well understood and reliably dated.
- **Low asset densities for migration and early medieval periods** – The low asset densities of the migration (0.16 assets per km<sup>2</sup>) and the early medieval (0.06 assets per km<sup>2</sup>) reflect the limited understanding of the archaeology of these periods (Basford 1980, 35–37; Waller 2006). The recent NMP project did not record any new sites which could be confidently dated to the migration or early medieval periods (Royall 2009, 41).
- **Low modern asset density** – The modern period has surprisingly low asset density (2.32 assets per km<sup>2</sup>) considering that this period is very well understood. The asset density appears low because many types of assets which would be of interest if they dated to the post medieval or earlier periods (e.g. houses, shops, factories, civil and religious buildings etc) are not of interest when they are of modern construction. This reflects current and past perceptions of the role and purpose of the HER and whether such assets are of historical interest.

## 8 Archaeological Resource Assessment: Period Based Summaries

### 8.1 Introduction

- 8.1.1 The period based summaries describe the state of archaeological understanding of the aggregates resource on the Isle of Wight by period in order to provide a basis for the research agenda and strategy and future resource management. The data has been analysed using GIS and excel programs in order to determine whether the distribution of assets can be used as a predictive tool for identifying distribution patterns of early human activity which may assist in future asset management.
- 8.1.2 The discussion will focus primarily on those assets which have been precisely dated to the relevant periods, and the key sites for each period. There is also an overview of additional assets which may date to the period, but for which there is no conclusive dating evidence. The assets have been subdivided into 'sufficient' and 'insufficient', indicating whether the HER entry provided sufficient dating evidence or if such evidence was not present within the HER but was assigned by the author based on other data recorded in the HER (e.g. morphology, typological attribution etc). This has been undertaken primarily to assist the HER in checking and reintegration of the data into their database.
- 8.1.3 In the HER and project database most assets have been assigned to a particular chronological period, and the following period summaries are similarly divided. For example, Bronze Age barrows are typically assigned the date –2350 to –751 (i.e. Bronze Age). Every effort has been made to reflect inter and intra period similarities and changes in material culture within this Resource Assessment, but because of the often strict chronological divisions in the database, the Resource Assessment does not always follow the period divisions of the Solent Thames Archaeological Resource Assessment. The Solent Thames Archaeological Resource Assessment at times joins different periods, or parts thereof, together in order to consider more accurately where similarities between periods reflect continuity of material culture and differences within periods reflect cultural changes.
- 8.1.4 Throughout the period summaries assets, sites and places described on the text are identified on the figures as **bold** numbers. It should be noted that the asset densities only include those assets which are known to date to the period concerned. Each period summary also contains an indication of the number assets of uncertain date which could possibly date to that period, but these have not been included in the asset density table.

### 8.2 Introduction to the Palaeolithic

- 8.2.1 Palaeolithic archaeology is the study of the Pleistocene geological epoch (c 750,000BC – 10,000BC) and is often studied together with the geology and natural environment as Quaternary Science. The period is normally divided into chronological periods based on oxygen or marine isotope stages (OIS or MIS), equivalent to periods of climatic and environmental change. Stadials (cold or glacial phases) are identified by even OIS/MIS numbers and interleave with interstadials (warm phases), identified by odd OIS/MIS numbers. This resource assessment will use the dating framework provided by marine isotope stages (MIS) as used by the *Solent Thames Archaeological Resource Assessment* (Wenban- Smith and Loader 2008). The chronological phases of the Palaeolithic are shown on Table 6 below:

Table 6 Phases of the Palaeolithic

Date	Marine Isotope Stage	Period	Cultural stage
pre 475,000BC	MIS17– MIS13	Cromerian	Early lower/middle Palaeolithic with Clactonian and Acheulean industries (no Levalloisian)
475,000 – 425,000 BC	MIS12	Anglian	
425,000– 125,000 BC	MIS 11 – MIS5e	Hoxnian/ Wolstonian complex	Later lower/middle Palaeolithic (with Levalloisian)
135,000 – 73,000 BC	MIS6 – MIS4	Ipswichian interstadial	Later lower/middle Palaeolithic (with Levalloisian) to early British Mousterian with Bout coupe handaxes
115,000 – 50,000 BC	MIS5d – MIS3	Devensian	British Mousterian
50,000 – 10,000 BC	MIS1 – MIS2	Devensian	Upper Palaeolithic
10,000 BC to present	N/A	Flandrian	Mesolithic to modern

- 8.2.2 The period can also be divided into Lower, Middle and Upper Palaeolithic on the basis of the material culture, but the conventional (Roe 1981) distinction between Lower and Middle Palaeolithic, based on the appearance of Levallois knapping technology or *bout coupé* handaxes, is no longer considered to be a reliable basis for the differentiation of these periods in Britain (Wenban-Smith and Loader 2008, 2). This resource assessment will not therefore attempt to distinguish between Lower and Middle Palaeolithic and will follow the *Solent Thames Archaeological Resource Assessment (ibid)* in identifying Levallois material alone or together with handaxe and flake/core industries as 'Lower/Middle Palaeolithic'. *Bout coupé* material is identified as 'British Mousterian' to reflect its association with a distinct chronological and cultural phase of occupation at c 60,000BC, much later than that usually thought to represent 'Middle Palaeolithic'.

#### *Asset Density*

- 8.2.3 The aggregates resource contains 38 Palaeolithic assets, equivalent to an asset density of 0.21 assets per km<sup>2</sup>. These include 26 Lower/Middle Palaeolithic assets and 2 Upper Palaeolithic assets. A further 309 assets may possibly date to the Palaeolithic period, making a total of 347 or a maximum asset density of 1.92 assets per km<sup>2</sup>.

#### *Possible Palaeolithic assets*

- 8.2.4 The HER contains 309 assets which are possibly Palaeolithic date. Most (225) of these are objects.

### **8.3 Lower/Middle Palaeolithic (c 750,000–40,000 BC )**

#### *Introduction*

- 8.3.1 For most of the Lower and Middle Palaeolithic the Island was attached to the mainland of Britain on its western side, and separated from what is now Hampshire by the Old Solent River which flowed south-east towards the channel. During the cold stadial periods, when sea levels were low, the Old Solent River flowed into the channel river which did not discharge into the sea (Atlantic Ocean) until it reached Ouessant Deep to the south of Falmouth (Antoine *et al.* 2003). During warmer interstadials with high sea levels, the channel and lower parts of the Old Solent River were flooded.

- 8.3.2 What is now the Isle of Wight was larger than it is currently, particularly to the south-west, and was drained by ancient predecessors of the Medina, the Eastern Yar and the Western Yar, which flowed northwards into the Solent. The date at which the Wight-Purbeck ridge to the west was breached to form the Island is disputed (Wessex Archaeology 1993, 163–172). The Isle of Wight may have been separated from the mainland as early as the Ipswichian (135,000–73,000BC ) interstadial (Antoine *et al.* 2003, 253), in which case it would have been an island for the latter part of the Lower/Middle Palaeolithic period, and is certainly likely to have been an island by the British Mousterian. Alternatively, it is possible the Wight-Purbeck Ridge was not breached until the early Flandrian (c 12,000BC ) period (Allen and Gibbard, 1993, 526), in which case, the Isle of Wight would have remained attached to the mainland throughout the whole Palaeolithic period.
- 8.3.3 Lower/Middle Palaeolithic remains are typically found within Pleistocene geological deposits and usually comprise stone tools, faunal remains and palaeoenvironmental data. Structural remains of this date are not found, and human remains are very rare. Lower/Middle Palaeolithic assets are often residual (i.e. located outside the deposit or layer in which they were originally deposited) and *in situ* sites of tool manufacture or butchery are consequently very important.
- 8.3.4 The earliest deposits containing Lower/Middle Palaeolithic remains are likely to be the Plateau Gravels of early to Middle Pleistocene date, but the precise dates of these deposits are not known. The Steyne Wood Clay at Bembridge has been dated to c 500,000 BC , just before the Anglian glaciation and associated with deposits which, elsewhere (but not on the Island), contain early hominin activity (Roberts and Parfitt 1999). The Plateau and Marine Gravels along the north-eastern coastline may also include Middle Pleistocene deposits, and an outcrop at Priory Bay has been dated by optically stimulated luminescence (OSL) dating to the post-Anglian Hoxnian/Wolstonian (424,000–135,000BC) complex (Wenban-Smith and Loader 2008, 6). The earlier (higher) terraces of Terrace Gravels of the Eastern and Western Yar are likely to be of similar date, while the lowest Terraces might date to the (last) Devensian (73,000–10,000 BC) glaciation (*Ibid*). Solifluction gravels (i.e. gravels which have slipped down a slope during periods of freeze and thaw during periglacial conditions) overlying the Bembridge raised beach on the eastern tip of the Island have been dated by OSL to the Devensian, the Terrace Gravels at Great Pan Farm have also been dated to this period and it is likely that other superficial deposits are of similar age (Wenban-Smith *et al* 2005).
- 8.3.5 The current project has identified a number of Plateau and Terrace Gravels which are not recorded on the BGS mapping (3.3.10). The Plateau Gravels probably date to the Lower/Middle Palaeolithic period. The date of the Terrace Gravels is less certain, but in view of their typically low level it is suggested that they might date to the Devensian and so span the Lower/Middle Palaeolithic, British Mousterian and Upper Palaeolithic periods. Until these deposits are mapped and subject to further investigation, their precise date remains uncertain.

#### *Asset densities*

- 8.3.6 Only 26 Lower/Middle Palaeolithic assets are included in the aggregates resource, equivalent to 0.14 assets per km<sup>2</sup>. These represent c 50% of the Lower/Middle Palaeolithic artefacts across the Island as recorded by the *Solent Thames Archaeological Resource Assessment* (Wenban-Smith and Loader 2008, 1), i.e. half are located outside the aggregates resource. Those within the aggregates resource are shown on Fig 5. Numbers in **bold** refer to Fig 5:
- On nationally important multi-horizon site with undisturbed palaeo-landsurfaces and *in situ* flint working remains at Priory Bay (**4**)
  - One rich pre-Anglian handaxe concentration at Bleak Down (**1**)



- One area of important multi-period deposits (pre- and post-Anglian) with a significant background noise of artefact finds at Steyne School (**2**), Whitecliff Bay and Bembridge Foreland (**21**).
- One area with relatively numerous finds of Levalloisian material, as well as some handaxes and unspecified debitage at Afton Farm (**19**)
- 21 other findspots, mostly single handaxe finds but some with several flakes and cores.

#### Key Lower/Middle Palaeolithic sites

8.3.7 The Lower/Middle Palaeolithic assets within the aggregates resource include five of the six most important sites on the Island for Lower/Middle Palaeolithic remains (Fig 5). These sites or outlying remains associated with them would be a significant constraint for any development or extraction. **Bold** numbers relate to Fig 5:

- **Bleak Down (1)** – Bleak Down in South Wight Sandstone is probably the earliest site on the Island (Wenban-Smith and Loader 2008, 1). It produced over 70 handaxes which Poole (1934) related to a stratigraphic sequence of gravel beds. The site (MIW879) is interpreted as a lithic working site for the production of handaxes. Based on the height of the terrace (c 80m OD) which contained the artefacts, the lithic working site is likely to date to the Anglian Glaciation (c 500,000BC).
- **Bembridge Foreland** – Pleistocene deposits are visible in the cliff between the school and lifeboat station in the Brading Haven Bembridge Isle study area, and have been investigated since the 19th century. The Steyne Wood Clay here dates to the pre-Anglian environment of c 500,000BC. A storm beach deposit at c 5–18m OD has been dated by OSL, pollen content and height to the Ipswichian high sea level stand of c 125,000BC and an adjacent clay silt deposit, representing an estuarine salt marsh is contemporary (Wenban-Smith and Loader 2008, 15; Wenban-Smith *et al* 2005). Lower Palaeolithic artefacts have been recorded from this area, an assemblage of 8 pieces (MIW1193), a rolled handaxe (MIW1347) and a hammerstone (MIW1910) at Bembridge Foreland (**2**) and an ovate handaxe (MIW2465) at Whitecliff Bay (**21**).
- **West High Down (3)** – In 1899 H. S Warren discovered a layer of flint tools c 0.6–1.10m below ground level at the western end of the West Wight Chalk Downland study area (MIW44). The finds included artefacts identified as Mousterian and older forms, of clear Lower/Middle Palaeolithic date. The material is abraded within a slopewash deposit containing mixed artefacts derived from a variety of contexts (*ibid*). Warren recovered a Lower/Middle Palaeolithic flint flake (MIW5431) on Headon Hill in Freshwater Isle study area, c 625m north of this assemblage. Seven other possible Lower/Middle Palaeolithic assets are also located within the western parts of the Freshwater Isle and West Wight Chalk Downland study areas on High Down, Tennyson Down and Headon Hill. These are close to the flint assemblage recorded by Warren and comprise flint artefacts and a lithic working site (MIW2601). At least one (MIW10493) is probably of Bronze Age date as it was found with a Bronze Age hoard. The precise date of the others (MIW1471; 1528; 51–2; 73) is unknown, but some may be Lower/Middle Palaeolithic. The presence of later artefacts confirms the importance of the area for flint working with repeated, possibly continuous, use over a long period.
- **Priory Bay (4)** – Priory Bay (in the Brading Haven Bembridge Isle HEAP study area) has produced the largest assemblage of Palaeolithic material on the Island, and one of the largest in Britain, including over 200 handaxes. Implements have been recovered from the site since the 1880s (mostly from the beach) and in 1986 and 2001 *in situ* deposits on the cliff top were

excavated (Loader 2001; Wenban-Smith 2003; Wenban-Smith et al. 2009). A complex and artefact-rich sequence was shown to be present. Basal terrace gravel deposits contained abraded artefacts, but were overlain by an *in situ* occupation horizon which had had little disturbance. This in turn was overlain by fine-grained artefact-bearing deposits that included a second, younger occupation horizon. The base of the gravel deposits was recorded at c 29m OD linking it with the post-Anglian interglacial-glacial cycle (Bates et al. 2004) and OSL dating indicates that the occupation horizons date to the period MIS 11 to 9, the Hoxnian/Wolstonian (425,000–125,000BC) Complex (Wenban-Smith et al 2009).

- **Great Pan Farm (5)** – The nationally important Lower/Middle Palaeolithic remains include at least three, possibly four, former terraces of the Medina. The lowest terrace (with a c 4m OD base) contained *bout coupe* and Levallois remains together with organic deposits and faunal remains from the British Mousterian culture (Poole 1924; Shackley 1973; Tyldesley 1987; Roe 1981) of the Devensian (70,000–10,000BC). Recent investigations (Oxford Archaeology 2005; Archaeology South East 2005) dated the organic deposits to >42,400BC (Roberts et al. 2006). Although the accuracy has been questioned, it is compatible with the OSL date of c 50,000BC for the second terrace (Wenban-Smith and Loader 2008, 14). The remains at Great Pan Farm are not included in the Lower/Middle Palaeolithic assets, being located in the urban area around Newport, which is excluded from the current study. Nonetheless, there is the potential for associated Lower/Middle Palaeolithic remains in the Northern Lowlands study area, to the south-east and east of Newport. The project area includes one asset associated with fieldwalking and metal detecting at Great Pan Farm (EIW287), which recorded Palaeolithic and Mesolithic flint remains (Wessex Archaeology 2007), potentially including Lower/Middle Palaeolithic remains and indicating possible continuity of use.

8.3.8 The aggregates resource includes a group of 18 possible Lower/Middle Palaeolithic assets (MIW1338; 1394; 1396–98; 1399–14; 1908–9; 2034–6; 2456), comprising chance finds of flint artefacts in the area of gravel deposits c 0.5–1.6km west of the Priory Bay site. An assessment of these artefacts (R Loader, Isle of Wight Historic Environment Record Officer, pers comm) indicates that these are most likely to comprise undiagnostic Neolithic or Bronze Age artefacts.

8.3.9 One of the six most important Lower/Middle Palaeolithic assets on the Island is located close to, but not within, the aggregates resource. Remains associated with this site may extend into the aggregates resource and it is therefore considered here (see Fig 5).

- **Newtown (6)** – The remaining site of importance for Lower/Middle Palaeolithic remains on the Isle of Wight is at Newtown, but the site and much of the Newtown estuary was not included in the aggregates resource. The gravel deposits in this area have not been mapped by the BGS and are only known from gravel extraction pits. As the gravel extent here is derived solely from past extraction (see above 3.3.8), the limits become more speculative the further they extend from the extraction site. Much of the Newtown estuary lies within an area internationally designated for nature conservation and is unlikely to be subject to future extraction (Chris Mills, Isle of Wight Planning Services Department pers comm). Only the area outside the nature conservation area and reasonably close to the site of known extraction at Shalfleet was included. More precise mapping of the gravel deposits based upon future borehole investigation would refine the current aggregates resource and is likely to include the Newtown Lower/Middle Palaeolithic site. The Newtown Lower/Middle Palaeolithic site, located in the Newtown river intertidal zone, produced faunal remains. No associated hominin artefacts were recorded. In 1985, the geology was

systematically investigated and four sedimentary units recorded. The earliest phase of deposition (three units) included fauna typical of a warm climate including a full interglacial, probably the Ipswichian. The upper gravel stratum was a post-Ipswichian cool phase, possibly MIS 5d (Munt and Burke 1986).

- 8.3.10 Within the aggregates resource to the north-east of the Newtown estuary and to the south around Shalfleet, 13 possible Lower/Middle Palaeolithic assets have been identified. Two mammoth teeth were found during gravel extraction at Shalfleet and these may be Upper Palaeolithic rather than Lower/Middle Palaeolithic (MIW11515). The possible Lower/Middle Palaeolithic assets include three 'Flint Scatters' (MIW2258–60). As these included burnt flint, they may be of later date. One scatter of burnt flint (MIW1475) was associated with Roman pottery (but was not *in situ*).

#### *Wider Lower/Middle Palaeolithic potential*

- 8.3.11 The relationship between the recorded distribution of assets and the Lower/Middle Palaeolithic potential of different areas of the aggregate resource is a particularly problematic area. Partly, because some findspots may represent isolated redeposited artefacts that have been both reworked from another context and transported a long distance. More importantly, because it is essential to take on board that important Lower/Middle Palaeolithic research is based upon: (a) the recovery and analysis of transported artefacts; and (b) the systematic investigation of deposits that may, or may not, contain artefacts. From this work, one can develop a broad picture of the history of Lower/Middle Palaeolithic settlement and cultural change in a region. Even recovery of a single, derived artefact in a very ancient river gravel could provide evidence of the first occupation of Britain, let alone the Isle of Wight. Clusters of assets may provide an indication of areas with a higher probability to contain either *in situ* Lower/Middle Palaeolithic remains or concentrations sufficient to make a valuable contribution to understanding of the period. Such deposits could constitute a significant constraint to future aggregate extraction. These clusters are shown on Fig 5 and numbers in **bold** relate to locations on the figure:

- **Afton (19)** – Levallois flakes and a Levallois core have been recovered from the vicinity of the Thorley Wellow Plain (MIW99) in unmapped Terrace Gravels, possibly extending beneath the Bronze Age urnfield. Recorded by Poole, some are believed to be in the Hazzeldine Warren collection of the British Museum. A further 10 potential assets have been identified, mainly in Terrace Gravels along the Western Yar. It is likely that a proportion are Lower/Middle Palaeolithic.
- **South of Carisbrooke** in West Wight Downland Edge. A small group (**22**) of potentially Palaeolithic assets were found in the highlands near Carisbrooke castle and Bowcombe Down. These concentrations may be more a reflection of investigative activity as they are in areas historically subject to considerable investigation due to the castle and barrow cemeteries.
- **Eastern Yar** – Lower/Middle Palaeolithic artefacts have been recorded from gravel deposits in Arreton Valley and Newchurch Sandown (**10**). Poole (1938) reported Mousterian (**7**) artefacts from Froghill (MIW889) and Acheulean artefacts (**8**) from Kern (MIW1071) and Ninham (MIW838, **9**). Outside the aggregates resource, Blackpan Farm has also produced Lower/Middle Palaeolithic material (*ibid*, 10). Given the presence of the Eastern Yar Terrace Gravels, it is not surprising that a further 21 potential Palaeolithic assets have been identified within Newchurch Sandown and 19 possible Palaeolithic assets from Arreton Valley. Considering the gravel deposits within the study area it is likely that a number of these, and as yet unidentified assets, are likely to date to the Lower/Middle Palaeolithic.

- **Along the East Wight Chalk Ridge.** Three small clusters of potential Palaeolithic assets are located at Arreton Down (**23**), Middle West Down (**24**) and Brading Down (**25**). It is possible these assets reflect the investigative interest (see above).
- **Gatcombe** – Two assets (MIW981; MIW988) within South Wight Sandstone at Gatcombe (**17** and **18** respectively) in Terrace Gravels associated with the Medina. They included an unfinished Palaeolithic handaxe found eroding out of the gravels and an Acheulean ovate handaxe respectively. Other possible assets are known from the same area, indicating further potential.
- **Northern Lowlands** – Two Lower/Middle Palaeolithic assets have been identified here within the strip of Plateau/Marine Gravel along the northern coast. These include an Acheulean handaxe (**11**) from a gravel pit at Norris Castle (MIW1589) and another handaxe recovered from Hamstead (**12**) by B. C. Reynolds (MIW190). A number of other artefacts have been identified along the northern coast and outside the aggregates resource at Wooton, Ryde, Seaview and Rew Street (Wenban-Smith and Loader 2008, 9). A further 72 possible Palaeolithic assets are known from the Northern Lowlands study area (including those around Newtown described above 8.3.9 □ and it is likely that a proportion of these are of Lower/Middle Palaeolithic date.
- **South-West Coast** – an important area of Upper Palaeolithic to Bronze Age occupation and the distribution of Lower/Middle Palaeolithic remains suggests a focus of earlier activity. A Lower/Middle Palaeolithic object was recorded at Chale Cliff (MIW205) in Atherfield Coastal Plain study area from Blown Sand geology (**13**), associated with an unmapped area of Plateau Gravel (Wenban-Smith and Loader 2008, 11). Three (**14**, **15** and **16**) Lower/Middle Palaeolithic assets (MIW8; MIW265; MIW784) are located within South West Wight Coastal Zone in an area of Terrace Gravels associated with a former tributary of the Old Western Yar. Artefacts including a Mousterian implement and Levallois flakes were recovered by T.E.B. Gunyon and Poole (1938; 1940) respectively. The Levallois flakes and other Lower Palaeolithic remains were identified by Nigel Larkin and Paul Pettitt. Atherfield Coastal Plain contains 22 possible Palaeolithic assets and South West Wight Coastal Zone contains 37 possible Palaeolithic assets, and a proportion of these are likely to date to the Lower/Middle Palaeolithic.
- **Undercliff (20)** – A Lower/Middle Palaeolithic handaxe of Acheulean form was found at the Orchard in Niton, in sandrock geology overlain by superficial clay, silt, sand and gravel beach and tidal flat deposits. This handaxe may have originally been deposited in deposits on the Downs and slipped or washed down to their final location to the south (Wenban-Smith and Loader 2008, 9). Only six other assets have been recorded in Undercliff and the lack of *in situ* gravel or Pleistocene deposits suggests a low potential for *in situ* Palaeolithic remains.
- **West Wight Downland** – A Lower/Middle Palaeolithic cordate axe was found on Cheverton Down (**60**) in Clay-With-Flints geology (MIW2591). A further 68 possible Palaeolithic assets are known from the area (including five assets around the West High Down site: see para 8.3.6). It is likely that a proportion of these, and unknown assets from Clay-With-Flints geology and unmapped gravel deposits elsewhere, are Lower/Middle Palaeolithic.
- **Yaverland (26)** – In addition to the importance sites at Priory Bay and Bembridge Foreland (described above 8.3.6), another Lower/Middle Palaeolithic asset was found at Yaverland in Brading Haven Bembridge Isle. The water worn Acheulean ovate (MIW1161) may derived from unmapped

Plateau Gravels or a deposit washed down from higher gravels (Wenban-Smith and Loader 2008, 11). A further 36 possible Palaeolithic assets have been recorded from the study area. These include known Lower/Middle Palaeolithic assets at Priory Bay (2 assets) and Bembridge Foreland (4 assets), and a group of 18 assets associated with the same gravel deposit as Priory Bay (see para 8.3.6). Of the remaining 12 assets, it is likely that a proportion are Lower/Middle Palaeolithic.

- 8.3.12 In several of the examples it is highly likely that the concentration results from patterns of recent investigation rather than ancient occupation. The precise meaning of these clusters is therefore uncertain and would be improved by further systematic fieldwalking and survey.

### Conclusions

- 8.3.13 The Isle of Wight is known to contain important Lower/Middle Palaeolithic assets and Pleistocene deposits which can provide a dating framework for the period and context for Palaeolithic artefacts. The assets are associated with geologies, particularly Plateau and Terrace Gravels (but also Clay-With-Flints), which have historically been exploited for aggregate and which are likely to be the target of future extraction. There is therefore the potential for Palaeolithic assets to be found wherever the Pleistocene geologies are exploited for aggregate. The identification of a number of Lower/Middle Palaeolithic assets within unmapped areas of Plateau and Terrace Gravels (at West High Down, along the Calbourne, at Afton, Chale Cliff and Yaverland particularly) indicates that such assets and associated Pleistocene gravel deposits may be present in areas where superficial aggregate deposits have not previously been identified.
- 8.3.14 Of the six key sites on the Island of regional or national significance for Lower/Middle Palaeolithic archaeology, four (Bleak Down, Bembridge Foreland, West High Down and Priory Bay) are located within the aggregates resource and would potentially form a significant constraint to future extraction, because extraction would either be resisted or the *in situ* deposits would potentially be costly to excavate and record archaeologically. Although the other two sites at Great Pan Farm and Newtown are not located within the defined aggregates resource, it is likely that the nearby resource contains associated remains, possibly of equal importance.
- 8.3.15 This Resource Assessment has also revealed a number of locations where Lower/Middle Palaeolithic assets have been recorded, where additional remains may be present and where these remains might potentially include *in situ* deposits of equal importance to the six key sites which are already known.
- 8.3.16 In addition, numerous other less precisely dated Palaeolithic assets (n = 242) are known from all study areas. It is likely that a high proportion of these are Lower/Middle Palaeolithic, although whether these were *in situ* or redeposited artefacts is uncertain.
- 8.3.17 Patterns within the data provide some indications of areas with a higher probability to contain important and/or currently unknown Lower/Middle Palaeolithic remains. In general assets are potentially present within any Pleistocene geology, particularly river terrace and marine beach/intertidal deposits. Key known sites with a high potential for important *in situ* remains are typically located on River Terrace Gravels and in overlying colluvial deposits; these two context types also form the context of the majority of less prolific findspots. Potential is higher in aggregate areas where possible Palaeolithic assets have already been identified and is greatest where confirmed Lower/Middle Palaeolithic assets are known. However, the most important message of this resource assessment is that outlined above (para 2.2.11), namely that the greatest contribution to Lower/Middle Palaeolithic understanding is made by the systematic investigation of Pleistocene deposits for both transported and *in situ* remains. Both this study and other research projects have indicated that

understanding of the distribution of Pleistocene deposits on the Island is limited. In order to fully understand the Palaeolithic period on the Island it will therefore be necessary to reassess the distribution, nature and date of the Pleistocene deposits.

## 8.4 Upper Palaeolithic (c 40,000–10,000 BC)

### *Introduction*

- 8.4.1 The Upper Palaeolithic (c 40,000–10,000BC) is a period of human material culture located entirely within the Devensian (c 73,000–10,000BC). It corresponds to a period when the stone tools made by modern humans increased considerably in variety and specialisation and when the creation of miniature statuary (in the form of 'Venus figurines' of pregnant or plump women) and cave paintings is first encountered. The earliest remains of settlement sites are also from the Upper Palaeolithic.

### *Upper Palaeolithic Asset Density*

- 8.4.2 Understanding of the Upper Palaeolithic of the aggregate resource is currently limited. There are currently only two Upper Palaeolithic assets known from the aggregates resource and one of these has recently been reassessed as unlikely to be of Palaeolithic date (Fig 6). A further two assets date from the Palaeolithic to Mesolithic, and might therefore represent the Upper Palaeolithic or the Palaeolithic/Mesolithic transition. Even if all four assets are Upper Palaeolithic that is still only 13% of the 30 Palaeolithic assets which have been dated to a particular Palaeolithic period (Lower/Middle or Upper). There are a further 313 assets which may possibly date to the Upper Palaeolithic.
- 8.4.3 The two assets recorded in the HER as of Upper Palaeolithic date are shown on Fig 6. They are located within the South West Wight Coastal Zone study area, in an area of Terrace Gravels associated with the Old Western Yar. Numbers in **bold** relate to Fig 6:
- A flint (MIW269) found by T. E. B. Gunyon (**27**), identified as a late La Madeline type tool by Reginald A Smith and published by Poole (1928).
  - Flint artefacts (MIW8) assessed (**14**) by Nigel Larkin and Paul Pettitt as unlikely to be of Palaeolithic date.
- 8.4.4 The Old Western Yar terraces within South West Wight Coastal Zone have long been associated with Upper Palaeolithic and Mesolithic activity (Loader 2008) and a large number of assets of potential Palaeolithic date have been recorded here. These comprise isolated flints and artefact scatters and a proportion may be Upper Palaeolithic.
- 8.4.5 Of the two possible Upper Palaeolithic assets, one (MIW8) is located within the South West Wight Coastal Zone (**14**). The other (MIW2513) was found in Arreton Valley (**28**) study area on the southern edge of the east-west ridge in sandrock geology. The artefact may have moved down the southern slope of the ridge with colluvium or may be associated with unmapped Terrace Gravel associated with the Eastern Yar.

### *Conclusions*

- 8.4.6 The Resource Assessment has revealed that understanding of the Upper Palaeolithic within the aggregates resource is very limited, although there is an indication that South West Wight Coastal Zone and possibly Arreton Valley, have potential for Upper Palaeolithic remains. Although limited numbers have been found to date, Upper Palaeolithic remains are also likely to be associated with superficial gravel deposits.

## 8.5 Other Palaeolithic assets

- 8.5.1 The aggregates resource contains 10 assets which are Palaeolithic, but with an unspecified date, all of which are findspots.
- 8.5.2 A further 309 assets may possibly be Palaeolithic, leaving a potential maximum of 347 Palaeolithic assets or an asset density of 1.92 assets per km<sup>2</sup>.

## 8.6 Mesolithic (c 10,000–4,000 BC)

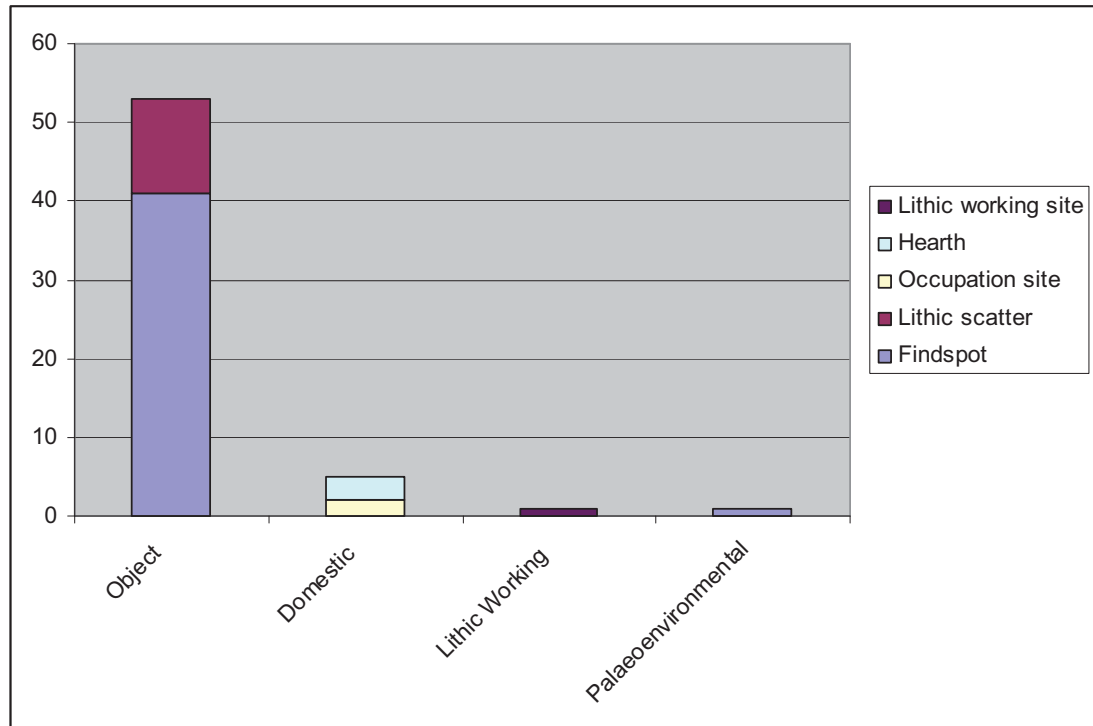
### *Introduction*

- 8.6.1 It is uncertain whether the Isle of Wight was entirely separated from the mainland during the Mesolithic period (c 10,000–4000BC). The Flandrian sea level rise (marine transgression) resulted in the flooding of the lower reaches of the river valleys and as a result a number of Upper Palaeolithic and Mesolithic sites were submerged. Poole (1936a) characterised the Mesolithic culture of the Isle of Wight as divided into two groups. The earliest group was associated with the gravels and brickearths of the south-west coast and Medina estuary and characterised by tranchet axes and a limited number of microliths. The later group was associated with the Greensands and included more microliths, arrowheads and lighter tranchet axes. Suzanne Palmer reassessed the Mesolithic evidence (1977) and concluded that only one homogenous culture existed during this period, utilising different types of tools in different locations.
- 8.6.2 The remains of this period typically include faunal remains and stone implements of the types discussed above. Palaeoenvironmental remains and some evidence of settlement (e.g. hearths) may also be found but structural remains are unlikely to survive.

### *Mesolithic Asset density*

- 8.6.3 There are 60 Mesolithic assets, equivalent to a density of 0.33 assets per km<sup>2</sup>. A further 363 assets could potentially date to this period, resulting in a possible total of 423 Mesolithic assets, or an asset density of 2.33 assets per km<sup>2</sup>.
- 8.6.4 The assets are primarily objects. The Mesolithic assets are shown on Fig 7 and Chart 1:
- 53 objects – of which 41 are individual findspots and 12 are lithic or flint scatters.
  - Five domestic assets – including two occupation sites and three hearths.
  - 1 lithic working site.
  - 1 palaeoenvironmental asset.

Chart 1 Number of Mesolithic assets by asset type



### Key sites

8.6.5 The concentrations of Mesolithic assets are associated with some of the key sites of this period on the Isle of Wight (Fig 7). These sites and any outlying remains associated with them are likely to be a significant constraint to development. Where particularly important sites are present extraction may be resisted because of the requirement to preserve remains of high significance. In most cases the constraint to extraction is due to the expense required to excavate and record archaeologically *in situ* deposits of this period. Numbers in **bold** refer to the map of Mesolithic assets (Fig 7):

- **Blackpan Common (33)** – A Mesolithic lithic working site (MIW860) on the Terrace Gravels of the Eastern Yar in the Newchurch Sandown study area. Although it is likely to be the flint within the Terrace Gravels which made the site attractive for lithic working, Poole (1936a) associated it with the ‘Greensand’ group of Mesolithic sites (i.e. those across the southern central part of the Island) which he believed were later and displayed more varied microlith types.
- **Newtown East Spit** – Poole (1936a) recorded *in situ* lithic material on an old landsurface in a low cliff above the high water mark at the mouth of the Newtown estuary. This site is not included within the aggregates resource because it is not within the area of mapped gravel and beach deposits (see also 8.3.9. and □). However, a Mesolithic object (MIW7260) and a prehistoric object (MIW1475) were recorded in the East Spit to the east of Poole’s site, within the aggregates resource, indicating that Poole’s site or related activity may be present within the aggregate (see **58** on Fig 7). Four post-built structures (MIW6820, 6823–4; MIW6821) were recorded nearby and may relate to continued prehistoric occupation in this area (see para 8.10.2; Fig 17).
- **South West Coast** – the gravel terraces of the Old Western Yar in South West Wight Coastal Zone and Atherfield Coastal Plain include one of the densest concentrations of Mesolithic assets on the Island. Hearths, of which there are 25, form an important component and a majority are located within



either South West Wight Coastal Zone or Atherfield Coastal Plain. There is some uncertainty in dating the hearths, which were identified by antiquarians. Investigation of material from a plant bed associated with a hearth at Brook (31) was undertaken by Clifford (1936), but until recently none of the hearths have been subject to absolute scientific dating techniques. Two (31 and 32) hearths (from Chilton Chine and Brook in this study area) were radiocarbon dated as part of the English Heritage Coastal Assessment Enhancement project (Loader 2008) and revealed to be of late Neolithic to early Bronze Age date (R. Loader pers comm). It is likely that further investigation and re-assessment would confirm whether any are of Mesolithic date. In addition, Mesolithic assets from the two areas comprise:

- o South West Wight Coastal Zone contains 18 of the 60 Mesolithic assets (30% or 3.58 assets per km<sup>2</sup>). A further 45 may be Mesolithic (63 assets; 17% or 12.55 assets per km<sup>2</sup>).
- o Atherfield Coastal Plain contains 2 of the 60 Mesolithic assets (3.33% or 0.88 assets per km<sup>2</sup>). A further 29 may be Mesolithic (31 assets; 9% or 8.24 assets per km<sup>2</sup>).
- **Werrar (29)** – an ancient landsurface, occasional hearths, plant remains and *in situ* flint artefacts indicated Mesolithic occupation to Hubert Poole (Poole 1936a). More recent pollen remains might indicate Neolithic occupation as well (Loader 2008). The asset (MIW1004) is located in gravel deposits on the west side of the Medina estuary in the Northern Lowlands study area. Palaeoenvironmental evidence was also recovered from a second asset (MIW2302) to the south-east and further remains may be present in the vicinity.

8.6.6 Other key sites for Mesolithic activity on the Island are not located within the aggregates resource. These include the submerged site within the Solent at Bouldnor, a large assemblage of flints from a property in Shorwell (Bennett 1966; 1967) and scatters of Mesolithic artefacts in the intertidal zone between Wooton and Quarr (Tomalin *et al* forthcoming).

#### *Potential Key Mesolithic sites*

8.6.7 Concentrations of Mesolithic assets may suggest the presence of a complex site, although it is difficult to determine the true nature of underlying remains when they comprise mainly objects and scatters. It is possible that some may represent *in situ* settlement or lithic working evidence, or alternatively redeposited artefacts or scatters created by past disturbance (e.g. ploughing, earth moving).

8.6.8 Nonetheless the distribution of the 60 Mesolithic assets shows a concentration in the areas identified by past researchers (e.g. Loader 2008; Basford 1981) as having higher potential:

- Along the northern coast in the Northern Lowlands study area (represented on Fig 7 by 34, 35 and 58).
- Within the Medina estuary in the Northern Lowlands study area (29)
- Along the south-western coast, primarily within South West Wight Coastal Zone and Atherfield Coastal Plain study areas
- Across the Greensands to the south of the central ridge in Arreton Valley, Newchurch Sandown and South Wight Sandstone study areas.

8.6.9 In addition, certain concentrations might indicate localised areas of Mesolithic activity, potentially representing a constraint to future aggregate extraction:

- **East –west ridge** – Small clusters of possible Mesolithic assets are located along the central east-west ridge in the following study areas:
  - o East Wight Chalk Ridge;
    1. Arreton Down (23),

2. Ashey Down **(24)**,
  3. Brading Down **(25)**.
  - o West Wight Chalk Downland;
    1. Afton Down **(19)**,
    2. Bowcombe Down **(41)**
    3. Brighstone Down **(42)**,
    4. Compton Down **(36)**
    5. Limerstone Down **(43)**,
    6. Little Down **(44)**.
    7. West High Down **(3)**
  - o West Wight Downland Edge:
    1. Carisbrooke castle **(45)**,
    2. Mottistone **(46)**.
- **Greensand belt** – Mesolithic assets are spread south of the central east-west ridge. The possibility that further remains will be brought to the surface by ploughing has been identified (Basford 1980, 15), but at present two subgroups stand out:
    - o A number of Mesolithic assets are located along the gravel terraces of the Eastern Yar in the Arreton Valley and Newchurch Sandown study areas. There are a further 19 possible assets in addition to Blackpan Common (see above 8.6.5), and three (MIW1054; MIW2491; MIW5464) of these are Mesolithic **(50, 51 and 52)** on Fig 7 respectively).
    - o **Medina valley (53)** – A group of five known (MIW507; MIW509; MIW971; MIW981; MIW989) and one possible (MIW1414) Mesolithic assets are present in the South Wight Sandstone study area in Terrace Gravels associated with the Medina and Blackwater at Gatcombe.
  - **North-east coast (34)**– A group of 20 possible Mesolithic assets and one confirmed Mesolithic asset (MIW999) within Northern Lowlands, within the fluvial or marine Terrace Gravels between East Cowes and Quarr. It is possible this group is associated (in geological or material cultural terms) with the scatters of Mesolithic artefacts found in the intertidal zone between Wooton and Quarr.
  - **Nettlestone and Seaview (35)** – One Mesolithic (MIW6173) and two possible Mesolithic assets (MIW5801; MIW5804) within Northern Lowlands in the fluvial or marine Terrace Gravels to the east of Ryde.
  - **Priory Bay (4)** – A cluster of 18 possible Mesolithic assets in Brading Haven Bembridge Isle.
  - **Redcliff** – Two **(26 and 30)** respectively) Mesolithic assets (MIW1161; MIW1177) and five possible assets to the east of the Brading gap, straddling the Brading Haven Bembridge Isle and East Wight Chalk Ridge study areas. MIW1177 is an important site with evidence of lithic working and occupation from the Mesolithic to Iron Age.
  - **South-west coast** – A cluster along the south west coast of the in Atherfield Coastal Plain and South West Wight Coastal Zone study areas (see Fig 7). These are likely to be associated the high density of Mesolithic remains in this area (see above 8.6.5).
  - **South Downs** – Three small clusters of possible Mesolithic assets are present in the south downs in South Wight Downland:

- o At St Catherine's Hill (**47**), where they may be associated with past archaeological investigation of barrows, rather than representing particular focus of Mesolithic activity.
  - o On Niton Down (**48**).
  - o On Appuldurcombe Down (**49**). There are barrows present on this down, but a concentration of six possible Mesolithic assets may indicate a Mesolithic site.
- 8.6.10 At present the distribution of these assets do not provide a clear understanding of the nature and extent of Mesolithic occupation and other activity, but do nevertheless suggest higher potential in the aggregate areas from which they were recovered.

### *Conclusions*

- 8.6.11 A number of significant Mesolithic sites (see above 8.6.5) are located within the aggregates resource. Where deposits are *in situ*, it would pose a constraint to extraction. The distribution of known Mesolithic assets provides an indication of where further Mesolithic remains may be present (8.6.9 above), but to some extent may reflect the activity of researchers rather than representing a clear picture of the full extent of Mesolithic activity. For example, the clusters of Mesolithic remains along the east-west ridge (8.6.9) are located close to known areas of later prehistoric activity (particularly Bronze Age barrow cemeteries) and may therefore represent the distribution of antiquarian investigation focussed on such cemeteries, rather than any foci of Mesolithic activity.
- 8.6.12 Possible Mesolithic remains are known from all study areas, although some of these assets have questionable dates. Recent re-analysis, notably the hearths, indicates the need for a reassessment and further investigation and a subsequent review of HER entries. Reassessment, particularly of flint artefacts and artefact assemblages, and confirmation of the date of known assets is therefore a key requirement for future research.

## **8.7 Neolithic (c 4000–2350 BC)**

### *Introduction*

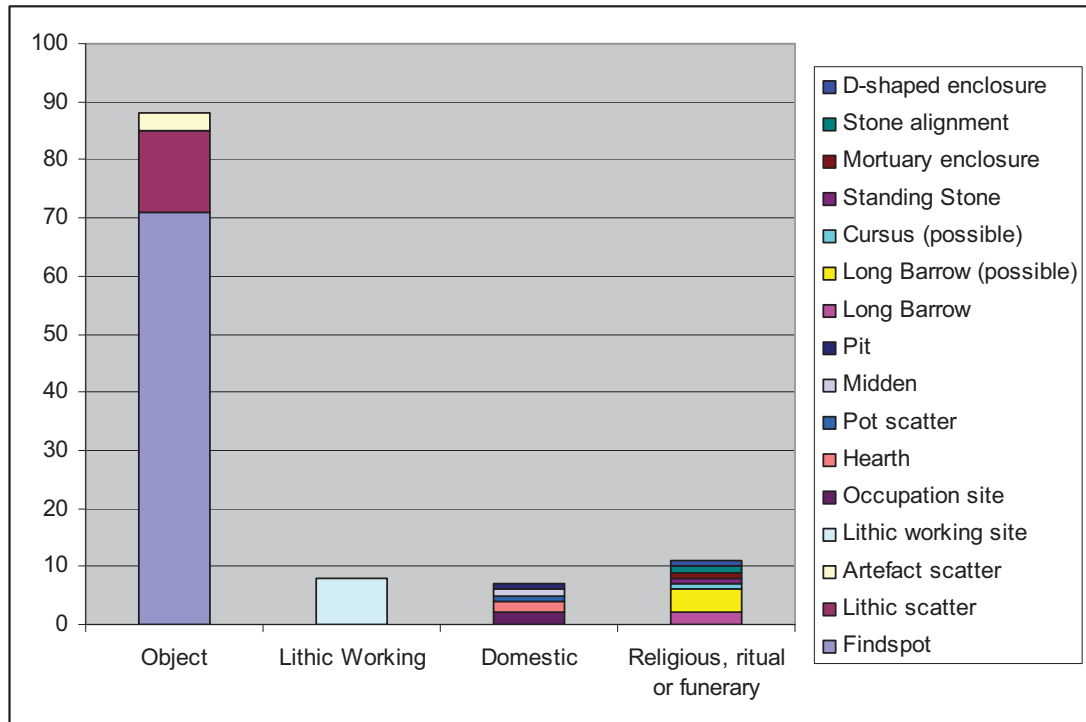
- 8.7.1 The Neolithic period (c 4000–2350 BC) is characterised by the development of farming practices, leading to more settled communities and the construction of communal monuments (e.g. long barrows and causewayed enclosures) initially for ritual or funerary purposes.

### *Asset Densities*

- 8.7.2 There are 114 Neolithic assets within the aggregate resource, equivalent to an asset density of 0.62 assets per km<sup>2</sup>. There are a further 816 possible Neolithic assets within the aggregate resource, making a potential total of 930 or 5.13 assets per km<sup>2</sup>.
- 8.7.3 The Neolithic assets are mostly objects. These assets are shown on Fig 8 and Chart 2. Note that numbers in **bold** refer to Fig 8, Fig 9 and Fig 10:
- There are 88 objects, including 14 flint or lithic scatters, 71 findspots and three artefact scatters.
  - There are eight lithic working sites.
  - There are seven domestic sites, including two occupation sites, a midden, one pit, one pot scatter (found beneath a Bronze Age barrow on Arreton Down) and two hearths. There are also a further 25 hearths within the aggregate resource which could potentially date to the Neolithic.

- There are 11 religious, ritual or funerary sites comprising two known long barrows, four possible long barrows, one possible cursus, one standing stone, one mortuary enclosure, one stone alignment and a D-shaped enclosure.

Chart 2 Number of Neolithic assets by asset type



### Key Neolithic sites

- 8.7.4 There is some overlap between the Mesolithic and Neolithic periods and some sites were occupied or used during both periods. The pattern of Neolithic occupation is apparently similar to that of the Mesolithic, with a focus on the river valleys (the Medina, Eastern Yar and Western Yar) and coastal areas (Basford 1980, 15). In part this may reflect the biases within the fieldwork, but some continuity would be expected (Waller 2006b). Neolithic remains have also been recorded in the areas of Mesolithic activity:
- Along the south-west coast.
  - Along the Eastern Yar (see above 8.6.7).
  - Along the north-eastern coast between East Cowes and Quarr (24). The English Heritage funded Wooton-Quarr project recorded and analysed remains here and has scientifically dated timber structures from the early Neolithic to the Bronze Age transition, confirming continuity of use (Tomalin *et al* forthcoming).
- 8.7.5 Only further fieldwork to identify and date additional assets can confirm how far the Neolithic distribution pattern reflects a direct dependence upon earlier occupation, although it seems likely that there was some continuity.
- 8.7.6 A number of key Neolithic sites have been identified within the aggregate resource, and with a possible dense concentration of features, might potentially constitute a significant constraint to aggregate extraction. In some cases these sites are Scheduled Monuments and are subject to stringent legislative controls regarding their preservation, maintenance and immediate environment. In other cases complex domestic or religious sites may require expensive archaeological excavation and recording prior to extraction.

8.7.7 In addition to those assets which are known to be of Neolithic date, there are a further 827 assets which could potentially be Neolithic. There are a relatively large number of objects (317) along with assets which are likely to represent dense or complex archaeological activity (e.g. settlements, cemeteries etc) or diffuse remains spread across a larger area (e.g. trackways, field systems, field boundaries etc).

#### Domestic

8.7.8 Domestic Neolithic sites with clear structures and archaeological features are less frequently found than those of later periods and evidence of occupation is usually ephemeral. This may perhaps be due to transhumance or continuity of hunter-gatherer lifestyles in the earliest phases of the agricultural revolution. Continuity from the Mesolithic period is seen in the distribution of Neolithic remains on the Isle of Wight and in the location of some Neolithic sites close to Mesolithic predecessors (Poole 1927; Tomalin 1979).

8.7.9 There are seven assets which have been classed as domestic, although lithic working sites may also have been associated with settlement. Domestic assets are shown on Fig 8 and lithic working sites on Fig 10. **Bold** numbers in brackets refer to sites on the figures.

- **Arreton Down (23)** – The second Neolithic occupation site is on the chalk (MIW943) in East Wight Chalk Ridge study area. A late Neolithic settlement was found beneath a Bronze Age barrow during excavations in 1956. The remains included c 350 sherds of Peterborough Ware pottery and flint artefacts (Alexander and Ozanne 1960).
- **Eaglehead Copse (38)** – A Neolithic midden (MIW1104) on the East Wight Chalk Ridge, 4.5km to the east of Arreton Down (and close to another Bronze Age barrow cemetery). This may indicate settlement or it may be associated with ritual activity (e.g. feasting) near a long barrow at Middle West Down.
- **Lea Farm (54)** – A hearth was associated with Neolithic and earlier lithic working (MIW848) at Blackpan Common.
- **Redcliff (MIW1177)** – The Neolithic occupation (**30**) on the southern edge of the cliff at Yaverland in Brading Haven Bembridge Isle study area, continues a pattern which began in the Mesolithic and continued into the Bronze Age and included exploitation of nearby flint sources. The site was first published by Poole (1927) who recorded three hearths, Neolithic pottery and a number of flint artefacts. Excavations in 1978 recorded a 65m<sup>2</sup> Neolithic and Bronze Age working floor and late Neolithic sherds (Tomalin 1979).
- **South West Wight Coastal Zone (55)** – A hearth MIW2257 in the Terrace Gravels of the Old Western Yar is dated to the late Neolithic to early Bronze Age following sample radiocarbon dating (R. Loader pers comm).
- **Whippingham (56)** – Evidence of Neolithic to Bronze Age occupation in the form of a pit and artefacts found during excavations at Padmore Farm in the Northern Lowlands (MIW5516).

8.7.10 The Arreton Down find is the most extensive evidence of Neolithic occupation associated with a Bronze Age barrow, but evidence of Neolithic activity in the form of pottery sherds has been found beneath other Bronze Age barrows at **Middle West Down (58)** (MIW1064), **Niton Down (48)** (MIW222) and **Week Down (57)** where an intact Neolithic bowl (MIW700) was found (Dunning 1932).

8.7.11 It has been suggested that Bronze Age barrow cemeteries (and any associated Neolithic long barrows) reflect territorial grouping of Neolithic and later communities, with associated settlement along the spring line at the foot of scarp slopes (Basford 1980, 16). There is currently no archaeological evidence of such settlement on the Isle of Wight, but these areas have not been intensively investigated in the past.

This may suggest higher potential for settlement in the lowland areas associated with downland (East Wight Chalk Ridge, South Wight Downland and West Wight Chalk Downland) where barrow cemeteries are present (see Fig 12).

- 8.7.12 Another possible area of Neolithic occupation may have been along the south-west coast of the Island (in the Atherfield Coastal Plain and South West Wight Coastal Zone study areas). In addition to the aforementioned Neolithic hearth (**55**), 25 other hearths are known in this, and the Godshell, area (**59**). The distribution may reflect past occupation patterns, or possibly antiquarian and more recent investigation along the eroding coastline.

#### Religious, ritual or funerary

- 8.7.13 Neolithic religious ritual or funerary sites are amongst the most prominent monuments of the period. These include large communal structures such as henges, causewayed enclosures and long barrows, which can survive as earthworks or cropmarks. The Isle of Wight does not contain as many known assets of these types as other areas of southern England, but 11 Neolithic religious, ritual or funerary assets have been identified within the aggregate resource and are shown on Fig 9:

- **Standing stone (70)** – The only standing stone on the Island is said to have been located at Limmerstone Shoote in West Wight Downland Edge study area and is recorded in the Swainston Survey of 1630 (MIW 1972) as a ‘greate broad stone with a hole in it’. Elsewhere in southern England standing stones are associated with henges, form part of stone circles and occasionally occur singly within a larger ritual landscape. Stone could be reused, perhaps accounting for the Swainston Survey’s suggestion that the stone was part of an early Christian cross. It is possible this asset represented part of a Neolithic structure (e.g. long barrow or henge monument, as at Mottistone) which has since been lost.
- **Mortuary enclosure (74)** – The mortuary enclosure (MIW55) on Tennyson Down is located within the West Wight Chalk Downland study area at the western end of the central east-west chalk ridge across the Island. It is aligned east-west and overlooks the sea, with the Afton Down long barrow on the same ridge on the opposite side of the Western Yar. It was first recorded in 1940 (Grinsell and Sherwin 1940). In 1989, a piece of charcoal from primary ditch infill gave a radiocarbon date of 2865–2290BC (Waller 2006b).
- **Long Barrows** – There are two known long barrows:
  - o The Afton Down (**60**) long barrow (MIW162) is aligned north-east to south-west and lies 1.5km east of the mortuary enclosure, on the opposite side of the gap in the chalk ridge at Freshwater Bay. It was investigated by Rev J. Skinner in 1817, but his trenches revealed no evidence (Waller 2006b). Subsequently interpretation conjectures that this was the work of the same social unit as the mortuary enclosure, which is seen as its partner in a ritual landscape (Basford 1980, 16).
  - o The Mottistone (**73**) long barrow is (MIW253) located on a crest of the steep southern scarp of the central ridge in the West Wight Downland Edge study area. The defining element is the ‘Longstone’, two megalithic blocks of Ferruginous Sandstone associated with a low mound. Excavations in 1956 revealed part of a sandstone kerb revetment, a flint scraper and two sherds of pottery contemporary with the asset (Hawkes 1957).
- **Long Barrows (possible)** The recent NMP survey has located a further four assets which may be Neolithic long barrows:

- o At Longdown (MIW11773), in the Ferruginous Sands geology of South Wight Sandstone (77).
- o On Mersley Down (MIW11719), on the chalk geology of East Wight Chalk Ridge (68). This asset may alternatively be a lynchet associated with an adjacent field system.
- o In East Wight Chalk Ridge, on Middle West Down (MIW1063). The NMP survey suggested that an existing asset located within the Bronze Age (58) barrow cemetery might be an earlier Neolithic oval barrow, representing a transitional stage between Neolithic long barrows and Bronze Age round barrows (Royall 2010, 28).
- o An asset on Chessell Down (65) in West Wight Chalk Downland study area, was already present within the HER prior to the NMP survey. This asset may also be a Neolithic long barrow (MIW5095).

8.7.14 The tentative identification of these assets as Neolithic long barrows by the NMP survey indicates the need for further investigation in order to confirm their nature and date. If some or all of these assets are confirmed as Neolithic long barrows this would have a significant impact on understanding of the Neolithic period on the Island.

- **Cursus** (possible) – A possible Neolithic cursus monument (75) is located on Garstons Down (MIW1817). A cursus is a ceremonial monument comprising two parallel ditches (with associated banks) running in straight lines across a landscape. Cursus may have been used as processional routes and usually occur in association with a landscape of ritual monuments (e.g. mortuary enclosures, barrows, and henges).
- **D-shaped enclosure** (possible) – A possible D-shaped enclosure (76) (MIW1865) was located from aerial photographs in Arreton Valley, such D-shaped enclosures vary in nature and usage but are typically either domestic or ritual in purpose (Castleden 1992, 20: Rideout, J. 1997).
- **Stone alignment** (78) – This (MIW6304) is located at Nunwell Down. It consisted of three sarsen stones, which were pulled down from their original monumental position on top of the down by a local vicar and a group of navies. Elsewhere in the south of England (most notably at Stonehenge and Avebury) Sarsen stones are associated with monumental Neolithic and later construction.

8.7.15 Bronze Age barrow cemeteries of the Isle of Wight appear to be grouped close to pre-existing Neolithic long or oval barrows in a similar pattern to that observed elsewhere in southern England (Basford 1980). The Afton Down and Mottistone long barrows are located close to Bronze Age barrows at Afton Down and Westover Down respectively (Fig 12). Three of the four possible Neolithic barrows (described above) are located close to Bronze Age barrow cemeteries at Mersley Down, Middle West Down and Chessell Down. Only the Longdown long barrow is not associated with nearby barrows. Depending on whether these assets are confirmed as Neolithic or not, this may have a significant impact on understanding the relationship between these ritual monuments. Sites which have the potential for Neolithic ritual or funerary sites comprise:

- Afton Down (60)
- Arreton Down (23)
- Brighstone Down (42)
- Bowcombe Down (63)
- Cheverton Down (43)
- Chessell Down (65)
- Culver Down (66)
- Luccombe Down (67)

- Mersley Down (**68**)
- Middle West Down (**58**)
- Niton Down (**71**)
- Week Down (**72**)
- Westover Down (**73**)

### Lithic Working

- 8.7.16 The chalk and flint gravel deposits of the Island produce material favourable for lithic working and there is evidence for Neolithic exploitation. It is probable that some working sites were associated with domestic occupation, or were close to occupation sites, or on regular routes. The occupation site at Redcliff, for example, was only located 1.4km south-east of the lithic working site at Upper Bush Down.
- 8.7.17 There are eight lithic working sites within the aggregate resource and these are shown on Fig 10:
- **Brading Down (25)** on the chalk geologies of East Wight Chalk Ridge (MIW1066)
  - **Chawton (90)** near Northwood in Northern Lowlands where a flint scatter was interpreted as evidence of lithic working (MIW6731)
  - **Combe Farm (MIW6276)** on the southern scarp of the chalk downs in West Wight Downland Edge (**87**)
  - **Lea Farm (33)** – There is evidence of a Neolithic continuation of the Mesolithic exploitation (see above 8.6.5) of the lithic resource in the Blackpan Common area (MIW848) on the Eastern Yar gravel terraces in Newchurch Sandown.
  - **Mersley Farm (85)** in Newchurch Sandown (MIW2513)
  - **Prospect limestone Quarry (MIW6388)**, where further limestone extraction is likely to take place (**88**).
  - **Tobacco Pipe Copse (89)** near Whippingham in Northern Lowlands (MIW7231).
  - **Upper Bush Down (84)** – a lithic working site located at in Brading Haven Bembridge Isle (MIW1440), close to an important source of flint which may also have been exploited during the Mesolithic (Tomalin 1979).

### Objects

- 8.7.18 A high proportion of Neolithic assets are objects, usually flint, and mostly found by chance. The relationship between the 88 objects and any Neolithic activity is uncertain, but suggest further Neolithic remains may be present. Several objects have been found in areas of Mesolithic activity, a Gatcombe (**53**; see para 8.6.9); Blackpan Common (**33**; see para 8.6.5) and Newtown estuary (see para 8.6.5) where a timber structure (**83**) was radiocarbon dated to the Neolithic-Bronze Age transition (IWCAHES 2000).

### *Possible diffuse Neolithic sites*

- 8.7.19 There are a large group of late prehistoric assets which represent diffuse activity within ancient landscapes. Many of these assets represent the earliest remains associated with highly significant sites from later periods and several are from nationally designated Scheduled Monuments (specifically Gallibury Fields and Little/Newbarn Down below). These assets are of very high significance because they reflect the earliest phases of sites in continuous or repeated use over a number of periods (i.e. they have considerable Time-Depth). Assets within Scheduled Monuments, and others of equally high significance, would merit preservation *in situ*. Other significant assets would require mitigation if located within an area proposed



for extraction, and extraction would not be permitted where *preservation in situ* is considered the only appropriate mitigation strategy (i.e. within Scheduled Monuments and around assets of equal significance).

- 8.7.20 A proportion of these assets may be Neolithic, and might include four field systems (Fig 8) located within or close to the central ridge on West Wight Chalk Downland at (79) Bowcombe Down (MIW1795), (80) Gallibury Fields (MIW290) and (81) Little/Newbarn Down (MIW411) and in the northern part of Arreton Valley (82) at Heasley Manor (MIW11560). The field systems may indicate a pattern of late prehistoric and Roman agricultural activity along the ridge, or may reflect greater preservation of the evidence due to the lack of mechanised ploughing in these areas.
- 8.7.21 Clusters of diffuse assets might indicate a dense archaeological site, such as a settlement. Where such clusters have been observed within the late prehistoric assets (these are recorded in para 8.10.17) it is possible a proportion is Neolithic.

### Conclusions

- 8.7.22 The Resource Assessment has revealed that Neolithic assets are located across the aggregate resource. These assets mainly comprise artefacts and artefact scatters, but also include several significant lithic working sites (one within the active extraction site at Prospect Quarry), occupation sites and ritual structures. Extraction at or near these key Neolithic sites would be constrained by the important nature of the remains (some of which are Scheduled) which might prevent extraction or result in significant expense to mitigate.
- 8.7.23 There are a large number of assets that may date to this period, particularly artefacts, but also possible barrows. The relationship between the distribution of objects and any underlying archaeological sites is uncertain. Nonetheless it is possible to identify certain patterns in the asset distribution and some areas with potential for further, possibly significant, Neolithic remains:
- Like the earlier Mesolithic assets, there is a notable concentration on the three main river valleys and around the coast.
  - A number of known and possible Neolithic assets have also been located on the downland along the central east-west chalk ridge and in the south of the Island.
  - Geologically, Neolithic assets are often associated with terrace and Plateau Gravels, but also show associations with chalk geologies, perhaps reflecting a preference for better drained land in this early phase of agricultural development.
- 8.7.24 Current understanding of the distribution of Neolithic activity is based on the NMP survey of the central areas, the visible evidence (with better survival of earthworks on the downs outside current arable cultivation), and the interest in the downs expressed by past investigators. Nonetheless, within the downland areas, particularly the western part of West Wight Chalk Downland between Brighstone and Mottistone, there does appear to be a higher potential for Neolithic remains. If hypotheses about the relationship between downland Bronze Age barrow cemeteries, Neolithic barrows and associated settlement are also correct, the location of such later features might also prove profitable in the identification of previously unrecorded Neolithic sites.

## 8.8 Bronze Age (c 2350–751 BC)

- 8.8.1 The Bronze Age is characterised by the development of metal (initially copper and then bronze) working technology and changes to ritual practices. Metalwork of this period has been found on the Island, but it is uncertain how prevalent metal was amongst societies of this period and flint tools continue to appear regularly in the archaeological record. The construction of round barrows is associated with the

appearance of a particular ceramic form of 'beaker'. In the later Bronze Age, burial practice takes the form of cremated remains in pottery 'urns'. Remains of Bronze Age agricultural fields and trackways have been found with greater frequency than evidence of Neolithic agriculture. In some cases remains of Bronze Age agricultural landscapes include domestic sites, but these are rare.

### *Asset densities*

- 8.8.2 The density of Bronze Age assets is high in comparison to Neolithic, Iron Age and Roman assets. The aggregates resource contains 473 Bronze Age assets, equivalent to 2.6 assets per km<sup>2</sup>. A further 988 assets are potentially of Bronze Age date, making a possible total of 1461 assets, equivalent to 8.1 assets per km<sup>2</sup>.
- 8.8.3 The following asset types are represented:
- 387 Religious, ritual or funerary sites, comprising 372 barrows, two findspots, three inhumations, nine cremations and one cemetery.
  - 60 Objects, primarily (49) findspots but with nine lithic or flint scatters, one object and one artefact scatter.
  - Seven unassigned assets, including two pits, a structure, a mound, a post alignment, a boundary bank and a rectangular enclosure.
  - Six lithic working assets, including four lithic working sites and two flint scatters.
  - Seven domestic assets, including one circular enclosure, one occupation site, one hearth, one group of gullies, and three middens.
  - Four hoards
  - One trackway
  - One agriculture and subsistence asset.
- 8.8.4 Chart 3 and Chart 4 show the relative numbers of different asset types. The distribution of possible Bronze Age assets is shown on Fig 11 to Fig 14.
- 8.8.5 There is a noticeable concentration of barrows and other assets on the central ridge, probably a reflection of the appeal of this area for past investigators, the survival of earthworks due to absence of mechanised ploughing, and the recent NMP survey in this area. Extension of the NMP survey across the Island may reveal different concentrations of assets.

Chart 3 Number of Bronze Age assets by asset type

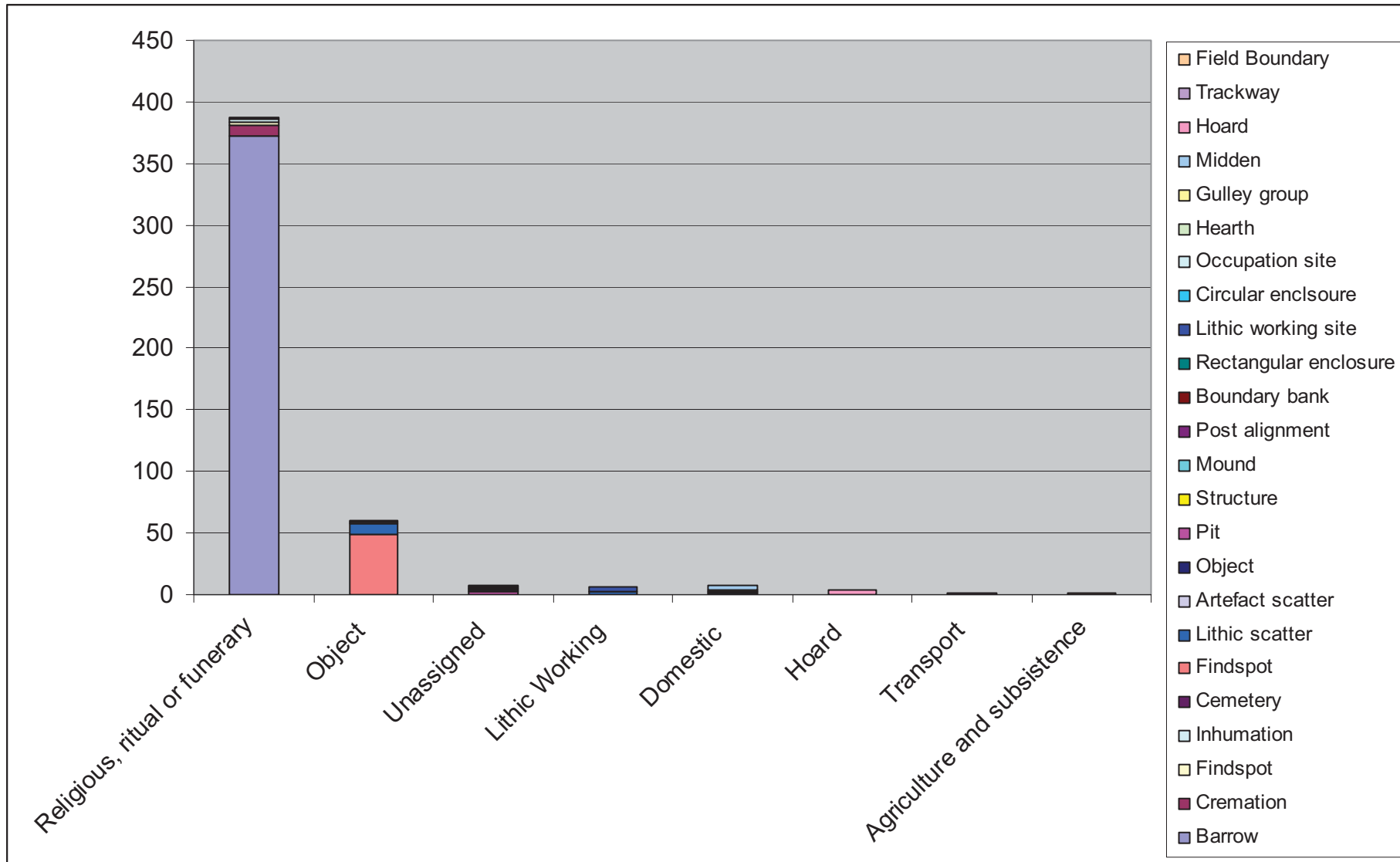
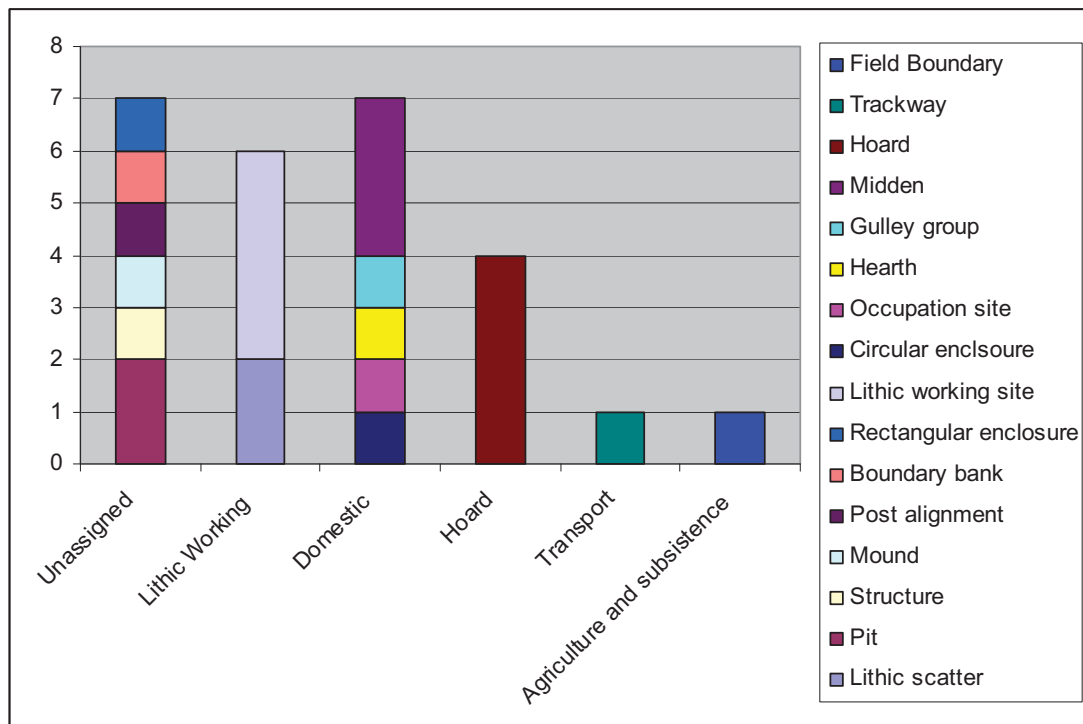


Chart 4 Number of Bronze Age assets by asset type, excluding object and religious, ritual and funerary assets.



### Key Bronze Age sites

#### Domestic

8.8.6 Understanding of Bronze Age settlement patterns is far better than for earlier periods. Structural remains of domestic buildings are found periodically. Settlement usually took the form of circular timber huts (round houses), of which only the postholes survive, often located within enclosures surrounded by banks and /or ditches. They may be associated with ditched droeways (unmetalled roads) and field systems. Some sites exhibit continuous activity from earlier periods. Domestic sites are likely to include a dense concentration of archaeological features, which may be a significant constraint to future extraction, and/or costly to excavate and record archaeologically.

8.8.7 The aggregates resource includes six domestic Bronze Age assets, shown on Fig 11. Lithic working may be associated with such occupation. The assets comprise:

- **Shalfleet hut circle (61)** – a Bronze Age circular enclosure, identified as a possible hut circle, has been located in Northern Lowlands (MIW2617).
- **Southern and south-west coast settlements**– An area of Bronze Age activity represented by hearths and middens:
  - o **Atherfield Coastal Plain and South West Wight Coastal Zone Hearths** – A hearth (31) at Brook (MIW2257) was dated to the Neolithic to Bronze Age following C14 dating as part of the English Heritage Coastal Assessment Enhancement project (Loader 2008). It is likely that some or all of the 25 hearths from these areas date to this period (para 8.6.5).
  - o **Undercliff Middens**– two Bronze Age middens (92 and 93) and two possible middens, indicating nearby settlement exploiting the coastal resources. Other middens and hearths are known from outside the aggregates within the study area (Waller 2006c).

- **Whippingham (89)** –possible occupation and flint working in Northern Lowlands, at Padmore Farm (MIW5516).
- **Wooton–Quarr Coastal Area** – evidence of activity (continuing from the Neolithic) was found during the Wooton Quarr Project (Tomalin forthcoming). Most of the study area for that project falls outside the aggregate resource, although one site at Quarr (**91**) on aggregate geologies produced charcoal from gullies and a crude pit, which was C14 dated to the Bronze Age (MIW 2272).

#### Religious, ritual or funerary

- 8.8.8 Religious, ritual or funerary assets are the largest group of Bronze Age assets, principally because of the large number of Bronze Age barrows present on the Island, and particularly within the aggregates resource. Barrows are common in the downland areas of the Island, and consequently within the aggregates resource. Many upstanding barrows are designated as Scheduled Monuments, and any extraction in the vicinity would be tightly controlled. Non-designated barrows may hold similar significance and might also require preservation *in situ*, or archaeological mitigation in the form of excavation and recording prior to removal.
- 8.8.9 Barrows exhibit a variety of forms, but are usually circular and comprise a central burial mound with a surrounding ditch. In the early Bronze Age these were used for important individuals and by the middle Bronze Age had become the foci of secondary burials and cremations. Barrows were frequently grouped together into ‘Barrows Cemeteries’ and several survive on the Island. Where they have not been in areas of modern cultivation, they survive well as upstanding mounds. The surrounding ditches have usually been filled in, but are visible as cropmarks (‘ring ditches’) on aerial photographs. Where barrows have been removed by ploughing, ring ditches may be the only visible remains of the structure.
- 8.8.10 Within the aggregates resource there are 372 Bronze Age barrows and 53 possible barrows (including 46 probable ring ditches and seven earthworks), making a potential total of 425 barrows, equivalent to an asset density of 2.35 assets per km<sup>2</sup> (91% of the Bronze Age assets). Barrows comprise a very high proportion of known Bronze Age assets, although when the potential total of 1461 Bronze Age assets is considered, barrows only comprise 29%.
- 8.8.11 The high number of barrows is due to a combination of factors. Barrows have a dominant physical appearance (more pronounced in the recent past prior to the levelling of many examples and the afforestation of much of the chalk) and are concentrated on the chalk downlands. This has made them both easily visible and highly attractive to antiquarian investigators of the 19th-century, who frequently opened barrows (Basford 1980, 18) and recorded the findings in journals. A barrow survey in 1940 identified 170 examples and documentary evidence for another 10 (Grinsell and Sherwin, 1940). In the modern period, barrows are identified from aerial photographs by their mounds or the cropmarks of their ring ditches.
- 8.8.12 The NMP survey identified 181 barrows and ring ditches, equal to 71% of all the prehistoric sites identified during the NMP project. Of these, 59 ring ditches had not previously been identified (Royall 2009, 25, 29, 31), contributing to the 13.3% increase. The recent NMP survey identified ring ditches in lowland areas, challenging previous distribution patterns (based on visible remains) that had Early Bronze Age barrows linked closely with downland areas. Further NMP work across the rest of the Island is likely to further understanding of the distribution of barrows amongst other assets.
- 8.8.13 The barrows are shown on Fig 12 and numbers in **bold** refer to sites/areas discussed below. Smaller groups of barrows are located across all the study areas, but areas with important barrow groups (either upstanding or buried) include:
- East Wight Chalk Ridge:

- o Ashley Down (**24**)
  - o Arreton Down (**23**)
  - o Brading Down (**25**)
  - o Culver Cliff (**66**)
  - o Mersley Down (**68**)
  - Freshwater Isle study area – Headon Warren (**94**)
  - Northern Lowlands – Shalfleet (**95**)
  - South Wight Downland
    - o Luccombe Down (**67**)
    - o Niton Down (**72**)
    - o Week Down (**71**)
  - West Wight Chalk Downland
    - o Afton Down (**19**)
    - o Bowcombe Down (**63**)
    - o Brighstone Down (**42**)
    - o Brook Down (**98**)
    - o Chessell Down (**65**)
    - o Cheverton Down (**43**)
    - o Dukem Down (**99**)
    - o East Afton Down (**96**)
    - o Mottistone/Westover Down (**73**)
    - o Mountjoy (**101**)
    - o Newbarn Down (**97**)
    - o Plaish (**100**)
    - o High Down (**600**)
- 8.8.14 Three Bronze Age inhumations were associated with barrows at Arreton Down (MIW943), Goldings Farm (MIW1064) and Afton Down (MIW1978). These may be burials associated with barrow construction. A Bronze Age inhumation (**109** on Fig 13), found to the south-west of Newport (MIW494), may be an isolated burial or part of a cemetery which has yet to be identified.
- 8.8.15 A number of barrows are associated with Neolithic long barrows within West Wight Chalk Downland and East Wight Chalk Ridge study areas, along the central east-west ridge (see 8.7.7). The speculated relationship between the downland barrow cemeteries and settlement along spring lines has also been discussed (para 8.7.7).
- 8.8.16 During the Middle Bronze Age, barrows retained a ritual significance and served as the focus of secondary cremations inserted within the central mound (Fig 13):
- **Afton Down (19)** – in west Wight Chalk Downland (MIW168)
  - **Ashengrove (102)** – in West Wight Chalk Downland (MIW398)
  - **Arreton Down (23)** – in East Wight Chalk Ridge (MIW943)
  - **Brook Down (98)** – in west Wight Chalk Downland (MIW121)
  - **Nunwell Down (103)** – in East Wight Chalk Ridge (MIW1058)
- 8.8.17 Later cremations have also been found in close proximity to barrows and barrow cemeteries, at:
- **Downend (104)** – in Northern Lowlands (MIW957\_01)
  - **Rew Down (105)** – in South Wight Downland (MIW665)
  - **Rowborough (106)** – in West Wight Chalk Downland (MIW364)
- 8.8.18 Three Bronze Age cremations are not associated with any known barrows. Two are

located on the coast, one in South West Wight Coastal Zone (**31**) and one at Thorness Bay (**108**) in Northern Lowlands. It is possible that the barrow was lost to coastal erosion. The third is at Mottistone in West Wight Downland Edge (**107**), where a number of prehistoric funerary monuments are located, and may relate to a previously unknown cemetery.

- 8.8.19 In the late Bronze Age funerary practice moved to cremation cemeteries with no above ground burial mounds. Seven possible cremation cemeteries are known from the Island, but as these were excavated during the 19th century require re-appraisal (Basford 1980, 25; Waller 2006c). Six cemeteries lie outside but close to aggregates at Swanmore, Ryde (Dunning 1931); Barnes High on the south-west coast (*ibid*); Whitwell (Kell 1867) and Rew Down on the southern downs; Yafford (Wilkins 1859) and Chale (Hillier 1856) on the south coast. The only cremation cemetery confirmed as being within aggregates is at Afton (MIW98), within 250m of the Neolithic and Bronze Age cemeteries on Afton Down (**19**).

#### Lithic Working

- 8.8.20 Copper and later bronze were available during the Bronze Age but remained relatively rare and most tools continued to be made of mostly of flint. There are six sites within the aggregates resource, where flint was extracted and worked, and these are shown on Fig 11 and include :

- **Brading Down (25)** on the chalk geologies of East Wight Chalk Ridge (MIW1066)
- **Mersley Farm (85)** in Newchurch Sandown (MIW2513)
- **Prospect limestone Quarry (88)**, where further limestone extraction is likely to take place (MIW6388).
- **Redcliff (30)** – the Mesolithic lithic working and Neolithic occupation site at Redcliff (MIW1177) in Brading Haven and Bembridge Isle continued to be used into the Bronze Age (Tomalin 1979).
- **Whippingham (89)** – there is evidence for Neolithic to Bronze Age lithic working in flint scatters at **Tobacco Pipe Copse** (MIW7231) and **St Mildred's Church** (MIW5515), Northern Lowlands. These assets may be associated with Bronze Age occupation at Whippingham.

- 8.8.21 Four of the above are located along the central ridge, where deposits of chalk and contained readily accessible flint nodules that could be used for tools.

#### Hoard

- 8.8.22 Copper and Bronze tools first appear in England during the Bronze Age, and represent the earliest use of metals. The most likely source of early hoards is either the collection of material for re-use, or 'ritual' deposition associated with ritual activity and the physical value of the newly developed metal. Known early Bronze Age hoards within the aggregates resource are located along the central spine of the Island and are shown on Fig 14:

- **Arreton Down (110)** – In 1735 a hoard of early Bronze Age metalwork (MIW939) was found along the central east west chalk ridge. The description of the hoard (Franks 1855) was relatively detailed for its day, and indicated that the artefacts were carefully arranged, suggesting 'ritual' deposition, perhaps associated with the nearby barrows. It is a nationally important site and is the 'type site' for artefacts of this nature on the Island.
- **Brading Marsh (111)** – In 1832 a bronze spearhead and 11 penannular rings were found on the west side of Brading Marsh close to the hard ground in the Brading Haven Bembridge Isle study area (MIW1213). The deposition of the artefacts within a marshy area, close to the hard ground, suggests this was a votive deposit associated with rituals involving bodies of water, as seen at similar locations across southern England.

- **Moon's Hill (112)** – In 1942 a hoard of Arretton Down type was found in wet ground in Freshwater Isle (MIW10493). It was associated with a layer of dark earth and decayed wood and a section through the bank revealed burnt flint and debitage from flint working. The worn nature of the artefacts suggests a hoard collected for re-use, but the wet area and dark woody deposit beneath might also suggest a ritual deposit.

8.8.23 One late Bronze Age hoard is known from within the aggregates resource. A group of later Bronze Age bronze palstaves (MIW1003) were recovered in 1884 from the brick pit at Werrar (Dunning 1936) (**29**). The nature of this deposit is not known. It is located some distance from the central ridge, but close to a navigable estuary.

#### Object

8.8.24 The Bronze Age assets include 60 objects (Fig 14). Most are individual finds, typically flint, with some artefact scatters. The large number of isolated chance finds means that it is difficult to understand the relationship between these assets and any associated activity. Systematic recorded metal detector and fieldwalking surveys and subsequent targeted investigation would be necessary to illuminate the patterns partially revealed by individual chance finds.

8.8.25 Bronze Age remains from Blackpan Common (MIW860) in Newchurch Sandown may represent the continuation of Mesolithic lithic working at Blackpan Common and Neolithic occupation site at nearby Lea Farm (**33**). Other Bronze Age objects have been identified at sites of known Bronze Age activity.

#### Unassigned

8.8.26 Unassigned assets are those where there is insufficient information to determine asset type. Two unassigned assets may be representative of key Bronze Age sites with dense or significant archaeological remains and these are shown on Fig 11:

- At **Churchill Chine (31)** in South West Wight Coastal Zone a Bronze Age hurdle was found eroding out of the cliff and radiocarbon dated (MIW6424). The purpose of the hurdle was unknown, but it may be associated with the nearby hearth at Brook.
- At **Newtown East Spit (83)** in Northern Lowlands, a longshore post alignment (MIW6822) was dated to the Neolithic/Bronze Age transition by radiocarbon dating. It is located in an area where Neolithic and Mesolithic artefacts have been found. The function of feature is uncertain, but it may be associated with nearby settlement. A number of other undated post-built structures are also located in the area (Fig 17) and some of these might be contemporary.

#### *Diffuse Bronze Age assets*

8.8.27 Other Bronze Age assets might represent areas of more diffuse activity (Fig 11), such as field systems and trackways. Remains of this type may be of very high significance if they have good time-depth (i.e. they are associated with remains of other periods), are located in waterlogged areas and associated with preserved organic material, or have other highly significant elements. Assets within Scheduled Monuments or unscheduled remains of very high significance would require preservation *in situ*. Other remains, which are not considered of sufficiently high significance to merit preservation *in situ*, would require mitigation in the form of archaeological excavation and recording (preservation by record).

8.8.28 A Bronze Age and later trackway (MIW86) runs along the central ridge from Afton Down in the west to Brading Down in the east. A number of barrow cemeteries are located along it, while the three early Bronze Age hoards are also focussed on the central ridge. This suggests a higher potential in the vicinity for Bronze Age remains the trackway.



- 8.8.29 Other diffuse Bronze Age assets are of uncertain function.
- **Luccombe Down (114)** – A recorded boundary bank and rectilinear enclosure.
  - **Mersley Down (68)** – A recorded boundary and probable field system (MIW11718).
  - **Newbarn Down (97)** – A Bronze Age ‘mound’. Possibly a barrow.
- 8.8.30 There are a further 995 possible Bronze Age assets. Little is currently known and these might indicate diffuse archaeological remains or more complex archaeological sites. Most of these assets could date to any of the late prehistoric periods and as such have been discussed in section 8.10.
- 8.8.31 These include 13 ‘possible’ Bronze Age agricultural assets in the form of field systems and one boundary feature, located either on or close to the central ridge (Fig 11):
- **Arreton (115)** in South Wight Sandstone (MIW1877)
  - **Bowcombe Down (79)** in West Wight Chalk Ridge (MIW12069–70: MIW12049: MIW12074)
  - **Gallibury Fields (80)** in West Wight Chalk Downland (MIW11929) within a Scheduled Monument.
  - **Knighton Down (116)** on East Wight Chalk Ridge (MIW11738)
  - **Pitts Down (97)** in West Wight Chalk Downland (MIW410)
- 8.8.32 The possible Bronze Age boundary is at Cheverton Down (**43**) in West Wight Chalk Downland (MIW11929).

### *Conclusion*

- 8.8.33 The Resource Assessment has shown that although the asset density for the Bronze Age is high, this is primarily due to the large number of barrows which have been identified. Most of the known barrows are located along the central east-west ridge and in South Wight Downland. The NMP survey has identified additional barrow sites on the lowlands beyond the downs which were not previously known.
- 8.8.34 Other than the barrows, key Bronze Age sites include lithic working and occupation sites within the aggregates resource, many of which show continuity from the Neolithic, and later Bronze Age cremation cemeteries. One cemetery is located within the aggregates resource at Afton, with a second possible cemetery at Stenbury. Although apparently outside the aggregates resource, the precise location and extent of the others is uncertain in some cases.
- 8.8.35 These key sites are likely to prove a significant constraint to extraction. Many of the barrows are protected through Scheduling. Proposals for extraction might be refused if the remains, even if currently undesignated, were considered of sufficient importance to merit preservation *in situ*. Otherwise, such remains might be costly excavate and record archaeologically.
- 8.8.36 There are also known and possible Bronze Age assets which are likely to reflect more diffuse activity, such as trackways and field systems, which could be of national importance and would require archaeological mitigation.
- 8.8.37 The significance of a large number of chance finds and artefact scatters is less clear. The distribution of these assets is greatly affected by patterns of recent investigation and the relationship between such objects and foci of Bronze Age activity would need further investigation.
- 8.8.38 In addition to the identification of individual areas and key sites with a high concentration of Bronze Age assets, the following study areas have been identified as having particular interest for the Bronze Age and containing a potentially higher number of key sites and potential key sites:
- Central ridge (East Wight Chalk Ridge and West Wight Chalk Downland)

- North eastern coast between Cowes and Ryde (part of Northern Lowlands)
- South west coast (Atherfield Coastal Plain, South West Wight Coastal Zone and Undercliff)
- South Wight Downland

8.8.39 However, this distribution is likely to be at least partly dependent upon past investigation and survival of extant remains outside areas of mechanised ploughing. Extension of the NMP and further survey and investigation is therefore likely to alter the current understanding of Bronze Age asset distribution and potential for the discovery of hitherto unrecorded remains within aggregate areas.

## 8.9 Iron Age (c 750BC–AD 43)

### *Introduction*

8.9.1 During the Iron Age, the climate deteriorated with colder weather and more rainfall. The period is characterised by expanding population, which necessitated the intensification of agricultural practices and the utilisation of marginal land. Hillforts were established in lowland Britain, linked to tribal land ownership.

8.9.2 Field systems, enclosures and other agricultural features of Iron Age date occur quite regularly where subsequent agricultural practices have allowed remains to survive. Remains of domestic Iron Age round houses are also found. Towards the end of the Iron Age there is evidence of increasing trade with continental Europe in the form of foreign coins and pottery types. On the Isle of Wight the late Iron Age is characterised by Vectis Ware pottery, which continues into the Roman period (Tomalin 1987, 30).

### *Asset density*

8.9.3 There are 56 Iron Age assets and 13 assets dating to the Iron Age/Roman transition, making a total of 69, equivalent to an asset density of 0.38 assets per km<sup>2</sup>. There are a further 955 possible Iron Age assets, making a potential total of 1024 with a density of 5.65 assets per km<sup>2</sup>.

8.9.4 The Iron Age assets include:

- 43 objects comprising 4 artefact scatters and 39 findspots.
- 1 religious, ritual or funerary asset.
- 2 assets associated with defence, including a hillfort and a rectilinear enclosure
- 2 agricultural assets, comprising field systems.
- 6 domestic assets comprising an occupation site, a midden, a ditch, a pit group, an enclosure and a linear feature.
- 1 hollow way.
- 1 Industrial site – an Iron Age quarry at Quarr

8.9.5 The Iron Age/Roman transition assets include:

- 6 domestic assets, comprising 2 occupation sites, a villa, a building, a ditch and a pit.
- 5 objects
- 1 inhumation
- 1 industrial site.

8.9.6 The Iron Age assets are shown on Chart 5 and the Iron Age/Roman transition assets on Chart 6.

Chart 5 Number of Iron Age assets by asset type

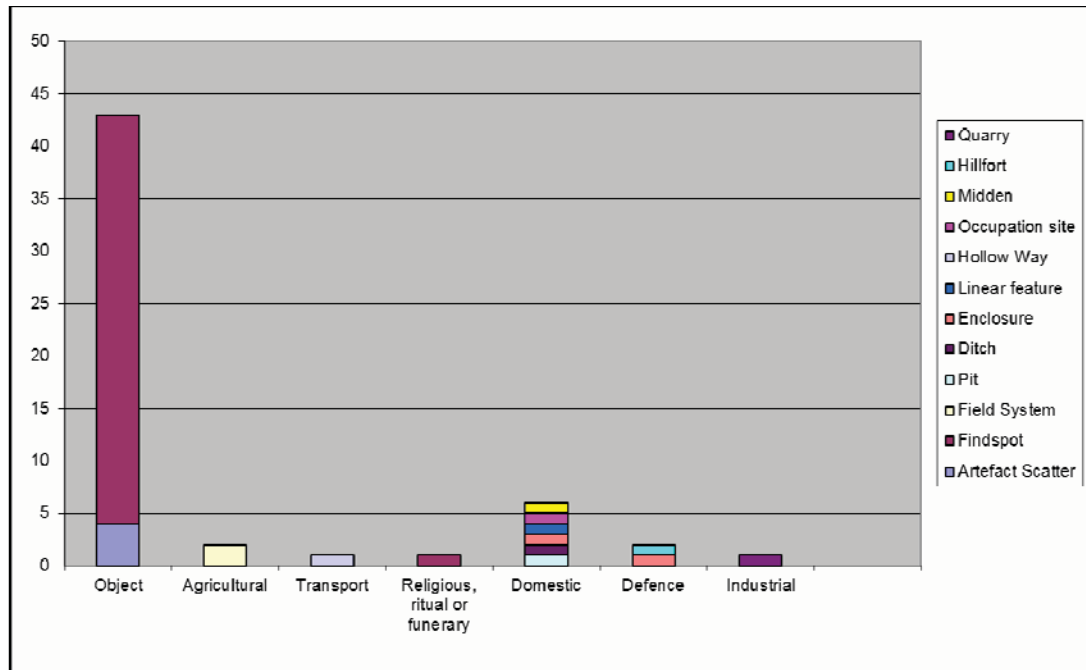
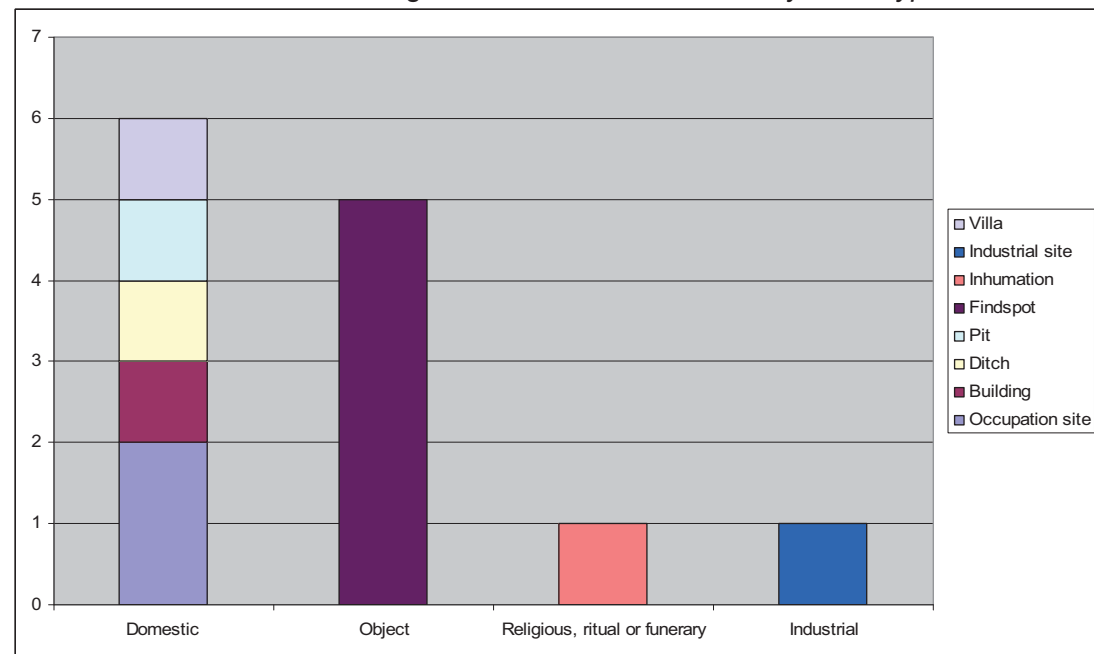


Chart 6 Number of Iron Age/Roman transition assets by asset type



### Key Iron Age Sites

8.9.7 The aggregates resource includes a number of key sites which are likely to represent areas of dense archaeological remains. Some of these assets are protected through Scheduling. Other assets are of high importance and archaeological mitigation prior to extraction would represent a considerable cost, assuming extraction as permitted.

### Domestic

8.9.8 Iron Age settlement, in particular in the late Iron Age/Roman transition, is more common than the preceding periods. In form, settlement and domestic sites are similar to Bronze Age precedents, comprising enclosures with one or more circular round houses within them. Only the post holes and sometimes the 'drip gullies' (a

drain to carry away rainwater running off the roof) of the house structure survive, but internal pits and hearth features may also be found.

8.9.9 There are six Iron Age domestic assets and six Iron Age/Roman transition domestic assets within the aggregates resource. It is possible that assets identified as industrial and defensive may also have a domestic or settlement aspect. Numbers in **bold** in brackets refer to locations on Fig 15.

- **Alvington Down (125)** – Iron Age linear features in West Wight Chalk Downland (MIW5788) contained Iron Age pottery, a loom weight and flint suggesting nearby occupation.
- **Bowcombe (123)** – An Iron Age and Roman occupation in West Wight Downland Edge (MIW 458) in the form of a midden along with a scatter of Roman building materials (MIW1424) indicating a nearby building.
- **Brading (86)** – Iron Age occupation site and a possible kiln (Trott 1999) was found at Brading Roman villa (MIW7130), close to an earlier Bronze Age lithic working site.
- **Combley (124)** – Iron Age material underlying the Roman villa at Combley (MIW935), indicating possible occupation preceding the villa. Similar remains have been found beneath other Roman villas on the Island (Waller 2006c).
- **Knighton (122)** – An Iron Age occupation site is known from Knighton in Newchurch Sandown (MIW1112), where an enclosure, a building and ditches were excavated, but have not been published (Basford 1980; Waller 2006c).
- **Mersley Farm (85)** – *In situ* Iron Age and Roman artefacts were found during an evaluation at Mersley Farm close to a Neolithic/Bronze Age lithic working site (Trott 2002a).
- **Ninham (9)** – a group of five Iron Age pits were identified at Ninham (MIW1623), close to a Neolithic occupation site at Lea Farm and Bronze Age activity at Blackpan Common.
- **South West Wight Coastal Zone** – An Iron Age ditch (**119**) was found eroding out of the cliff at Shippards Chine (MIW3) in 1951 and undated features nearby (e.g. MIW11389) may be contemporary. In 1933, Hookey (1951) excavated a Iron Age and Roman settlement site eroding out of the cliff at Sudmoor (**120**). Three ‘huts’ and a well were excavated (Dunning 1935; Sherwin 1939b).
- **Undercliff** – An Iron Age midden (MIW234), indicating domestic settlement has been identified at St Catherine’s Point (**118**). A further three middens of possible Iron Age date have been uncovered nearby (MIW2058; MIW2494; MIW4943), one (MIW2058) with human remains. Iron Age occupation has also been recorded at Ventnor and other Iron Age burials are known from the study area outside the aggregates resource (Basford 1980, 29).
- **Whippingham (89)** – At Padmore Farm (MIW5516) in Northern Lowlands, evidence of Iron Age debris suggested domestic, and possibly, industrial activity in the vicinity. Excavations revealed earlier activity in the area.

#### Religious, ritual or funerary

8.9.10 A variety of forms of ritual and funerary practice predominated during the Iron Age. Iron Age funerary practice encompassed both inhumation and cremation at different times and in different areas, whilst ritual deposition and associations with ‘sacred’ water and marshy areas appears to have continued from the Bronze Age.

8.9.11 Evidence of Iron Age religious, ritual and funerary activity is limited within the aggregates resource, as they are across the Island. One Iron Age/Roman transition inhumation is known from the aggregates resource. This and other possible Iron

Age assets are shown on Fig 16:

- **Packway, Newchurch (128)** – There was no evidence of a skeleton, possibly due to the acidic soils, but the positioning of the pottery within the pit indicated a funerary context (MIW6412; Tomalin 1998)
- **Undercliff** – A possible Iron Age midden associated with human remains (MIW2058) was excavated at St Catherine's Point (**118**). A possible Iron Age burial (**127**) was found on the seashore at Binnel (MIW11303). Other Iron Age burials are known from the Undercliff study area, outside the aggregates resource (Basford 1980, 29).

8.9.12 A possible cremation cemetery was identified outside the aggregates resource at Lake, near Sandown (Poole 1932b).

8.9.13 At **Michael Morey's Hump** in East Wight Chalk Ridge (MIW942) an Iron Age spindle whorl was found in association with a Bronze Age barrow group (**129**). The significance of this find is uncertain, but may indicate activity focused on the earlier barrows.

#### Industrial

8.9.14 There are 2 Iron Age industrial sites within the aggregates resource (Fig 15). Generally, the evidence of industrial remains of this period across the Island includes a wider variety of activities than previously (e.g. pottery manufacture, salt extraction, metal working and other processes), although such activity does not appear to be located within the aggregate areas. Of the 2 known sites, 1 is quarry, located at Quarr (**117**) on the northern coast of the Island in Northern Lowlands. The quarry was dated by the Late Iron Age material found within them. The Quarr quarries are close to the Wooton-Quarr intertidal zone, where a project recently found Iron Age timber structures outside the aggregates resource (Tomalin *et al* forthcoming). The final industrial asset is a late Iron Age salt manufacture site at Redcliff (**30**) (Tomalin 1990). The area has evidence of earlier activity (MIW1178).

#### Defence

8.9.15 During the Iron Age hillforts and defended settlements appear in the archaeological record and have been interpreted as a response to increasing competition for resources during the Iron Age. These comprise a site on high ground with multiple (up to three) sets of large banks and ditches. Excavated hillforts have revealed evidence of internal domestic occupation. The aggregates resource contains two known Iron Age hillforts and one possible Iron Age enclosure (Fig 15):

- **Castle Hill (132)** – Castle Hill in West Wight Downland Edge (MIW255) comprises a ditched enclosure on top of a ridge. The Scheduled Monument has not been excavated and is interpreted as a possible Iron Age enclosure.
- **Chillerton Down (130)** – The Chillerton Down hillfort (MIW373) in West Wight Chalk Downland was identified by Dunning (1947) and is a Scheduled Monument. The site has not been excavated but its construction is considered to have been unfinished.
- **Yaverland (26)** – In 2001, archaeological excavations revealed a triple ditch defensive system surrounding the hilltop overlooking a possible harbour at Brading Haven (Waller 2006c). Evidence of settlement during the Iron Age, Roman and Migration periods (MIW4868) was recovered.

#### Object

8.9.16 Of the 82 Iron Age assets, 43 (52%) are objects. Of these, 39 are individual objects found either by chance or through metal detecting. The significance of the individual objects is difficult to determine, but might indicate areas of Iron Age activity. Clusters of objects are likely to indicate the presence of dense archaeological remains (e.g. settlements, cemeteries etc) rather than more diffuse agricultural features.

- **Carisbrooke castle (133)** – A group of four known, and 39 possible, Iron Age objects were found at and around Carisbrooke Castle in West Wight Downland Edge. It is possible that this group is associated with Iron Age activity preceding the construction of Carisbrooke Roman villa.
- **Combley (124)** – An Iron Age artefact scatter (MIW2310) was found to the east of Combley Roman villa, and two objects were found in close by (MIW7318; MIW2301), suggesting activity preceding the villa construction.
- **South of Mersley Down/Ashey Down (161)** – An Iron Age artefact scatter (MIW1045) in East Wight Chalk Ridge and Newchurch Sandown. Four Iron Age objects and an Iron Age/Roman object along with Roman metal artefacts were found by a metal detectorist in the same field (MIW7249). The concentration of artefacts suggests activity in the area, possibly related to the Iron Age occupation site at Knighton, 630m to the south.

8.9.17 The lack of clusters of Iron Age artefacts in known areas of Iron Age occupation, such as South West Wight Coastal Zone and Undercliff, indicates how much the distribution of objects and chance finds reflects the choices of investigators rather than the distribution of Iron Age activity or key sites.

#### *Diffuse Iron Age assets*

8.9.18 In addition to the key sites with dense archaeological remains, the aggregates resource contains a limited number of Iron Age sites which probably represent more diffuse remains (Fig 15). Diffuse remains may be of very high significance if they have good time-depth (e.g. Brading Down field system), or have other highly significant elements. Assets within Scheduled Monuments or unscheduled remains of very high significance would require preservation *in situ*. Other remains, which are not considered of sufficiently high significance to merit preservation *in situ*, would require mitigation in the form of archaeological excavation and recording (preservation by record).

8.9.19 Two Iron Age field systems have been identified at Ashey Down (MIW1044: **24**) and Mersley Down (MIW1043: **68**) in East Wight Chalk Ridge. It is also possible that the Roman field system on Brading Down (MIW1110) may have Iron Age antecedents. The Mersley Down field system is associated with a hollow way representing an Iron Age route. It is likely that the Bronze Age trackway (MIW86) across the central ridge of the Island continued in use in this period.

8.9.20 There are a further 970 possible Iron Age assets on the aggregates resource. These include a number of objects likely to represent diffuse activity, although some may represent more complex archaeological sites. Assets potentially representing concentrations of Iron Age activity are discussed in section 8.10.

8.9.21 The possible diffuse assets include 19 field systems and 5 boundaries. These include four field systems which may be as early as the Neolithic (see above 8.7.19) and 8 field systems and a boundary which may be as early as Bronze Age (see above 8.8.30). All these assets are located in close proximity to the central ridge, reflecting either past occupation patterns, differential survival of these features or greater investigation in the central area. Those possible Iron Age field systems are shown on Fig 15 and include:

- **Ashey Down (24)** in East Wight Chalk ridge close to the Iron Age site at Knighton and a known Iron Age field system.
- **Bowcombe Down/Idlecombe (79)** in West Wight Chalk Downland.
- **Brighstone Forest (60)** in West Wight Chalk Downland.
- **Cheverton Down (43)** in West Wight Chalk Downland.
- **Gallibury Fields (80)** in West Wight Chalk Downland, within a Scheduled Monument.

- **Mersley Down (68)** in East Wight Chalk ridge close to the Iron Age site at Knighton and a known Iron Age field system.
- **Middle West Down (69)** in East Wight Chalk Ridge.
- **Moor Farm (64)** in South Wight Sandstone.
- **Newbarn Down (97)** in West Wight Chalk Downland.
- **Heasley Manor (601)** in Arreton Valley

### *Conclusion*

- 8.9.22 There are a limited number of Iron Age assets within the project database, although this is likely to reflect the distribution of past investigations rather than the concentration of Iron Age occupation. Of those key Iron Age sites that have been identified, there are a number which show continuity from the Bronze Age or earlier. A number of Iron Age sites also show continuity of activity into the Roman period, with some sites developing into villas.
- 8.9.23 The key Iron Age sites in the aggregates resource include up to three hillforts, a number of occupation sites and two burials. Recent archaeological investigation of a short section of coast between Wooton and Quarr has revealed evidence for greater exploitation of the coast than previously understood. Iron Age occupation sites at Whippingham and Ninham and an important hillfort at Yaverland have been identified during recent investigations. Despite recent work, much of the evidence within the aggregates resource is dependent upon antiquarian excavations and chance finds. Reassessment of earlier excavated sites remains a priority, as does further survey and investigation to identify additional Iron Age assets.
- 8.9.24 The distribution of known and possible Iron Age objects has indicated there may be further remains at Carisbrooke, Combley and Mersley Down, although the precise significance of the distribution of chance or metal-detected finds is difficult to determine without systematic survey to confirm where concentrations reflect the artefact distribution and where they are the result of investigator preferences.
- 8.9.25 The recent NMP survey of part of the Island has resulted in an increase in assets in these areas, but many of these assets comprise unexcavated cropmarks dated on morphological grounds. Most cannot be assigned to a particular period without further investigation, although a number are likely to date to the Iron Age. Further investigation might reveal more about the organisation of the landscape and patterns of land use in this period.

## **8.10 Later prehistoric (c 4000BC–43AD)**

- 8.10.1 There are 685 undated assets in the HER and project database, which have a broad 'later prehistoric' (Neolithic, Bronze and Iron Age) date range assigned. These are considered together here as a group.

### *Assets representing possible key later prehistoric sites with dense archaeological remains*

- 8.10.2 Such sites might comprise dense archaeological features which could be expensive to excavate and record archaeologically and might, upon preliminary investigation, be sufficiently significant to require preservation *in situ*, which would prevent extraction taking place. The potential key sites are detailed below and are shown on Fig 17.

### Domestic

- 8.10.3 The following undated sites may represent domestic activity:
- **Cheverton Down (126)** – a cluster of 22 pits, considered archaeological in nature, identified from aerial photographs south of Cheverton in the West Wight Chalk Downland (MIW391).

- **Godshill hearths (59)** – In addition to the possible later prehistoric hearths along the south west coast (see above 8.7.13) a group of seven undated hearths have been identified along the Medina (MIW2628-32 and MIW6810) and Eastern Yar (MIW5435). These assets might indicate later prehistoric activity around these rivers.
- **King's Quay (135)** – An undated post-built structure in Northern Lowlands. King's Quay was also important in later periods, a Roman, Migration or early medieval boundary ran from King's Quay to St Lawrence and the structure may be associated with later exploitation of the area.
- **Lane End Nursery (141)** – The NMP identified a possible hut circle within an enclosure at in Arreton Valley (MIW11587).
- **Newtown Estuary (6)** – The HER records four post-built structures (MIW5281; 6823–4) and a structure (MIW6821) on the East Spit on the west side of the Newtown estuary. These assets could contain preserved wood from the Neolithic onwards.
- **South-west coast** – A number of possible later prehistoric hearths are known from the south-west coast (Atherfield Coastal Plain and South West Wight Coastal Zone study areas). These hearths have already been discussed in para 8.6.5 and are shown on Fig 17.
- **Undercliff middens** – Three later prehistoric or Roman middens have been identified at St Catherine's Point (MIW2058, MIW2494 **118**) and Binnel (MIW4943, **136**). One of the middens was associated with undated human remains (MIW2058). These assets are likely to represent occupation of the later prehistoric period in this area.

#### Religious ritual or funerary

8.10.4 The following assets are known to be of religious, ritual or funerary type, but are undated:

- **Gallows Hill Inhumation (24)** – An inhumation was found on East Wight Chalk Ridge (MIW1438). The inhumation was near a Bronze Age barrow cemetery, and may represent a secondary burial or associated with the use of the hill as a gallows in the post-medieval period.
- **Stenbury cremation cemetery (140)** – Ten cremations (MIW651) were found at Stenbury in West Wight Downland Edge in 1727 (Worsley 1781, 220). The date of these cremations is unknown, but they possibly represent a Bronze Age, Iron Age or Roman cemetery.
- **Undercliff undated human remains (127)** – undated human remains which may date to the later prehistoric or later periods uncovered at St Catherine's point (MIW2058) and Binnel Bay (MIW11303). These assets represent isolated burials but they may alternatively be associated with hitherto unrecorded cemeteries.

#### Industrial

8.10.5 Five undated flint working sites are known from the aggregates resource. Flint was most commonly used during the prehistoric period, and its use continued into the Bronze and Iron Ages when metals were available. It is therefore likely that these finds are of late prehistoric date:

- On the clifftop at **Atherfield (139)** in Atherfield Coastal Plain (MIW2023).
- **Bowcombe Down (41)**, close to two barrows in West Wight Chalk Downland (MIW449)
- **Cheverton Down (43)** on Plateau Gravel in West Wight Chalk Downland (MIW2588) **North-west of Freshwater Bay (137)** in Northern Lowlands (MIW2601)



- **Mottistone Common (138)** in West Wight Downland Edge (MIW4978 and MIW4977)

*Assets representing diffuse archaeological remains of possible later prehistoric date*

- 8.10.6 Most of the possible late prehistoric assets represent sites where diffuse archaeological remains are spread over a wide area (e.g. agricultural field systems). These are discussed by asset type below and are shown on Fig 18 and Chart 7.
- 8.10.7 Many of these assets have been identified through aerial photography and as a result they are concentrated across the central part of the Island which was included in the recent NMP survey. It is likely that extension of NMP survey across the rest of the Island would result in an increase in assets across the rest of the study areas.
- 8.10.8 The type of mitigation for such remains would depend upon their significance. Remains of very high significance (e.g. Scheduled Monuments, and remains with considerable time depth or other significant elements) would require preservation *in situ*. Other remains would require mitigation, including archaeological excavation and recording as a minimum. Initial site based investigations would be required to determine the precise significance of these assets and, therefore, the type of mitigation required.

Agricultural assets

- 8.10.9 There are 50 possible late prehistoric agricultural assets including 13 field systems, 11 lynchets (banks formed at the end of fields by the movement of earth caused by ploughing), 7 linear features, 6 field boundaries, 4 linear earthworks, 3 boundary ditches, 3 sites, 2 earthworks and one spoil mound. These assets are either positive (e.g. mounds and banks) or negative (e.g. ditches) features which represent the physical remains of past agricultural activity.

Civil assets

- 8.10.10 There are 11 possible civil assets comprising 9 boundary banks, 1 boundary and 1 linear earthwork. Whether these are genuinely of a civil nature or reflect agricultural boundaries is unknown.

Industrial

- 8.10.11 In addition to the possible later prehistoric lithic working sites discussed above there are 15 further industrial assets of possible later prehistoric date within the aggregates resource. These include 5 quarries, 3 pits, 3 mounds, 2 chalk pits, 1 marl pit and 1 hollow. These assets are all associated with quarrying or similar extractive activity. Most are likely to be later than the prehistoric, but it is possible some were begun during the later prehistoric period.

Palaeoenvironmental

- 8.10.12 There are 23 palaeoenvironmental assets including 17 natural features, 2 non-antiquities, 3 palaeochannels and a wood. These assets include remains of ancient landscape features, some of which (e.g. palaeochannels) may contain evidence for ancient landscape and vegetation.

Transport

- 8.10.13 There are 52 transport assets, including 41 trackways, 5 linear features, 2 ditches, 1 bank, 1 hollow way, 1 footpath and 1 ford. It is likely that many of these assets remained in use for multiple periods.

### Unassigned

8.10.14 There are 240 possible later prehistoric unassigned assets types. These assets are primarily earthworks representing either current (i.e. upstanding) or former (i.e. flattened but visible from aerial photographs) earthwork features that are either positive (e.g. mounds and banks) or negative (e.g. ditches). They are most likely to represent diffuse landscape uses such as agriculture, transport or civil boundaries. In some cases, they may include more concentrated areas of ancient activity (e.g. settlements, cemeteries or ritual sites) the detail of which was not visible from aerial survey but can only be determined by more intensive investigation:

- 75 linear features
- 39 earthwork banks
- 31 mounds
- 26 earthworks
- 14 enclosures
- 12 rectilinear enclosures
- 9 sites
- 8 linear earthworks
- 5 ditches
- 5 curvilinear enclosures
- 3 pits
- 4 Non-antiquities
- 3 platforms
- 1 structure
- 1 terrace
- 1 sub-circular enclosure
- 1 ditched enclosure
- 1 asset comprised of post holes
- 1 circular soil mark

### Water and drainage

8.10.15 There are three possible late prehistoric assets are associated with water and drainage, including 1 pond, 1 linear feature and 1 drainage ditch.

### Object

8.10.16 The relationship between objects and areas of past activity is uncertain without further investigation. Nonetheless clusters of objects, particularly in association with other assets, can reveal areas of past activity. There are 252 possible later prehistoric object assets including 12 artefact scatters, 193 findspots, 46 flint scatters and 1 flint assemblage. These assets are shown on Fig 19.

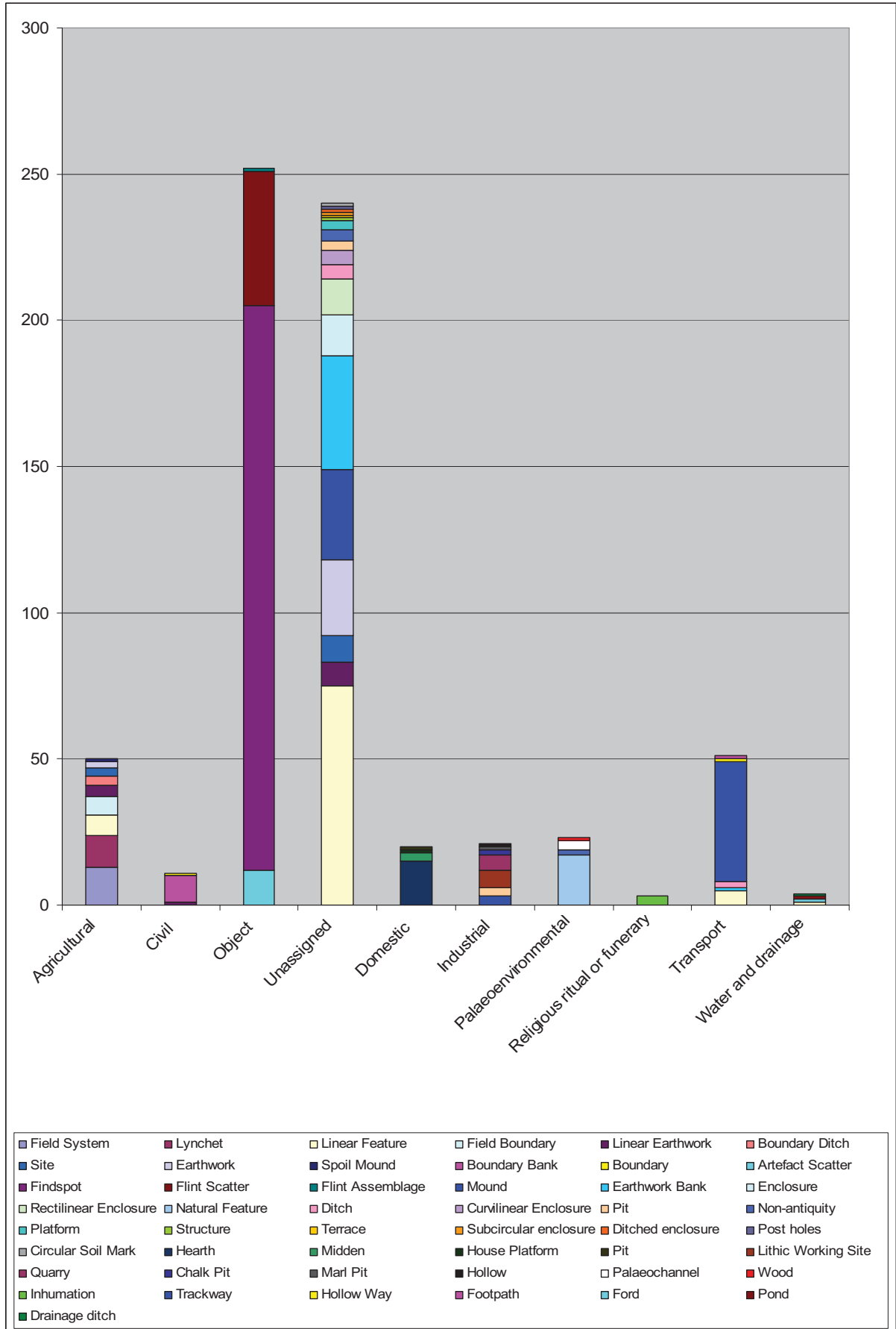
### *Clusters of possible later prehistoric assets*

8.10.17 Where clusters of such diffuse assets are present there may be a more complex site with a dense concentration of archaeological remains (Fig 18 and Fig 19). These potentially represent a greater risk to future extraction, either from the cost of archaeological mitigation or a requirement to preserve very significant remains *in situ*.

- **Appuldurcombe Down (62)** – There is a concentration of transport, agricultural and unassigned earthwork assets in South Wight Downland. There are Bronze Age barrows in the vicinity.

- **Binstead (151)** – Undated objects and artefact scatters may reflect late prehistoric activity in this area.
- **Bowcombe Down (79)** – A collection of undated objects, an extraction site, transport and unassigned assets.
- **Combley (124)** – A concentration of undated objects, scatters and artefact assemblage might indicate Iron Age and/or Roman occupation.
- **East Wight Chalk Ridge** – several concentrations of undated but possibly late prehistoric agricultural, transport or unassigned assets on Arreton Down (23), Mersley Down (68), Brading Down (25), Bembridge Down (144) and Culver Cliff (66).
- **Great Pan (5)** – There is a concentration of possible late prehistoric assets in Northern Lowlands, close to the nationally significant site (see above 8.3.9 and □).
- **Priory Bay (4)** – There is a concentration of possible late prehistoric lithic scatters and objects.
- **Shalfleet (150)** – A group of undated objects may be associated with the nearby timber structures at Shalfleet and Newtown East Spit.
- **St Catherine's Hill (142)** – a concentration of unassigned earthwork assets in South Wight Downland.
- **Tennyson Down (143)** – There is a concentration of possible late prehistoric unassigned and object assets near the Neolithic mortuary enclosure.
- **West Wight Chalk Downland** – a high concentration of diffuse possibly late prehistoric features around **Brook Down (98)**, **Compton Down (36)**, **Brighstone Down (42)**, **Mottistone Down (73)**, **Newbarn Down (97)**, **Cheverton Down (43)** and **Afton Down (19)** has. These include agricultural, civil and transport assets as well as a large number of unassigned earthworks.
- **Whippingham (152)** – A group of unassigned assets, artefact scatters and objects may be associated with known activity at this location.

Chart 7 Number of undated possibly late prehistoric assets by asset type



## 8.11 Roman (c 43–410AD)

### *Introduction*

- 8.11.1 In 43 AD the Romans invaded the south-east of England, creating the Roman province of Britain. The Isle of Wight was known as Vectis and was in an advantageous position close to the natural harbours of the south coast. There is evidence for Island involvement in the wine trade between Iron Age Britain and Roman Gaul shortly before the Roman conquest. The Island continued to represent an important site on the trade routes and Roman emporia are known from Yarmouth Roads and Fishbourne (Lyne 2008, 13)
- 8.11.2 The effect of the Roman conquest upon the Island appears variable. A number of late Iron Age sites, including Knighton and Havenstreet show little or no occupation after the conquest (Lyne 2008, 3), but there is also some continuity of building tradition along the south-west coast and some continuity of occupation at some of the later Roman villa sites (Basford 1980, 29).
- 8.11.3 During the early Roman period the Island prospered and there are a number of early occupation sites located across the Island. Some (predominantly along the south and west coasts) were of local form and others formed the initial stages of later villas. Many of the smaller native occupation sites did not survive the 2nd century AD, but the villas prospered during the late 3rd century AD. By the mid-4th century AD, villa sites at Combley, Carisbrooke, Clatterford and Shide were abandoned and villas at Rock and Brading had been reduced to derelict state (Tomalin 1987).
- 8.11.4 There were a number of industries on the Isle of Wight. During the end of the Iron Age and beginning of the Roman period, the Island developed a distinctive pottery tradition, known as Vectis Ware. This pottery type is believed to have been produced at coastal sites in association with salt production and fishing. It is likely that the small local coastal settlements in the western part of the Island were involved in such practices. Elsewhere the villas grew a variety of crops and there is evidence of wine production at Rock. Tile manufacture also took place on the Island, and Bembridge and Quarr limestone was quarried for construction on the Island and in the south of England (Lyne 2008).

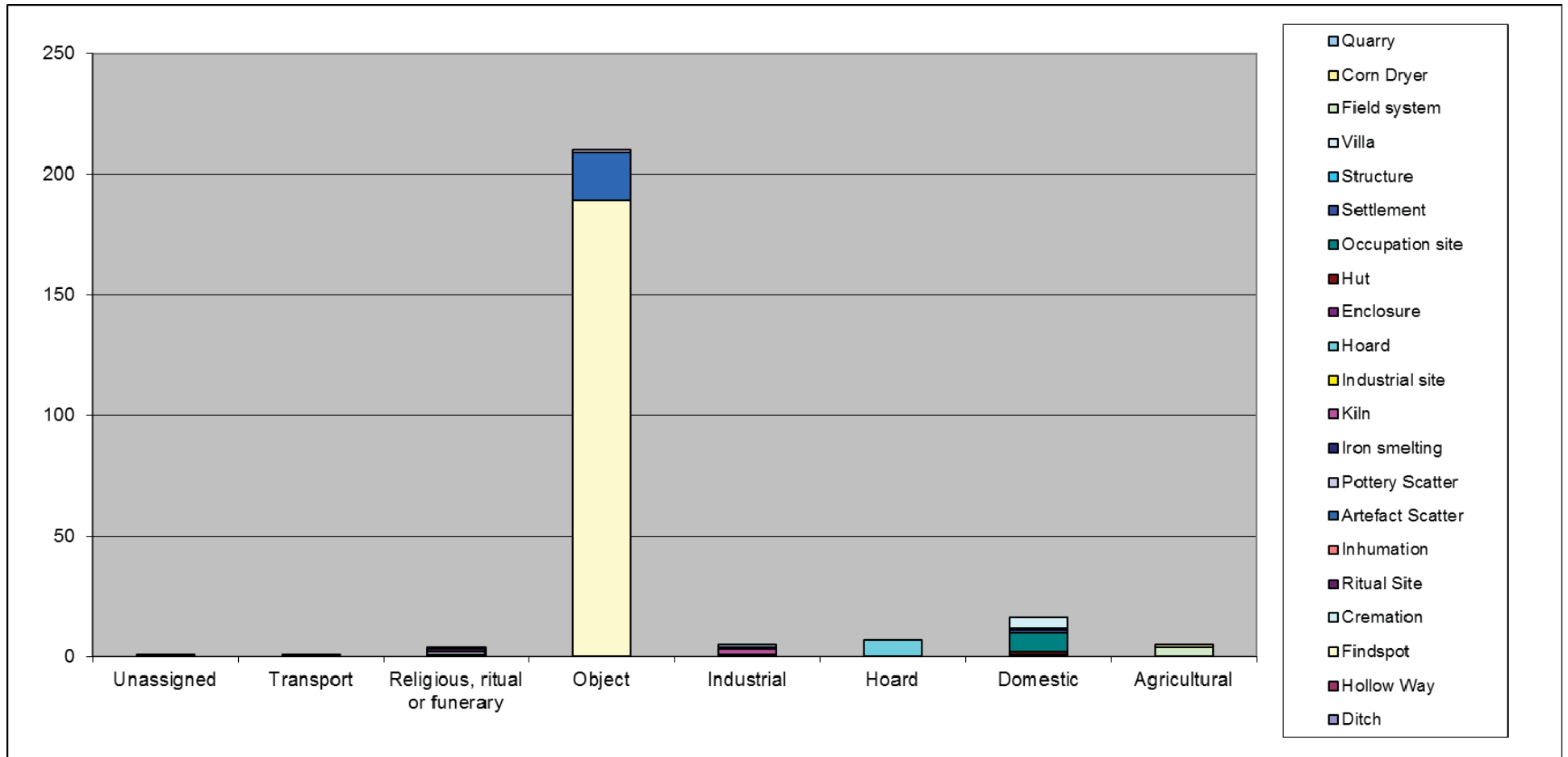
### *Asset density*

- 8.11.5 There are 250 Roman assets within the aggregates resource, equivalent to a density of 1.38 assets per km<sup>2</sup>. This is higher than the asset densities of the Neolithic and Iron Age periods (0.57 and 0.45 assets per km<sup>2</sup> respectively), but lower than the Bronze Age density of 2.57 assets per km<sup>2</sup>. This increase in the Roman period may be associated with an increase in activity, but it is also likely to be due to the patterns of archaeological investigation on the Island and the nature of the remains themselves. Like Bronze Age barrows, Roman villas were of particular interest to antiquarian researchers and a number of Roman villas were excavated during the 19th-century and consequently provide a number of entries to the HER (Basford 1980, 31). Roman finds are also relatively distinctive and easily identifiable and consequently have been found in consistent numbers as chance finds and through metal detecting and fieldwalking surveys (Lyne 2008, 1–2). These biases favour the collection and identification of Roman remains and make it likely that Roman remains will be dated reliably.
- 8.11.6 The Roman assets are shown on Chart 8 and include:
- 210 objects, including 189 findspots, 20 artefact scatters and one pottery scatter.
  - 16 domestic assets, including 8 occupation sites, four villas, an enclosure, a hut, a settlement and a structure.
  - 7 hoards

- 5 agricultural assets, including one corn dryer and four field systems
- 5 industrial assets, including 1 quarry, two kilns, an iron smelting site and an industrial site.
- 5 religious, ritual or funerary sites, including a findspot, a cremation, an inhumation and a ritual site.
- 1 transport asset, a hollow way.
- 1 unassigned asset, relating to settlement at Whippingham.

8.11.7 There are a further 720 assets of possible Roman date, making a possible total number of 970 Roman assets or a density of 5.35 assets per km<sup>2</sup>.

Chart 8 Number of Roman assets by asset type



### *Key Roman sites*

- 8.11.8 The aggregates resource includes a number of key sites known to have dense or significant concentrations of archaeological remains which would pose a constraint to extraction, either because they need to be preserved *in situ* (as with Scheduled Monuments and nationally significant sites) or because of the expense of archaeological mitigation.

### Domestic

- 8.11.9 There are 16 domestic Roman assets within the aggregates resource, detailed below and shown on Fig 20. Numbers in **bold** refer to Fig 20.
- 8.11.10 There is evidence for both continuity in domestic occupation from earlier periods and also change, with examples of a abrupt cessation of activity at the end of the Iron Age.
- 8.11.11 Sites with occupation during the early Roman period show a mixture of activities and there is evidence that Iron Age style buildings and structures continued in use in the Roman period.
- 8.11.12 Elsewhere Iron Age occupation was succeeded or replaced by more obviously Roman structures. A number of Roman villas have been excavated on the Island and all show evidence of Roman construction methods and living arrangements including mosaics, hypocaust central heating systems and bath houses. Roman villas excavated during the 19th-century revealed mosaics and 'civilised' associations which attracted the attention of antiquarians. Consequently archaeological understanding is not always as good as with villas and settlement sites excavated more recently. Nonetheless there is sufficient evidence to show the fortunes of the villas varied during different parts of the Roman period, to chart the development and demise of some and to attest to industrial processes which took place at many.
- 8.11.13 Villa sites typically began as small buildings, either during the late Iron Age or early Roman period. By the mid-3rd century many had become prosperous and during the late 3rd-century there is evidence for expansion and expenditure on luxury items such as quality mosaics. By the mid-4th century this prosperous phase had ended with villas becoming disused, abandoned or reverting to agricultural usage. Evidence of burning and disarticulated human remains at Shide and Brading indicates that the abandonment might have been violent (Tomalin 1987, 18: Lyne 2008, 8).
- 8.11.14 There are a total of 8 villas known on the Island at present, and four within the aggregates resource. It is possible that other villas are located near to occupation sites such as Bowcombe and Packway. Across the entire Island, only one of the 12 known villas (Gurnard) was located on the coast, although this may reflect the bias in investigation rather than a genuine occupation pattern:
- **Brading (86)** villa outside Brading, near Sandown, is a Scheduled Monument. The building was originally excavated in the 19th century to a high standard. It included a winged corridor house with an aisled building and bath house to the north-east and subsidiary buildings and a second bathhouse to the south-east (Tomalin 1987). The winged corridor house was constructed on the site of an earlier farmhouse during the late 3rd-century as the villa entered a period of relative prosperity, before it was abandoned (perhaps violently) and converted into an agricultural building (Lyne 2008, 8). Iron Age occupation (MIW7130) and a possible Iron Age/Roman clamp kiln (MIW1069) were recently recorded nearby during building works (Loader and Westmore 1995: Trott 1999).
  - **Clatterford (146)** – the Scheduled Roman villa in West Wight Downland Edge (MIW495) has not been extensively excavated, although it has been



known since 1856 (Kell 1856a). Aerial photographs reveal a winged corridor villa and geophysical survey confirmed the extent of the main building and additional buildings to the south. Trenching and soil coring to the south in 1995 recorded the presence of subsidiary buildings to the south and also confirmed that the villa development followed that of other villas on the Island. It originated in the mid-1st century AD and reached its maximum extent by the end of the 3rd-century, with minimal 4th-century occupation (Busby 1998: Busby *et al* 2001).

- **Combley (124)** villa in Northern Lowlands (MIW935) is a Scheduled Monument. It was first excavated in 1911 and re-excavated by Fennelly in the 1960s and early 1970s (Fennelly 1969a; 1971: Goodburn *et al* 1976b: Grew *et al* 1980: Wilson *et al* 1974). The excavations revealed Iron Age remains and a subsequent Roman aisled building and bath house, with mosaics constructed during apparent prosperity in the mid 3rd century.
- **Rock (145)** – This Scheduled Monument is a Roman villa in West Wight Downland Edge (MIW276). It was first found in 1831. It consisted of a corridor house of 10 to 12 rooms cut into a platform set into the hillside. The villa had a hypocaust and had been built in c AD 275. A corn dryer had been added in the late 4th-century, when there is evidence of some squatter occupation (Goodburn *et al.* 1976a). It has been suggested that the villa was involved in wine production on the basis of the pottery assemblage and a possible press structure outside the building (Lyne 2008, 5).

8.11.15 In addition to the villas there are a number of Roman occupation sites of less prestigious appearance on the aggregates resource. These may have been less wealthy properties and/or associated with less prestigious activities:

- **Ashey Down (24)** – A Roman settlement site (MIW1897) was identified by Drewett who recorded a small circular enclosure and 68 sherds of pottery to the south of a Bronze Age barrow group (Drewett 1970). A Roman field system (MIW1044) and several Roman objects (MIW1114: MIW1085: MIW1083) were found nearby.
- **Bowcombe (123)** – an Iron Age and Roman midden was excavated in West Wight Downland Edge (MIW458) by Pritchett, Sydenham and Flux in 1941 (Sydenham 1944). A deposit containing Roman building materials was later revealed in 1960–1 by Dr Jack Jones.
- **Centurions Copse (147)** – a possible Roman occupation site near to Brading Haven Bembridge Isle study area (MIW4787; Trott 2002b).
- **Limerstone Down (149)** – A Roman hut with remains of iron smelting and a hoard of 22 coins were found in 1932–33 in West Wight Chalk Downland (MIW298).
- **Below Mersley and Ashey Down (148)** – A large spread of pottery and great number of metal detected artefacts including Iron Age and Roman coins, suggesting nearby settlement, were recorded south of the road between the downs (MIW1045) in East Wight Chalk Ridge.
- **Newnham Farm, Binstead (152)** – Roman occupation was found close to a pottery manufacturing site near a spring in Northern Lowlands (MIW1558).
- **Packway, Newchurch (128)** – A Roman corn drying oven was recorded in excavations (MIW6412). Two Roman artefact scatters were found nearby (MIW2513: MIW2308), suggesting part of an occupation site.
- **South West Wight Coastal Zone** – Roman settlement at Sudmoor (MIW11) (**120**) had evidence of previous, Iron Age, occupation (Hookey 1951). At Grange Chine (MIW1976) the occupation was continuous through the Roman period (**153**). There is evidence of Roman occupation at Barnes Chine outside the aggregates resource (Lyne 2008, 7). These small native

sites have been associated with salt production and manufacture of the local Vectis Ware pottery.

- **St Catherine's Point (118)** – Iron Age and Roman activity in the form of a midden, Roman 3rd to 4th-century coin hoard and late Roman enclosure has been recorded at Undercliff (MIW2048).
- **Redcliff (30)** – archaeological excavations in Brading Haven Bembridge Isle (MIW1178) recorded late 1st century activity around a hearth and 2nd century AD salt production (Tomlain 1990).
- **Whippingham (89)** – evidence of Roman occupation at Padmore Farm, in Northern Lowlands (MIW5516).
- **Yaverland (26)** – evidence has been uncovered for activity at the hillfort in Brading Haven Bembridge Isle study area (MIW4868) at around the time of the Roman conquest. The defensive ditch was partly filled up at this point (Lyne 2008, 3). Below the hillfort, evidence of Roman activity was found including a late 3rd to 4th century building associated with copper, lead, glass and iron working (Lyne 2008, 13).

8.11.16 There are a number of other sites outside the aggregates resource which appear as ephemeral remains of Roman occupation sites, often comprising little more than an occupation horizon (Lyne 2008, 9).

8.11.17 In addition to those known Roman sites, the aggregates resource contains undated domestic assets which may possibly be of Roman date. Most of these have been discussed in 8.10.2 and shown on Fig 17. In addition further settlement or domestic sites may be revealed by clusters of undated assets or chance finds (8.11.27).

#### Religious, ritual or funerary

8.11.18 Evidence of Roman religious, ritual and funerary activity is limited on the Island. A mosaic suggesting possible Gnostic rituals (**86**) and deposits of a religious nature were recorded at Brading villa (Lyne 2008, 10). A skeleton was also found in the top of the hillfort ditch at Yaverland (**26**). He had been buried face down with his hands tied behind his back (Lyne pers comm), perhaps indicating a hastily buried victim of social or political upheaval (Lyne 2008, 3). Otherwise most evidence comes from chance finds of burials and these are limited within the aggregates resource. Religious, ritual and funerary assets are shown on Fig 21:

- **Ashey Down (24)** – a single Roman cremation in an urn, an inhumation and a number of Roman coins and sherds were found within the barrow cemetery (MIW 1075).
- **Farringford (154)** – a 'ritual site' was (MIW56) found on the land of Alfred Lord Tennyson in 1863. The site comprised a horse's head in a circle of stones and a hoard of 3rd century coins were found in an urn nearby.
- **Michael Morey's Hump (129)** – in East Wight Chalk Ridge (MIW942) Roman pottery was found near Bronze Age barrows. An Iron Age spindle whorl and earlier Bronze Age remains indicated that this site had been of significance for a long period.
- **Packway, Newchurch (128)** – a probable late Iron Age and early Roman inhumation was found close to a Roman occupation site (MIW6412).

#### Defence

8.11.19 There are no known large Roman forts, towns or military installations on the Island. It was originally believed that the earliest phase of Carisbrooke Castle was a Roman fort, but this has since been discredited (Young 2000).

8.11.20 Possible Roman military activity has been identified at **St Catherine's Point (118)** in Undercliff. In addition to Roman occupation debris there was a stamped tile which suggested the presence of a signal station or military lighthouse (Lyne forthcoming).

### Industrial

- 8.11.21 Evidence of industrial activity is limited on the Island, and where it is found it is typically associated with domestic occupation. Activities include the manufacture of the local Vectis Ware pottery, quarrying, iron smelting, metal and glass working. The industrial assets within the aggregates resource are shown on Fig 22.
- 8.11.22 A pottery kiln has been excavated at Brading villa (**86**) and kiln bars were recorded at Combley villa (**124**), suggesting that kilns were a typical features of a villa complex (Tomalin 1987, 31). Other villas may also have been engaged in local industrial processes (Lyne 2008, 12–13). At Newnham Farm (MIW1558) late forms of Vectis Ware were manufactured and perhaps used to contain materials for export from the emporium at Fishbourne (**152**). Overall the evidence indicates that pottery manufacture was small scale and subordinate to other activities, such as salt production, fishing and farming. (Lyne 2008, 11). In this context, a pottery kiln or furnace recorded at Burnt Wood (**155**), Thorness, in Northern Lowlands (MIW565) on the northern coast is likely to indicate a small coastal settlement also associated with fishing or salt production. The furnace was excavated by Pritchett in 1931–2 and a large quantity of 1st–2nd century pottery recovered, although whether it was from pottery production or other industrial processes, e.g. salt from evaporation (Sherwin 1933b).
- 8.11.23 There is evidence for Limestone extraction from an intertidal outcrop at Quarr (**117**) during the Roman period. This was associated with Iron Age and Roman activity on the Quarr beach and may have provided limestone for a number of buildings and artefacts. As well as being employed in the construction of most villas on the Island, the Bembridge limestone was used to build Fishbourne Palace near Chichester and was later manufactured into querns, roofing slabs and building stone. The location of the quarry, on the north coast of the Island, close to the emporium at Fishbourne, would have facilitated the export of the stone to the mainland.
- 8.11.24 The Island provided great opportunities for salt production (brine boiling) from the surrounding seawater and a number of small local occupation sites along the south-west coast have been associated with this activity. It has been suggested that these sites were also centres of Vectis Ware manufacture and sea fishing (Lyne 2008). At Redcliff (**30**) salt production was undertaken in the 2nd century and at nearby Yaverland (**26**) 3rd century Roman metal and glass working industries were located near the hillfort.
- 8.11.25 An iron smelting site is known from the aggregates resource at Limerstone Down (**149**), but it is likely that other such sites were present.

### Hoard

- 8.11.26 There are seven hoards of Roman metalwork within the aggregates resource. Apart from the St Catherine's Point hoard, they are all located (Fig 21) along the central ridge of the Island. The pattern of hoards across the rest of the Island is quite different and it is likely that this distribution pattern reflects the bias towards the central ridge in the aggregate geologies rather than an genuine distribution of Roman activity:
- **Bembridge (155)** – a Roman hoard of 27 coins (MIW1605) was found at in intertidal silt in Brading Haven Bembridge Isle study area. Coins included a Sestertius of Antoninus Pius associated with parts of a key, and coins ranging from Domitian (AD81–96) to Faustina II (wife of Marcus Aurelius and daughter of Antoninus Pius). Most are sestertii and dupondii of Antoninus Pius (AD138–161) and the Faustinas (Faustina I died 140AD, commemorative coins minted by Antoninus Pius: Faustina II died 175AD).
  - **Chames, Bowcombe (156)** – a Roman hoard (MIW2136) of almost 250 late 3rd-century coins was found in West Wight Chalk Downland. The hoard had been deposited within or against a large field lynchet.

- **Combley (157)** – a hoard of c 1200 Roman coins (MIW2506) from a disused quarry at Combley Farm in East Wight Chalk Ridge study area. The coins had been disturbed, probably by quarrying activity. Combley villa lies 700m north-west of the quarry.
- **Farringford (154)** – a hoard of 250 Roman coins (MIW56) was discovered in an urn in 1863 in Freshwater Isle. The coins date from the mid to late 3rd century including issues of Gallienus (AD 253–268), the Tetricii (AD 271–274), Victorinus (AD 269–70), Postumus (AD 260–9) and Claudius Gothicus (AD 268–270). The hoard was found close to a ritual site comprising a horse's head in a circle of stones and may have had a votive purpose.
- **Limerstone Down (158)** – a hoard of 22 3rd–4th century Roman coins was found in 1932 in a bank beside a hut and iron smelting site (MIW298).
- **St Catherine's Point (118)** – a group of 3rd–4th century Roman coins was found in Undercliff (MIW2058) associated with a multi-period midden and undated human remains. This is the only large collection of coins within the aggregates resource found outside the central ridge. The very wide date range of the coins might suggest that this was not a coin hoard (i.e. a group of coins deposited at one time for a specific purpose) but rather an indication of intensive coin loss by various individuals over a sustained period of time (Lyne pers comm). This might imply a larger population was present, the population were present for a long period or the original owners of the coins were engaged in activities which made accidental loss more likely. The 'hoard' may be associated with the multi-period site at St Catherine's Point, a possible signal station or lighthouse which would be expected to have a relatively highly concentrated population.
- **Tapnell Down (159)** – a hoard of more than 10 worn Roman coins (MIW7323) was found by a metal detectorist in Thorley Wellow Plain. Part of a gold torque was found nearby.

### Object

- 8.11.27 Roman objects are often highly recognisable and easily dated (particularly coins) and consequently a large number of Roman chance finds, and finds from metal detection and fieldwalking are recorded in the HER (Fig 22).
- 8.11.28 The HER records the presence of high concentrations known and possible Roman remains, which may be evidence of underlying focus of Roman activity (i.e. a site). Systematic mapping of the distribution of surface artefacts can identify potential archaeological sites where there is a concentration. Occasional surface finds may have been moved by human or natural processes from their original location and the significance of such finds is uncertain. The absence of concentrations of objects at locations where high concentrations might be expected (e.g. Brading Roman villa, St Catherine's Point) provides an indication of the variable nature of using isolated chance finds as a predictive tool. Notable groups of objects on aggregate geology comprise:
- **Arreton Down (23)** – A cluster of Roman objects in East Wight Chalk Ridge might reflect known Roman activity close to the barrow cemetery.
  - **Ashey Down/Mersley Down (161)** – There is a large cluster of Iron Age and Roman objects to the south in East Wight Chalk Ridge and Newchurch Sandown study areas. One of these (MIW7249) suggests a Roman site nearby. The spread of objects across Ashey Down may relate to the occupation site on the Down, while objects and several artefact scatters at Mersley Down and south towards Mersley Farm and Knighton may relate to the Iron Age site at Knighton and the Iron Age and Roman site at Mersley Farm.

- **B3323 (165)** – There is a line of known and possible Roman objects along the B3323 road in West Wight Chalk Downland. This distribution extends along the road from Clatterford Roman villa (MIW495), where excavations recorded a Roman road running along the valley of the Lukely Brook on a similar line to the modern road (Busby 1998: Busby *et al* 2001).
- **Binnel (168)** – Two Roman objects and a possible Roman object have been found here. These assets may be associated with a midden at Binnel.
- **Combley Farm (124)** – A small group of Roman objects and an artefact scatter in Northern Lowlands, probably reflects activity around Combley Roman villa.
- **Culver Cliff (171)** – Two Roman objects at the eastern end of Culver Cliff in East Wight Chalk Ridge.
- **Farringford (167)** – The HER records two known and one possible Roman objects in Freshwater Isle. It's possible these were associated with the 'ritual site' and coin hoard described above (para 8.11.26).
- **Gurnard (169)** – Three Roman objects in Northern Lowlands may reflect activity near the Roman villa.
- **Hale Manor Farm (164)** – A cluster of five Roman objects on either side of the Eastern Yar in Arreton Valley may indicate the presence of a nearby Roman site, perhaps associated with a river crossing.
- South and west of **Newport (160)** – A high concentration of known and possible Roman artefact scatters at Mount Joy and west of Carisbrooke in West Wight Downland Edge study area. This may be associated with the nearby Roman villas at Carisbrooke, Clatterford and Shide and the Roman settlement at Bowcombe.
- **Pyle Farm (166)** – A Roman pottery scatter and three objects Atherfield Coastal Plain may reflect a small Roman site.
- **Shalcombe (162)** – A cluster of known and possible Roman objects in West Wight Chalk Downland and Thorley Wellow Plain, including an artefact scatter at Chessell Farm.
- **Shalfleet (170)** – Two known and three possible Roman artefacts in Northern Lowlands.
- **South West Wight Coastal Zone (163)** – There is a clear concentration of known and possible Roman objects along the coast. The significance of this area for occupation has already been noted, but it is noticeable that most of the Roman objects (like the sites) are located along the coast. The higher concentration of discoveries may reflect coastal erosion and exposure and a higher level of investigation.

8.11.29 Across the aggregates resource there is a clear pattern of known Roman activity. The following areas have demonstrated higher concentrations of Roman remains, although this may reflect biases in the investigation of the Island, and as such have a high potential to contain hitherto unrecorded Roman remains:

- **Central East-West ridge** – The four villas, four domestic occupation sites, two industrial sites and all the known Roman ritual locations, field systems and trackways are located along the central east-west ridge. This falls primarily within West Wight Chalk Downland and East Wight Chalk Ridge, but adjacent parts of other study areas (Arreton Valley, Brading Haven Bembridge Isle, Freshwater Isle, Northern Lowlands, Newchurch Sandown, Thorley Wellow Plain, West Wight Downland Edge) may also have high potential.
- **South West Wight Coastal Zone** – Two Roman occupation sites and has been identified as an important area for occupation since prehistoric times.

- **Undercliff** – Although a small study area, Undercliff contains the important multi-period site of St Catherine’s Point and evidence of other Roman and earlier occupation along the south coast.

#### *Diffuse Roman assets*

8.11.30 The aggregates resource contains assets likely to represent diffuse landscape features (Fig 20). The type of mitigation for such remains would depend upon their significance. Remains of very high significance (e.g. Scheduled Monuments, and remains with considerable time depth or other significant elements) would require preservation *in situ*. Other remains would require mitigation, including archaeological excavation and recording as a minimum. Initial site based investigations would be required to determine the precise significance of these assets and, therefore, the type of mitigation required.

#### Agricultural

8.11.31 Evidence from excavated villa sites, from artefact assemblages and plant remains extracted from charred or waterlogged contexts (e.g. from corn dryers, such as the one at Packway in Newchurch; **128**), indicates that the Romans farmed spelt wheat, bread wheat and barley (Tomalin 1988). At Brading, Clatterford and Ventnor Celtic beans were grown and there is evidence of cattle rearing at Brading (Lyne 2008, 5).

8.11.32 Corn dryers and processing remains are likely to be located within or close to settlements, but remains of field systems and boundaries occur as diffuse landscape features which are often identified from aerial photographs (i.e. NMP). Many field systems have probably been removed by mechanised ploughing and most identified are from on the downland. There are two known Roman field systems within the aggregates resource; one (**24**) at Ashley Down (MIW1044) and another (**86**) at Brading Down (MIW1110). Both are located close to Roman settlements. Five possible Roman field systems have been identified at Hale Manor Farm (164) in Arreton Valley. Roman objects (see Fig 18) have been noted in this area.

#### Transport

8.11.33 It is likely that the ancient track across the central ridge continued to be used during the Roman period. A hollow way of Roman date has been identified at Mersley Down (MIW1043) in East Wight Chalk Ridge (**68**) and is shown on Fig 20. This asset may be associated with nearby Roman occupation at Mersley Farm.

8.11.34 A waterlogged wooden trackway was excavated by Kevin Trott outside the aggregates resource at Alverstoke Pond near Newchurch Sandown. The trackway ran north-south across a wetland area and was founded on a brushwood foundation (Malcolm Lyne pers comm).

#### Civil

8.11.35 The possible Roman boundary between King’s Quay and St Lawrence (MIW953) runs north-south across the Island through the Northern Lowlands, Arreton Valley, South Wight Sandstone, South Wight Downland Edge and South Wight Downland study areas. It was identified from aerial photographs and survives in some sections as a bank and ditch. Although the feature has not been excavated, it is respected by some medieval parish and estate boundaries. It has therefore been identified as of possible Roman, Migration or early medieval date.

#### *Conclusions*

8.11.36 The Roman period is relatively well represented in archaeological terms across the Isle of Wight and the aggregates resource. Early interest in Roman sites by antiquarian investigators has ensured that a number of villas and other sites of interest were recorded and are included in the HER. Although more recent

excavations have revealed new Roman sites (notably at Yaverland, Redcliff, Whippingham, St Catherine's Point and along the eroding south-west coast) understanding of Roman assets is still dependant on antiquarian investigation, chance finds and metal detected finds. There are also a number of possible Roman assets (including a large number of possible landscape features identified by the NMP) which require further investigation to confirm if they are of Roman date.

- 8.11.37 Within the aggregates resource the key sites include four Roman villas and a number of occupation sites of a more ephemeral nature. Some Roman industrial sites, including pottery kilns producing Vectis Ware, have also been identified within the aggregates resource at Brading, Binstead and Burnt Wood. Pottery production may also have been associated with coastal fishing and salt manufacturing settlements along the south coast. The site at Redcliff produced evidence of salt production and later industrial activity including metal and glass working. Since Carisbrooke Castle was identified as a Saxon, rather than a Roman, foundation (Lyne 2008, 10), the only possible military installation on the Island is located within the aggregates resource at St Catherine's Point in Undercliff, where a possible military lighthouse or signalling station has been identified. The HER also includes a large number of Roman objects and possible Roman landscape features, including possible trackways and field systems.
- 8.11.38 At present the distribution of Roman assets across the aggregates resource reflects a concentration along the central east-west ridge and in the study areas adjacent to it. In part this is probably due to the pattern of investigation, by antiquarians and also in the form of the recent NMP survey which focussed on these central areas. Similarly the apparent concentration of Roman occupation along the South West Wight Coastal Zone and Undercliff might reflect the increased investigation of sites under threat from coastal erosion. Further survey (including NMP and surface survey) across the rest of the Island and targeted investigation of possible Roman assets would confirm whether the present distribution reflects a genuine occupation pattern or not.

## 8.12 Migration and early medieval period (c AD 410–1065)

### *Introduction*

- 8.12.1 The migration and early medieval periods comprise the time between the withdrawal of the Roman legions from Britain in AD 410 and the Norman Conquest in AD 1066. They encompass a period when the governance of Britain was uncertain. Britain was subject to raids, incursions and some degree of settlement by pagan tribes from northern Europe and competing local rulers developed in various areas of the country. By the end of the period, the inhabitants had been converted to Christianity and had a king acknowledged by most of what is now England. For the purposes of clarity, the pagan period of incursion and settlement is here identified as the Migration period and the subsequent period of Christian state formation, the early medieval period. The division between the two periods would have been fluid as different sections of the population adopted Christianity at different times, but to differentiate the pagan assets from the later Christian assets in the database the Migration period is assigned to AD 410–800 and the early medieval period to AD 801–1065. This (somewhat arbitrary) division represents a compromise as by AD 800 Christianity had been firmly established across much of England for some time, but a more unified monarchy and government of England was only beginning to emerge in the face of the threat of Viking incursions.
- 8.12.2 Understanding of migration and early medieval activity on the Isle of Wight is derived mainly from conflicting documentary accounts because archaeological evidence is very limited. Bede (AD 673–735), writing in his *Ecclesiastical History of the English People* claims that the Jutes settled the Island, perhaps under the leadership of the West Saxon warlord Cerdic who seized the Island in AD 530 according to the Anglo-Saxon Chronicle. Asser writing on the origins of Alfred the

Great (reigned AD 871–899) records that the West Saxon Cerdic and his successors were of Jutish ancestry. The Anglo-Saxon Chronicle records further competition over the Island in the 7th-century. The Christian warlord Wulfhere invaded in AD 661 and heathen families were persecuted when Caedwalla seized the Island in AD 686.

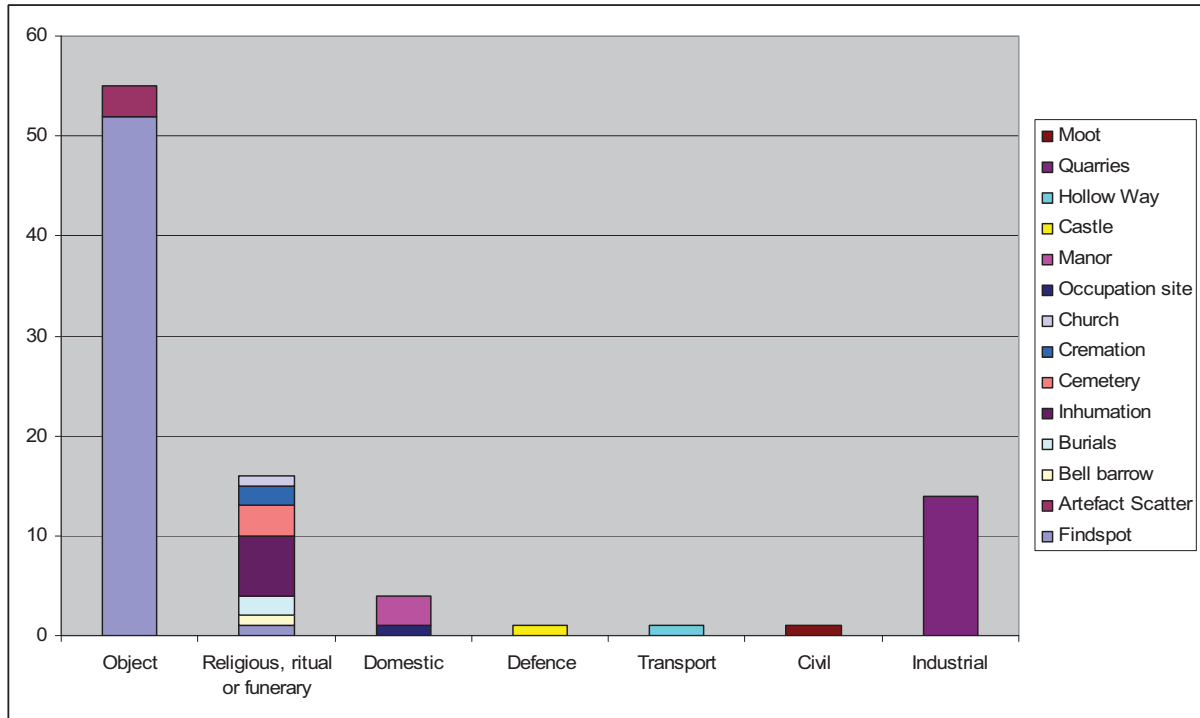
- 8.12.3 Evidence from early medieval estate documents has revealed that during the late 7th-century, large estates developed across the Island, later determining the form of the early medieval parochia (large mother-parishes). These units comprised thin slices across the Island from the north to the south coast (Hockey 1982, 1–13) allowing each parish to include most of the topographic zones of the Island and ensure each had access to a wide range of natural resources (Basford 2008, 72). Such parishes were centred on Freshwater, Calbourne, Carisbrooke, Newchurch, Brading and Arreton and in some cases may have originated in earlier Roman estates (Waller 2006d). The parochial arrangement emphasising settlement along the central ridge, may perhaps indicate that the importance this feature in this and earlier periods is not purely a result of investigative bias. If the central ridge was favoured for important early medieval settlement, the Northern Lowlands were a less densely populated area, probably because the heavy clay soils made cultivation more arduous. Nonetheless, occupation did occur in advantageous locations, where gravel deposits provided lighter more easily worked soils (for example at Whippingham) and where other natural resources (such as inlets and natural harbours) were located (*ibid*, 84). The southern part of the Island, with more easily worked soils, appears to have been a more favourable area for occupation, and place-name evidence has suggested that the Eastern Yar valley was particularly favoured (Kokeritz 1940).
- 8.12.4 By the end of the early medieval period, some of the large estates had been broken up into smaller landholdings described in series of charters (Margham 2005), but the parochia continued to form the basis for the later medieval parochial system (Basford 2008, 72).

#### *Asset densities*

- 8.12.5 There are 92 Migration and Early medieval assets within the aggregates resource, with a density of 0.50 assets per km<sup>2</sup>. There are a further 685 possible migration and early medieval assets within the aggregates resource, making a possible total of 777 and a possible density of 4.29 assets per km<sup>2</sup>. The 92 migration and early medieval assets represent the following asset types:
- 55 objects – including 3 artefact scatters and 52 findspots
  - 16 religious ritual or funerary assets – including Migration period re-use of a bell barrow, 6 inhumations, 2 burials, 2 cremations, 3 cemeteries, a findspot and a church.
  - 4 domestic assets – including 3 manors and an occupation site.
  - 1 defence asset – the lower enclosure at Carisbrooke Castle
  - 14 industrial assets – the quarries at Quarr
  - 1 civil asset – the *gemet beoth* moot at Calbourne
  - 1 transport asset – a hollow way at Carisbrooke



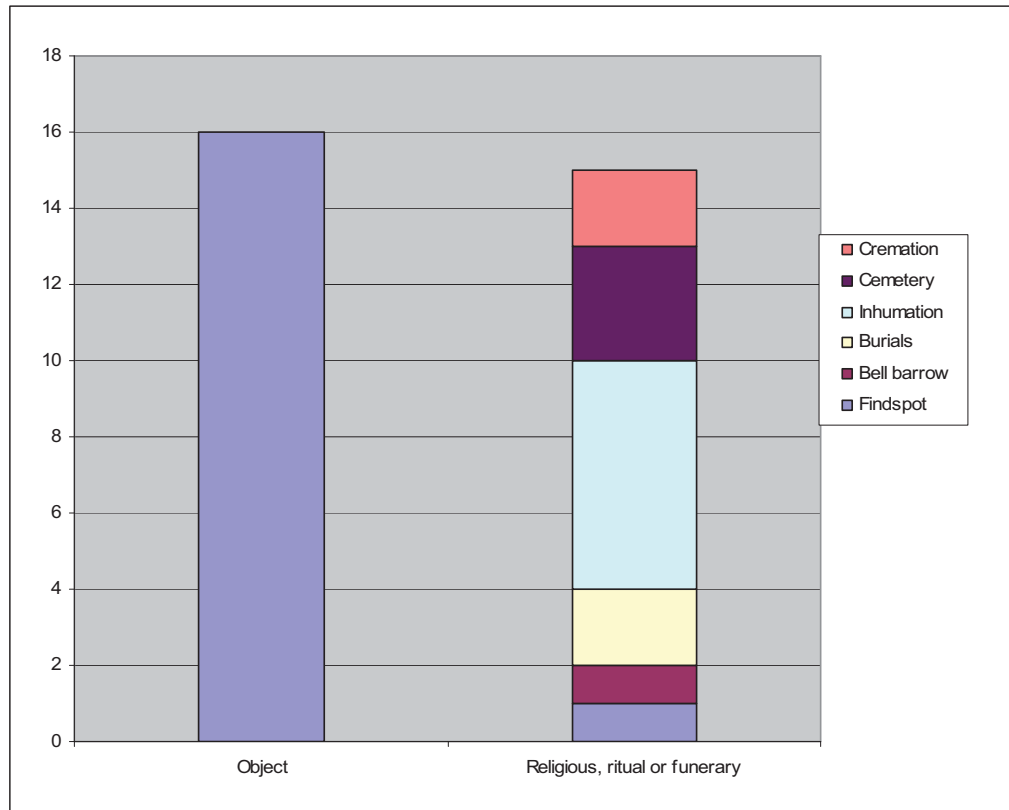
Chart 9 Number of Migration and early medieval period assets by asset type



8.12.6 Of these assets 29 are exclusively of pagan Migration period date (an asset density of 0.16 assets per km<sup>2</sup>) and 11 are of early medieval date (an asset density of 0.06 assets per km<sup>2</sup>). The Migration period assets include:

- 16 objects – all findspots
- 15 religious ritual or funerary assets – including all the religious, ritual and funerary assets described above, except for the church (i.e. Migration period re-use of a barrows, 6 inhumations, 2 burials, 2 cremations, 3 cemeteries and a findspot).

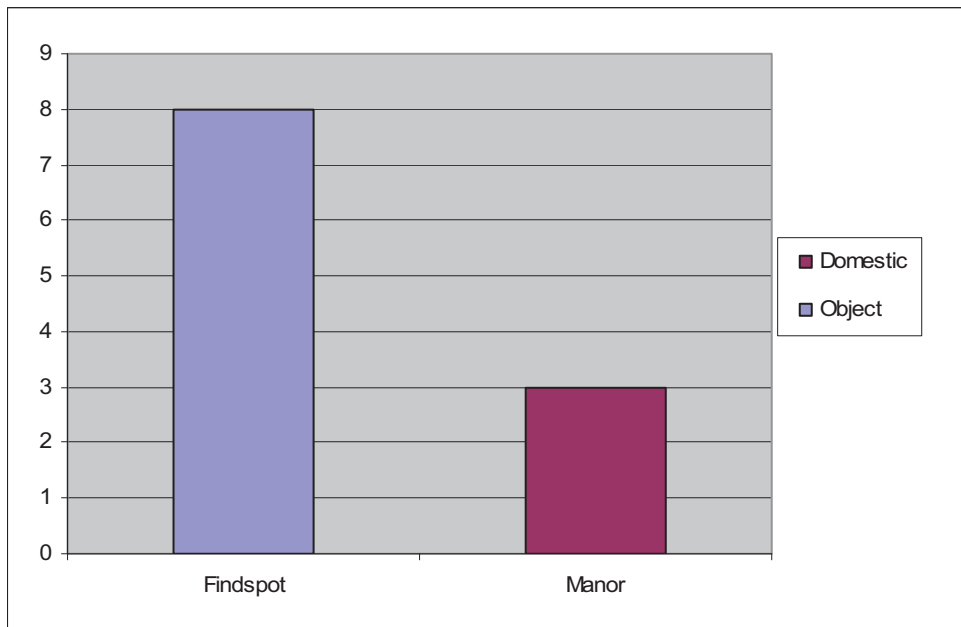
Chart 10 Number of Migration period assets by asset type.



8.12.7 The early medieval assets include:

- 8 findspots
- 3 manors.

Chart 11 Number of early medieval assets by asset type.



*Key migration and early medieval period sites*

8.12.8 There are a limited number of migration period sites on the Island and evidence of Migration period activity within the aggregates resource is even more limited, although the Wooton-Quarr Project has revealed a number assets along the along

the north-east coast, outside the aggregates resource (Waller 2006d). Nonetheless, the aggregates resource includes a number of migration and early medieval period key sites. These sites would pose a significant constraint to extraction, either because they would need to be preserved *in situ* (i.e. they are Scheduled Monuments or nationally significant sites) or because the dense concentration of archaeological remains would be expensive to excavate.

### Domestic

- 8.12.9 Archaeological evidence for migration and early medieval settlement and domestic sites within the aggregates resource is limited. Domestic structures of these periods were typically of wood, wattle and daub, and are more ephemeral than Roman structures. Consequently such assets are more difficult to identify and so have not been investigated as frequently as those of other periods. Understanding of migration and early medieval occupation and settlement patterns is therefore based largely upon documentary evidence, and much remains to be confirmed by archaeological investigation.
- 8.12.10 The transition from the Roman period was a time of both change and continuity, where occupation continued, but not in a recognisably Roman form. Occupation of Roman villas ceased by the 5th century and the destruction or abandonment of many in the mid-4th century suggests raiding and/or political instability began considerably earlier (Tomalin 1987, 18). Nonetheless, evidence of late Roman (late 4th and early 5th-century) coin hoards, a gold solidus of Libius Severus (AD 461–5) found at Mount Joy before 1865 and early 5th century pottery (Lyne 2008, 16) indicates that activity continued after the end of the Roman period.
- 8.12.11 The aggregates resource includes one migration and three early medieval domestic assets. These are detailed below and shown on Fig 24. Numbers in **bold** refer to Fig 24.
- **Yaverland hillfort (26)** – Archaeological investigation has identified one migration period domestic site, close to the Iron Age hillfort (MIW4868). Two post-built longhouses were built on different alignments. It has been suggested that the occupation of this site was associated with use of Brading Haven as a natural harbour in the these (and the Roman) periods (Waller 2006d).
  - **Carisbrooke castle** - a possible early medieval burh (defended settlement) has been identified (**175**). This asset is considered below (8.12.32).
- 8.12.12 Three of the manors within the aggregates resource have been identified from documentary evidence as having originated in the early medieval period:
- **East Ashe Manor (173)** in Northern Lowlands. The Isle of Wight Historic Landscape Characterisation (HLC) identifies another early medieval settlement at East Ashe Manor Farm in Northern Lowlands. Originally known as Ashe, it fell within the Meolcbumantune estate (HLC UID 2563).
  - **Heasley Manor (174)** in Arreton Valley. Before it became a grange of Quarr Abbey, the manor was part of an early medieval estate (MIW963).
  - **Kern manor (172)** in Newchurch Sandown.
- 8.12.13 It is possible that other manors had early medieval antecedents, but this can only be confirmed by archaeological investigation where there is no documentary evidence.
- 8.12.14 Place-name evidence provides an indication of other possible migration and early medieval domestic assets. Charters record a number of parochia which extended across the Island along the lines of earlier secular estates:
- Arreton (**180**)
  - Brading (**178**)
  - Carisbrooke (**175**) in particular was an important migration and early medieval centre. It is associated with high status migration period burials on

Bowcombe Down (8.12.19 and 8.12.22) and a possible early medieval *burh* and occupation at Carisbrooke castle (8.12.29)

- Calbourne (**177**)
- Freshwater (**176**)
- Newchurch (**179**)

8.12.15 It is notable that the names of the parochia are associated with later settlements along or close to the central ridge, suggesting that they were named after existing settlements. The location of the modern settlements of these names are typically located outside the aggregates resource, but more dispersed secondary settlement, or early diffuse settlement, might well have extended into aggregate areas.

8.12.16 Place names ending in 'ham' and 'ing', with 'ham' settlements probably representing slightly earlier occupation (Arnold 1975: Cox 1973: Kokeritz 1940). Earlier (ham) settlements include:

- Hamstead in Northern Lowlands (**182**)
- Newnham in Northern Lowlands, close to where a Roman pottery manufacturing site was located (**181**).
- Ninham (**9**) in Newchurch Sandown (where evidence of prehistoric occupation has been recorded)
- Sainham outside the aggregates resource close to South Wight Sandstone (**183**).

8.12.17 Those place-names ending in 'ing' or otherwise of later origin include:

- Atherfield (**193**) in Atherfield Coastal Plain
- Bathingbourne in Arreton Valley (**189**)
- Billingham (**191**) in South Wight Sandstone
- Brading (**178**) – the modern village is outside the aggregates resource, but the location of any migration or early medieval settlement is unknown.
- Chillingwood (**198**), outside the aggregates resource.
- Dungewood (**192**) in South Wight Sandstone
- Durton in Northern Lowlands (**186**)
- Etharin (St Helen's) in Brading Haven Bembridge Isle (**184**)
- Farringford (**195**) in Freshwater Isle, close to a Roman ritual site and coin hoard.
- Horryngford in Arreton Valley, close to possible migration or early medieval assets at Horryngford (**190**).
- Huffingford (**196**) near Blackwater – the location is outside the aggregates resource, but is close to South Wight Sandstone study area.
- Tidearding Mor in Arreton Valley (**187**)
- Tidelingham in Arreton Valley (**188**) – close to Roman and possible migration and early medieval activity at Hale Manor Farm.
- Watchingwell (**197**), outside the aggregates resource.
- Whippingham (**185**) in Northern Lowlands, where evidence of prehistoric and Roman settlement has been found.
- Wilmingham (**194**) in Thorley Wellow Plain

8.12.18 The place-name evidence suggests that the Eastern Yar valley was the most densely occupied area, initially.

8.12.19 The location of Roman villas at Brading, Carisbrooke and elsewhere may have influenced settlement patterns and it is notable that a number of the migration period burial sites are located close to known or possible Roman settlements. These discussed below and are shown on Fig 25. Numbers in **bold** refer to Fig 25:

- **Arreton Down cremations/inhumations (206)** – Combley Roman villa
- **Bembridge Down (210)** – Yaverland hillfort (with known migration period occupation) or Brading Roman villa.
- **Bowcombe Down cemetery (202)** – Bowcombe occupation site and Clatterford Roman villa. Carisbrooke and Shide Roman villas are also located in the area close to a crossing of the Medina.
- **Cheverton Down (201) /Shalfleet (209)/Shalcombe Down (208) cemetery**– possible Roman site at Shalcombe
- **Mottistone (203) and Brighstone burials** – Rock Roman villa.
- **Rancombe cremations (205) and West Court Farm (207)** – Limerstone Down Roman occupation and industrial site

8.12.20 The correlation might indicate:

- Migration period settlement re-occupied Roman sites or was focussed on former Roman settlements but did not directly re-occupy them. If so there might be some continuity from the Roman to the migration and later periods, although there is currently no archaeological evidence to confirm this; or
- Both Roman settlement sites and Migration period cemeteries were focussed on areas with easy access from the lowlands to the downs.

8.12.21 In either case, this might suggest that Roman settlement and migration period cemeteries can indicate areas with potential for settlement sites of either period. Further research is required to determine whether this is a genuine relationship or a result of differential investigation practice.

#### Religious, ritual and funerary

8.12.22 There are 16 religious, ritual or funerary assets within the aggregates resource. Other than objects, these form the largest group of migration and early medieval assets. 15 of the 16 assets comprise pagan migration period funerary sites.

8.12.23 The large number is due to the type of funerary practices undertaken. Inhumation and cremation burials of the migration period were typically associated with barrows raised over burials of important individuals, which could also be interned in then-existing Bronze Age barrows. Such barrows appear as upstanding monuments within the unploughed downlands. Many were opened by early antiquarians who recorded what they found and so provided records of the assets for later HER compilers.

8.12.24 There are 11 identified migration period cemeteries on the Island. Of these the two most important and most extensively investigated are located within the aggregates resource:

- **Bowcombe Down (202)** – The cemetery in West Wight Chalk Downland (MIW448) was excavated by George Hillier and Ernest Williams in 1854, with a further barrow being excavated in 1858 (Hillier 1855). The documentation on the excavations is not as extensive as at Chessell (see below), although it is clear that the cemetery was divided into two parts. One part with mixed inhumation and cremation burials and the other, probably earlier, comprised of only cremations. Many burials were associated with barrows, either constructed over the burial or Bronze Age barrows into which the burial had been inserted (Arnold 1982).
- **Chessell Down (201)** – The cemetery in West Wight Chalk Downland (MIW137) was excavated in the 19th century by John Dennett and Sir Leonard Holmes in 1816, by the Rev John Skinner in 1817, 1818 and 1831, and by George Hillier in 1855 (Kell 1850). Although not fully published at the time, the archives are such that it possible to reconstruct every grave, and the cemetery has since been published in full from these notes (Arnold 1982). Arnold establishes two phases. The first, where cremation was

preferred to inhumation, dates to the late 5th and early 6th century. There is no material within the cemetery which could date to the 7th-century, although objects made at the end of the 6th century might not have been buried for some time after their date of manufacture. After the earliest phase there is considerable variation between Chessell Down and other cemetery sites, with evidence of imported luxury goods. Other characteristics include the regular burial of individuals under barrows, as has been observed elsewhere on the Island and in the southern part of England.

8.12.25 There are a further nine known cemeteries within aggregates resource:

- **Arreton Down (206)** – During the 19th century two barrows in East Wight Chalk Ridge were opened to reveal secondary migration period inhumations in an existing Bronze Age barrow (MIW942) and a primary inhumation and subsidiary cremations within a migration period barrow (MIW943: MIW1439). Other barrows in the vicinity might have secondary or primary migration period burials (Arnold 1982, 76).
- **Bembridge Down (210)** – In 1863, Kell described a cremation and two inhumations found in East Wight Chalk Ridge (MIW1176). The inhumations comprised a double burial of a man and a woman with their heads to the east and west respectively. A pot buried with them implied a migration period date (Arnold 1982).
- **Mottistone (203)** – In 1856 Kell (1856b, 85) reported that some secondary migration period inhumations had been found inserted into and located around a Bronze Age barrow called ‘Harboro’ or ‘Five Barrows’ in West Wight Chalk Downland. The barrow (MIW244) is associated with three other upstanding barrows (MIW243: MIW245: MIW246) and five other possible barrows or spoil mounds (MIW2180: MIW248: MIW2547: MIW2548: MIW2549). Some or all of these assets may be associated with other undiscovered, primary or secondary migration period burials.
- **Newbarn Down (204)** – Dennett (1845, 159) describes the discovery of ‘a great many swords, spears and other weapons’ in a piece of ground between ‘rows of pits’ in West Wight Chalk Downland. He ascribed the construction of the pits to defensive works around a ‘small entrenchment’ and suggested the weapons were evidence of the burial of those killed in the skirmish. The ‘rows of pits are most likely to be the same natural features later identified as a ‘British village’ and now believed to be natural ‘swallow holes’ derived from the dissolution of the chalk by carbonic acid in rainwater (MIW419). It is notable that when the ‘British Village’ was excavated Kell identified the holes as ‘pit dwellings’ on the basis of animal bones found in most, human bones found in one, and a flint floor in another (Adams 1856). It is possible that the human bones and flint floor identified by Kell were components of a barrow with which Dennett’s weaponry had been associated.
- **Rancombe (205)** – At least three urned cremations were found in West Wight Downland Edge, and are now in the County Archaeological Collection. They are comparable to migration period urns from other sites (Arnold 1982, 73).
- **Shalcombe Down (208)** Two secondary migration period inhumations (MIW127 and MIW123) were found inserted into Bronze Age barrows in West Wight Chalk Downland. The inhumations were recorded by John Dennett and Leonard Holmes, after the barrows had been damaged during ‘marl’ extraction (Dennett 1845).
- **Shalfleet (209)** – In 1816, an inhumation with a sword and three beads was found in a grave at Chessell Farm, c 450m north of the cemetery at Chessell Down and Shalcombe Down (MIW404). In 1933 another burial was found in a limestone quarry north of the road junction at Chessell (Sherwin 1939c, fol

153). These burials are considered unusual as they are not situated on the chalk downs, although the Chessell Farm inhumation is undoubtedly migration period (Arnold 1982, 79). The inhumations at Shalfleet, Shalcombe and Chessell are located close to a possible Roman site at Shalcombe.

- **West Court Farm (207)** – A migration period cemetery has been identified from finds recorded in West Wight Downland Edge as part of the Portable Antiquities Scheme (MIW6971).
- **Carisbrooke Castle (175)** – Migration period burials have been found at Carisbrooke Castle, underlying later occupation remains (Young 2000).

8.12.26 Arnold (1982) also records two further sites of migration period funerary activity, at Chillerton Down and Brighstone Down. Both comprised secondary migration period cremations, the former located within an existing barrow possible outside the aggregates resource. Neither of these assets can be identified on the HER, although both Downs contain several barrows which could potentially contain such assets.

8.12.27 The excavated examples of migration period funerary activity indicate a concentration upon the central ridge (West Wight Chalk Downland, West Wight Downland Edge and East Wight Chalk Ridge study areas), although one inhumation was found beyond the central ridge at Shalfleet. This distribution may be due to the pre-occupation of antiquarian investigators, who excavated all of these sites, with the barrows of the central ridge. Barrows (with the potential to contain early medieval remains) are also present on the South Wight Downs and the NMP has recently identified a number of ring ditches in areas outside the downlands.

8.12.28 There are no surviving churches of early medieval origin on the Island, but documentary evidence indicates that early medieval churches were present at Bowcombe, Calbourne, Shalfleet and Arreton. Possible early medieval fabric has been identified in Freshwater and Arreton churches (Taylor and Taylor 1965), but remains of Bowcombe church (**212** on Fig 25) have not been found. On the basis of the documentary evidence, Bowcombe church is likely to be within the aggregates resource and not on the same site as the current parish church (MIW500). Bowcombe church is one of 6 early medieval churches which belonged to the Abbey of Lyre in the early 11th century (Williams and Martin 1992, 130).

#### Defence

8.12.29 There is limited archaeological evidence for defensive assets of the migration and early medieval period, but remains have been found at Carisbrooke Castle (MIW446) and are shown on Fig 24 (number **175**). Excavations at the castle revealed substantial early medieval buildings overlying migration period burials. The lower enclosure of the Castle has been identified as an early medieval construction (Young 2000), possibly the remains of a *burh* (a defended settlement constructed as a response to Viking raids (Waller 2006d). The construction of a *burh* here would be entirely in accordance with the apparent importance of the Carisbrooke area during the migration and early medieval periods when, together with nearby Bowcombe, it was a major settlement with Bowcombe giving its name to the hundred (a large administrative unit) which covered most of the Island (Ulmschneider 2003).

#### Industrial

8.12.30 It is likely that the quarries at Quarr (**117** on Fig 24) saw some exploitation, particularly during the early medieval period, when some construction (possibly associated with churches) would have required local stone. The Wooton Quarr survey has revealed evidence of activity along the nearby shore close to the quarries, although it is not possible to say if this was associated with quarrying and export.

## Object

- 8.12.31 There are 55 migration and early medieval period objects and artefact scatters within the aggregates resource. These are shown on Fig 25 and discussed below. Numbers in **bold** refer to those on Fig 25.
- 8.12.32 Although relating the discovery of chance or metal detected finds to any underlying sites is difficult, clusters of objects may reveal possible key sites.
- **South-west of Carisbrooke (211)** – A cluster of artefacts at Froglands Farm in West Wight Downland Edge may reflect the likely settlement and possible mid-Saxon (650–850 AD) market close to Carisbrooke Castle. (MIW2219 and MIW2442). The market is close to the former Roman villa of Clatterford, migration period burials and the possible early medieval enclosure at Carisbrooke Castle. This area has therefore been identified as an important ‘central place’ for the Island (Ulmschneider 2003).
  - **Chessell Down (201)** – which may reflect the cemetery and any nearby settlement.
- 8.12.33 Early medieval objects are more diffuse, but may indicate loci of early medieval activity:
- **Appuldurcombe (220)** – A 10th to 11th century Viking period sword pommel was found close to Appuldurcombe Down in South Wight Downland where a number of undated features, including extraction pits, have been located.
  - **Bloodstone Copse/Eaglehead Copse (216)** – an early medieval cruciform brooch was found at Eaglehead Copse in East Wight Chalk Ridge (MIW2312) and an early medieval or migration period artefact scatter (MIW5871) and an opaque glass chevron bead and early medieval pottery from nearby Bloodstone Copse in Northern Lowlands (MIW7333: MIW1970).
  - **Brading (215)** – A sceat (coin) and a chevron bead have been found in Northern Lowlands study area (MIW7463: MIW1203). Brading is known to be the central place for the Brading parochia and these assets may reflect activity near the settlement.
  - **Chawton (213)** – At Chawton (MIW6724) near Northwood in Northern Lowlands fieldwalking recorded a scatter of pottery, indicating a possible site.
  - **Cheverton Down (201)** – where a 7th–11th century copper alloy hooked tag and migration period pottery (MIW2589: MIW519) have been found.
  - **Freshwater (214)** – The aggregate deposits in Thorley Wellow Plain on the east side of the Western Yar at Freshwater contained a copper alloy fiddle key buckle pin, another migration or early medieval object (MIW2166: MIW67) and several assets of uncertain date. Freshwater is a known area of settlement and these assets may be associated with it.
  - **Gurnard (218)** – Ninth century pottery (MIW618) was found at Gurnard in Northern Lowlands, perhaps reflecting later activity in the area of the former Roman villa.
  - **Knighton (161)** – Migration and early medieval objects (MIW7249) are known from a group of objects found during metal detecting at Knighton just south of the East Wight Chalk Ridge. These included a drop shaped lead weight a copper alloy buckle.
  - **Mersley Down (217)** – An 11th-century box mount (MIW2132) and an early medieval or migration pottery sherd (MIW1074) have been found on in East Wight Chalk Ridge.



- **Pagham (219)** – The early medieval or migration stirrup mount (MIW2160) was located close to a group of undated assets in South Wight Sandstone which may reflect settlement or agricultural activities in the vicinity.
- **Yafford (221)** – Migration or early medieval pottery (MIW1643) was found close to a small group of undated assets and the probable settlement at Dungewood at Samber Hill in South Wight Sandstone.

8.12.34 In addition to the possible key sites, there are also a number of diffuse and undated objects which may be of migration and early medieval period date. The nature and type of these assets and possible sites of more concentrated past activity have already been discussed (8.10.6). Concentrations of undated assets which might indicate possible migration or early medieval period 'key site' have been discussed before in 8.10.2, 8.10.17, 8.8.30, 8.9.21 and 8.11.27.

#### Civil

8.12.35 An early medieval 'moot' has been identified at Gallibury in West Wight Chalk Downland. The moot is described as the *gemot beoth* in early medieval documents. A 'moot' was a meeting of the elders of the hundred (the administrative unit) where they decided local issues and typically took place within a low ring-shaped earthwork. Two possible sites of the *gemot beoth* have been located at Gallibury. These are shown on Fig 24 as number **199**:

- An enclosure in Brighstone forest (MIW423).
- A Bronze Age barrow known as Gallibury hump (MIW424) which was later the site of a gallows.

8.12.36 Both sites are located close to the main track across the Island that is believed to have functioned as an important route since the Bronze Age (MIW86) and it seems likely from the documentary evidence that the *gemot beoth* was in this area.

8.12.37 The presence of a possible Roman, migration or early medieval boundary from Kings' Quay to St Lawrence has been noted. This boundary is respected by later medieval parish and estate boundaries and is likely to be of early medieval date at the latest. In view of its position, it may relate to the boundary between the parochia of Carisbrooke and Arreton.

#### Transport

8.12.38 It is likely that the route of the Bronze Age and later trackway across the Island (MIW86) continued in use and may perhaps relate to the apparent concentration of settlement along the central ridge. It is also probable that various hollow ways and other trackways began to develop in this period, some of these have been recorded by aerial photography and earthwork survey, but without further investigation remain undated.

#### Conclusion

8.12.39 There are only a limited number of known migration and early medieval key sites within the aggregates resource. Migration period cemeteries and burial sites predominate and include a number of sites which are of national importance for the understanding of this period. Unfortunately many of these sites were investigated during the 19th-century, while other newly identified sites have been located through the activities of local metal detectorists. There is therefore a need for further investigation of newly identified sites and ongoing survey to identify new ones. At present most migration period cemeteries are located along the central ridge, but further investigation may reveal additional sites in other areas.

8.12.40 There is some evidence of continuity of use from the Roman period at some sites (such as Yaverland) but settlement sites are rare in general. The distribution of objects, location of cemeteries and documentary evidence from the early medieval period may reveal possible settlements, but improving understanding will be

dependant upon further investigation.

- 8.12.41 Two phases of migration period occupation has been posited from place-name evidence alone. Documentary evidence has also revealed that early medieval estates and later parochia comprised long strips of land stretching from north to south coasts and named after (presumably primary) settlements located along the central ridge. The central place at Carisbrooke/Bowcombe, the primary settlement of the Carisbrooke parochia, has been identified from documentary and archaeological evidence as an important location throughout the migration and early medieval period. Other primary settlements of the parochia may perhaps appear of similar importance if subject to further investigation.
- 8.12.42 Key migration and early medieval sites are concentrated along the central ridge of the Island, in the East Wight Chalk Ridge, West Wight Chalk Downland and West Wight Downland Edge study areas. This may reflect the high level of investigation within this area, but it may also reflect the genuine importance of the ridge and sites along it.

### 8.13 Later Medieval (c 1066–1540)

#### *Introduction*

- 8.13.1 Following the Norman Conquest of 1066, the governing class of England changed from primarily Anglo-Saxon to Norman. Some changes in society and culture resulted, but initially at least, the Conquest made limited difference to daily life, settlement and occupation patterns on the Isle of Wight. It remained a relatively isolated community, but did develop a certain military significance.
- 8.13.2 The landscape of the Isle of Wight in this period has been described as 'Ancient Countryside' (Rackham 1986) comprising a reasonable quantity of waste common or heath, winding tracks and small woods (particularly in the north). The recent Historic Landscape Characterisation (Basford 2008) has identified a more complex landscape with dispersed settlement across all areas, nucleated settlement on flat land with rising ground behind and linear settlements in valleys. Settlements were frequently located at the interface of different landscapes, the best example being the important settlements at Carisbrooke and Brading where the central chalk ridge intersects with the Medina and Eastern Yar valleys. The early medieval settlement pattern continued into the later medieval period. The central ridge and southern part of the Island was occupied by nucleated and disperse settlement and manors and farmsteads occupied land along the combes where downland and lowland met. Occupation was more limited in the Northern Lowlands and more common in the south of the Island. Nonetheless, significant settlements were located in the north where conditions made them favourable. Thus the early medieval village at Whippingham continued to flourish on easily worked gravel soils, Quarr Abbey was founded close to the outcrop of accessible high quality limestone with access to the sea at Wooton Creek and a new planned town was founded at Newtown (*ibid*).
- 8.13.3 The four later medieval towns at Newport, Yarmouth, Newtown and Brading were planned medieval towns, with markets and fairs located close to navigable waterways. The 12th-century towns at Newport and Yarmouth were founded by the de Redvers family, who were Lords of the Island and both had charters of incorporation. Newtown was founded by the Bishop Elect of Winchester within his manor of Swainston and Brading may either have been founded by William Fitz Stur in the 12th century, or by Edward I following his acquisition of the manor of Whitefield and grant of a market and fair to Brading in 1285 (STARA 2006a).
- 8.13.4 Domesday Book (AD 1086) reveals that at the beginning of the later medieval period, the major landowners were the King, William Fitz Stur, William Fitz Azor and the See of Winchester. The Abbey of Lyre also had considerable landholdings on the Island and six churches (Williams and Martin 1992, 94 and 128). This land was administered by Carisbrooke Priory from the 12th century. Other Island priories at St

Helens, St Cross (Newport) and Appuldurcombe held lands, but Quarr Abbey (founded 1131) was the other primary religious landowner (STARA 2006a).

- 8.13.5 As for many preceding periods, the evidence is limited by the lack of large-scale modern excavations. Remains at Carisbrooke castle were revealed during the 1990s (Young 2000) and the Wooton-Quarr project recorded a number of later medieval assets along the north-east coast (Tomalin *et al* Forthcoming), but other excavations have been mainly small scale. Even investigation along pipeline routes has typically identified small areas of limited archaeological remains (Network Archaeology 2005: RPS Consultants 2001). The Isle of Wight Historic Landscape Characterisation (Basford 2008) has identified a number of forms of later medieval land use and has provided some insight into occupation and settlement patterns.
- 8.13.6 Seven later medieval assets and a larger number of undated assets were identified during NMP. All the seven later medieval assets were agricultural (five pillow mounds, one area of ridge and furrow and one enclosure) and most of the undated sites are also associated with agricultural or landscape management. Understanding of the later medieval period is therefore dependant upon earthworks, standing structures, survey and historical documents. These have provided considerable evidence, but some issues remain. Historical documents provide valuable evidence, but may be subject to misinterpretation; earthworks and standing structures may require archaeological investigation to confirm their date and nature. Significantly until further excavation records additional sequences of stratified artefacts, the chronological framework for the period remains limited. Further excavation across the Island is therefore necessary to complete the picture of the Isle of Wight in this period.

#### *Later medieval asset densities*

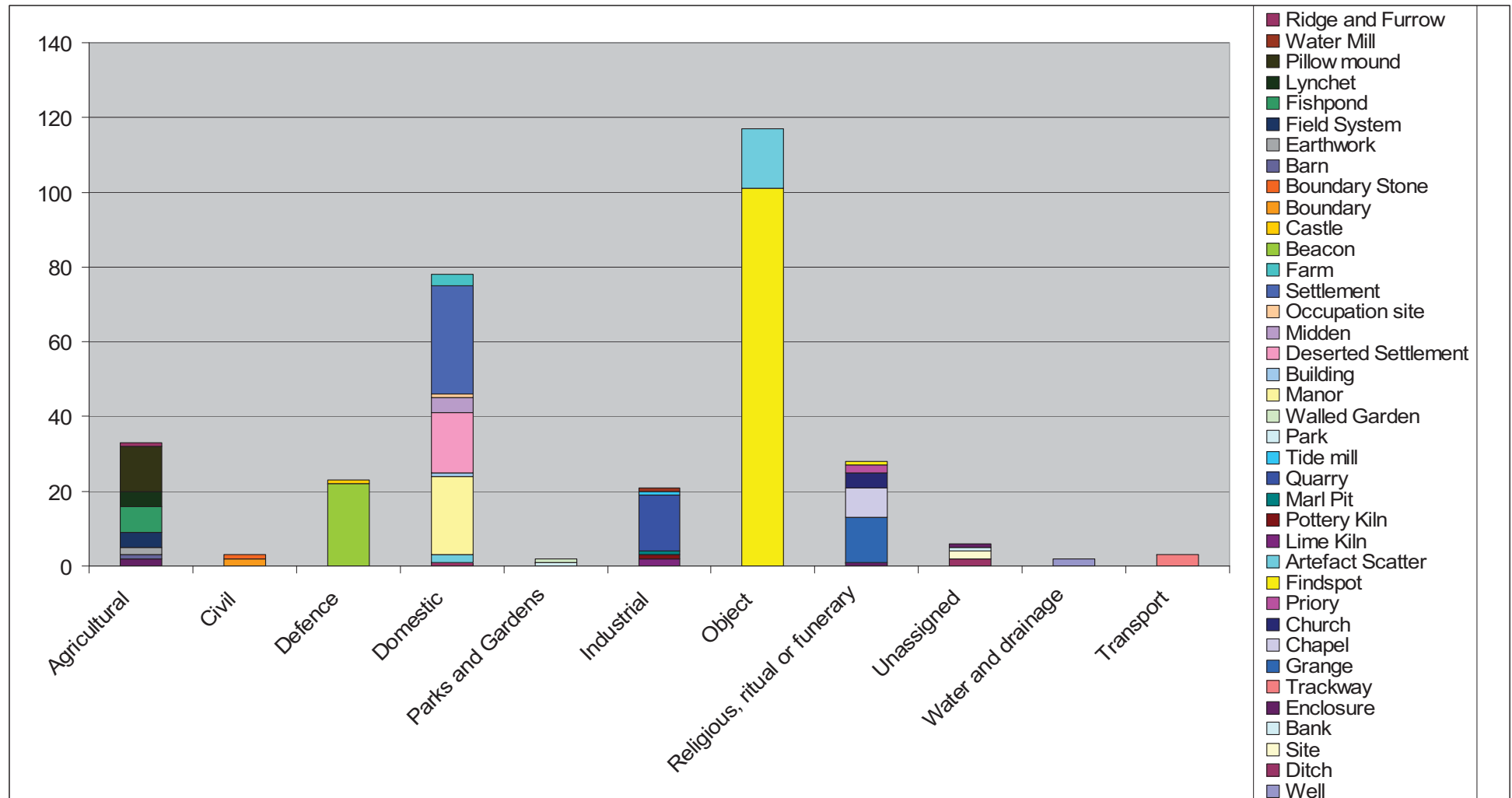
- 8.13.7 There are 318 later medieval assets within the aggregates resource, equivalent to a density of 1.76 assets per km<sup>2</sup>. There are a further 789 possible assets of this period within the aggregates resource, making a possible total of 1107, with a density of 6.11 assets per km<sup>2</sup>.
- 8.13.8 The 319 later medieval assets include:
- 117 objects – 16 artefact scatters and 101 findspots
  - 28 religious, ritual or funerary assets – 12 Granges, 8 chapels, 4 churches, 2 priories, 1 findspot and 1 enclosure
  - 78 domestic assets – 29 settlements, 21 manors, 16 deserted settlements, 4 middens, 3 farms, 2 artefact scatters, 1 building, 1 ditch, 1 occupation site,
  - 23 defensive assets – 22 beacons and 1 castle.
  - 33 agricultural assets – 12 pillow mounds, 7 fishponds, 4 lynchets, 4 field systems, 2 enclosures, 2 earthworks, 1 barn and 1 ridge and furrow.
  - 21 industrial assets – 14 quarries, 2 lime kilns, a pottery kiln, a tide mill, a water mill, a marl pit and a quarry
  - 6 unassigned assets – including 2 sites, 2 ditches, a bank and an enclosure
  - 3 civil assets – 2 boundaries and a boundary stone
  - 2 water and drainage assets – both wells.
  - 3 transport assets – trackways
  - 2 maritime assets – 1 lighthouse and 1 quay
  - 2 parks and gardens – 1 park and 1 walled garden.
- 8.13.9 Chart 12 shows the number of assets by asset type.

#### *Key later medieval sites*

- 8.13.10 The aggregates resource contains a number of important later medieval sites.

These include both standing buildings and archaeological remains. Some of these assets may be nationally designated Listed Buildings or Scheduled Monuments, and any extraction which resulted in damage to these assets or their setting would be refused. Other undesignated assets may be of relatively high significance and this would constrain any extraction. There may also be assets comprising dense concentrations of archaeological remains, where extraction may be permitted, but the cost of undertaking necessary archaeological mitigation might represent a significant constraint to extraction in term of cost and time.

Chart 12 Number of later medieval assets by asset type



## Domestic

- 8.13.11 Settlement and landholding were derived from the patterns established in the early medieval period. Domesday Book records ten churches and c 100 manors on the Island (Hockey 1982, 2), while other settlements are indicated by early medieval place-name evidence (Kokeritz 1940). The initial division of the large secular estates (on which the *parochia* of the early medieval period had been based) continued as manorial holdings were divided further. Carisbrooke Castle (**266**), although a defensive construction, also had a domestic role as the primary seat of the Lords of the Island (8.13.27).
- 8.13.12 There are 85 domestic assets within the aggregates resource, including 24 manors which are shown on Fig 26. **Bold** numbers indicate the relevant manor on Fig 26.
- 8.13.13 Some of the manor houses can be identified by their moats. During the later medieval period (particularly c 1250–1350) moats were constructed to enhance the prestige of the owner and provide an additional defence. These moats are therefore often the only remnant of the former manorial complex visible above ground. There are three moated sites within the aggregates resource:
- **Barton manor (236)** – The manor, in Northern Lowlands was bestowed upon Barton Oratory by John de Lisle in 1275 (MIW996). A moat at Barton is recorded in historical documents of Sir John Oglander. The property of the Oratory was granted to Winchester College in 1439. In the late 14th-century the archpriest of the Oratory was taken prisoner by the French (*VCH Hampshire ii*, 180–181). Whether or not this occurred during a raid on the Oratory itself, Barton was close to the Solent and Medina and therefore at risk from French raiders. The documented moat may have been built by the Augustinian priests or by the later mid-15th century by the tenant who held the manor from Winchester College. The location of the moat is not known.
  - **Stenbury manor (232)** – Domesday Book records that the King held Stenbury manor (Williams and Martin 1992, 95). Stenbury was the property of the de Aulas family, from whom it came to De Heyno in the 13th-century. De Heyno built the original manor house (which does not survive) and is likely to have been responsible for the encircling moat. The moat was partially filled in the 18th-century, but its outline can be traced. The listed manor house and a 15th-century chapel within the moat and an adjacent settlement outside it are located within a Scheduled Monument (MIW648). This includes earthworks of a deserted settlement (MIW647), confirmed by a resistivity survey. A field system (MIW650), ridge and furrow and a fishpond attest to subsistence practise (MIW649)  
A field system (MIW650), ridge and furrow and a later medieval fishpond attest to subsistence practise (MIW649). Earthworks near the manor have been interpreted as a deserted settlement (MIW647) and a resistivity survey has confirmed the possible presence of a small later medieval settlement, probably associated with the manor.
  - **Wolverton manor (235)** – The manor in South Wight Sandstone (MIW356) survives as a water filled moat with a small platform on its north-east side. Geophysical survey indicated that a rectangular, stone or partly stone-built structure was present in the northern corner and this probably represents the manor house. Domesday Book records that Joscelin Fitz Azor held Wolverton, which comprised 1 hide (a unit of measurement theoretically 120 acres but in practice 60–240 acres) in 1088 (Williams and Martin 1992, 132).
- 8.13.14 Other manor houses or manorial settlements have been identified from documentary evidence, including Domesday Book and other legal documents. In some cases remains of manorial buildings has also been recorded either by antiquarians or in more recent investigations. Those within the aggregates resource are described

below. Other manors (known as granges) were owned by monastic institutions and are described elsewhere (see 8.13.25):

- **Alverstone Farm (238)** – Alverstone manor is listed in Domesday Book, and HLC identifies Alverstone Farm as the probable site of the manor house (HLC UID 2784)
- **Alvington (263)** – A settlement at Alvington manor in Northern Lowlands (MIW7795) is recorded in Domesday Book.
- **Bridgecourt, Godshill (225)** – The manor of Bridgecourt at Godshill in South Wight Sandstone is first mentioned in the 13th-century (MIW8161). The current manor house is a 17th-century building and is listed.
- **Calbourne (222)** – Domesday Book (AD1086) indicates that the large manor in Thorley Wellow Plain (MIW9032) 3 was held by the Bishop of Winchester (Williams and Martin 1992, 129). This is also known as Swainston manor. Swainston manor house (now a hotel) originated as a later medieval palace of the Bishops of Winchester and is located outside the aggregate resource in the village of Swainston c 1 mile east of Calbourne. A small part, possibly a later subdivision, was held by William Fitz Stur in 1088 (*ibid* 130). This small estate of Calbourne is likely to be located in the immediate vicinity of Calbourne village within the aggregate resource.
- **Centurion's Copse (244)** – a small manor in Brading Haven Bembridge Isle (MIW1172). Remains of a small manor house have been excavated and nearby earthworks probably represent a small manorial settlement (MIW1174). Evidence of occupation debris on a hill crest south-west of the Copse might reflect another area of later medieval occupation (MIW1706).
- **East Ashey Manor Farm (261)** – This early medieval manor in Northern Lowlands continued into the later medieval period (HLC UID2563)
- **East Standen (227)** – The manor house of East Standen is modern, but in the early 20th century remains associated with the later medieval manor were observed in the Orchard (MIW921). The manor was associated with a small chapel (8.13.21) dedicated to St Leonard was located within the manorial complex, but is no longer extant.
- **Great Budbridge Manor (229)** – Great Budbridge manor in Arreton Valley (MIW8160) was first mentioned in 1248, when Henry son of Odo de Buteridge gave a parcel of land in the manor to Quarr Abbey.
- **Horringford Manor (230)** – Horrington manor in Arreton Valley is first mentioned in 1235 (MIW8092) and it was a submanor of Yaverland by 1256 (*VCH Hampshire v, 139–151*).
- **Kern (258)** – Kern manor in Newchurch Sandown (MIW 7555) was held by the King at Domesday, it was a small manor with a maximum of 1 hide and land for 1 plough (Williams and Martin 1991, 94). It is likely that the small manor was rapidly subsumed within the nearby manor of Knighton Gorges.
- **Kingston (231)** – A small manor located in South Wight Sandstone (MIW381), owned by the King at Domesday. The manor house was located close to the extant church, but there is no trace of it now. The village is also mentioned in a survey of poll tax returns as a possible deserted settlement, but this may be an error (see below 8.13.16).
- **Knighton Gorges (257)** – Knighton Gorges manor in Newchurch Sandown (MIW751) is first mentioned in Domesday Book when it was held by the King, but may be a considerably older landholding, given the discovery of migration and early medieval period objects to the north (8.12.33) and Iron Age and Roman assets in the vicinity. The property was held by the de Morville family in the 13th-century and acquired the epithet 'de Gorges' after

Eleanore de Morville married Ralph de Gorges. The de Gorges family held the manor throughout the 13th-century, but died out in the mid-14th-century following a series of misfortunes (*VCH Hampshire v*, 117–187). Based on early illustrations, later medieval elements survived within the post-medieval house. Contemporary remains include the walled garden (MIW5127), a pottery kiln (MIW1111) and two pillow mounds for raising rabbits (MIW2566: MIW2568).

- **Luccombe Chine House (224)** – The site of a small 15th-century property known as Bolhul, which was rented from Quarr Abbey (HLC UID 3281).
- **Nunwell (275)** – Nunwell manor in Northern Lowlands (MIW1106) was held by the King at Domesday and had land for 1 and a half ploughs worth 40 shillings (Williams and Martin *ibid*). The house was held by the Oglander family by the 13th-century. The house and its tenements were burned during a French raid in 1377 and again in 1522. Remains of the manor house are believed to be located in a field near Nunwell farm.
- **Park Farm (234)** – The HLC identifies a manor at Park Farm (UID 2928) in Northern Lowlands, which did not exist at the beginning of the later medieval period, but in the 13th-century it was held by Thomas de Parco.
- **West Standen (239)** – Two manors called Standen are recorded in Domesday Book and presumably reflect West and East Standen. One was held by William Fitz Stur and the other by William Fitz Azor (Williams and Martin 1992, 131). The manor house of West Standen was located at Standen House (MIW918). Beresford (1954) identified West Standen as a deserted medieval village, but there is no archaeological evidence to support this and it seems more likely the documents reflect the reduction in economic value of the property and consequent reduction in working population.
- **West Court (228)** – The manor of West Court in South Wight Sandstone has been identified as the manor of Shorwell held by Joscelin FitzAzor in 1086 (MIW355).
- **Yard (611)** – Yard in South Wight Sandstone has been identified with the manor of 'La Yerde' in Godshill mentioned in a text of 1248 (HLC UID882).

8.13.15 There are 29 later medieval settlements within the aggregates resource recorded in Domesday Book. Some are associated with known manor houses and others with later granges (see above 8.13.14 and 8.13.25). Numbers in **bold** refer to Fig 26.

- Arreton Valley:
  - **Branstone (255: MIW6658)**
  - **Bathingbourne (254: MIW6651)**
  - **Heasley (249: MIW964)** – later a grange
  - **Lessland (256: MIW6679)**
  - **Redway Farm (250: MIW11502)**
- Atherfield Coastal Plain:
  - **Atherfield (251: MIW6648)**
  - **Walpen (252: MIW6649)**
- Newchurch Sandown:
  - **Brothwood Farm (259: MIW6655)**
  - **Kern (MIW1056)** – where a later medieval manor has been identified (**258**)
  - **Knighton (MIW1051)** – where an important manor house is also located within the aggregates resource (**257**).
  - **Lea Farm (260: MIW6678)**



- Northern Lowlands:
  - **Alvington** (MIW504) – where a manor house has also been identified (**263**)
  - **Ashey** (**261**: MIW6647)
  - **Hamstead** (MIW6675) – later a grange (**262**)
- South West Wight Coastal Zone:
  - **Chilton** (**265**: MIW6665)
  - **Mottistone** (**264**: MIW1300)
  - **Shate** (MIW6694) – later a grange (**266**).
- South Wight Downland Edge:
  - **Chale** (**240**: MIW6672)
- South Wight Sandstone:
  - **Abla** (**243**: MIW6643)
  - **Appleford** (**242**: MIW6645)
  - **Bagwich** (**244**: MIW6650)
  - **Dungewood** (**245**: MIW6668)
  - **Roud** (**246**: MIW6686)
  - **Woolverton** (**267**: MIW6707) – where a moated manor site has been identified.
- Thorley Wellow Plain:
  - **Afton** (**248**: MIW6642) – Afton is also listed as a deserted settlement but there is no archaeological evidence of depopulation (see below 8.13.16)
  - **Shalcombe** (**247**: MIW128) – where a manor house and later grange have been identified.
- West Wight Chalk Downland:
  - **Cheverton** (**268**: MIW6663)
- West Wight Downland Edge:
  - **Coombe** (**253**: MIW6666)

8.13.16 The aggregates resource includes 16 assets identified as deserted settlements. These settlements were identified on the basis of historic documents detailing the poll tax paid, and therefore changes in the population (Beresford 1954). Although there is documentary evidence for some depopulation on the Island in the later medieval period, in many cases there is no evidence of a deserted village on the ground. Many are manorial sites or granges and it has been suggested that a reduction in poll tax over time might reflect a less economically viable manor and the consequent reduction in population of the manor farm, rather than the abandonment of a small village due to economic changes or plague (Sly 1988). These deserted settlements include those associated with manors at Stenbury, West Standen, Kingston, Nunwell and Centurion's Copse, which have previously been discussed in 8.13.14 or 8.13.15. Settlements associated with the granges at Compton (**271**) and Billingham (**611**) were also identified as deserted settlements (see 8.13.25). Only one of the following deserted settlements is likely to have been a thriving community abandoned for economic or social reasons, but the others do provide an indication of other sites of domestic occupation during this period:

- **Atherfield farms** (**274**) – A deserted settlement in Atherfield Coastal Plain identified by Beresford (*ibid*), although there is not physical evidence for such a settlement. The statistics quoted by Beresford are more likely to reflect the subdivision of manorial holdings with the original tenant sub-letting a portion of his land to another, resulting in the reduction in the

property (and population dependant on) the original tenant and the creation of a new small manorial farm/holding (MIW202).

- **Barnsley (276)** – Barnsley in Northern Lowlands (MIW1245) has been identified as a manorial settlement recorded in Domesday Book and probably centred on Barnsley Farm. Beresford (1954) has found evidence of 13 houses, although the only physical evidence is a large unmetalled track unrelated to modern settlement patterns.
- **Durton (277)** – Durton in Northern Lowlands (MIW950) has been identified as a pre-Conquest settlement on the basis of the 'ing' of 'Drodintone' which is the name given in Domesday Book. There is no physical evidence of abandonment.
- **Hale (273)** – Hale in Arreton Valley has been identified in Domesday Book and is recorded as a possible small later medieval settlement (MIW881).
- **Hardley (269)** – Hardley in Brading Haven Bembridge Isle has been identified as a deserted settlement, but probably represents a small sub-manor of Wolverton (Centurion's Copse). It descended with the manor of Wolverton from the 13th-century and the appearance of 'desertion' in the documents probably reflects the inclusion of the former sub-manor with the manor of Wolverton when Hardley was held by the same Lord (MIW1219).
- **Moor Farm (272)** – Moor Farm in Arreton Valley has been identified as the 'Lamore' in Domesday Book, but it is more likely to refer to Moreton in Brading (Kokeritz 1940). No evidence of any later medieval remains have been found to date (MIW878).
- **Orham (270)** – Orham in Brading Haven Bembridge Isle (MIW1224) has been identified as a settlement within Brading Haven and has been associated with Bembridge village (Kokeritz 1940).
- **Shoflet (237)** – Shoflet in Northern Lowlands (MIW2062) is located in the area of King's Quay. It is recorded in Domesday Book and some land and property in the area was donated to Quarr Abbey in the early 12th-century (Hockey 1970). The village apparently became deserted in the later 15th-century following the enclosure of Wooton Park (MIW1011) by the Lisle family in 1490 (Basford 1989). A scatter of pottery, cropmarks on aerial photographs and earthworks suggest the location of the settlement. Fragments of stone, later medieval pottery, charcoal and other evidence recorded during a watching brief suggest either the settlement or manor were located near to Palmer's Farm (MIW2121).
- **Week (278)** – Week in South Wight Downland was also identified as a deserted settlement (Beresford 1954), although there is no archaeological evidence of this. It is suggested that Week Farm is rather a small sub-manor and farm rather than a village.

8.13.17 The aggregates resource also contains other assets which provide evidence of later medieval occupation or settlement:

- **Ashey Down (226)** – In East Wight Chalk Ridge, an enclosure containing a building platform and scatters of pottery has been identified as a small farm, perhaps subsidiary to Ashey manor (MIW 1898). The north-west corner of the enclosure is a Scheduled Monument.
- **Knowles Farm (233)** – Knowles Farm in Undercliff is attested by the 13th-century, when the name may have referred to a larger district. Pottery scatters at the site suggest it was probably a small farmstead by the end of this period (MIW6283). A midden was recorded eroding out of the cliff in the south-west corner of the modern lighthouse enclosure (MIW4905), possibly associated with occupation at or near Knowles Farm.

- **Lucombe midden (224)** – In 1923 a 12th-century midden was found eroding out of the cliffs in Undercliff (MIW815), suggesting nearby settlement.
- **Mersley Farm (223)** – Archaeological excavations in Newchurch Sandown (MIW2513) identified a probable later medieval building and artefact scatters (Trott 2002a).
- **Rosecliff Court (224)** – A later medieval midden with particular evidence of 12th and 14th-century activity was found in Undercliff (MIW814).
- **Whippingham (89)** – Later medieval remains at Alverstone Farm and Padmore Farm in Whippingham in Northern Lowlands, suggest nearby occupation (MIW5517).

#### Religious, ritual or funerary

- 8.13.18 The main religious, ritual or funerary sites of the later medieval period are those associated with Christian worship, churches, chapels and monasteries, some of which are standing buildings and may be listed. Domesday Book provides a record of which settlements had churches and who owned the advowson (the right to appoint the priest) and property associated with it. Domesday Book does not detail all churches extant at the time of the survey and many were founded at a later date. The survey records ten churches on the Island (Hockey 1982, 2). The large parochia of the early medieval period were increasingly subdivided into 'daughter parishes'. Initially parishes frequently severed multiple manors and over time many Lords established small manorial chapels which subsequently achieved parochial status.
- 8.13.19 There are 28 religious, ritual or funerary assets within the aggregates resource. These are described below and shown on Fig 27. Numbers in **bold** refer to Fig 27:
- 8.13.20 There are four known later medieval churches within the aggregates resource. Three of these (St Helen's, Brook and Kingston) are listed buildings. Brook and Kingston are mentioned as manorial settlements in Domesday Book, but no church is listed for them (Williams and Martin 1992). St Helen's is not mentioned and as it exhibits some characteristics of a planned village, it is likely to have developed after Domesday was written (STARA 2006a) :
- **Bowcombe (212)** – An early medieval church is known to have been present at Bowcombe (MIW500), but its precise location is not known and no remains have been identified. It was donated to the Abbey at Lyre by AD 1086 and later superseded by the current church. Of the four within the aggregates resource, this is the only church mentioned in Domesday book (Williams and Martin 1992, 128).
  - **Brook (301)** – Brook church in South West Wight Coastal Zone was built by at least the 12th-century and the 12th-century north aisle survives (MIW13).
  - **Kingston (231)** – Kingston church in South West Wight Coastal Zone was built in the 13th-century and retains over half of its later medieval fabric, despite subsequent alterations (MIW386).
  - **St Helen's (300)** – St Helen's church in Brading Haven Bembridge Isle was built probably as part of the Cluniac priory of St Helen's, and replaced in 1717 by a new church a mile inland. Most of the church has since been lost to erosion and only the 13th-century tower survives (MIW1212).
- 8.13.21 There are a further 8 chapels within the aggregates resource:
- **Appleford (304)** – The chapel in South Wight Sandstone is first recorded in 1305. Like Briddlesford, it had been founded by the Lisle's and the advowson remained with the Lords of Appleford. The chapel was also known as Maudlkin or Magdalen and is believed to have been located at Holden, Roud (MIW7214).

- **Bridlesford (303)** – A chapel at Bridlesford in South Wight Sandstone is known to have existed from 1305 (MIW947). The chapel is associated with the family of Sir Thomas Lisle. By 1795 the chapel had entirely disappeared.
- **Centurion's Copse (244)** – The chapel of St Eurian in Brading Haven, Bembridge Isle is described as the chapel of Wolverton in 1305 (MIW1173). In the early 17th-century the ruins of the chapel were seen, but a bomb crater in 1942 revealed no trace of the building. It is possible the chapel was integral to the manor house, rather than a separate building.
- **Chapel of the Holy Cross, Carisbrooke (302)** – The Chapel of the Holy Cross in Carisbrooke in West Wight Downland Edge (MIW499).
- **Great East Standen (305)** – The chapel of St Leonard at Great East Standen in South Wight Sandstone formed part of the manor complex from the end of the 12th century until at least 1780 and by the end of the 18th century, the ruins could still be seen in the orchard behind the manor house (MIW922).
- **La Wode (307)** – Wolseley mentioned a chapel at La Wode in Brading Haven Bembridge Isle, but no evidence of this chapel has been found in original documents (MIW7213).
- **Milton (306)** – In the middle of the 14th-century John de Weston obtained licence to have services in his chapel at Milton in Brading Haven Bembridge Isle (MIW7212).
- **St Catherine's Hill (308)** – A chapel or Oratory was built at St Catherine's Hill in South Wight Downland in the 14th century by Walter de Godeton (MIW1285). The chapel accompanied the lighthouse which he also constructed. Walter had been threatened with excommunication by the church for stealing casks of wine from a shipwreck in 1314 Chale Bay. The lighthouse and oratory were to be endowed in order to pay for a priest to tend the light and say masses for the souls of those lost at sea. The lighthouse is still standing and is Listed Building (MIW213), but the oratory survives only as grass covered banks along the line of the walls. The oratory and lighthouse are surrounded by a medieval enclosure (MIW1287), forming a precinct comparable to those located around medieval churches. The precinct also contained a Bronze Age barrow reused as a medieval lime kiln (MIW213), perhaps to create the mortar for the construction of the lighthouse and oratory. The enclosure and everything in it (i.e. land beneath the lighthouse, oratory and the barrow/lime kiln) are a Scheduled Monument.

8.13.22 There are two later medieval priories within the aggregates resource:

- **Barton Oratory (236)** – Barton Oratory, near Whippingham in the Northern Lowlands was founded in 1275 by Thomas de Wynton, rector of Godshill, and John de Insula, rector of Shalfleet (MIW998). The oratory suffered economic problems and in 1439 Winchester College obtained the land and property, maintaining a single chaplain at Barton until the mid 16th-century (VCH Hampshire ii 180–181).
- **St Helen's (300)** – St Helen's priory in Brading Haven Bembridge Isle was founded in 1071–86 by the Cluniac order (MIW1211). Many Cluniac priories were founded in England following the Norman Conquest and all owed their allegiance to the Abbey of Cluny in Burgundy (alien priories). In 1414 St Helen's was dissolved during the suppression of all alien priories by Henry V. The priory is believed to have been contiguous with St Helen's church, and therefore to have been lost to coastal erosion.

8.13.23 Two later medieval wells with religious associations are known from the Island (STARA 2006a), but only St Boniface's Well (**309**) in South Wight Downland (MIW803) is located in the aggregates resource. The well was a spring rising high

on the chalk down and venerated by seamen (Whitehead 1911, 118–9). It has since dried up, but remains of well head structures or religious buildings may be present in the vicinity.

8.13.24 The aggregates resource also contains a record of a stone coffin (**310**) found close to Limerstone in West Wight Downland Edge (MIW318). The coffin is believed to be associated with an oratory, outside the aggregates resource at Limerstone.

8.13.25 The aggregates resource contains 12 granges. Granges were manors held by monastic organisations and used for the production of food and other commodities for the monastic community. The manor house formed the organisational centre of the grange. Favoured granges might be used as a retreat for the prior or abbot, but most would be run by a steward or bailiff, who may have lived at the manor house. The agricultural work would be undertaken by lay brothers, hired workers or by those who owed work to the Lord of the manor as a feudal obligation. The granges within the aggregates resource include:

- **Bigbury (313)** – Bigbury in Newchurch Sandown is listed as a grange of Quarr Abbey (MIW871).
- **Billingham (611)** – The only mention of the manor of Billingham in South Wight Sandstone is a record of land in Billingham given to the Barton Oratory by John de Lisle in 1293. There is no further evidence of a manor house (MIW380). Documentary evidence suggests the settlement was involved in wool production. It has been listed as a deserted settlement, but this is likely to be an error (see below 8.13.16) reflecting a reduction of farming population resulting from wool production (MIW379).
- **Combley Farm (311)** – In 1230 Quarr Abbey exchanged the holding of Blackland for Combley with Simon Fitz Hubert. Combley, in Northern Lowlands, was thereafter held as a grange of the abbey until the dissolution (MIW985).
- **Compton (271)** – Compton in West Wight Downland Edge (MIW110) was the smallest grange of Quarr Abbey (Hockey 1970). It was probably located at the present Compton Farm. On historical (poll tax) evidence it has been listed as a deserted medieval village (Beresford 1954), but there is no evidence for this on the ground (Sly 1988).
- **Heasley Manor (249)** – The manor of Heasley in Arreton Valley was given to Quarr Abbey in 1136 by Engler de Bohum and was held as a grange until the dissolution (MIW963). A later manor house stands on the site, but the west end of the extant east wing has a 14th-century roof. In the grounds are the remains of a fishpond. The manor was used as a sheep farm and after 1139, the abbey built a wool room and water powered fulling mill. The manor house is listed and the ground around and beneath is Scheduled.
- **Hamstead (262)** – A grange at Hampstead in Northern Lowlands was recorded at the dissolution (c 1540), although no visible evidence has been found (MIW183).
- **Newnham Farm (312)** – A grange at Newnham Farm in Northern Lowlands has been identified as the property of Quarr Abbey (MIW1131).
- **Perreton (315)** – Perreton in South Wight Sandstone, originally belonged to Arreton, but by the dissolution was the property of the Abbey of Quarr (MIW960). The manor house or farmhouse had been located during ploughing.
- **Rowborough (314)** – Isabel de Fortibus (1237–93), the last hereditary descendant of the de Redvers family and owner of the Isle of Wight, confirmed a grant of land at Rowborough to the Abbey at Quarr by 1284. In 1284 the abbot obtained a grant of free warren (permitting the killing of certain game) for his grange at Rowborough in 1285 and in 1399–1400 a manor house was built to serve the Rowborough grange (MIW461).

- **Shalcombe Manor (247)** –Shalcombe manor in Thorley Wellow Plain (MIW1291) in Domesday Book, when it was described as belonging to the church of St Nicholas in Carisbrooke Castle. When Quarr Abbey was founded in 1132, the manor was granted to the Abbey and remained a monastic grange until 1536. A listed 17th-century house stands on the site.
- **Shate (266)** –The grange at Shate (or Shate) in South West Wight Coastal Zone (MIW272) has been identified as the property of Quarr Abbey known as Sieca. It subsequently gave its name to 'Grange Chine' and may have been located near the present Grange Farm, although no evidence of later medieval buildings has been found at the farm.

8.13.26 Except for Billingham, all the granges within the aggregates resource were owned by Quarr Abbey. Some existed as manors (e.g. Heasley, Shalcombe) prior to their acquisition by the Abbey, while others (e.g. Perreton, Billingham and Rowborough) may not have acquired manorial status until they were developed as monastic property. This latter group were probably part of larger manors, before being donated to the abbey.

### Defence

8.13.27 The Isle of Wight acquired a certain military importance during the later medieval period. The construction of Carisbrooke Castle, on the site of the early medieval settlement and *burh* began shortly after the Conquest. The military significance of the Island was further emphasised by its donation to William Fitz Osbern, a Norman Lord close to William the Conqueror. From 1066 to 1293 the Island was ruled by quasi-independent hereditary Lords, and afterwards by Lords appointed by the Crown (STARA 2006a). From the 14th-century, war with France resulted in raids which prompted the Islanders to create a militia and network of beacons (Basford 1980, 37). At the end of the period Henry VIII built castles at East Cowes, West Cowes, Sandown and Yarmouth. The military importance of the Island continued up to the end of World War II.

8.13.28 The aggregates resource contains 23 defence assets. These are shown on Fig 26 and described below. Numbers in **bold** refer to Fig 26.

8.13.29 Carisbrooke Castle (**226**) was originally constructed as a motte and bailey castle shortly after the Conquest to emphasise the power of the Normans to their local population (MIW446). The castle became the primary seat of the Lords of the Island, who made a number of additions to the structure. It saw action twice, in 1146 when it was taken by King Stephen, and in 1377 when the French failed to take it. Remains of various components (MIW2450) of the castle have been found in past archaeological (Young 2000).

8.13.30 Other defences on the Island were limited to a system of beacons extending across the Island, intended to warn the militia of an invasion. A list of these beacons survives from 1324, and 22 are located within the aggregates resource:

- Arreton Valley
  - o **Wackland (280)**: MIW805)
- Atherfield Coastal Plain
  - o **Atherfield (274)**: MIW203)
  - o **Atherfield Point (281)**: MIW225)
- Brading Haven Bembridge Isle
  - o **St Helen's (282)**: MIW1209)
- East Wight Chalk Ridge
  - o **Arreton Down (283)**: MIW938)
  - o **Bembridge Down (284)**: MIW1171)
- Freshwater Isle

- o **Headon Hill (285: MIW34)**
- Northern Lowlands:
  - o **Burntwood, Thorness (286: MIW567)**
  - o **Hamstead (262: MIW182)**
  - o **Quarr Abbey Mound, Fishbourne (289: MIW2284)**
  - o **Whippingham (287: MIW994)**
  - o **Wooton (288: MIW1009)**
- South Wight Downland
  - o **Appuldurcombe Down (291)** known as La Wytedich (MIW890)
  - o **St Catherine's Hill (292: MIW213)**
  - o **St Martin's Down (290: MIW867)**
- South Wight Sandstone
  - o **Emmethill, Shorwell (294: MIW368)**
  - o **St George's Down (293: MIW977)**
- West Wight Chalk Downland
  - o **Alvington (298: MIW493)**
  - o **Garston's Down (297: MIW508)**
  - o **Harboro Down (295: MIW243)**
  - o **Lorden (296: MIW353)**
- West Wight Downland Edge
  - o **Coombe Tower (299: MIW330)**

### Industrial

- 8.13.31 Later medieval industry was variable, but produced much of what was required locally. The main export was Quarr limestone, which was used across the south-east of England during the Norman period (Tatton-Brown 1980). The aggregates resource contains 21 industrial assets, primarily quarries. These include the group of quarries at Quarr (**117**) and one at Gat Cliff on Appuldurcombe Down in South Wight Downland (**620**).
- 8.13.32 Other assets may reflect sites of higher importance which may either be statutorily protected or of such complexity that the cost of archaeological mitigation would represent a significant constraint to aggregate extraction. Such assets are discussed below and shown on Fig 28. Numbers in **bold** refer to Fig 28:
- **Afton tide mill (319)** – A later medieval tide mill is recorded at Afton in Freshwater Isle (MIW59) from the 14th-century.
  - **Chequers lime kiln (318)** – A lime kiln was found during ploughing in 1914 close to Chequers Inn, near Godshill in South Wight Sandstone (MIW896).
  - **Knighton pottery kiln (257)** – a later medieval pottery kiln was found at Knighton in Newchurch Sandown (MIW1111).
  - **Preston mill (320)** – A later medieval water mill is recorded at Ryde in Northern Lowlands (MIW6580).

### Maritime

- 8.13.33 There are only two maritime assets within the aggregates resource. These are described below and shown on Fig 28:
- **Brading Quay (317)** – Brading Quay in Brading Haven Bembridge Isle (MIW1971) is located close to the centre of Brading settlement. It provided mooring for boats which once travelled up the Eastern Yar before the Haven was drained. Other quayside structures may be located nearby.

- **St Catherine's Hill (308)** – A quarry (MIW6287) and lime kiln (MIW213) are present, close to and probably associated with the later medieval lighthouse in South Wight Downland.

#### Agricultural

8.13.34 The aggregates resource contains 33 agricultural assets. These assets are unlikely to represent a constraint to extraction and are discussed elsewhere (8.13.38). The following assets would potentially represent a significant constraint to extraction because some or all of them are statutorily protected:

- **Garston's Farm Barn (321)** – The 15th-century barn in West Wight Downland Edge is a listed building. It may indicate a nearby manor house or small settlement (MIW7521).
- **Pillow mounds** – the aggregates resource contains 12 pillow mounds, created as artificial rabbit warrens, primarily in Arreton Valley, East Wight Chalk Ridge and Newchurch Sandown. Although these may not represent dense concentrations of archaeological features, there may be a requirement to preserve these features.

#### Objects

8.13.35 There are 117 objects within the aggregates resource, many of which have been recorded as a result of the Portable Antiquities Service. These include 16 artefact scatters and 101 findspots, and are shown on Fig 29. The relationship between chance finds and any underlying sites is difficult to assess, but clusters of objects may indicate the presence of an underlying site. Some clusters can be directly related to known later medieval activity. Numbers in **bold** on Fig 29 reflect significant clusters of objects:

- **Ashey manor (261)** – in Bloodstone Copse in Northern Lowlands where a scatter of Norman pottery was recorded (MIW5871)
- **Carisbrooke Castle (266)** – A prominent cluster of objects in West Wight Chalk Downland and West Wight Downland Edge, reflecting activity at the Castle, village and later town of Newport. These included a group of later medieval coins (MIW7462) and a buckle and chapel dating from 1350–1500 (MIW7465).
- **Centurion's Copse (244)** – in Brading Haven Bembridge Isle where later medieval pottery was found and identified as evidence of manuring practice associated with St Eurian's manor (MIW4787).
- **Combley Farm (311)** – in Northern Lowlands, where later medieval coins were found (MIW2301)
- **Knighton (257)** – Another prominent cluster of later medieval pottery (MIW2038) and objects is present at Knighton in Newchurch Sandown.

8.13.36 Other clusters of objects and/or artefact scatters may reflect previously unrecognised sites:

- **Atherfield (326)** – Two pottery scatters (MIW236: MIW5375) and several objects, including a skillet handle (MIW1624) in Atherfield Coastal Plain may relate to settlement at Atherfield Farms or Walpen.
- **Arreton (323)** – A scatter of later medieval copper objects (MIW7251) and coins (MIW2595) in Arreton Valley may reflect activity around the manor and village (which are outside the aggregates resource).
- **Birchmore Farm (325)** – later medieval pottery scatter (MIW6938) in South Wight Sandstone.
- **Bowcombe (329)** – later medieval pottery scatters (MIW2542: MIW2545) in West Wight Chalk Downland Edge imply the later medieval settlement was close to the modern village and.



- **Brook Bay (328)** – A cluster of later medieval pottery (MIW2: MIW2000: MIW1455: MIS1525) found at Brook Bay in South West Wight Coastal Zone suggest an outlying part of the village of Brook.
- **Chawton (327)** – Fieldwalking in Northern Lowlands revealed early and later medieval artefact scatters, suggesting nearby settlement (MIW6724).
- **Nettlestone (324)** – An artefact scatter of later medieval pottery in Northern Lowlands was identified as evidence of manuring and may reflect either the manor at Park Farm or the settlement at Barnsley (MIW5801).
- **Yaverland (322)** – A later medieval pottery scatter (MIW4788) in Brading Haven Bembridge Isle has been identified as evidence of manuring practice near a manor house at Yaverland (located outside the aggregates resource).

#### *Diffuse later medieval assets*

8.13.37 There are a number of assets of a more diffuse nature than the key sites discussed above. The HLC has revealed a number of different later medieval land uses and the NMP survey has identified assets which may be associated with the management and control of the landscape. These assets would represent less constraint to aggregate extraction because they are unlikely to be statutorily protected and would require less time consuming and expensive archaeological mitigation.

#### Agricultural

8.13.38 Many diffuse later medieval assets are of an agricultural nature, comprising field systems, lynchets, fishponds and enclosures. There are 33 later medieval agricultural assets within the aggregates resource and these are shown on Fig 28.

#### Civil

8.13.39 The King's Quay to St Lawrence boundary was constructed by the beginning of the later medieval period and was respected by parish and estate boundaries during that period. Whether it reflected on ongoing division of the Island in the later medieval period, or merely represented a useful landmark is uncertain.

#### Transport

8.13.40 It is likely that the main trackway across the Island's central ridge continued in use in this period. Other routes may have become hollow ways or green lanes during this period, but most remain undated.

#### *Possible later medieval assets*

8.13.41 There are 788 possible later medieval assets within the aggregates resource. These are concentrated along the central ridge, and largely comprise undated cropmarks found during the NMP survey. Some may be associated with settlement, many have been discussed previously (8.10.6). There are three undated platforms at Culver Cliff (East Wight Chalk Ridge) and Afton Down (West Wight Chalk Downland), which may be building platforms for later medieval structures. Concentrations of undated diffuse assets which might indicate possible migration or early medieval period 'key site' have been discussed before in 8.10.2, 8.10.17, 8.8.30, 8.9.21 and 8.11.27.

#### *Conclusion*

8.13.42 The distribution of later medieval activity on the Island is better understood than for earlier periods. This is mostly due to the large amount of documentary evidence, but also reflects the continuing impact of later medieval occupation patterns on post-medieval and modern settlement. It is therefore possible to predict areas of later

medieval activity and so determine the potential risk to future extraction with a greater degree of confidence than for earlier periods.

- 8.13.43 Settlement patterns of the later medieval period developed from early medieval antecedents which had divided the Island into large estates and parochia, that were subsequently subdivided into smaller manors and parishes. A proportion of the manors and many of the churches came into the hands of monastic institutions, particularly the Abbey of Quarr. The Norman castle at Carisbrooke was constructed on the site of the former early medieval *burh*, but it had little impact on latter French raids and only saw action twice. To help guard against invasion a series of beacons were set up. None of these beacons have been excavated but a number are located within the aggregates resource.
- 8.13.44 Current understanding of later medieval settlement patterns comprises a scatter of nucleated villages, linear villages and dispersed settlement across the Island, with some planned villages (at St Helen's and Carisbrooke) and four larger planned medieval urban centres at Brading, Newport, Yarmouth and Newtown. Later medieval settlement appears more dispersed across the Island in than early medieval settlement which was apparently focussed upon the central ridge. The northern part of the Island is believed to have been less extensively occupied than the south, although settlements in the north may have been underestimated and much of the northern plain is located outside the aggregates resource.
- 8.13.45 The origins of some settlements may extend before the early medieval period with some manors or occupation sites (e.g. Carisbrooke, Knighton Gorges, Whippingham, Yaverland) located close to prehistoric or Roman occupation. This may reflect continuity of occupation or the particular attraction of these areas for succeeding generations.
- 8.13.46 In many cases the identification of later medieval occupation sites, manors and churches rests upon documentary evidence and apart from the excavations at Carisbrooke Castle there have been no large scale modern excavations of later medieval sites. Past small scale modern and antiquarian excavations, including fieldwalking, excavation at Centurion's Copse and along the SeaClean (RPS Consultants 2001) and Transco pipelines (Network Archaeology 2005) have revealed important new sites and information on later medieval occupation. Documentary evidence has been used to suggest depopulation and desertion of some areas during the later medieval period, but this may alternatively reflect an increasingly dispersed pattern of settlement as manors were subdivided into smaller manorial farms.
- 8.13.47 The Isle of Wight historic landscape characterisation has identified a number of different later medieval land uses, some of which have survived to the present day (Basford 1980). The recent NMP survey has revealed a large number of additional possibly later medieval assets, most of which are likely to be associated with diffuse landscape features, and are unlikely to pose a significant constraint to extraction. Only complex (primarily occupation or religious) sites are likely to pose a significant constraint to extraction. Some such sites are Scheduled or Listed, while others would represent a significant outlay in terms of archaeological excavation and recording.

## **8.14 Post-medieval period (AD1540–1900)**

### *Introduction*

- 8.14.1 The post-medieval covers a long period between the dissolution of the monasteries, when the monarch became both the ultimate temporal and spiritual power in England, and the end of the 19th century. England developed from a largely rural agrarian economy through to increasing invention, industrialisation and imperial power, changes which are reflected on the Isle of Wight. The Island had an important role in shipbuilding and new urban centres grew up at Cowes, Ryde,

Ventnor and Sandown/Shanklin, alongside the existing towns at Newport, Yarmouth and Brading (Basford 1980, 51).

- 8.14.2 Although understanding of the national and international context is very good, understanding of the archaeology of this period on the Island is varied. Most extant buildings within the aggregates resource date to the post-medieval, but there is limited archaeological evidence from excavation. Historically post-medieval remains were often discounted during antiquarian excavation. More recent synthetic studies such as the Extensive Urban Survey and developer-funded excavations of post-medieval sites have been focussed on urban centres (STARA, 2006b) that are excluded from the aggregates resource. Consequently understanding of the generally rural aggregates resource is primarily dependant upon historical documents, map evidence, standing buildings and objects found by chance or recovered by metal detecting. These have provided useful information, but further archaeological evidence will be required to further understanding in particular to identify aspects of continuity and change in settlement and occupation patterns between this and earlier periods.

#### *Asset densities*

- 8.14.3 There are 1607 assets of post-medieval date within the aggregates resource, equivalent to an density of 8.87 assets per km<sup>2</sup>. There are a further 747 possible assets within the aggregates resource, making a possible maximum number of 2354 assets or a density of 12.99 assets per km<sup>2</sup>.
- 8.14.4 The asset types are shown in Chart 13, Chart 14, Chart 15 and Chart 16:
- 495 agriculture and subsistence assets – including 134 barns, 90 stables, 56 cart sheds, 53 cow houses, 48 farm buildings, 24 granaries, 12 pigsties, 12 sheep dips, 9 dairies, 9 sheds, 8 brewhouses, 5 churn stands, 5 field boundaries, 5 field systems, 5 ridge and furrow, 4 dovecotes, 4 boundaries, 2 artefact scatters, 2 icehouses, 1 pond, 1 enclosure, cultivation marks and a game larder.
  - 298 domestic assets – 212 houses, 40 farmhouses, 25 manor houses, 8 garages, 3 occupation sites, 2 buildings, 2 deserted settlements, 2 coach houses, 2 house platforms, 1 midden and 1 almshouse.
  - 282 industrial assets – 88 extractive pits, 66 chalk pits, 44 quarries, 19 lime kilns, 15 brickworks, 13 marl pits, 8 watermills, 5 spoil heaps, 5 gravel pits, 2 mills, 3 sandpits, 2 cement works, 2 forge, 1 fulling mill, 1 engine house, 1 bank, 1 hop kiln, 1 oyster bed, 1 pump, 1 paper mill, 1 windmill, 1 saltern and 1 tide mill.
  - 119 civil assets – 95 boundary stones, 10 boundaries, 2 pounds, 2 radio transmitters, 1 triangulation point, 1 school, 1 radio station, 1 road block, 1 semaphore station, 1 parish boundary, 1 hospital, 1 postbox, 1 gibbet and 1 gallows.
  - 88 transport assets – 21 trackways, 17 bridges, 15 railway carriages, 9 milestones, 7 railway lines, 4 railway stations, 2 railway tunnels, 2 linear earthworks, 2 roads, 2 toll houses, 1 bank, 1 earthwork, 1 footbridge, 1 hollow way, 1 viaduct, 1 tramway and 1 ford.
  - 86 objects – 62 findspots and 24 artefact scatters.
  - 80 recreation assets – 60 earthworks, 3 golf courses, 2 hotels, 2 public houses, 1 mounting block, 1 museum, 1 racecourse, 1 summerhouse, 1 bowling green, 1 chalet, 1 golf bunker, 1 cockpit, 1 miniature fort, 1 bathhouse, 1 boathouse, 1 graffiti and 1 set of steps.
  - 41 park and garden assets – 12 landscape parks, 7 lodges, 6 gardens, 4 gates, 2 walled gardens, 2 walls, 1 building platform, 1 haha, 1 gatehouse, 1 garden shed, 1 folly, 1 mound, 1 set of landscape features and 1 wood.

- 43 defence assets – 13 beacons, 8 batteries, 6 signal stations, 4 firing range, 3 watch houses, 2 forts, 1 bridge, 1 barracks, 1 military road, 1 glacia, 1 searchlight battery, 1 castle and 1 site.
- 33 water and drainage assets – 7 drainage systems, 8 drainage ditches, 5 wells, 2 ponds, 2 mill ponds, 2 banks, 1 drain 1 mill dam, 1 linear feature, 1 waterfall, 1 spring, 1 revetment and 1 dew pond.
- 15 maritime assets – 6 coastguard stations, 4 lighthouses, 2 quays, 1 seamark and 2 lifeboat stations.
- 10 religious, ritual or funerary assets – 4 churches, 4 non-conformist chapels, 1 lych gate and 1 cemetery.
- 9 unassigned assets – 1 bank, 1 cave, 1 ditch, 1 enclosure, 1 hollow, 1 ventilation shaft, 1 platform, 1 structure and 1 tower.
- 8 commemorative assets – 4 commemorative monuments, 2 mounds, 1 plaque and 1 obelisk.

Chart 13 Number of post-medieval religious, ritual or funerary, commemorative, unassigned and maritime assets

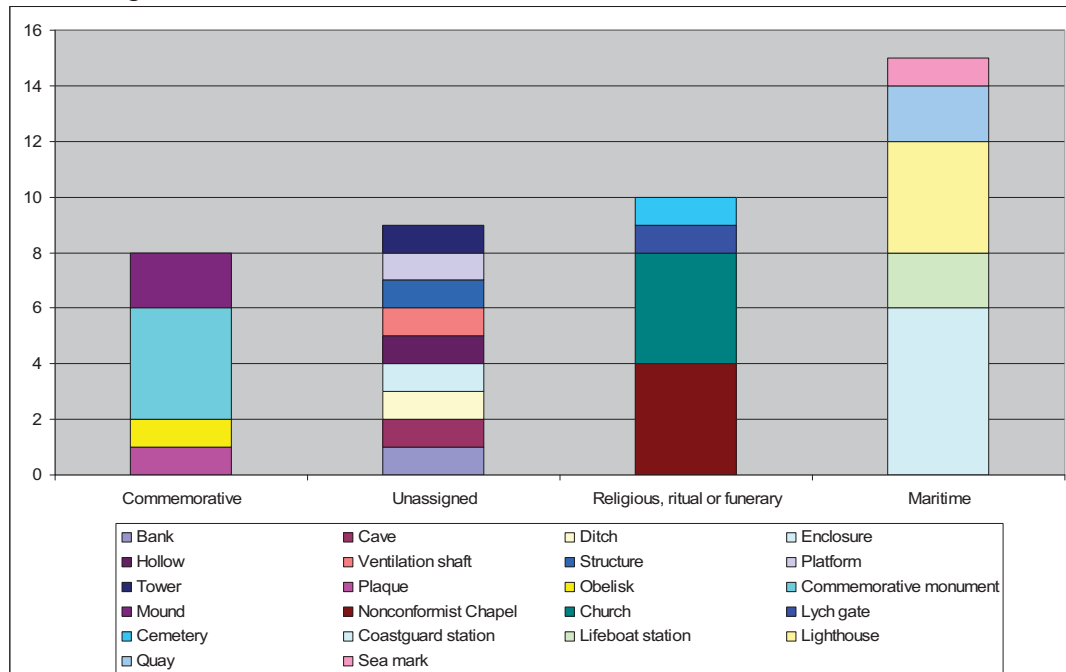


Chart 14 Number of post-medieval park and gardens, water and drainage and defence assets

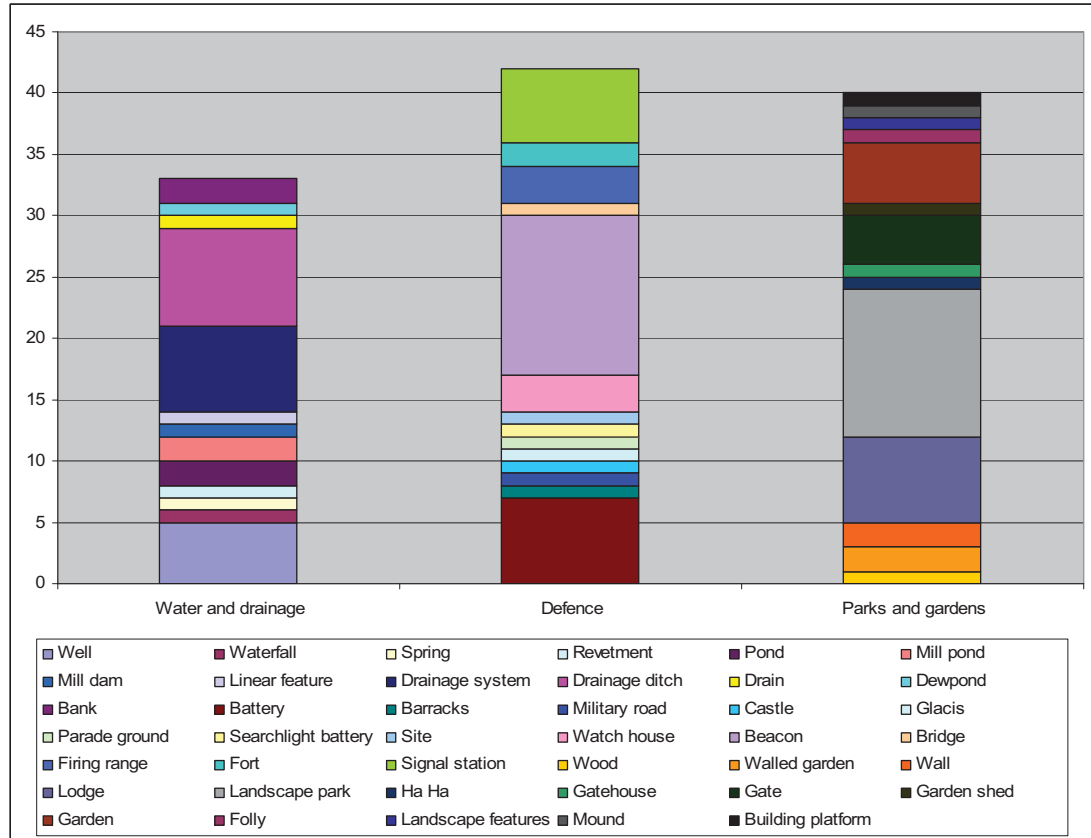


Chart 15 Number of post-medieval object, recreation and transport assets

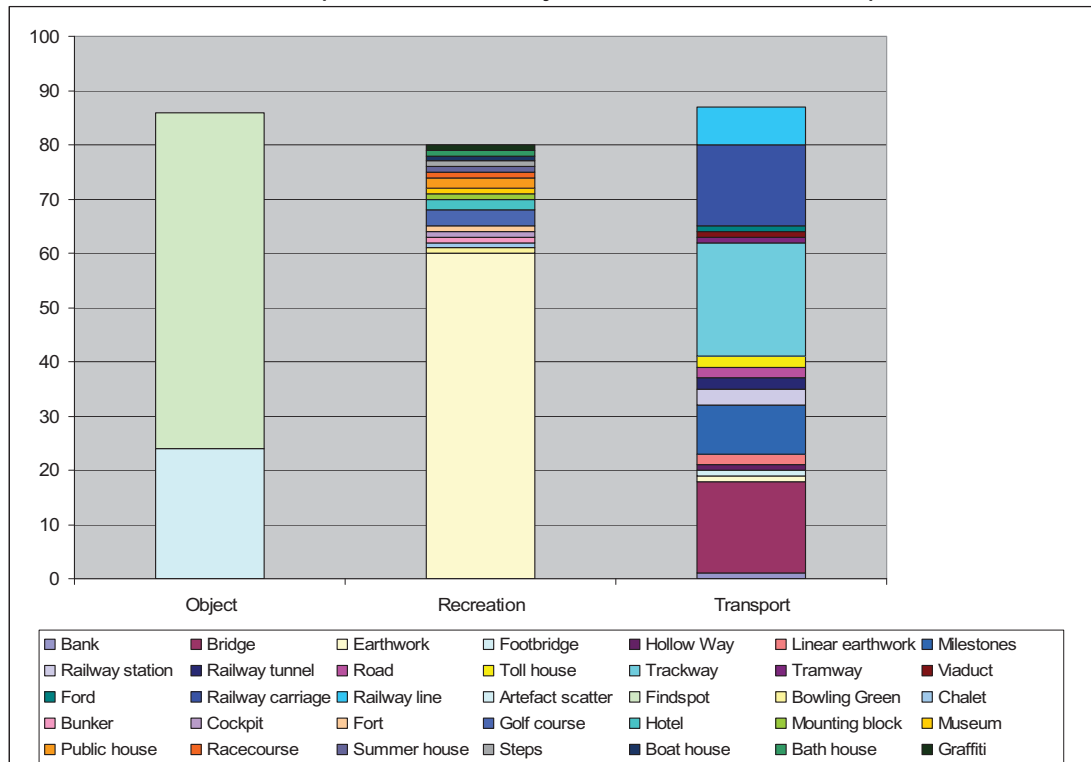
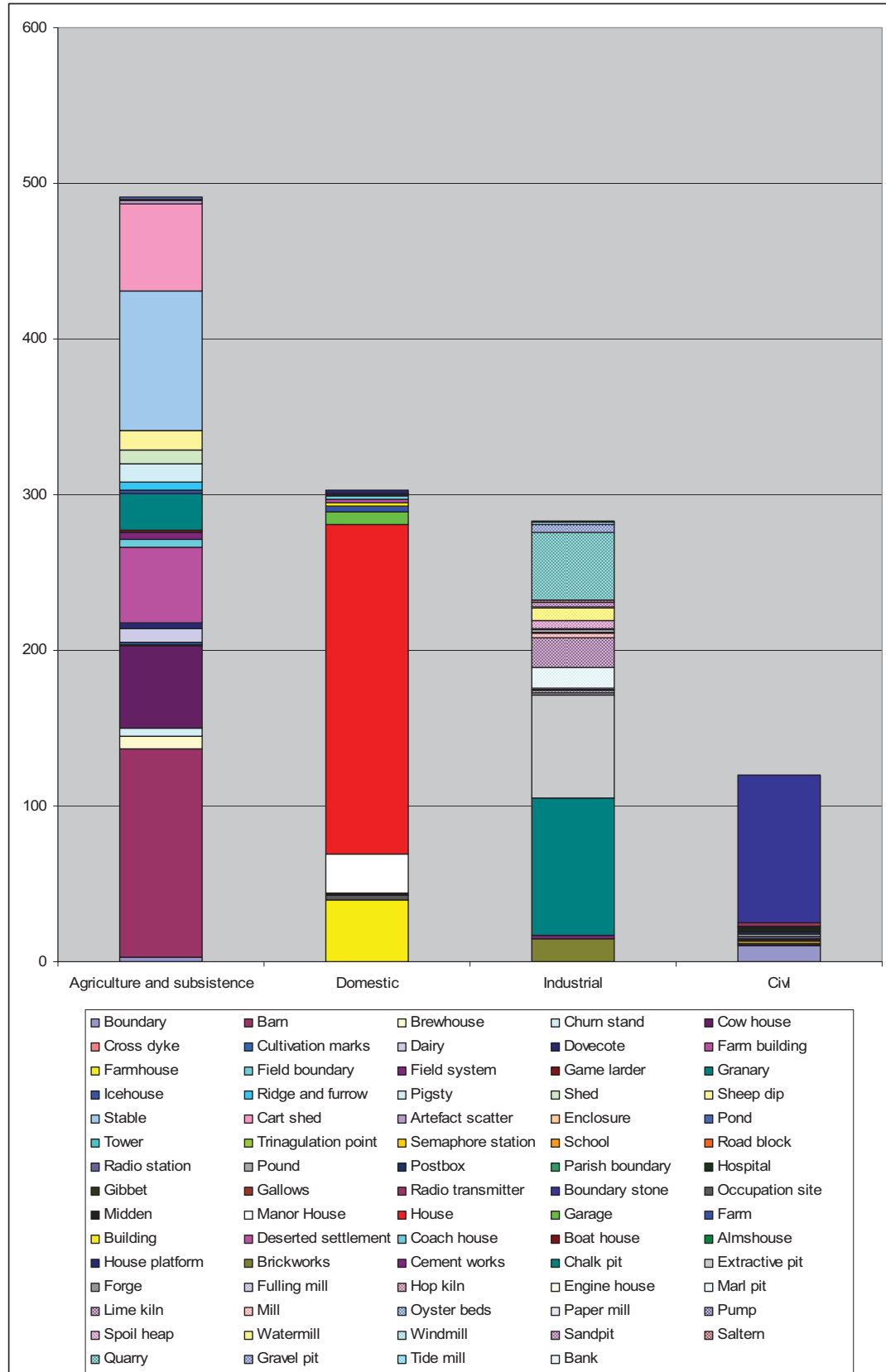


Chart 16 Number of post-medieval agriculture and subsistence, domestic, industrial and civil assets



8.14.5 Of the post-medieval assets, 46 % (744 of the 1609) are buildings, reflecting the high survival of structures recent periods. Although this provides considerable information on settlements, farms and manor houses, it masks the relatively limited number of archaeologically recorded post-medieval sites. The asset densities of

other periods are much more dependent upon the level and distribution of archaeological investigation.

- 8.14.6 In addition to the HER, the Isle of Wight Historic Landscape Characterisation (HLC) has recorded the different elements of the historic landscape across the Island. Since many of the landscape types recorded originate in the post-medieval, this has resulted in an improved understanding of the historic landscape of the Island (Basford 2008). The HLC records that the enclosure of land on the Island continued with common land being enclosed. Even the East Wight Chalk Ridge and South Wight Downland had been enclosed, although the West Wight Chalk Downs were still very open as late as 1799. The period saw some changes to existing settlement and new rural villages and farmsteads, which took advantage of newly enclosed land. Many of these new settlements followed patterns from earlier periods, with dispersed and nucleated settlements located on the edge of the downs at the intersection of different landscape types. By the end of the period, tourism had resulted in the creation of small urban areas and alteration to older settlements in picturesque or seaside locations (*ibid*).

#### *Key post-medieval assets*

- 8.14.7 The aggregates resource contains a large number of important post-medieval remains, many of which are listed buildings. Listed or Scheduled remains are protected and extraction would not be permitted in the vicinity. Such remains may have associated, possibly significant, buried remains, which would potentially require archaeological mitigation.

#### Domestic

- 8.14.8 The distribution of post-medieval rural settlement on the Island developed from the later medieval pattern of nucleated and dispersed settlement with local manors and farms. A large number of buildings of this period have survived, while others are recorded in documentary sources. These include manor houses of varying size and importance, and more humble buildings. Map evidence studied during the HLC has indicated that settlement continued to be associated with downland edge and areas at the interface of different landscape types (Basford 2008, 74). This may reflect the earlier importance of the central downland ridge.
- 8.14.9 The post-medieval period was also a time of increasing urbanisation and on the Isle of Wight this was driven by both industry (Cowes was an important shipbuilding port) and tourism. The popularity of sea-bathing in the late 18th and 19th centuries created a demand for properties along the coast and following the construction of the railways in the late 19th-century, the pleasant climate and attractive coastline resulted in the rapid expansion of seaside resorts at Shanklin, Sandown, Ryde and Ventnor (STARA 2006b).
- 8.14.10 Within the aggregates resource, there are 298 domestic post-medieval assets, most of which are listed buildings. There are 25 manor houses (most of which are listed) and 40 listed farmhouses. Some are descendents of earlier medieval manors, whilst others were built by new gentry and lower aristocracy. The houses and farmhouses are either associated with known settlements or are more isolated components of dispersed settlement. Where such buildings are descended from medieval manors they are more likely to represent foci of settlement. Listed domestic assets are shown on Fig 30. Post-medieval manors are described below, numbers in **bold** refer to Fig 30:
- **Afton Manor (248)** in Thorley Wellow Plain
  - **Alvington Manor (263)** in Northern Lowlands
  - **Apse Manor (341)** in Newchurch Sandown
  - **Barton Manor (236)** in Northern Lowlands
  - **Bridgecourt Manor (255) at Godshill** in South Wight Sandstone

- **Calbourne Manor (222)** in Thorley Wellow Plain
- **Combley Farm (311)** in Northern Lowlands
- **East Ashey Manor (261)** in Northern Lowlands
- **Gotten Manor (340)** in South Wight Downland Edge – this is not a listed building.
- **Great Budbridge Manor (229)** in South Wight Sandstone
- **Great East Standen Manor (227)** in South Wight Sandstone
- **Hale Manor (273)** in Arreton Valley
- **Heasley Manor (249)** in Arreton Valley
- **Horrington Manor (230)** in Arreton Valley
- **Kingston Manor (231)** in South Wight Sandstone
- **Knighton Gorges Manor (257)** in Newchurch Sandown –the manor house is no longer extant but listed structures associated with it survive.
- **Nunwell House (275)** in Northern Lowlands
- **Pyle Manor (342)** in Atherfield Coastal Plain/South Wight Sandstone
- **Shalcombe Manor (247)** in Thorley Wellow Plain
- **Stenbury Manor (232)** in South Wight Downland Edge
- **West Court Manor (228)** in South Wight Sandstone – the moated site no longer contains a building, but is a Scheduled Monument.
- **West Standen Manor (239)** in South Wight Sandstone
- **Weston Manor (343)** in Freshwater Isle
- **Wolverton Manor (267)** in South Wight Sandstone
- **Wycombe Manor (344)** in South Wight Downland Edge

8.14.11 There are a further 212 listed houses within the aggregates resource and 40 listed farmhouses. Isolated houses may reflect either dispersed settlement or areas where only one post-medieval structure survived (suggesting potential for nearby contemporary buried remains). Listed houses are shown on Fig 30. Clusters of Listed Houses are described below, numbers in **bold** refer to Fig 30:

- **Bowcombe (345)** in West Wight Chalk Downland
- **Brook Green (346)** in South West Wight Coastal Zone
- **Glovers Farm (347)** in Brading Haven Bembridge Isle
- **Knowles Farm (348)** at St Catherine's Point in Undercliff
- **Rock (349)** in West Wight Downland Edge
- **Roud (350)** in South Wight Sandstone
- **Sandford (351)** in South Wight Downland Edge
- **Yard (352)** in South Wight Sandstone

8.14.12 The HLC has identified evidence of dispersed settlement from map evidence, and in some cases are associated with extant houses or farmhouses:

- **America Cottages (354)** dispersed settlement in Newchurch Sandown (HLC2705)
- **Downend (355)** dispersed settlement in East Wight Chalk Ridge (HLC2061)
- **East of Apse Heath (356)** residential cluster in Newchurch Sandown (HLC2696)
- **Five Houses (357)** settlement core in Northern Lowlands (HLC762)
- **Hollier's Farm (358)** farmstead in Arreton Valley (HLC 2512)
- **Luccombe fishing village (224)** residential scatter in Undercliff (HLC3305)



- **Olive cottage (359)** residential scatter in Brading Haven Bembridge Isle (HLC 3006)
  - **Quarr Wood (360)** residential scatter in Northern Lowlands (HLC 2187)
  - **St Helen's Duver (361)** residential scatter in Brading Haven Bembridge Isle near St Helen's post-medieval church (HLC 3002).
  - **South of Needles Pleasure Park (362)** residential scatter in Freshwater Isle (HLC371)
  - **The Lynch (363)** residential scatter in South Wight Downland (HLC3260)
- 8.14.13 The aggregates resource also includes a record of Berry almshouses (**353**) in South Wight Sandstone (MIW6069). Post-medieval farms, described below (8.14.46) may also be associated with domestic occupation and structures.
- 8.14.14 Two shrunken or deserted post-medieval settlements have been identified at Hoxall (**364**) in South West Wight Coastal Zone and Rancombe (**365**) in West Wight Chalk Downland. Rancombe (MIW6355) is a completely deserted settlement identified from map evidence and remains on the ground, while Hoxall (MIW 6959) represents a shrunken settlement where some cottages remain but other components of the hamlet have been lost. Archaeological remains associated with demolished buildings and occupation areas may be located nearby.
- 8.14.15 The aggregates resource contains two house platforms, indicating areas of domestic occupation, at St Catherine's Hill (**366**) in South Wight Downland (MIW224) and Chilton Green (**367**) in South West Wight Coastal Zone (MIW2119).
- 8.14.16 Archaeological evidence of settlement has also been found at Tobacco Pipe Copse (**368**) near Whippingham (MIW2152) and King's Quay (MIW5032) in Northern Lowlands (**369**). A midden (MIW2450) was found at Carisbrooke Castle (**266**), and is probably associated with post-medieval activity around or within the Castle. Carisbrooke Castle (MIW446) remained a significant site of defence and occupation. It was fortified with large bastions following the Spanish Armada in 1588, and was later used as a prison for Charles I and his daughter Princess Elizabeth, who died there.

#### Religious, ritual or funerary

- 8.14.17 Religious sites of the post-medieval period are primarily churches and chapels and burial grounds. In 1539, Henry VIII completed the legislation that separated the English church from the control of the Pope and created the Church of England. Although the interiors of many churches were subsequently altered, most originated as Catholic Churches of the later medieval period. In some cases the church was moved for practical reasons (such as coastal erosion at St Helen's) or due to parochial reorganisation. The aggregates resource contains four churches. These are all listed and are likely to have associated graveyards. They are shown on Fig 31 and discussed below. Numbers in **bold** refer to Fig 31:
- **Brook Church (301)** in West Wight Downland Edge (MIW13) is a later medieval and post-medieval church associated with a post-medieval lych gate (MIW6275).
  - **St Helen's Church** (MIW1212) at St Helen's in Brading Haven Bembridge Isle is a later medieval church eroded by the sea and replaced in 1717 (**300**).
  - **St Helen's Church (370)** at Nettlestone and Seaview in Brading Haven Bembridge Isle is the replacement for the later medieval church (MIW5900). The HLC identifies some dispersed post-medieval settlement nearby (HLC 3029).
  - **St James' Church Kingston** (MIW386) in South Wight Sandstone continued in use from the later medieval period (**231**).
- 8.14.18 A number of non-conformist sects developed. These sects disagreed with the

doctrine or practise of the Church of England and sought to worship separately. Four non-conformist chapels associated with three non-conformist groups are present on the Island. These chapels are not listed but are of historic interest. They are shown on Fig 31 and described below, numbers in **bold** refer to Fig 31:

- **Bowcombe Road (371)** Bible Christian Chapel in West Wight Chalk Downland (MIW6039).
- **Borthwood (372)** Bible Christian Chapel in Newchurch Sandown (MIW6065).
- **Roud (373)** Baptist Chapel in South Wight Sandstone (MIW5849).
- **The Hollands (374)** Methodist chapel in Arreton Valley (MIW3485).

8.14.19 Occasionally non-conformist groups would create their own burial ground, but these non-conformist burial grounds were not always associated with chapels.

8.14.20 In 1853 the Burial Act forbade burial in urban churchyards, which were overflowing and had become a public health risk ([www.statutelaw.gov.uk](http://www.statutelaw.gov.uk)). Large municipal cemeteries were established, one of which is located within the aggregates resource at Mount Joy (MIW7224) in West Wight Chalk Downland (**375**). The cemetery served Newport town and was in use by the end of the 19th-century. It continues to provide for the burial of local inhabitants and is protected under law.

### Defence

8.14.21 The military significance of the Isle of Wight increased during the conflicts of the later post-medieval period as the increasing importance of the navy made the protection of ports and seaways a priority. Henry VIII had constructed forts at Yarmouth, Cowes and Sandown to guard against French attack. A number of later medieval warning beacons were re-used during the Civil and international Wars of the 17th-century. In 1860, a series of forts were guard the passage past the Needles, Spithead and Sandown Bay. A military road was constructed from Freshwater to Chale to ensure reinforcements could be moved from one fort to another with greater ease (Basford 1980, 52).

8.14.22 Many of the defence assets survive as built structures and most of the forts and batteries are statutorily protected as listed buildings or Scheduled Monuments and extraction would not be permitted. Other military assets, such as beacon sites and firing ranges, are more ephemeral and have been identified from map evidence and documents. At the very least these assets would required further archaeological investigation prior to any extraction.

8.14.23 There are 43 defence assets within the aggregates resource. Apart from the beacons, these are mainly clustered around the coast. Individual assets are discussed below and shown on Fig 32. Numbers in **bold** refer to Fig 32.

8.14.24 The castle at Carisbrooke (**266**) retained its military importance. In 1588, its defences were enhanced in the face of the Spanish Armada, although the anticipated attack never came. The defeat of the Spanish Armada showed that invasion could be prevented by the development of a strong naval force and consequently naval warfare became increasingly important. The Island's defences were constructed with the view of preventing enemies entering the Solent or taking the Island's natural harbours. The castle never saw active service again, but it did house Charles I and his daughter Princess Elizabeth following his defeat in the Civil War.

8.14.25 There are two forts within the aggregates resource. Both are located on the eastern part of the Island, to defend the harbours at Sandown and Brading Haven from an attack from the continent:

- **Bembridge Fort (381)** – the fort in East Wight Chalk Ridge was built in 1862–7 on the highest point of Bembridge Down. It supported the batteries in Sandown Bay and commanded the lower land between Brading and the sea (MIW1215). The fort is a Scheduled Monument.

- **St Helen's Fort (380)** – the fort in Brading Haven Bembridge Isle was constructed in the mid-16th century and is mentioned in cotemporary document sources. It protected St Helen's anchorage, a favoured naval station in the 17th and 18th centuries. A 19th-century fort was later constructed in almost the same location (MIW10497).

8.14.26 There are 8 batteries within the aggregates resource. Most were built in the mid-19th to protect against the threat of invasion from France:

- **Brook (384)** – a gun battery is shown on the 1862 Ordnance Survey map at Brook in South West Wight Coastal Zone. The battery was destroyed by coastal erosion during the early 20th-century (MIW2689)
- **Culver Cliff (390)** – Culver battery parade ground and camp replaced Redcliff battery at the end of the 19th-century as the latter suffered from increasing coastal erosion. The flat area of the parade ground and camp is now used as a car park (MIW6746).
- **Freshwater Redoubt (383)** – this overlooks Freshwater Bay in West Wight Chalk Downland. Built in 1861, the battery was converted into tea rooms and later a private property. The remains are listed (MIW1272).
- **New Needles battery (382)** – the battery was built in 1890 in West Wight Chalk Downland and replaced the Old Needles Battery. In 1913, the first anti-aircraft guns were tested here, and from 1956–72 it was used for testing Black Knight rockets (MIW1268).
- **Old Needles battery (381)** – the battery in West Wight Chalk Downland was built in 1861 to control the Needles passage and protect against the threat of invasion from France. Significant components survive and are Scheduled (MIW1269)
- **Redcliff (385)** – the battery was completed in 1863 in Brading Haven Bembridge Isle. It defended Sandown Bay. The site was largely removed by coastal erosion in the early 20th-century and its function passed to Culver Battery (MIW1641).
- **St Helen's (386)** – Land for an earthwork battery was purchased in 1862 at Brading Haven Bembridge Isle. A battery is shown on the 1866 Ordnance Survey map and earthwork traces remain (MIW4930).
- **Node's Point (380)** – the battery in Brading Haven Bembridge Isle was constructed in 1860 to defend St Helen's and Brading Haven against invasion from France. It remained in use until the end of World War II, but little remains after the creation of a holiday camp (MIW1218).

8.14.27 Several hills inland served as beacons, located for their commanding views of the coasts, estuaries and natural harbours or their intervisibility with other beacons. A list of beacons on the Island was compiled in 1638. A total of 13 are located within the aggregates resource. Apart from the beacon on Tennyson's Down, which replaced that at Headon Hill, the beacons typically occupy sites first used in the later medieval:

- Arreton Valley
  - **Wackland (280: MIW805)**
- Atherfield Coastal Plain
  - **Atherfield (274: MIW203)**
- Brading Haven Bembridge Isle
  - **St Helen's (282: MIW1209)**
- East Wight Chalk Ridge
  - **Bembridge Down (284: MIW1171)**
- Northern Lowlands:

- o **Whippingham (287: MIW994)**
- o **Wooton (288: MIW1009)**
- South Wight Downland
  - o **Appuldurcombe Down (291)** known as La Wytedich (MIW890)
  - o **St Catherine's Hill (292: MIW213)**
- South Wight Sandstone
  - o **St George's Down (293: MIW977)**
- West Wight Chalk Downland
  - o **Alvington (298: MIW493)**
  - o **Garston's Down (297: MIW508)**
  - o **Lorden (296: MIW353)**
  - o **Tennyson's Down (388: MIW47)**

8.14.28 There are three watch houses within the aggregates resource. Map evidence indicates that these were constructed no later than the late 18th-century. These may have developed from beacons or observation posts, into more permanent structures in accordance with the military imperatives of the 17th and 18th-centuries:

- **Culver Cliff (390)** – the watch house in East Wight Chalk Ridge is shown on a 1794 Admiralty survey (MIW4344). It would have had a good view of shipping coming up the Channel towards the Solent, providing advance warning of threats to anchorages at St Helen's or Brading Haven.
- **High Down (388)** – the watch house in West Wight Chalk Downland is shown on a 1781 chart (MIW4356). It would have had views over Needles passage and approaches to Freshwater Bay.
- **Node's Point (380)** – the watch house in Brading Haven Bembridge Isle is shown on Ordnance Survey 1" map of 1801. The area was known as 'Watch House Point' by 1769. It was described as a square tower in 1840 (Brettel 1840, 58) and would have provided shelter and improved visibility for observers above the anchorage at St Helen's (MIW4342)

8.14.29 There are six signal stations within the aggregates resource:

- **Ashey Down (410)** in East Wight Chalk Ridge (MIW4424)
- **Bembridge Down (381)** in East Wight Chalk Ridge (MIW4808) was associated with an earlier beacon and late 19th-century fort.
- **High Down (460)** in West Wight Chalk Downland (MIW4423)
- **Mottistone Down (411)** in West Wight Chalk Downland (MIW4806)
- **St Catherine's Hill (292)** in South Wight Downland (MIW4422)
- **St Helen's Priory, Ryde (380)** in Brading Haven Bembridge Isle (MIW4809) was associated with military site occupied since the 16th century. The signal station was associated with the site of a 16th century fort (rebuilt in the late 19th-century) and watch house.

8.14.30 To facilitate the movement of troops and munitions a military road (MIW2658) was constructed along the south-western coast of the Island between Freshwater and Blackgang as part of the military works resulting from the 1859 Royal Commission. This road remains in use as the main road along the south-western part of the Island in the study areas of West Wight Chalk Downland, West Wight Downland Edge, South West Wight Coastal Zone and Atherfield Coastal Plain. Several bridges were built along the road, including one (**387**) at Grange Chine in South West Wight Coastal Zone (MIW2464).

8.14.31 An early 19th-century barracks is recorded at Compton (**389**) in West Wight Downland Edge (MIW144). The barracks were not present in 1794, and had been demolished by 1837–8, and were probably constructed during the Napoleonic Wars (1805–15) or just before. Traces of early 19th-century occupation debris have been

recorded, but no physical remains survive above ground. It is likely that much of the barracks has been eroded away.

- 8.14.32 There are four military firing ranges within the aggregates resource. These were present by the mid-19th century and may have been associated with local militia or gentlemen training in arms:
- **Brading (412)** – in East Wight Chalk Ridge (MIW6048)
  - **Gurnard (391)** – in Northern Lowlands (MIW4391)
  - **St Boniface Down (392)** – in South Wight Downland (MIW5854)
  - **West Cliff, Niton (472)** – in South Wight Downland (MIW6091)

#### Industrial

- 8.14.33 With the increasing urbanisation of the Island, a number of industries developed on the periphery of the urban centres to supply necessary commodities (such as bricks, stone, aggregate and cement). Other industries reflected practices that had been in use for much longer, such as blacksmithing, beer making, fulling and milling.
- 8.14.34 A larger number of industrial premises survive from the post-medieval period than from earlier times, but these are just a small sample of the original number. This is partly because of the lack of interest in recording and preserving such remains. Thus only one forge is recorded within the aggregates resource, although it is likely that most settlements over a certain size would have had a blacksmith.
- 8.14.35 Standing structures are in some cases listed and where they are not statutorily protected is likely to require archaeological investigation prior to extraction in order to improve understanding of their use and development.
- 8.14.36 There are 282 industrial assets within the aggregates resource. These are shown on Fig 33. Numbers in **bold** refer to Fig 33.
- 8.14.37 There are 219 post-medieval extraction sites within the aggregates resource. These provided stone and aggregate for building materials for the manufacture of bricks and cement. The assets include Quarr quarries (**117**) which had been worked out by the end of the post-medieval period, along with five major associated spoil heaps, noted on the HER. The 219 extraction sites include:
- 88 extractive pits,
  - 66 chalk pits,
  - 44 quarries,
  - 13 marl pits,
  - 5 gravel pits,
  - 3 sandpits.
- 8.14.38 The extraction sites are primarily located along the chalk, limestone and sandstone of the central east-west ridge (East Wight Chalk Ridge, West Wight Chalk Downland and West Wight Downland Edge study areas), with some located on the South Wight Downland and occasional other extraction sites where outcrops of viable minerals occur.
- 8.14.39 There are 19 lime kilns within the aggregates resource. These were used to convert limestone into slaked lime suitable for lime mortar, required for the large number of new buildings. The two cement works on the resource were also essential for late 19th and 20th century construction.
- 8.14.40 There are 15 brickworks within the aggregates resource, which provided bricks for domestic, civil and industrial buildings all across the Island.
- 8.14.41 Prior to the development of the steam engine by James Watt in the late 18th-century, wind and water had been the primary sources of power. Various different forms of mill were designed to harness this power. The aggregates resource contains 14 mills, including 8 watermills, one windmill, one tidemill, one paper mill

and one fulling mill. The mills are discussed below and shown on Fig 33:

- Watermills:
  - **Calbourne Lower Mill (395)** in Northern Lowlands (MIW5349)
  - **Calbourne Upper Mill (396)** in Northern Lowlands (MIW5348)
  - **Gatcombe mill (398)** in South Wight Sandstone (MIW5345)
  - **Godshill (397)** in South Wight Sandstone (MIW5363)
  - **Horringford water mill (393)** in Arreton Valley (MIW962)
  - **Mottistone water mill (394)** in West Wight Downland Edge (MIW5346)
  - **Newchurch, Lower Knighton Mill (398)** in Newchurch Sandown (MIW5361)
  - **Preston Mill, Ryde (320)** in Northern Lowlands (MIW6580)
- **Shalcombe mill (247)** in Thorley Wellow Plain (MIW1291) was associated with Shalcombe post-medieval manor.
- **Ford mill (402)** in South Wight Sandstone (MIW5916) was a corn mill shown on the Ordnance Survey 1st edition.
- **Afton tide mill (319)** in Thorley Wellow Plain originated in the later medieval period and was used into the post-medieval period (MIW59)
- **Clatterford paper mill (399)** in West Wight Downland Edge (MIW5365).
- **Calbourne fulling mill (400)** in Northern Lowlands was used for making cloth (MIW438)
- **Bembridge windmill (401)** in Brading Haven Bembridge Isle would have been used to grind cereals, probably for bread (MIW1220).

8.14.42 The aggregates resource contains a single building probably designed to house a steam engine. The engine house at Little East Standen Farm in South Wight Sandstone (**403**) is a listed building dating back to the mid-19th century or earlier (MIW3524). It may have been used to house a steam engine or threshing machine.

8.14.43 A pump at Horrington House in Arreton Valley (**393**) has been listed. A date plaque records it was put in 1783 and was associated with a brewhouse (MIW5785).

8.14.44 Forges for working iron would have been an essential part of any local community. These typically comprised ephemeral buildings containing the blacksmiths fire, bellows and tools. Few have survived other than successful, strongly-built forges. Two forge buildings survive within the aggregates resource. Both are listed:

- **Pagham Farm forge (404)** in South Wight Sandstone dates to at least the middle 19th-century (MIW3454).
- **Ford manor forge (402)** in South Wight Sandstone (MIW3148).

8.14.45 The aggregates resource includes a saltern (**405**) for evaporating salt from seawater at Newtown in Northern Lowlands (MIW555), a listed hop kiln (**406**) for brewing at Briddlesford in Northern Lowlands (MIW3600) and an oyster bed (**407**) at St Helens in Brading Haven Bembridge Isle (MIW4431).

#### Agriculture and subsistence

8.14.46 For much of the post-medieval period, the economy of the Island was predominantly based on agriculture. A number of agricultural assets survive, including a large number of listed farm buildings. There are 495 agriculture and subsistence assets. These include 455 agricultural buildings, 452 of which are listed (see Fig 34: numbers in **bold** are shown on this figure);

- 134 barns
- 90 stables
- 56 cart sheds

- 53 cow houses
- 48 farm buildings
- 24 granaries
- 12 pigsties
- 12 sheep dips
- 9 dairies
- 9 sheds
- 8 brewhouses.

8.14.47 The aggregates resource also contains 40 listed farmhouses (also included with the domestic assets) and four farm complexes, located at:

- **Ashey Down (226)** in East Wight Chalk Ridge (MIW1898)
- **Knowles Farm (233)** in Undercliff (MIW6283)
- **Norris Castle Farm (615)** in Northern Lowlands (MIW3739)
- **Pitlands Farm (233)**, Rocken End, in Undercliff (MIW6282)

8.14.48 Agricultural assets are primarily diffuse assets, and as such, where remains survive or are extant, archaeological mitigation in advance of future extraction is unlikely to represent a significant constraint:

- 5 milk churn stands
- 5 field boundaries, and four agricultural boundaries
- 5 field systems,
- 5 ridge and furrow indicating areas of traditional farming practice
- 4 dovecotes
- 2 artefact scatters derived from manuring fields
- 2 icehouses
- 1 pond,
- 1 enclosure,
- 1 game larder
- Cultivation marks where the movement of farming implements is visible in the subsoil.

#### Civil

8.14.49 A large number of civil assets survive from the post-medieval period, almost entirely in the form of boundary markers. Most of these would not present a significant constraint to extraction. Civil assets are shown on Fig 35 and discussed below. Numbers in **bold** refer to Fig 35

8.14.50 There are 119 civil assets within the aggregates resource. There are 95 boundary stones, 10 boundaries, one parish boundary, one milestone and one triangulation point on Tennyson Down. There are two pounds. Originally these served as a shelter for holding animals found straying on common land, but more recently have been used to refer to facilities for holding stray domestic animals (usually dogs and cats), often in urban or semi-urban environments.

- **Merstone lane (415)** – A pound was present by the end of the 19th century and probably served to contain straying farm animals in Arreton Valley (MIW6043).
- **West Court Shorwell (416)** – An early 19th-century square enclosure in South West Wight Coastal Zone was restored in 1951 and is a statutorily protected listed structure (MIW6302).

8.14.51 The aggregates resource also contains two radio transmitters and a radio station. In

the 1890s Guglielmo Marconi was engaged in creating a method of sending and receiving telegraph messages through radio waves. The Isle of Wight was chosen for his experiments because it was close to the mainland without having electrical interference from urban centres. Associated assets within the aggregates resource comprise:

- **Alum Bay (418)** – In 1897 Marconi moved his equipment to the Royal Needles Hotel in Freshwater Isle and made successful radio transmissions to a tug in Alum Bay, Totland Post Office, Bournemouth, Poole and East Cowes (MIW4869)
- **Ladywood cottage, East Cowes (417)** – Ladywood Cottage in East Cowes, Northern Lowlands received radio transmissions from Marconi's transmitter in 1898 (MIW1039).
- **Knowles Farm, Niton (233)** – experiments resulted in contact with a station at Poldu in Cornwall and the development of selectively tuned transmitting equipment (MIW4785).

- 8.14.52 A National School is located within the aggregates resource at St Helen's (**419**) in Brading Haven Bembridge Isle (MIW7182). This was founded by the National Society for Promoting Religious Education, set up in 1811, which provided the first universal system of elementary education in England. National Schools were associated with parish churches and aimed to provide a basic education to poor children in accordance with the teachings of the Church of England. The school at St Helen's is shown on the 1866 Ordnance Survey map. A building is still present on the site.
- 8.14.53 The aggregates resource has a semaphore station on Stenbury Down in South Wight Downland Edge (**420**). Such stations were created as part of an early telegraph system by the Chappe brothers in the late 18th-century. A network rapidly developed across France and was used to great effect by Napoleon. The semaphore station on Stenbury Down was used by Charles Pelham to signal his yacht 1805–1820. It is not certain if it had any alternative civil or military uses. The site contains a modern Civil Aviation Authority Station, but remains associated with 19th-century and World War II usages would require archaeological investigation (MIW7053).
- 8.14.54 A Victorian post-box was identified in the wall of a barn at West Billingham in South Wight Sandstone (**421**). Such historic structures are of interest and in some cases are considered suitable for listed status if well preserved (MIW10534).
- 8.14.55 Sandown and Shanklin Isolation Hospital (**422**) was located at Schotchells Bridge in Newchurch Sandown (MIW6082). Isolation hospitals were constructed in the Victorian period as understanding of the spread of infection increased. The site is now a depot, but below ground remains of the hospital, and potentially a burial ground, may survive and would require archaeological investigation if threatened by aggregate extraction. Burial grounds are protected.
- 8.14.56 The aggregates resource contains the site of a road block and gibbet at Downend (**423**) in East Wight Chalk Ridge. The road block was built by the Highway Commission in 1815 (MIW1257). The gibbet was used to hang Michael Morey who was convicted of the murder of his grandson about 1730. The stone socket of the gibbet was reportedly found when a nearby barrow was opened (MIW942). The site of a post-medieval gallows has been identified at Gallibury Hump in West Wight Chalk Downland (**199**).

#### Commemorative

- 8.14.57 The aggregates resource contains eight commemorative post-medieval assets. Most are listed structures. The assets are discussed below and shown on Fig 36. Numbers in **bold** refer to Fig 36:



- **Appuldurcombe Down (425)** – an obelisk in South Wight Downland. Erected by Sir Richard Worseley in 1774 to commemorate his ancestor Sir Robert Worsley (died 1747). The remaining plinth is listed (MIW4405).
- **Coombe Tower (427)** – a monument (MIW6350) erected near Brighstone in West Wight Downland Edge. Little remains above ground.
- **Freshwater cliff (426)** – a listed sandstone obelisk with Biblical texts, commemorating Edward Lewis Miller who fell from the cliff in 1846 aged 15 (MIW 2643).
- **Knowles Farm (233)** – A plaque (MIW4516) in Undercliff, commemorating the activities of Marconi on the site (see above).
- **Tennyson Down (388)** – A listed Celtic cross memorial to Lord Tennyson erected in 1897 to a design by J. L Pearson and sited on the highest point of one of Lord Tennyson's regular walks (MIW47).
- **Yarborough Monument (428)** – an obelisk erected in 1849 on Culver Down in East Wight Chalk Ridge. Dedicated to the memory of Charles Anderson Pelham who died in 1846 (MIW2650). Two spoil heaps (MIW1188 and MIW1189) are associated with its construction. The monument is listed.

### Parks and gardens

- 8.14.58 Estate parks increased as upper and middle class individuals were able to afford country houses on various scales. These varied in size and layout. During the 16th, 17th and early 18th centuries gardens were more formal, but by the 18th-century they reflected the ideals of the pastoral movement and landscape gardening. Parkland was increasingly brought into management as part of the gardens, and modified to exploit landscape of views and vistas.
- 8.14.59 Individual gardens are located across the aggregates resource. In some areas a group of assets that together comprises the remains of the landscape garden. The status of a Registered Parks and Gardens does not afford any statutory protection but development is unlikely to be permitted. Diffuse garden features and localised remains of structures may be present.
- 8.14.60 The aggregates resource contains 41 parks and gardens. These are shown on Fig 37 and discussed below. Numbers in **bold** refer to Fig 37. There are two highly significant landscaped parks which are located within the aggregates resource and contain a number of assets. Both are registered parks:
- **Appuldurcombe park (425)** – Appuldurcombe park in South Wight Downland and South Wight Downland Edge is the landscaped park associated with Appuldurcombe House (outside the aggregates resource). It contains a group of assets associated with the park, including:
    - o Gate (MIW645)
    - o Gatehouse or lodge (MIW3344) – a listed building
    - o Haha (MIW7040)
    - o Park wall (MIW7050)
    - o Mound (MIW7060)
    - o Building platform (MIW7076)
    - o Venison house (MIW7082)
    - o Wood (MIW7054)
    - o Another wall associated with the estate is located on Week Down (MIW7085).
  - **Osborne park (426)** – The Osborne Estate in Northern Lowlands is the landscape park associated with Osbourne House, the residence of Queen Victoria on the Island. The Osbourne estate includes Barton manor (MIW5120) and associated gardens (**236**) which were bought by Queen

Victoria in 1853, although only elements of Barton manor are included in the registered park. The manor house and many features of Barton manor gardens are listed, including (620) the north and south gate lodges (MIW10257 and MIW10258). A shed within Osbourne Park is also located within the aggregates resource (MIW6546).

8.14.61 The aggregates resource also contains 12 landscape parks, some of which are registered:

- **Brook House (435)** – landscape park in West Wight Downland Edge (MIW5100). Originally the home of the Bowerman family 1450–1792 and later (from 1850) the Sealy family. The house and several of the subsidiary buildings are listed but little remains of the park. It is included in the local list of Parks and Gardens of Architectural or Historic Interest.
- **Farringford Park (433)** – the park in Freshwater Isle was created around Farringford House in the early 19th-century. It was later the home of Lord Tennyson. Part of the park comprises a modern golf course and the rest forms the hotel grounds. The house is listed and elements of the grounds are included in the HER. The park is included in the local list of Parks and Gardens of Architectural or Historic Interest (MIW5103).
- **Gatcombe Park (436)** – the park in West Wight Downland Edge was probably created c 1750 when Sir Edward Worsley rebuilt the house. The house and elements of the subsidiary buildings are listed. The park and gardens are included in the local list of Parks and Gardens of Architectural or Historic Interest (MIW5104)
- **Norris Castle (427)** – a small estate in East Cowes in Northern Lowlands overlooking the Medina estuary and the Solent. The park and gardens were purchased by William Goodrich in 1794 and are included in the local list of Parks and Gardens of Architectural or Historic Interest (MIW5121).
- **Nunwell Park (431)** – a registered park in Northern Lowlands (MIW2503), formerly the home of the Oglander family.
- **Rocken End (438)** – a landscaped area with a waterfall described as ‘picturesque’ (MIW6281).
- **Strathwell (439)** - a late Victorian house and park in South Wight Downland Edge is. Some components of the buildings may be earlier and the house is listed, but the park is not designated.
- **Swainston (430)** – a registered park in Northern Lowlands associated with the manor of Swainston (MIW1037). A 1790s folly (447) in the form of a Doric temple is listed (MIW392).
- **The Priory (429)** – The Priory in Brading Haven Bembridge Isle was formerly part of the estate owned by the Priory but was not located in the original Priory buildings (MIW5109). The Grose family owned the estate from 1769–1930. The house and components of the estate are listed. Landscape features are in the style of Lutyens. The garden is included in the local list of Parks and Gardens of Architectural or Historic Interest.
- **Weston Manor (434)** – the park in Freshwater Isle (MIW5115) was constructed 1870–2 for WG Ward, a friend of Lord Tennyson. The house and other structures in the ground are listed. The park is included in the local list of Parks and Gardens of Architectural or Historic Interest.
- **Westover Park (432)** – a late 18th and early 19th-century registered park associated with Westover House in Northern Lowlands (MIW2505).
- **Woodlands Vale (428)** – a 19th and early 20th-century park in Nettlestone and Seaview, Northern Lowlands. The house is listed. The park is included in the local list of Parks and Gardens of Architectural or Historic Interest (MIW5110).

8.14.62 The aggregates resource contains six gardens, but only one is registered:

- **Barton Manor garden (236)** – Barton manor garden was originally part of the Osbourne Estate, but is not included in the registered park (MIW5120).
- **Castle Garden (440)** – the garden in St Helen's Brading Haven Bembridge Isle was constructed c 1860 and retains much original planting (MIW5108). Included in the local list of Parks and Gardens of Architectural or Historic Interest.
- **Morton Manor (441)** – Morton Manor gardens in Newchurch Sandown were laid out in the late 18th-century and retain many original features (MIW5097). The house and subsidiary structures are listed and the garden is included in the local list of Parks and Gardens of Architectural or Historic Interest.
- **Mottistone Manor (443)** – Mottistone manor in West Wight Downland Edge is associated with a garden created in 1963 by Sir John Nicholson. The 16th and early 17th-century house and subsidiary buildings are listed and the garden included in the local list of Parks and Gardens of Architectural or Historic Interest (MIW5099).
- **Northcourt (444)** – Northcourt gardens in West Wight Downland Edge developed around a house built by Sir John Leigh from 1615. Terracing may date from the 18th-century and the late 18th-century gardens have been recreated. The house is listed and the registered gardens (MIW5114).
- **Old Park (442)** – the gardens in Ventnor Undercliff were laid out in the early 19th-century by Thomas Haddon. The gardens retain many original features and the house and subsidiary buildings are listed. The garden is included in the local list of Parks and Gardens of Architectural or Historic Interest (MIW5116).

8.14.63 A further two individual walled gardens are included within the aggregates resource, although landscaped parks and gardens may include walled gardens as part of their resource:

- **Afton manor walled garden (446)** – listed late 18th-century walled garden in Thorley Wellow Plain (MIW10630).
- **Knighton Gorges walled garden (445)** – the manor house is not extant but elements of the gardens including the walled gardens (MIW5127) and listed gate piers (MIW6073) survive.

8.14.64 There are a number of park and garden features which are included in the aggregates resource. In addition to those previously described, there are five lodges:

- **Alverstone Lodge (450)** – a listed building in Northern Lowlands, built in 1858 as part of the Osbourne Estate (MIW10432).
- **Brocks Lodge (451)** – a listed building in Northern Lowlands, built in 1864 as part of the Osbourne Estate (MIW10425).
- **Mount Joy lodge (452)** – The lodge in West Wight Chalk Downland was built as a small gothic fantasy in the mid 19th-century (MIW10436).
- **Old church lodge (440)** – listed lodge in St Helen's in Brading Haven Bembridge Isle built in 1831–61, probably by the Grose family (MIW10431).
- **Wydcombe manor lodge (453)** – a listed lodge in South Wight Downland Edge constructed as part of Wydcombe manor in 1863 (MIW10239).

8.14.65 In addition to the gates at Knighton Gorge and Appuldurcombe there are two gates (454) in Undercliff on Blackgang Road (MIW4927) and St Catherine's Road (MIW4898). The gate piers on Blackgang road are not listed but those on St Catherine's are.

## Maritime

- 8.14.66 The importance of the Isle of Wight for shipping and its position close to two major seaways (the Channel and the Solent) and the post-medieval ports at Southampton gave the Island a marine significance and resulted in the creation of maritime assets on the Island. There are 16 maritime assets within the aggregates resource, mostly around the coast. These are shown on Fig 36 and discussed below. Numbers in **bold** refer to Fig 36.
- 8.14.67 There are six coastguard stations within the aggregates resource. These were built in the late 19th-century and many no longer appear extant. Archaeological remains of demolished coastguard stations and associated buildings (coastguard cottages) may be present and would require archaeological mitigation in advance of extraction, but this is not likely to pose a significant constraint. At least one coastguard station has been destroyed by coastal erosion:
- **Atherfield (465)** in Atherfield Coastal Plain, which has probably been eroded away (MIW4340).
  - **Brook (463)** in South West Wight Coastal Zone, which was destroyed by coastal erosion (MIW5843)
  - **Culver Down (428)** in East Wight Chalk Ridge, which is occupied by an Inn (MIW2704)
  - **Grange Chine (464)** in South West Wight Coastal Zone (MIW2696).
  - **Headon Warren1 (461)** in Freshwater Isle (MIW4358)
  - **Headon Warren2 (462)** in Freshwater Isle (MIW2735)
- 8.14.68 Two of the coastguard stations in South West Wight Coastal Zone were also associated with lifeboat stations. At **Brook (463)** the lifeboat house is still present (MIW2679), but at **Grange Chine (464)** the lifeboat house has either been eroded away or covered by modern caravans (MIW2723). Both lifeboat stations were inaugurated in 1860.
- 8.14.69 The aggregates resource also contains 4 lighthouses:
- **Bembridge harbour lighthouse (469)** – harbour lighthouse or ‘harbour lights’ in Brading Haven Bembridge Isle are shown on 19th-century Ordnance survey maps, but there is no evidence of these features on the ground (MIW4856)
  - **St Catherine’s Hill (308)** – a lighthouse in South Wight Downland had first been built in the later medieval period following a tragic shipwreck (see above 8.13.21 and 8.13.33). In 1785 a new lighthouse was constructed 100 yards south-east, but was never completed (MIW195). The unfinished structure is listed.
  - **St Catherine’s lighthouse (468)** – A new lighthouse was constructed in Undercliff in 1836 following the wreck of the *Clarendon*. It was reduced in height in 1875 and a subsidiary tower built in 1932. The lighthouse and adjacent lighthouse keeper’s cottage are listed (MIW2662).
  - **West High Down lighthouse (467)** – the Old Needles Lighthouse in West Wight Chalk Downland was built in 1785 and demolished in 1859 after the New Needles Lighthouse began operating (MIW1490).
- 8.14.70 The aggregates resource contains a seamark (a navigational aid indicating hazards and safe channels) on Ashy Down in East Wight Chalk Ridge (**470**). It comprises an obelisk inscribed with the date 1735, located within a Scheduled Monument (MIW1118).
- 8.14.71 There are two quays within the aggregates resource:
- **Brading Quay (317)** – There had been a quay in Brading Haven Bembridge Isle since the later medieval period. As late as the 18th century a ship of 20 tonnes could come up to Brading through the haven. Larger ships had to

moor at St Helen's. An earthwork and some stone blocks may indicate the location of the quay (MIW1919).

- **Shalfleet Quay (471)** – A Bembridge limestone quay survives and is shown on maps of the 18th and 19th centuries. The quay may originally have served a small salt works (MIW4371).

### Recreation

- 8.14.72 During the 18th and 19th centuries the Isle of Wight became an increasingly important tourist destination, culminating in the purchase of land at East Cowes by the royal family in the mid-19th century and the construction of Osborne House as a palace for Queen Victoria and her family. The royal visitors were followed by those of lesser rank, and towns at Ventnor, Shanklin, Sandown and Ryde became popular tourist destinations, with large villas for the well to do and more humble accommodation for other classes. The popularity resulted in additional recreational facilities to entertain the lucrative visitors and those who made the Isle of Wight a regular destination and owned property on it.
- 8.14.73 There are 79 recreation assets within the aggregates resource. These are discussed below and shown on Fig 38. Numbers in **bold** refer to Fig 38. The majority (60) of the assets are earthworks, many of which are associated with golf courses. Such assets are not typically statutorily protected, are likely to be diffuse in nature and would not therefore pose a significant archaeological constraint to extraction. The significance of other assets is variable, but a number are listed, including **Heasley manor (482)** 18th-century mounting block in Arreton Valley (MIW5784).
- 8.14.74 Graffiti carved into rock at Sainham Copse (**593**) shows two ships and the initials VM 1792 (MIW10548). It is possible that that the authorities would request that it be protected from adverse impact from extraction.
- 8.14.75 There are two post-medieval hotels within the aggregates resource. Both are listed:
- **Farringford House (433)** in Freshwater Isle was originally the home of Lord Tennyson and later became a hotel (MIW8756). A summer house associated with Lord Tennyson and now in ruins is located in the grounds (MIW6556).
  - **Priory hotel (429)** in Brading Haven Bembridge Isle has post-medieval components (MIW9864).
- 8.14.76 There are also two public houses within the aggregates resource:
- **Chequers Inn (475)** in South Wight Sandstone is a listed building of post-medieval origin and probably dates to the 18th century (MIW3422).
  - **The Fighting Cocks (476)** in Arreton Valley is not a listed building, but is potentially of 18th-century date (MIW3480).
- 8.14.77 There are three post-medieval recreational assets associated with the Osborne estate (**426**). All are listed buildings and statutorily protected:
- **Archaeological museum** (MIW10256) built to house the Royal children's collections.
  - **A miniature fort and barracks** built in 1856 for the Royal children (MIW6545).
  - **A Swiss Chalet** (MIW10255) imported from Switzerland as a playhouse for the Royal Children.
- 8.14.78 The post-medieval assets also include a boat house (**486**) at King's Manor Farm in Freshwater Isle (MIW3257) and a bath house for secluded sea bathing in Binnel Bay (MIW2673) in Undercliff (**442**). The bath house was associated with the gardens of Old Park (8.14.62). Neither of these assets are listed.
- 8.14.79 The following assets comprise diffuse features of 19th century date. They are unlikely to pose a significant archaeological constraint for future extraction.

- Three post-medieval golf courses:
  - o **Brading Harbour (479)** in Brading Haven Bembridge Isle was created to provide a golf course of nine holes for ladies who were not permitted to use the Royal Isle of Wight Golf Club at Duver (MIW2739)
  - o **Duver, St Helens (478)** in Brading Haven Bembridge Isle (MIW2738). A golf bunker associated with the links is recorded on the HER (MIW7441).
  - o **West High Down (477)** in West Wight Chalk Downland is associated with a large number of earthwork features which are probably components of the golf course (MIW 2722).
- **Bowcombe Down racecourse (480)** was created in the mid-19th century for foot racing and is shown on Ordnance Survey maps (MIW6046).
- **St George's Down bowling green (481)** was used during the 16th and 17th centuries by local gentry (MIW7208). It is now located within a modern golf course in an area of gravel extraction.
- **Wackland cock fighting pit (484)** in Arreton Valley (MIW7190)
- **Landslip steps (485)** in Undercliff were created to allow access to the vertical sides of the landslip and a small viewing platform (MIW4970).

### Transport

- 8.14.80 The post-medieval period is characterised by increasing mobility and improving transport links. As an island, the Isle of Wight had always had good transport links with the mainland and Europe but by the end of the post-medieval period it was possible to travel across the world from nearby Southampton, thanks to the improvement in the design and construction of ships (initially sailing and later steam powered), the ability to accurately calculate longitude, effective mapping and the political stability provided by the British Empire. Assets associated with maritime travel are discussed in 8.14.66. The aggregates resource contains a further 88 assets associated with transport. These are shown on Fig 39 and discussed below. Numbers in **bold** refer to Fig 39.
- 8.14.81 On land transport and communications improved with the creation of turnpike roads in the mid-18th century, the development of road construction methods, drainage and surfaces by Pierre-Marie-Jérôme Trésaguet in France in the mid-18th century. and refinements by Thomas Telford and John Loudon MacAdam in the early 19th-century. By the end of the 19th-century many roads had been provided with effective metalling (Lay 1992).
- 8.14.82 The route of the Bronze Age trackway, which had provided the main east-west route across the Island since the prehistoric period, continued in use for much of the post-medieval period. In the 1860s a military road was constructed along the south-west coast of the Island from Freshwater to Chale (8.14.30). This road subsequently provided a useful line of communication along the south-western part of the Island and remains in use today. At Chilton (**502**) a viaduct carried the road over an unstable area (MIW4347).
- 8.14.83 The aggregates resource contains a further two post-medieval roads, 20 trackways and one hollow way. There are also four earthwork features which are associated with transport and three of these are most likely to represent the remains of other trackways or roads. The fourth (**492**) is believed to be associated with a miniature railway (MIW7478).
- 8.14.84 The aggregates resource also contains nine milestones and two toll houses dating from the mid-19th century, which would have been used to collect tolls from travellers for the maintenance of the roads:
- **Afton toll house (491)** in Thorley Wellow Plain (MIW6153)

- **Rew toll house (490)** in South Wight Downland (MIW6154)
- 8.14.85 The aggregates resource includes a historic ford at Carisbrooke (**501**) which was later replaced by a footbridge (MIW6927). There are a further 17 bridges within the aggregates resource. Some of these bridges are associated with roads and others with the railways. None of these assets are listed:
- **Apse Reach Bridge (515)** in South Wight Downland Edge (MIW6922)
  - **Bathingbourne (509)** in Arreton Valley (MIW6901)
  - **Beacon Alley (512)** in South Wight Sandstone (MIW5841 and MIW6889)
  - **Bow Bridge (511)** in South Wight Sandstone (MIW5483)
  - **Brocks Copse Road (507)** in Northern Lowlands (MIW2784)
  - **Freshwater causeway (505)** in Freshwater Isle (MIW4355)
  - **Horringford Bridge (495)** in Arreton Valley (MIW6894)
  - **Island View Bridge (514)** in South Wight Downland Edge (MIW6923)
  - **Kennerley Bridge (510)** in South Wight Sandstone (MIW6932)
  - **Little Budbridge Farm (494)** in Arreton Valley (MIW6886)
  - **Lower Calbourne mill (506)** in Northern Lowlands (MIW6834)
  - **Roud bridge (513)** in South Wight Sandstone (MIW6887)
  - **Roud railway bridge (513)** in South Wight Sandstone (MIW6888)
  - **Smallbrook Lane (508)** in Northern Lowlands (MIW6879 and MIW6880)
  - **Winstone Bridge (514)** in South Wight Downland Edge (MIW6924)
- 8.14.86 Railways first appear in the mid 19th century and by 1900 much of Britain was crossed with railway lines providing regular, relatively cheap travel at a much greater speed than was possible on the roads. There were seven railway lines on the Isle of Wight, built between 1850 and 1900 to link the major towns and ports. These were important in the development of the Island as a tourist destination as they provided cheap and efficient travel from the ports to the resort towns. Only the section of railway from Ryde to Shanklin remains in use, but the other routes survive as earthworks and many have been converted to cycle tracks.
- 8.14.87 The aggregates resource contains four former railway stations. None are listed:
- **Cement Mills Halt (493)** – Cement Mills Halt on the Cowes to Newport line was built to serve the workers at the Cement mill (MIW6774).
  - **Horringford Railway Station (495)** in Arreton Valley (MIW6785)
  - **Merstone Railway Station (494)** in Arreton Valley (MIW6784).
  - **St Helen's Railway Station (590)** in Brading Haven Bembridge Isle (MIW6795)
- 8.14.88 There are also two railway tunnels within the aggregates resource:
- **St Lawrence tunnel (496)** in South Wight Downland (MIW7135)
  - **Ventnor railway tunnel (497)** in South Wight Downland (MIW7136).
- 8.14.89 A single tramway (**500**), associated with gravel extraction on St George's Down is also located within the aggregates resource (MIW5940).
- 8.14.90 There are 15 railway carriages in two groups at St Helen's Duver (**498**) and Gurnard (**499**) where they are used as beach huts and residential accommodation respectively.

#### Water and drainage

- 8.14.91 During the post-medieval period the increasing amount of land brought into agricultural usage, changing patterns of agricultural use and changes in industry and technology resulted in increasing numbers of water or drainage related assets. In particular the reclamation of Brading Haven resulted in the creation of earthwork

banks. There are 33 water and drainage assets within the aggregates resource. These are shown on Fig 40. All of the water and drainage assets are associated with diffuse archaeological remains and would not represent a significant constraint to extraction.

### Object

8.14.92 There are only 86 objects within the aggregates resource, comprising 62 findspots and 24 artefact scatters. These are shown on Fig 40. The distribution of post-medieval activity is well understood due to map, documentary and physical evidence. Consequently the distribution of objects does not reveal much additional information, although it does provide an indication of where archaeological survey (i.e. fieldwalking) has been undertaken previously.

### Unassigned

8.14.93 There are nine unassigned assets of post-medieval date. These assets are shown on Fig 31 and described below, numbers in **bold** refer to Fig 31. Four of these assets are either of significance in themselves or may indicate areas of intense, rather than diffuse, post-medieval activity:

- **Prospect Tower, Dunnose (379)** – A small square crenulated tower was identified at Dunnose in Undercliff, built of greensand with a cobbled floor (MIW4968). The purpose of the tower is uncertain, it may be a folly and viewing tower or of military origin.
- **Ventilation shaft, Wroxall (376)** – A red brick ventilation shaft at Wroxall in South Wight Downland (MIW6381).
- **Building platform, Brook Chine (377)** – An early post-medieval building platform was recorded at Brook Chine in South West Wight Coastal Zone (MIW11385)
- **St Helen's Common Structure (378)** – A rectangular structure was shown on the 1st edition Ordnance Survey map in Brading Haven Bembridge Isle (MIW7452).

### *Conclusions*

8.14.94 The post-medieval period is a well understood period due to the large amount of evidence that survives from it (i.e. map, documentary and physical remains). This makes it possible to determine the risk of post-medieval remains being present within a given area with a high degree of confidence.

8.14.95 Post-medieval occupation patterns reflect the influence of later medieval activity and the effect of the great changes in society which occurred in the 18th and 19th centuries. Although the Island continued to be a primarily rural society with much of its income coming from agriculture, its favourable location and changing fashions ensured that by the end of the 19th-century it had become a popular tourist destination. This stimulated the rise of several urban areas and was fostered by the development of the Isle of Wight railway in the second half of the 19th-century. As the urban centres are excluded, the settlement pattern within the aggregate resource maintains the rural pattern of nucleated and diffuse settlement exhibited in the later medieval period, although post-medieval development resulted in a greater concentration of settlement than in earlier periods. Typically a pattern of villages and small country houses occupies most of the study areas, although settlement is more limited within the downland study areas East Wight Chalk Ridge, West Wight Chalk Downland and South Wight Downland.

8.14.96 The military and maritime significance of the Island also remained high during the post-medieval period, due to the frequent foreign wars, importance of the British navy and close proximity to the Solent ports and the Channel shipping lanes. Consequently a number of post-medieval military and maritime assets are present



on the Island and these are typically located within the coastal study areas.

- 8.14.97 The large number of other asset types within the aggregates resource (as compared to earlier periods) reflects the close proximity of this period to the present day and consequently the increased survival of such remains.

## 8.15 Modern (1901–2010AD)

### *Introduction*

- 8.15.1 The modern period covers the span of time from 1901 until the present day. This period encompassed enormous social, political and industrial change including universal suffrage, the Welfare State and two World Wars which had a significant effect upon the nation.
- 8.15.2 On the Isle of Wight tourism continued to expand during the early part of the modern period, but began to decline towards the end of the century with the increasing popularity of cheap package holidays abroad.

### *Asset densities*

- 8.15.3 There are 420 modern assets within the aggregates resource with a density of 2.32 assets per km<sup>2</sup>. There are a further 94 possible modern assets, a total of 514 with an asset density of 514 assets per km<sup>2</sup>.
- 8.15.4 The modern assets comprise the following asset types, which are shown on Chart 17 and Chart 18:
- 232 defence assets – 53 aircraft crash sites, 29 earthworks, 27 anti-landing defences, 21 PLUTO pipeline markers, 18 anti-aircraft positions, 14 pill boxes, 4 structures, 9 observation posts, 9 searchlight emplacements, 8 batteries, 8 radar stations, 5 gun emplacements, 4 signal stations, 3 bunkers, 3 anti-tank defences, 2 military roads, 2 military camps, 2 guard houses, 2 home guard headquarters, 2 bomb craters, 1 PLUTO pipeline, 1 seaplane base, 1 rocket test facility, 1 POW camp, 1 firing range, 1 ammunition dump, 1 road block, and 1 airfield.
  - 67 recreation assets – 62 golf course features, 2 sites of the Isle of Wight pop festival, 1 holiday centre, 1 club house and 1 graffiti.
  - 33 transport assets – 15 railway carriages, 7 railways, 3 railway stations, 3 bridges, 2 earthworks, 1 tunnel, 1 path and 1 airport.
  - 20 industrial assets – 12 extraction sites, 3 mounds, 2 brickworks, 1 wind pump, 1 power station and 1 lime kiln.
  - 16 civil assets – 6 boundary stones, 2 boundaries, 2 prisons, 1 radio station, 1 school, 1 radio transmitter, 1 pit, 1 conservatory and 1 triangulation point.
  - 12 maritime assets – 6 coastguard towers, 2 coastguard stations, 2 coastwatcher poles, one lifeboat station and one beacon
  - 10 agricultural assets – 5 sheep dip, 3 churn stand, 1 trough and 1 dovecote
  - 10 domestic assets – 4 houses, 2 manor houses, 1 platform, 1 church, 1 houseboat and 1 farmstead
  - 7 commemorative assets – 3 war memorials, 3 commemorative monuments and one triangulation pillar
  - 7 water and drainage assets – 1 drainage ditch, 1 drainage system, 1 sluice, 1 pipeline, 1 pump, 1 reservoir and 1 dewpond.
  - 4 religious, ritual or funerary assets – one monastery, one priory, one non-conformist chapel and a lych gate
  - 4 objects, all findspots
  - 2 palaeoenvironmental natural features

- 2 unassigned asset – 1 non antiquity and one cropmark

Chart 17 Number of modern defence assets

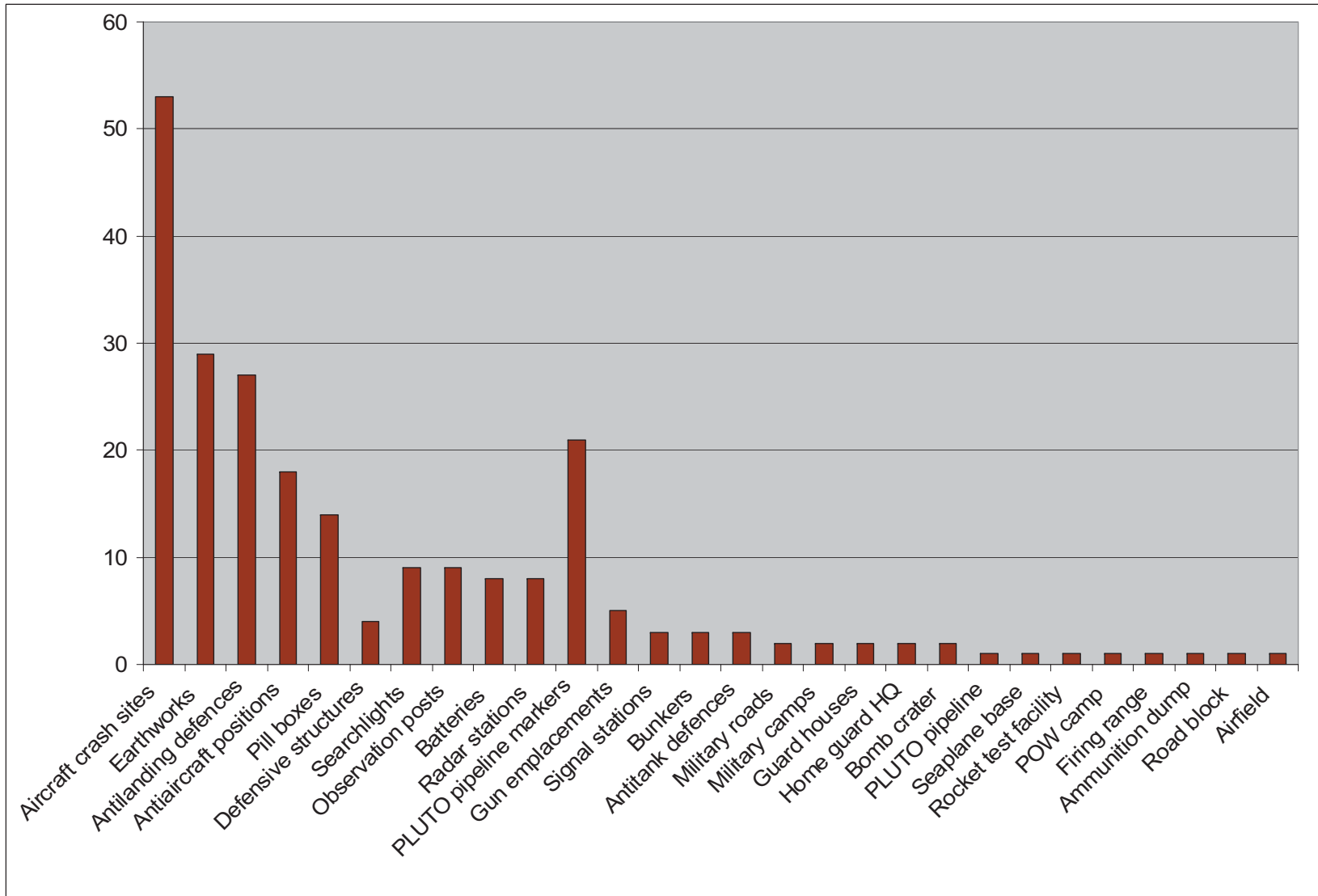
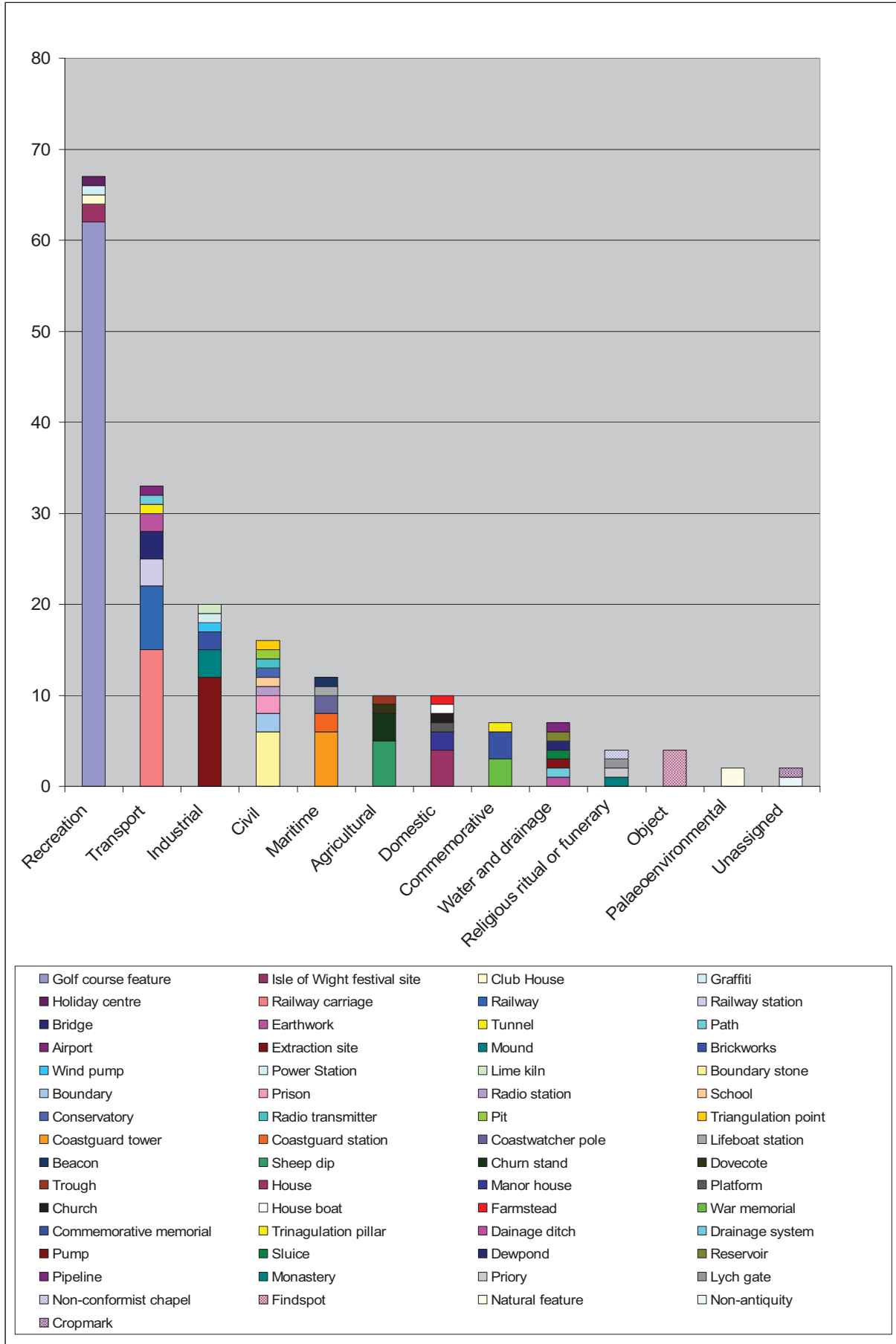


Chart 18 Number of modern assets by asset type



### Domestic

- 8.15.5 The 20th-century saw the continuation of the shift from predominantly rural to urban life. On the Isle of Wight, the 19th-century towns continued to grow and develop, particularly during the early 20th-century when the Island remained a popular tourist destination. More recently, the inland parts have developed as tourist destinations in themselves, attracting walkers and cyclists and visitors to craft shops and picturesque villages. The modern settlement pattern reflects this with some large towns and a continuation of the nucleated villages and dispersed settlement of the later medieval and post-medieval periods.
- 8.15.6 Most modern buildings are not of sufficient age or interest to be considered heritage assets, although listed structures discussed in earlier periods continue to be used. Such buildings often provide settlements with much of their historic character.
- 8.15.7 There are 10 domestic assets within the aggregates resource. Some of these assets are listed buildings and are statutorily protected. One of the houses is locally listed. The remaining modern assets are unlikely to constitute a significant constraint to extraction. The assets are discussed below and shown on Fig 41. Numbers in **bold** refer to Fig 41:
- **Afton Down platform (556)** in West Wight Chalk Downland housed a 20th century building, which is no longer extant but shown in photographs (MIW11483).
  - **Barton manor house (236)** in Northern Lowlands is a listed building (MIW7554).
  - **Beach Cottage (554)** in Undercliff is a locally listed building (MIW10519)
  - **Brook Hill House (552)** in West Wight Downland Edge is a listed building (MIW10225)
  - **Harmony houseboat (555)** in Brading Haven Bembridge Isle (MIW5056)
  - **Kern manor house (558)** in Newchurch Sandown is a listed building (MIW7555)
  - **Kingston church (231)** in South Wight Sandstone was converted into a dwelling in 1986. It is a listed building (MIW386).
  - **Knowles farmstead (233)** in Undercliff, which has possible later medieval antecedents (MIW6283).
  - **Strathwell house (551)** in South Wight Downland Edge is a listed building (MIW10608).
  - **Tideways cottage (553)** in Freshwater Isle (MIW8751)

### Religious, ritual or funerary

- 8.15.8 The modern period saw great change in religion in the UK. At the beginning of the 20th century the country was almost universally Christian and most were Church of England with some Catholic and non-conformist. Over the course of the last 100 years Church of England attendance has declined, although other denominations can still be well attended. In addition immigration has resulted in number of other faiths occurring within the country. These include the major world religions (Judaism, Islam, Hinduism, Buddhism and Sikhism) as well as smaller sects, pagans and witches.
- 8.15.9 On the Isle of Wight many of the later medieval and post-medieval churches and chapels remain in use, but some additional religious assets have been created during the modern period. Two monastic institutions reflect modern tolerance of the Catholic faith and a renewed interest in monasticism.
- 8.15.10 There are four religious assets within the aggregates resource, and all are associated with Christian religion. These are discussed below and shown on Fig 41.

Numbers in **bold** refer to Fig 41:

- **Hale Common (559)** Methodist chapel in Arreton Valley, first shown on the 1908 Ordnance Survey map (MIW6044).
- **Newport priory (560)** in West Wight Downland Edge was originally designed for Dominican Nuns but closed in 1989 and currently used as a Christian healing centre. The building and gateway are listed (MIW6317).
- **Quarr Abbey monastery (561)** in Northern Lowlands was founded by Benedictine monks who migrated as a result of anti-clerical legislation in France. The monastery includes Victorian Quarr House and early 20th century buildings. The expressionistic buildings are listed (MIW1150).
- **St Helen's lych gate (370)** in Brading Haven Bembridge Isle was designed as a war memorial to those who died in the two World Wars (MIW7279).

### Defence

- 8.15.11 World War One, with its modern weaponry and industrial killing had as great an effect on the communities of the Island as on any other part of the United Kingdom and a number of 19th-century batteries and forts were re-occupied to provide protection from enemy shipping. In World War Two the Island acquired a far greater importance as a base for anti-aircraft guns to intercept enemy planes before they reached the important docks and large cities of the mainland. Parts of the Island were also refortified against a possible invasion. The most significant role for the Island came during the Normandy landings in 1944, when the PLUTO pipeline left the UK from Shanklin Chine. This pipeline was laid across the floor of the Channel as the invasion fleet advanced and provided all the petrol required by the invasion until a second pipeline could be laid from Kent. There are 21 pipeline markers within the aggregates resource.
- 8.15.12 The aggregates resource contains 232 defence assets, which are shown on Fig 42 and discussed below. The assets are concentrated around the coast and at certain locations within the interior of the Island. Coastal assets included batteries to protect from seaborne invasion and anti-landing defences to prevent invasion from the air. Coastal assets include searchlights, observation posts and radar stations for recording the approach of enemy aircraft and anti-aircraft batteries to attack them. Interior assets include support infrastructure such as military and POW camps, homeguard headquarters and ammunition dumps. Observation posts (often sited on higher ground), searchlights and anti-aircraft emplacements were also located in the interior. Military earthworks, often created for practise, and aircraft crash sites are located all across the aggregates resource.
- 8.15.13 The defence assets frequently form clusters of one or more primary defensive assets (e.g. an anti-aircraft emplacement and a coastal battery) with subsidiary assets to assist (e.g. a searchlight battery or observation post) or protect (e.g. gun emplacements, bunkers, guard houses and trenching) the primary asset. Areas in close proximity to defence assets therefore have a high potential for containing currently unknown assets.
- 8.15.14 Most defence assets are not statutorily protected, but are of increasing historical and archaeological interest. Should extraction be permitted, it is likely that archaeological investigation would be required.

### Maritime

- 8.15.15 The role of the Island in maritime affairs continued in the modern period, but most structures associated with modern maritime activity (e.g. lighthouses, modern coastguard stations, seamarks etc) are not included in the HER because they are not considered to be assets of particular historic interest. There are 12 modern maritime assets within the aggregates resource and these are shown on Fig 43.
- 8.15.16 The maritime assets are primarily associated with former coastguard premises,

including 6 coastguard towers and 2 coastguard stations. Other assets include two coastwatcher's poles, a lifeboat station and Tennyson's monument (see above 8.14.57), which was partly intended to function as a daymark (to aid navigation during the day). Only Tennyson's monument is statutorily protected through listing. The other assets are not likely to prove a significant constraint to extraction.

### Commemorative

- 8.15.17 The most common form of modern commemorative assets are war memorials. As they are typically in urban areas there are only three within the aggregates resource. War memorials take various forms, but almost all include a dedicatory inscription and the names of the deceased. Where possible the names of the fallen from World War Two were often added to an earlier war memorial. If this was not possible another memorial was typically erected, often of a similar form to the first. Other commemorative assets are memorials to private grief, public tragedy or significant historic events.
- 8.15.18 There are six commemorative assets within the aggregates resource, these are discussed below and shown on Fig 43. Numbers in **bold** refer to Fig 43.
- 8.15.19 Two of the commemorative assets are war memorials, associated with church buildings at Brook, where the church building is listed. There are two war memorials at Brook (**301**) in the form of stained glass windows. One relates to World War One (MIW6561) and one to World War Two (MIW6562). The memorials at Brook are within the fabric of the church and so included in the statutory protection.
- 8.15.20 The lych gate (**370**) at St Helen's in Brading Haven Bembridge Isle was built as a war memorial and is discussed above (8.15.9).
- 8.15.21 The other commemorative monuments are more varied. Although none are listed, in view of their emotive purpose and historical significance at the very least these assets would need to be relocated and it is possible that extraction may not be permitted:
- **Triangulation pillar on Brook Down (570)** – This pillar in West Wight Chalk Downland is used for triangulation by the Ordnance Survey but also hosts a memorial plaque dedicated by a mother to her two sons (MIW11480).
  - **Alum Bay monument (571)** in Freshwater Isle commemorates Marconi's achievements at the nearby Needles wireless telegraph station. It was moved due to coastal erosion (MIW57).
  - **Salter monument (572)** in West Wight Downland Edge commemorates a gift of land to the National Trust in memory of Cpl Edward Talfourd Salter who was killed in action in Italy in 1943 (MIW2666).
  - **St Boniface Down monument (573)** in South Wight Downland commemorates a plane which crashed into the Down in 1962, killing nine of the fourteen passengers (MIW6464).

### Civil

- 8.15.22 There are 16 civil assets within the aggregates resource. These are shown on Fig 43 and discussed below. Numbers in **bold** refer to Fig 43.
- 8.15.23 The largest are boundaries, either boundary stones or other boundary features. None are listed, although Old Park boundary in Undercliff (**442**) is associated with a locally listed garden. Other assets include:
- **Albany Prison (575)** in Northern Lowlands was built in 1967 and forms another component of the three HMP Isle of Wight prisons together with Camp Hill and Parkhurst (MIW11510). The administrative offices and cell hall of Parkhurst Prison outside the aggregates resource to the north of Albany and Camp Hill Prisons are listed buildings.

- **Bouldnor cliff triangulation point (579)** in Northern Lowlands is a low pillar used for Ordnance Survey mapping (MIW2721).
- **Camp Hill Prison (575)** in Northern Lowlands was built in 1912 and forms one of three facilities within HMP Isle of Wight (MIW11509).
- **Cowes Primary School (577)** in Thorley Wellow Plain is a statutorily listed building (MIW10125). A conservatory separate from the main building is also included in the HER (MIW10122).
- **Civil aviation authority station (420)** in South Wight Downland Edge is located on a former semaphore station (MIW7051)
- **Gallows hill pits (578)** in East Wight Chalk Ridge are probably associated with a nearby road block (MIW11656).
- **Knowles Farm transmitter (233)** is the site of the radio mast used by Marconi when he transferred from the Needles to Niton in Undercliff. The site is not statutorily protected but preservation of the concrete base of the transmitter and further development of the historic associations of the site have been recommended (MIW6280).

### Transport

- 8.15.24 There are 33 transport assets within the aggregates resource and many relate directly to changes in transport during the 20th century. These assets are discussed below and shown on Fig 43. Numbers in **bold** refer to Fig 43:
- 8.15.25 The development of civil air transport meant long distance travel could now be accomplished efficiently without sailing across the sea although travel across the Solent remains the most practical method of getting to the Island. A small civil airport (**580**) is present within the aggregates resource at Sandown (MIW11661).
- 8.15.26 The refinement of the internal combustion engine and development of road transport had a far greater effect on the Island's transport infrastructure. New wider, flatter roads were built to facilitate travel and parts of the Bronze Age route across the central ridge of the Island were abandoned, surviving only as footpaths. The 19th-century military road from Chale to Freshwater remained a major route across the western side of the Island, but required repair and re-routing due to advancing coastal erosion. Earthworks (**581**) associated with the original, now eroded, route of the road are present at Shippards Chine in South West Wight Coastal Zone (MIW11417 and MIW11418).
- 8.15.27 The growth of motoring also had an impact upon the railways as people increasingly drove direct to their destinations. As a result by the mid-20th century many railways had become uneconomic and a number of lines ceased to operate. On the Island all but the line between Ryde and Shanklin ceased to operate between 1952 and 1966. Many of the former railway lines are now cycle paths.
- 8.15.28 With the end of an integrated Isle of Wight railway, many of the railway carriages were sold off to become residential accommodation or beach huts. Two clusters of former railway carriages are located within the aggregates resource at Gurnard (**499**) and St Helen's (**498**). These are unlikely to cause a significant constraint to extraction, although recording and possible moving of the carriages may be required (8.14.89).
- 8.15.29 There are three former railway stations, at Herringford (**495**; MIW6785) and Merstone (**494**; MIW6784) in Arreton Valley, and at St Helen's (**590**) in Brading Haven Bembridge Isle (MIW6795). These have previously been discussed (8.14.87). The aggregates resource also contains a path, a tunnel and three bridges recorded on the HER. The three bridges have been discussed above (8.14.85). These structures are not listed and are unlikely to cause a significant constraint to extraction.



### Industrial

- 8.15.30 During the 20th century the distribution and size of industrial sites changed. Instead of earlier post-medieval patterns of large numbers of relatively small manufacturers and producers, the modern pattern has encompassed a great reduction in the number but an increase in the size of the producers.
- 8.15.31 There are 19 industrial assets within the aggregates resource. These are discussed below and shown on Fig 44. Numbers in **bold** refer to Fig 44. The majority (12) comprise extraction sites. The extraction of minerals and other raw materials from the Isle of Wight changed from a large number of small extraction sites in the first half of the 20th century to a small number of much larger extraction sites in the second half of the century. The extraction sites include:
- 5 chalk pits
  - 3 extractive pits
  - 2 gravel pits
  - 2 quarries
- 8.15.32 At Compton Down (**582**) in West Wight Chalk Downland there are three mounds which have been identified as probable spoil heaps associated with the quarries (MIW11369, MIW11489 and MIW11497).
- 8.15.33 As in earlier periods, extraction sites are concentrated along the central east-west ridge (West Wight Chalk Downland and East Wight Chalk Ridge and areas close to these study areas). The mineral resources of the South Wight Downland can also be exploited, but there are no assets in this area.
- 8.15.34 There are two modern brickworks within the aggregates resource. Neither are likely to be a significance constraint to extraction. They comprise:
- **Elmsworth brickworks, Newtown (585)** in Northern Lowlands operated until 1939. The brickworks house remains standing but is derelict (MIW1630).
  - **Apse heath brickworks (586)** in Newchurch Sandown (MIW5744).
- 8.15.35 Other industrial assets include:
- **Needles power station (583)** in West Wight Chalk Downland provided power for defensive batteries at the Needles. The power station is not of very high significance in itself, but it is likely that extraction would not be permitted in this area because of the high density of other significant assets and designated assets, including the batteries (MIW6305).
  - **Rock wind pump (587)** in West Wight Downland Edge was used for pumping water from the stream from 1925. It was damaged in a storm in 1987. It is not designated but it is likely that investigation and recording of any remains would be necessary prior to any disturbance (MIW10549).
  - **West Ashey lime kiln (584)** in Northern Lowlands is shown on a historic map. It is not nationally designated but is likely to require investigation and recording (MIW4956).

### Recreation

- 8.15.36 The aggregates resource contains 67 recreation assets and these are shown on Fig 44 and discussed below. Numbers in **bold** refer to Fig 44. Most (62) are associated with Freshwater Bay golf course (**588**) on East Afton Down in West Wight Chalk Downland. The golf course was established by 1900 and had many modifications during the 20th century, notably in 1927, 1969 and 1982 (MIW11470).
- 8.15.37 One asset is the club house of the St Helen's golf club in Brading Haven Bembridge Isle (**478**). The club was set up in the late 19th-century (see 8.14.79), but the club house was not built until the early 20th century (MIW5088). It is now a National Trust holiday cottage.

- 8.15.38 The aggregates resource contains the first purpose built holiday camp at Brighstone (**589**) in South West Wight Coastal Zone. It was built in 1930 and remains are still present, and although suffering from erosion are locally listed.
- 8.15.39 The aggregates resource contains two sites of the Isle of Wight Music Festival held from 1968 to 1970 and famous in 1969 as the venue for Bob Dylan's comeback after his motorcycle accident. The largest festival in 1970 prompted a special Act of Parliament 'The Isle of Wight Act 1971' which prohibited large gatherings of more than 5000 people on the Island without a special licence. Since 2002 the festival has been revived and occurs every year in June. The sites of the 1968–70 festival are not designated but are of historic/social interest:
- **East Afton (591)** in Thorley Wellow Plain was the site of the music festival 23–30 August 1970 (MIW6386).
  - **Ford Farm, Godshill (592)** in South Wight Sandstone was the site of a festival on 31st August 1968 (MIW6384).

#### Agricultural

- 8.15.40 There are 10 agricultural assets comprising structures associated with the practice of modern agriculture. These assets are shown on Fig 45 and numbers in **bold** refer to the figure. The dovecote at Billingham manor (**550**) is listed. The other assets would not prove a significant constraint to extraction.

#### Parks and gardens

- 8.15.41 The early 20th century saw the continuation of the great houses and large landscaped parks and gardens of the preceding age, but by the middle of the century social and political change meant many families sold such properties. Only one park and garden is located within the aggregates resource and is shown on Fig 41. The Hermitage (**562**) in South Wight Downland Edge was rebuilt at the beginning of the 20th century and the house and gardens are locally listed (MIW5105).

#### Water and drainage

- 8.15.42 Modern water and drainage assets encompass those to control water reserves (e.g. reservoirs), those to control agricultural water systems (e.g. drainage systems) and those to control reclaimed land (e.g. sluices). There are 7 modern water and drainage assets within the aggregates resource and these are shown on Fig 45.

#### Object

- 8.15.43 The aggregates resource contains only 4 modern objects which are shown on Fig 45. The distribution of activity and settlement for the modern period is known very well and so these assets provide little additional information.

#### Unassigned

- 8.15.44 Due to the large amount of evidence available for this period only one unassigned asset has been identified. It is shown on Fig 45 and comprises a cropmark of uncertain nature.

#### Palaeoenvironmental assets

- 8.15.45 Two natural features have been identified within the aggregates resource and are shown on Fig 45. Both were features identified during the NMP survey, which have been identified as natural (rather than archaeological or historical) by the HER.

#### *Conclusions*

- 8.15.46 Modern occupation patterns are largely visible in current and recent maps and a

large amount of material is available on changing patterns of land use and activity. Consequently this period is very well understood. Instead of a record of known occupation, the HER provides a record of those modern assets considered to be of particular historic interest (e.g. wartime batteries and important buildings) and those which might otherwise be mistaken for earlier and more significant remains (e.g. earthworks associated with golf courses).

- 8.15.47 The HER includes a large number of modern defence assets associated with World War One or World War Two. These are significant for our understanding of the physical aspects of these wars and complement the large number of primary documentary sources and synthetic secondary histories regarding these events. These assets have variable historic significance, but would probably require archaeological investigation and recording prior to removal and some (particularly where groups of associated defence assets are present) are likely to be of national importance. Permission is unlikely to be given for assets of national importance to be removed and in many cases they are statutorily protected.

## 9 Archaeological Resource Assessment: Spatial Trends

### 9.1 Introduction

9.1.1 The distribution of assets across the study areas varies considerably (Table 5). Ancient anthropogenic distribution patterns have been distorted by antiquarian interest and modern development, but this distortion is not consistent across all study areas and will be greater where asset densities are lower. To reduce the impact of this variability and provide a more consistent basis for comparing the asset densities of different study areas, they have been compared against those of the entire aggregates resource.

9.1.2 Study areas were divided into those with Very low, Lower, Low, Moderate, High Higher and Very High asset densities, as determined by the density of assets in the study area in comparison to the asset densities across the aggregates resource:

- Very low asset densities – more than 50% below the asset density of the same period for the entire aggregates resource.
- Lower asset densities – more than 20% below the asset density of the same period for the entire aggregates resource.
- Low asset densities – more than 10% below the asset density of the same period across the entire aggregates resource.
- Moderate asset densities – within 10% of the asset density of the aggregates resource.
- High asset densities – more than 10% above the asset density of the same period for the entire aggregates resource.
- Higher asset densities – more than 20% above the asset density of the same period for the entire aggregates resource.
- Very high asset densities – more than 50% above the asset density of the same period for the entire aggregates resource.

9.1.3 Where the asset density is relatively high, due to higher levels of investigation and good preservation, it will be possible to predict the likely impact of any future aggregates extraction with greater confidence.

### 9.2 Asset densities of the study areas

9.2.1 The asset densities are shown in Fig 46 and tabulated in Table 5. Five study areas have very high asset densities:

- East Wight Chalk Ridge (EWCR)
- Freshwater Isle (FI)
- South West Wight Coastal Zone (SWWCZ)
- Undercliff
- West Wight Chalk Downland (WWCD)

9.2.2 Atherfield Coastal Plain and West Wight Downland Edge both have higher asset densities and Brading Haven Bembridge Isle has a high asset density. Newchurch Sandown has a moderate asset density. There are five study areas with lower asset densities:

- Arreton Valley (AV)
- South Wight Downland (SWD)
- South Wight Downland Edge (SWDE)
- South Wight Sandstone (SWS)
- Thorley Wellow Plain (TWP)

9.2.3 Northern Lowlands had a very low asset density.

- 9.2.4 The archaeology of the study areas and current understanding of the asset densities is highly variable. Particular spatial and chronological aspects of the asset densities are discussed in more detail by study area below. It anticipated that all study areas would benefit from the general research priorities (10.2), although areas where some NMP has taken place would only require limited additional survey.

#### *Arreton Valley*

- 9.2.5 This study area, south-east of Newport, has a low density of assets of known date and a high density of assets of uncertain date, the latter probably reflecting the results of the NMP survey, which covered much of the study area. The study area is moderately well understood, but completion of the NMP and investigation of undated assets identified through it is required to improve understanding further.
- 9.2.6 Arreton Valley contains deposits of mapped River Terrace Gravels of the Eastern Yar and these have been associated with Palaeolithic and Mesolithic assets. The northern part of the study area has some potential for later prehistoric settlement associated with the populations which created the Neolithic and Bronze Age ritual sites along the high ground of East Wight Chalk Ridge immediately to the north. Roman objects suggest a possible site at Hale Manor Farm and place-name evidence suggests that Arreton Valley was a popular area for settlement during the migration and early medieval period. By the early medieval period Arreton comprised a large mother parish (*parochia*) with a probable settlement close to the modern village and scarp of the East Wight Chalk Ridge. During the later medieval period the area was occupied by further small settlements and manors, which developed into the pattern of dispersed and nucleated settlement evident in the post-medieval and modern period.

#### *Atherfield Coastal plain*

- 9.2.7 This study area, on the south-western coast of the Island, has a higher asset density overall and its archaeological potential is relatively well understood. The asset densities of different periods are variable and the high number of uncertain assets reflects a need for further archaeological investigation.
- 9.2.8 The very high density of prehistoric assets probably reflects the influence of coastal erosion in bringing deeply buried remains to the surface. In other study areas such assets may remain buried. There is a concentration of Mesolithic to Bronze Age remains and further investigation is required to confirm the date of a number of prehistoric hearths and identify any associated settlement.
- 9.2.9 Roman, migration and early medieval remains are very limited, although NMP and further investigation may reveal more. The village of Atherfield is probably of early medieval origin on place-name evidence, but no archaeological remains have been recorded. During the later medieval and post-medieval periods, more settlements (comprising mainly smaller manors and dispersed settlement) developed and this is reflected in the higher density of assets of these periods. In the mid-19th century a military road and associated bridges, milestones and other features were constructed through this study area to facilitate the movement of troops around the Island. In the modern period coastguard and lifeboat stations were built to provide protection for those using Chale bay.

#### *Brading Haven and Bembridge Isle*

- 9.2.10 There is a high asset density in this study area in the eastern part of the Island. The densities of later periods are high and this reflects the relatively low density of uncertain assets and generally high level of understanding.
- 9.2.11 The asset densities of earlier periods are more variable. The density of Palaeolithic assets is very high, reflecting the presence of the nationally important Priory Bay Palaeolithic site. The two important multi-period occupation sites at Redcliff

(Mesolithic to Roman) and at Yaverland hillfort (Iron Age to migration) indicate that the higher ground around Sandown Bay and Brading Haven was of considerable significance for earlier populations. Migration and early medieval place-names suggest the presence of a small settlement called Etharin near St Helen's. During the later medieval period settlement was more limited than in other study areas as much of Brading Haven remained a marshy tidal inlet. Yaverland was joined by the manor at Centurion's Copse and the settlement at St Helen's was laid out as a planned village close to the Priory. During the post-medieval period, the study area acquired its present form as the Eastern Yar was straightened and the former haven drained. Areas around St Helen's attracted tourists and the harbours were fortified against sea and, later, airborne raiders and invaders.

### *East Wight Chalk Ridge*

- 9.2.12 This has the highest asset density of all study areas and is very well understood across all periods except the Palaeolithic and Mesolithic. The study area, in the eastern-central part of the Island, has been subject to NMP and repeated investigations by antiquarians and archaeologists which have provided considerable information. Nonetheless more systematic field survey and targeted excavation would help to confirm possible sites such as the assemblage of metal detected artefacts below Ashe Down and the possible Neolithic barrows identified by the NMP.
- 9.2.13 Neolithic to modern asset densities are very high. A Neolithic industrial site has been identified at Brading Down. The study area contains the highest concentration of known Bronze Age barrows in the aggregates resource. A Bronze Age and later trackway runs along the ridge and Iron Age, Roman and migration period remains have been associated with the barrows. A Roman occupation site is also known from Ashe Down and a large group of metal-detected artefacts were recorded nearby. Ashe Down was sparsely settled during the later medieval period, with manor houses and larger settlements located in the lower land beyond the study area. The lack of settlement continued into the post-medieval and particularly modern periods and the high asset densities of these periods reflects the significance of this high land for civil assets (such as the gibbet at Michael Morey's Hump) and wartime defences, many of which survive. Post-medieval and modern chalk and stone quarrying took place along the scarp on both the north and south sides of East Wight Chalk Ridge.
- 9.2.14 There are no Palaeolithic or Mesolithic assets within East Wight Chalk Ridge, although it is not certain if this reflects a lack of activity in this area during these periods.

### *Freshwater Isle*

- 9.2.15 This study area, on the western tip of the Island, has a very high asset density and a low density of uncertain assets, although the asset densities of individual periods are more variable. The study area would benefit from NMP survey to improve understanding of distribution patterns across the study area.
- 9.2.16 The very high density of Palaeolithic assets reflects the potential of the River Terrace Gravels of the Western Yar. Unknown Mesolithic and Neolithic remains may also be associated with these deposits. Other than barrows, Bronze Age assets are limited and there is little evidence of other late prehistoric, Roman or migration activity. Freshwater is known to be a site of early medieval occupation and the church (outside the aggregates resource) has early medieval components. Later medieval occupation continued at Freshwater, but is likely to be located outside the aggregates resource. The high ground at Headon Warren was of defensive value during the later medieval period onwards and a later medieval and post-medieval beacon was sited there. There are very high densities of post-medieval and modern assets, which are typically well understood and securely dated and reflect

documented settlement.

### *Newchurch Sandown*

- 9.2.17 Newchurch Sandown, in the central-eastern part of the Island, has a moderate asset density, but this is not reflected across all periods. The HEAP (HEAP 2008h) indicates that, until the reclamation of land during the later medieval and post-medieval period, a good proportion of the Eastern Yar valley floor in this study area was marshy or wetland. The alluviated areas have the potential to contain waterlogged material, including evidence of settlement, ritual features and trackways. As the NMP survey is unlikely to have identified assets beneath alluvium, further palaeoenvironmental and geoarchaeological investigation is required to inform understanding of the ancient landscape.
- 9.2.18 The south-eastern part of the study area shows good potential for prehistoric remains. Mesolithic and Neolithic lithic working is known from the River Terrace Gravels at Blackpan Common and Lea Farm and Iron Age remains were found at Ninham Farm. The northern part of the study area has potential for later prehistoric occupation associated with the Neolithic and Bronze Age ritual assets on the adjacent East Wight Chalk Ridge. Iron Age activity has been recorded at Mersley Farm, Knighton and Brading Roman villa and a large concentration of Roman and Iron Age assets was found south of Ashe Down on the northern boundary of the study area.
- 9.2.19 During the migration and early medieval periods, place-name evidence suggests areas along the Eastern Yar (e.g. Newchurch Sandown) were favoured for occupation and Kern manor is of early medieval origin. Brading, outside the aggregates resource to the north, was an important settlement with a large *parochia* extending across the Island. During the later medieval and post-medieval period, the number of manors and settlements increased and by the end of the 19th-century, the town at Sandown was developing as a tourist centre.

### *Northern Lowlands*

- 9.2.20 This study area, occupies most of the northern half of the Island, but has a very low asset density and is the lowest of any study area. It is not certain if this low asset density reflects a lack of genuine past activity or a lack of archaeological investigation. Further NMP and archaeological investigation is needed to improve understanding.
- 9.2.21 The moderate density of Palaeolithic and Mesolithic assets reflects the potential of the River Terrace Gravels to contain such remains. Mesolithic remains were found at Werrar on the Medina estuary, from within the Solent (outside the aggregates resource) at Bouldnor Cliff and along the intertidal zone from Wooton to Quarr. Further geological investigation and dating of previously unmapped River Terrace Gravels is necessary.
- 9.2.22 The River Terrace Gravels were also occupied during later periods, when they provided better soils for the farmers of the period. A group of multi-period sites around Whippingham (Padmore Farm, Alverstone Farm and Tobacco Pipe Copse) included Neolithic and later occupation. Later prehistoric settlement has also been associated with possible River Terrace Gravels along the Calbourne. A site at Binstead had evidence of Roman occupation including pottery production and Gurnard Roman villa was located on the River Terrace Gravels outside the aggregates resource, before it was lost to coastal erosion. Combley Roman villa was located to the north of the east-west ridge and provided evidence for later Iron Age and Roman activity. The Bembridge Limestone quarries at Quarr were exploited from the Iron Age and early Roman period until they were exhausted in the post-medieval period. Their initial exploitation provided limestone for export, perhaps through a Roman emporium identified nearby at Fishbourne on the Solent.
- 9.2.23 Place-names suggest possible migration or early medieval settlements and later

medieval manors within the Northern Lowlands. The King's Quay to St Lawrence boundary runs north-south across the Island from King's Quay in Northern Lowlands and is likely to be early medieval or earlier.

- 9.2.24 Later medieval towns were founded close to the aggregates resource at Newport, Newtown and Yarmouth, but previous understanding has been that the Northern Lowlands were less densely occupied than other areas because of the heavy clay soils which were hard to work (Basford 1980, 8; Waller 2006). This may reflect genuine occupation patterns, but it may also reflect a more limited archaeological knowledge of this study area (HEAP 2008j).
- 9.2.25 Understanding of the post-medieval period is much greater. Towns at Cowes and Ryde developed as entry points for tourists and ports for local shipping. Industry developed on the edge of settlements and beacons and forts were built for defence. Following the purchase of Osbourne House at Barton by Queen Victoria, the Island became a popular tourist attraction. The house and gardens are still extant in Northern Lowlands and are associated with assets developed for the amusement of the royal children. A large anti-aircraft searchlight, battery and ammunition dump were located close to Combley during World War II as the Island provided advance warning and an initial line of defence against air-raids.

#### *South West Wight Coastal Zone*

- 9.2.26 This study area, along the south-west coast of the Island, has a very high asset density, reflecting how well this study area is understood even without NMP coverage. The very high density of prehistoric and Roman asset reflect the identification of remains exposed by coastal erosion. The River Terrace Gravels contain a number of Palaeolithic and Mesolithic remains and were occupied by later prehistoric settlement. Two hearths, previously thought to be Mesolithic were recently scientifically dated to the Neolithic to Bronze Age.
- 9.2.27 The lower density of Bronze Age assets reflects the lowland landscape with a lower density of barrows. Roman settlement is attested by several small, native settlements associated with local fishing, salt and pottery manufacture.
- 9.2.28 The very low density of migration and early medieval assets reflects the generally limited understanding of these periods across the aggregates resource. No early medieval settlements have been identified from place-name evidence or archaeological remains.
- 9.2.29 The very high density of later medieval, post-medieval and modern assets reflects the high number of settlements. In the mid-19th century the military road and associated bridges, milestones and other features were constructed to facilitate the movement of troops around the Island. In the modern period coastguard and lifeboat stations were built on the coast to provide protection for those using Chale bay.

#### *South Wight Downland*

- 9.2.30 South Wight Downland, in the southern part of the Island, has a lower asset density, reflecting a more limited understanding of this study area. This area has not been as extensively investigated as other downland areas and no NMP has been undertaken here. Consequently, it is not certain whether the asset density reflects a genuinely lower level of past occupation. The very low Palaeolithic and Mesolithic asset densities may reflect the lack of River Terrace Gravels which often contain such remains. The low density of later prehistoric (other than Bronze Age barrows) and later assets might reflect a lack of settlement on the downland. Of all historic periods, only the later medieval has a moderate asset density and this is associated with assets suitable to the higher ground such St Catherine's lighthouse and oratory and later medieval and post-medieval beacons.



### *South Wight Downland Edge*

- 9.2.31 This study area, in the south-eastern part of the Island, also has a lower asset density reflecting more limited understanding of the archaeological remains within this study area. The densities of all periods are very low except for the post-medieval and modern periods, reflecting a slightly higher level of settlement along the downland edge during these periods. The HLC (Basford 2008) indicates that from the later medieval period, nucleated settlements were found at the foot of the downland. This study area contains the later medieval moated manor of Stenbury, the later medieval settlement at Chale and the post-medieval estate at Appuldurcombe. It is possible that later prehistoric occupation may also be identified along the foot of the downland slopes.
- 9.2.32 This study area would benefit from further survey (including NMP) and excavation to provide an improved understanding of this study area and permit more meaningful comparisons with others

### *South Wight Sandstone*

- 9.2.33 This study area in the central-southern part of the Island, has a lower asset density and is moderately well understood, although evidence regarding some periods is better than others. Up to 30% of the study area was included in the NMP survey and this has increased the number of assets within the area surveyed.
- 9.2.34 The study area contains River Terrace Gravels associated with the Medina and these deposits contain Palaeolithic and Mesolithic remains including the nationally important Palaeolithic site at Bleak Down and remains found during gravel extraction at St George's Down. A group of hearths have been found around Godshill. They may date from the Mesolithic or from the later prehistoric period, like the C<sup>14</sup> dated hearths along the south-west coast.
- 9.2.35 Evidence for later prehistoric, Roman or migration settlement is very limited. Place-name evidence indicates a few early medieval settlements were within or close to the study area, with a scatter of manors and settlements by the later medieval period. Later medieval and post-medieval beacons were located on the high ground to provide advance warning of invasion. The study area remained predominantly rural during the post-medieval and modern periods and settlements expanded with changing demographic pressures and occupation patterns.

### *Thorley Wellow Plain*

- 9.2.36 This study area, in the western part of the Island, has a lower asset density and this is reflected across most periods. Part of the study area was included in the NMP.
- 9.2.37 The asset density of all periods is low except the Neolithic and Migration periods. The moderate density of Neolithic assets reflects the lithic working site at Prospect Quarr, and chance finds from the River Terrace Gravels along the Western Yar.
- 9.2.38 The very high density of migration period assets reflects the presence of the Chessell Down cemetery. Place-name evidence suggests Wilmingham had early medieval origins and documentary evidence indicates that a manor was present at Shalcombe. The manor at Shalcombe may perhaps have developed from the settlement associated with the Chessell Down cemetery. A later medieval and post-medieval settlement is known from Afton. In the later medieval and post-medieval period, quarrying took place along the boundary between Thorley Wellow Plain and West Wight Chalk Downland.

### *Undercliff*

- 9.2.39 This study area along the southern coast of the Island has a very high asset density and is relatively well understood although no NMP has been undertaken here yet. Coastal erosion has revealed numerous archaeological remains, although the original context of some assets is consequently less well understood.

- 9.2.40 The very high asset density is consistent across most periods. The Mesolithic and Bronze Age asset densities are very low and moderate respectively, but all other prehistoric periods, and the Roman period, have very high asset densities reflecting coastal occupation. Undercliff contains several Bronze Age, Iron Age and Roman middens, a number of which are undated and would benefit from further investigation. There is an important multi-period site at St Catherine's Point with evidence from the Bronze Age to the later medieval period, including a possible Roman military signal station or lighthouse.
- 9.2.41 There are no known migration or early medieval sites within the study area, but the density of later medieval assets is very high. A small later medieval manor is known at Luccombe Chine House and later medieval middens have been found at Luccombe and St Catherine's Point. During the post-medieval and modern periods the area became a popular tourist destination, reflected in the high asset densities of these periods.

#### *West Wight Chalk Downland*

- 9.2.42 This study area in the central-western part of the Island, has a very high density of assets and is a relatively well understood study area. It has had previous NMP survey and considerable archaeological investigation.
- 9.2.43 Despite the high level of archaeological investigation, some periods do not have so high a density of assets. The density of Palaeolithic and Mesolithic assets is very low. This pattern is very similar to East Wight Chalk Ridge and may possibly reflect a lack of ancient activity on the chalk downlands.
- 9.2.44 The density of Neolithic assets is low despite the presence of a Neolithic mortuary enclosure and long barrow at Afton, a possible long barrow at Chessell Down and a cursus.
- 9.2.45 The density of Bronze Age assets is very high, primarily due to the large number of barrows, which comprise 45% (235 out of 520) of the Bronze Age assets. The density of Iron Age assets is low, possibly suggesting that later prehistoric settlement was located outside the study area, in lower areas at the edge of the downs.
- 9.2.46 The density of Roman period assets is higher, reflecting the presence of various Roman settlements and two hoards. Carisbrooke, Bowcombe Down and Limmerstone Down all provided evidence of Roman occupation and other Roman settlements were located outside the study area, around the edge of the downs.
- 9.2.47 The very high density of migration and early medieval assets reflects religious, ritual or funerary activity in existing Bronze Age barrows or separate migration period cemeteries. A number of these assets are highly significant and of national importance. The settlement and later defended *burh* at Carisbrooke and the early medieval church at Bowcombe are also located within the study area and assets associated with the settlement or objects derived from it have had an impact on the asset densities. An early medieval moot site is also located close to the trackway across the downs.
- 9.2.48 Later medieval and post-medieval assets are more limited and settlement of these periods was located outside the downland. The downland did provide an ideal place for beacons and four are known from West Wight Chalk Downland. The very high density of modern assets probably reflects the construction of military assets on the higher ground during recent conflicts.

#### *West Wight Downland Edge*

- 9.2.49 This study area in the central-western part of the Island, has a higher asset density, but this is not consistent across all periods and there is a high density of uncertain assets. Although 33% of the study area was included in the NMP survey, the survey needs to be extended across the rest of the study area.

- 9.2.50 As with the East Wight Chalk Ridge and West Wight Chalk Downland, the density of Palaeolithic assets is very low, reflecting either limited past activity or a lack of investigation. The density of Mesolithic and Neolithic assets is very high, the latter including the Mottistone long barrow and Limmerstone Shoote standing stone.
- 9.2.51 The density of Bronze Age assets is very low, due to the limited number of barrows. Although some additional barrows were identified during the NMP, the density is much lower than in certain other study areas.
- 9.2.52 The density of Roman assets is very high due to Clatterford and Rock Roman villas. It is possible that these Roman sites later attracted migration and early medieval settlement. At present the very high density of migration period assets reflects the presence of funerary sites at Mottistone, Rancombe and West Court Farm.
- 9.2.53 During the later medieval and post-medieval period the density of settlement increased across the Island. West Wight Downland Edge contained the village of Coombe and the grange at Compton. During the post-medieval period the juxtaposition of sea views, high downland and scarp slopes attracted the attention of architects and several large houses with landscaped parks were constructed, including Brook House and Gatcombe Park

### 9.3 Geographic distribution of assets

- 9.3.1 The geographic distribution (Fig 46) of the study areas with high asset densities, indicates that assets are concentrated in three particular areas:
- The central east-west ridge and associated high ground across the centre of the Island (represented by East Wight Chalk Ridge, Freshwater Isle, West Wight Downland and West Wight Downland Edge study areas).
  - Coastal areas of the Island particularly the south-west coast (represented by Atherfield Coastal Plain, South West Wight Coastal Zone and Undercliff study areas) and Brading Haven Bembridge Isle.
- 9.3.2 It is not certain whether these areas of high asset density reflect a genuine concentration of ancient activity or more recent archaeological interest. Both the central east-west ridge and the Island's coast have been subject to considerable archaeological investigation for different reasons, outlined below:

#### *Central east-west ridge*

- 9.3.3 The central east-west ridge has been subject to greater levels of archaeological investigations because it contains large number of upstanding assets (Bronze Age barrows) enhanced by the height of the landscape, the limited arable cultivation, the lack of tree cover (until recently), historic routes across the Island and chalk and gravel extraction sites. As a result, large numbers of barrows and associated features were identified and investigated over the last 300 years raising the asset density within this area. More recently, the open landscape, lack of cultivation and association with prestigious archaeological finds has encouraged metal detectorists to choose the central east-west ridge for their hobby. Where metal detected finds are reported to the HER and included in the project database, even small concentrations of artefacts can raise the asset density considerably. Each find is recorded separately (because they represent different periods, or the relationship between them cannot be established without further excavation) even though the concentration may only represent one or two sites at most. The central east-west ridge also contains the two NMP study areas. The inclusion of these areas in the NMP survey has increased the number of assets, although most of these are not dated and so have not had a direct impact upon the asset densities (i.e. density of assets of known date) discussed here.

#### *Coastal study areas*

- 9.3.4 The coastal study areas have been heavily investigated because of the high rate of

coastal erosion. The large number of artefacts and sites eroding from the cliffs resulted in the discovery of many sites and chance finds by those walking along the beaches and prompted early researchers to seek out such remains. More recently, the destruction of sites through coastal erosion has prompted the academic researchers, enthusiasts and archaeologists of the Carisbrooke Castle Museum (later the Isle of Wight County Archaeology and Historic Environment Service) to locate and investigate sites at risk. Both historic research and more recent rescue investigations have increased the numbers of such sites within the HER in comparison to inland sites, which are not at immediate risk of loss.

## 9.4 Geological distribution of assets

- 9.4.1 In geological terms the central east-west ridge (represented by East Wight Chalk Ridge, Freshwater Isle, West Wight Downland and West Wight Downland Edge study areas) comprises underlying Lewis and West Melbury Chalk formations with superficial deposits of clay-with-flints. In some areas the ridge of chalk is also overlain by superficial River Terrace Deposits, although these are not located within the study areas identified above as having the highest asset densities.
- 9.4.2 Around the coast, no dominant geology can be identified across all coastal study areas with high asset densities. Those geologies which are strongly associated with one or more high asset density study areas are detailed below and shown on Fig 47:
- River Terrace Gravels – comprising most of the South West Wight Coastal Zone. Limited areas are also present within the Atherfield Coastal Plain and Freshwater Isle study areas.
  - Bracklesham group and Barton group – comprising most of Freshwater Isle study area and part of Brading Haven Bembridge Isle.
  - Ferruginous Sands – comprising most of Atherfield Coastal Plain study area and limited areas within South West Wight Downland Edge and Brading Haven Bembridge Isle.
  - Sandrock Series – comprising much of Undercliff and limited areas within West Wight Downland Edge.
- 9.4.3 A number of other geologies also occur within the study areas (including Raised Marine Deposits, Blown Sand, Upper Greensand and Beach and Tidal Flat deposits) but these only occur in small areas and cannot be considered to represent a major geological component of any of the study areas.
- 9.4.4 It is noticeable that the primary geologies of high asset density study areas, are not consistently associated with a high density of archaeological assets across the Island. A geology comprising most of one high asset density study area may not be associated with a high asset density in another study area. The strongest association between high density study areas and a particular geology type is the relationship between the high density study areas of the central east-west ridge and the underlying chalk. However, South Wight Downland is also a chalk geology study area, but has a lower asset density.
- 9.4.5 *The presence of a particular geology is not therefore sufficient to identify an area with a high density of archaeological assets.* This is expected to some extent, since the distribution of assets is likely to have been affected by a range of other factors of relevance to past inhabitants (i.e. hydrology, availability of fertile soil, preferred defensive and settlement locations). Some of these factors will be consistent across geologies, but others will be independent of it.
- 9.4.6 It is also possible that relationships between geology type and asset density have been obscured by the pattern of past archaeological investigation. Further investigation into low asset density study areas with geologies which are elsewhere associated with high asset densities (particularly chalk) may confirm whether this is the case.

## 10 Research Strategy and Agenda

### 10.1 Introduction

- 10.1.1 The following research strategy and agenda has been developed following the assessment of archaeological resource within aggregate areas and the *Solent – Thames Archaeological Research Framework*. It relates primarily to the aggregate areas, but may also be relevant to the Island as a whole.

### 10.2 General research priorities

- 10.2.1 The following general research priorities have been identified. These would have positive impact upon understanding of multiple periods across the aggregates resource and, potentially, the rest of the Island as well. This would allow assessments of the impacts of future aggregates extraction projects to be made with greater certainty.

#### *Geological*

- 10.2.2 During the course of this project a number of past aggregate extraction sites were identified which were not located in areas of aggregate geology as understood by the BGS. These sites indicate the presences of unmapped River Terrace Deposits which often contain early prehistoric (Palaeolithic and Mesolithic) remains and later (Neolithic to early medieval) settlement because of their well drained soils. Geological and geoarchaeological research is required to identify the full extent of unmapped River Terrace Deposits and any potential for archaeological remains associated with them. The need for improved understanding of relevant geological deposits is identified in the *Solent Thames Archaeological Research Framework Research Agenda* for the Lower and Middle Palaeolithic, because of the importance of a good understanding of the geological distribution of Pleistocene sediments in the identification and interpretation of remains these periods (Wenban Smith and Allen 2010, 12).

#### *NMP*

- 10.2.3 Just 75km<sup>2</sup> of the Island was surveyed by the NMP for this project. This comprises 41% of the aggregates resource and 19% of the Island. The NMP survey has increased the number of known assets, particularly for periods with very low asset densities, where understanding was limited. The NMP provides a systematic method of identifying all visible assets across the aggregates resource and could provide a consistent basis for the identification of higher and lower asset density areas. The NMP project recorded 533 previously unrecorded monuments, comprising a 41% increase in the HER within the NMP sample areas. The extension of NMP across the rest of the Island (including the aggregates resource) is therefore a priority.

#### *Re-assessment of assets*

- 10.2.4 A large proportion of the assets were initially identified and excavated by antiquarian researchers. Despite the good quality of many investigations, some assets remained undated while others require re-assessment in view of modern developments in artefact typologies and developments in scientific dating. This is particularly significant for the prehistoric periods, and is identified as a key research priority for the Lower and Middle Palaeolithic of the Isle of Wight in the *Solent Thames Archaeological Research Framework Research Agenda* (Wenban Smith and Allen 2010, 12).

#### *Targeted investigation*

- 10.2.5 Although NMP can identify all visible assets, in most cases such assets cannot be

dated without more detailed archaeological investigation. Targeted fieldwalking, evaluation and excavation can provide a better understanding of such assets and the periods to which they belong, and reduce the risk of unforeseen discoveries during future extraction.

- 10.2.6 Fieldwalking and targeted investigation of relevant geological deposits has also been identified by the *Solent Thames Archaeological Research Framework Research Agenda* as a necessary research priority for periods, such as the Lower and Middle Palaeolithic, where archaeological remains are not normally visible to aerial photography survey or NMP (Wenban Smith and Allen 2010, 12).

### 10.3 Specific research priorities

- 10.3.1 The general research priorities would have a positive effect on understanding of the archaeology of all periods across the aggregates resource. However certain periods and study areas have particular research needs and these are discussed below:

#### *Palaeolithic period*

- 10.3.2 Understanding of the Palaeolithic period is variable. The Island, and particularly the aggregates resource, contains some nationally important Palaeolithic sites and there is the potential for other similarly significant sites to be present. Understanding of this period is particularly good around the coast where erosion has revealed remains, but inland study areas often exhibit low asset densities. Understanding of the Upper Palaeolithic is particularly limited by the very low density of assets across the aggregates resource.

- 10.3.3 The *Solent Thames Archaeological Research Framework Research Agenda* for the Lower and Middle Palaeolithic (Wenban-Smith and Allen 2010) endorsed recommendations made by previous projects including the *Vectis Report* (Basford 1980) and the *Southern Rivers Palaeolithic Project* (Wessex Archaeology 1993). Several of the specific research priorities identified by these projects continue to be of relevance to the Island generally and the aggregates resource particularly:

- Fieldwork along the south west coast and re-examination of material from this area (Basford 1980).
- Investigation of Pleistocene deposits at Bembridge and Steephill if these sites are threatened with disturbance (Basford 1980).
- Further investigation of the important sites of Bleak Down and Priory Bay (Basford 1980; Wenban-Smith and Allen 2010, 12; Wessex Archaeology 1993, 172).
- Further fieldwork and/or preservation *in situ* of deposits at Great Pan Farm, in order to address those unanswered questions raised by past developer-funded investigation (Basford 1980; Wenban-Smith and Allen 2010, 12; Wessex Archaeology 1993, 172).
- Palaeoenvironmental investigations particularly of the Bembridge Steyne Wood Clay or along the Calbourne (Wenban-Smith and Allen 2010, 12; Wessex Archaeology 1993, 172).
- Typological/technological review of existing collections (Basford 1980; Wenban-Smith and Allen 2010, 12).
- Field-walking survey and systematic investigation of gravel deposits for Palaeolithic artefacts (Wenban-Smith and Allen 2010, 12).
- Survey and attempted broad dating of Plateau gravel outcrops (Wenban-Smith and Allen 2010, 12).
- Systematic OSL dating of Terrace gravels (Wenban-Smith and Allen 2010, 12).

- 10.3.4 In addition to these ongoing research priorities, this project has identified further

specific research priorities for the Lower/Middle Palaeolithic period:

- A review of Palaeolithic entries within the HER to revise the dates of those which, by virtue of their nature, associations or physical position, cannot be Palaeolithic.
- Further fieldwork to identify and map currently unmapped areas of Plateau and Terrace Gravel.

10.3.5 Both of these specific research priorities would contribute to the improvement of the chrono-stratigraphic framework and artefact typologies which are important for the understanding of the Palaeolithic on the Island and across the wider region (Wenban-Smith and Allen 2010).

### *Mesolithic*

10.3.6 Understanding of the Mesolithic period is also variable. Current asset densities suggest that Mesolithic assets are concentrated around the river valleys and coast, but this is probably due to the greater visibility of such assets in areas of erosion.

10.3.7 The *Solent Thames Archaeological Research Framework Research Agenda* for the Late Upper Palaeolithic and Mesolithic has noted that the visibility of assets of these periods and the likely biases in data collection have had an impact upon understanding of the distribution of remains of these periods within the region (Hey and Allen 2010). They have identified a number of specific research priorities for the Isle of Wight, which would also be relevant to the aggregates resource on the Island:

- Publication of old sites, including the 'Wakes' on the Isle of Wight.
- New excavations at previously identified sites, including Werrar on the Isle of Wight. This could be particularly beneficial in improving understanding of antiquarian finds and interpretations and testing whether these remain well founded after the collection of additional evidence.
- Further fieldwalking and collection, particularly on the Greensand of the Isle of Wight. This research priority was originally identified by Basford (1980, 15), in *The Vectis Report*.
- Further investigation into palaeoenvironmental deposits to improve understanding of the ancient environment.
- Efforts to identify Mesolithic remains outside of river or estuary environments.

10.3.8 This Resource Assessment has further identified some very specific research priorities for the Mesolithic of the aggregates resource on the Island:

- A review of Mesolithic entries within the HER to revise the dates of those which, by virtue of their nature, associations or physical position, cannot be Mesolithic.
- A re-examination of artefacts and associated archive (if possible) where uncertainty remains as to their date.
- Reassessment of assets, particularly flint artefacts and artefact assemblages. This could include OSL dating to improve chronological frameworks, and re-assessment of the materials used, their sources and transportation as recommended by the *Solent Thames Archaeological Research Framework Research Agenda* for the Late Upper Palaeolithic and Mesolithic (Hey and Allen 2010, 4).
- Further scientific dating of Mesolithic hearths (where possible) and review of existing evidence to determine if all hearths along the south-west coast of the Island should be dated to a later period as suggested by recent evidence. This specific research priority conforms generally to the *Solent Thames Archaeological Research Framework Research Agenda* for the Late Upper Palaeolithic and Mesolithic, which emphasises the need to

undertake scientific dating and improve chronology generally (Hey and Allen 2010, 2).

### Neolithic

- 10.3.9 There is evidence of some continuity between the Mesolithic and Neolithic periods. Neolithic assets are evident around the coast and river valleys, but remains have also been found further inland. There is evidence of Neolithic activity within the chalk downland study areas and links have been posited between later Bronze Age barrow cemeteries and earlier Neolithic landscapes. The two known and four possible Neolithic long barrows are mostly located close to Bronze Age remains and there is potential for Neolithic settlement on lower ground near Bronze Age and Neolithic ritual assets.
- 10.3.10 The *Solent Thames Archaeological Research Framework Research Agenda* for the Neolithic and Early Bronze Age (Bradley *et al.* 2010) identifies a number of research questions of significance in the investigation of these periods in the region. Almost all of these are relevant to the investigation of these periods within the aggregates resource. However, in order to answer many of the larger research questions concerning regional patterns it is necessary to first prioritise the refinement of the existing data. This project has therefore identified four general research priorities which would improve baseline data for the identification and understanding of the Neolithic:
- A re-examination of artefacts and associated archive (if possible) where uncertainty remains as to their date.
  - Reassessment of Neolithic flint artefacts and artefact assemblages to improve dating of individual assets and the chronological framework for the period.
  - Extension of NMP across the rest of the Island.
  - Targeted survey and investigation of possible Neolithic assets and concentrations of assets to confirm their date and nature.
- 10.3.11 The particular nature of the known Neolithic remains has also allowed a number of very specific research priorities to be identified for the aggregates resource of the Island:
- Targeted investigation of possible Neolithic barrows identified during the NMP. Despite the long history of barrow excavation, the *Solent Thames Archaeological Research Framework Research Agenda* for the Neolithic and Early Bronze Age notes that further modern archaeological investigation is required to elucidate the many complex features of these monuments. This modern investigation should include scientific dating, palaeoenvironmental study of buried landsurfaces beneath barrows, careful investigation of barrow phasing and development and excavation of the areas around barrows (Bradley *et al.* 2010, 5).
  - Investigation of the possible cursus monument. In accordance with the research priorities of the *Solent Thames Archaeological Research Framework Research Agenda* for the Neolithic and Early Bronze Age (Bradley *et al.* 2010, 5), this should include consideration of its relationship with earlier and later monuments.
  - Further scientific dating and re-evaluation of the hearths along the south-west coast to confirm whether they are of Neolithic to Bronze Age date. This could improve understanding of Neolithic and Early Bronze Age settlement on the Island (Bradley *et al.* 2010).
  - Re-assessment and perhaps further excavation at the several Neolithic lithic working sites on the Island might provide further evidence of relevance to the origin and distribution of flint across the region during this period (Bradley *et al.* 2010, 5).



- The *Solent Thames Archaeological Research Framework Research Agenda* for the Neolithic and Early Bronze Age identifies the relationship between small burial monuments (such as barrows) and settlement as a key area of research into settlement dynamics (Bradley *et al.* 2010). Given the presence of Neolithic and Bronze Age barrows on the Island, further fieldwalking and survey of lower lying areas near Neolithic barrows would be appropriate in order to test the hypotheses that these features indicate territorial divisions and the locations of associated settlements.

### *Bronze Age*

- 10.3.12 There is a very high density of Bronze Age assets within the aggregates resource, but these are mostly barrows. Understanding of the distribution of barrows is very good in downland study areas. This is probably due to the preservation of upstanding barrows in these areas and the fascination of antiquarian researchers. The recent NMP survey has shown that barrows were once also present in low-lying zones and understanding of the distribution of barrows in these areas is much more limited.
- 10.3.13 Understanding of other Bronze Age activity is limited. Coastal erosion has revealed Bronze Age remains including hearths and middens, but the activity these assets represent has not been determined. It has been suggested that settlement associated with barrow cemeteries is located in lower ground at the edge of the downs, but this hypothesis has not been tested.
- 10.3.14 As a result of the preceding *Resource Assessment*, a number of key research priorities for the Bronze Age within the aggregates resource have been identified. The furtherance of many of these research priorities would either provide the foundation for or directly contribute to the research priorities identified in the *Solent Thames Archaeological Research Framework Research Agenda* for the Neolithic and Early Bronze Age (Bradley *et al.* 2010) and the Later Bronze Age and Iron Age (Lambrick 2010):
- The extension of NMP across the rest of the Island in order to systematically identify additional barrows (particularly in low-lying areas) and other possible Bronze Age features. This would provide a comprehensive picture of the distribution of barrows across the Island and would improve understanding of the Bronze Age as a whole. The further investigation of the types, dates and variations within these monuments, their relationship with other monuments of other periods, and their influence on settlements has been identified as a research priority by the *Solent Thames Archaeological Research Framework Research Agenda* for the Neolithic and Early Bronze Age (Bradley *et al.* 2010, 4). A systematic understanding of the distribution of Bronze Age barrows is necessary to any regional or sub-regional investigation of their types, dates and relationships, and may also provide options for modern archaeological excavation of some examples.
  - Improving understanding of the characterisation of buried sites and how they relate to surface finds has been identified as a research priority in the *Solent Thames Archaeological Research Framework Research Agenda* for the Neolithic and Early Bronze Age (Bradley *et al.* 2010, 3). This should include systematic fieldwalking and metal detecting survey to identify foci of Bronze Age activity and provide a reliable context for understanding the relevance of chance finds and the distribution of individual objects. There is also the need for targeted investigation of sites identified during NMP, fieldwalking and metal detecting surveys to establish the relationship between the surface evidence provided by these techniques and the underlying archaeological remains.
  - Investigation of areas with the potential to contain Bronze Age settlement. This should include the investigation of suspected settlement sites,

investigation to test hypotheses about the relationship between downland barrow cemeteries and lowland settlement and further investigation of hearths and middens to establish their date and the nature of any associated remains. The better identification of settlement sites and improving understanding of them is a key research theme addressed in several research priorities in the *Solent Thames Archaeological Research Framework Research Agenda* for the Neolithic and Early Bronze Age (Bradley *et al.* 2010, 4). Investigation into relative levels of transhumance and permanent settlement are also of importance for determining how far settlement distribution reflects permanent occupation (Lambrick 2010, 3).

- Review of individual objects and research into the corpus of Bronze Age material. A review of Bronze Age objects and material could contribute to a number of research priorities identified in the *Solent Thames Archaeological Research Framework Research Agenda* for the Neolithic and Early Bronze Age (Bradley *et al.* 2010). These include the dating of Bronze Age urns; understanding of assemblages associated with settlement sites; improving understanding of middens; investigation into the origins of lithics, metal working, and wood working; and considering links with areas across the Solent and outside the region. A review of mid to late Bronze Age pottery could particularly assist in answering questions about sub-regional styles, changing fashions and the social significance of pottery which have been identified as research priorities by the *Solent Thames Archaeological Research Framework Research Agenda* for the Later Bronze Age and Iron Age periods (Lambrick 2010, 6).
- Palaeoenvironmental research to investigate Bronze Age change in the landscape, and whether this may relate to land clearance and increasing agriculture. Investigation into tree clearance is a particular research priority of the *Solent Thames Archaeological Research Framework Research Agenda* for the Neolithic and Early Bronze Age (Bradley *et al.* 2010, 2).
- Investigation into the usage of occasionally or periodically occupied land types is emphasised as a research priority in the *Solent Thames Archaeological Research Framework Research Agenda* for the Neolithic and Early Bronze Age. Of particular relevance to the aggregates resource is the apparent use of the Greensands in the Bronze Age (Bradley *et al.* 2010, 2).
- Further investigation into the deposition and origins of Bronze Age hoards. Such research may help to answer wider regional questions regarding the origins of metal working in the Early Bronze Age (Bradley *et al.* 2010), the ritual significance of weapons; and the ceremonial and practical aspects of hoards in the Later Bronze Age (Lambrick 2010, 7)
- Investigation, including excavation, of the possible Bronze Age trackway along the central ridge of the Island. The changes in transport methods are a significant research priority for the *Solent Thames Archaeological Research Framework Research Agenda* for the Later Bronze Age and Iron Age periods (Lambrick 2010, 7). It would also be appropriate to consider whether this trackway had any territorial or ceremonial significance (Lambrick 2010, 8).

### *Iron Age*

- 10.3.15 Understanding of Iron Age assets is limited across the aggregates resource. Iron Age assets have not been investigated as extensively as earlier Bronze Age and later Roman remains, which appealed to the imaginations of past researchers.
- 10.3.16 NMP survey has resulted in a great improvement in the number of known Iron Age assets, and it is likely that further assets will be identified if currently undated cropmarks are investigated further. Significant Iron Age assets within the aggregates resource include the three hillforts and Iron Age remains associated with later

Roman villas and occupation sites. The relationship between the Iron Age and Roman period requires further research, with some sites demonstrating continuity and other sites change at the end of the Iron Age.

10.3.17 This Resource Assessment has shown how certain research priorities for the Island and the aggregates resource could contribute significantly to the answering of certain regional research questions within the *Solent Thames Archaeological Research Framework Research Agenda* for the Later Bronze Age and Iron Age (Lambrick 2010):

- The *Solent Thames Archaeological Research Framework Research Agenda* for the Later Bronze Age and Iron Age emphasises the importance of providing systematic coverage of the region and identifying Iron Age sites in formerly 'blank' areas in order to provide comparisons for those heavily investigated 'hotspots' of Iron Age activity (Lambrick 2010, 1). On the Isle of Wight, several specific research priorities could contribute to this regional theme:
  - o Extension of the NMP across the rest of the Island in order to systematically identify possible Iron Age sites.
  - o Targeted investigation (field survey and excavation) of features and clusters of features identified during the NMP in order to improve dating and understanding of both sites and diffuse ancient landscape features. This could also contribute to the research priorities of the *Solent Thames Archaeological Research Framework Research Agenda* for the Later Bronze Age and Iron Age in terms of improving understanding of the origins, development and usage of field systems and landscapes and aspects such as land clearance (Lambrick 2010, 2).
  - o Targeted fieldwalking and metal detecting survey of those areas where clusters of objects indicate that significant Iron Age sites may be present, but the nature, date and significance of any such sites is currently unknown.
- Further investigation of possible Iron Age hillforts or enclosures at Chillerton Down and Castle Hill could provide valuable insights to contribute to research priorities identified in the *Solent Thames Archaeological Research Framework Research Agenda* for the Later Bronze Age and Iron Age; including the origins, level of occupation, purpose and relationship with later Roman centres. Good quality modern investigations of such sites could also provide valuable evidence to contribute to research priorities associated with material cultural trends in object manufacture and usage; how hearth and floor deposits are associated with the practical functioning of the former building; and even the social and ritual function of the ubiquitous storage pit (Lambrick 2010).
- Reassessment and/or publication of historic excavations as necessary. Past researchers have identified the Knighton site as a target for publication (Basford 1980). The re-assessment of such sites could provide opportunities to explore where the modern research priorities of the *Solent Thames Archaeological Research Framework Research Agenda* for the Later Bronze Age and Iron Age can be addressed by the existing archaeological archive and where further investigation is required to address such topics.
- Reassessment of Iron Age coins in order to take into consideration more recently recovered items could potentially contribute to several regional research questions including those associated with improving the chronological framework; questions regarding the relationship between the Late Iron Age and subsequent Roman period (Fulford and Allen 2010, 1); questions of social and settlement hierarchy and local tribal centres (Lambrick 2010, 3;4;8;).

- Investigation of processes of change and continuity between the Iron Age and Roman period when sites of this date are investigated. The *Solent Thames Archaeological Research Framework Research Agenda* for the Later Bronze Age and Iron Age considers the questions of continuity in religious and political sites to be of particular importance (Lambrick 2010, 8),
- Investigation into changes in the historic landscape between the Bronze Age and Iron Age, including territorial and settlement distribution and landscape management. As with the Iron Age/Roman transition, the Isle of Wight offers the opportunity to investigate such research questions in a defined geographical area, which reflects in miniature many of the topographic and geological characteristics of the Solent Thames region as a whole.

### Roman

- 10.3.18 The Roman period is well understood in general and the Isle of Wight is no exception. Prestigious Roman sites have been identified and excavated since the 19th century and there is a good understanding of the chronological framework and artefact typologies. The central ridge of the Isle of Wight was associated with most of the known villas on the Island, while smaller native occupation sites have been identified along the coasts. These occupation sites have been associated with salt and pottery production and provide a valuable contrast to wealthy Roman villas. Other sites provide evidence of shipping and trade.
- 10.3.19 However, both this *Resource Assessment* and the *Solent Thames Archaeological Research Framework Research Agenda* for the Roman period (Fulford and Allen 2010) have revealed a number of areas which require further investigation in order to provide an appropriate foundation for further archaeological analysis across the Island and the wider region:
- There is a need to extend NMP across the Island.
  - NMP needs to be followed up by targeted investigation (including field survey and excavation as appropriate) of possible Roman sites.
  - Targeted systematic field survey of those areas with apparent concentrations of Roman objects is also necessary in order to confirm if these concentrations genuinely reflect Roman sites, and if so what sites they represent.
  - Publication of those sites which have been excavated, but where publication has not proven possible before.
- 10.3.20 The completion of these research priorities would contribute to answering regional research questions, including those concerning the nature and extent of Roman activity on claylands (as in the northern part of the Island) and chalk (as on the central ridge and south-eastern part of the Island). It should also provide a more detailed understanding of the range of the different types of settlement and activity site which are present on the Island (Fulford and Allen 2010, 3–4).
- 10.3.21 The particular types of archaeological remains within the aggregates resource on the Island also provide opportunities to address certain specific regional research questions identified in the *Solent Thames Archaeological Research Framework Research Agenda* for the Roman period. These include:
- Investigation into fields and field systems in the context of landscape and land-use. There are a number of Roman or possibly Roman field systems on the Island, and more are likely to be identified by any increase in NMP coverage. They offer considerable opportunity to answer specific questions associated with Roman land-use and agriculture (Fulford and Allen 2010, 1–2).
  - Further investigation of smaller native sites, both those already known and those identified by NMP or other means. The characterisation of settlement and economy has been identified as a significant research priority for the

region (Fulford and Allen 2010, 3). Improved understanding of the nature of the smaller native sites could provide additional information on their role in the settlement hierarchy and their economies.

- Investigation into the relative importance and decline of the Roman villas on the Island. This could include consideration of the role of violence and warfare in the decline of the villas and the relationship between the villas and the reorganisation of the rural landscape (Fulford and Allen 2010, 4).
- The identification and investigation of nucleated settlements on the Island and consideration of why no Roman urban centres have been identified on it (Fulford and Allen 2010, 5).
- The *Solent Thames Archaeological Research Framework Research Agenda* for the Roman period reveals that 'the military impact on the region is not as well understood as previously thought (Fulford and Allen, 2010, 5–6)'. The Isle of Wight is located in a militarily strategic position both for the initial conquest of Britain and its later protection. Both these aspects require further investigation, as does a possible military site at St Catherine's point.
- The economic, social and tribal foundations of material culture are identified as a research priority in the *Solent Thames Archaeological Research Framework Research Agenda* for the Roman period (Fulford and Allen, 2010, 6). Research into the *Vectis Ware* pottery industry offers opportunities to explore these aspects of the period; including its economic basis, the regional extent of the manufacture and use of the pottery, and how far it reflects local tribal affiliations and social identity.
- The Island's location at the mouth of the Solent and between Britain and continental Europe make it probable that archaeological remains may contribute to research questions concerning local and international trade (Fulford and Allen 2010, 7).
- The insular nature of the Island and the presence of a variety of different types of Roman sites on it provide opportunities to undertake synthetic studies within a geographically cohesive unit.
- The differences and similarities between the Island and the mainland should be investigated (Fulford and Allen 2010, 8).
- The Isle of Wight offers considerable opportunity to investigate the effect of the Roman conquest and the level of continuity and change from the late Iron Age at a more limited resolution. A number of sites on the Island offer the opportunity to investigate why some saw continuity between the two periods, while others experienced dramatic, sometimes violent, change. This has been identified as a significant area of research by the *Solent Thames Archaeological Research Framework Research Agenda* for the Roman period (Fulford and Allen 2010, 1).

### *Migration and early medieval*

- 10.3.22 Understanding of the migration and early medieval periods on the Island is very limited. There are few assets of each period and only a slightly greater number which may date to either period. Migration period occupation sites have been identified at Yaverland hillfort and Carisbrooke Castle and the Carisbrooke area has been identified as a 'central place' for the period with a possible early medieval *burh*. Three manors with early medieval antecedents have also been identified and place-name evidence has been used to suggest areas with the potential for early medieval settlement. Known migration period sites are mostly of a ritual or funerary nature and comprise two nationally important cemeteries at Bowcombe and Chessell and a variety of smaller burial or cremation sites primarily located on the central downland. The concentration of such sites on the central downs may reflect the greater investigation in this area, rather than a genuine attribute of migration period activity.

10.3.23 The generally limited understanding of this period across the region is noted in the *Solent Thames Archaeological Research Framework Research Agenda* for the early medieval period (Crawford and Allen 2010, 1). They also note that the level of understanding, evidence and data collection is variable across the region and this should be addressed to allow comparisons across the region. On the Isle of Wight these issues could be addressed through a number of research strategies including:

- Targeted, systematic field survey (including metal detecting and fieldwalking) in order to identify possible migration and early medieval sites.
- Targeted investigation (including field survey and excavation as appropriate) of possible migration and early medieval assets. This should include assets identified from NMP, from documentary and place-name evidence and from artefact scatters and metal detecting.
- The integration of evidence from a variety of sources (palaeoenvironmental, historical, archaeological, landscape etc). The importance of integration is emphasised in the *Solent Thames Archaeological Research Framework Research Agenda* for the Early Medieval period (Crawford and Allen 2010, 1) and could benefit understanding of the early medieval period on the Island.

10.3.24 In addition the particular nature of archaeology on the Island provides opportunities to address or contribute to regional research priorities from the *Solent Thames Archaeological Research Framework Research Agenda* for the early medieval period (Crawford and Allen 2010):

- Investigation of possible migration period cemetery sites identified through artefact concentration could contribute to improving understanding of the chronology of Anglo-Saxon cemeteries and the socio-economic aspects of burial (Crawford and Allen 2010, 2;6).
- Investigation into settlement patterns and the nature of early medieval settlements. This could include investigation into whether the known Anglo-Saxon cemeteries on the downland are associated with settlements on nearby lowlands; targeted survey of early medieval manors and villages currently only known from documentary sources; and consideration of the possible Roman origins and later medieval development of early medieval settlements at Brading, Carisbrooke and other early medieval centres along the central chalk downland. This could contribute to regional understanding of 'estate centres' and settlement hierarchy (Crawford and Allen 2010, 4–5).
- Investigation into possible *burhs* and other defensive features is identified as a priority in the *Solent Thames Archaeological Research Framework Research Agenda* for the early medieval period (Crawford and Allen 2010, 8) in order to improve understanding of warfare and defence. In this light the possible *burh* at Carisbrooke should be reinvestigated.
- The possible early-medieval boundary between King's Quay and St Lawrence would also repay further investigation, to confirm its date and perhaps contribute to understanding of linear earthworks and parish boundaries of the early medieval period (Crawford and Allen 2010, 4; 8).
- Further investigation is needed into the archaeological origins of the earliest medieval churches and their associated villages. Currently the evidence for most early medieval settlements is primarily documentary. The identification and excavation of associated archaeological remains would be of considerable value in understanding early medieval religion and settlement development (Crawford and Allen 2010, 6).

#### *Later medieval*

10.3.25 The later medieval period is relatively well understood as the archaeological evidence is supported by documentary sources. The distribution of settlement and

land use is relatively well understood and the Historic Landscape Characterisation has been carried out across the Island. Four later medieval towns at Newport, Yarmouth, Brading and Newtown were complemented by a large number of smaller nucleated villages and dispersed settlements associated with manors owned by civil or religious Lords. The abbey at Quarr and the priories of St Helens and Carisbrooke were the major monastic institutions on the Island. Settlement was concentrated on the southern part of the Island and was more limited within the Northern Lowlands and downlands. A number of deserted settlements have been identified from documentary sources, but in many cases there is no archaeological evidence. The Island was defended by Carisbrooke Castle and a network of beacons which gave advance warning of attack.

10.3.26 As with the early medieval period, the *Solent Thames Archaeological Research Framework Research Agenda* for the later medieval period (Munby and Allen 2010, 1) emphasises the need to integrate archaeological, scientific, environmental, documentary, historical and art-historical sources. To this end the following research priorities have been identified:

- Analysis of NMP results in terms of the HLC to identify any surviving remains of landscape management features identified in the HLC.
- Extension of fieldwalking and systematic metal detecting survey to provide a context for chance finds and artefact scatters within the HER.
- Further archaeological investigation of later medieval assets identified from documentary research in order to confirm their location, nature and origin.
- Further excavation of later medieval settlements in order to refine the chronological framework for the Island.

10.3.27 In addition, the Island offers the opportunity to address certain specific research questions identified in the *Solent Thames Archaeological Research Framework Research Agenda* for the later medieval period (Munby and Allen 2010):

- The development of field systems and landscape management features including their relationship with settlement and later maps (Munby and Allen 2010, 2).
- The nature of village morphology, its relationship with settlement hierarchies and the causes, nature and impact of desertion of later medieval settlements (Munby and Allen 2010, 4).
- The origins nature and characterisation of the manorial sites of the Island (Munby and Allen 2010, 5).
- Research questions associated with the nature of rural later medieval buildings, their character and development (Munby and Allen 2010, 6).
- The nature of granges in relation to monastic houses and civil manors (Munby and Allen 2010, 7).
- The development of parish churches, from the well understood *parochia* of the early medieval period to later medieval chapels and parishes. Their location in relation to villages and manors would also be of interest as there is often little archaeological evidence for sites attested in documentary sources (Munby and Allen 2010, 7–8).
- Reconsideration of Carisbrooke Castle as a defensive site, including its relationship with the many later medieval beacons. This could include further archaeological investigation of beacon sites themselves.
- Further investigation of Quarr quarry, consideration of whether any evidence of later medieval working survives on the site and whether this could contribute to questions regarding the origin and production of later medieval stone (Munby and Allen 2010, 10).

### *Post-medieval*

- 10.3.28 The post-medieval period is very well understood, but despite the good understanding of the history and buildings of the period, there has been limited archaeological excavation of post-medieval remains. Many buildings survive from this period and documentary and map evidence provides considerable information on settlement patterns and land use. The rural settlement pattern of the later medieval continued into the post-medieval period and a number of large houses developed fashionable landscaped parks. The Island became increasingly important in the conflicts of the period and a number of military assets of the period survive within the aggregates resource. By the end of the period the Isle of Wight boasted a royal residence at Osbourne House and had become a popular tourist destination. The railway network brought tourists from the northern ports of Yarmouth, Cowes and Ryde to new spa towns at Sandown, Shanklin and Ventnor.
- 10.3.29 The *Solent Thames Archaeological Research Framework Research Agenda* for the post-medieval and modern period (Hind 2010) emphasises the need to investigate further where existing sources are contradictory and improve understanding of the strengths and weaknesses of different types of evidence. The following research priorities could contribute to these aims:
- Dating structures and landscape features wherever possible
  - More integrated approach to the study of documents, maps, standing buildings and archaeological remains.
  - Investigation into the material culture of the period on the Island to improve dating frameworks and investigate the effect of its insular status upon imports and fashions.
- 10.3.30 In addition the Island may contribute to the answering of certain specific research questions for the region and the place of the Isle of Wight within it:
- Investigation into the effect of its position and insularity upon agriculture and urban development on the Island (Hind 2010, 2)
  - Further investigation of known parks and gardens, including their social aspects (Hind 2010, 2).
  - Investigation into the relationship between surviving listed buildings, demolished structures and other surviving remains to categorise and improve understanding of settlement morphology and relationships between what survives and what has been removed. Such studies could also improve understanding of social relationships and mobility (Hind 2010, 2).
  - Studies of public buildings and infrastructure to improve understanding of building materials, settlement development and social change (Hind 2010, 3).
  - A study of church buildings on the Island as an example of those across the wider region, including interior decoration and identifying churches with decorative styles of particular periods (Hind 2010, 4).
  - A systematic study of non-conformist places of worship and religion on the Island is also necessary (Hind 2010, 4).
  - Further investigation into 17th century beacons, 18th century naval sites and 19th century military structures and the interrelationships of various defence/military components (Hind 2010, 4).
  - Reassessment of the nature and usage of post-medieval anchorages and harbours on maritime activity, both civilian and military (Hind 2010, 6).
  - Further investigation into post-medieval roads, including identification of any turnpikes, the pre-turnpike road system and other communally managed roads on the Island (Hind 2010, 6).



- Investigation into the social and architectural impacts of road travel including the distribution of Inns (Hind 2010, 6).

### Modern

- 10.3.31 The modern period is very well understood, but asset densities remain variable because of questions of which modern remains should be considered heritage assets. For earlier periods heritage assets are typically 'those which have survived' but assigning heritage assets for the modern period requires identifying those 'which should be preserved' and is therefore a more complex issue. Those assets which have been identified include a large number of defence assets, many of which relate to the defence of the Island during World War II. Other assets include commemorative assets, such as war memorials, listed buildings, earthworks identified through NMP survey and significant religious buildings such as monasteries and chapels.
- 10.3.32 The *Solent Thames Archaeological Research Framework Research Agenda* for the post-medieval and modern period (Hind 2010) recognises the difficulties associated with identifying which modern assets should be retained and which should not. The *Research Agenda* recommends further integration of different sources and individuals, further investigation where sources are contradictory and recognition of the different strengths and weaknesses of the evidence. To this end the following research priorities have been identified to improve the identification and understanding of genuine modern assets:
- Extension of NMP mapping across the rest of the Island and cross-referencing of identified cropmarks and earthworks against current mapping to identify those assets which are of modern origin.
  - New synthetic approach to defence assets across the Island, including the identification of assets with higher group value and those which merit statutory protection.
  - Active preservation and investigation of World War II assets as required by their deterioration with age (Hind 2010, 4).
  - Further investigation of the role of the Island during the cold war (Hind 2010, 4).
  - Systematic approach to modern buildings and structures, their development over time and what makes them appropriate for listing.
  - Identification of non-Christian places of worship and religious sites and consideration of their significance
  - Identification of civilian defence assets (e.g. air raid shelters)
  - Recording of large and important structures which are still in use (e.g. breweries, industries and sites of scientific research) to provide evidence for the assets of the future.
  - Recording of smaller crafts and cottage industries on the Island.
  - Oral histories to place documentary resources and physical remains into their cultural context (Hind 2010, 6).

## 11 Mitigation

### 11.1 The archaeological impact of aggregates extraction

11.1.1 Aggregates extraction typically results in the entire removal of any archaeological (i.e. buried), built heritage (i.e. standing buildings or structures) or historic landscape (i.e. woodland, earthworks, hedgerows and field systems). This impact derives from two main phases:

- Preliminary topsoil strip and enabling works – Archaeological deposits would potentially be located immediately beneath the topsoil. Removal of the topsoil exposes any archaeological remains that may be present immediately beneath the topsoil. Exposed remains may then be damaged by subsequent movement of vehicles and plant involved in construction activities (i.e. through rutting and compaction) and the construction of new ground surfaces and site amenities (e.g. offices, rest areas, processing plants etc). In addition, it is possible that topsoil removal without archaeological supervision may result in overstripping, which would have a direct impact upon archaeological remains located beneath the topsoil, or understripping, where archaeological features are concealed beneath a thin layer of topsoil but are then exposed and unprotected from subsequent activities.
- Aggregate extraction – which entirely removes any surviving assets, (including archaeological remains, built heritage and historic landscape features where these were not removed by the preliminary topsoil strip).

### 11.2 Planning Policy and guidance

11.2.1 The status of archaeological remains in the planning system is outlined in national, and local planning and minerals policy and guidance and minerals planning policy:

- Planning Policy Statement 5 (PPS5): *Planning for the Historic Environment*
- Planning Policy Statement 1 (PPS1): *Delivering Sustainable Development*
- Minerals Policy Statement 1 (MPS1): *Planning and Minerals*
- Isle of Wight Unitary Development Plan (saved policies)

11.2.2 These policies and guidance establish that development and minerals extraction should take place in accord with principles of sustainable development. They emphasise that heritage assets of national (very high) significance (including statutorily protected sites and those of equivalent merit) should be preserved *in situ*, while sites of lesser significance should be subject to archaeological excavation and recording (*preservation by record*) where the needs of the development outweigh the need to preserve archaeological remains *in situ*.

11.2.3 As a result of this planning policy, the process of archaeological investigation into a site has become well defined into a number of stages designed to define the nature and extent of archaeological remains on a given site in order to determine whether any remains are of national significance and identify an appropriate mitigation strategy. All archaeological work should be undertaken to the standards prescribed in English Heritage (2006; 2007), Institute for Archaeologists (IFA 2001a; 2001b; 2001c) and national and local guidance.

11.2.4 Guidance on the application of planning policy to minerals and the historic environment is provided in *Mineral Extraction and Archaeology: A Practice Guide* (MHEF 2008) and *Mineral Extraction and the Historic Environment* (English Heritage 2007). Any archaeological investigation, whether invasive or non-invasive, should take consideration of the research priorities discussed in the Research Strategy and Agenda (section 10) of this project report and other relevant documents (e.g. *Solent Thames Archaeological Research Framework*).

## 11.3 Desk-based assessment

### *Introduction*

- 11.3.1 The initial stage of archaeological investigation is a desk-based historic environment assessment (HEA) and is sometimes included in an Environmental Impact Assessment (EIA) where one is requested by the planning authority.
- 11.3.2 Under the terms of PPS5 an HEA forms an initial stage of investigation of the area of proposed extraction and may be required as part of a planning submission in order for the local planning authority (LPA) to formulate an appropriate response in the light of the impact upon any known or likely heritage assets. These are parts of the historic environment which are considered to be significant because of their historic, archaeological, architectural or artistic interest. These might comprise below and above ground archaeological remains, buildings, monuments or heritage landscape within or immediately around the site (DCLG 2010, 1, 13).
- 11.3.3 The HEA will set the site into its full archaeological and historical context in order to determine the likely nature, extent, preservation and significance of any heritage assets that may be present within the site or its immediate vicinity. It will assess the likely impacts from the proposed extraction upon any known or likely heritage assets and make recommendations as to the next stage of investigation. Where understanding of the archaeological remains on the site is very good and can be determined to a high degree of certainty, it may be possible to undertake archaeological mitigation immediately without further initial investigation. More usually the HEA will recommend further site-based investigation into the nature of the remains because the existing information is insufficient to determine precisely what is present on the site. This investigation may take the form of invasive or non-invasive procedures. The HEA may also include or recommend a survey of the buildings and historic research to identify relevant physical and historical aspects of the building in order to make an assessment of the importance of the building, whether it should be retained and whether further recording would be appropriate.

### *Predicting archaeological remains*

- 11.3.4 The current level of understanding across the aggregates resource of the Island will have a direct impact on the accuracy of any prediction in an HEA as to the nature, date and significance of any archaeological remains within that area. In general the greater the understanding, the greater the probability of predicting at the desk-based stage the nature and significance of the remains which are likely to be present. The following factors improve understanding of the archaeological resource within a given area and so enhance the probability of predicting the nature and significance of any anticipated remains at the desk-based stage:
- High asset density – the greater the number of assets around a site, the more evidence there is as to what might be present on it.
  - High number of past archaeological investigations – the greater the number of archaeological investigations around the site, the more evidence there is as to what might be present within it. If archaeological investigations found no remains, this provides an indication that the absence of evidence reflects a genuine aspect of past occupation patterns and rather than an absence of investigation. Systematic fieldwalking and metal detecting surveys can provide a useful indication of areas with archaeological potential and areas without. Even the results of less systematic metal detecting can reveal possible archaeological sites where very high concentrations of assets have been recovered,
  - NMP coverage – NMP identifies any archaeological remains of either earthwork or masonry type which are sufficiently large and shallow enough and to have had a visible impact upon the patterns of grass and crop

growth. This will include most large and complex sites of most periods as well as diffuse assets such as field systems, enclosures and boundaries. Although NMP identifies all such sites visible in air photographs, further investigation is often required to confirm their date, nature and significance. NMP cannot normally identify deeply buried sites beneath alluvium or remains of the earliest prehistoric periods (Palaeolithic and Mesolithic) and particular types of sites (e.g. cemeteries without earthwork boundaries) may also be invisible. A qualified archaeological contractor would normally be able to view, interpret and plot aerial photographs, even if NMP had not been completed, but may not be able to access as wide a range of photographs as the NMP.

- 11.3.5 It would therefore be easier to predict accurately the nature and significance of archaeological remains within the study areas with the very high asset densities (i.e. East Wight Chalk Ridge, Freshwater Isle, South West Wight Coastal Zone, Undercliff and West Wight Chalk Downland). Where a very high density study area has been subject to NMP mapping and has had a history of intensive investigation (i.e. East Wight Chalk Ridge and West Wight Chalk Downland), desk-based predictions of the nature and significance of predicted archaeological remains are likely to have a greater accuracy still. However, this may not obviate the need for non-invasive investigation or evaluation which may still be required at the discretion of the County Archaeologist.
- 11.3.6 In areas where understanding is low due to a low asset density, limited past investigation and an absence of NMP survey, initial non-invasive investigation and evaluation are more likely to be required because the nature and significance of the remains are less predictable at the desk-based stage.

## **11.4 Non-invasive techniques of evaluation**

- 11.4.1 Non-invasive techniques may be undertaken at the same time as desk-based assessment, subsequent to it or as part of an invasive field evaluation of the potential of the site. Non-invasive archaeological techniques require minimal ground disturbance and may be an appropriate initial stage of site based investigation, particularly if a site is very large in area or if understanding of the archaeology of the area is very limited.

### *Walkover survey*

- 11.4.2 Walkover survey is often undertaken as part of an initial phase of desk-based assessment but may also be incorporated into later investigations. It can be used to identify and monitor any up-standing buildings or historic landscape features (e.g. Scheduled Monuments, historic field boundaries, barrows etc), identify likely areas of archaeological interest and record features that may be periodically obscured (e.g. by tidal movement, growth of vegetation etc). Depending on the purpose of the walkover survey, the location of significant features can be documented using GPS equipment and surveyed to a standard commensurate with their significance as described in RCHME (1999b) and English Heritage (2007b) guidance.

### *Topographical survey*

- 11.4.3 Topographical survey can be undertaken to record and analyse earthworks, field boundaries and other up-standing components of the historic landscape. Topographical surveys should only be undertaken following detailed historic map regression, so that the survey is informed by a clear understanding of the key landscape components.
- 11.4.4 The level of detail recorded should be judged according to the nature of the remains. Recording levels appropriate for specific types of assets are defined by RCHME guidance (1999b). English Heritage guidance (English Heritage 2007b) on recording archaeological landscape may also be appropriate. Survey will normally be

undertaken using GPS equipment and drawings will be generated in CAD, such that the results can be incorporated directly into a digital scheme mapping.

#### *Aerial photographic survey*

- 11.4.5 A survey of aerial photographs might be undertaken as part of a desk-based assessment or an initial stage of a subsequent evaluation. If the site has been included in existing NMP survey, it might only be necessary to examine aerial photographs taken after the NMP was completed (if any). Aerial photographs show two different kinds of feature:
- Cropmarks – buried features are visible as cropmarks or grassmarks because the different material within them causes differential growth of the crop or grass above.
  - Earthworks – The upstanding remains (either positive or negative) are visible from the air.
- 11.4.6 The following types of assets are unlikely to be identified from aerial photographs:
- Deeply buried remains – As the remains have to be sufficiently shallow to have an impact on surface growth deeply buried remains are typically invisible. Typical deeply buried remains include:
    - o Palaeolithic (and sometimes Mesolithic) remains which may be within River Terrace Gravels.
    - o Prehistoric and some historic remains within or beneath alluvium.
    - o Remains beneath landfill or made ground.
  - Small remains – Even if relatively shallow, small features and artefact assemblages are unlikely to be seen because they are not normally large earthwork features and do not affect the water retention of a large area of plants.
  - Burials – Graves are normally refilled with the material dug out of them relatively soon after the initial grave digging. Consequently the grave fill is very similar in water holding properties to the surrounding area and little differential may be visible between the plants above the burial and the surrounding land.

#### *Field artefact collection survey (Fieldwalking)*

- 11.4.7 Surface artefact collection survey (fieldwalking) may be undertaken in fields under arable cultivation. Artefacts within the ground are disturbed by agricultural practices periodically brought to the surface by ploughing. Buried archaeological sites are detected by collecting artefacts from the ploughed field surface and plotting the distribution of different artefact types by period.
- 11.4.8 Fieldwalking is particularly effective for the following types of site:
- Sites with very ephemeral or non-existent sub-soil features
  - Sites rich in durable artefacts such as worked flint or Roman and later medieval pottery
- 11.4.9 Unlike geophysical survey, fieldwalking can determine the period of the site's use. Fieldwalking and geophysical survey may therefore be undertaken together in order to identify the main activity areas in a very extensive development area, but it is rarely cost-effective to use both methods purely for evaluation purposes.
- 11.4.10 Surveys are normally carried out using linear transects 10–20m apart. Fieldwalkers walk along each line, systematically collecting artefacts within a 2m wide sample transect. More intensive coverage can be applied over relatively small areas. Artefacts are then separated into categories and periods and artefact distribution plotted against the linear transects so that areas of artefact concentration are seen as 'hotspots'.

- 11.4.11 If geophysical survey (including metal-detecting) is to be carried out, it may be cost-effective to do such surveys at the same time as the fieldwalking, using the same survey transects.

#### *Geophysical survey*

- 11.4.12 Available methods of geophysical survey include:

- Magnetometer Survey
- Electromagnetic survey (including soil conductivity, magnetic susceptibility, magnetic viscosity, metal detecting and ground penetrating radar)
- Resistivity survey

- 11.4.13 The choice of method depends on the type of archaeology expected, the environment, ground conditions (including, drift and solid geology, depth of overburden above archaeological remains), survey objectives and cost. Detailed guidance on the selection of methods and sampling strategies can be found in the English Heritage (1995) guidance. The advice of a specialist is normally required before determining any geophysical survey strategy.

- 11.4.14 For extensive surveys in rural areas, magnetometer survey is the most commonly used and effective method, usually using a fluxgate gradiometer. Extensive magnetometer survey is capable of revealing the layout of a site in remarkable detail under suitable (magnetically enhanced) soil conditions. Resistivity survey is more effective at detecting certain types of feature, including masonry and brick foundations and is also quite commonly used. Geophysical survey of any sort is rarely an option in urban environments, or for detecting sites covered with thick deposits of hillwash or alluvial deposits, although Ground Penetrating Radar has some applications.

#### *Metal detector survey*

- 11.4.15 Metal-detector survey can be very effectively used in conjunction with surface artefact collection survey (or in place of it where the land is under permanent pasture) and in the course of archaeological excavation. Concentrations of metal artefacts in the ploughsoil are often the first indication for the presence of complex archaeological sites (Roman and medieval settlements and industrial sites, for example). Some important Anglo-Saxon sites consist entirely of scatters of metal artefacts in the ploughsoil.
- 11.4.16 It may be desirable to employ amateur metal-detector users, as a contribution to community access and involvement. However, surveys must always be carried out under the supervision of a suitably experienced professional archaeological contractor, who will record the location of the artefacts and undertake specialist artefact identification, conservation and reporting.

## **11.5 Invasive techniques of evaluation**

#### *Geoarchaeological techniques*

- 11.5.1 Geoarchaeological boreholes and sampling techniques may be used as part of an evaluation or mitigation strategy to investigate geological deposits of archaeological interest, establish the geological sequence on the site, identify any geological deposits with potential to contain archaeological remains and collect palaeoenvironmental and geoarchaeological samples. Where extraction of sub-alluvial River Terrace Deposits is required, geoarchaeological investigation of the alluvial sequence is likely to be required because of the archaeological and palaeoenvironmental potential of these deposits.
- 11.5.2 The identification and dating of geological deposits with archaeological potential and understanding of geological sequences is particularly important for aggregates

extraction sites. Geoarchaeological techniques may be used to identify the potential for such deposits to be of archaeological significance (either through the remains they contain or the potential to improve understanding and dating of the geoarchaeological sequence on the Island) and to mitigate the impacts of aggregate extraction.

- 11.5.3 Where geoarchaeological techniques are used as part of a mitigation strategy the aim is to develop an understanding of the geological sequence (including the date of significant deposits) and to excavate, record and analyse any archaeological remains within the geological sequence in order to improve understanding of the periods concerned.
- 11.5.4 The strategy for geoarchaeological investigation is likely to involve a combination of some or all of the following:
- Investigation and extraction of deposits (most frequently through the use of boreholes and test pits),
  - The extraction of samples (from boreholes, bulk sampling and monoliths)
  - Laboratory analysis and testing (including analysis of stratigraphic deposits, micro-artefact sieving, Optically Stimulated Luminescence dating, palaeoenvironmental analysis of pollen, insects and other environmental indicators) where appropriate.
  - Topographical modelling of the surface and subsurface deposits to inform understanding of past landscapes.
- 11.5.5 Stratigraphic information from individual logs can be entered into a specialist geological modelling program in order to allow borehole cross-sections through the site to be generated and topographical projections of identified surfaces to be constructed (e.g. Pleistocene gravel surface topography). Information from individual boreholes and test pits is examined and the major stratigraphic units identified. Interpretation of the geological sequence at each stage will be informed by palaeoenvironmental data, as it becomes available.

#### *Field Evaluation*

- 11.5.6 Following a HEA or initial non-invasive investigation, archaeological evaluation may be requested to confirm the results of the earlier work. Evaluation usually comprises a series of trial trenches or test pits across the site and archaeological boreholes. Archaeological monitoring of geotechnical investigations may be included to provide information on the stratigraphic sequence and the potential for geoarchaeological and palaeoenvironmental information. The proportion of the site and distribution of the pits would need to be agreed with the Island's County Archaeologist. The location and distribution of the test pits and trenches would normally be expected to investigate any anomalies identified in earlier work and provide good coverage of the site to give the best opportunity for the identification of previously unidentified archaeological remains.
- 11.5.7 Field evaluation on proposed aggregate extraction sites is most likely to comprise large open test trenches. Made ground and topsoil is normally removed by machine. Further deposits may then be removed by machine until archaeological remains are identified. All machining is undertaken under archaeological supervision. Any archaeological remains are cleaned and recorded and may be sampled to obtain evidence for their date and significance. The size and distribution of the evaluation trenches would need to be agreed with the County Archaeologist and would be expected to investigate any anomalies identified during earlier non-invasive investigations.
- 11.5.8 The depth of the required evaluation trenches will depend upon the likely depth of any archaeological remains and the geology type. Across most aggregate geologies, archaeological remains are likely to be relatively shallow. Remains of the later prehistoric to modern periods are typically present above or cut into the top of the

highest natural deposits whether these are the aggregate bearing geologies (e.g. River Terrace Deposits, Angular Flint Gravel, Chalk etc) or superficial non-aggregate geologies overlying them.

11.5.9 Certain geology types have the potential to contain archaeological remains at deeper levels. If the following geologies are present on the proposed extraction site, deeper evaluation trenches or test pits may be required:

- River Terrace Deposits, Angular Flint Gravels, Raised Marine Deposits and Blown Sand have the potential to contain Palaeolithic remains. Geoarchaeological investigation of these strata may be required to confirm the extent and date of these deposits and if any archaeological remains are present.
- Alluvium (present above sub-alluvial River Terrace Deposits in river valleys, on floodplains, marshes or semi-inundated land) has potential for palaeoenvironmental remains and deeply buried *in situ* assets, potentially including well preserved waterlogged material. Investigation (through boreholes, test pits or deep trenches) of the archaeological and palaeoenvironmental potential of the alluvium would be required prior to any aggregate extraction

## 11.6 Mitigation

11.6.1 Following the completion of the evaluation phase, a historic environment mitigation strategy would be developed and agreed with the County Archaeologist. Mitigation may include any of all of the following:

- Re-design or modification of the proposals to allow for the *preservation in situ* of any nationally significant remains (whether these have been statutorily protected or have been recently identified). Nationally significant remains could potentially include elements of the historic landscape (such as Ancient Woodland or protected Hedgerows).
- Archaeological excavation to comprise *preservation by record* of archaeological remains which are not of national significance. Different excavation techniques may be suitable for different environments and types of remains and these are detailed in 0.
- Geoarchaeological investigation to develop an understanding of the geological sequence (including the date of significant deposits) and to excavate, record and analyse any archaeological remains within the geological sequence. Geoarchaeological investigation may include any or all of the techniques described in 0.
- Watching brief – comprising intermittent attendance by an archaeologist to ensure no archaeological remains are removed without record during non-archaeological works that are unlikely to have an impact on archaeological remains.
- Standing building recording – should any standing structures of historic interest be identified, but not considered appropriate for *preservation in situ*, standing building recording is likely to be requested. This would comprise a survey of the structure undertaken before demolition, with accompanying historical research and visits during demolition (if appropriate) to identify any features not visible during the initial survey. The levels of standing building recording have been set out by English Heritage (2006) and the IFA (2001c) and vary depending on the importance of the structure.

### *Excavation techniques*

11.6.2 The precise form of mitigation will depend upon the significance, preservation, underlying geology and depth of the archaeological remains present on site. Sites



on River Terrace Deposits (i.e. particularly in Northern Lowlands, South West Wight Coastal Zone and also in parts of Arreton Valley, Newchurch Sandown and South Wight Sandstone) may require geoarchaeological investigation as in 4) below to determine the date and extent of the River Terrace Deposits. Deeper trenches might also be required to excavate any *in situ* Palaeolithic remains within the River Terrace Deposits.

11.6.3 Sites within the alluvium (i.e. in parts of Brading Haven Bembridge Isle, Freshwater Isle and Newchurch Sandown) may require geoarchaeological and palaeoenvironmental investigation to provide answers to research questions about the past environment. Deeper trenches (as described in 4) below) may be required to excavate *in situ* prehistoric deposits if present within the alluvium:

- 1) Where diffuse or dispersed archaeological remains (e.g. field systems with localised settlement or ritual landscapes) are likely to be located at shallow depth (i.e. most extraction sites and particularly on River Terrace Deposits) 'general excavation' is likely to be most appropriate.
- 2) Where understanding of archaeological potential and significance is very good 'targeted excavation' may be most appropriate. Normally a thorough HEA, followed by non-invasive investigation and/or field evaluation would be required to confirm that the targeted areas are of sufficient archaeological significance and whether other areas require 'general excavation' or 'watching brief'.
- 3) A watching brief may be appropriate if proposed works (e.g. geotechnical works, preparatory excavation works, site preparation, preliminary topsoil/subsoil strip and other enabling works etc) are only anticipated to have a limited and localised impact on archaeological remains and/or in areas where preceding HEA and non-invasive investigation and/or field evaluation have identified a low archaeological potential where no significant archaeological remains are anticipated.
- 4) Where archaeological potential has been identified within geological deposits (i.e. River Terrace Deposits, Angular Flint Gravel, Raised Marine Deposits or Blown Sand) or alluvium; deeper excavations, geoarchaeological tests pits and boreholes may be required to mitigate the impacts upon deeper remains. These could include localised areas of deeper excavation where higher archaeological potential has been identified. On alluvium, battered or stepped trenches up to 4m below ground level (mbgl), with further machine dug (and not manually accessible) test pits in the base may be required to reach deep remains.

#### General excavation

11.6.4 General (also known as 'strip, map and sample') excavation is particularly appropriate for large scale extraction sites with relatively shallow rural sequences. It is particularly advantageous in recording large areas and diffuse features. It should be undertaken according to a Method Statement agreed with the County Archaeologist and in accordance with the IFA guidelines (IFA 2001):

- Strip – The topsoil or made ground is removed by machine under archaeological supervision until the subsoil or first archaeological layer is reached.
- Map – Archaeological deposits are hand cleaned to define the edges of discrete features and a measured plan, photographic and written record is made of the visible features.
- Sample – Visible artefacts are collected to assist in dating of features and deposits. Sections (of circular or linear features) and quadrants (of large circular or sub-circular features) of large or significant features are excavated to recover artefacts and record internal stratigraphy. Certain

types of features (burials, hearths, stratified remains or significant features) are hand excavated in their entirety by the archaeologist and recorded. Palaeoenvironmental sampling of buried soil horizons and bulk sampling of certain deposits will be undertaken to retrieve additional evidence.

#### Targeted excavation

- 11.6.5 Targeted excavation is most suitable where the archaeological potential of the site is well understood and localised areas of interest with significant archaeological remains have been identified. Under these conditions, archaeological investigation can focus on a particular area of archaeological remains rather than stripping a large area, including areas of no archaeological potential.
- 11.6.6 Should areas of complex and deeply stratified archaeological deposits be identified, 'single context excavation' may be appropriate. Such complex and stratified deposits are unlikely to occur outside an urban environment. Single context excavation excavates each feature in its entirety and records them individually in plan. This enables the stratigraphic sequence to be reconstructed at the post-excavation stage. A written record provides additional information on the nature of contexts.

#### *Watching Brief*

- 11.6.7 During a watching brief an archaeologist may be required to visit the site during or prior to specific works to ensure no previously unknown or unexpected remains are removed without record.
- 11.6.8 There are two forms of watching brief:
- General watching brief – an archaeologist visits the site at predetermined intervals to monitor archaeologically sensitive areas where no specific remains have been identified but where there is a risk that works may have an impact on previously unknown remains.
  - Targeted watching brief – an archaeologist observes certain specific locations or processes which have been identified as posing a potential risk to specific archaeological remains.
- 11.6.9 There may also be provision for the client to contact the archaeologist should archaeological remains be located. Should remains be identified provision would normally be required for the excavation and recording of such remains by the attending archaeologist and/or others.
- 11.6.10 The watching brief would need to be undertaken in accordance with IFA guidance (IFA 2001e) and the requirements of the County Archaeologist.

#### *Standing building recording*

- 11.6.11 Standing building recording may be applied to significant buildings and structures prior to demolition and clearance. The level of recording will be commensurate with the significance of the remains, and will be carried out in accordance with RCHME (1999a), English Heritage (2006a; 2006b; 2007b; 2007c and 2008) and IFA (2001b; 2001c) guidelines. The 19th and 20th century development of the site is as important as earlier phases. As minimum, digital records of buildings and other structures will be included in the Project digital mapping in layers illustrating the historic development of the site. Much of this information can be obtained from digital overlays of historic map information. However, particularly important standing structures may require more detailed recording.
- 11.6.12 In general, baseline recording of significant structures will be undertaken to RCHME Level 2. In summary, this is a descriptive record in which both the exterior and interior of the building is seen, described and photographed. The examination of the building will produce an analysis of its development and use and the record will include the conclusions reached, but will not discuss the evidence on which the analysis is based. A plan will be made and elevations may be appropriate in some

circumstances.

- 11.6.13 Building survey will not be undertaken until existing documentary sources have been consulted, as adequate survey records may already exist in some cases, particularly for modern oil refinery structures.

*Post excavation*

- 11.6.14 Following completion of the fieldwork the data and artefacts recovered from the site would require post-excavation assessment and analysis to determine the potential of the data, appropriate analytical techniques and type of publication. The results of the assessment would need to be presented to the County Archaeologist and the type of analysis and publication agreed with them. On completion of the project, the publication or client report would need to be lodged with the Isle of Wight County Archaeological Collection and included in the HER.

## 12 Conclusion

- 12.1.1 This project was undertaken by MOLA and Isle of Wight Council, with funding from the ALSF administered by English Heritage with the aim of improve knowledge if the archaeological resource in aggregate producing areas of the Isle of Wight to facilitate strategic planning decision and the management of historic environment assets within them.
- 12.1.2 The methodology employed in the project followed that used by 'Archaeological Resource Assessment of the Aggregates Producing Areas of Warwickshire and Sollihull' in order to ensure the results were comparable with those of the Warwickshire and other Resource Assessments employing the same methodology. The project identified areas of past, present and potential future extraction from BGS mapping, historic maps, BritPits Database and current minerals permissions. Where evidence from past extraction indicated the presence of aggregates resources not shown on the BGS mapping, these were estimated from the location of the past extraction sites, the probable geology and the surrounding topography. Once urban areas were excluded, 47% of the Island had been identified as 'aggregates resource' and this was divided into study areas based on the Isle of Wight HEAP, reflecting the topography, geology, history and demography of the Island.
- 12.1.3 A Backlogs Project identified two archaeological investigations prompted by past aggregate extraction which were not present on the HER, and an NMP survey of two areas of the Island identified a large number of previously unknown archaeological remains visible in aerial photographs. The project database, derived from the Isle of Wight HER, was updated with the results of these projects and with information from the NMR, which was generally found to be less accurate and comprehensive than the HER. The HER data within the project database was then checked to ensure dating was consistent and enhanced with additional information on the nature of the assets. These changes to the project database resulted in a 27.5% increase in assets of known date and a 22% increase in the number and density of total assets. The impact upon particular periods was even greater, with the Mesolithic, migration and early medieval periods showing the greatest increase. As the Backlogs Project and NMR survey had little effect on the number of HER assets, it is believed that this change is primarily due to the new assets identified during the NMP survey and the improved dating of some assets resulting from HER enhancement.
- 12.1.4 The enhanced and updated project database was then used to generate asset density figures for an archaeological resource assessment. This considered the density of types of assets (e.g. domestic, ritual, agricultural etc) across the aggregates resource, divided by period and study area, and how this reflects past occupation and activity and the history of archaeological investigation. This revealed some clear patterns in the asset densities of different periods:
- The Bronze Age and Roman periods had particularly high asset densities. This reflects the good understanding of the Roman period and the distribution of Bronze Age barrows, although other Bronze Age assets are likely to be underrepresented.
  - The low density of migration and early medieval assets reflects current limited understanding of these periods.
  - The low density of modern assets is probably associated with the perception of when and why a modern asset is of sufficient interest to be included in the HER.
- 12.1.5 Spatially, the archaeological resource assessment some clear patterns associated with asset density, geology, topography and asset distribution:
- The highest density study areas are associated with the southern and eastern coast and the central ridge.

- Chalk geologies appear particularly associated with high density areas, although this is not universal and may be due to the nature of data collection. River terrace deposits, Bracklesham group and Barton group, ferruginous sands, and sandrock series have also formed major geological components of study areas with high asset densities. River terrace gravels (including plateau gravels) on the Island have historically produced significant concentrations of flint artefacts of early prehistoric date.
- 12.1.6 There is no consistent association between high asset densities and particular geology types and the presence of a particular geology is not therefore sufficient to identify an area with a high density of archaeological assets. This is likely to be because asset density reflects current understanding of the archaeological resource, with lower density areas being less well understood than high density areas. Increased investigation (including extending NMP coverage) of low density study areas may reveal more consistent relationships between geology or geography and asset density.
- 12.1.7 The asset densities and accompanying archaeological Resource Assessment provided the basis for a Research Strategy and Agenda. This identified four general research priorities, which would have an impact on the asset densities of multiple periods across the aggregates resource:
- Geological and geoarchaeological research to identify and date the full extent of unmapped River Terrace Deposits and any archaeological potential associated with them.
  - Extension of the NMP survey across the rest of the Island.
  - Re-assessment of assets recovered by antiquarians (where possible) to reflect modern typologies and development in scientific dating.
  - Targeted investigation of assets of uncertain date or nature (including some identified by NMP)
- 12.1.8 Further specific research priorities were identified to improve understanding of particular periods. These research priorities would be appropriate to any investigation into the archaeology or heritage of the aggregates resource (whether associated with proposed aggregates extraction or not) and other research agendas should also be considered.
- 12.1.9 Given the potential impact on the historic environment that normally results from extraction, it is likely that any proposals for aggregate extraction would require archaeological investigation of the area of impact. Confirmation of the precise procedures required for particular sites would need to be agreed with the County Archaeologist, but the process of historic environment assessment, evaluation (either invasive or non-invasive) and mitigation of any impacts was outlined in the report. In general it was noted that the identification of possible assets and impacts through historic environment assessment is likely to be most effective in high density study areas, while site-based invasive or non-invasive field investigation would almost certainly be required in lower density areas. It was noted that geoarchaeological investigation might be required for the evaluation and mitigation of extraction impacts on River Terrace Deposits and other superficial aggregate producing geologies with potential for *in situ* Palaeolithic remains. Similarly, where alluvium is present over aggregate deposits, geoarchaeological and palaeoenvironmental investigation is likely to be required to evaluate and mitigate any impacts on archaeological remains within the alluvium and this might require large or deep trenches to access deep alluvial deposits. Elsewhere, fieldwalking, metal detecting, geophysical survey and trial trenching would be appropriate evaluation techniques and could be followed by general excavation of large areas of shallow, diffuse archaeological remains; targeted excavation of more significant archaeological sites; and/or watching brief of areas where impacts from extraction or the potential for, and significance of, archaeological remains are anticipated to be low.

12.1.10 The results of the project, including this project report and changes to the Isle of Wight HER, will be used to facilitate management of the impacts of aggregate extraction on archaeological remains. The report has provided a summary of the current understanding of archaeological remains and indicated those areas of the Island where a greater density of archaeological remains would be at risk from aggregate extraction or where understanding is limited and the impacts of any proposed extraction cannot be determined without further field investigation. It also provides a research agenda and strategy for any further archaeological work associated with aggregates extraction and an indication of the position of archaeological within the planning process and the possible investigation and mitigation strategies which may be employed to determine and mitigate the impacts of extraction on archaeological remains. The report will be circulated widely to members of the Isle of Wight Council employed in archaeology and minerals planning, to English Heritage and the minerals industry. The results of the report will be further disseminated through a project seminar to be held on the Island.

## 13 Acknowledgements

- 13.1.1 The project team wishes to acknowledge the help and support of all those who have assisted with the project including Buzz Busby and Barney Sloane of English Heritage; the period experts Dr Francis Wenban-Smith, Malcolm Lyne, Dr Rob Scaife, Dr Ruth Waller and Rebecca Loader who reviewed the period summaries; Chris Mills of Isle of Wight Planning who provided advice on aggregates geologies and current minerals permissions; Cornwall County Council NMP Team who undertook the NMP survey; ARCUS (now a division of Wessex Archaeology) who modified and updated the Backlogs Project database; Delian Blackhouse Fry of PIWNHAS and Mark Cahill, Darryl Palmer of Archaeology South-East, Rob Bourn of CgMs consulting, Paul Martin of Absolute Archaeology and William Bedford of Oxford Archaeology who all provided information to the Backlogs Project; the NMR who provided the NMR data; and Rebecca Loader and her team at the Isle of Wight HER who provided shapefiles and descriptions, checked entries and answered questions about the project data.

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## 15 Appendix 1: Table of all current and past extraction sites on the Isle of Wight

15.1.1 The following table details all known aggregates extraction sites, past and present within the aggregates resource on the Isle of Wight. Note that where this project has identified potential previously unmapped gravel deposits, these are described in the table as 'Additional gravel deposits' as in Fig 2.

Table 7 Past and present aggregate extraction sites on the Isle of Wight

Name	NGR Easting	NGR Northing	Formation	Source	BritPits Pit ID
Afton Down	435215	85780	Chalk	Historic OS map	N/A
Afton Down	435410	85850	Chalk	Historic OS map	N/A
Afton Down	435607	85865	Chalk	Historic OS map	N/A
Afton Park	434505	86715	River Terrace Deposits	Historic OS map	N/A
Aldeen	454561	93273	River Terrace Deposits	Historic OS map	N/A
Alverstone Cottages	452392	92869	River Terrace Deposits	Historic OS map	N/A
Apesdown	445858	87644	Chalk	Historic OS map	N/A
Appley	460995	91711	River Terrace Deposits	Historic OS map	N/A
Appuldurcombe	453900	80260	Upper Greensand	BritPits	16204
Appuldurcombe	453815	80415	Upper Greensand	BritPits	18216
Appuldurcombe Down	453200	79685	Upper Greensand	BritPits	18218
Appuldurcombe Down	453490	79873	Chalk	Historic OS map	N/A
Appuldurcombe Down Marl Pit	453690	80300	Chalk	BritPits	18217
Apse Castle	456480	81765	Sandrock	BritPits	2450
Apsedown	445596	87573	Chalk	Historic OS map	N/A
Apsedown Copse	444919	87511	Chalk	Historic OS map	N/A
Apsedown Copse	444919	87592	Chalk	Historic OS map	N/A
Apsedown Copse	445305	87453	Chalk	Historic OS map	N/A
Apsedown Field	445128	88048	Bracklesham Group and Barton Group	Historic OS map	N/A
Arreton	453160	87110	Chalk	BritPits	18201
Arreton	453107	86356	River Terrace Deposits	Historic OS map	N/A
Arreton Down	454381	87503	Chalk	Historic OS map	N/A
Arreton Down	454309	87425	Chalk	Historic OS map	N/A
Arreton Down	454677	87497	Chalk	Historic OS map	N/A
Arreton Down	454809	87497	Chalk	Historic OS map	N/A
Arreton Down Chalk Pit	454640	87055	Chalk	BritPits	18210
Arreton Downs Chalk Pit	454080	87020	Chalk	BritPits	18202
Ashengrove Cottages	444552	87198	Chalk	Historic OS map	N/A
Ashey Chalk Pit	457460	87880	Chalk	BritPits	18225
Ashey Down Chalk Pit	457125	87835	Chalk	BritPits	27489
Ashey Down Chalk Pit	458140	87800	Chalk	BritPits	27490
Barnes High	443830	80898	Upper Greensand	Historic OS map	N/A
Barton's Corner	456968	91535	River Terrace Deposits	Historic OS map	N/A
Bembridge Causeway	463724	87964	Raised Marine Deposits	Historic OS map	N/A
Bembridge Down	462587	86225	Chalk	Historic OS map	N/A
Bembridge Down	462506	86336	Chalk	Historic OS map	N/A
Bembridge Down	463182	85808	Chalk	Historic OS map	N/A
Berry Copse Sand Pit	448320	82420	Sandrock	BritPits	18251

Binstead	457790	92280	Bembridge Limestone	BritPits	6856
Blackgang	449016	76683	Upper Greensand	Historic OS map	N/A
Blackwater Quarry	451000	87600	River Terrace Deposits	BritPits	2451
Blackwater Road	450612	85313	River Terrace Deposits	Historic OS map	N/A
Bleak Down Landfill	451150	81520	River Terrace Deposits	Historic OS map	N/A
Bleakdown Gravel Pits	451155	82430	River Terrace Deposits	BritPits	18206
Bloodstone Copse	458539	87671	Additional gravel deposits	Historic OS map	N/A
Bouldnor Cliff	438751	90643	River Terrace Deposits	Historic OS map	N/A
Bourne Cottage	455560	92199	River Terrace Deposits	Historic OS map	N/A
Bowcombe	447338	86774	Chalk	Historic OS map	N/A
Bowcombe Down	446522	87652	Clay with flints	Historic OS map	N/A
Bowcombe Down	446535	87394	Clay with flints	Historic OS map	N/A
Bowcombe Down	446076	83032	Chalk	Historic OS map	N/A
Bowcombe Down	446787	87636	Chalk	Historic OS map	N/A
Bowcombe Down	447368	88055	Clay with flints	Historic OS map	N/A
Bowcombe Down	446667	88066	Chalk	Historic OS map	N/A
Bowcombe Down	446836	88099	Chalk	Historic OS map	N/A
Bowcombe Down	447429	88204	Chalk	Historic OS map	N/A
Bowcombe Down	447819	88222	Chalk	Historic OS map	N/A
Brading Cement Works	461285	87345	Bembridge Limestone	BritPits	18236
Brading Down	459296	86830	Upper Greensand	Historic OS map	N/A
Brickfields Equestrian Centre	456939	91351	River Terrace Deposits	Historic OS map	N/A
Brickiln Copse	453357	93506	Additional gravel deposits	Historic OS map	N/A
Brighstone Down	442351	85037	Chalk	Historic OS map	N/A
Brighstone Down	443947	85005	Chalk	Historic OS map	N/A
Brighstone Down	443837	84744	Chalk	Historic OS map	N/A
Brighstone Down	443762	84784	Chalk	Historic OS map	N/A
Brighstone Down	443637	84669	Chalk	Historic OS map	N/A
Brighstone Down	443665	84580	Chalk	Historic OS map	N/A
Brighstone Forest	439079	85598	Chalk	Historic OS map	N/A
Brighstone Forest	439318	85586	Chalk	Historic OS map	N/A
Brighstone Forest	444312	85341	Clay with flints	Historic OS map	N/A
Brighstone Forest	444025	85349	Clay with flints	Historic OS map	N/A
Brook Down	438268	85151	Chalk	Historic OS map	N/A
Brook Down	438543	85143	Chalk	Historic OS map	N/A
Brook Down	438194	85420	Chalk	Historic OS map	N/A
Brook Down	439057	85048	Chalk	Historic OS map	N/A
Brook Down	439437	85072	Chalk	Historic OS map	N/A
Bunkers Copse	450312	84066	Upper Greensand	Historic OS map	N/A
Calbourne	442609	86649	Chalk	Historic OS map	N/A
Carsibrooke	448250	88227	Chalk	Historic OS map	N/A
Castle Pit	449015	87750	Chalk	BritPits	18243
Causeway Field	435381	68794	Bracklesham Group and Barton Group	Historic OS map	N/A
Chessell Down	439864	85451	Chalk	Historic OS map	N/A
Chessell Down	440014	85409	Chalk	Historic OS map	N/A
Chessell Down	440186	85397	Chalk	Historic OS map	N/A
Chessell Down	440492	85301	Chalk	Historic OS map	N/A
Chessell Down	440564	85281	Chalk	Historic OS map	N/A
Chessell Down	440680	85273	Chalk	Historic OS map	N/A
Chessell Plantation	440120	85620	Bracklesham Group and Barton Group	Historic OS map	N/A



Cheverton Down	444155	84394	Chalk	Historic OS map	N/A
Cheverton Farm	446407	84396	Chalk	Historic OS map	N/A
Cheverton Quarry	445060	84275	Chalk	BritPits	2445
Cheverton Quarry	444000	84000	Clay with flints	BritPits	2452
Chillerton	448440	84005	Chalk	BritPits	28778
Chillerton Down	447409	83181	Chalk	Historic OS map	N/A
Chillerton Down	447781	83348	Chalk	Historic OS map	N/A
Chillerton Down	447806	83702	Chalk	Historic OS map	N/A
Churchill's Farm	439835	86315	Bembridge Limestone	BritPits	18174
Combley Farm	454426	87984	Bracklesham Group and Barton Group	Historic OS map	N/A
Compton Down	436358	85542	Chalk	Historic OS map	N/A
Compton Down	436708	85433	Chalk	Historic OS map	N/A
Compton Down	437052	85376	Chalk	Historic OS map	N/A
Compton Down	437682	85239	Chalk	Historic OS map	N/A
Cowleaze Hill	457587	79814	Chalk	Historic OS map	N/A
Crokers Farm	448952	92763	River Terrace Deposits	Historic OS map	N/A
Downend	453528	87923	River Terrace Deposits	Historic OS map	N/A
Downend	453408	87892	River Terrace Deposits	Historic OS map	N/A
Downend	453346	87834	River Terrace Deposits	Historic OS map	N/A
Downend	453372	88117	River Terrace Deposits	Historic OS map	N/A
Downend Chalk Quarry	453520	87370	Chalk	BritPits	2444
Downend Road	453200	87200	Chalk	BritPits	18200
Dukem Down	447118	85402	Chalk	Historic OS map	N/A
Duke's Copse	447224	93705	River Terrace Deposits	Historic OS map	N/A
Duke's Farm	447040	93888	River Terrace Deposits	Historic OS map	N/A
Dungewood Farm	446467	81211	Ferruginous Sands	Historic OS map	N/A
Duxmore Chalk Pit	455000	87500	Chalk	BritPits	2446
Duxmore Chalk Pit	455140	87570	Chalk	BritPits	18208
East Afton Down	435907	85882	Chalk	Historic OS map	N/A
East Afton Down	436086	85929	Chalk	Historic OS map	N/A
East Afton Down	436462	85909	Chalk	Historic OS map	N/A
East Afton Down	436880	85908	Chalk	Historic OS map	N/A
East Afton Down	436787	85935	Chalk	Historic OS map	N/A
East Afton Farm	436842	86301	Bracklesham Group and Barton Group	Historic OS map	N/A
East Ashey Cottages	458288	88418	Additional gravel deposits	Historic OS map	N/A
East Cowes	450930	95294	River Terrace Deposits	Historic OS map	N/A
Elm Grove	456020	77610	Upper Greensand	BritPits	27501
Elmfield	459922	91291	River Terrace Deposits	Historic OS map	N/A
Fairfields	450650	79669	Sandrock	Historic OS map	N/A
Fishbourne	455650	92235	River Terrace Deposits	Historic OS map	N/A
Fishbourne	455675	92170	River Terrace Deposits	Historic OS map	N/A
Five Houses	443060	87556	Bracklesham Group and Barton Group	Historic OS map	N/A
Fore Down	444534	83582	Chalk	Historic OS map	N/A
Fore Down	443264	83554	Chalk	Historic OS map	N/A
Freshwater Bay	434123	85833	Chalk	Historic OS map	N/A
Freshwater Bay	434794	85842	River Terrace Deposits	Historic OS map	N/A
Freshwater Bay	434926	85886	Chalk	Historic OS map	N/A
Gallibury Fields	444120	84964	Chalk	Historic OS map	N/A
Gallows Hill Chalk Pit	453920	87475	Chalk	BritPits	18203
Gallows Hill Pits	453651	87569	Chalk	Historic OS map	N/A

Gards Farm	545918	84024	River Terrace Deposits	Historic OS map	N/A
Garstons	447785	85755	Chalk	BritPits	28779
Garstons Down	447622	85475	Chalk	Historic OS map	N/A
Garstons Down Gravel Pit	447835	85220	Clay with flints	BritPits	28780
Garstons Down Gravel Pit	447815	85150	Clay with flints	BritPits	28781
Gat Cliff	447900	86700	Upper Greensand	BritPits	16404
Gatcombe	449000	84980	Upper Greensand	BritPits	28772
Gatcombe	449095	85000	Upper Greensand	BritPits	28773
Gatcombe	449075	84940	Upper Greensand	BritPits	9529
Glen Avon House	453306	77149	Upper Greensand	Historic OS map	N/A
Gottenleaze Cottages	442424	85501	Chalk	Historic OS map	N/A
Great Appleford Farm	450222	80636	Ferruginous Sands	Historic OS map	N/A
Great East Standen Farm	451791	87803	Chalk	Historic OS map	N/A
Great East Standen Farm	451922	87567	Chalk	Historic OS map	N/A
Great East Standen Manor	452577	87228	River Terrace Deposits	Historic OS map	N/A
Green Ventnor	455530	77455	Upper Greensand	BritPits	8478
Gunville	448478	88967	Bembridge Limestone	Historic OS map	N/A
Gurnard	448021	95267	River Terrace Deposits	Historic OS map	N/A
Gurnard Recreation Ground	448616	95004	River Terrace Deposits	Historic OS map	N/A
Hale Manor Farm Quarry	454200	84300	River Terrace Deposits	BritPits	16277
Hamstead	439899	91083	River Terrace Deposits	Historic OS map	N/A
Haslett Farm Quarry	446100	82200	Sandrock	BritPits	2453
Headon Hill Gravel Pits	431605	85930	River Terrace Deposits	BritPits	18168
Headon Hill Gravel Pits	431130	85880	River Terrace Deposits	BritPits	18167
High Down Chalk Pit	431605	85300	Chalk	BritPits	18169
Highfield Caravan Site	450507	76418	Upper Greensand	Historic OS map	N/A
Highwood Lane Gravel Pits	451760	88830	River Terrace Deposits	BritPits	18187
Holme Hill	448215	91387	River Terrace Deposits	Historic OS map	N/A
Homelands Pit Farm	454888	78633	Upper Greensand	Historic OS map	N/A
Homelands Pit Farm	455052	78614	Chalk	Historic OS map	N/A
Homelands Pit Farm	455159	78920	Chalk	Historic OS map	N/A
Homelands Pit Farm	455301	78796	Chalk	Historic OS map	N/A
Homelands Pit Farm	455316	78993	Chalk	Historic OS map	N/A
Horringford Gravel Pit	454165	85025	River Terrace Deposits	BritPits	18214
Horringford Nurseries	455574	84897	River Terrace Deposits	Historic OS map	N/A
Hyde Farm Sand Pit	457560	81625	Sandrock and Ferruginous Sands	BritPits	18229
Idlecombe Down	445060	85498	Chalk	Historic OS map	N/A
Idlecombe Down	445047	85416	Chalk	Historic OS map	N/A
Idlecombe Down	445984	85960	Chalk	Historic OS map	N/A
Idlecombe Down	445613	85829	Clay with flints	Historic OS map	N/A
Idlecombe Down	445588	85495	Clay with flints	Historic OS map	N/A
Jeals Lane Gravel Pit	459620	84910	Additional gravel deposits	BritPits	18228
Kern Farm	457825	86621	Sandrock	Historic OS map	N/A
Kern Marl Pit	458035	87210	Chalk	BritPits	27491
Knighton	456531	87271	Chalk	Historic OS map	N/A

Knighton	456637	87152	Chalk	Historic OS map	N/A
Knighton Quarry	457400	86500	Sandrock	BritPits	2454
Knighton Quarry	457400	86500	Sandrock	BritPits	2454
Lake Common	458708	85016	Ferruginous Sands	Historic OS map	N/A
Lane End Gravel Pit	465020	87870	River Terrace Deposits	BritPits	18240
Lime Kilns Cottages	432743	85947	Bracklesham Group and Barton Group	Historic OS map	N/A
Limerstone Down	443593	83681	Chalk	Historic OS map	N/A
Limerstone Down	443780	83553	Chalk	Historic OS map	N/A
Limerstone Down	443915	83631	Clay with flints	Historic OS map	N/A
Limerstone Down	444181	83504	Chalk	Historic OS map	N/A
Little Down	443369	86494	Chalk	Historic OS map	N/A
Little Lynn Common	453628	89419	River Terrace Deposits	Historic OS map	N/A
Little Lynn Common	453700	89366	River Terrace Deposits	Historic OS map	N/A
Lodge Farm	441680	86512	River Terrace Deposits	Historic OS map	N/A
Lodge Farm	441734	86476	River Terrace Deposits	Historic OS map	N/A
Lodge Park	454275	93204	River Terrace Deposits	Historic OS map	N/A
Longlands Chalk Pit	462411	86332	Chalk	Historic OS map	N/A
Longlands Sand Pit	462585	86455	Bracklesham Group and Barton Group	BritPits	18238
Longlands Sand Pit	462390	86550	Bracklesham Group and Barton Group	BritPits	18237
Longlane Plantation	452767	88414	River Terrace Deposits	Historic OS map	N/A
Longlane Plantation	452543	88380	River Terrace Deposits	Historic OS map	N/A
Lowtherville Gravel Pit	455415	77725	Clay with flints	BritPits	27504
Lowtherville Marl Pit	455370	77630	Chalk	BritPits	18232
Luccombe	457405	79920	Upper Greensand	BritPits	18220
Luccombe	457570	79915	Upper Greensand	BritPits	18221
Luccombe Copse	457506	79390	Chalk	Historic OS map	N/A
Luccombe Copse	457556	78947	Chalk	Historic OS map	N/A
Luccombe Down	457353	79139	Chalk	Historic OS map	N/A
Luccombe Down	457371	79041	Chalk	Historic OS map	N/A
Luccombe Down	457354	78990	Chalk	Historic OS map	N/A
Luccombe Down	457125	79561	Clay with flints	Historic OS map	N/A
Luccombe Down	457152	79393	Clay with flints	Historic OS map	N/A
Luccombe Farm Cottages	457863	79004	Upper Greensand	Historic OS map	N/A
Luccombe Marl Pit	458110	80085	Upper Greensand	BritPits	18222
Luckington Farm	447862	87641	Chalk	Historic OS map	N/A
Lukely Brook	447970	87308	Chalk	Historic OS map	N/A
Lynch Lane	442297	84419	Chalk	Historic OS map	N/A
Lynch Lane	442493	84237	Chalk	Historic OS map	N/A
Lynn Farm	453977	89377	River Terrace Deposits	Historic OS map	N/A
Lynn North	453800	89000	River Terrace Deposits	BritPits	2455
Lynn South	453700	88300	River Terrace Deposits	BritPits	2456
Maples	456970	78085	Upper Greensand	BritPits	8479
Marks Corner	447118	91849	River Terrace Deposits	Historic OS map	N/A
Marvel Copse	449884	86922	Sandrock	Historic OS map	N/A
Mersley Chalk Pit	455785	87180	Chalk	BritPits	18212
Mersley Chalk Pit	455660	87210	Chalk	BritPits	18213
Mersley Down	456221	87465	Chalk	Historic OS map	N/A
Mersley Down	456026	87260	Chalk	Historic OS map	N/A
Mersley Down	455852	87632	Chalk	Historic OS map	N/A
Mersley Down Chalk Pit	455700	87615	Chalk	BritPits	18209

Mersley Farm Chalk Pit	455415	87115	Chalk	BritPits	18211
Middle Barn Farm	445736	79125	Upper Greensand	Historic OS map	N/A
Millbank Farm	454920	81954	River Terrace Deposits	Historic OS map	N/A
Morton Chalk Pit	460235	86500	Chalk	BritPits	18233
Morton Marl Pit	460220	86660	Chalk	BritPits	18234
Morton Marl Pit	459895	86675	Chalk	BritPits	18235
Mottistone Down	441726	84496	Chalk	Historic OS map	N/A
Mount Joy Marl Pit	449750	87835	Chalk	BritPits	18244
Mudless Copse	445240	87097	Chalk	Historic OS map	N/A
Nansen Hill	457856	78888	Chalk	Historic OS map	N/A
Nettlecombe Farm	453147	78407	Upper Greensand	Historic OS map	N/A
New Barn Farm	446644	83166	Chalk	Historic OS map	N/A
New Fairlee Farm	451319	89956	Additional gravel deposits	Historic OS map	N/A
Newbarn	443100	86800	Chalk	BritPits	2447
Newbarn Down	447078	84229	Chalk	Historic OS map	N/A
Newbarn Down	447924	85033	Chalk	Historic OS map	N/A
Newbarn Down	448002	85020	Chalk	Historic OS map	N/A
Niton	450695	76130	Upper Greensand	BritPits	16407
Niton and Whitwell	452043	76778	Chalk	Historic OS map	N/A
Niton and Whitwell	452043	76814	Chalk	Historic OS map	N/A
Niton Down	449276	76709	Chalk	Historic OS map	N/A
Niton Down	449437	76717	Chalk	Historic OS map	N/A
Niton Down	449627	77000	Chalk	Historic OS map	N/A
Nodewell Chalk Pit	432460	85565	Chalk	BritPits	18170
Norris Wood	451886	95734	River Terrace Deposits	Historic OS map	N/A
Norris Wood	451987	95710	River Terrace Deposits	Historic OS map	N/A
Northcourt Down	446480	83623	Chalk	Historic OS map	N/A
Northcourt Down	446970	83476	Clay with flints	Historic OS map	N/A
Northcourt Down	447005	83247	Chalk	Historic OS map	N/A
Northwood	449356	94952	River Terrace Deposits	Historic OS map	N/A
Northwood Poultry House	448915	93345	River Terrace Deposits	Historic OS map	N/A
Nunwell Down	459217	87254	Chalk	Historic OS map	N/A
Nunwell Down	459728	87092	Chalk	Historic OS map	N/A
Nunwell Down	459816	87059	Chalk	Historic OS map	N/A
Nunwell Down	459982	86989	Chalk	Historic OS map	N/A
Nunwell Down	460073	86960	Chalk	Historic OS map	N/A
Nunwell Down	460347	86841	Chalk	Historic OS map	N/A
Old Coastguards	431695	85515	Bracklesham Group and Barton Group	Historic OS map	N/A
Pan Pit	450615	88095	Chalk	BritPits	18189
Paradise Farm	450042	86231	River Terrace Deposits	Historic OS map	N/A
Park Place	446303	87874	Chalk	Historic OS map	N/A
Parkhurst Forest	447703	90384	River Terrace Deposits	Historic OS map	N/A
Parkhurst Forest	448165	90280	Additional gravel deposits	Historic OS map	N/A
Parsonage Farm	456365	85750	Inferred sub-alluvial River Terrace Deposits	BritPits	18224
Pay Down	439974	84869	Chalk	Historic OS map	N/A
Pay Down	440340	84658	Chalk	Historic OS map	N/A
Pay Down	440594	84608	Chalk	Historic OS map	N/A
Prospect	438490	86625	Bembridge Limestone	BritPits	2449
Quarr	457200	92890	Bembridge Limestone	BritPits	6855
Rancombe	443685	83455	Upper Greensand	BritPits	16406

Redcliff	462282	85922	Upper Greensand	Historic OS map	N/A
Redcliff	462260	85857	Upper Greensand	Historic OS map	N/A
Redcliff	462438	85832	Upper Greensand	Historic OS map	N/A
Redcliff	462649	85655	Upper Greensand	Historic OS map	N/A
Rew Down Gravel Pit	454960	77690	Clay with flints	BritPits	27505
Rew Farm	454830	78300	Upper Greensand	BritPits	16203
Rew Street	447300	95340	Additional gravel deposits	BritPits	18180
Rew Street	447129	94314	River Terrace Deposits	Historic OS map	N/A
Rock Sand Pit	442530	83890	Sandrock	BritPits	18242
Rookley Brick Works	451220	83995	River Terrace Deposits	BritPits	18204
Rookley Sand Pit	451755	83830	River Terrace Deposits	BritPits	18205
Rosemary Vineyard	459280	90969	Additional gravel deposits	Historic OS map	N/A
Row Down	458791	86852	Chalk	Historic OS map	N/A
Row Down	458918	86878	Chalk	Historic OS map	N/A
Rowridge Copse	444984	86060	Chalk	Historic OS map	N/A
Rowridge Copse	444911	86487	Chalk	Historic OS map	N/A
Rowridge TV Station	444726	86401	Chalk	Historic OS map	N/A
Ruffins Copse	448048	93211	River Terrace Deposits	Historic OS map	N/A
Ryde Queen Street	458971	92224	River Terrace Deposits	Historic OS map	N/A
Ryde West Street	458923	92189	River Terrace Deposits	Historic OS map	N/A
Sainham Farm	452870	80940	Sandrock	BritPits	18207
Sand Hill	446262	90744	River Terrace Deposits	Historic OS map	N/A
Sandford Sand Pit	455030	81310	River Terrace Deposits	BritPits	18215
Sandown Road	461584	86409	Chalk	Historic OS map	N/A
Sandown Road	461635	86262	Chalk	Historic OS map	N/A
Sandown Road	462004	86482	Chalk	Historic OS map	N/A
Shalcombe Down	438789	85620	Chalk	Historic OS map	N/A
Shalcombe field	438508	85907	Bracklesham Group and Barton Group	Historic OS map	N/A
Shalcombe field	438568	86000	Bracklesham Group and Barton Group	Historic OS map	N/A
Shalcombe Manor	439469	85509	Chalk	Historic OS map	N/A
Shalfleet Gravel Pit	441450	89590	Additional gravel deposits	BritPits	18252
Shanklin	457140	80235	Upper Greensand	BritPits	10101
Shanklin Down	456602	80074	Chalk	Historic OS map	N/A
Shanklin Down	456704	79807	Chalk	Historic OS map	N/A
Shanklin Down	456858	79588	Chalk	Historic OS map	N/A
Shanklin Down	457056	79680	Clay with flints	Historic OS map	N/A
Shanklin Down	457204	79674	Clay with flints	Historic OS map	N/A
Shide	450675	87620	Chalk	BritPits	18190
Shide Gravel Pits	450650	87800	River Terrace Deposits	BritPits	18192
Shorwell Chalk Pit	445800	83500	Chalk	BritPits	2448
Sibbecks Farm	450664	79158	Sandrock	Historic OS map	N/A
Smart's Cross Sand Pits	452160	79605	Sandrock	BritPits	27507
South Ford Farm Pits	451860	79005	River Terrace Deposits	BritPits	27506
Southview Grange	451392	83023	River Terrace Deposits	Historic OS map	N/A
Springhead	450331	76501	Upper Greensand	Historic OS map	N/A
St Boniface	456165	77985	Upper Greensand	BritPits	27500
St Catherine's Hill	449210	77479	Chalk	Historic OS map	N/A
St Catherine's Hill	449705	77428	Chalk	Historic OS map	N/A
St George's Down	451110	86775	River Terrace Deposits	BritPits	18197
St George's Down	451415	86475	River Terrace Deposits	BritPits	18196

St George's Down	451360	86225	Ferruginous Sands	BritPits	18198
St George's Lane Gravel Pits	451175	87175	River Terrace Deposits	BritPits	18193
St George's Lane Sand & Gravel Pits	451230	87040	River Terrace Deposits	BritPits	18194
St Helen's Duver	463632	89076	Blown Sand	Historic OS map	N/A
St Helen's Sand Pit	463670	89190	Blown Sand	BritPits	18241
St Martin's Down	455971	80009	Chalk	Historic OS map	N/A
St Martin's Down	455847	80263	Chalk	Historic OS map	N/A
St Martin's Down	455867	80325	Chalk	Historic OS map	N/A
St Martin's Down Marl Pit	456120	80355	Chalk	BritPits	18219
St Rhadegunds Path	452698	76804	Upper Greensand	Historic OS map	N/A
Standen Copse	452525	87424	Chalk	Historic OS map	N/A
Standen Elms Sand Pit	450845	87050	Sandrock	BritPits	18195
Stenbury Down	453543	78650	Chalk	Historic OS map	N/A
Stenbury Down	453435	79224	Upper Greensand	Historic OS map	N/A
Stenbury Down	453630	79073	Chalk	Historic OS map	N/A
Stenbury Down	454026	79046	Chalk	Historic OS map	N/A
Stenbury Down	454182	79126	Chalk	Historic OS map	N/A
Stenbury Down	454117	78743	Chalk	Historic OS map	N/A
Stoats Farm	432250	86205	Headon Beds and Osborne Beds	BritPits	18171
Stoats Farm	432547	85920	Bracklesham Group and Barton Group	Historic OS map	N/A
Stroud Wood Road	457271	90527	Additional gravel deposits	Historic OS map	N/A
Swainstone Down Gate	444219	86010	Chalk	Historic OS map	N/A
Swainstone Down Gate	444288	85882	Chalk	Historic OS map	N/A
Tapnell	437785	86380	Bembridge Limestone	BritPits	18173
Tapnell Down	437292	85869	Chalk	Historic OS map	N/A
Tapnell Down	437630	85798	Chalk	Historic OS map	N/A
Tapnell Down	437351	85749	Chalk	Historic OS map	N/A
Temple Plantation	443965	87326	Chalk	Historic OS map	N/A
Tennyson Down	432120	85455	Chalk	Historic OS map	N/A
Tennyson Down	432346	85531	Chalk	Historic OS map	N/A
Tennyson Down	432469	85569	Chalk	Historic OS map	N/A
Tennyson Down	432684	85649	Chalk	Historic OS map	N/A
Tennyson Down	432968	85711	Chalk	Historic OS map	N/A
Tennyson Down	433234	85727	Chalk	Historic OS map	N/A
Tennyson Down	433542	85736	Chalk	Historic OS map	N/A
Tennyson Down	433806	85713	Chalk	Historic OS map	N/A
The Causeway	435077	86828	Bracklesham Group and Barton Group	Historic OS map	N/A
Thorness	444725	92830	River Terrace Deposits	BritPits	18179
Tolt Copse	448720	84320	Upper Greensand	BritPits	28776
Tolt Copse	448350	84355	Clay with flints	BritPits	28777
Tolt Copse	448430	84665	Chalk	BritPits	28774
Tolt Copse	448485	84630	Upper Greensand	BritPits	28775
Totland	432699	87792	Additional gravel deposits	Historic OS map	N/A
Tumulous Field	443196	85876	Chalk	Historic OS map	N/A
Upper Woodside Road	454644	93032	Additional gravel deposits	Historic OS map	N/A

Vayres	448650	86310	Upper Greensand	BritPits	16405
Ventnor	455365	77350	Upper Greensand	BritPits	18231
Victoria Grove	450905	94782	River Terrace Deposits	Historic OS map	N/A
Victoria Grove	450748	94811	River Terrace Deposits	Historic OS map	N/A
Warren Farm	431240	85520	Bracklesham Group and Barton Group	Historic OS map	N/A
Week Down	453947	77293	Chalk	Historic OS map	N/A
Week Farm	453801	78326	Chalk	Historic OS map	N/A
Week Farms Fields	452991	77592	Chalk	Historic OS map	N/A
Weeks	458990	91821	River Terrace Deposits	Historic OS map	N/A
Wellow Down	438263	85731	Chalk	Historic OS map	N/A
Wellow Down	438537	85648	Chalk	Historic OS map	N/A
Wellow Down	438484	85491	Chalk	Historic OS map	N/A
West Cliff	449657	76035	Chalk	Historic OS map	N/A
West End Farm	449035	88082	Chalk	Historic OS map	N/A
West High Down	431024	85238	Chalk	Historic OS map	N/A
West High Down	431483	85318	Chalk	Historic OS map	N/A
West High Down	431602	85301	Chalk	Historic OS map	N/A
West High Down	431740	85334	Chalk	Historic OS map	N/A
West High Down	431916	85429	Chalk	Historic OS map	N/A
Westover Copse	441934	85517	Chalk	Historic OS map	N/A
Westover Down	441028	85211	Chalk	Historic OS map	N/A
Westover Down	441146	84931	Chalk	Historic OS map	N/A
Westover Down	441697	85254	Chalk	Historic OS map	N/A
Westover Down	441953	84957	Chalk	Historic OS map	N/A
Westridge Down	447164	84333	Clay with flints	Historic OS map	N/A
Whippingham	451048	93744	River Terrace Deposits	Historic OS map	N/A
Whitcombe	449340	87710	Upper Greensand	BritPits	9530
White Pit	449630	88265	Chalk	BritPits	18246
White Pit Marl Pit	449530	88250	Chalk	BritPits	18245
Whitecliff	430801	85225	Chalk	Historic OS map	N/A
Wilmington	435687	87987	Additional gravel deposits	Historic OS map	N/A
Winford	456317	84290	River Terrace Deposits	Historic OS map	N/A
Wooton Bridge	453670	92073	River Terrace Deposits	Historic OS map	N/A
Wooton Bridge	453655	91982	River Terrace Deposits	Historic OS map	N/A
Wooton Bridge	453674	91908	River Terrace Deposits	Historic OS map	N/A
Wroxall	455640	79025	Upper Greensand	BritPits	16205
Wroxall	454980	79274	Upper Greensand	Historic OS map	N/A
Wroxall	455687	80009	Upper Greensand	Historic OS map	N/A
Wroxall Copse	456599	78753	Clay with flints	Historic OS map	N/A
Wroxall Down Gravel Pit	456315	78405	Clay with flints	BritPits	27502
Wroxall Down Gravel Pits	455840	78250	Clay with flints	BritPits	27503
Yaverland	461415	85651	Ferruginous Sands	Historic OS map	N/A
York Avenue	450977	95148	River Terrace Deposits	Historic OS map	N/A

## 16 Appendix 2: Date Ranges for Monument Types

### 16.1 Introduction

16.1.1 It is recognised that these date ranges are very broad. It is not within the scope of this project to re-assess the precise dating of each asset from primary material, or current opinion on the dating of monument types or historic periods. The date ranges have been taken from evidence in the National Monuments Record Monument Class Descriptions and thesaurus.

### 16.2 Monument Types encountered

16.2.1 The following monument types were commonly encountered during the project as undated entries in the HER.

#### *Cropmarks*

16.2.2 Monument types resulting from cropmarks (e.g. Linear Feature; Enclosure) were frequently found to be undated. The following principles were used to assign date ranges to these monument types where no evidence on dating was found elsewhere in the HER records:

- LINEAR FEATURE – Linear Features would not typically have arisen prior to the Neolithic, but in the absence of any additional information they could potentially date to any time thereafter. They were therefore assigned the broad date range Neolithic to Imperial (-4000 to 1900).
- RING DITCH – Ring ditches representing the remains of barrows are likely to be of Late Neolithic to Bronze Age date. However some barrows have been dated to the Migration period, and others contain intrusive Early Medieval burials. Two entries were therefore created in the project database with the same HER number, one was assigned the date range Late Neolithic to Bronze Age (-2851 to -751) and the second was assigned to the Migration period (410 to 800).
- RECTILINEAR FIELD SYSTEM – Bronze Age to Imperial (-2350 to 1900)
- CURVILINEAR CROPMARKS or ENCLOSURE – Neolithic to Roman (-4000 to 409)
- RECTILINEAR ENCLOSURE (or ENCLOSURE) – Neolithic to Imperial (-4000 to 1900).
- HUT CIRCLES or ENCLOSURES containing HUT CIRCLES – Middle Bronze Age to Roman (-1500 to 409).

#### *Ridge and Furrow*

16.2.3 Medieval to Imperial (1066 to 1900).

#### *Lynchet*

16.2.4 Neolithic to Imperial (-4000 to 1900).

#### *Trackway*

16.2.5 Neolithic to Imperial (-4000 to 1900).

#### *Hollow Way*

16.2.6 Early Medieval to Imperial (801 to 1900).



*Earthworks*

- 16.2.7 Earthworks not otherwise covered in this list (i.e. terrace, bank, boundary, mound) – Neolithic to Imperial (-4000 to 1900).

*Hearth*

- 16.2.8 Mesolithic to Imperial (-10000 to 1900). Where Hearths are found within peat deposits they were categorised as Mesolithic to Medieval (-10000 to 1539).

*Allan Williams Turret*

- 16.2.9 A type of World War II fortification, classified as 'Modern' period but dated from 1939 to 1945.

## 17 Appendix 3: Assigning Asset Types

### 17.1 Introduction

- 17.1.1 Wherever possible Asset types were assigned using information in the HER descriptions. In some cases the monument types gave an indication of the correct asset type.

### 17.2 Principles for assigning asset types

#### *Agriculture and subsistence*

- 17.2.1 This asset type included field systems, farm buildings, stables, barns, granaries, cart shed, cow sheds, brewhouse, cow houses, dairy, pigsty, kill sites, churn stand, ridge and furrow, lynchet, sheep dip, fish ponds, mill (where specified as corn or other cereal product, or where the nature of the mill is unspecified), farmhouses (Farmhouses should have Agriculture and subsistence as Asset Type 1 and domestic as Asset type 2), artefact scatters described as resulting from manuring practices.

#### *Civil*

- 17.2.2 This asset type included jails, County Hall's, libraries, market places, forums, boundary markers and 'boundary banks', radio stations, signal stations (unless HER makes it clear they're defensive or maritime), Toll House.

#### *Commemorative*

- 17.2.3 Including war memorials, memorials to famous people such as Tennyson monument.

#### *Commercial*

- 17.2.4 Including shops, warehouses and commercial premises. Public Houses were recorded as 'Recreation' in Asset Type 1 and 'Commercial' in Asset Type 2.

#### *Defence*

- 17.2.5 Including beacons, forts, castles, hill forts, WWII defences, PLUTO pipeline or other PLUTO features, WWII plane crash sites, Firing Range provided there is evidence of military usage (rather than recreational gun club use).

#### *Domestic*

- 17.2.6 Including Roman Villas, castles, hill forts (Castles and hill forts should be both defence and domestic i.e. Defence in Asset Type 1, and Domestic in Asset Type 2), manors, settlements of all kinds, hut circles and enclosures containing hut circles, houses, coach house, boat house, garage.

#### *Gardens and parks*

- 17.2.7 Civil gardens for public use, private gardens and parklands, Lodges, gatehouses and garden features, folly.

#### *Hoard*

- 17.2.8 A new asset type added for this project to avoid ambiguity over whether hoards are ritual, defensive or industrial (i.e. metalworker's stock)

### *Industrial*

- 17.2.9 Including mills for steel, textiles or providing power to factories, factories, blacksmiths, pottery and tile kilns.
- 17.2.10 For the Mesolithic, Neolithic and Bronze Age, sites of lithic manufacture were described as 'Lithic Working' in order to avoid confusion with later industrial processes.

### *Maritime*

- 17.2.11 Including quays, ships, dry docks, light houses, coastguard towers/stations.

### *Object*

- 17.2.12 Individual objects, metal-detected finds, flint scatters and artefact scatters.

### *Palaeoenvironmental*

- 17.2.13 Another new asset type to identify natural features such as Palaeochannels, peat deposits and pollen studies which may be of archaeological interest but are not anthropogenic.

### *Recreation*

- 17.2.14 Recreation sites, including graffiti, site of the Isle of Wight 1969 festival, theatres, circuses, Firing Range's (unless the HER specifies a military origin), hotels, public houses (Public houses and hotels should have recreation as Asset Type 1 and commercial as Asset Type 2), Freemasons hall.

### *Religious, ritual or funerary*

- 17.2.15 Including ring ditches, D-shaped enclosures, barrows, churches, cemeteries, wayside crosses, Monastic Granges (Granges should have religious ritual or funerary as Asset type 1, agriculture and subsistence as Asset Type 2), non-conformist chapels.

### *Transport*

- 17.2.16 Including trackways, roads, bridges, railways, stations, mile stones, navigations, canals (Navigations and canals should have 'Transport' as Asset Type 1 and 'Water and Drainage' as Asset Type 2).

### *Unassigned*

- 17.2.17 Asset type used where the HER contains insufficient information to determine an alternative asset type (e.g. Linear features, enclosures, pits).

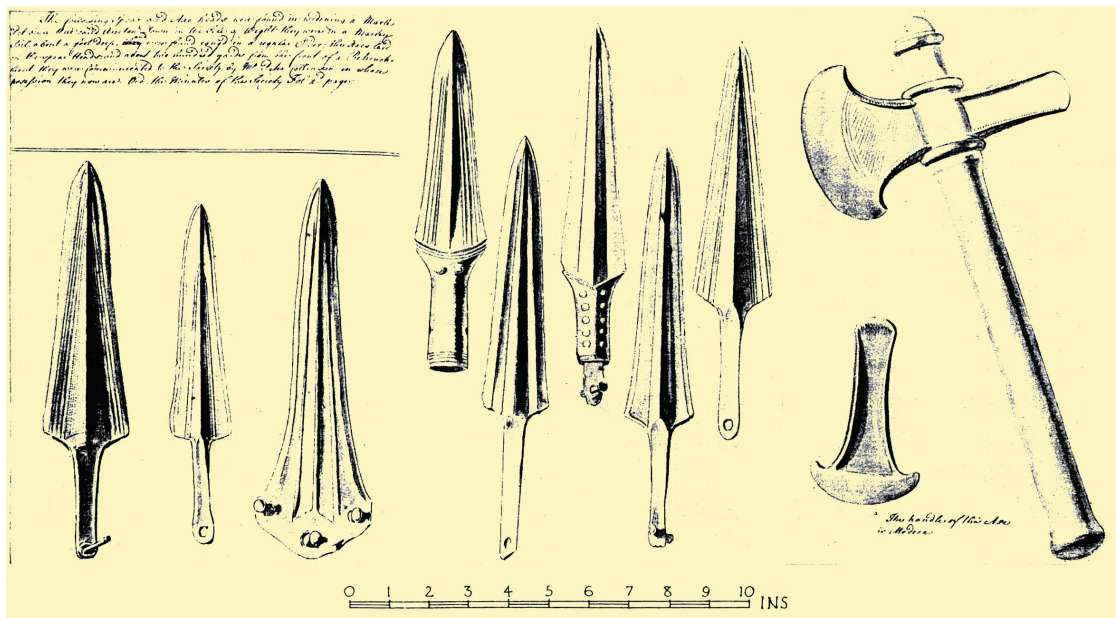
### *Water and drainage*

- 17.2.18 Including drainage ditches, water management features, mill ponds, aqueducts, navigations and canals (Navigations and canals should have 'Transport' as Asset Type 1 and 'Water and Drainage' as Asset Type 2).

### *Multiple*

- 17.2.19 This was not used, instead where multiple asset types were present the Asset\_Type2 field was used. The addition of a second asset type had to be based upon clear information in the HER entry unless otherwise stated above.

## **18 Appendix 4: Backlogs Report**



# IDENTIFICATION AND QUANTIFICATION OF ARCHAEOLOGICAL PROJECTS ARISING FROM AGGREGATES EXTRACTION IN THE ISLE OF WIGHT

ASLF Project N° 4769

March 2011

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## Executive Summary

*This report details the results of a project to identify and quantify past archaeological investigations arising from hard and soft aggregates extraction in the Isle of Wight. The study will provide a basis for a future strategy to improve and widen public dissemination of the results of such investigations, including the deposition of data from projects arising from aggregates extraction into a publicly accessible research archive. The Project, presented as a report and an Access database, has been funded by the Aggregates Levy Sustainability Fund, administered by English Heritage.*

*The study was conducted through the review of archaeological journals and other publications, along with a search of an archaeological dataset, the Isle of Wight Historic Environment Record (HER). It revealed variable levels of dissemination for the results and interpretation of archaeological investigations associated with aggregates extraction. Most projects are antiquarian/amateur observations and finds collection, with only six professional archaeological investigations out of the 40 projects. Due to a recommendation that many of the older projects should be reassessed, less than a sixth of projects (15%) were considered to be completely disseminated.*

*The study also revealed a high percentage of isolated finds ('Object' type of asset), mostly due to the type of investigation (antiquarian/amateur observations and finds collection).*

*Where archaeological sites have been excavated during aggregates extraction, best practice would be for the result to be made publicly available (the principle of preservation by record). Older projects were disseminated in a manner appropriate for the period in which they were undertaken and the levels of dissemination for these projects are not necessarily comparable with those expected of later projects undertaken as part of the planning process. Consequently projects within 28 quarries have been recommended for re-assessment, in order to bring the dissemination of these projects into line with that appropriate for more recent investigations. It is suggested that this reassessment might be incorporated into an Island wide study, in order to place aggregate related finds into their Island context.*

# 1 Introduction

## 1.1 Project background

- 1.1.1 This report summarises the results of a project carried out to identify and quantify archaeological investigations arising from aggregates extraction in the Isle of Wight and to access the extent to which the results of these investigations have been made publicly available. The work was undertaken by Museum of London Archaeology (MOLA) between April and September 2009 with funding from the Aggregates Levy Sustainability Fund (ALSF) administered by the English Heritage (EH) Historic Environment Enabling Programme (HEEP). The project (ASLF project no. 4769, hereafter referred to 'ALSF Project') has been carried out in accordance with current English Heritage guidelines including MoRPHE (2006) guidance on the management of research projects, and the Strategic framework for Historic environment Activities and Programmes in English Heritage (SHAPE 2008) guidance. The current assessment has been carried out alongside an ongoing assessment by MOLA of archaeological resources of the aggregate producing areas of the Isle of Wight (EH project no. 4769), and will provide additional baseline information for that study.
- 1.1.2 The Isle of Wight stone is known to have been quarried over 2000 years. The quarrying of building stone and in particular of Bembridge and Quarr 'featherbed' limestones has taken place historically on the island. Bembridge limestone was used for rotary querns, roofing slabs and general building stone and is present in one form or another on most Roman *villae* on the island. This limestone was also used in the construction of the Roman Fishbourne Palace (West Sussex) and earlier structures on that site. The likely quarries for this stone have been located at the low water mark on Quarr beach, on the north-eastern coast of the island, based on the discovery of late Iron Age/early Romano-British pottery, possible remnants of the pottery brought over from the mainland by the stone masons (Lyne 2008, 12). Gurnard Villa, on the Solent coast, may have been linked to the administration of the export of Bembridge Limestone to the mainland (Isle of Wight County Council 1992, 17 and 27).
- 1.1.3 The trade in this limestone continued in the Anglo-Saxon and medieval periods, with the stone being used particularly in Hampshire and Sussex (IoW CAHES 2008, 6). The most important export in Norman times was Quarr and Binstead Limestone. Much Quarr stone can be seen in Winchester and Chichester cathedrals, and in numerous Norman parish churches in Hampshire and Sussex. The coarser Binstead Stone was used after the supply of Quarr Stone was exhausted in the 13th century. Binstead Stone was much used for defensive works, particularly in the medieval town walls and gateways at Southampton (Lloyd and Pevsner 2006, 8). Upper Greensand was also an important building stone on the Island in the Middle Ages, being shipped to the mainland in the 14th and 15th centuries for use in several important buildings, including Chichester and Winchester cathedrals (Basford 2008b, 16). Further chalk pits and stone quarries are known to date from medieval period to present day (IoW CAHES 2008, 7).
- 1.1.4 The Isle of Wight produces both aggregates (sands and gravels) and chalk and the existing Isle of Wight Unitary Development Plan (UDP) (adopted 18 May 2001) anticipates that the island will continue to need to provide these resources, primarily for internal consumption. The extraction of these mineral resources is governed by the existing Isle of Wight UDP (IOW 2001) and will be addressed in the Minerals Development Documents which are currently being developed as part of the emerging Local Development Framework (LDF).
- 1.1.5 The extraction of aggregates has been responsible for the identification and recording of a number of archaeological sites and finds on the Isle of Wight over the

last 200 years. The Isle of Wight is subject to different development pressures to other areas of aggregate resource and has a large area of protected landscape, so large scale excavation of aggregates extraction sites has never been carried out. Consequently the archaeological sites and finds recorded on the Island were mainly the result of work by interested antiquarians and, in more recent times, voluntary archaeological groups. This has an impact on the nature of the record. In particular, much of the Palaeolithic and Mesolithic material found on the island has been recovered as a direct result of aggregates extraction.

- 1.1.6 Past excavations and discoveries have been disseminated by various parties since archaeological interest in the Island began. The levels of dissemination employed for the older projects were appropriate for the periods in which they were undertaken, but are not directly comparable with those expected of recent investigations undertaken in fulfilment of planning requirements. Consequently many of these projects have been recommended for reassessment and further dissemination and therefore appear in the database as having low levels of dissemination. There are also a number of unfinished or ongoing projects of varying levels of significance. In many cases the currently inaccessible information could transform understanding of the island and assist in the curation of the Historic Environment, particularly in aggregates extraction areas.

## 1.2 Research aims and objectives

### *Aims*

- 1.2.1 The primary aim of the project is to identify any archaeological investigation resulting from aggregate extraction and quantify its present status with regard to the completion of the investigation and the level of dissemination. This would comply with objective 1.2.6 of the project design (MOLA, March 2009) and reveal further information about the nature of past archaeological investigations and the type of archaeological remains likely to be encountered in aggregates extraction sites on the Isle of Wight. It would also allow a strategy to be formulated in order to unlock the potential of incomplete or inadequately disseminated past investigations and projects. This information could then inform a strategy to disseminate archaeological results more widely to interested groups and the general public in order to facilitate an improved understanding of the Historic Environment and the positive aspects of aggregates extraction.
- 1.2.2 In order to achieve this, the backlogs project has included a search of relevant publications and consultations with curators and local community and archaeological groups to identify as far as possible any archaeological investigation resulting from aggregates extraction. The search has identified where investigations have been completed and whether they are adequately disseminated. The results of this search have been included in a version of the database developed by ARCUS for a similar project in Derbyshire, Nottinghamshire and Oxfordshire (ARCUS 2007).

### *Objectives*

- To identify archaeological finds, investigations and projects that are currently inactive and are incomplete or have had appropriately low levels of archive completion, assessment, analysis and/or dissemination.
- Where levels of intervention and/or dissemination are unacceptably low to propose an appropriate level of further intervention/dissemination.
- To analyse the data collected to identify trends, significant omissions, possible future research (including the potential for cross-project synthetic research), to aid English Heritage in formulating a strategy to address

incomplete archive completion, assessment, analysis and/or dissemination for Historic Environment Projects associated with aggregate areas.

- To allow the database of archaeological finds, investigations and projects in the Isle of Wight (created during this project) to be integrated into the existing database held by English Heritage in order to facilitate future comparison with similar projects across the Country.

### 1.3 Scope

1.3.1 A pilot project of Derbyshire, Nottinghamshire and Oxfordshire (ARCUS 2007) undertaken by Archaeological Research and Consultancy at the University of Sheffield (ARCUS) developed a database and methodology for the identification and quantification of the current status of past archaeological investigations and projects resulting from aggregates extraction. This project has made use of the ARCUS database and methodology to identify any archaeological investigation and finds resulting from aggregate extraction in the Isle of Wight and quantify its present status with regard to the completion of the investigation and the level of dissemination.

1.3.2 The following terms have been used throughout the report:

- Archaeological '**project**' (of which there are 40) refers to an archaeological intervention. This might comprise a formal archaeological fieldwork investigation to mitigate the impact of quarrying, or chance finds exposed during quarrying and collected and noted by antiquarians, amateur archaeologists and local enthusiasts.
- Archaeological '**Investigation**' (of which there are 6) refers to a single archaeological intervention event, eg a fieldwalking survey, an evaluation, an excavation etc.
- Archaeological '**Asset type**' (of which there are 57) refers to a discreet asset type/site of a particular period (eg 'medieval industrial', 'Iron Age settlement'), revealed during an archaeological investigation or during the course of a project.

### 1.4 Study area

1.4.1 The study area for the Isle of Wight Resource Assessment, of which this project is a part, encompasses all soft aggregate geologies on the Isle of Wight (e.g. sands, gravels). Hard aggregate geologies (e.g. chalk, limestone) have only been included where extraction is currently taking place or where it has taken place in the past, along with a 100m buffer around such areas to allow for minor discrepancies in the geological mapping and ensure no relevant past investigations were missed.

1.4.2 The following areas have been excluded from the Resource Assessment, but may be included in this Backlogs project if they include archaeological projects resulting from aggregates extraction:

- Marine aggregates, ie those aggregates that occur below the low tide line. The ALSF funding for the current project covers terrestrial aggregate resources only. Aggregates located between the low and high tide lines have only been included where they are either currently extracted or have been extracted in the past.
- Due to the nature of tenure (i.e. perpetual ownership of bricks and mortar) in urban areas, future minerals extraction is unlikely to take place in urban areas, which, therefore, have been excluded from the scope of this project.

## **1.5 Methodology**

- 1.5.1 The methodology is outlined in the appendix (Section 8). An Access database was populated with data on past archaeological interventions carried out as a result of aggregates extraction, derived from a review of published sources, primarily local, regional and national journals. Relevant past archaeological interventions were also identified from a trawl of the Isle of Wight Historic Environment Record (HER). The study also included the addition of new records of events and monuments/remains not previously recorded by the HER.

## **1.6 Study data deposition**

- 1.6.1 The Microsoft Access database will be transferred in its entirety to English heritage (HEEP and the NMR) and will be available via the publicly accessible Archaeological Data Services (ADS). The report will be submitted to English Heritage in bound format, and a pdf version will be compiled for digital dissemination via ADS and the English Heritage website.

## 2 An overview of the data

### 2.1 The geology of the Isle of Wight

- 2.1.1 The Isle of Wight was originally connected to the mainland of Britain on the south side of the Old Solent River, a great river valley which drained a large area of central-southern England. At the end of the last glaciation the Solent river valley was flooded by rising sea levels. The land between the Needles and the Isle of Purbeck formed the final connection between the island and the mainland until it was severed, probably by marine activity, no later than c 7,000 years ago (Allen & Gibbard 1993, 503–506).
- 2.1.2 The geology of the northern half of the island, north of the east–west Chalk ridge that runs along the centre of the island, comprises Tertiary sands, clays and some limestones associated with the Solent Formation. These are lacustrine and lagoonal depositions by the River Solent, which are capped in places by sands and gravels deposited by the earlier incarnations of the River Solent during the Pleistocene period (see Fig 1).
- 2.1.3 The geology of the southern half of the island comprises Tertiary formations (the Eocene period of Lyell, geological period lasting from  $55.8 \pm 0.2$  to  $33.9 \pm 0.1$  million years ago), consisting of depositions partly derived from the sea, and containing mainly fossils. This series is made up of the two beds of Chalk (Upper and Lower), superimposed on Chalk Marl found along the central east-west axis of the island and by the south-eastern coast. It is overlain by the various strata of Upper Greensand, located along the central east-west axis of the island, and in the south-eastern quarter. The Upper and Lower Greensand strata are overlain by the argillaceous beds of Gault, located all across the southern half of the island.
- 2.1.4 The oldest Cretaceous strata are Wealden, a continental, fluvial deposit of mudstones and sandstones that is famous for its fossils, which crops out at Sandown Bay (south-eastern coast) and along portions of the south-western coast.

### 2.2 Quarries

- 2.2.1 Quarrying has been carried out on the Island for at least 2000 years. The primary resource in historical times, was building stone, in particular of Bembridge and Quarr ‘featherbed’ limestones. The use and trade in this limestone has been identified from the Roman period onwards, with a notable export to Hampshire and Sussex (IoW CAHES 2008, 6). It was probably one of the most important exports in the later medieval period. Upper Greensand also provided important building material and chalk pits and stone quarries are known from medieval period to present day.
- 2.2.2 During the last two centuries, quarrying has been small scale and located all over the Island. In modern times, legislation has rationalised mineral extraction and the number of small-scale hand dug quarries has diminished to be replaced by fewer, but much larger, quarries with mechanised extraction.
- 2.2.3 Aggregate extraction over the last 30 years has taken place in the centre of the island, in particular to the east and south-east of Newport. The British Geological Society’s *Directory of Mines and Quarries* locates the current aggregate extraction sites at the following locations:
- Newport: Blackwater (St George’s Lane)
  - Shorwell: Cheverton
  - Arreton: Hale Manor Farm



## 2.3 The number and distribution of projects

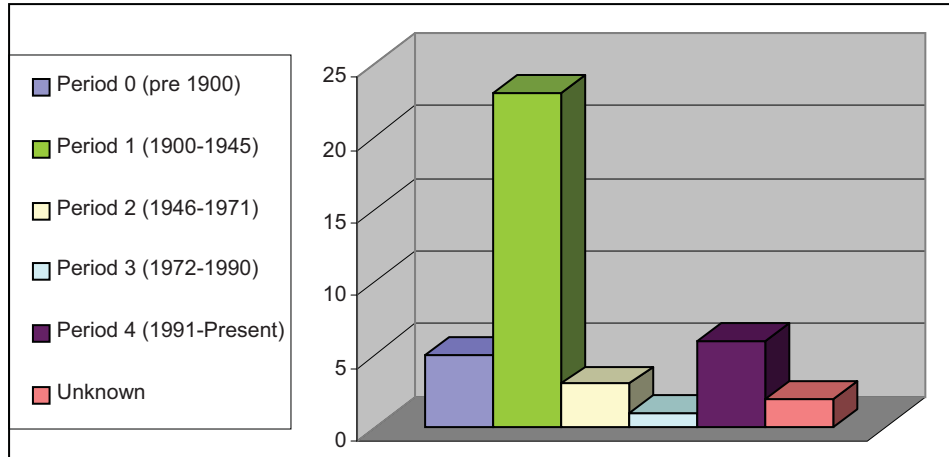
- 2.3.1 The database contains 40 projects, relating to six archaeological investigations (including a desk-based study associated with the Defence of Britain project) and 35 antiquarian/amateur observations or finds. The projects have differentiated 53 asset types distributed across 34 quarries and quarry pits. These projects were undertaken between 1735 and 2005.
- 2.3.2 The projects are located all over the Isle of Wight (Fig 1). The majority of the projects (30) are in the northern half of the island, in quarries exploiting the sands and gravels deposited by the Old Solent River (40% of the total), or in extraction sites scattered along the main river valleys of the Eastern Yar (River Yar) and River Medina (55% of the total) or on outcrops of hard geology. The remaining (10) projects are located in the southern half of the island, on hard geology, mostly chalk and sandstone formations.
- 2.3.3 The distribution of projects is primarily determined by the location of economically viable geological formations. The distribution of earlier investigations reflects both the location of smaller local quarries and the presence of those interested in recording archaeological remains. The distribution of later quarries is closely associated with planning policy. Following the *Town and Country Planning Act of 1947* the quarrying and associated archaeological interventions were mostly concentrated to the south and east of Newport (Fig 2).

## 2.4 Period of archaeological intervention

- 2.4.1 Legislation and national, regional and local planning policies influenced the nature and extent of gravel extraction across the Island and this has in turn affected the number of archaeological investigations carried out in quarries.
- 2.4.2 The legislation and planning policies define four periods of archaeological intervention from 1900 up to present day. The periods were initially established by the 2007 pilot project (ARCUS 2007) adding a Period 0 for the purposes of the current backlogs project. Therefore, the periods comprise:
- **Period 0:** Pre-1900. A time where there was no legislation or policy in respect of aggregates extraction, and the archaeological interventions are antiquarian finds and observations only.
  - **Period 1:** 1900–1945. A time where there was no legislation or policy in respect of aggregates extraction. The archaeological interventions are antiquarian finds and observations only.
  - **Period 2:** 1946–1971. This period commences with the introduction of the Town and Country Planning Act of 1947, which required planning permission to open a quarry or extract aggregates.
  - **Period 3:** 1972–1990. This period commences with the introduction of the Town and Country Planning Act of 1971, which consolidated the previous requirements set out in the Town and Country Planning Act of 1947 and the provisions of the Mines (Working Facilities and Support) Act of 1966.
  - **Period 4:** 1991-present. This period commences with the introduction of PPG16 (Planning Policy Guidance 16), which established archaeology as a material consideration in the planning process and resulted in its incorporation into Local Authority Planning Policy.
  - **Unknown:** the date of several antiquarian observations of archaeological remains in quarry sites is unknown (but were probably pre- or early 1900s). This category does not exist in the database but in the graph below has been derived from those database entries for which the period field was left blank.
- 2.4.3 Graph 1 shows the percentage of archaeological projects carried out in relation to

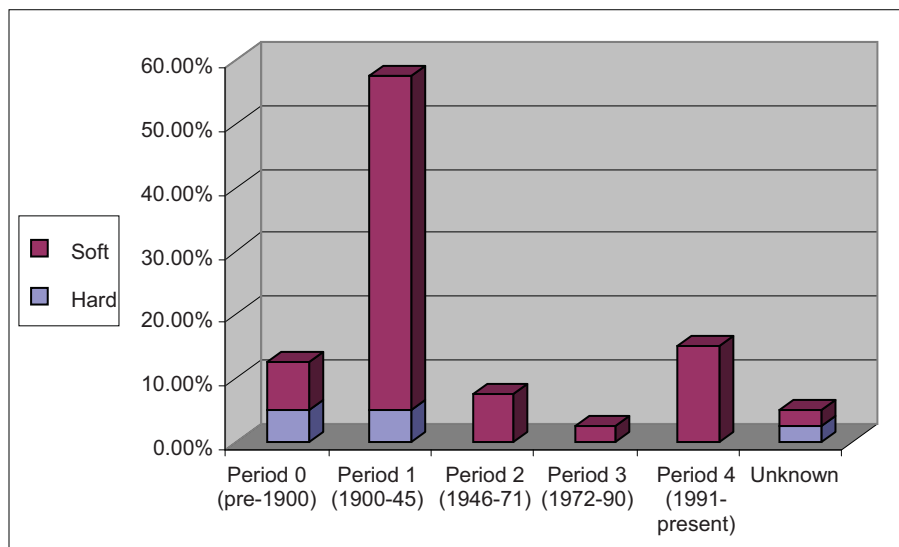
aggregate extraction by period of intervention. It clearly shows that a significant percentage of projects (58%) were carried out during the first half of the 20th century. These are related to amateur observations rather than formal archaeological fieldwork. The latter takes place exclusively during Periods 2 (an excavation) and Period 4 (various investigations) and comprises the next largest percentage of projects (15%), reflecting an increasing awareness of archaeology.

Graph 1 Projects by period of intervention



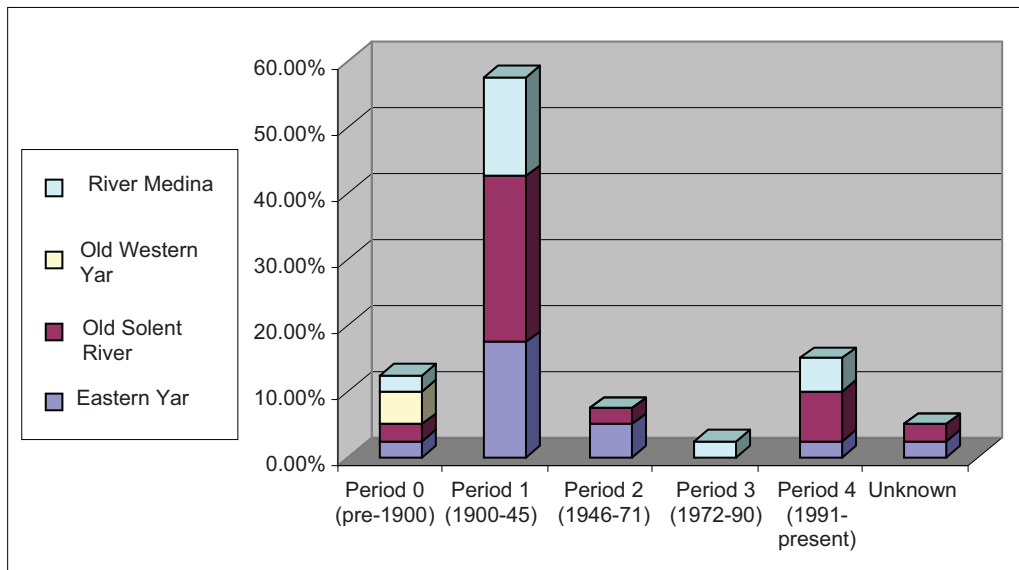
2.4.4 Graph 2 shows the period of intervention in relation to the aggregate geology. It shows that archaeological projects have primarily been associated with soft aggregates, with those on hard aggregates comprising only 12.5% of the total number of projects.

Graph 2 Projects by period of intervention in relation to aggregate geology



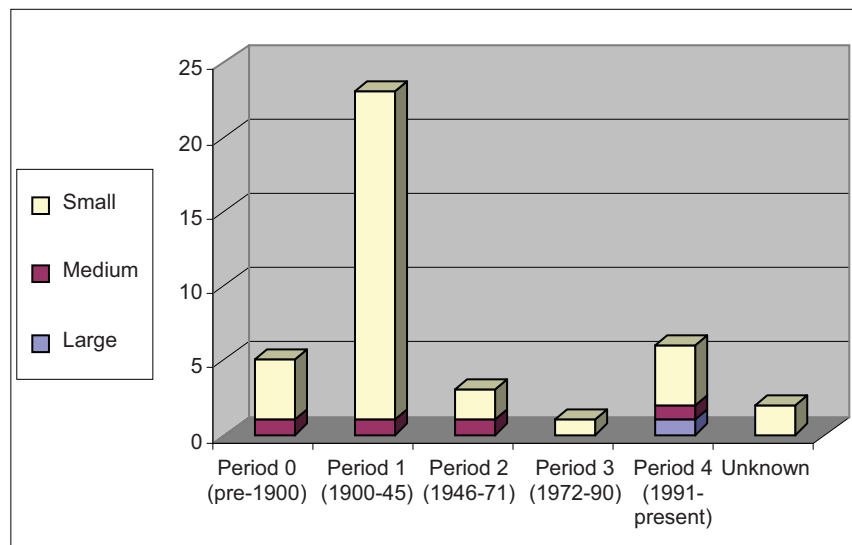
2.4.5 Graph 3 shows the period of intervention in relation to the valley systems. It shows that most archaeological investigations in the past up to the present day have been carried out in the Old Solent River valley and the Eastern Yar valley and to a lesser extent in the River Medina valley. The Old Western Yar valley has two projects, both of which took place in Period 0 (pre-1900).

Graph 3 Projects by period of intervention in relation to valley systems



2.4.6 Graph 4 shows the period of intervention in relation to size of the projects. It shows that projects on the IoW have been mostly small scale throughout Periods 0–4. Only small projects were carried out in Period 3. The only large project was carried out during Period 4.

Graph 4 Size of project in relation to period of intervention



2.4.7 Fig 2 shows the location of projects by investigation period. Period 0 projects are scattered along a central line from west to east of the island, some of them related to above ground archaeological earthworks known in the vicinity e.g. long and round barrows in Afton and Shalcombe. Period 1 projects are located all across the Isle of Wight. Period 2 to 4 projects are located mostly to the south-east of Newport with only three projects carried out further than five kilometres from this town, immediately east of Cowes, north-west of Shalcombe and south of Arretton.

*Periods 0 and 1*

2.4.8 Prior to the Town and Country Planning Act of 1947, no planning permission was required to open a quarry or extract gravel. Consequently numerous small-scale hand-dug quarries and operating gravel pits were opened up across the Isle of Wight, in the countryside and on the outskirts of the towns. Archaeological investigations related to these pre-1900 to mid-20th century quarries were usually

small scale and undertaken by individuals without funding (Graph 5). The work was primarily in the form of 'rescue' interventions and observations carried out as archaeological remains were exposed during quarrying. The projects during this period were typically small or medium size (see Graph 4), reflecting also the scale of the quarrying.

- 2.4.9 During Period 0, the individuals involved in these interventions comprised a small number of local antiquarians with varying levels of expertise who had an interest in archaeology and excavation and (due to their interest and local importance) would be informed of and investigate archaeological discoveries made during aggregate extraction. As a result the information and level of recording of the interventions varied greatly depending on the interests, skill and knowledge of the investigating antiquarian. The information provided from the early interventions is therefore variable and may reflect interpretations current at the time, but which have since been superseded by more recent artefact typologies or chronological sequences. The levels of dissemination undertaken by early investigators are also variable. While most reflect good practice at the time they were undertaken, the level of dissemination is often not comparable with more recent projects.
- 2.4.10 During the early part of Period 1 the level of information recovered from investigations associated with aggregate extraction increased considerably. This was due to the interest and diligence of a group of amateur and professional archaeologists including HF Poole, GA Sherwin and GC Dunning (Basford 1981, 8). These individuals undertook surveys of the known archaeological remains on the Island and wrote a number of articles and manuscripts. Poole developed a particular interest in the Isle of Wight flint industries, writing a number of articles on the subject. As a result of this interest he was frequently involved in investigations in aggregates extraction areas. Poole recorded these investigations in field notes and sketches (including section drawings and sketch plans in some cases). His records are currently kept by the Isle of Wight Natural History and Archaeological Society (Delian Blackhouse-Fry, Isle of Wight Natural History and Archaeological Society pers comm) and the Isle of Wight County Archaeological Collections.
- 2.4.11 The development of the Isle of Wight Natural History and Archaeological Society (inaugurated as the Isle of Wight Natural Historic Society in 1919 and changed its name to the Isle of Wight Natural History and Archaeological Society in 1928) increased local interest and awareness of archaeological remains and actively contributed to 'rescue' interventions during aggregates extraction (<http://www.iwnhas.org>). Interested amateurs such as Poole were part of this society developing typologies, surveying archaeological remains and recording detailed descriptions of artefact findspots.
- 2.4.12 Despite its small scale and amateur nature, much of the work carried out during this period is invaluable for the quality of information it has provided on the distribution and nature of archaeological remains, in particular for the early prehistoric periods. The discoveries made during the investigations (particularly those of Hubert Poole) of Period 0 and Period 1 provided the baseline for later synthetic histories and subsequent investigations into the archaeology of the Palaeolithic and Mesolithic periods on the Island. The recovery of artefacts and other evidence during aggregates extraction at sites such as Bleak Down (Bleak Down Flint Implements; Project no 9), Great Pan Farm (Great Pan Farm; Project no. 20), Chessell Down (Chessell Down Jutish Burial Ground; Project no 25) and Arreton Down (Arreton Down Round Barrow and Arreton Down Bronze Hoard; Project no.1 and 2 respectively) were important factors in the identification of the importance of these sites for the archaeology of their respective periods on the Island. In particular, the interventions of Hubert Poole in aggregates extraction sites, played a considerable role in his identification of the importance of Great Pan Farm and Bleak Down and later understanding of the distribution of early prehistoric sites on the Isle of Wight (Basford 1981, 11: Wenban-Smith 2008a, 9).

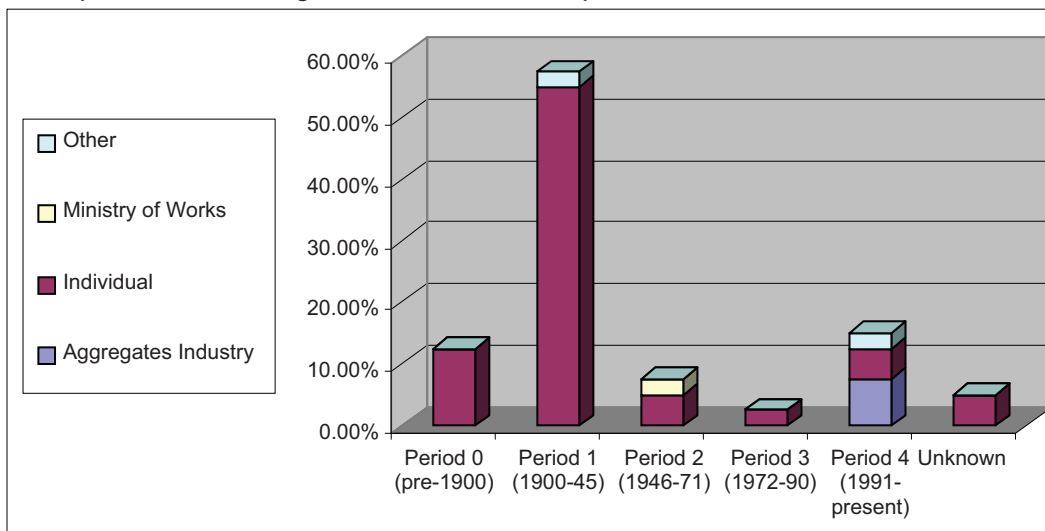
2.4.13 Although of continuing importance and usually investigated and recorded in accordance with best practice for the period, the current level of information available for many of the entries in the database is in most cases limited to the analysis and interpretation of the artefact published by the original finder or investigator. As a result many of the artefacts and sites within the database may benefit from re-assessment to locate them within the context of the archaeology of the island as it is currently understood and to consider them in the light of more recent evidence using modern typologies and scientific techniques (where applicable).

*Period 2*

2.4.14 With the introduction of the Town and Country Planning Act of 1947, planning permission was required to open a quarry and extract aggregates. However, the process did not make provision for the protection of the cultural heritage and, although archaeological finds continued to be displayed at Carisbrooke Castle Museum, there was no-one responsible for the archaeological remains on the island and no consistent professional archaeological investigation, even for threatened sites (Basford 1981, 8). Consequently, as with Periods 0 and 1, archaeological investigations were largely conducted as observations and 'rescue' interventions by local amateurs when archaeological remains were exposed during quarrying (Graph 5).

2.4.15 The number of projects carried out during this period reduced significantly (from 23 projects during Period 1 to three projects during Period 2: Graph 1), possibly reflecting a decline in quarrying due to the new legal requirements. Projects in this period were typically small or medium size (Graph 4), reflecting also the scale of the quarrying.

Graph 5 Funding bodies in relation to period of intervention



*Period 3*

2.4.16 After the Town and Country Planning Act of 1971, the number of archaeological projects declined further (Graph 1), with only a single project carried out during this period associated with the collection by amateurs of prehistoric flint flakes from a disused quarry. In 1973 an assistant curator with special responsibility for archaeology was appointed at Carisbrooke Castle Museum, but crucially there remained no cultural heritage component to the planning process and in 1981 it was still possible to comment that 'the museum's archaeological activities are curtailed by a lack of manpower and finance (Basford 1981, 8)'. The limited number of extraction related archaeological investigations undertaken during this period is

therefore likely to result from both a limited number of extraction sites (due to the slow pace of development and the legal restrictions to extraction) and the limited resources of the Carisbrooke Castle Museum to undertake investigations.

*Period 4*

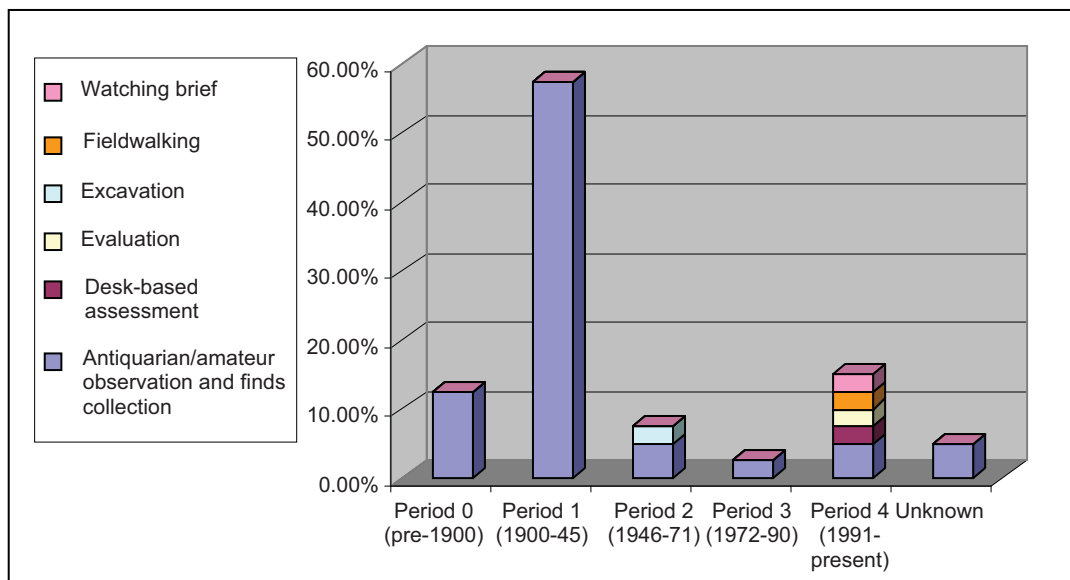
2.4.17 Following the publication of PPG16, archaeological investigations increased slightly and there are up to six projects during this period. Two of these projects have been carried out by a professional archaeological organisation (AC Archaeology) funded by the developer. One was carried out by the Isle of Wight County Archaeology and Historic Environment Service funded by the aggregates industry. The other was carried out in an aggregates area as part of the nationwide Defence of Britain project. Two projects were the collection of finds by local amateurs, indicating a continuation of the strong local archaeological society involvement seen in the past (Graph 5). These projects include large scale interventions (Graph 4), reflecting the size of the extraction site and the introduction of a programme of formal fieldwork in response to PPG16. The number of projects during this period is relatively small compared to a county of a similar size on the mainland.

*Professionalization of archaeology industry*

2.4.18 Improved awareness of archaeology within the planning process over the last 30 years, in particular with the introduction of PPG16, has resulted in an increasing professionalization of archaeological fieldwork.

2.4.19 Graph 6 indicates that the primary fieldwork during Periods 0 to 3 comprised amateur observation and finds collection with very little direct investigation but for an excavation carried out by an unaffiliated group in 1956 (Period 2). However, after PPG16, four of the six investigations consisted on different types of archaeological investigation from pre-fieldwork (desk-based assessments) to non-intrusive (fieldwalking) and intrusive (evaluation) fieldwork, carried out by professional bodies.

Graph 6 Nature of fieldwork in relation to period of intervention



2.4.20 It should be noted that although most desk-based assessments were excluded by the methodology, this was taken to mean pre-planning desk-based assessment. The Defence of Britain project described as 'desk-based assessment' in fact involved detailed historic and documentary research, and as such was felt appropriate to include in this assessment.

2.4.21 Although this actual number of investigations is small, the data does indicate the

development of a more professional, more comprehensive approach to investigation in Period 4, after the introduction of PPG16, as one would expect. Nonetheless, the involvement of amateur groups has continued during Period 4 and still comprises a third of the total number of projects, reflecting the strength of involvement of the local archaeological society and other amateurs.

## 2.5 Chronological periods represented

2.5.1 Aggregates extraction by its very nature takes place in areas attractive to early human settlement and other activity, for example on fertile and well-drained gravels and chalk geologies. It also takes place in currently undeveloped rural areas, away from modern settlement, in what would have been a predominantly rural and agricultural landscape throughout the medieval and post-medieval periods. Unless damaged by modern mechanical ploughing, archaeological features within such undeveloped areas are likely to have a relatively good state of preservation.

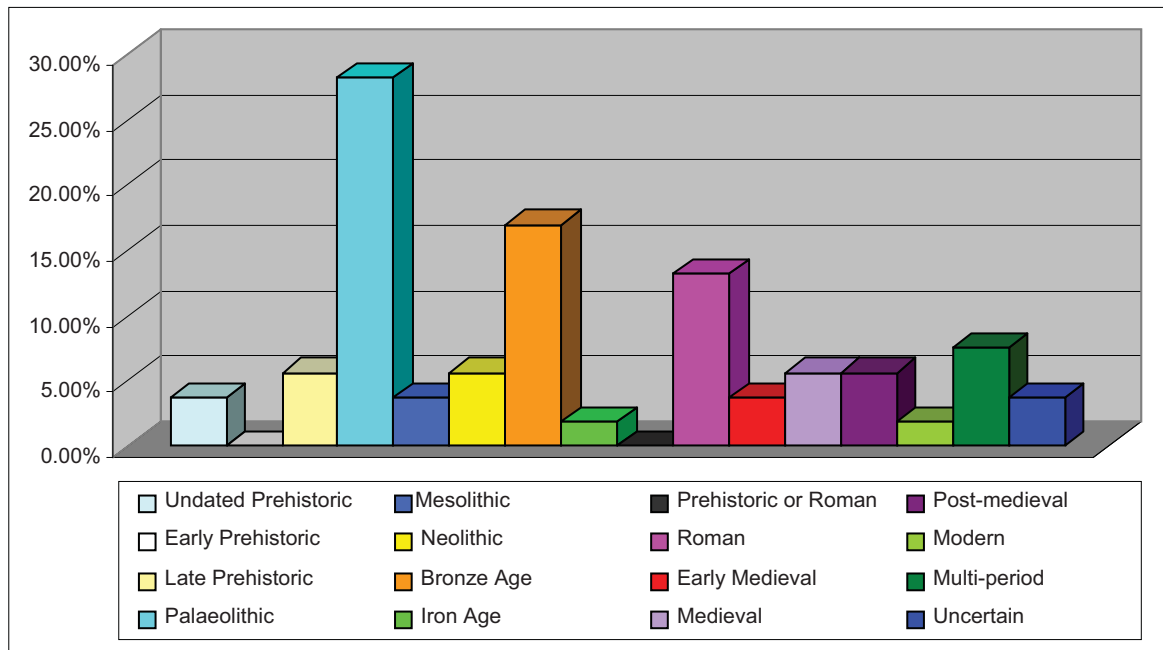
2.5.2 The chronological periods represented in the database have a broad range, with a number of multi-period sites recorded, and with a high percentage dated to the prehistoric and Roman periods (Graph 7 to Graph 10).

2.5.3 The 40 projects contained in the database represent 53 assets of a particular period. These vary in date from the prehistoric to post-medieval and modern periods. The number of assets of each period is as follows:

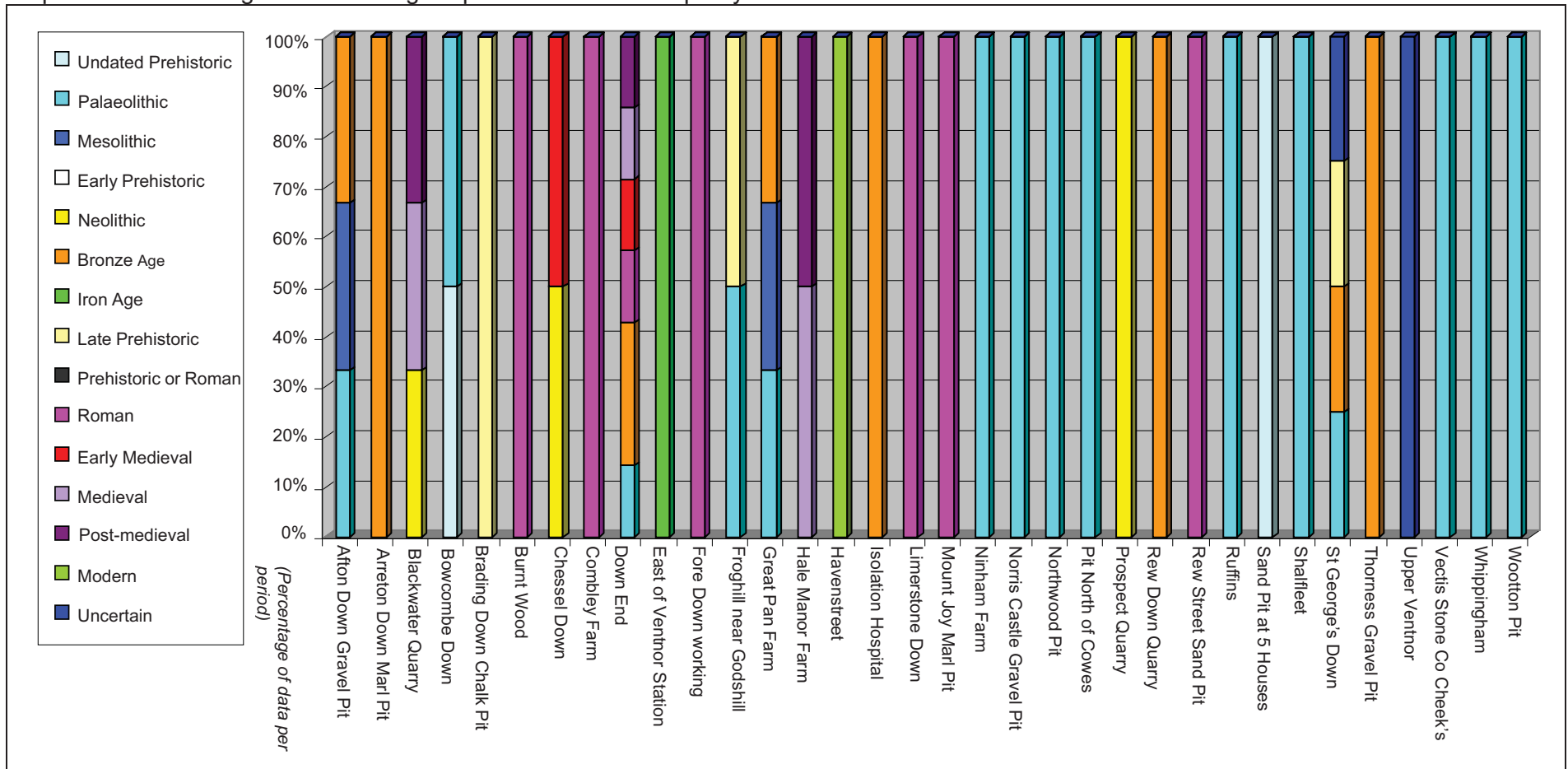
- Prehistoric - 35 assets;
- Roman - 7 assets;
- Early/late medieval - 5 assets
- Post-medieval - 3 assets;
- Modern - 1 asset; and
- Unassigned - 2 assets.

2.5.4 Four of the assets (7.6% of the total) are 'multi-period'. These have been noted in the database as 'multi-period' although, as stated in the methodology, the separate periods have also been noted. Graph 7 shows the percentage of assets by period.

Graph 7 Percentages of sites in relation to chronological/cultural period



Graph 8 Percentages of chronological periods within each quarry site





- 2.5.5 Graph 8 represents a distribution of the chronological periods (colours) in the different quarries (each bar). The graph shows that the majority of quarry sites hold assets of a single period, which is related to the nature of the intervention, i.e. antiquarian amateur observation and finds collection.
- 2.5.6 Archaeological interventions during Periods 0–4 all recorded assets of single chronological period only, as opposed to multi-period activity, reflecting the nature of the interventions - antiquarian observations and finds collection, suggesting a partial recording of the possible data available from the quarry sites rather than comprehensive identification of all archaeological remains present. Where interventions have occurred in the same quarry over an extended period of time, for example at Bowcombe Down (Projects nos. 14 and 37), Down End (Projects nos. 1, 15 and 32) and St George's Down (Projects nos. 5, 11 and 38), assets of different periods have been recorded on each occasion, indicating that a more comprehensive approach to investigation might well result in a greater proportion of multiperiod assets at one location. Only a small number of sites have evidence of multi-period activity. This might reflect the type of investigation, antiquarian/amateur observation and finds collection, rather than a lack of continuity in the settlement or human activity.
- 2.5.7 Graph 7 and Graph 8 show a pre-eminence of single period assets of prehistoric date (15 of the total 34 quarry sites have assets of this date). These are mostly of Palaeolithic origin.
- 2.5.8 Lower (500,000–150,000 BC) and Middle Palaeolithic sites (150,000–40,000 BC) on the Island largely comprise isolated finds of single handaxes from the coastline or from the Solent Straits as a by-product of dredging or fishing. The richest area for their discovery is the strip of Plateau/Marine gravels that extends from west of Cowes to Bembridge (north-eastern coastline). Of particular importance is the British Mousterian (a stone industry characterised by the bout coupe handaxe as a typological marker) site at Great Pan Farm, Immediately south of Newport in the centre of the island (Project no. 20, Fig 1). This site represents a rare survival of evidence of occupation in the Devensian (73,000–10,000 BC), with the reported presence of organic deposits, containing plant macrofossils, and faunal remains (Wenban-Smith and Loader 2008, 11).
- 2.5.9 In the early 20th century antiquarians collected worked flints which they believed to be of Upper Palaeolithic date (40,000–10,000 BC) from the eroding cliffs of the south west coast of the Island and from the small quarries scattered across it. However, none of their identifications have been confirmed and the material warrants reassessment. There is little material that can confidently be assigned an Upper Palaeolithic date, although recent finds from submerged sites in the Solent may date from the Upper Palaeolithic or Early Mesolithic periods (Wenban-Smith 2008b, 1).
- 2.5.10 The second largest group of assets (from eight of 34 quarry sites) date to the Bronze Age (2,600–700 BC). The HER indicates that most of the sites known for this period consist of barrows (i.e. Arreton Down Round Barrow: Project no. 1, Fig 1) and ring ditches. There are also lithic working sites (e.g. Brading Down: Project no. 33, Fig 1), hoards (e.g. Arreton Down Hoard: Project no. 2, Fig 1), and human burials (i.e. Downend: Project no. 32, Fig 1), but little evidence of settlement activity itself (Waller 2008b, 1). Bronze Age barrows survive along on the three chalkland areas of Afton/Brighstone Downs; Ashe/Brading Downs and Week/Luccombe Downs, some of them removed by quarrying activity, particularly at Afton Down (Project no. 8, Fig 1),
- 2.5.11 Five quarry sites have Mesolithic, Neolithic and Iron Age assets. Mesolithic (10,000–4,000 BC) activity, in the form of flint tranchet axes, tranchet arrowheads, graters and microliths, has been recorded primarily along the north coast, the Medina Estuary and the Greensands to the south of the central chalk ridge. This may not be

a complete pattern of activity as a considerable number of lithic scatters are recorded in the HER as being of 'prehistoric' date (such as at Bowcombe Down quarry: Project no. 38, Fig 1), but which may include Mesolithic material (Wenban-Smith 2008b, 1).

- 2.5.12 The Neolithic (4,000–2,600 BC) is represented by flint and stone tools and pottery, a mortuary enclosure, two long barrows, seven lithic working sites, three occupation sites, one midden, one hearth, six trackways, two post built structures, a platform and part of a submerged forest. These remains are widely dispersed with concentrations along the river valleys, and at the mouths of the four northern estuaries and along the south coast (Waller 2008a, 1). The evidence from quarry sites is also limited, consisting of areas of flint knapping (Blackwater Quarry: Project no. 24, Fig 1), a possible flint mine (Brading Down: Project no. 33, Fig 1) or isolated artefacts (such as the axe from Chessel Down: Project no. 4, Fig 1).
- 2.5.13 Seven of the 34 quarry sites have activity dated to the Roman period (AD 43–410) and within six of the quarries this is the only period represented. Roman occupation of the Island comprised rural villa estates in an ordered landscape of cereal cultivation and livestock rearing, which developed due to the fertile soils and good climate. Although the evidence from quarry sites is related to isolated artefacts (i.e. Mont Joy: Project no. 6, Fig 1) and features (such as the hut at Rew Street: Project no. 28, Fig 1), understanding of this period has improved in the last ten years revealing a heavily populated island with numerous farmsteads and a probable military presence at St Catherine's Point at the southernmost point on the Island (Lyne 2008, 4).
- 2.5.14 The archaeological evidence for early medieval period (AD 410–1066) focuses along, and to the south of, the central chalk ridge with highlights on the burials at Chessel Down Jutish Burial Ground (Project no. 25, Fig 1) and Arreton Down (Project no. 1, Fig 1). The Clay geology of the northern part of the Island was probably not brought into cultivation until after the Norman Conquest, and it remained more heavily wooded than the southern part in later medieval (1066–1540 AD) times. Much of the evidence of later medieval and post-medieval (1540–1901 AD) periods comes from documentary sources, including charters and also from place-name evidence (Basford 2008b, 1–2). The evidence recorded within quarry sites is constrained to isolated artefacts and agricultural features, as in Blackwater Quarry (Project no. 24, Fig 1). This would be expected, given that medieval and post-medieval settlement on the Isle of Wight was characterised by scattered rural settlement - mainly farmsteads, but also hamlets and villages, with the market towns of Newport, Yarmouth, Newtown, Brading and Cowes, located along the central axis and northern coast of the island beside navigable estuaries.
- 2.5.15 The post-medieval and modern period of the Isle of Wight is characterised by the enormous variation in the types of sites and landscapes, although this is not reflected in the data recorded within the quarry sites, which is only related to agricultural features (i.e. Hale Manor Farm: Project no. 23, Fig 1) and defence features (Havenstreet: Project no. 40, Fig 1). The Chalk downland in the southern part of the island contains large estates controlling large tracts of land, with small communities serving those estates. Whilst the estuarine areas have produced more urban development with diverse local industries, including shipbuilding and stone quarrying, as shown in the location of the quarry sites in the current project (Fig 1). A major trend of urban development would be carried out during the 19th century, when the island became a tourist resort for wealthy Victorians.

## **2.6 Types of assets represented**

- 2.6.1 The 40 projects contained in the database represent 56 archaeological asset types. The breakdown is shown in Graph 9 and is as follows:

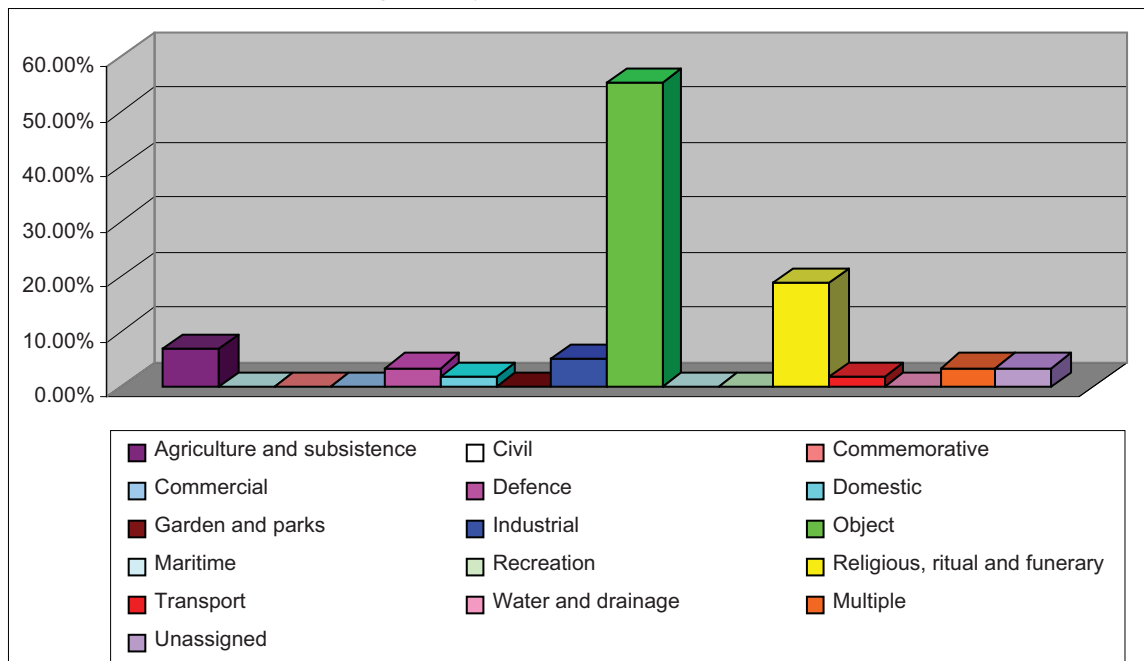
- Agriculture and subsistence – 3 assets;

- Defence – 2 assets;
- Domestic – 1 asset;
- Industrial – 3 assets;
- Religious or funerary activity – 11 assets;
- Transport – 1 asset;
- Objects (residual isolated finds or groups of finds recovered during an investigation) – 33 assets; and
- Unassigned – 2 assets.
- Multiple – 2 assets

2.6.2 Two of the projects contained multiple, rather than a single, asset type. As stated in the methodology, these were noted in the database as 'multiple' but were also broken down into the separate asset types (with period also assigned).

2.6.3 Seven asset types are present from a list of 14 types (excluding 'Unassigned' and 'Multiple' although including 'Object' as isolated finds or groups of finds). More than half (56.9%) of the assets are objects. This reflects the nature of archaeological intervention on the Island in the past, with most investigations comprising the collection of artefacts and observations by antiquarians rather than survey or extensive excavation of archaeological features. This data is primarily of value for its indication of the distribution and chronology of the Island.

Graph 9 Percentages of types of asset



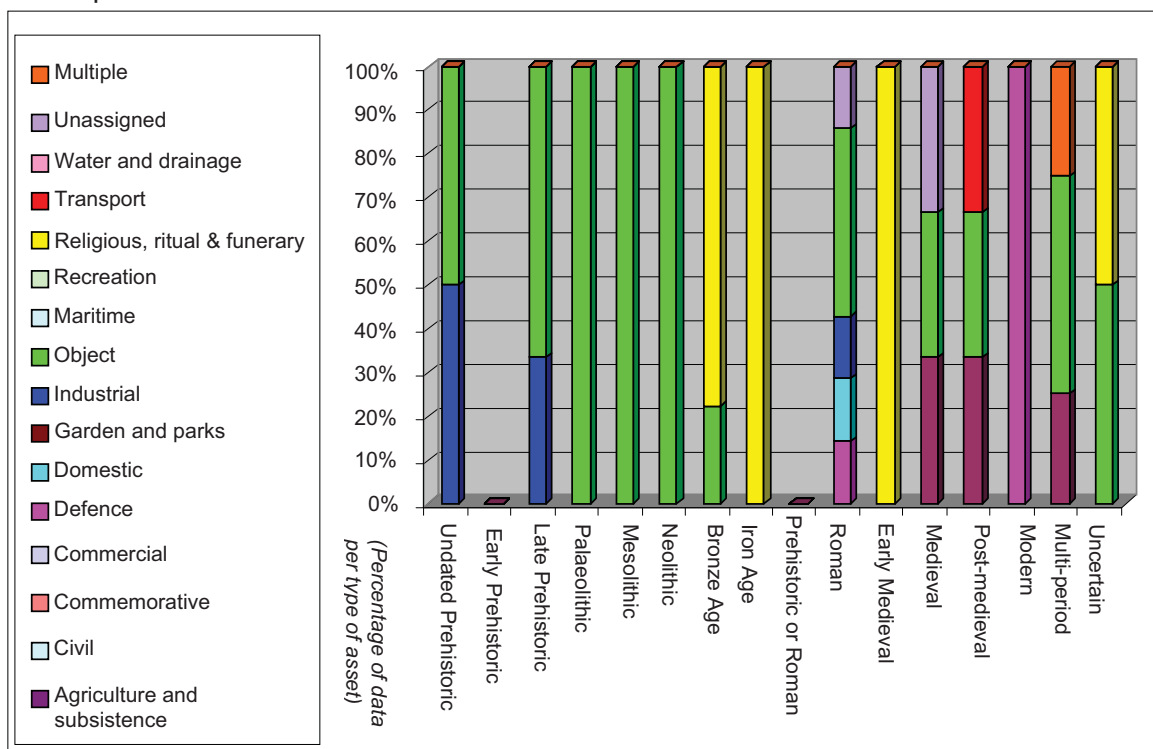
2.6.4 Graph 10 shows the asset types by period, whilst Fig 7 to Fig 14 show the distribution. Other than the 'Object' category, which predominates within each chronological period and is distributed across the Island, the graph shows:

- 'Religious, ritual or funerary' assets are confined to the Bronze Age (extant barrows), Iron Age (a single asset at Ventnor on the south-eastern coast) and early medieval periods (burials at Arreton Down round barrow and a Jutish cemetery at Chessel Down, Project nos. 1 and 25).
- 'Industrial' assets are confined to the undated and undated/late prehistoric periods (in the form of possible flint tool manufacture sites at Brading Down and Bowcombe Down, Project nos. 33 and 37) and also the Roman

period (a possible pottery kiln or corn drying oven at Burnt Wood, Project no. 27).

- A single 'Domestic' asset is recorded. This dates to the Roman period and is located in the northern part of the Island, south-west of Cowes (Project no. 28).
- 'Defence' assets are confined to the Roman (Project no. 7) and modern periods. The latter comprises Second World War defences which are visible above ground and noted by the Defence of Britain survey (Project no. 40).
- 'Agricultural and subsistence' assets are present in the medieval to post-medieval periods (Project no. 23). These include a double-ditched enclosure and post-medieval agricultural features shown in historic maps.

Graph 10 Percentages of types of asset in relation to chronological/cultural period



## 2.7 Significance of the data

2.7.1 The 40 projects within the Access database have been assigned the following significance in local, regional and national terms, on the basis of the data that they can potentially provide:

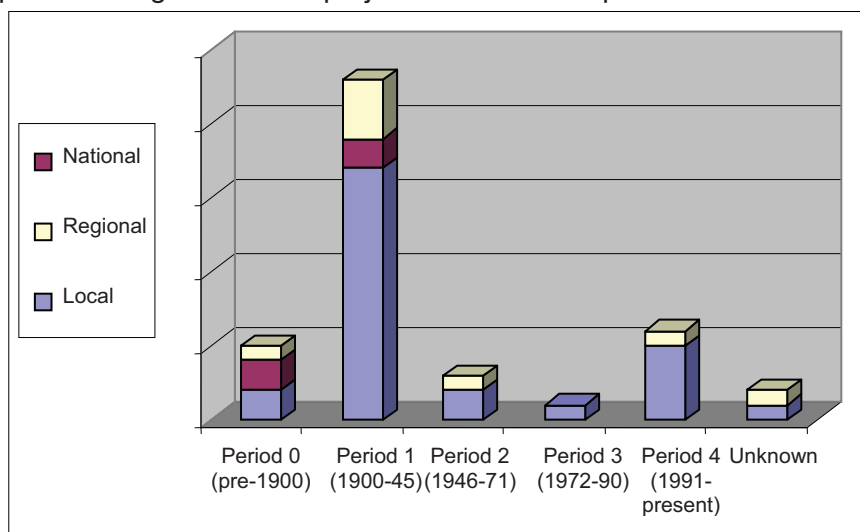
- National - 4 projects;
- Regional - 8 projects;
- Local - 28 projects.

2.7.2 Great Pan Farm (Project no. 20, Fig 1) has been identified as one of Britain's more important British Mousterian sites (Wenban-Smith and Loader 2008, 11). The project comprises observations made by a local enthusiast during gravel extraction between 1912 and 1920 which identified straight-tusked elephant teeth associated with Acheulian (Lower Palaeolithic stone industry), Levallois (Lower to the Upper Palaeolithic) and Chellean (Upper Palaeolithic) implements. The un-abraded condition of the flint implements and the close association with the faunal remains suggests that these finds are *in situ* and are therefore extremely rare. Other projects

of national significance include Bleak Down (Project no 9) Palaeolithic site, Arreton Down Bronze Age Hoard (Project no 2) and Chessell Down Jutish burial ground (Project no 25), which are very important for the understanding of certain periods on the Island, but which have also produced data of national significance (i.e. Arreton Down Hoard is the type site for Arreton Bronze Age culture objects).

- 2.7.3 Eight projects of potentially regional significance were recorded in the database. These projects include sites such as Arreton Down Round Barrow (Project no 1), which is considered very important for the understanding of the Bronze Age period on the island. It also includes sites which are considered to be potentially of regional importance because of the rarity of the artefacts or features recorded or for the valuable information they provide on ancient site distribution. The precise nature of the archive (including the location of finds and the quantity, quality and location of any other records) for some of these sites is uncertain. In some cases it is therefore possible that the potential regional significance of an intervention would not be fulfilled when the data is assessed. Nonetheless, the potential significance (as assessed from information that is currently available) of these interventions indicates that which may be realised by similar sites investigated under modern conditions and suggests that the archival remains would merit re-assessment to determine if the archive could reveal additional valuable information.
- 2.7.4 Considering that most of the data is derived from antiquarian/local enthusiast observations, the high number of projects of regional or potentially of regional significance suggests a rich heritage environment, which would benefit from a re-assessment of the finds recorded. The likely rich heritage environment would also be of significance in terms of any future extraction or development. The knowledge and enthusiasm of local groups, the continuing importance of archaeology within the planning framework, better investigative techniques and a greater contextualisation of human activity within a broader landscape, mean that projects of national significance could easily emerge in the future.
- 2.7.5 Graph 11 compares the known or perceived significance of the projects with the period of archaeological investigation (Periods 0–4). Projects of local significance predominate in all five Periods, reflecting the residual context of most of the recorded remains (antiquarian finds). Projects of regional significance are present in Periods 0–2 and 4, but are absent in Period 3. This is possibly linked to a decline in quarrying activity and associated archaeological investigations (see Section 2.4). The projects of national significance took place in Period 0–1.

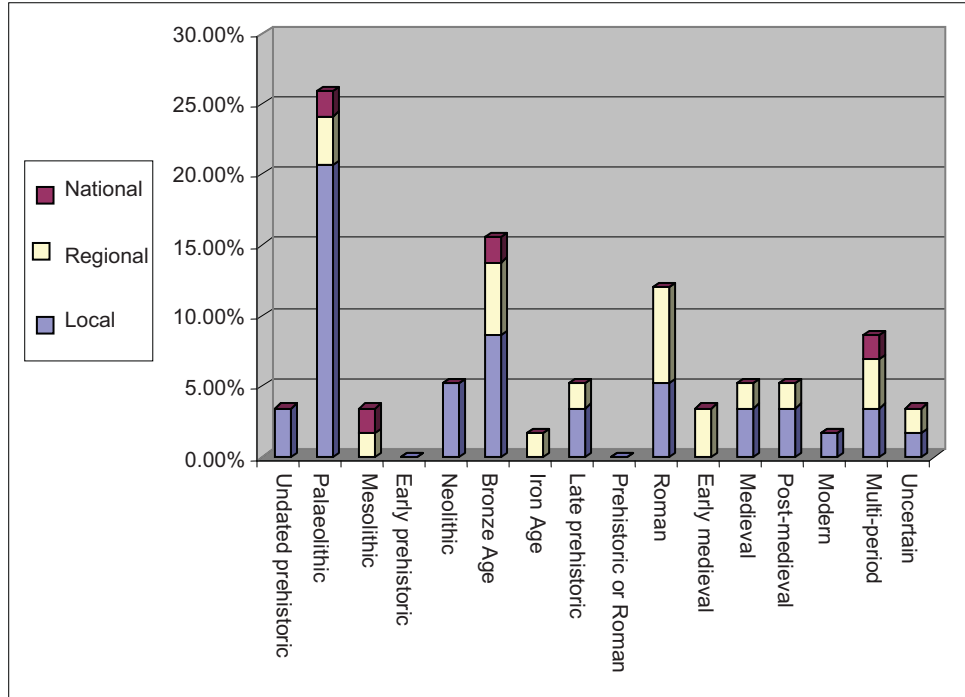
Graph 11 Significance of projects in relation to period of intervention



- 2.7.6 Graph 12 shows the significance in relation to chronological period. It should be

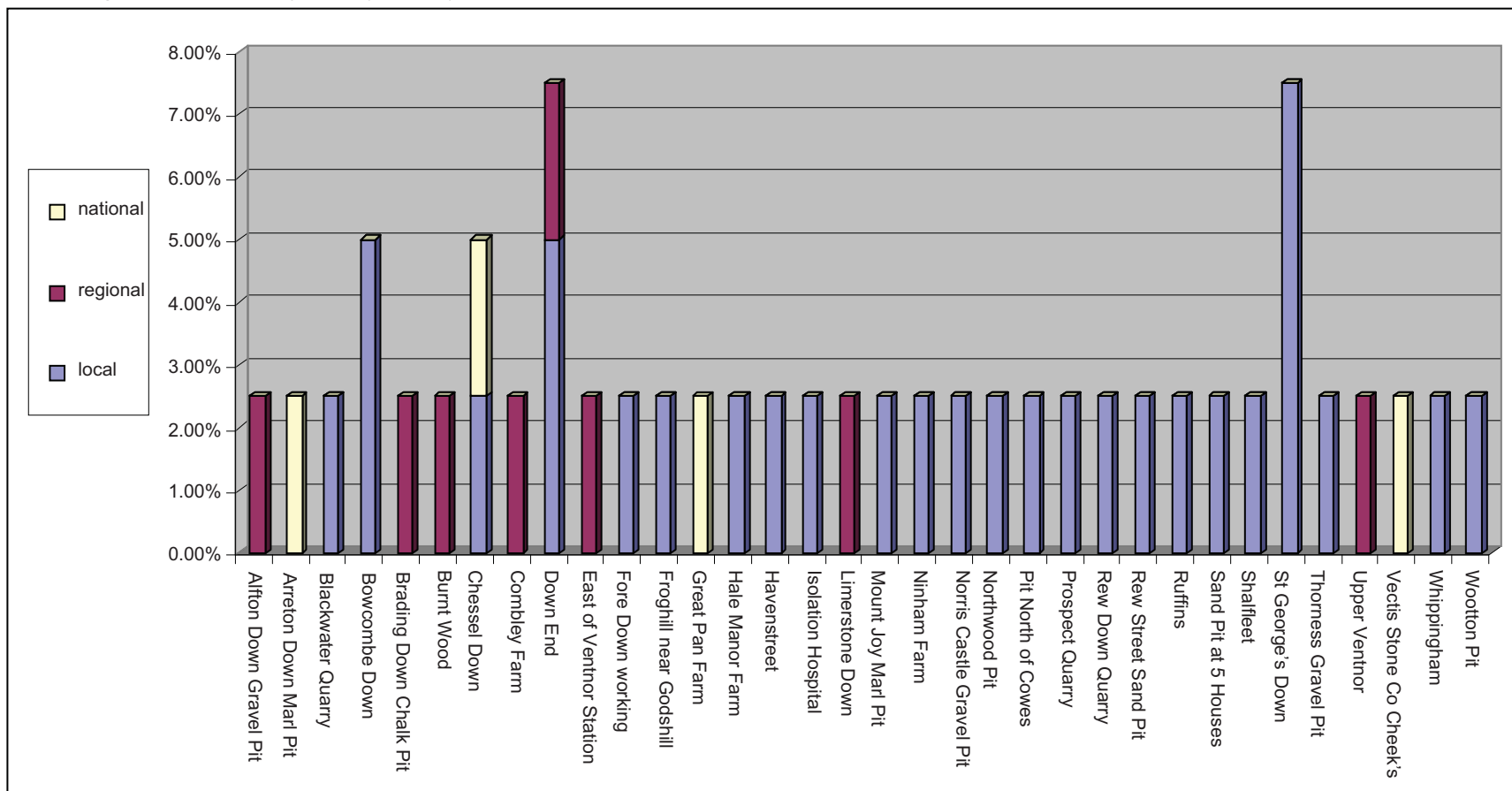
noted that significance recorded in the database was related to the project as a whole rather than the individual archaeological assets within it, and consequently the graph may not present an accurate picture of the significance of archaeological remains of a particular period. Assets of most chronological periods are present in projects of regional and of local significance. Palaeolithic, Mesolithic and Bronze Age assets are present in a single project of multi-period site, in which the only nationally significant remains date to the Palaeolithic.

Graph 12 Significance of projects in relation to chronological period



2.7.7 Graph 13 shows the significance of the projects undertaken within each quarry site. Four quarries have data of possible national significance. Eight quarry sites have the potential for information of regional significance. The majority of quarries (22 of 34) have projects with data of local significance.

Graph 13 Significance of projects by quarry site



### 3 Assessing trends in levels of dissemination

#### 3.1 Introduction

3.1.1 The primary objective of the current study is to identify and quantify past archaeological investigations relating to aggregates extraction, which have incomplete or inappropriately low levels of archive completion, assessment, analysis and/or reporting of the results, with a view to forming a strategy to complete the dissemination of these projects. It is hoped that improving dissemination would facilitate an improved understanding of the Historic Environment and the opportunities provided by aggregates extraction in the Isle of Wight by stakeholders, including the general public.

3.1.2 **The study found that the majority, just under four-fifths (77.5%), of the projects were inadequately disseminated.** Less than one fifth (17.5%) were considered to be complete in terms of appropriate dissemination, whilst 5% of the projects have unknown level of dissemination. In considering these figures, it is important to note that the majority of the investigations are observations and finds made by local enthusiasts rather than any formal fieldwork programme. Although many of these were disseminated adequately according to usual practice of the period to which they belonged, a reassessment of many of these projects is necessary to facilitate comparison between them and other more recent investigations on the island.

3.1.3 In order to identify any possible trends within projects associated with the completeness or incompleteness of dissemination, a series of queries were carried out of various data in the Access database. The queries have been represented under subheadings below, and the data tabulated with the main theme of the query in the first column and the level of dissemination (complete or incomplete) in the right hand column.

#### 3.2 Quarry site

3.2.1 Table 1 shows levels of dissemination in relation to the 34 different quarry sites identified during the current study.

3.2.2 The results of archaeological investigations in nine of the quarry sites are classed as fully disseminated. These projects were mostly fairly small with investigations consisting of early observations of historic assets removed during aggregates extraction in late 19th and early 20th century.

3.2.3 At Chessel Down and Down End, two of the quarries with the largest number of investigations carried out over an extended period of up to c 50 years, only one project from each quarry site has been classed as fully disseminated (5.0% of the total projects in this study). Again this reflects the need for synthetic reassessment of the remains recovered from these sites in the context of the archaeology of the aggregates resource in particular and the whole island in general.

*Table 1 Levels of dissemination in relation to quarry site*

Name of quarry	No. of projects	Level of dissemination (% of total of all 40 projects)	
		Complete	Incomplete
Afton Down Gravel Pit	1		2.5%
Arreton Down Marl Pit	1	2.5%	
Blackwater Quarry, St George's Down	1	2.5%	
Bowcombe Down	2		5.0%
Brading Down Chalk Pit	1		2.5%
Burnt Wood, Thorness	1		2.5%



Name of quarry	No. of projects	Level of dissemination (% of total of all 40 projects)	
		Complete	Incomplete
Chessel Down	2	2.5%	2.5%
Combley Farm	1	2.5%	
Down End	3	2.5%	5.0%
East of Ventnor Station	1		2.5%
Fore Down working above Rancombe	1		2.5%
Froghill near Godshill	1	2.5%	
Great Pan Farm	1	2.5%	
Hale Manor Farm	1	2.5%	
Havenstreet	1	2.5%	
Isolation Hospital Gravel Pit	1		2.5%
Limerstone Down Gravel Pit	1		2.5%
Mount Joy Marle Pit	1		2.5%
Ninham Farm	1		2.5%
Norris Castle Gravel Pit	1		2.5%
Northwood Pit	1		2.5%
Pit North of Cowes	1		2.5%
Prospect Quarry	1		2.5%
Rew Down quarry	1		2.5%
Rew Street Sand Pit	1		2.5%
Ruffins	1		2.5%
Sandpit at 5 Houses, Calbourne	1		2.5%
Shalfleet	1		2.5%
St George's Down	3		7.5%
Thorness Gravel Pit	1		2.5%
Upper Ventnor	1		2.5%
Vectis Stone Co. Cheek's Pit	1		2.5%
Whippingham	1		2.5%
Wootton Pit	1		2.5%
<b>Total</b>	<b>40</b>	<b>22.50%</b>	<b>77.50%</b>

### 3.3 Valley system

- 3.3.1 Table 2 shows levels of dissemination in relation to the four main valley systems where the archaeological projects reviewed by this study were located.
- 3.3.2 The Old Solent River Valley has 40% of all projects but only 7.5% of all fully disseminated archaeological projects are located here. These comprise the early medieval cemetery at Chessel Down Marl Pit (Project no. 25), investigated during the second half of the 19th century, the Combley Farm coin hoard (Project no. 39) found in 1996 and published as part of the Wootton-Quarr Project and the Havenstreet investigation (Project no. 40) within the Defence of Britain project in 2000.
- 3.3.3 The Eastern Yar valley has the second largest percentage of the total projects and has only a slightly higher level of full dissemination (10.0 of all projects).
- 3.3.4 Only two projects within the River Medina valley are fully disseminated.
- 3.3.5 Only two projects have been undertaken on the Old Western Yar valley (Project no. 8: Afton Down Gravel Pit and Project no. 4: Chessel Down Chalk Quarry). Neither has been fully disseminated.

Table 2 Levels of dissemination in relation to valley system

Name of valley system	No. of projects	Level of dissemination (% of total of all 40 projects)	
		Complete	Incomplete
Eastern Yar	12	10.0%	20.0%
Old Solent River	16	7.5%	32.5%
Old Western Yar	2		5.0%
River Medina	10	5.0%	20.0%
<b>Total</b>	<b>40</b>	<b>22.50%</b>	<b>77.50%</b>

### 3.4 Funding body

3.4.1 Table 3 shows levels of dissemination related to the funding body for the archaeological work carried out. It is not generally known whether the bodies that funded the investigation also funded the publication and dissemination of the data. Fig 6 shows the distribution.

3.4.2 For over three quarters (85%) of the 40 projects, information on the source of the funding was not readily identified as part of the present study. Based on the nature and date of the interventions (i.e. mostly pre-PPG16), the majority were however noted as 'individual', as it is believed that the work was probably undertaken by amateurs voluntarily. The majority of these are classed as requiring further dissemination to allow for a reassessment of the remains.

3.4.3 Two archaeological investigations were undertaken by amateurs in 1996, after PPG16, at St George's Down Pit (Project no. 38) and Combley Farm (Project no. 39). The investigations were small scale and comprised metal detecting and collection of finds, carried out in disused quarries (work not subject to planning). The Project at St George's Down Pit has been classed as requiring further dissemination, as the artefact may benefit from assessment as part of a synthetic study with similar artefacts from St George's Down and other sites. The Roman coin hoard from the Combley Farm project has been published as part of the Wootton-Quarr Project.

3.4.4 Only three of the 40 projects (7.5% of the total) were funded by the aggregates industry. Two have been adequately disseminated. One is incompletely disseminated. These projects were carried out post PPG16.

Table 3 Levels of dissemination in relation to funding body

Name of funding body	No. of projects	Level of dissemination (% of total of all 40 projects)	
		Complete	Incomplete
Aggregates Industry	3	5.0%	2.5%
Department of the Environment (DoE)	0		
Local authority	0		
Manpower Services	0		
Ministry of Works (MoW)	1	2.5%	
Other	2	2.5%	2.5%
Individual	34	12.5%	72.5%
<b>Total</b>	<b>40</b>	<b>22.50%</b>	<b>77.50%</b>

### 3.5 Archaeological organisation

3.5.1 Table 4 shows levels of dissemination related to which archaeological organisation carried out the fieldwork (occasionally the analysis and publication of an investigation is carried out by someone else; this is not included in the table).

3.5.2 The table shows that the largest group comprises 'unaffiliated' - amateur archaeologists and enthusiasts, usually operating prior to PPG16 on rescue

excavations and observations. Most of the work produced by this group (75% of the projects) has not been fully disseminated, in some cases reflecting lack of funding or availability of researchers, but in others reflecting the need for reassessment of the remains within the context of similar assets recovered across the island.

- 3.5.3 Three of the four projects carried out by professional archaeological organisations have been appropriately disseminated. This is not surprising considering that much (but not all) of the work would have been carried out under PPG16 planning conditions. Two of the projects have been disseminated through the HER and associated grey literature reports, while the Defence of Britain project would have been disseminated through the existing website. The only remaining project, the recovery of redeposited flint debitage from Prospect Quarry (Project no. 22) is recorded in the HER, but might also benefit from inclusion in a synthetic study of such remains from across the island. Naturally such a study would not be possible for the Isle of Wight County Archaeology and Historic Environment Service, without additional funding.

*Table 4 Levels of dissemination in relation to archaeological organisation*

Name of archaeological organisation	No. of projects	Level of dissemination (% of total of all 40 projects)	
		Complete	Incomplete
AC Archaeology	2	5.0%	
Defence of Britain Project	1	2.5%	
Isle of Wight County Archaeology and Historic Environment Service	1		2.5%
Unaffiliated	36	15.0%	75.0%
<b>Total</b>	<b>40</b>	<b>22.50%</b>	<b>77.50%</b>

### 3.6 Period of archaeological intervention

- 3.6.1 Table 5 shows levels of dissemination in relation to the period of archaeological intervention (Periods 0–4). Most (70.0%) intervention was carried out during Periods 0 and 1, prior to the development of any planning policy related to this industry (see section 3.6).
- 3.6.2 Period 4 has the best level of dissemination. Period 0 and Period 1 have reasonable levels of dissemination, reflecting credit on those who carried out the early fieldwork (although this is across a small number of projects). Period 3 has very low level of dissemination, possibly reflecting the lack of a suitable archaeological mitigation framework, more commercial quarrying practices which excluded those who might otherwise have undertaken projects and a generally lower level of (primarily local amateur) archaeological intervention across the island at this time.
- 3.6.3 A third of the six Period 4 projects have been classed as incompletely disseminated. This is not an indictment of PPG16, however, since 75% of those investigations prompted by PPG16 provisions are classed as fully disseminated. It is rather evidence of the limited impact PPG16 and developer funded archaeology has had on the number of archaeological investigations proceeding from aggregates extraction sites on the island. Of the two Period 4 projects which were not fully disseminated, one was undertaken by a local group in a disused quarry and was therefore outside the provision of PPG16. The third project has been classed as incompletely disseminated because of the opportunity to include it in a wider synthetic study of assets across the island.

*Table 5 Levels of dissemination in relation to investigation period*

Period of intervention	No. of projects	Level of dissemination (% of total of all 40 projects)	
		Complete	Incomplete
Unknown	2		5.0%
Period 0 (pre 1900)	5	5.0%	7.5%

Period of intervention	No. of projects	Level of dissemination (% of total of all 40 projects)	
		Complete	Incomplete
Period 1 (1900-1945)	23	5.0%	52.5%
Period 2 (1946-1971)	3	2.5%	5.0%
Period 3 (1972-1990)	1		2.5%
Period 4 (1991-Present)	6	10.0%	5.0%
<b>Total</b>	<b>40</b>	<b>22.50%</b>	<b>77.50%</b>

### 3.7 Project size

- 3.7.1 Table 6 shows levels of dissemination related to the size of the project. Fig 3 shows the distribution. The majority (87.5%) are small projects, comprising antiquarian finds and observations. Just over a fifth have been classed as appropriately disseminated as a marker of the need for reassessment of these projects to place their findings within the context of the archaeology of the island. Otherwise most of these projects would be identified as adequately disseminated since all have an HER entry and this is accompanied in most cases by grey literature.
- 3.7.2 There is only one large project (long term and spatially extensive) in the database, Hale Manor Farm (Project no. 23, Fig 1). The level of dissemination is considered complete. There are only four medium projects, two of which have complete dissemination.

*Table 6 Levels of dissemination in relation to size of project*

Project size	No. of projects	Level of dissemination (% of total of all 40 projects)	
		Complete	Incomplete
Large	1	2.5%	
Medium	4	7.5%	2.5%
Small	35	12.5%	75.0%
<b>Total</b>	<b>40</b>	<b>22.50%</b>	<b>77.50%</b>

### 3.8 Nature of fieldwork

- 3.8.1 Table 7 shows levels of dissemination related to the nature of archaeological intervention. Fig 4 shows the distribution.
- 3.8.2 The data indicates that 87.5% of projects comprise amateur observation and finds collection, and of these only 12.5% are considered to be completely disseminated, in order to emphasise the need for reassessment of the projects.
- 3.8.3 Of the four fieldwork projects, three are completely disseminated - an excavation carried out in 1956 by the Ministry of Works, Hale Manor Farm evaluation undertaken in 2002 by AC Archaeology and fieldwalking carried out by AC Archaeology between 2004 and 2005. A desk-based assessment (and possible survey) of Havenstreet bunkers as part of the Defence of Britain project has the appropriate level of dissemination.

*Table 7 Levels of dissemination in relation to nature of fieldwork*

Nature of fieldwork (primary)	Nature of fieldwork (secondary)	No. of projects	Level of dissemination (% of total of all 40 projects)	
			Complete	Incomplete
Antiquarian/amateur observation and finds collection		35	12.5%	75.0%
Desk-based assessment (Defence of Britain survey)		1	2.5%	
Evaluation	Survey/ Geophysics	1	2.5%	

Nature of fieldwork (primary)	Nature of fieldwork (secondary)	No. of projects	Level of dissemination (% of total of all 40 projects)	
			Complete	Incomplete
Excavation		1	2.5%	
Fieldwalking		1	2.5%	
Watching brief		1		2.5%
<b>Total</b>		<b>40</b>	<b>22.50%</b>	<b>77.50%</b>

### 3.9 Regulatory condition

- 3.9.1 Table 8 shows levels of dissemination related to the nature of the regulatory conditions associated with the archaeological intervention. Fig 5 shows the distribution.
- 3.9.2 In most of the cases (92.5%) there was no requirement for archaeological investigation to be carried out, reflecting the historic nature of most of these investigations. Only 17.5% of these projects have been recorded with complete dissemination, again reflecting the need for reassessment of these projects.
- 3.9.3 Three projects were identified as having been carried out under the terms of a planning condition, i.e. *preservation by record* with a standard requirement to publish the results. One of these three projects is however incompletely disseminated, reflecting the benefit that might be gained by including the project in a larger synthetic survey.

*Table 8 Levels of dissemination in relation to regulatory conditions*

Regulatory condition	No. of projects	Level of dissemination (% of total of all 40 projects)	
		Complete	Incomplete
Not required	37	17.5%	75.0%
Planning condition	3	5.0%	2.5
<b>Total</b>	<b>40</b>	<b>22.50%</b>	<b>77.50%</b>

### 3.10 Chronological period

- 3.10.1 Table 9 shows levels of dissemination related to the chronological periods of the discoveries. The table shows low levels of dissemination across the assets of most of the periods, with the exception of the early medieval and modern periods, which have complete dissemination.
- 3.10.2 All Iron Age assets (1.7% of total assets) and assets of uncertain date have incomplete dissemination. Bronze Age (5.17%), Palaeolithic (5.17%) and multi-period (6.9%) assets have higher levels of dissemination. Palaeolithic assets in particular and prehistoric assets in general would benefit from re-assessment.

*Table 9 Levels of dissemination in relation to chronological/cultural period*

Chronological period	No. of assets	Level of dissemination (% of total of all 57 assets)	
		Complete	Incomplete
Palaeolithic	15	5.17%	20.69%
Mesolithic	2	1.72%	1.72%
Neolithic	3	1.72%	3.45%
Bronze Age	9	5.17%	10.34%
Iron Age	1	0.00%	1.72%
Late Prehistoric	3	1.72%	3.45%
Undated Prehistoric	2	0.00%	3.45%
Roman	7	1.72%	10.34%
Early Medieval	2	3.45%	0.00%
Medieval	3	3.45%	1.72%
Post-medieval	3	3.45%	1.72%

Modern	1	1.72%	0.00%
Multi-period	5	6.90%	1.72%
Uncertain	2	0.00%	3.45%
<b>Total</b>	<b>58</b>	<b>36.21%</b>	<b>63.79%</b>

### 3.11 Asset type

- 3.11.1 Table 10 shows levels of dissemination in relation to asset types recorded during archaeological intervention. Seven of the 14 known asset types are not represented at all in the data.
- 3.11.2 'Domestic', 'Defence' and 'Industrial' types all have incomplete levels of dissemination.
- 3.11.3 'Unassigned' assets have the highest level of dissemination, which is perhaps surprising as one would expect that the analysis of the discoveries prior to dissemination will have determined the nature of the asset. The uncertainty probably reflects caution on the part of the person who entered the data into the HER, on the basis that the excavator/author's interpretation might not be reliable. This point highlights the need to re-assess these assets in future research projects.
- 3.11.4 'Agriculture and subsistence', 'Object', 'Religious, ritual and funerary' and 'Multiple' types have mixed levels of complete and incomplete dissemination.

*Table 10 Levels of dissemination in relation to asset type*

Asset type	No. of assets	Level of dissemination (% of total of all 57 assets)	
		Complete	Incomplete
Agriculture and subsistence	3	1.72%	3.45%
Civil			
Commemorative			
Commercial			
Defence	2		3.45%
Domestic	1		1.72%
Garden and parks			
Industrial	3		5.17%
Object	33	18.97%	37.93%
Maritime			
Recreation			
Religious, ritual and funerary	11	6.90%	12.07%
Transport	1	1.72%	
Water and drainage			
Multiple	2	1.72%	1.72%
Unassigned	2	3.45%	
<b>Total</b>	<b>58</b>	<b>34.48%</b>	<b>65.52%</b>

### 3.12 Current project status

- 3.12.1 Table 11 shows levels of dissemination related to current project status. The table indicates that all projects are considered to be 'complete' in that the intervention/observation/fieldwork event has finished and in the case of the post-PPG16 projects a final report produced. Due to the large number of antiquarian projects requiring reassessment, just under four fifths (77.5%) of the projects are considered to be inadequately disseminated under the criteria of the current study. As mentioned before, this does not reflect an inability on the part of the original investigator, but rather the need for further research in the future to unlock the potential of these projects.

**Table 11** Levels of dissemination in relation to current project status

Current project status	No. of projects	Level of dissemination (% of total of all 40 projects)	
		Complete	Incomplete
Complete	40	22.5%	77.5%
Not known	0		
<b>Total</b>	<b>40</b>	<b>22.5%</b>	<b>77.5%</b>

### 3.13 Project significance

3.13.1 Table 12 shows the levels of dissemination related to the known or perceived significance of the archaeological data. Fig 14 shows the distribution (along with recommended dissemination, discussed later in the report).

- Three of the four projects with data considered of national significance have a complete level of dissemination. The only project of national significance which is not considered to be completely disseminated is Bleak Down (Project no 9). This antiquarian project was disseminated through a regional publication to a high standard for the period in which it was investigated. However, in view of its national significance it is recommended that the material from this project be reassessed and republished to place the site in the context of the Palaeolithic period as it is now understood and fulfil the potential this project has in terms of national understanding of the Palaeolithic.
- The eight projects with data considered to be of regional significance have variable levels of dissemination - just 2 of the 8 projects have complete dissemination. The low level of dissemination results from the suggested need for reassessment of some of these projects. If the importance of the projects were lower and they did not merit reassessment, they could be considered to be adequately disseminated as information on the projects is held in the files at the Isle for Wight HER and is therefore accessible if required.
- Projects producing data of local significance (70.0% of all projects) have the lowest percentage of complete dissemination, which is unusual considering the low level of dissemination they require to fulfil the criteria (e.g. grey literature report, HER entry). Again this is due to a number of projects which might benefit from reassessment, but could otherwise be considered adequately disseminated.

**Table 12** Levels of dissemination in relation to significance of data retrieved

Project significance	No. of projects	Level of dissemination (% of total of all 40 projects)	
		Complete	Incomplete
National	4	7.50%	2.50%
Regional	8	5.00%	15.00%
Local	28	10.00%	60.00%
<b>Total</b>	<b>40</b>	<b>22.5%</b>	<b>77.5%</b>

### 3.14 Archive details

3.14.1 Table 13 shows levels of dissemination in relation to whether the archive location is known or not. In most cases, archaeological investigations discussed in journals and newsletters fail to mention details of the project archive, such as the archive location. Where possible, the archive location was identified following consultation with HER or the council museum and archive service.

3.14.2 For most (34 out of 40) of the projects, the archive locations were identified. For a small percentage of projects (6 out of 40) the archive location was not readily

apparent and was not identified as part of the present study. Projects with no archive details mainly predate the 1950s and are associated with the lack of formal archiving deposition and/or possibly the misplacement of the archive records.

*Table 13 Levels of dissemination in relation to archive location*

Archive location	No. of projects	Level of dissemination (% of total of all 40 projects)	
		Complete	Incomplete
Known	34	22.5%	65.0%
Unknown	6		12.5%
<b>Total</b>	<b>40</b>	<b>22.5%</b>	<b>77.5%</b>

### 3.15 Summary of trends

- 3.15.1 Two main themes emerged. The first is the lack of certain important information within the journal and newsletter articles (and occasionally the HER entries) examined, namely why the work was carried out, the location of the archive, information on the funding body, and the high percentage of isolated finds ('Object' type of asset) without any indication of context and related human activity. The lack of information of this type is in most cases due entirely to the antiquarian nature of the work, which was disseminated prior to current procedures for including such details in reports and articles.
- 3.15.2 For over four fifths (87.5%) of the 40 projects noted in the database, the funding body was not stated and the project was thought to be voluntary work carried out by an amateur group or individual. In many cases journal/newsletter notes and articles do not state why the work was carried out (i.e. quarrying activity or research).
- 3.15.3 For just under one fifth (12.5%), and most pre-1950s projects, the location of the archive was not identified as this information was not readily apparent in the published journal/newsletter notes and articles. However, in many cases archival information (or copies thereof) is present in the backup files of the HER.
- 3.15.4 Over half (56.9%) of the archaeological assets were noted as 'Object', whilst 3.5% of the assets were 'Unassigned'. Only seven asset types out of a possible 14 were noted. This is due to the origin of most of the projects in antiquarian or amateur work prior to the inclusion of archaeology in the planning process. These individuals were frequently limited to small scale observation and finds collection and resulting archaeological remains are typically isolated discoveries lacking interpretation of context. Future reassessment, synthetic analysis of multiple projects from particular periods, integration with relevant data from the rest of the island and dissemination of the results would allow a better understanding of the nature of human activity recorded than is currently available from the data.
- 3.15.5 The second theme is the low level of dissemination. Just over a fifth (22.5%) of projects were considered to be complete in terms of fulfilling the criteria for having an appropriate level of dissemination. This is primarily due to the large number of antiquarian projects. Most were adequately disseminated, considering the period in which they were undertaken, but (see 3.15.4) their dissemination has been classed as inappropriate because a reassessment of these projects would be beneficial to develop and publish their full potential in terms of the understanding of the archaeology of the island.
- 3.15.6 There is a clear relationship between the number of small scale antiquarian projects and low levels of dissemination, which indicates the need for reassessment of these projects. By contrast 75% of the investigations which resulted from a planning condition (i.e. undertaken under the current system) are classed as adequately disseminated. The fourth investigation (representing 25%) is only classed as inadequately disseminated because, like antiquarian projects, the redeposited remains discovered might benefit from further analysis as part of a synthetic project encompassing the entire island.



## 4 Current levels of dissemination

### 4.1 Projects with complete dissemination

4.1.1 Projects carried out within 6 of the 34 quarries are considered to be fully disseminated. These are shown on Fig 14 and comprise:

- *Arreton Down Round Barrow* (Arreton Down Chalk Quarry, Project no. 1): The archaeological excavation carried out in 1956 recorded the early Bronze Age barrow, with scattered Roman potsherds and early medieval secondary burials. The journal articles published at national level are considered appropriate for the regional significance of the data obtained.
- *Arreton Down Bronze Hoard* (Arreton Down Marl Pit, Project no. 2): The investigation carried out in 1735 recorded a votive hoard of early or middle Bronze Age date. The brief journal notes published at regional and national level are considered appropriate for the national significance of the data obtained and the limited information available from a project so early in the development of archaeology.
- *Blackwater Quarry* (Blackwater Quarry St George's Down, Project no. 24): The archaeological investigation carried out between 2004 and 2005 recorded Neolithic flints, later medieval ironwork and 19th-century agricultural activity. The grey literature report held by the HER is considered appropriate dissemination for the local significance of the data obtained.
- *Froghill Implements* (Froghill near Godshill, Project no. 17): The investigation carried out between 1900 and 1938 recorded Mousterian implements and Neolithic or Bronze Age chips of flint. The journal articles and short notes published at regional and national level are considered appropriate for the local significance of the data obtained.
- *Great Pan Farm* (Great Pan Farm, Project no. 20): The investigation carried out between 1912 and 1924 recorded Acheulian, Levallois and Chellean implements, two Mesolithic picks and a Bronze Age palstave. The journal notes and articles published at regional and national level are considered appropriate for the national significance of the data obtained.
- *Hale Manor Farm* (Hale Manor Farm, Project no. 23): The investigation carried out by AC Archaeology in 2002 recorded a double-ditched enclosure of later medieval and post-medieval date, along with agricultural features. The grey literature report held by the HER is considered appropriate dissemination for the local significance of the data obtained.
- *Chessell Down Jutish Burial Ground* (Chessell Down Marl Pit, Project no. 25): The investigations carried out in 1816, 1818 and 1855 recorded 130 graves of a possible 'Jutish' cemetery. The publication of the data within a regional synthesis is considered to be appropriate for the regional significance of the data obtained.

### 4.2 Projects in the process of dissemination

4.2.1 No projects in process of dissemination have been identified.

### 4.3 Projects with incomplete dissemination

4.3.1 The majority of the investigations have incomplete dissemination, although in many cases this represents the need for a modern reassessment of antiquarian data in order to realise the full potential of the projects. Those quarry sites/projects with incomplete dissemination are discussed in section 5, along with recommendations.

## 5 Recommendations

### 5.1 Introduction

- 5.1.1 The results of this ASLF study reveal that the majority of the investigations in the past on quarry sites on the Island comprise observations and finds collection by local amateurs and antiquarians. Although the dissemination undertaken at the time of the projects was in most cases appropriate, the age of much of this material makes a modern reassessment a necessity to realise the full potential of this corpus. Consequently many of these investigations have been classed as having low levels of dissemination in order to mark this need. This section of the report puts forward recommendations for achieving a reassessment of this data and the dissemination of any other projects which require it.
- 5.1.2 The Access database includes, in accordance with the methodology set out in Section 8.3, three levels of further work for each separate project, where dissemination is considered to be incomplete. The three levels of further work comprise Assessment, Analysis, and Publication, and are based on the process of post-excavation assessment, analysis and dissemination detailed in English Heritage guidelines (English Heritage 2008, 19–23; Map2 1991: MoRPHE 2006, 15). The level of work chosen represents the first stage necessary for the subsequent dissemination of the project. Where a project requires assessment, it is anticipated that this assessment will determine the feasibility of and provide recommendations for subsequent analysis and publication.
- 5.1.3 The ultimate level of dissemination achieved by any subsequent assessment and analysis will depend upon the known or perceived significance of the data contained within each project and the results of the assessment and analysis. The expected levels of dissemination for projects of differing significance are detailed in section 7.3.12 and Table 16. The level of dissemination feasible for a particular project will also depend upon the survival and quality of the archive material (including artefacts and any written records). Where the survival or the quality of the project archive is low, the information that can be obtained from the surviving archive will not equal the expected level of significance and is unlikely to provide sufficient information for the equivalent level of dissemination. The significance and associated level of dissemination will therefore be reduced. For example, a project of regional significance would normally merit full treatment in a local or national journal. Should an assessment indicate that the project archive is very limited the information that can be obtained during subsequent analysis would be reduced and is likely to be of local significance, meriting a much shorter journal note, grey literature report and an update of the HER entry.
- 5.1.4 The section below discusses the reasoning behind the suggested levels of further work and dissemination, and has been grouped by quarry site. The approach has considered current research priorities, which are outlined in the section below.

### 5.2 Research frameworks

- 5.2.1 The Archaeological and Historic Environment Service of the Isle of Wight has contributed to the Solent-Thames Research Framework by producing resource assessments for all chronological periods, highlighting gaps in knowledge and providing recommendations on possible research themes ([http://www.buckscc.gov.uk/bcc/archaeology/Isle\\_of\\_Wight](http://www.buckscc.gov.uk/bcc/archaeology/Isle_of_Wight)). The framework covers the counties of Berkshire, Buckinghamshire, Hampshire, Isle of Wight and Oxfordshire. The research framework is currently under consultation and the research agenda is being developed. The current study refers to the issues considered in this draft document.

5.2.2 The Isle of Wight County Archaeological Framework is in the process of being developed, and consequently it has not been included within the present study.

5.2.3 English Heritage has recently produced several research documents comprising *Research Agenda: an introduction to English Heritage's research themes and programmes* (English Heritage, 2005) and *Discovering the past shaping the future: research strategy 2005–10* (English Heritage, 2005). These set out a broad strategy of maximising public benefit from the nation's heritage.

### 5.3 Publication

5.3.1 No projects have been recommended for publication because many which are likely to be published are recommended for assessment. Under current and previous English Heritage guidelines (English Heritage 2008, 19–23; MAP2 1991; MoRPHE 2006, 15) the assessment stage will lead on to subsequent analysis and dissemination of the data as appropriate. The assessment stage is thus a preliminary to subsequent analysis and dissemination and will implicitly result in publication where the evidence merits this. A few projects have not been recommended for publication because the data is of limited significance or the projects have adequately disseminated.

### 5.4 Analysis

5.4.1 No projects have been considered for analysis. Many of the projects in the database are likely to require analysis prior to subsequent dissemination, but in all these cases the current understanding of the project archive was insufficient to allow analysis without prior assessment. Projects which would be appropriate for immediate analysis would typically be projects for which a post-excavation assessment (English Heritage 2008, 19–23; Map2 1991; MoRPHE 2006, 15) was extant. The process of post-excavation assessment only began after the implementation of PPG16 and the publication of the English Heritage Management of Archaeological Projects (Map2) guidelines. Projects which would be determined to require analysis would therefore either be projects which have an existing post-excavation assessment (in the case of projects undertaken after 1991), or where the type, quantity and nature of the data within the archive was understood sufficiently well to allow informed analysis (in the case of projects undertaken before 1991). Due to the limited number of projects from later periods, no projects were recorded where a post-excavation assessment was known to exist, and in most pre-1991 projects the information available on the nature of the archive was too limited to allow for immediate analysis. Immediate analysis was not recommended for the remaining projects because they have been assessed as being adequately and completely disseminated.

### 5.5 Assessment

5.5.1 The current report has identified 30 projects that would merit further assessment with subsequent analysis and publication as appropriate. The projects are located within the following 27 quarries:

- Afton Down Gravel Pit
- Vectis Stone Co. Cheek's Pit
- Bowcombe Down
- Brading Down Chalk Pit
- Burnt Wood, Thorness
- Chessel Down
- Down End

- East of Ventnor Station
- Fore Down working above Rancombe
- Isolation Hospital Gravel Pit
- Limerstone Down Gravel Pit
- Mount Joy Marle Pit
- Ninham Farm
- Norris Castle Gravel Pit
- Northwood Pit
- Pit North of Cowes
- Prospect Quarry
- Rew Down quarry
- Rew Street Sand Pit
- Ruffins
- Sandpit at 5 Houses, Calbourne
- Shalfleet
- St George's Down
- Thorness Gravel Pit
- Upper Ventnor
- Whippingham
- Wootton Pit

5.5.2 The projects recommended for assessment include both individual artefacts and larger projects. In both cases a proportion of the projects are likely to be associated with field notes, sketches and correspondence, some of which provide the only original data on projects that contribute significantly to our understanding of the archaeology of the Island. This study has determined that the location of the written records is often different from that of the artefacts and in some cases the location of the artefacts has not been confirmed. In some cases, assessment has been recommended because, at the very least, it would be appropriate to determine the feasibility of any future analysis by verifying the location of the written records and artefacts.

5.5.3 For other projects, it is anticipated that assessment will confirm the significance of the project and allow the project to proceed to analysis and further publication, enhancing understanding of the archaeology of the Island. For certain groups of artefacts (typically chance finds, but including some larger assemblages) it is suggested that these projects should be assessed (and proceed to analysis and publication) as a group. Certain of the projects would not necessarily be sufficiently important to merit assessment or subsequent study when viewed in isolation, but could still benefit from assessment and archiving. Studying these projects as a group is also likely to enhance the information that would be obtained from a single project.

5.5.4 The projects which can be grouped together include:

- Prehistoric stone artefacts
- Bronze Age funerary sites
- Bronze Age metal artefacts (including one hoard and a single damaged palstave)
- Roman numismatic finds (including one hoard of Roman coins)

5.5.5 It would also be appropriate to undertake the reassessment of these groups of projects together with assets of the same periods which were not discovered as a

result of aggregates extraction. This would allow the most comprehensive picture of the archaeology of these periods on the Island and would provide the best context for the reassessment of the projects derived from aggregates extraction.

- 5.5.6 The amount and quality of archival information varies between the projects in a group, but in many cases the context of the finds was recorded to a high standard (for the period concerned) and records of the project survive in notes and correspondence. In particular, those artefacts discovered by Hubert Poole, Pritchett and Sherwin are likely to be associated with notes and descriptions of the location and context in which they were found. Many of these artefacts have also been important in the understanding of their respective periods on the Island and (in some cases) across a large part of the country. Despite this importance and the potential inherent in projects with artefacts and associated contextual information, most have not been subject to modern analysis (or re-analysis) which may refine and improve our understanding of the archaeology of the Island.
- 5.5.7 It is also suggested that a re-assessment of the field notes of HF Poole and HE Pritchett would be appropriate. Many of these notes relate to aggregate extraction sites and would therefore be included in the identification and collation of the archive associated with the projects recommended for assessment, but a wider reconsideration of the field notes in general may also be appropriate. During the project it was noted that many journal articles did not record the reason for the investigation or project which they reported on, and were therefore excluded from the database. It is considered likely that some of these articles may relate to aggregates extraction, particularly those of HF Poole and HE Pritchett. It is suggested that a future project to re-assess the field notes may reveal further projects associated with aggregates extraction, many of which are likely to require re-assessment, analysis and publication and could be included in the groups of projects described below and potentially published together with them.

#### *Prehistoric stone artefacts*

- 5.5.8 The projects recommended for assessment include 20 projects which produced prehistoric and stone artefacts (Project nos 3–5, 8, 9, 11–13, 15, 16, 18, 19, 21, 22, 32–38). These included 15 projects with Palaeolithic artefacts, two projects with Mesolithic artefacts and five projects with Neolithic/Bronze Age data, although future analysis may revise the dating of some artefacts.
- 5.5.9 Stone artefacts found during gravel extraction have been important for understanding of the archaeology of the Island and particularly the earliest periods. Many of the artefacts were investigated by Hubert Poole or Pritchett and are therefore associated with contextual information often provided in field notes and drawings. Where these finds have been published, the publication was often made at the time of discovery, and very few of the artefacts have been subject to analysis in the light of current typologies and chronological revisions. In recent years re-assessment of other projects originally published by Poole (Shackley 1975: Basford 1981, 11: Wenban-Smith and Loader 2008) has shown that Poole's conclusions may need further analysis and revision in the light of current understanding. The importance of the re-assessment of existing collections for developing a more robust chrono-stratigraphic framework of the Palaeolithic period and improving understanding of the materials, sources and trade route of the Mesolithic period has also been highlighted in the draft Solent-Thames Archaeological Research Framework (Wenban-Smith 2008a, 9: 2008b, 2). The assessment may also provide opportunities to answer a number of other research questions considered in the draft. These include:
- Patterns of occupation and settlement through the Lower/Middle Palaeolithic

- Integration, correlation and chrono-stratigraphic attribution of Plateau and Terrace gravels
- Patterns of technological/typological change through the Palaeolithic, and contrast/similarities with adjacent mainland areas such as The Test Valley, Bournemouth and West Sussex
- Discovery of faunal/palaeo-environmental remains in fluvial deposits (Wenban-Smith 2008a, 7)

5.5.10 It is therefore suggested that the prehistoric flint artefacts should be assessed to determine the feasibility of further analysis and publication. As many of the artefacts are only of local significance, it is suggested that the artefacts could be assessed, analysed and published either as one group or divided up by period. Ideally this would be done together with a similar assessment of artefacts of the same period which are not associated with aggregate extraction.

#### *Bleak Down Flint Implements (Vectis Stone Co. Cheek's Pit, Project no. 9)*

5.5.11 The investigation carried out in 1932 at Bleak Down recorded Lower Palaeolithic Acheulian and Mousterian flint implements including occasional in situ objects and a palaeochannel. The implements are of considerable national importance for understanding of the Palaeolithic period. The artefacts were studied and published in journal articles at the time, but it is recommended that a reassessment would be beneficial in order to place them in the context of current understanding about the Palaeolithic period and other sites of equal importance which may not have been known at the time of the original publication.

#### *Bronze Age funerary sites*

5.5.12 Four of the projects (Project nos 8, 10, 29 and 32) included evidence of Bronze Age cremations, including the Afton Down cremation cemetery (Project no 8) where over 40 cremations were recorded. Three of these projects are considered to be of potentially local significance (Project nos 10, 29 and 32) but publication is variable. The need for a better understanding of the date range of the very varied burial monuments, and further analysis of the chronology and function of early Bronze Age funerary monuments has been identified in the draft Solent-Thames Archaeological Research Framework (Bradley 2008, 3). The projects identified for assessment could potentially assist in answering this need and illuminating the burial monuments of the Bronze Age.

5.5.13 In view of the variation in archival information and the possibility of increasing the understanding of the Bronze Age funerary customs it is suggested that all the projects should be assessed. In view of their local significance, three of the projects (Project nos 10, 29 and 32) could be assessed together and may also benefit from subsequent analysis and publication (if appropriate) as a group. In view of the size and potential significance of the Afton Down cemetery it may be appropriate to undertake analysis and publication of this project independently, but if the assessment indicates that the archive is of limited extent or the information which can be retrieved is so limited as to be of only local significance, it may be appropriate to undertake analysis and publication of the Afton Down cremation cemetery together with the other projects which include data relating to Bronze Age cremations. Again any reassessment would ideally be undertaken together with a reassessment of other Bronze Age funerary assets on the island in order to provide the best context for the projects.

#### *Bronze Age metal artefacts*

5.5.14 The single Bronze Age Palstave from St George's Down (Project no 5) is considered to be of local significance and has been identified as a candidate for

assessment, to identify any associated correspondence or records and whether further analysis (including scientific or metallurgical analysis) would be appropriate. It could also be assessed in relation to the Arreton Down bronze hoard (Project no 2) given that the objects are of the same material and period and were found at sites not far distant from each other in the same ridge line.

#### *Roman numismatic finds*

- 5.5.15 The database includes three finds of individual Roman coins (Project nos 6, 7 and 26) and one coin hoard (Combley Farm Project no 39). The coin hoard has been studied and published within Wootton-Quarr publication. The *Aureaus* from the Mount Joy Marle Pit (Project no 26) is mentioned in a historical work, but no report on the artefact itself (and any contextual information) is available. It is suggested that the three individual numismatic finds should be assessed to determine if further analysis and publication would be beneficial and if it would be appropriate to publish them together with other individual numismatic finds from elsewhere on the island.

#### *Afton Down Gravel Pit (Project no. 8)*

- 5.5.16 An investigation carried out by R Walker in the 19th century recorded a Bronze Age cremation cemetery of over 40 urns recorded together with Palaeoliths and Mesolithic picks in the gravel beneath. The data recorded from the site is considered to be of regional significance and is published in number of short journal notes through the last century. No re-assessment of this important site has been made in recent times. In view of its size and importance for the archaeology of the Island and wider region, it is recommended that further assessment be undertaken to determine what may be learned from the surviving archive (including artefacts and records) and whether a current, longer journal article is merited to bring understanding of the site up to date. Future analysis and publication of this project could potentially be undertaken in association with analysis of other Bronze Age funerary sites identified as requiring re-assessment (5.5.12).

#### *Bowcombe Down (Project no. 37)*

- 5.5.17 The site was investigated by HF Poole in 1900–38 and by local enthusiasts in 1990. Palaeolithic artefacts were discovered *in situ*. Due to the nature of the archive, the data has limited potential to enhance current understanding and is considered therefore to be of local significance. The earlier discoveries were published in a brief journal note in 1938, but it is recommended that the project should be assessed for subsequent analysis and publication together with other Palaeolithic and prehistoric artefacts from similar sites (5.5.8).

#### *Brading Down Chalk Pit (Project no. 33)*

- 5.5.18 An investigation carried out by unknown individual in 1930 recorded a possible Neolithic and Bronze Age flint mine comprising waste flakes but no finished implements. The data obtained from this site is considered to have potential regional significance, but this cannot be confirmed without re-assessment to determine the location of the artefacts and archive and any potential for analysis. If the archive cannot be identified the project should be considered of local significance only, but a brief note in a journal might be appropriate in view of the importance a site of this type would have if further information were available. This publication could take the form a group publication for prehistoric artefacts as described above (5.5.8).

#### *Burnt Wood, Thorness (Project no. 27)*

- 5.5.19 An investigation carried out by unknown individual in 1930–32 recorded a circular furnace and adjoining trench with Roman pottery suggesting a pottery kiln or corn

drying oven of 1st to 2nd-century date. The data obtained from this site is considered to be of regional significance. The findings were published as a brief journal note in the early 20th century, but a re-assessment of the quality and nature of the archive may indicate that analysis and/or further dissemination would be appropriate. If the assessment indicates that sufficient information is available from the archive, this site may have the potential to provide information on subjects identified in the Solent-Thames Archaeological Research Framework, including the major change in settlement occupation across the diverse landscapes of the region between the late Iron Age and the early medieval period (Fulford 2008, 4–5).

*Chessell Down (Project no. 4)*

- 5.5.20 An investigation carried out by TE Way in the 19th century recovered a Greensand Axe identified as local variant of a widespread Neolithic type. Information from the discovery is considered to be of local significance. It was published as a brief journal note in the early 20th century. The project is recommended for assessment and subsequent analysis and publication (if appropriate) together with other projects relating to prehistoric stone artefacts (5.5.8).

*Down End (Project nos. 15 and 32)*

- 5.5.21 Three investigations were carried out between 1900 and 1966. The discoveries made in the quarry in 1900–38 (Project no. 15) and 1966 (Project no. 32) are in need of further assessment. The finds, located close to a Bronze Age barrow, comprised an isolated Palaeolithic artefact and a Bronze Age cinerary urn associated to burnt hearth and bone. The data obtained from these investigations is considered to be of local significance and has been partially published as a brief journal note. It is suggested that finds are reassessed with a view to a more complete publication, possibly with other projects which have revealed evidence of Bronze Age funerary remains (5.5.12).

*East of Ventnor Station (Project no. 30)*

- 5.5.22 An investigation carried out by unknown individual during the first half of the 20th century recorded three skeletons, a pot and a hearth dated to Iron Age. The data obtained from this site is potentially of regional significance, and re-assessment is recommended to determine the location and potential of the archive (if accessible) for analysis and publication as a journal article. If the data has the potential for further analysis the results may contribute to the question of what defines an Iron Age cemetery and whether small groups outside settlements count as detailed in the draft Solent-Thames Archaeological Research Framework (Lambrick 2008, 5).

*Fore Down working above Rancombe (Project no. 6)*

- 5.5.23 An investigation carried out by unknown individual in 1924 recorded a Roman coin. The data obtained from this site is considered to be of local significance, but has not been published. The artefact and the associated field notes of Pritchett and Poole are in the Carisbrooke Castle Museum and County Archaeological Collections. It is recommended that the artefact and paper archive be assessed and analysed prior to publication as a brief journal note. This could be undertaken with the analysis and publication of other Roman numismatic finds (5.5.15).

*Isolation Hospital Gravel Pit (Project no. 3)*

- 5.5.24 An investigation carried out by HF Poole in early 20th century recorded a polished stone axe, interpreted as coming from a Bronze Age round barrow. The data obtained from this site is considered to be of local significance. The findings have been published in a number of brief journal notes, but should be assessed to



determine the feasibility of analysis and publication together with other prehistoric stone artefacts (5.5.8).

#### *Limerstone Down Gravel Pit (Project no. 7)*

5.5.25 An investigation carried out by Sherwin and Pritchett in 1932 recorded a bank and ditch with associated post-holes and stones of a possible building with Roman pottery and coins, including a hoard of c 22 coins of up to 4th century date. The data obtained from this site is of regional significance. The discovery has been published as a brief journal note, but is recommended for assessment because Sherwin's records may provide sufficient information to allow the analysis for and publication of the longer article that is merited by a find of potential regional significance. Should the assessment find there is sufficient information to proceed to further analysis and publication, this may elucidate the research questions identified in the draft of the Solent-Thames Archaeological Research Framework including:

- What is the evidence for major change in settlement occupation across the diverse landscapes of the region between the late Iron Age and the early medieval period?
- 'How does the change in settlement occupation relate to the development and decline of 'villas' and associated reorganisation of the rural landscape?' (Fulford 2008, 4–5)

#### *Mount Joy Marle Pit (Project no. 26)*

5.5.26 An investigation carried out by unknown individual in mid-19th century recorded a Roman *Aureus* of Libius Severus. The data obtained from this site is considered to be of local significance and briefly mentioned in a published county history. Re-assessment is recommended to identify the artefact and any records associated with it. The artefact could potentially be published with other numismatic finds of the Roman period from the Island (5.5.15).

#### *Ninham Farm (Project no. 19)*

5.5.27 An investigation carried out by unknown individual in early 20th century recorded a single ovate Acheulian implement. The data obtained from this site is considered to be of local significance. It has been published as a brief journal note, but is recommended for assessment together with other prehistoric stone artefacts (5.5.8).

#### *Norris Castle Gravel Pit (Project no. 34)*

5.5.28 An investigation carried out by unknown individual by mid-20th century recorded an early Acheulian hand-axe. The data obtained from this site is considered to be of local significance, but has not been published and there is no grey literature report. It is recommended for assessment together with other prehistoric stone artefacts from other projects (5.5.8).

#### *Northwood Pit (Project no. 12)*

5.5.29 An investigation carried out by HE Pritchett in early 20th century recorded a pointed 'eolithic' flint implement. The data obtained from this site is considered to be of local significance. It has been published as a brief journal note and is recommended for assessment together with other prehistoric stone artefacts from other projects (5.5.8).

#### *Pit North of Cowes (Project no. 35)*

5.5.30 An investigation carried out by unknown individual in unknown period, possibly pre-1900, recorded a Palaeolithic flint implement. The data obtained from this site is

considered to be of local significance and is recommended for assessment together with other prehistoric stone artefacts from other projects (5.5.8).

*Prospect Quarry (Project no. 22)*

- 5.5.31 An investigation carried out by the Isle of Wight County Archaeology and Historic Environment Service in 2002 recorded a Neolithic flint arrowhead, axe and scattered debitage. The data obtained from this site is considered to be of local significance and is recommended for assessment together with other prehistoric stone artefacts from other projects (5.5.8).

*Rew Down Quarry (Project no. 29)*

- 5.5.32 An investigation carried out by unknown individual in 1916 recorded a Bronze Age cremation urn containing bone. The data obtained from this site is considered to be of local significance, but no publication of the find has been made. The urn was known to be in Ventnor Museum. It is recommended that further assessment be undertaken to identify the current location of the urn and any other artefacts or records from the project with a view to publishing a brief note in a local journal. Assessment, analysis and publication could be undertaken together with other Projects which have provided evidence of Bronze Age funerary remains (5.5.12).

*Rew Street Sand Pit (Project no. 28)*

- 5.5.33 An investigation carried out by Mr G A Sherwin in 1936 recorded a shallow ditch and pits, as well as a large depression interpreted as a hut site. There were also recorded a bronze bell, a jet object and Romano-British ware. The data obtained from this site is of local significance. The project was published in a national journal and the HER holds the original notes and drawings within its back-up files. A reassessment may elucidate the research questions identified in the draft of the Solent-Thames Archaeological Research Framework including:

- What is the evidence for major change in settlement occupation across the diverse landscapes of the region between the late Iron Age and the early medieval period?
- 'How does the change in settlement occupation relate to the development and decline of 'villas' and associated reorganisation of the rural landscape?' (Fulford 2008, 4–5)

*Ruffins (Project no. 13)*

- 5.5.34 An investigation carried out by HE Pritchett in early-20th century recorded Palaeolithic handaxes. The data obtained from this site is considered to be of local significance. It has been published as a brief journal note and is recommended for assessment together with other prehistoric stone artefacts from other projects (5.5.8).

*Sandpit at 5 Houses, Calbourne (Project no. 36)*

- 5.5.35 An investigation carried out by unknown individual in 1927 recorded a flake of possible prehistoric date. The data obtained from this site is considered to be of local significance and is recommended for assessment together with other prehistoric stone artefacts from other projects (5.5.8).

*Shalfleet (Project no. 21)*

- 5.5.36 An investigation carried out by unknown individual in early-20th century recorded mammoth teeth. The data obtained from this site is considered to be of local significance. It has been published as a brief journal note and is recommended for

assessment together with other prehistoric stone artefacts from other projects (5.5.8).

#### *St George's Down (Project nos. 5, 11 and 38)*

- 5.5.37 Three investigations have been carried out by Poole in the 1930s and unknown individuals in 1996 recording handaxes, a bronze palstave, late Mesolithic or Neolithic barbed and tanged arrowhead and small pick, and unidentified object. The data obtained from this site is considered to be of local significance. The earlier discoveries (Project nos. 5 and 11) were published in brief journal notes. The objects are believed to be located in the County Archaeological Collections along with Poole's often extensive notes. Some of his notes are also held by the Isle of Wight Natural History and Archaeology Society.
- 5.5.38 It is suggested that the assessment, analysis and publication of the Bronze Palstave (Project no 5) could be undertaken with the Arreton Down Bronze Hoard (Project no. 2) given that the objects are of the same material, date and were found at sites not far distant from each other in the same ridge line. It is possible that the Bronze Palstave, by virtue of its damaged state, may provide opportunities to acquire additional information from metallurgical and scientific assessment which may not be possible for some or all of the artefacts of the hoard.
- 5.5.39 The assessment of the stone artefacts (Project nos 5 and 11) is also recommended in view of the need to reassess the work of early projects and because of the contextual information that may be provided by Poole's notes and archive. Assessment and any subsequent analysis and publication could be undertaken together with prehistoric stone artefacts from other projects (5.5.8).

#### *Thorness Gravel Pit (Project no. 10)*

- 5.5.40 An investigation carried out by HE Pritchett in 1939 recorded a middle Bronze Age cremation urn inverted in a small pit with associated burnt bone and charcoal. The data obtained from this site is considered to be of local significance. The discoveries have been published as a brief journal note. In view of the contextual information likely to be provided by this discovery it is suggested that the project be assessed to determine the feasibility of analysing the project further to elucidate any additional information which could be published as a further brief journal note and which could place the project in the context of modern chronological and typological frameworks. This could be undertaken together with Bronze Age funerary remains from other projects (5.5.12).

#### *Upper Ventnor (Project no. 31)*

- 5.5.41 An investigation carried out by unknown individual, probably pre-1900, recorded human remains of uncertain date in close proximity to a stone oven. The data obtained from this site is potentially of regional significance, but was not published. No record of the whereabouts of this archive and artefacts has been found and assessment is recommended to determine if the location of the artefacts and any archive can be determined with a view of publication.

#### *Whippingham (Project no. 16)*

- 5.5.42 An investigation carried out by HE Pritchett in early-20th century recorded a middle Palaeolithic flint. The data obtained from this site is of local significance. The discovery has been published as a brief journal note and is recommended for assessment together with prehistoric stone artefacts from other projects (5.5.8).

#### *Wootton Pit (Project no. 18)*

- 5.5.43 An investigation carried out by Mr Creighton in early-20th century recorded a

Acheulian ovate implement. The data obtained from this site is of local significance. It has been published as a brief journal note and is recommended for assessment together with prehistoric stone artefacts from other projects (5.5.8).

## 6 Conclusions

- 6.1.1 The Government issued Planning Policy Statement 5 (PPS5) in March 2010 (DCLG 2010) to replace the former Planning Policy Guidance note 16 (PPG16) under which most developer funded archaeological investigations have been undertaken. PPS 5 puts a strong emphasis on the public access of the data held by public archives and obtained from diverse investigations. Issues have been raised in relation to the former policy guidance (PPG16) regarding the lack of a coherent approach between the implementation of standards for recording archaeological data and the lack of standards in relation to its dissemination to become a public benefit (Thomas 2009 and Wise 2009). The project has shown that 66% of projects undertaken since PPG16 was introduced were fully disseminated, and 75% of projects undertaken as a direct result of PPG16 planning condition were adequately disseminated. This discrepancy is due to the limited amount of aggregates extraction (particularly on new or expanded sites) and the consequently limited number of developer funded investigations which have taken place since PPG16 was introduced in 1992. As a result, the total number of projects undertaken since PPG16 includes two undertaken by local voluntary groups and metal detectorists. One of these projects was classed as requiring further dissemination because it may benefit from inclusion in a synthetic study with other projects of the same period within the aggregates resource and across the island.
- 6.1.2 PPS 5 notes the necessity of implementing the public benefit of the archaeological work, through the dissemination of the results via museum exhibitions and popular, as well as traditional/academic, forms of publication. The recommended dissemination might fulfil a similar objective of directing the results of past archaeological investigations in quarry sites, towards the widest possible audience.
- 6.1.3 Two main themes emerged from the study. The first is the low level of appropriate dissemination. Just over a fifth (22.5%) of projects were considered to be complete in terms of fulfilling the study criteria for having an appropriate level of dissemination. This is due to the large number of older and antiquarian projects, which were mostly published at the time of their discovery, but could benefit from reassessment and reanalysis on the basis of current practices and theories to place them in the context of the archaeology of the island as it is now understood. Medium and small projects and projects of regional or local significance have notably low levels of dissemination, while large projects and projects of national importance are more likely to be completely disseminated.
- 6.1.4 The second is the lack of certain important information within the journal and newsletter articles (and some HER entries) examined. Information on the funding body (for 87.5% of the projects recorded), why the work was carried out or the location of the archive (12.5% of total, unknown) was not available for many projects. This is because most of these projects were old antiquarian or voluntary projects, published or recorded at times when such details were not thought essential. Consequently these details were not included in the published records and (in many cases) those records which provided data for the later development of the HER. It is likely that this has resulted in an underestimation of aggregates related archaeological projects because the association between aggregate extraction and the archaeological projects was not present in the articles reviewed.
- 6.1.5 In terms of the projects identified in the database, the funding body was assumed to be the individual or group undertaking the work if the project was of antiquarian type. Similarly the HER contains a large amount of archival material, including some associated many of the sites included in the database. Other sites may have very limited archives because they comprise stray antiquarian finds where little was recorded other than the approximate position of the find.

- 6.1.6 The limitations of projects where little information is available (either because it was not collected or not recorded in the surviving archival and published records), together with the high percentage of isolated finds ('Object' asset, comprise 56.9% of total) makes it difficult to interpret the related human activity or the likely nature of the archaeological features. Future reassessment, analysis and dissemination of the data recorded across the different projects would allow a better understanding of the nature of human activity recorded in past investigations in areas of aggregate extraction. Ideally this would be combined with a similar reassessment of data related to the same periods across the rest of the island in order to place the finds within aggregates extraction areas in their full context.
- 6.1.7 This study makes a number of recommendations for addressing incomplete dissemination in line with English Heritage methodology and with reference to current research frameworks.
- 6.1.8 The dissemination level of 'Assessment' (including analysis, publication and archive location, collation and deposition) has been suggested for projects located within 27 quarries. The projects recommended for assessment are of regional and local significance and include both published and unpublished projects. The nature of the projects also varies, including chance finds (with varying levels of associated written records) and more comprehensive investigations. The projects have been identified for assessment for the following reasons:
- The project has not been appropriately disseminated or published previously and it is considered appropriate to determine by assessment whether analysis and publication is feasible and appropriate considering the nature of the archive.
  - The publication took place before more recent typologies, chronological frameworks and scientific methods were available and additional information (potentially relevant to research questions identified in the regional frameworks) may be obtained from re-assessment and further analysis.
- 6.1.9 'Assessment' would include a rapid preliminary appraisal of the adequacy of the existing corpus of site records (including the field notes of HF Poole and HE Pritchett), in order to determine the possibility to carry out any subsequent analysis and publication. It was not possible to determine the location of the archive of six of the projects and an appraisal of the feasibility of undertaking further work on these projects could lead to more appropriate, focused and cost-effective future work.
- 6.1.10 Assessment may indicate that there is insufficient data or potential significance to merit further analysis or publication, but the collation and deposition of the archive would be a valuable measure to ensure future access.
- 6.1.11 It has been suggested that projects which have produced similar types of remains (e.g. prehistoric stone artefacts, Bronze Age funerary remains and Roman coins) could be analysed and published together. This would be beneficial in view of the information analysis or reanalysis of these projects can contribute to current research priorities and would be particularly valuable where individual projects within the group might not be of sufficient significance to merit individual analysis and publication, but can still provide useful information as part of a corpus. Ideally the reassessment of groups of projects should ideally be undertaken together with material of the same date from other areas of the island (i.e. outside the aggregates resource, or not associated with aggregate extraction sites) in order to place the aggregates related material in its full context and ensure all important data contributes to the conclusions.
- 6.1.12 It is also suggested that a re-assessment of the field notes of HF Poole and HE Pritchett would be appropriate. This would aim to identify any records associated with the projects in the database and to identify any additional projects which relate to aggregates extraction and would benefit from assessment, analysis and

publication, either singly or as part of the groups of projects which are identified above. Ideally the review of the field notes would include all sites and artefacts recorded by these two individuals in their field notes (and not just those identified by this project). It is likely that more of the sites recorded in these notes are associated with aggregate extraction, than were identified during this project (see above 6.1.4). Equally records of archaeological remains which were not associated with aggregate extraction are also likely to provide context for an island-wide reassessment of archaeological remains, particularly of the prehistoric period (see above 6.1.11). This might bring out new archaeological data, illuminate existing artefacts, improve understanding of the evolution of human activity in the Isle of Wight and contribute to the research aims of the draft Solent-Thames Archaeological Research Framework.

- 6.1.13 Following assessment further consideration could also be given to different types and levels of dissemination addressing key stakeholders. There are a variety of media available to address the aim of broadening public appreciation of the historic environment, including popular interpretation booklets, interactive exhibitions, educational material for schools, and making key aspects of deposited archives (such as finds information) available on-line. Where a limited archive makes more academic publication inappropriate or where further dissemination of a significant project is deemed advisable it may be appropriate to make use of different media in dissemination. This would potentially be valuable where artefacts which contribute to a corpus have very limited contextual information (either because it was not collected or has been lost). The artefact may be analysed by an expert and included in a collective journal article, but options also exist to make the artefact and the analysis available on-line. Similarly the journal notes of Pool and Pritchett could be scanned and made available on-line to allow interest parties to consult them quickly and easily. Ideally digital versions of the original notes would be linked to images of the original artefact and records of past analysis.

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<http://www.wightstay.co.uk/context/geology.html>

## 7.3 Other sources

British Geological Survey 1:50,000 Sheets 330, 331, 344 and 345

## 7.4 ALSF Funded projects in Isle of Wight

Project Name: Artefacts from the Sea. Catalogue of the Michael White Collection. Foreword and Records 1-150.

Project No. 51541.05a

Aggregate Levy Sustainability Fund. Marine Aggregates and the Historic Environment. Catalogue of lithics and faunal remains that have been collected during the course of fishing activities in the Solent. The collection includes implements that date from the Lower Palaeolithic to the Bronze Age.

Wessex Archaeology – Publication 2004

Project Name: Artefacts from the Sea. Catalogue of the Michael White Collection. Records 151-298.

Project No. 51541.05b

Aggregate Levy Sustainability Fund. Marine Aggregates and the Historic Environment. Catalogue of lithics and faunal remains that have been collected during the course of fishing activities in the Solent. The collection includes implements that date from the Lower Palaeolithic to the Bronze Age.

Wessex Archaeology – Publication 2004

## 8 Appendix: Methodology

### 8.1 Project set up (Stage 1a)

#### *Access database*

8.1.1 A copy of the ARCUS Access database was transferred to MOLA together with the ASLF Project ID database numbers. The database was developed for a pilot project in Derbyshire, Nottinghamshire and Oxfordshire in 2007 (ARCUS 2007). For the present study, MOLA requested that ARCUS make a number of modifications to the database, with the approval of English Heritage:

- The original database had a single 'multi-period' option for projects with multi-period activity. The database was refined to allow multi-period projects to be noted but also to allow activity to be separated out into each period.
- The original database had a single 'multi-type' option for projects with multiple asset types. The database was refined to allow projects with multiple asset types to be noted but also to allow the asset types (and associated periods) to be separated out.
- The original database had nine options to identify the 'nature of fieldwork'. The database was refined to include a tenth option to identify desk-based assessments (DBA) carried out in relation to the aggregates extraction process. No 'pre-planning' DBAs were included in the database, and although described by the HER as a DBA, the single project recorded under this option was not a typical 'pre-planning' document, but rather a piece of detailed historical research into World War II defences in an aggregate area (Project no. 40).

8.1.2 These modifications allow a greater degree of transparency for database interrogation. The first two modifications enabled the creation of more accurate and comprehensive distribution maps for each period and asset type, without sites of a particular period and particular type being subsumed under a general 'multi-period' or 'multi-type' designation.

8.1.3 Note that in order to meet objective 1.2.6 of the Project Design (MOLA, March 2009), the Isle of Wight database needed to make use of a range of new numbers which cannot be assigned to any other project. This will enable the Isle of Wight database to be easily re-integrated into the ARCUS database for the whole country at the end of the project and facilitate future comparison with similar projects across the country. The database structure and fields is discussed in more detail in section 8.2.

#### *Identification of areas of geology containing aggregates resources*

8.1.4 A Geographical Information System (ArcGIS) project was created for the study, from which the accompanying figures were produced. This included a digital version of the British Geological Survey's 1:50,000 scale drift geology maps supplied by Isle of Wight Council, which was used to identify areas within the Isle of Wight containing aggregates resources. This included all soft terrestrial aggregate geologies and past and current hard stone extraction sites. These aggregate geologies were buffered by 100m to allow for minor discrepancies in the geological mapping and ensure no relevant past investigations were missed. Urban areas were plotted from digital data held by the Isle of Wight Council and excluded from the aggregates resource layer. Marine aggregates below the low tide line were excluded. Aggregates located between the low and high tide lines have only been included where they are either currently extracted or have been extracted in the past.

8.1.5 The spatial extent of the relevant geologies was cross referenced with areas of past and current minerals extraction and potential future extraction areas to confirm that BGS mapping of the aggregates resource accurately reflects the exploited geologies. Past and present minerals extraction was identified from:

- British Geological Survey (BGS) data
- British Geological Society's *Directory of Mines and Quarries*
- BGS British Pit database
- Isle of Wight Council Minerals Planning data
- Ordnance Survey 6":mile maps from Isle of Wight (digital copies of editions to 1946)
- Ordnance Survey 1:10,000 scale maps from the British Library (non-digital copies after 1946)

## 8.2 Populating the database (Stage 1b)

### *Database structure*

8.2.1 The ASLF Project database is in Microsoft Access 2003 format (an .mdb file). Each known archaeological intervention (or multiple phases of work at the same location/site) is presented as a single record (when Site Code and/or Grid Coordinates match). Where multiple interventions (no matching on Site Code and Grid Coordinates) have taken place over time within a single quarry, these are presented as multiple records.

8.2.2 The data input layout has been subdivided into sections based on the type of data contained. This is designed for ease of use and does not affect the database structure. The layout on the form is followed in the description of field below. Each record contains 37 fields, summarised in Table 14.

*Table 14 Access database fields and explanation*

Field No.	Field name	Description
1	National ID	<i>Unique record auto number.</i> Used when different databases are combined to a national database for English Heritage.
2	[ALSF] Project ID	<i>Unique record auto number.</i> Used when inputting data. The record is auto generated and consists of a 4 digit name as a prefix for the research project with a continuous number sequence following (i.e. ARC1XXXX for the pilot project IW09XXXX for the Isle of Wight project)
3	Name of project	<i>Free text:</i> individual project name for the project under consideration, where this is known. Not necessarily the same as the quarry name (e.g. Fleak Close, recorded within Swarkestone Quarry). It will be usually the name of the project or its address.
4	Region	<i>Glossary:</i> English Heritage region. The only option selectable in the current project is South-East.
5	County	<i>Glossary:</i> geographical counties, not unitary authority names. The only option selectable in the current project is Isle of Wight.
6	Valley system	<i>Glossary:</i> <ul style="list-style-type: none"> <li>• River Medina</li> <li>• Old Western Yar</li> <li>• Eastern Yar</li> <li>• Old Solent River</li> <li>• N/A (for hard geologies)</li> </ul>
7	Name(s) of quarry(ies)	<i>Free text.</i> It has not been possible within the scope of the ASLF Project to conduct a full historical review of changing quarry names and ownerships. For each quarry a single quarry name has been adopted within this field, to ensure consistency, e.g. 'Stanton Harcourt' is used in place of 'Vicarage Field', 'Vicarage Pit', 'Beard Mill' etc.

Field No.	Field name	Description
		Sometimes the name of the project and the quarry might be the same.
8	Aggregate deposit type	<i>Glossary:</i> <ul style="list-style-type: none"> <li>• Soft (drift geology: brickearth, sand [including Ferruginous Sands and Sandrock Formation i.e. Lower Greensand] and gravels)</li> <li>• Hard (solid geology: stone, chalk...)</li> <li>• Unknown</li> </ul>
9	Grid reference easting	<i>Number:</i> world co-ordinates. Constrained to a six-figure integer.
10	Grid reference northing	<i>Number:</i> world co-ordinates. Constrained to a six-figure integer.
11	HER/SMR location	<i>Glossary:</i> location of HER record relating to the site. <ul style="list-style-type: none"> <li>• Isle of Wight (Historic Environment Record)</li> <li>• None</li> </ul>
12	HER/SMR number	<i>Free text:</i> site, event or report number, blank if HER record was not located.
13	Scheduled Monument number	<i>Free text:</i> if applicable.
14	Listed building number	<i>Free text:</i> if applicable.
15	Funding body	<i>Glossary:</i> <ul style="list-style-type: none"> <li>• Department of Environment (DoE)</li> <li>• Ministry of Works (MoW)</li> <li>• Local authority</li> <li>• Manpower Services</li> <li>• Aggregates Industry</li> <li>• Individual</li> <li>• Other</li> <li>• Unknown</li> </ul>
16	Archaeological organisation undertaking work	<i>Glossary:</i> list of archaeological organisations that have undertaken the work. For projects not associated with an organisation there is a category called UN unaffiliated
17	Year or year range of intervention	<i>Free text:</i> four digit number for year or year range (two years separated by hyphen) when the archaeological work was carried out
18	Period 1-4	<i>Glossary:</i> period allocation for the project <ul style="list-style-type: none"> <li>• Period 0 (pre-1900)</li> <li>• Period 1 (1900-1945)</li> <li>• Period 2 (1946-1971)</li> <li>• Period 3 (1972-1990)</li> <li>• Period 4 (1991-present)</li> </ul>
19	Size of project	<i>Glossary:</i> this was used as a broad assessment of the relative scope of the project, as judged from the available documentation <ul style="list-style-type: none"> <li>• Small: Minor and/or non-intrusive works, e.g. test-pitting, a small-scale watching brief or geophysical survey</li> <li>• Medium: Intervention involving a significant excavation element, such as evaluation trenching, or more extensive landscape survey work</li> <li>• Large: A large-scale set-piece excavation, or multi-stranded investigations over a larger area</li> <li>• Very large: Long term and spatially extensive investigations including possibly numerous large-scale excavations and/or extensive landscape survey/environmental sampling</li> </ul>
20	Nature of fieldwork (primary)	<i>Glossary:</i> an assessment of the primary type of fieldwork undertaken which has given the most significant information (ie an evaluation would be producing more information than an evaluation). <ul style="list-style-type: none"> <li>• Desk-based assessment (DBA; here used for the Defence of Britain study)</li> </ul>

Field No.	Field name	Description
		<ul style="list-style-type: none"> <li>• Survey/geophysics</li> <li>• Fieldwalking</li> <li>• Evaluation</li> <li>• Excavation (used for pre-PPG16 rescue excavation in addition to post-PPG 16 mitigations)</li> <li>• Building recording</li> <li>• Environmental</li> <li>• Finds</li> <li>• Watching brief</li> <li>• Unknown</li> </ul>
21	Site code Fieldwork (primary)	<i>Free text:</i> if applicable/available.
22	Nature of fieldwork (secondary)	<i>Glossary:</i> as above to allow for secondary fieldwork producing less significant information (ie a watching brief for areas surrounding a main excavation).
23	Site Code Fieldwork (secondary)	<i>Free text:</i> if applicable/available.
24	Fieldwork required by regulatory conditions	<i>Glossary:</i> <ul style="list-style-type: none"> <li>• Scheduled monument consent</li> <li>• Planning condition</li> <li>• Not required</li> <li>• Unknown</li> </ul>
25	Archaeological Period	<i>Tick boxes:</i> English Heritage periods have been used. For multi-period projects each period is selected along with the multi-period box. <ul style="list-style-type: none"> <li>• Palaeolithic (500,000–100,000 BC)</li> <li>• Mesolithic (10,000–4,000 BC)</li> <li>• Neolithic (4,000–2,200 BC)</li> <li>• Bronze Age (2,600–700 BC)</li> <li>• Iron Age (800 BC– AD 43)</li> <li>• Roman (AD 43–410)</li> <li>• Early medieval (AD 410–1066)</li> <li>• Medieval (AD 1066–1540)</li> <li>• Post-medieval (AD 1540–1901)</li> <li>• Modern (AD 1901–2000)</li> <li>• Undated Prehistoric (500,000 BC– AD 43)</li> <li>• Early prehistoric (500,000–4,000 BC)</li> <li>• Later prehistoric (4,000 BC– AD 43)</li> <li>• Prehistoric or Roman (500,000 BC– AD 410)</li> <li>• Multi-period</li> <li>• Uncertain</li> </ul> <p>The dates inputted are those specified by the excavator/ author of the original article. No additional level of interpretation was added as part of the present ASLF Project.</p>
26	Site [Asset] type class	<i>Glossary:</i> NMR Monument Class descriptions have been used. <ul style="list-style-type: none"> <li>• Agriculture and subsistence</li> <li>• Civil</li> <li>• Commemorative</li> <li>• Commercial</li> <li>• Defence</li> <li>• Domestic</li> <li>• Gardens and parks</li> <li>• Industrial</li> <li>• Maritime</li> </ul>

Field No.	Field name	Description
		<ul style="list-style-type: none"> <li>• Object</li> <li>• Recreation</li> <li>• Religious, ritual or funerary</li> <li>• Transport</li> <li>• Unassigned</li> <li>• Water and drainage</li> <li>• Multiple</li> </ul> <p>These adhere to the types specified by the author of the original article. No additional level of interpretation was added as part of the present ASLF Project.</p>
27	Nature of discoveries	<p><i>Free text:</i> a brief summary of the project results where known, explaining what remains have been recorded (and period ascribed when remains from different periods have been recorded and interpreted). These adhere to the data specified by the author of the original article. No additional level of interpretation was added as part of the present ASLF Project.</p>
28	Current project status	<p><i>Glossary:</i></p> <ul style="list-style-type: none"> <li>• Active: Multi-stage projects where more fieldwork is expected, or projects where post-excavation work is ongoing</li> <li>• Stalled: Multi-stage projects where more fieldwork is expected, but a significant time-lapse has occurred</li> <li>• Complete: Completion of all anticipated fieldwork, with post-excavation complete and a client report submitted</li> <li>• Not known</li> </ul> <p>Older projects were considered 'complete' by definition. The status of more recent projects has been determined later where possible in consultation with the organisations responsible.</p>
29	Most recent project stage	<p><i>Glossary:</i> this originally only contained stages identified in MAP2. This was found to be problematic during the pilot study when dealing with projects not following MAP2 and additional terms have been added to cope with such projects.</p> <ul style="list-style-type: none"> <li>• ongoing fieldwork</li> <li>• fieldwork complete</li> <li>• post-excavation in progress</li> <li>• developer report submitted</li> <li>• publication work in progress</li> <li>• publication complete</li> <li>• Evaluation (MAP2)</li> <li>• Excavation (MAP2)</li> <li>• Site archive completion (MAP2)</li> <li>• Assessment (MAP2)</li> <li>• Analysis (MAP2)</li> <li>• Dissemination (MAP2)</li> <li>• Archive deposition (MAP2)</li> </ul> <p>Projects with brief summaries in journals, LAARC or HER have been considered 'fieldwork complete' if nothing else is specified (which is usually the case) or more information was not available.</p>
30	Archive location known/unknown	<p><i>Glossary:</i></p> <ul style="list-style-type: none"> <li>• Known</li> <li>• Unknown</li> </ul>
31	Archive details	<p><i>Free text:</i> location and accession numbers, where available. Includes developer reports when submitted to SMR/HER.</p>
32	Published references	<p><i>Free text:</i> abbreviations of journal titles (Tables 1 and 2) were used along with the year of publication in brackets, volume and pages of publication, when various articles were separated by a semi-colon, i.e. LA (2000), 9(2), p 49; LA (1998), 8(3), p 87)</p>
33	Significance of data retrieved from project	<p><i>Glossary:</i></p> <ul style="list-style-type: none"> <li>• Local: Negative or limited archaeological evidence, meriting a</li> </ul>

Field No.	Field name	Description
		<p>grey literature report or a brief note in a local journal</p> <ul style="list-style-type: none"> <li>• Regional: Significant archaeological evidence, meriting a longer report in a local journal</li> <li>• National: A major archaeological discovery, meriting full publication in a national journal or in monograph form</li> <li>• International: A major archaeological discovery of international importance meriting full publication in national or international journals and monographs</li> </ul> <p>In cases where a number of interventions have been carried out over time within a single quarry, the assessment of importance will be made on the evidence in total, rather than on a single season's work.</p>
34	Dissemination complete	<p><i>Glossary:</i> Is dissemination of the project complete and of an appropriate level?</p> <ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> <li>• Not known</li> </ul> <p>This assessment was based on the significance of data retrieved from project described above (see Table 4)</p>
35	Suggested level of dissemination	<p><i>Glossary:</i> only to be completed if dissemination is regarded as incomplete or inappropriate (see Table 5)</p> <ul style="list-style-type: none"> <li>• Assessment</li> <li>• Analysis</li> <li>• Publication</li> </ul>
36	Proposed type of work and dissemination	<p><i>Tick boxes:</i> when dissemination is not complete (more than one box could be ticked)</p> <ul style="list-style-type: none"> <li>• Completion of archive</li> <li>• Full assessment and appropriate analysis</li> <li>• Analysis of assessed material</li> <li>• Deposition of archive</li> <li>• Brief journal note</li> <li>• Short journal article</li> <li>• Inclusion in synthetic regional/national study</li> <li>• Monograph or major journal article</li> <li>• Wider dissemination of grey literature report</li> <li>• Popular publication/dissemination</li> </ul>
37	Associated projects	<p><i>Free text:</i> related interventions in the quarry (different Site Code and/or Grid Coordinates), etc</p>

### Research methodology

8.2.3 The project comprises a rapid desk-based assessment of existing information only. In order to meet objective 1.2.6 of the Project Design (MOL Archaeology, March 2009), past archaeological investigations in quarries were primarily located (and the database populated) from a review of published articles and notes in local, regional and national journals (see below).

8.2.4 In order to ensure that no past investigations were missed by the study, once the review of the journals (the primary source of data) had been completed, a search was conducted of the Isle of Wight Historic Environment Record (HER,) using key words associated with aggregates extraction (see below). The HER is the primary repository of archaeological information within the Isle of Wight and is managed by the Isle of Wight Council. It includes information from past investigations, local knowledge, find spots, and documentary and cartographic sources.

### Review of journals

8.2.5 The consultation of journals was undertaken in the MOLA and Museum of London libraries, The London Society Library, the University College London Library, the

British National Copyright Library and the Isle of Wight County Archaeological Collection Library. Table 15 lists all the journals consulted.

**Table 15 Journals consulted**

Abbreviation	Name
AJ	Antiquaries' Journal
AN	Antiquary, The
A	Antiquity
Arch	Archaeologia
TAJ	Archaeological Journal, The
Archy	Archaeology
B	Britannia
BIAB	British and Irish Archaeological Bibliography
BIABS	British and Irish Archaeological Bibliography (Supplements) or Gazetteer of Archaeological Investigations undertaken in England Archaeological Investigations Project (AIP)
BA	British Archaeology
CA	Current Archaeology
HFC	Hampshire Field Club: Papers and Proceedings
BOREAS	International Journal of Quaternary Research
JBAA	Journal of the British Archaeology Association
JRA	Journal of Roman Archaeology
JRS	Journal of Roman Studies
JQS	Journal of Quaternary Science
MA	Medieval Archaeology
OJA	Oxford Journal of Archaeology
PIWNHAS	Proceedings of the Isle of Wight Archaeological and Historical Society
PPS	Proceedings of the Prehistoric Society
QI	Quaternary International
QR	Quaternary Research
QSR	Quaternary Science Reviews
SAM	Society of Antiquaries Minutes
HFC	The Hampshire Field Club: Proceedings and Papers
TH	The Holocene

8.2.6 Where archaeological investigations resulting from aggregates extraction have been identified from these journals, these have been incorporated into the project Access database. Information on publication and archiving of the investigation was obtained, where available, through consultation with archaeological units and voluntary groups a later stage (see below).

8.2.7 Note that the majority of the project entries comprised antiquarian finds. In many case the context of the discoveries are uncertain, and it is not known whether these were made in relation to aggregates extraction. Where there is doubt the antiquarian finds have not been included in the database.

### *Review of HER*

8.2.8 Once the information from the journals/newsletters had been incorporated into the Access database (and noted for further consultation with other groups if necessary), an additional search was conducted of the Isle of Wight HER data. Rebecca Loader, the HER Officer, undertook a search of the HER descriptions data using the following keywords:

- Quarry
- Extraction
- Pit
- Gravel

8.2.9 This was carried out in order to locate relevant records of past archaeological investigations or monuments associated with aggregate extraction. Three additional



entries were created in this way and added to the Access database.

#### *Correction of HER data*

- 8.2.10 As the project progressed any finds and investigations resulting from aggregates extraction which were absent from the HER or had incorrect spatial references were logged for inclusion/correction. Following completion of the database, the HER was rectified by the HER Officer, Rebecca Loader. Three new monuments were identified for inclusion into the HER. These were:
- Down End (Project no. 15): findspot of an *in situ* 'eolith'.
  - Shalfleet (Project no. 21): findspot of mammoth teeth.
  - Whippingham (Project no. 16): findspot of an 'eolith'.

#### *Consultations*

- 8.2.11 Once the database had been populated, consultations were undertaken with:
- Curators at the Isle of Wight County Archaeological Collections.
  - Archaeological units working in the area (S Cottam of AC Archaeology; P Martin of Absolute Archaeology; Archaeology South-East; R Bourn of CgMs Consulting)
  - Local Community and voluntary archaeological groups working in the area (R Martin of Isle of Wight Industrial Archaeology Society; D Fry of Isle of Wight Natural History and Archaeological Society)
- 8.2.12 The consultations were carried out by telephone and e-mail, and were undertaken to:
- determine the current status of outstanding projects;
  - determine the potential of projects for further work and/or dissemination;
  - identify previously unrecorded projects; and
  - verify the data and address omissions identified.

### **8.3 Assessment and recommendations**

#### *Assessing current level of project completeness*

- 8.3.1 The main objective of the study (objective 1.2.5. and 1.2.6. of the Project Design) has been to assess levels of project completeness and significance in order to recommend what level of dissemination is appropriate in accordance with English Heritage established methodology.
- 8.3.2 The tag of **incomplete** or **inappropriate** archive completion, assessment, analysis and/ or dissemination, is intended to:
- flag up the need to consider the project within any future strategy devised by English Heritage to improve the completion of the work and dissemination of Historic Environment information to an appropriate level and to the widest possible audience;
  - help ensure that all stakeholders involved in the planning process have easy access to all information derived from fieldwork within the Historic Environment, with a view to enabling informed decisions to be made regarding the future conservation, management and regulation of the historic landscape and assets.
- 8.3.3 **Incomplete** archive completion, assessment, analysis and/or dissemination was assigned where a project is still active or has stalled or been terminated before its results have been made available to the various stakeholders within the Historic Environment and development control sectors.

- 8.3.4 Projects that produced only negative results were regarded as complete providing they had a suitable HER entry. Projects which are disseminated only as interim note(s) or where there is no HER entry were regarded as incomplete.
- 8.3.5 **Inappropriate** archive completion, assessment, analysis and/or dissemination, was assigned where it was believed that further work on the project archive and/or further dissemination of the existing results of a project would be desirable. This included projects that would benefit from wider circulation of grey literature reports and/or further formal publication or where there is potential for popular presentation of the outcomes.
- 8.3.6 A final report was deemed inappropriate where it was believed that it:
- does not cover (without good reason) all stages and components of the archive (i.e. the report does not cover the entire time span of the project, or all spatial and thematic areas of the fieldwork);
  - is too summary in form;
  - where the data covered would benefit from further analysis.
- 8.3.7 Where it is unclear to what level work and/or dissemination has taken place on a project it was regarded as inappropriately disseminated. This is designed to flag up the need for further work at a later date, outside the scope of this brief, to determine the actual status of the project in question.
- 8.3.8 For projects completed after 1991 this judgement was guided by a Management of Archaeological Projects 2 (MAP2) assessment where it exists. The assessment report must state the academic potential of the data in the site archive. For projects undertaken prior to this date, or those without MAP2 assessments, professional judgement was used about the appropriateness of work and dissemination undertaken.
- 8.3.9 An **appropriately completed and disseminated project** was defined as fulfilling all of the following criteria as a minimum:
- the results have been disseminated and are publicly accessible to a level commensurate with the significance of the results; and
  - the data archive has been deposited as appropriate and is publicly accessible.
  - a completed HER entry;
  - a publicly accessible report written to the appropriate level in digital and/or hard copy format, summarising and interpreting the data. Note that a limited print run grey literature available only through the HER or originating archaeological unit was regarded as inappropriate dissemination. This is because there are examples where work carried out in the last 10 years and reported on is effectively unavailable because the limited copies of the reports have been lost or are no longer available from the originating unit.
- 8.3.10 This judgement is by definition subjective, and based on an understanding of the level of knowledge at the time the report was written; eg a report published in the 1970s was judged against the standards of the time and not against current practice or knowledge.
- 8.3.11 Where it is unclear to what level work and/or dissemination has taken place a project has been regarded as inappropriately disseminated. This is designed to flag up the need for further work at a later date, outside the scope of this brief, to determine the actual status of the project in question. Projects regarded as active by unit managers have been included in the study.

*Assessing whether projects have been appropriately disseminated based on project significance*

- 8.3.12 Table 16 below lists the criteria used to assess the current status of a project in terms of whether it has been appropriately disseminated or not based on the known or perceived archaeological significance of a project.
- 8.3.13 Professional judgement was used to assess the archaeological significance of data retrieved from a project against criteria that included: statutory protection or other formal designation; date; rarity; state of preservation; diversity/complexity; collective, group value and comparative potential; and educational, social or economic value.

*Table 16 Determining whether a project has been appropriately disseminated based on known or perceived archaeological significance*

Archaeological significance	The considered appropriate level of dissemination
National and International significance	Full publication in a national journal, or full monograph publication
Regional	Full treatment in a local/county journal (full article, not just a summary or brief note)
Local	For all projects, including those with negative or negligible archaeological results, there should be: <ul style="list-style-type: none"> <li>• a grey literature report available in the HER and</li> <li>• an adequate HER entry</li> </ul> <p>In some cases a brief local journal note is also appropriate.</p>

*Recommended dissemination level*

- 8.3.14 In the cases when the minimum standards for dissemination were not achieved in relation to the project significance, dissemination was considered 'incomplete' and a level of dissemination was recommended (Table 17).
- 8.3.15 sets out the criteria applied to determining the recommendations. More than one type of dissemination was recommended in some cases in order to provide the minimum and the optimum levels of dissemination for the recorded project.

*Table 17 Dissemination level types*

Dissemination Level	Description
Assessment	<ul style="list-style-type: none"> <li>• Completion of archive</li> <li>• Initial assessment of results of field work to determine whether detailed analysis (leading to publication) would be appropriate as a next stage</li> <li>• Deposition of archive if the initial assessment concluded that no further work would be appropriate</li> </ul>
Analysis	<ul style="list-style-type: none"> <li>• For projects which have already had initial assessment, including those stalled at the 'Post-Excavation Assessment' Stage (post PPG16) or equivalent.</li> <li>• Analysis of assessed material and publication (if appropriate)</li> <li>• Deposition of archive</li> </ul>
Publication	<ul style="list-style-type: none"> <li>• Brief journal note</li> <li>• Short journal article</li> <li>• Inclusion in synthetic regional/national study</li> <li>• Monograph or major journal article</li> <li>• Wider dissemination of grey literature report</li> <li>• Popular publication/dissemination</li> </ul>

Table 18 Recommended dissemination

Remains recorded	Significance of records		
	Local	Regional	National/International
<i>Isolated features without context / chance finds</i>	Completion of archive	Completion of archive or Completion of archive, full assessment and appropriate analysis	Analysis of assessed material, brief journal article and wider dissemination of grey literature report
<i>Features within an established context but poorly preserved</i>	Completion of archive or Completion of archive, full assessment and appropriate analysis	Analysis of assessed material and wider dissemination of grey literature report	Brief journal note
<i>Features within an established context in a good state of preservation</i>	Analysis of assessed material and brief journal note	Short journal article	Inclusion in regional / national study
<i>Well-preserved example of a type of asset</i>	Short journal article	Inclusion in synthetic regional / national study	Monograph or major journal article
<i>Well-preserved example of different types of asset</i>	Inclusion in regional / national study	Monograph or major journal article	Monograph or major journal article and popular publication / dissemination
<i>Well-preserved and rare asset</i>	Monograph or major journal article	Monograph or major journal article and popular publication / dissemination	Inclusion in regional / national study, monograph or major journal article and popular publication / dissemination
<i>Well-preserved, rare and complex asset</i>	Monograph or major journal article and popular publication / dissemination	Inclusion in regional / national study, monograph or major journal article and popular publication / dissemination	Inclusion in regional / national study, monograph or major journal article and popular publication / dissemination
<i>Exceptionally preserved and rare and complex asset</i>	Inclusion in regional / national study, monograph or major journal article and popular publication / dissemination	Inclusion in regional / national study, monograph or major journal article and popular publication / dissemination	Inclusion in regional / national study, monograph or major journal article and popular publication / dissemination

## 8.4 Limitations of study

- 8.4.1 The methodology of the study was outlined in the project design (MOLA March 2009) and followed considerations of the pilot project undertaken by ARCUS (March 2007). However, a number of limitations were noted.
- 8.4.2 One of the main difficulties encountered was that journal articles (particularly earlier articles) often did not specify the reasons for undertaking the archaeological fieldwork or mention that the artefacts and features were recorded as a result of aggregates extraction. It is therefore suggested that there may be other investigations resulting from aggregates extraction but which have not been included in this project because the relevant published material contained no reference to aggregates extraction or quarrying as a reason for the investigation.
- 8.4.3 It was also difficult to identify aggregates extraction sites specifically within the HER database. The database had to be searched using a set of keywords (see above). HER events data which did not include one of the keywords may have been missed.
- 8.4.4 In addition, analysis of the data revealed various gaps, discussed in Section 2.

## 9 Gazetteers

### 9.1 Gazetteer of archaeological projects

Project ID	Name of project	Name(s) of quarry(ies)	Description	HER number
1	Arreton Down Round Barrow	Down End Chalk Quarry	An excavation funded by the Ministry of Works in 1956 recorded an early Bronze Age barrow, with scattered Roman potsherds and early medieval secondary burials. Evidence of robbing in the 13th century, possible robbing in the 18th century and records of disruption caused by an early 19th century road were also recorded.	892-MIW944
2	Arreton Down Bronze Hoard	Arreton Down Marl Pit	A collection of 17 or 18 weapons including bronze spears, axe heads and daggers were found in 1735 laid out, with the axes over the top of the others a foot beneath the ground in a 'marle' pit on Arreton Down approximately 200 yards from a 'retrenchment'. Possibly a votive hoard of early to mid Bronze age date.	887-MIW939
3	Wroxall Down	Isolation Hospital Gravel Pit	A polished 5 and five sixths of an inch stone axe (celt) in greyish white bleached flint found during digging for gravel above the Isolation Hospital, Upper Ventnor. H. F Poole interprets as coming from a round barrow.	702-MIW700
4	Chessell Down	Chessell Down chalk quarry	Greensand axe identified as local variant of widespread Neolithic type. Found during chalk quarrying on Chessell Down. Presented to Carisbrooke Castle Museum by T.E. Way Esq.	404-MIW403
5	St George's Down Palstave	St George's Down gravel pit	Cutting part of a bronze palstave found in material which had passed through the crusher at St George's Down Gravel Pit in 1936. Also Late Mesolithic or Neolithic barbed and tanged arrowhead and small pick were recorded.	881-MIW933: 882-MIW934
6	Fore Down Roman Coin	Fore Down working above Rancombe	Roman coin found during gravel working on Fore Down in 1924.	310-MIW309
7	Limerstone Down Gravel Pit	Limerstone Down Gravel Pit	Bank and ditch with associated Roman pottery and coins, including a hoard of approximately 22 coins of up to 4th century. Some associated post-holes and stones suggested a possible building to Mr Sherwin and Mr Pritchett, the finders. Earthworks survived by 1967, as shown in Ordnance Survey map.	299-MIW298
8	Afton	Afton Down Gravel Pit	Cremation cemetery of over 40 Bronze Age urns recorded by Mr Robert Walker. A middle Bronze Age overhanging rim Beaker and cremation urn probably from a ploughed/dug out barrow was recorded by Hazzeldine Warren in 1899. Palaeoliths and Mesolithic picks were also recorded in the gravel beneath.	99-MIW98: 100-MIW99: 101-MIW100: 1875 - MIW1978
9	Bleak Down Flint Implements	Vectis Stone Co. Cheek's Pit	Lower Palaeolithic Acheulian and Mousterian flint implements were recorded in two separate gravel terraces in the Vectis Stone Co and Cheek's pit on Bleak Down. These included abraded unabraded and occasional in situ objects. A palaeochannel was also recorded.	827-MIW879
10	Thorness cremation urn	Thorness Gravel Pit	H. E Pritchett identified a Middle Bronze Age overhanging-rim type cremation urn inverted in a small pit with associated burnt bone and charcoal. No indication of a barrow. Bone identified as young adult (female?), a child and an additional cranium	567-MIW566
11	St George's Down Implements	St George's Down	'Eoliths' - poorly knapped handaxes recorded in the cliff face and talus of a gravel pit.	876-MIW928
12	Northwood Pit Implements	Northwood Pit	Pointed 'eolithic' flint implement recovered by Mr H. E Pritchett and recorded in his work on early Palaeolithic remains by H. F. Poole.	1911-MIW2014
13	Ruffins Implements	Ruffins	Palaeolithic handaxes (eoliths) recovered by Mr H E Pritchett and discussed by H. F. Poole in his study.	1494-MIW1597
14	Bowcombe Down Implements	Bowcombe Down	Palaeolithic object found in situ on Bowcombe Down by H. F Poole within the 'clay with flints' stratum.	1843-MIW1946
15	Down End Implements	Down End	Palaeolithic object from Down End found in situ by H E Pritchett	6675 MIW11514

Project ID	Name of project	Name(s) of quarry(ies)	Description	HER number
16	Whippingham Implements	Whippingham	Palaeolithic flint found by H.E. Pritchett	6677 MIW11516
17	Froghil Implements	Froghil near Godshill	Two Mousterian implements from hand dug gravels at 200 ft OD. One small ovate and one flake. Neolithic or Bronze Age chips of flint lower down the slope.	837-MIW889
18	WoottonWootton Implement	WoottonWootton Pit	Water worn and frost fractured Acheulian ovate implement found by Mr Creighton and examined by H. F. Poole.	968-MIW1020
19	Ninham Farm Implement	Ninham Farm	Single ovate Acheulian implement recovered from River Terrace Gravels	786-MIW838
20	Great Pan Farm	Great Pan Farm	Straight Tusked elephant teeth, unabrased Acheulian, Levallois and Chellean implements and 2 Mesolithic picks were recovered in gravel digging by 1912-24. A Bronze Age palstave was also recovered in 1920.	877-MIW-929
21	Shalfleet Implements	Shalfleet	Mammoth teeth recorded from the gravels.	6676 MIW11515
22	Prospect Quarry Shalcombe	Prospect Quarry	Neolithic flint arrowhead and axe collected from not in situ Neolithic scattered debitage..	EIW192; MON4890
23	Hale Manor Farm	Hale Manor Farm	Geophysical survey and archaeological trenching evaluation revealed agricultural features including a double-ditched enclosure of the later medieval and post-medieval periods. Some of these corresponded to features on historic maps.	EIW202. IWSMR4936
24	Blackwater Quarry	Blackwater Quarry, St George's Down	Neolithic flints indicating an area of flint knapping in the vicinity were recorded below Victorian ceramics, glass and building materials indicating Victorian activity. Later medieval ironwork was also recorded. A soil mark represented a Victorian field ditch.	EIW269: IWSMR5874: MON6373: 6373- MIW11175
25	Chessell Down Jutish Burial Gr	Chessell Down Marl Pit	A large 'Jutish' cemetery discovered by Marl diggers and dug in three different excavations revealed 130 graves. The earlier burials had no grave goods and were placed in urns. Other burials had grave goods. Some Roman finds appeared in the graves.	138-MIW137
26	Mount Joy Roman	Mount Joy Marle Pit	An Aureus of Libius Severus was found in the marl pit in 1841-2	484-MIW483
27	Burnt Wood, Roman kiln	Burnt Wood, Thorness	A circular furnace and adjoining 14 foot trench with Roman pottery was recorded in the quarry. No wasters were recorded, so the feature could be either a pottery kiln or a corn drying oven. 1st to 2nd century pottery was also recorded.	566-MIW565
28	REW Street Roman Remains	Rew Street Sand Pit	A shallow ditch contained a Kimmeridge Shale, with a jet object and Romano-British ware. A bronze bell was found also. A large depression to the east was interpreted as a hut site with dirty soil and charcoal. There were also recorded a number of pits nearby with charcoal/soil at base, but no other finds.	582-MIW581
29	Rew Down Cremation	Rew Down quarry	Bronze Age cremation urn containing bone found during quarrying in 1916.	667-MIW665
30	East of Ventnor Station	East of Ventnor Station	Three skeletons, an iron age pot and a hearth were recorded in a quarry east of Ventnor Station.	737-MIW735:
31	Upper Ventnor	Upper Ventnor	Remains of three individuals were found at a depth of 20ft in close proximity to a stone oven at depth of 3-4ft. No date is known for the discovery	750-MIW802
32	Downend	Downend gravel pit	A Bronze Age cinerary urn with rim and cord decoration found in gravel pit. Burnt earth and bone were recorded in association, although there is no evidence of barrow.	905-MIW957.
33	Brading Down	Brading Down Chalk Pit	Possible Neolithic and Bronze Age flint mine was identified from a collection of waste flakes from the outside of nodules but with no finished implements, which Poole considered from a mine site.	1014-MIW1066
34	Norris Castle	Norris Castle Gravel Pit	An heavily rolled early Acheulian hand-axe was recorded from a gravel pit at Norris Castle near Osbourne Golf Links.	1486-MIW1589

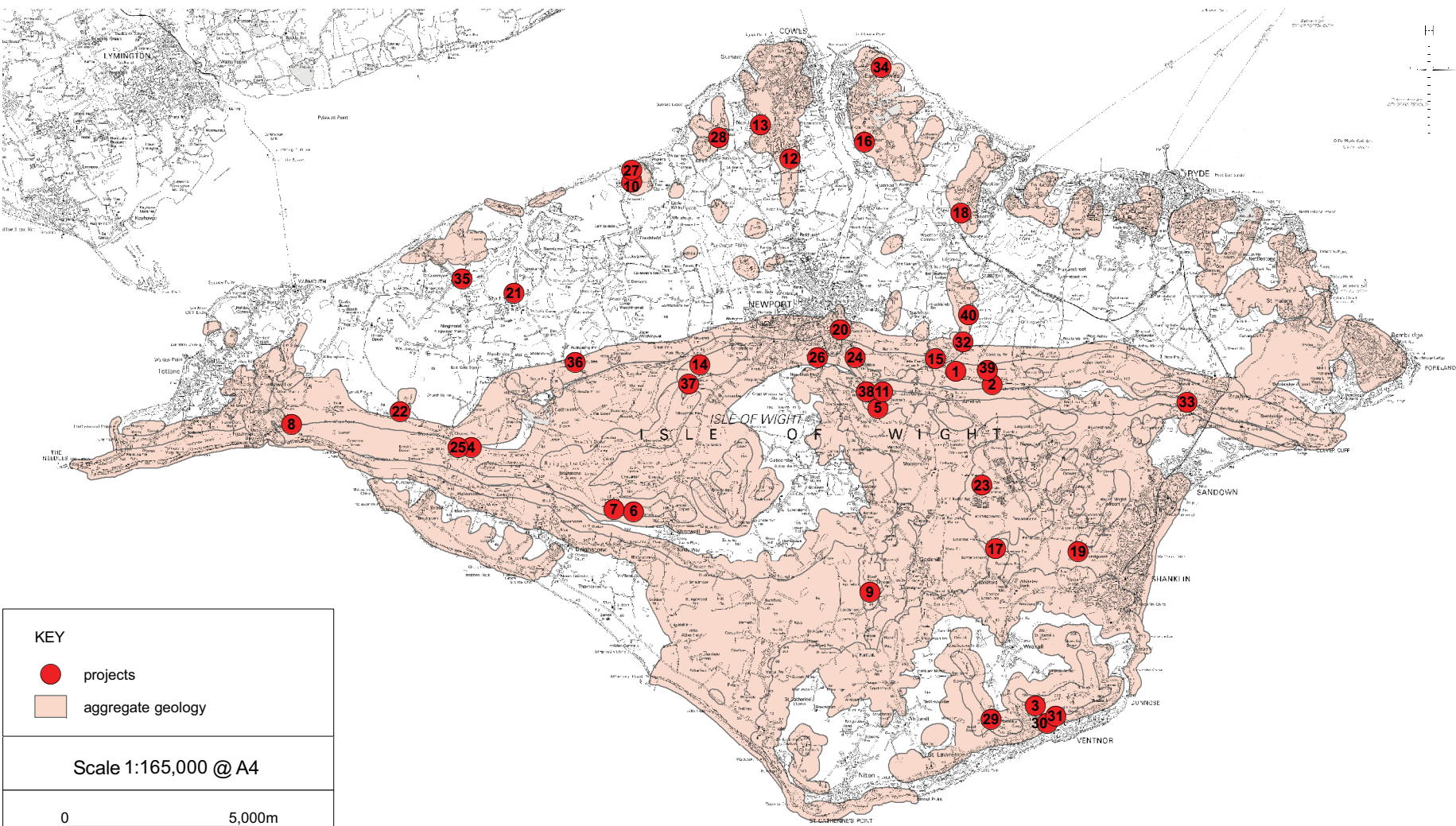
Project ID	Name of project	Name(s) of quarry(ies)	Description	HER number
35	Haynes Collection	Pit North of Cowes	Find described as 'Chelles' Palaeolithic flint implement was recorded from 'Gravel Pit North of Cowes' in Haynes Collection. It possibly came from Northwood.	1905-MIW2008
36	Five Houses, Calbourne	Sandpit at 5 Houses, Calbourne	Flake labelled 'Sandpit near Five Houses Calbourne' was recorded by Gunyon Colln in 1927.	1912-MIW2015
37	Bowcombe Down	Bowcombe Down	Two waste flakes were found in disused quarry on quarry floor.	2378-MIW2432
38	St George's Down	St George's Down Pit	Unidentified object was found in spoil from gravel extraction in July 1996.	2440-MIW2492
39	Combley	Combley Farm	Hoard of 500 bronze Roman coins was found by a metal detector in a disused quarry after clearance of overgrown plants. Subsequent detecting resulted in 1200 coins, two copper alloy rings and a sherd of Vectis Ware. The hoard has been loaned to Dr Malcolm Lyne, numismatist.	2456-MIW2506
40	Havenstreet	Havenstreet	Two bunkers Recorded during the Defence of Britain Project are now standing proud due to gravel extraction.	4326-MIW5954

## 9.2 Gazetteer of historic assets

Project ID	Name of project	Description
1	Arreton Down Round Barrow	Religious, ritual and funerary: Early Bronze Age barrow, with scattered Roman potsherds and early medieval secondary burials.
		Transport: records An early 19th century road.
		Unassigned: Evidence of robbing in the 13th century and possible robbing in the 18th century.
2	Arreton Down Bronze Hoard	Religious, ritual and funerary: Votive hoard dated to early-middle Bronze Age including a collection of approximately 18 weapons.
3	Wroxall Down	Religious, ritual and funerary: A polished stone axe which H F Poole interpreted as coming from a round barrow.
4	Chessell Down	Object: Greensand Axe identified as local variant of widespread Neolithic type.
5	St George's Down Palstave	Object: Cutting part of a bronze palstave. Also Late Mesolithic or Neolithic barbed and tanged arrowhead and small pick.
6	Fore Down Roman Coin	Object: Roman coin found during Gravel Working on Fore Down in 1924.
7	Limerstone Down Gravel Pit	Defence: Bank and ditch with associated Roman pottery and coins, including a hoard of approximately 22 coins of up to 4th century. Some associated post-holes and stones suggested a possible building to the finders Mr Sherwin and Mr Pritchett.
8	Afton	Religious, ritual and funerary: Cremation cemetery of over 40 Bronze Age urns. Middle Bronze Age overhanging rim Beaker and cremation urn probable ploughed/dug out barrow
		Object: Palaeoliths and Mesolithic picks in the gravel beneath.
9	Bleak Down Flint Implements	Object: Lower Palaeolithic Acheulian and Mousterian flint implements.
10	Thorness cremation urn	Religious, ritual and funerary: A middle Bronze Age overhanging-rim type cremation urn inverted in a small pit with associated burnt bone and charcoal. No indication of a barrow. Bone identified as young adult (female?), a child and an additional cranium
11	St George's Down Implements	Object: Poorly knapped handaxes
12	Northwood Pit Implements	Object: Pointed early Palaeolithic flint implement

Project ID	Name of project	Description
13	Ruffins Implements	Object: Palaeolithic handaxes
14	Bowcombe Down Implements	Object: Palaeolithic object
15	Down End Implements	Object: Palaeolithic object
16	Whippingham Implements	Object: Palaeolithic flint
17	Froghil Implements	Object: Two Mousterian implements, one small ovate and one flake. Neolithic or Bronze Age chips of flint lower down the slope.
18	WoottonWootton Implement	Object: Water worn and frost fractured Acheulian ovate implement
19	Ninham Farm Implement	Object: Single ovate Acheulian implement
20	Great Pan Farm	Object: Straight Tusked elephant teeth, unabraded Acheulian, Levallois and Chellean implements, two Mesolithic picks and Bronze Age palstave.
21	Shalfleet Implements	Object: Mammoth teeth
22	Prospect Quarry Shalcombe	Object: Neolithic flint arrowhead and axe collected from Neolithic scattered debitage.
23	Hale Manor Farm	Agriculture and subsistence: Agricultural features including a double-ditched enclosure of the later medieval and post-medieval periods.
24	Blackwater Quarry	Object: Neolithic flints, Later medieval ironwork, Victorian ceramics, glass and building materials
25	Chessell Down Jutish Burial Gr	Religious, ritual and funerary: A large 'Jutish' cemetery, 130 graves.
26	Mount Joy Roman	Object: Aureus of Libius Severus
27	Burnt Wood, Roman kiln	Industrial: A circular furnace and adjoining trench with 1st to 2nd century Roman pottery. No wasters so either a pottery kiln or corn drying oven.
28	REW Street Roman Remains	Domestic: A shallow ditch with Romano-British ware and a bronze bell. A large depression to the east interpreted as a hut site. Pits nearby
29	Rew Down Cremation	Religious, ritual and funerary: Bronze Age cremation urn containing bone
30	East of Ventnor Station	Religious, ritual and funerary: Three skeletons, an Iron Age pot and a hearth
31	Upper Ventnor	Religious, ritual and funerary: Remains of three individuals in close proximity to a stone oven, of uncertain date
32	Downend	Religious, ritual and funerary: Bronze Age cinerary urn with burnt earth and bone in association. No evidence of barrow.
33	Brading Down	Industrial: Collection of waste flakes from the outside of nodules but no finished implements suggest a possible Neolithic and Bronze Age flint mine
34	Norris Castle	Object: Early Acheulian hand-axe
35	Haynes Collection	Object: Find described as 'Chelles' Palaeolithic flint implement
36	Five Houses, Calbourne	Object: Undated prehistoric flake
37	Bowcombe Down	Industrial: Two undated prehistoric waste flakes
38	St George's Down	Object: Unidentified object of uncertain date
39	Combley	Object: Hoard of 500 bronze Roman coins. Subsequent metal detecting resulted in 1200 coins, 2 copper alloy rings and a sherd of Vectis Ware.
40	Havenstreet	Defence: Two World War II bunkers





<p><b>KEY</b></p> <ul style="list-style-type: none"> <li><span style="color: red;">●</span> projects</li> <li><span style="background-color: #d2b48c; border: 1px solid black; display: inline-block; width: 15px; height: 10px; vertical-align: middle;"></span> aggregate geology</li> </ul>
<p>Scale 1:165,000 @ A4</p>
<p>0 <span style="display: inline-block; width: 100px; border-bottom: 1px solid black;"></span> 5,000m</p>
<p><small>Based upon the Ordnance Survey mapping with the permission of the Controller of Her Majesty's Stationery Office © Crown Copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. City of London 100023243 2010.</small></p>

Fig 1 Distribution of projects on the Isle of Wight aggregate geology

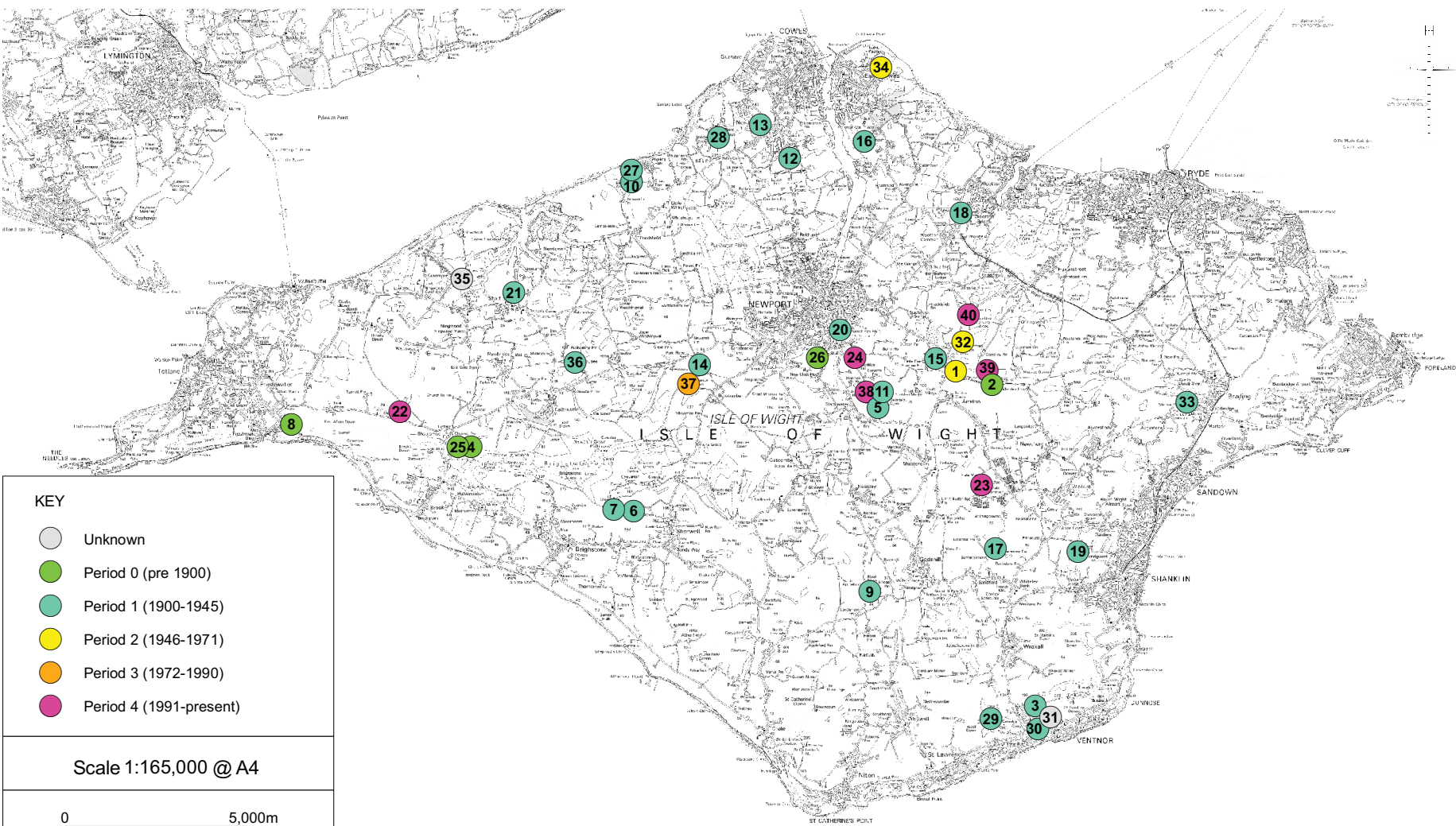


Fig 2 Distribution of projects in relation to period of intervention

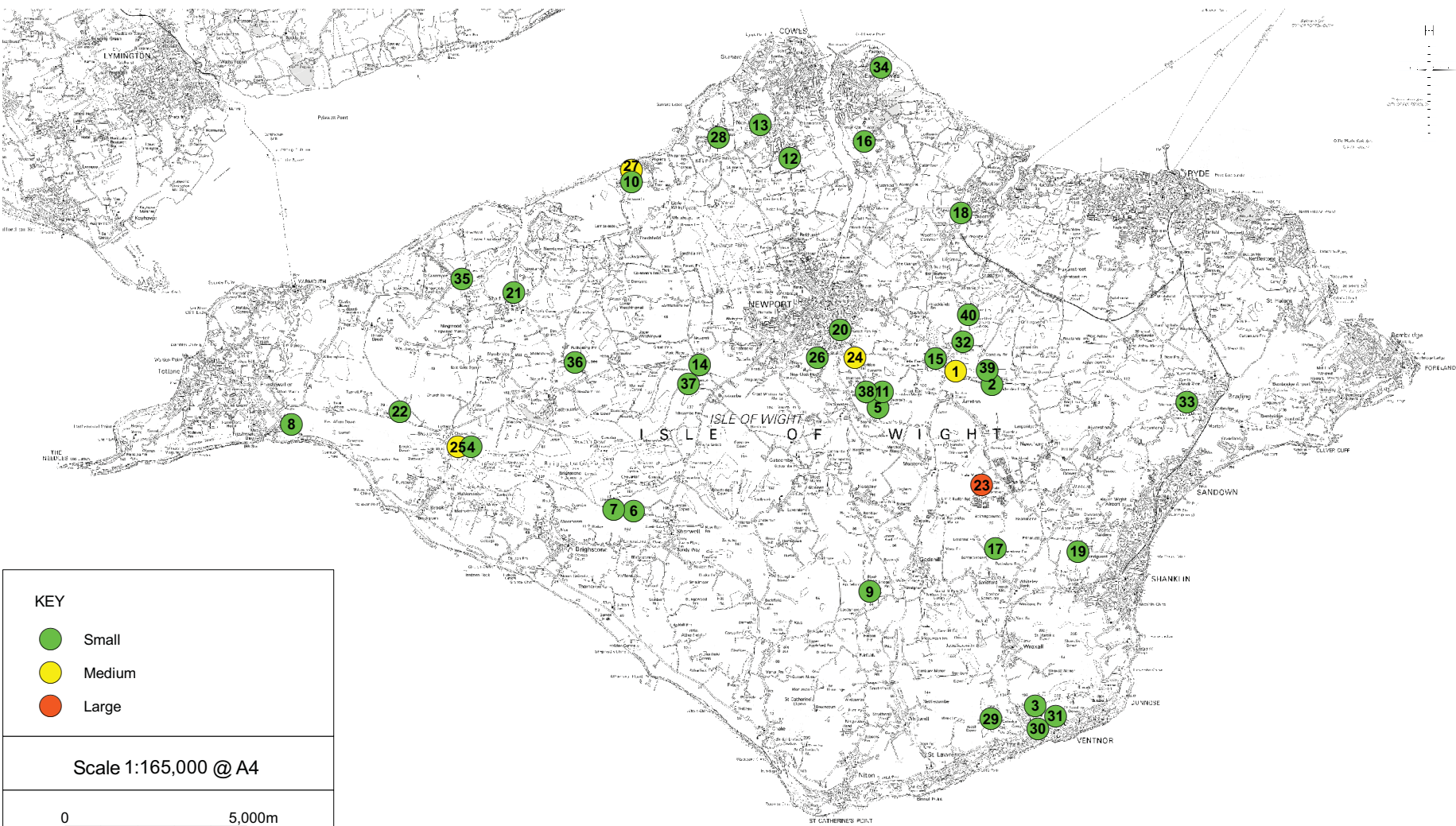


Fig 3 Distribution of projects in relation to project size

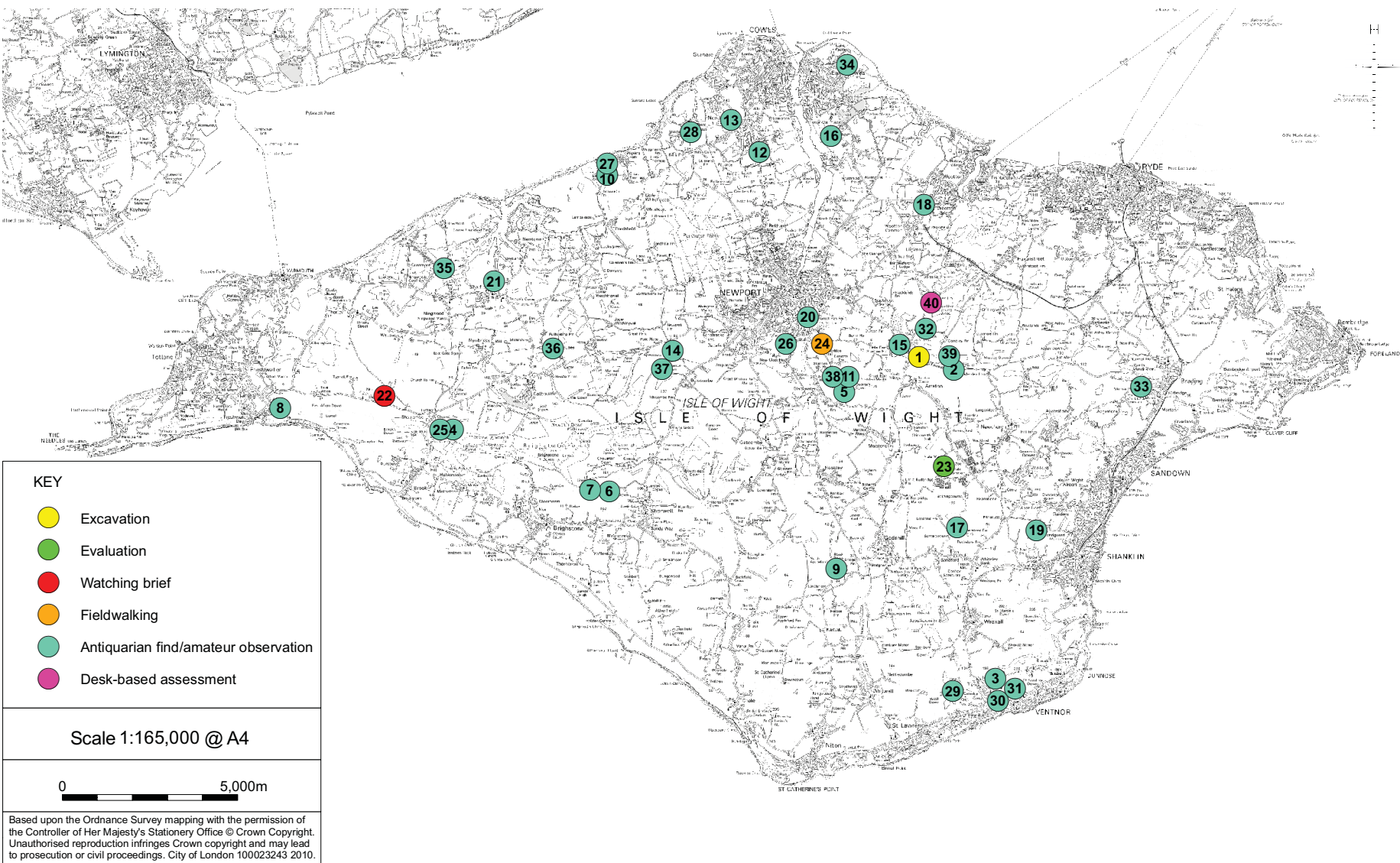
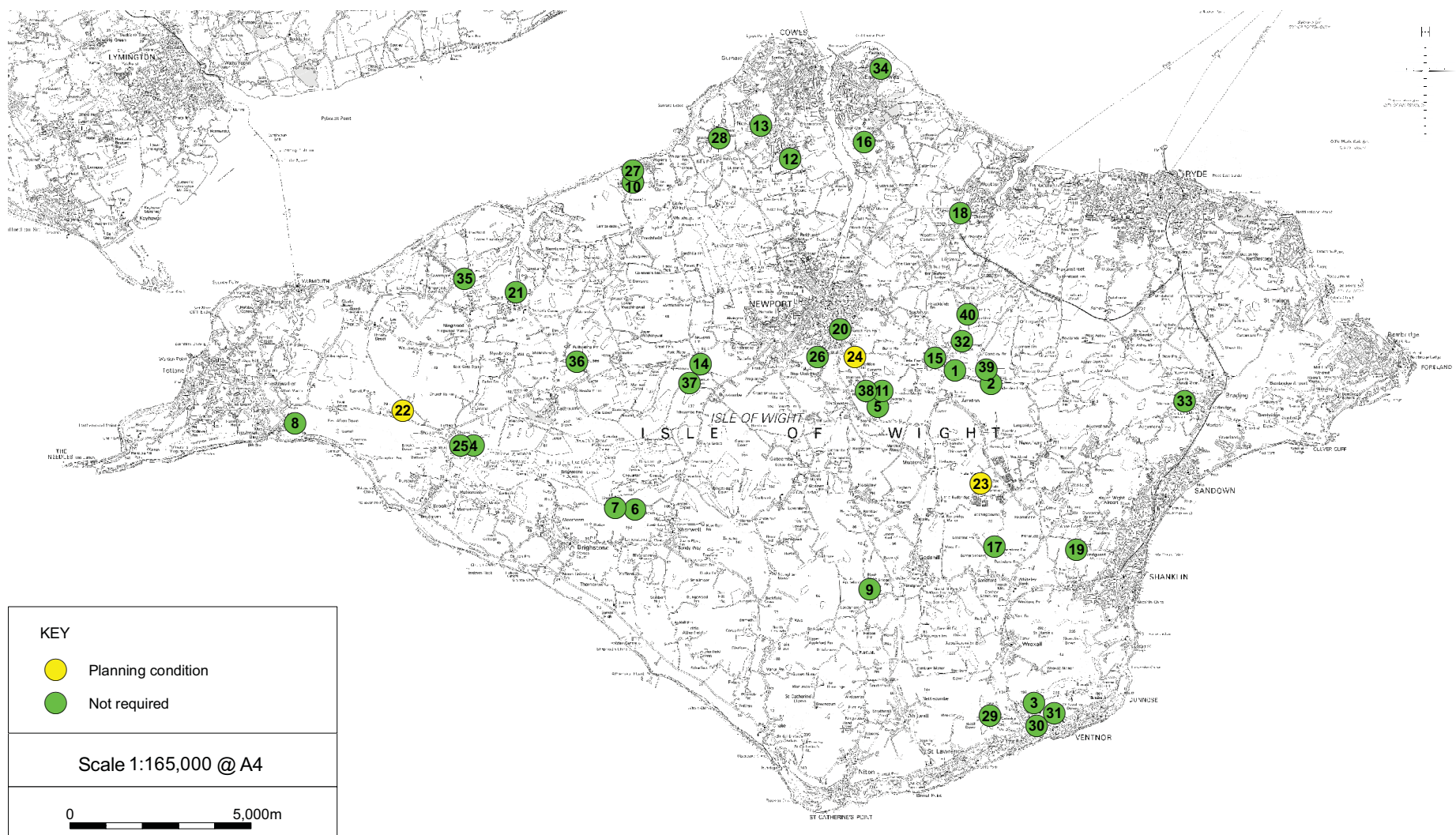


Fig 4 Distribution of projects in relation to the nature of primary fieldwork



**KEY**

- Planning condition
- Not required

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Scale 1:165,000 @ A4

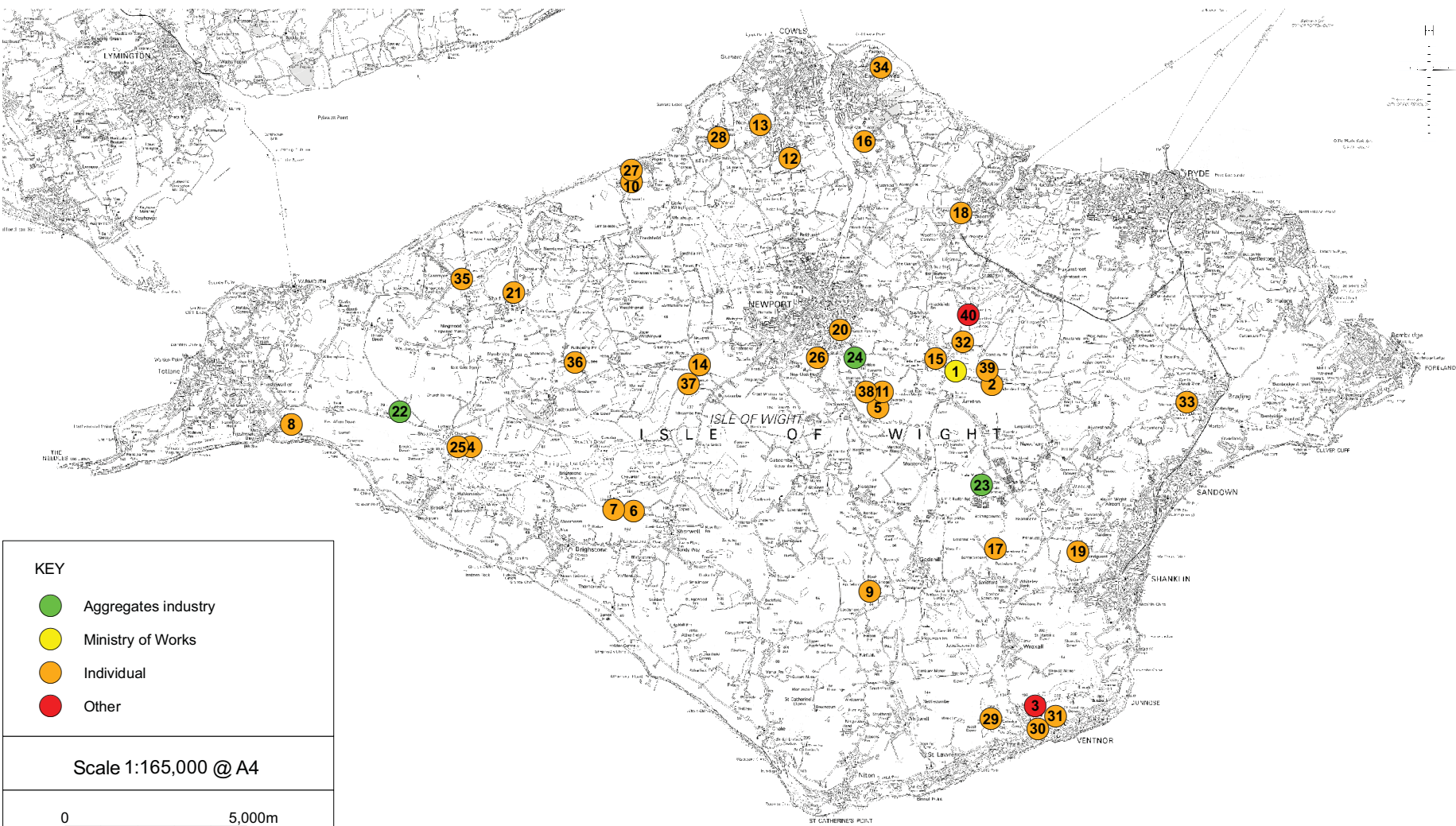
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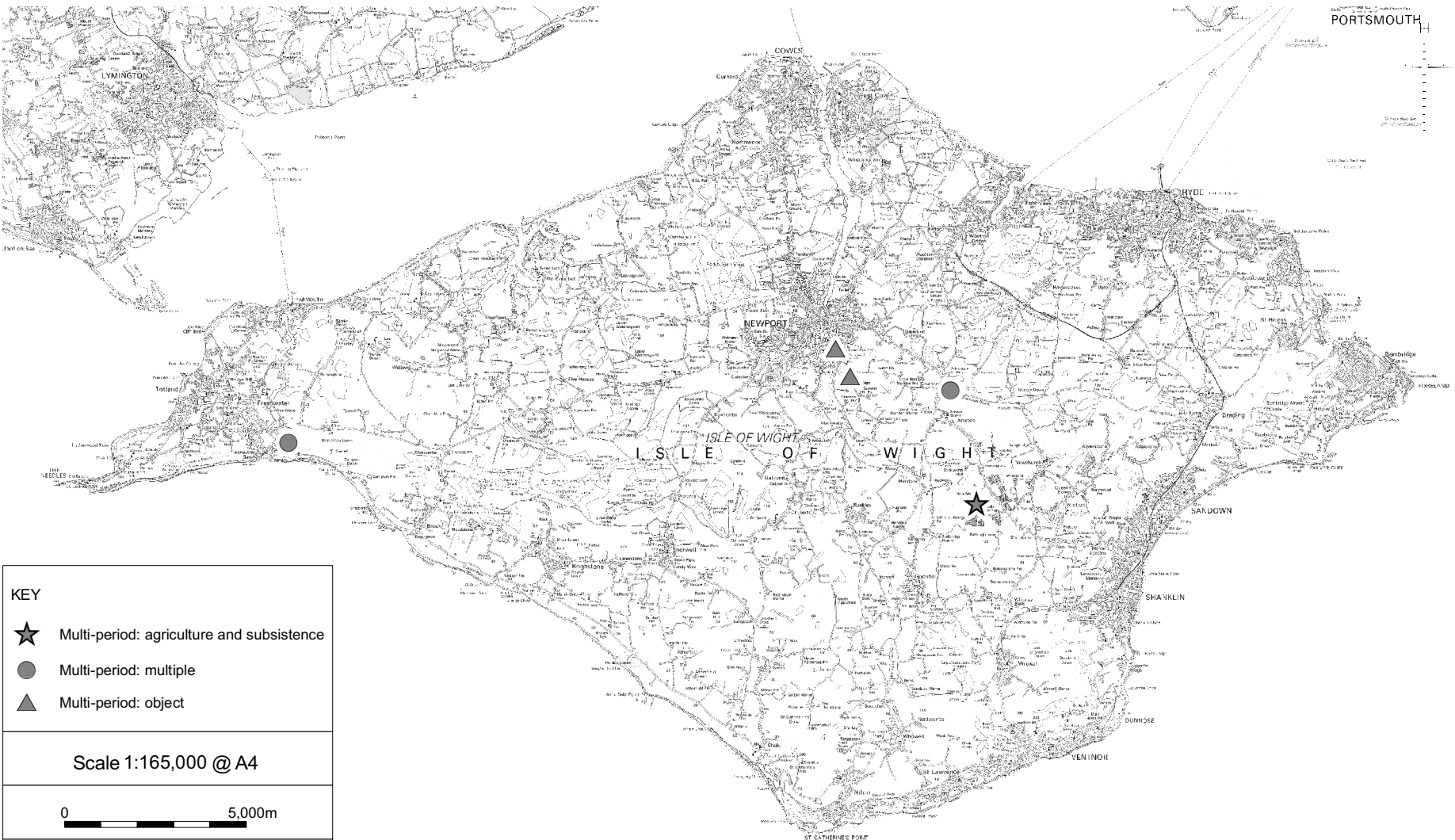
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Fig 5 Distribution of projects in relation to planning requirements



<b>KEY</b> Aggregates industry Ministry of Works Individual Other	
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Fig 6 Distribution of projects in relation to funding body



<b>KEY</b>	
★	Multi-period: agriculture and subsistence
●	Multi-period: multiple
▲	Multi-period: object
<b>Scale 1:165,000 @ A4</b>	
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Fig 7 Location of multi-period assets

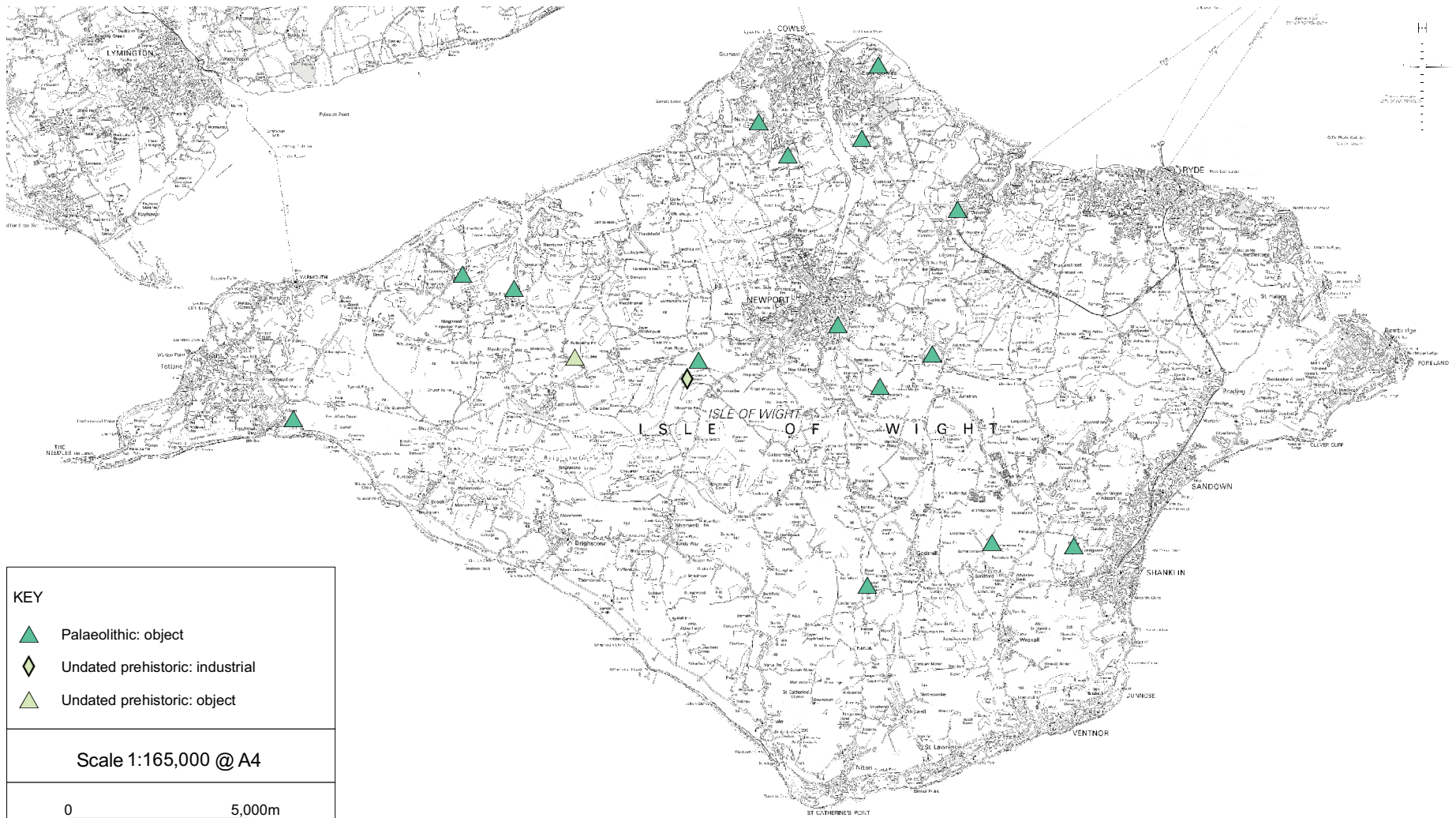


Fig 8 Location of undated prehistoric and Palaeolithic assets



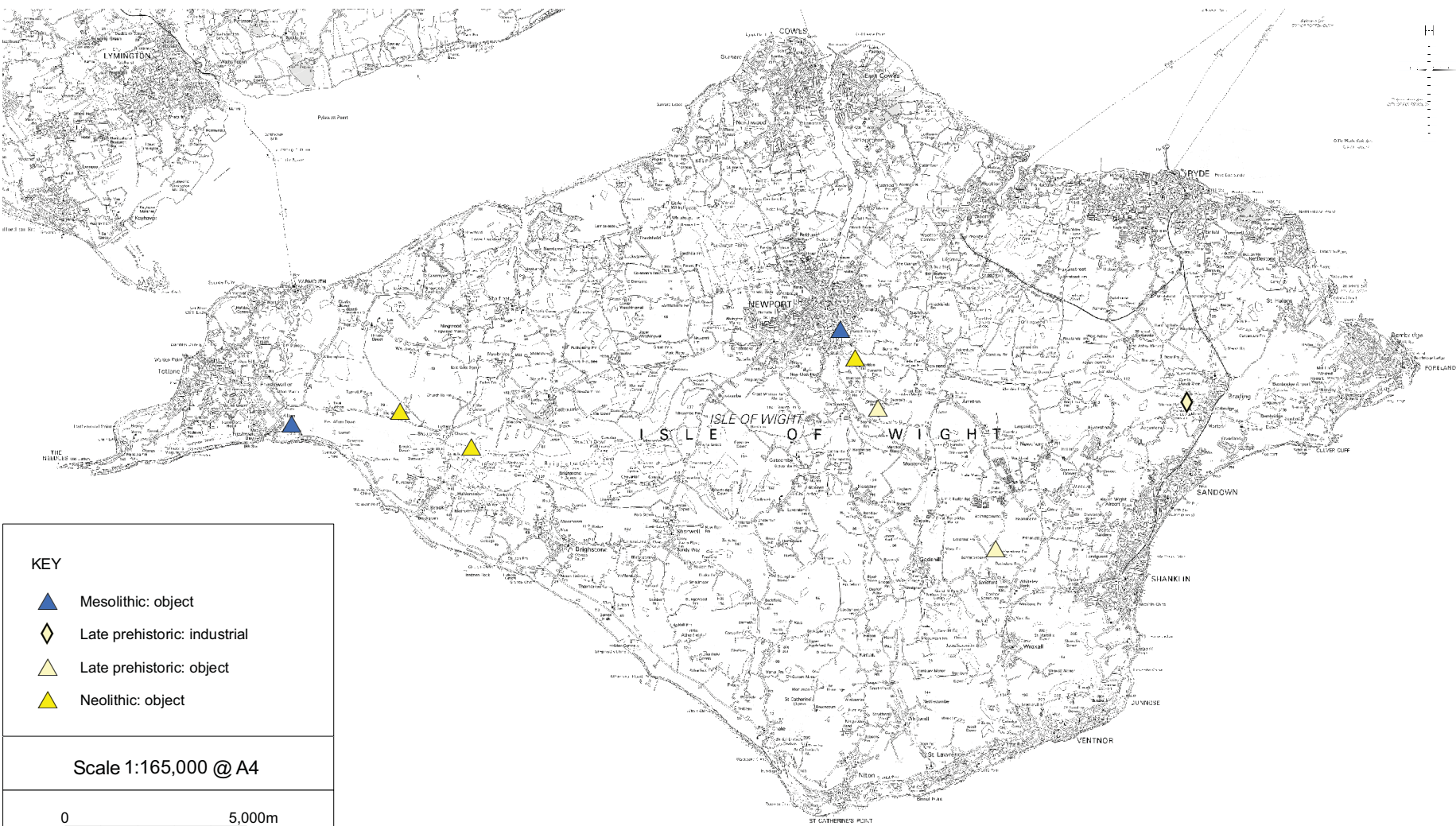
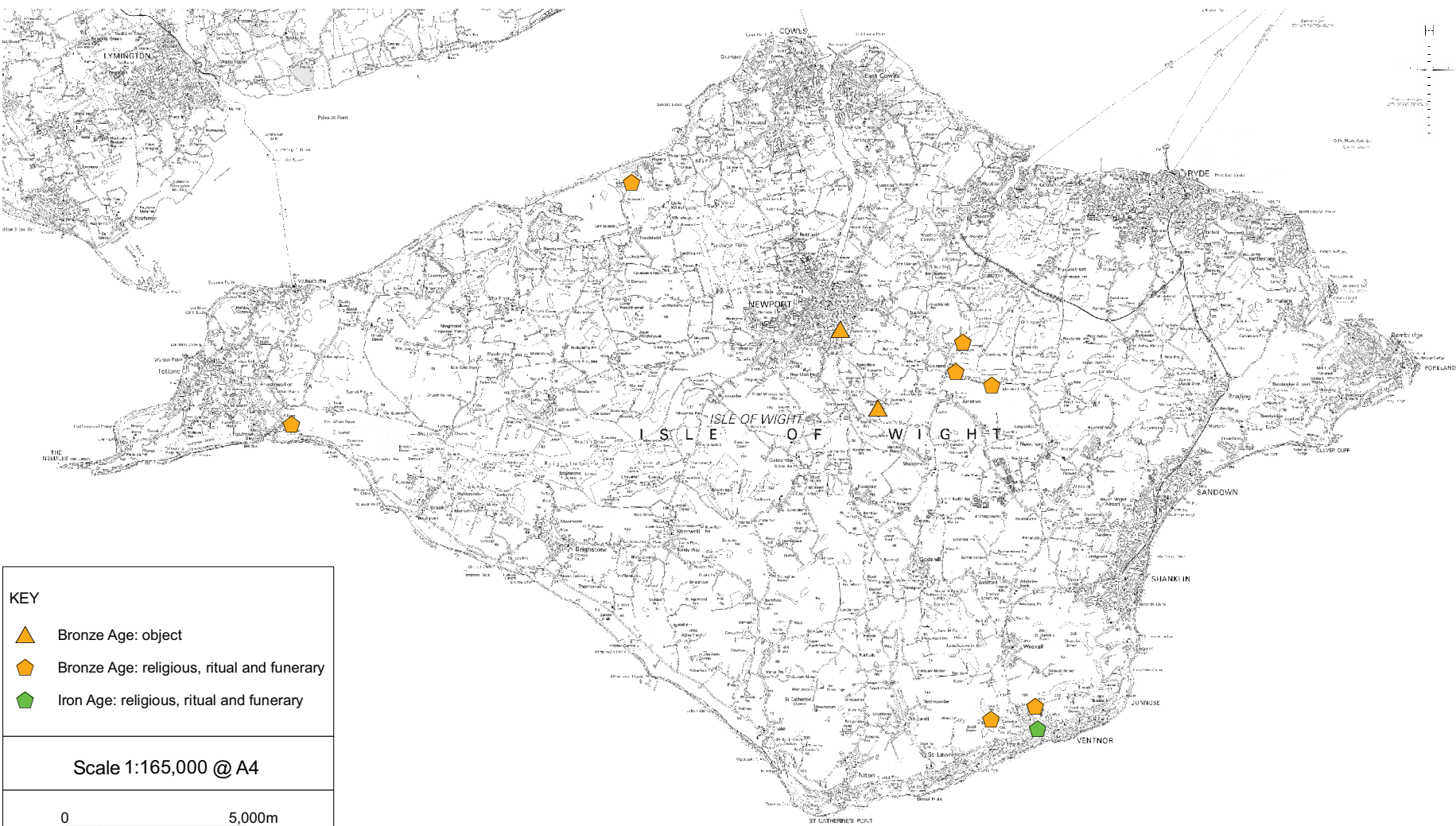


Fig 9 Location of Mesolithic, late prehistoric and Neolithic assets







<b>KEY</b>	
	Bronze Age: object
	Bronze Age: religious, ritual and funerary
	Iron Age: religious, ritual and funerary
<b>Scale 1:165,000 @ A4</b>	
	
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Fig 10 Location of Bronze Age and Iron Age assets

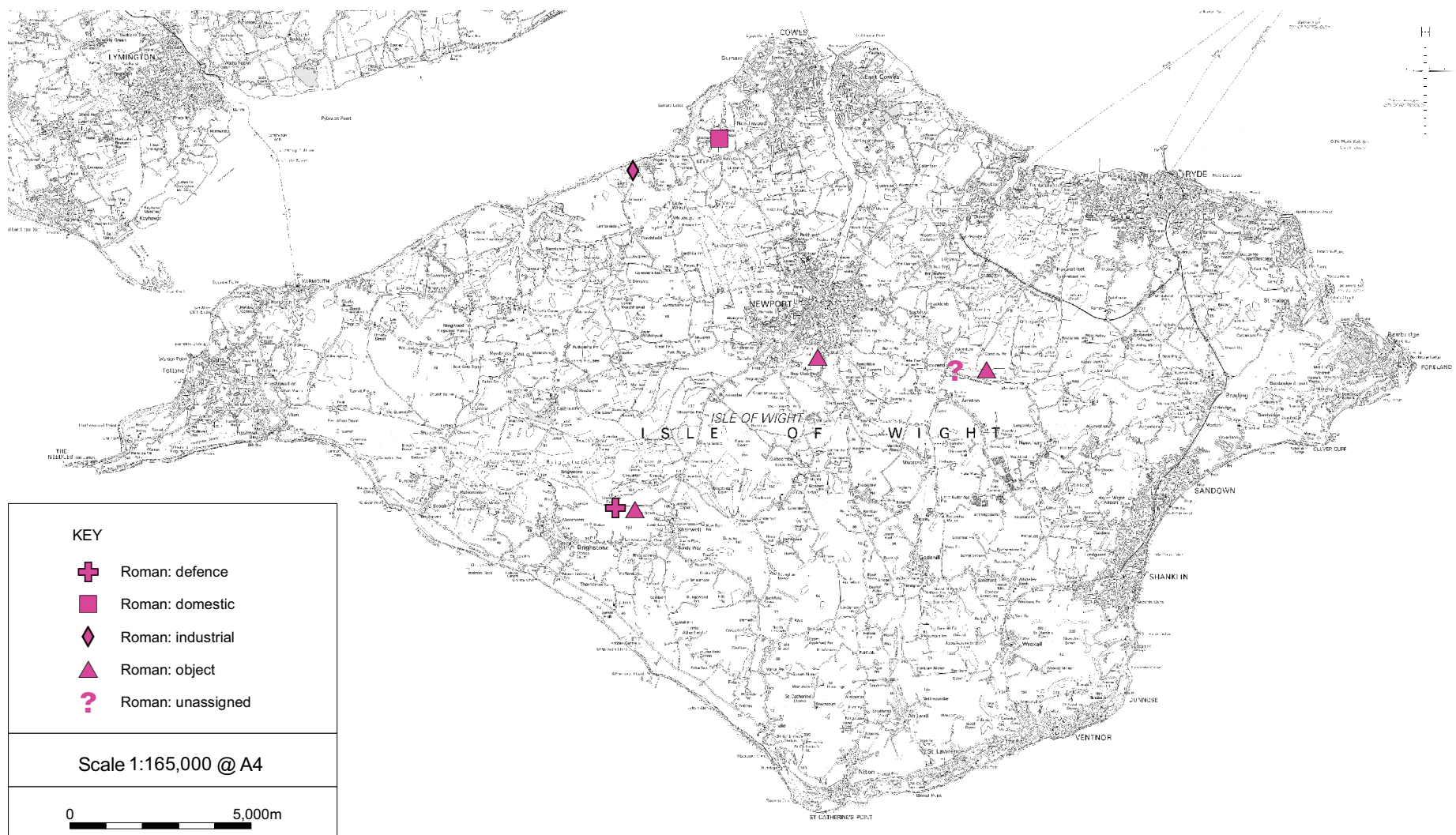
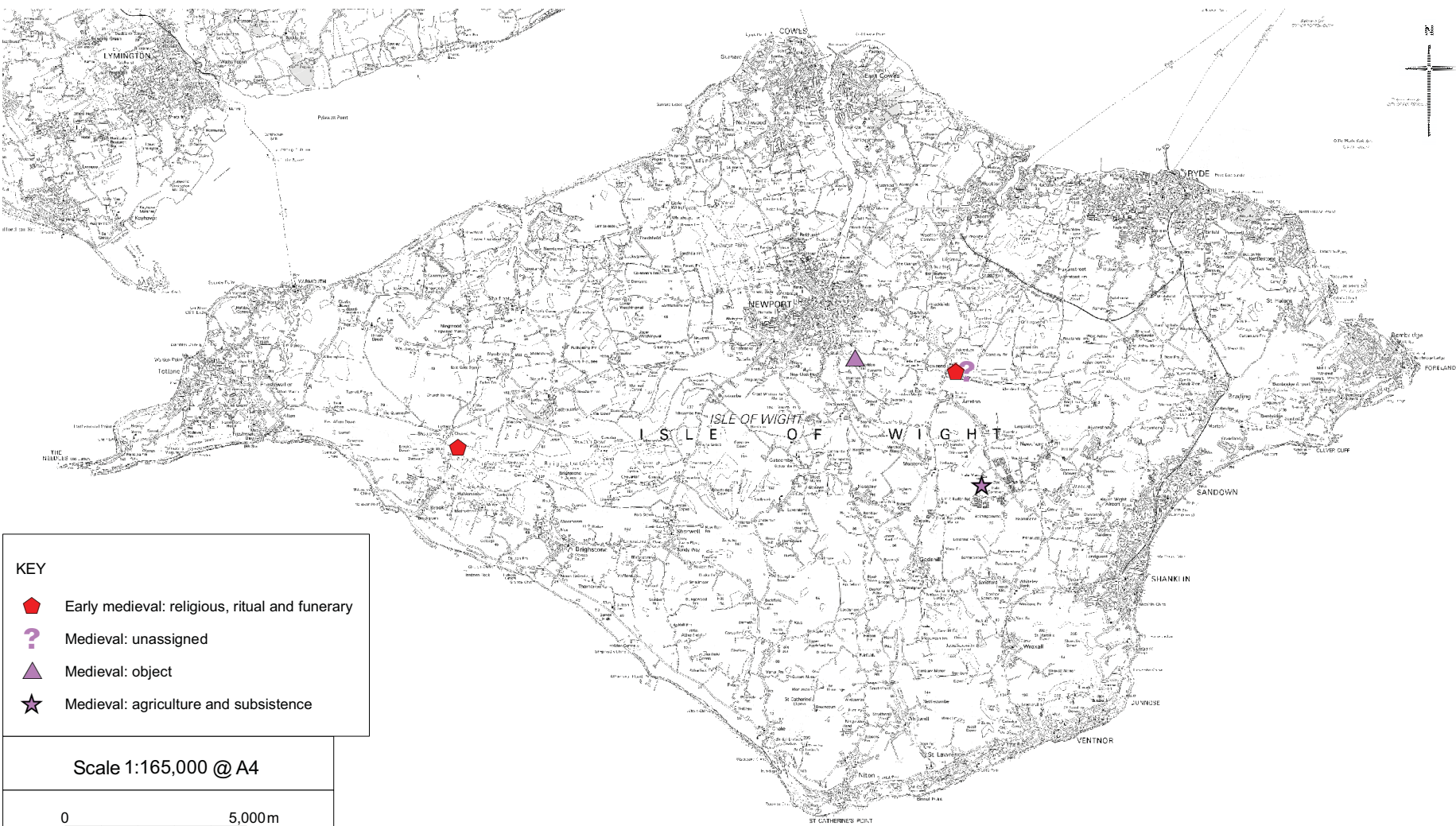


Fig 11 Location of Roman assets

IOFW/1013BR10#11



**KEY**

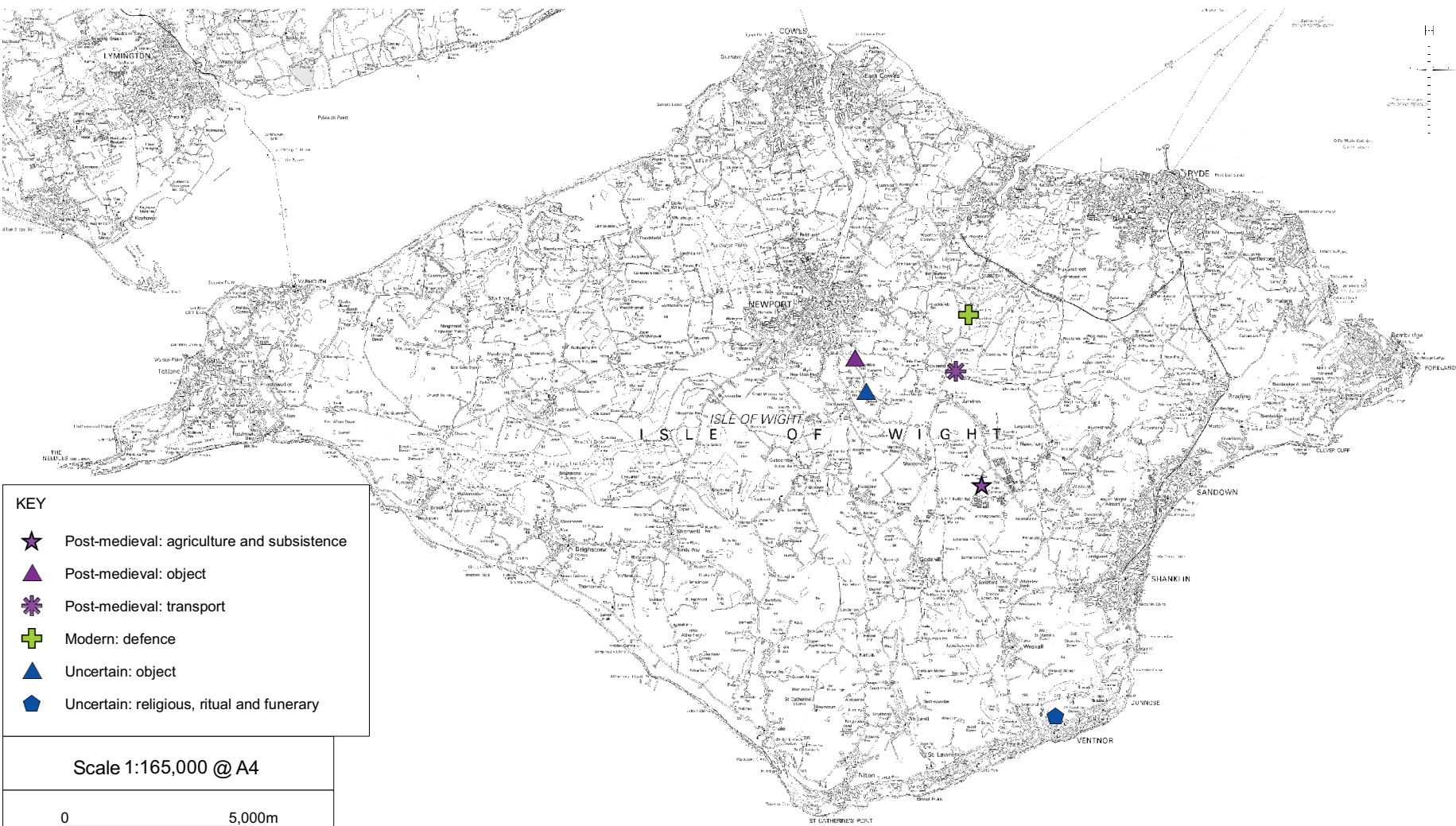
- ▣ Early medieval: religious, ritual and funerary
- ? Medieval: unassigned
- ▴ Medieval: object
- ★ Medieval: agriculture and subsistence

Scale 1:165,000 @ A4

0 5,000m

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Fig 12 Location of early medieval and medieval assets



**KEY**

- ★ Post-medieval: agriculture and subsistence
- ▲ Post-medieval: object
- ✱ Post-medieval: transport
- ⊕ Modern: defence
- ▲ Uncertain: object
- ⬠ Uncertain: religious, ritual and funerary

Scale 1:165,000 @ A4



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IOFW1013BR10#13

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Fig 13 Location of post-medieval, modern and uncertain assets

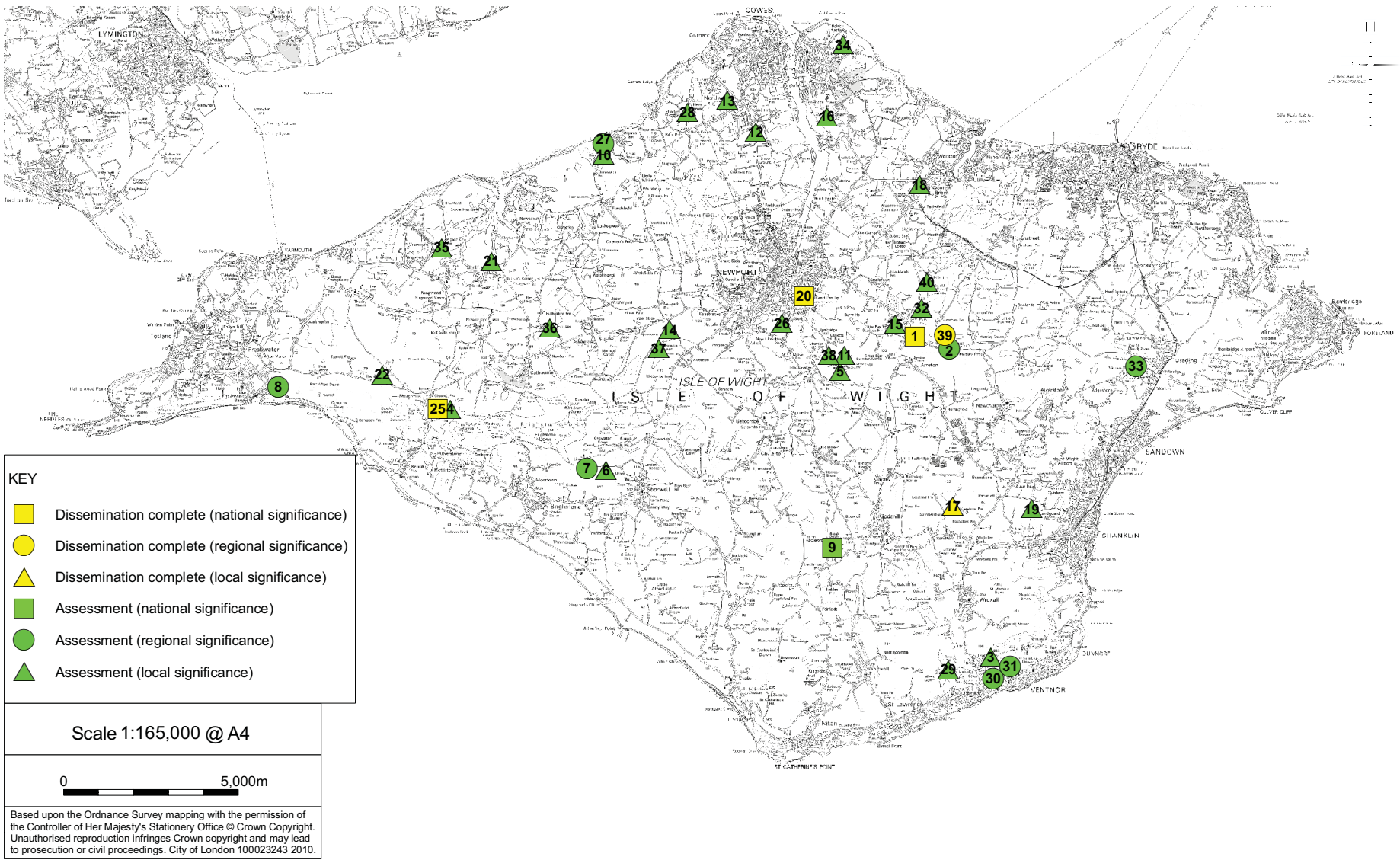


Fig 14 Distribution of projects in relation to suggested dissemination and significance

IOFW1013BR10#14

## **19 Appendix 5: NMR report**

# ASSESSMENT OF ARCHAEOLOGICAL RESOURCE IN AGGREGATE AREAS ON THE ISLE OF WIGHT

## Results of NMP Mapping



Historic Environment Projects



# **ASSESSMENT OF ARCHAEOLOGICAL RESOURCE IN AGGREGATE AREAS ON THE ISLE OF WIGHT**

## **Results of NMP Mapping**

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**March 2010**

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Within the Historic Environment, the Project Manager was Andrew Young.

The project was carried out using aerial photographs loaned by English Heritage National Monuments Record, The Isle of Wight Council and by Cambridge University's Unit for Landscape Modelling.

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## **Freedom of Information Act**

As Cornwall Council is a public authority it is subject to the terms of the Freedom of Information Act 2000, which came into effect from 1st January 2005.

## **Cover illustration**

Five Barrow, Bronze Age Barrow cemetery, Shalcombe Down. Photo: NMR 23303/10 SZ 3985/23 24 September 2003 © English Heritage. NMR

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## **Abbreviations**

AMIE	Archives and Monuments in England
ALSF	Aggregates Levy Sustainability Fund
AONB	Area of Outstanding Natural Beauty
CC	Cornwall Council
CUCAP	Cambridge University Committee for Aerial Photography
EH	English Heritage
HER	Historic Environment Record
IOW	Isle of Wight Council
LDF	Local Development Framework
LiDAR	Light Detection and Ranging
NMP	National Mapping Programme
NMR	National Monument Record
NMRC	National Monument Record Centre
OS	Ordnance Survey
RCHME	Royal Commission on the Historical Monuments of England
UDP	Wight Unitary Development Plan
ULM	Unit for Landscape Modelling



## Summary

This report outlines the results of the systematic interpretation and mapping of archaeological sites from aerial photographs in two sample areas on the Isle of Wight, using all available aerial photography. The analytical aerial survey was carried out using English Heritage's National Mapping Programme methodology and formed part of a wider Aggregate Resource Assessment project being undertaken by Museum of London Archaeology in partnership with the Isle of Wight Council.

Historic Environment, Cornwall Council carried out the mapping element of the project between July 2009 and January 2010. The project was funded by English Heritage under the Aggregates Levy Sustainability Fund.

The primary aim of the project is to improve knowledge of the archaeological resource of the aggregate producing areas of the Isle of Wight. This will provide the appropriate tools to facilitate strategic planning decisions and the management and preservation of archaeological sites and historic landscapes within those areas. The project will also increase public, industry and other stakeholders' awareness of the archaeology and historic landscapes within the aggregate areas.

The interpretation and mapping element of the project contributed to this aim by providing significant enhancement to existing baseline data through the mapping, interpretation and recording of over 500 previously unrecorded archaeological features ranging in date from the Neolithic period to the end of the Second World War. In terms of the kinds of sites potentially visible on aerial photographs, this amounts to a 76% increase in the archaeological record within the two project areas.

Key results included the identification of three possible Neolithic long barrows. The distribution of Bronze Age barrows, traditional considered to be confined to the chalk uplands, was significantly expanded with the recording of 59 new sites, several of which lie on the lower arable land to the south of the chalk. Many later prehistoric sites were recorded including round houses, enclosures and field systems. Whilst few sites dating to the medieval period were mapped, significant numbers of sites dating to the post medieval period and the early twentieth century were plotted including the site of a previously unrecorded heavy anti-aircraft battery dating to World War Two.

This report describes the project area, the methodology used and an overview of the results of the analytical aerial survey on a period by period basis. It was compiled with reference to the draft Solent Thames Archaeological Research Framework.

# 1 Background to the project

## 1.1 Circumstances of and reasons for the project

The Isle of Wight produces both aggregates (sands and gravels) and chalk and the existing Isle of Wight Unitary Development Plan (UDP) (adopted 18 May 2001) anticipates that the island will continue to need to provide these resources, primarily for internal consumption. The extraction of these mineral resources is governed by the existing Isle of Wight UDP (IOW 2001) and will be addressed in the Minerals Developments Documents which are currently being developed as part of the emerging Local Development Framework (LDF).

In view of the current review of planning policy and in the context of similar projects undertaken in Gloucestershire, Warwickshire and Hampshire, it was proposed to undertake a survey of the archaeology of the Isle of Wight focussing on areas where aggregates (and other mineral resources) have been extracted, are extracted or will potentially be extracted. It is intended that this assessment should provide a foundation for both the application of existing minerals planning policy and the development of future policies and to facilitate a greater interface between those with an archaeological interest in these areas and those involved with minerals planning and extraction.

Aerial photography enhancement of two sample areas was carried out as part of the National Mapping Programme (NMP) and undertaken to current NMP standards (English Heritage 2010).

The NMP was initiated by the Royal Commission on the Historical Monuments of England (RCHME) in 1992. Since the merger of RCHME and English Heritage (EH) in 1999, the NMP has been run and funded by EH. The NMP components of this project were funded through the Aggregates Levy Sustainability Fund administered by the Heritage Environment Enabling Programme of English Heritage.

The aim of the NMP is 'to enhance our understanding about past human settlement, by providing information and syntheses for all archaeological sites and landscapes (visible on aerial photographs) from the Neolithic period to the twentieth century' (Bewley 2001, 78). To achieve this aim a methodology was developed from previous selective approaches to mapping from aerial photographs (e.g. Benson and Miles 1974). The guiding principle of the methodology is 'to map, describe and classify all archaeological sites recorded by aerial photography in England to a consistent standard' (English Heritage, 2010).

## 1.2 Overview of NMP methodology

The NMP applies a systematic methodology to the interpretation and mapping of archaeological features visible on aerial photographs (English Heritage, 2010). This includes not only recording sites visible as cropmarks and earthworks but also structures, such as those relating to twentieth century military activities. This comprehensive synthesis of the archaeological information available on aerial photographs is intended to assist research, planning and protection of the historic environment.

The Isle of Wight mapping project followed standard NMP methodology and involved the systematic examination of all easily accessible aerial photographs from the National Monuments Record (NMR), the Unit for Landscape Modelling (ULM) at Cambridge University (formerly the Cambridge University Committee for Aerial Photography (CUCAP)), and the Isle of Wight Council (IOW). Archaeological features were digitally transcribed using the AERIAL (Version 5.29) rectification programme and AutoCAD Version Map3D 2010). Each archaeological site was recorded in the project's Access database.

Full details of the methodology for interpretation, mapping and monument recording carried out during the project are contained in Appendix 1.

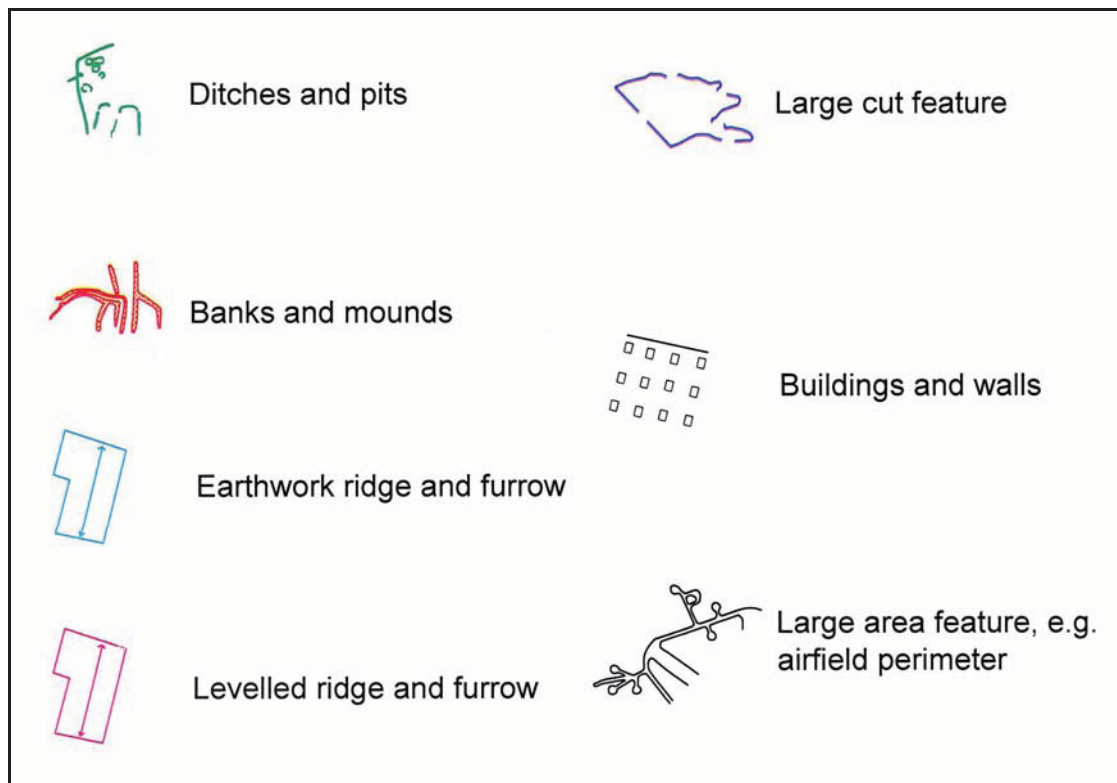


Figure 1. Conventions used on IOW NMP maps.

## **2 Aims and objectives**

### **2.1 Aims**

The overarching aim of the resource assessment is to improve knowledge of the archaeological resource of the aggregate producing areas of the Isle of Wight. This will provide the appropriate tools to facilitate strategic planning decisions and the management and preservation of archaeological sites and historic landscapes within those areas.

The project also aims to increase public, industry and other stakeholders' awareness of the archaeology and historic landscapes within the aggregate areas.

The principal aim of the NMP mapping is to provide a fuller awareness of the range and extent of archaeological remains in the aggregate producing areas through a survey of the landscape by aerial photographic transcription.

### **2.2 Objectives**

The NMP aims were achieved through three primary objectives.

1. To produce a series of AutoCAD drawings depicting archaeology visible on aerial photographs using the conventions and standards of NMP (English Heritage, 2010).
2. To create interpretive records for all sites mapped in a stand alone Access project database and to enhance the Isle of Wight HER database through the integration of those records generated by the project at the end of the mapping and recording phase.
3. To disseminate the project outcomes through the production of a summary report.

### 3 The project area

The NMP project area comprised 75km squares which was split into two separate mapping blocks; Block 1 (Thorley Wellow Plain) to the west of the island covering 35km squares between Freshwater Bay and Shorwell and Block 2 (Arreton Valley) to the east covering 40km squares between Newport and Brading, (Figs 2 and 4).

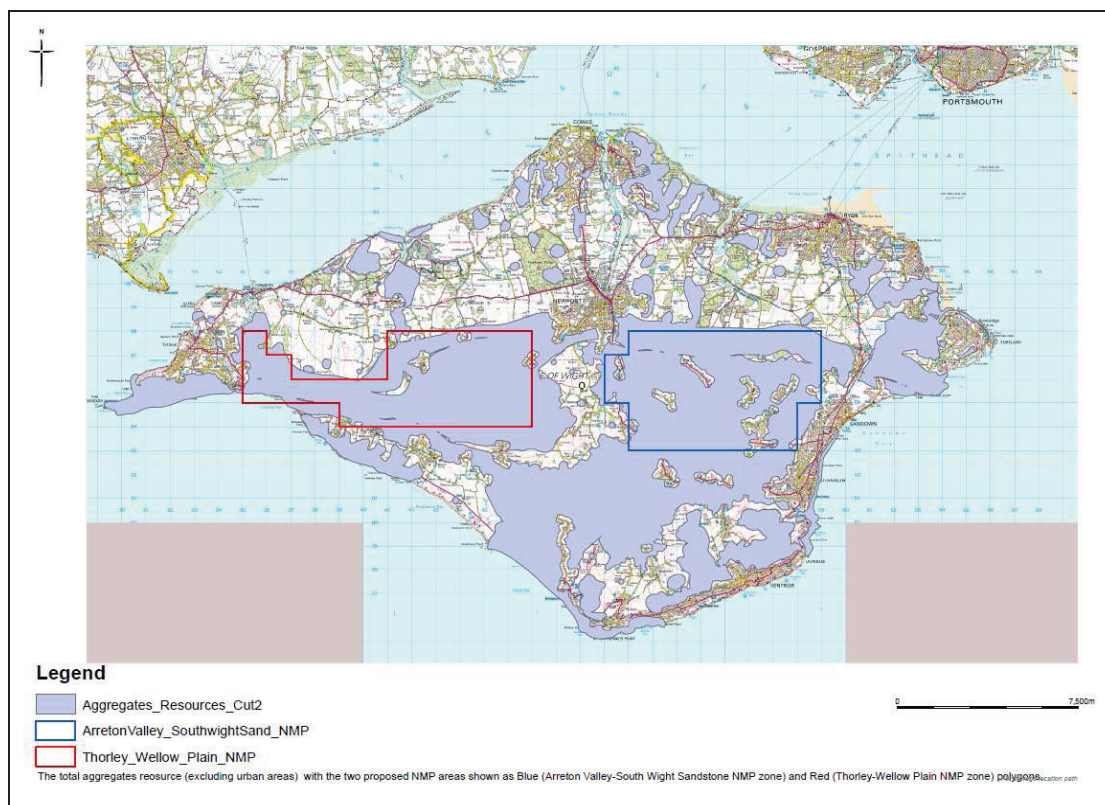


Figure 2. The project area showing the extent of the aggregate landscape and the two NMP mapping blocks.

#### 3.1 Geology of the project area

The Isle of Wight is roughly diamond shaped and is 36.5 km long (east-west) and 21.5km north-south. It is cut roughly in half by the River Medina which runs northward through Newport before opening into the Solent at Cowes.

In terms of geology the island is made up of relatively recent sedimentary deposits. A prominent feature is the Chalk downs which run across the island from Culver Cliff in the east to the Needles in the west. This Upper Cretaceous chalk forms the ridges of higher ground known as the “backbone of the Isle of Wight”.

The southern half of the island is made up of mostly Cretaceous deposits; and is dominated by Upper and Lower Greensand, Gault Clay and the Wealdon Clays, renowned for their dinosaur fossils.

To the north of the chalk downs lie tertiary deposits of sands, clays and gravels which have been tilted in places giving the near vertical coloured rocks at Alum Bay. Marls, clays and limestones of the Solent Group are also exposed in places around the northern part of the island.

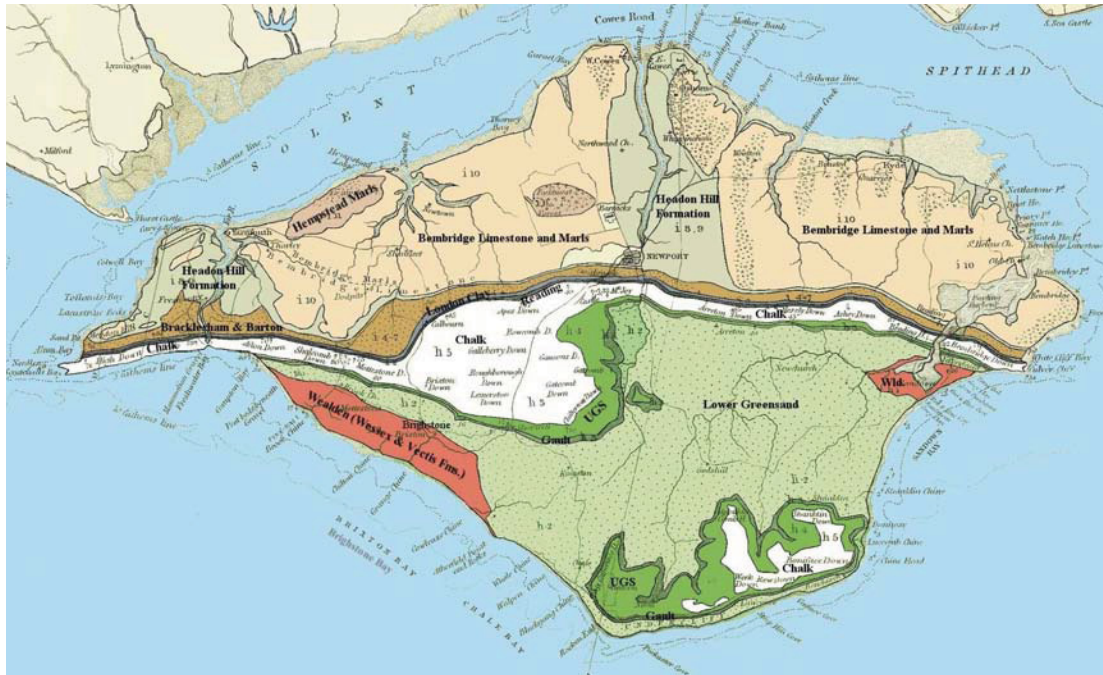


Figure 3. Map showing the simplified geology of the Isle of Wight, (Information based on Forbes 1856, updated by West and West 2008).

### 3.2 The aggregate landscape

Land-won aggregate minerals on the Isle of Wight comprise sand, gravel and, to a lesser extent, chalk. The Isle of Wight UDP allows for continued exploitation of minerals resources in order to satisfy continued demand. Much of these resources lie in the central and southern portions of the island (Figure 2) and are currently extracted to provide for the Island's internal market. It is possible that in the future, limestone in the north of the island will be quarried for use as aggregates (IOW 2001).

### 3.3 Area of Outstanding Natural Beauty

Approximately half of the Isle of Wight has been designated an Area of Outstanding Natural Beauty (AONB); mainly in the west and south but with smaller areas across the whole island, in total around 189 square kilometres (Figure 4). The AONB includes a variety of landscapes, from the high chalk downs to lower arable areas. It also includes roughly half of the coastline of the island including all of the Heritage Coast. The Heritage Coast comprises two stretches of coastline, the first (The Tennyson Heritage Coast) runs for 34km, from Steephill Cove in Ventnor to Widdick Chine at Totland; the second (The Hamstead Heritage Coast) runs for 11 km, from Bouldnor through to Thorness Bay (IOW AONB 2010).

Although current planning policy aims to avoid aggregates extraction in AONBs, it is recognised that aggregates resources within currently designated AONBs may in the longer term be exploited in order to ensure the island remains self sufficient in aggregates production despite a decreasing aggregates resource. Therefore, aggregates resources within these designated areas have been included in the project area.

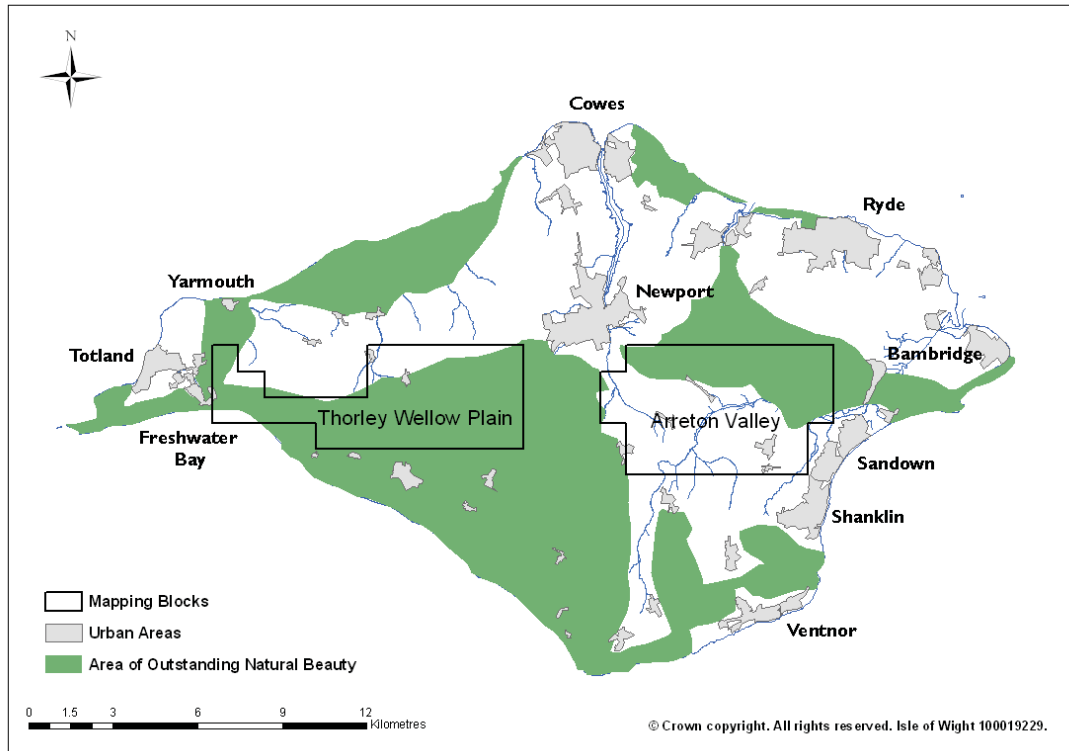


Figure 4. Isle of Wight AONB areas.

### 3.4 Isle of Wight Landscape Character

A summary of the key characteristics of the island as identified by Natural England, Character Area 127 (Natural England 2010), include:

- The Isle of Wight presents a small scale island landscape with varied and distinctive landforms, diverse land cover types and often sudden and dramatic views of the sea. The island’s cultural heritage from prehistoric times has been dominated by its close link to the sea.
- The island includes the key characteristics of much of southern England, albeit at a small scale: including an intensively farmed coastal plain, wooded dairy pasture, chalk downlands and dramatic sea cliffs.
- The southern coastal plain is largely intensively managed arable farmland with large open fields and few trees.
- The Chalk downs are characterised by open rolling arable land, with small areas of unimproved grassland on the steeper slopes. Beech and ash woodland occurs on some northern slopes with coniferous plantations on the southern slopes.
- The northern pastures are dominated by dairy farming with irregular fields defined by mature hedgerows. Coppiced woodland is a common feature.

## 4 Overview of the aerial photographs

More than 80 years of vertical and oblique photography have ensured that there is extensive aerial photographic cover of the Isle of Wight's aggregate landscape. Available aerial photographs comprise specialist oblique photography, extensive programmes of vertical photography carried out from the 1940s onwards, and oblique photographs taken by the Ministry of Defence in the years during and after the Second World War. Details of available photographs are contained in Appendix 1.

### 4.1 Specialist oblique photography

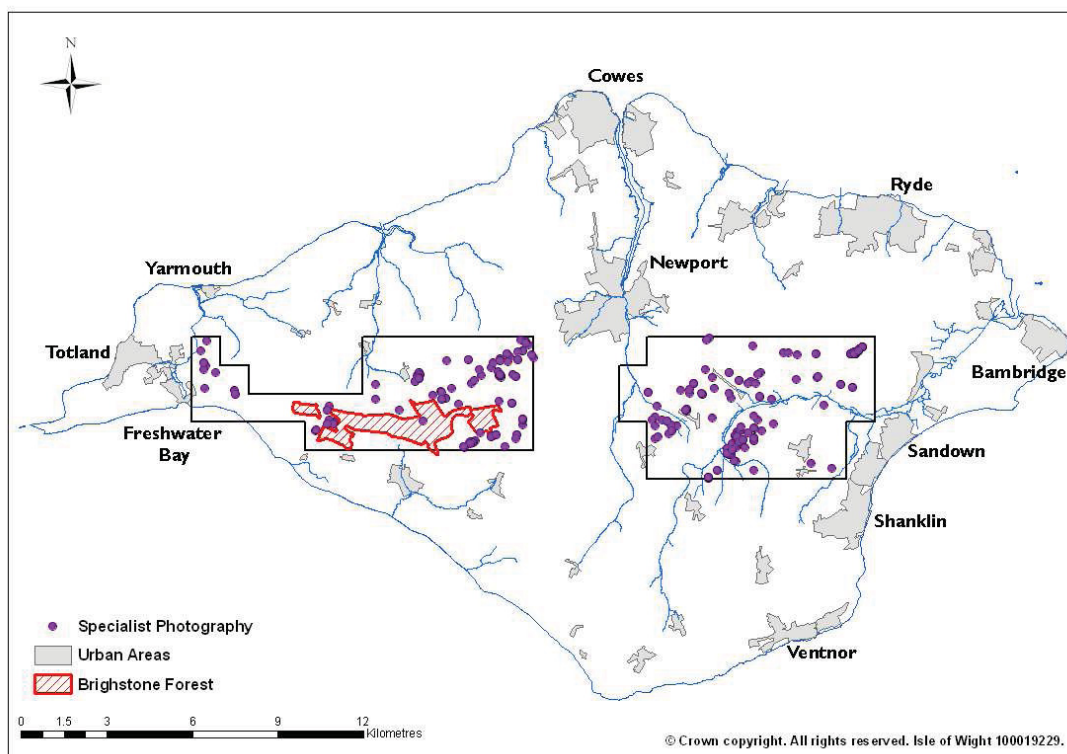
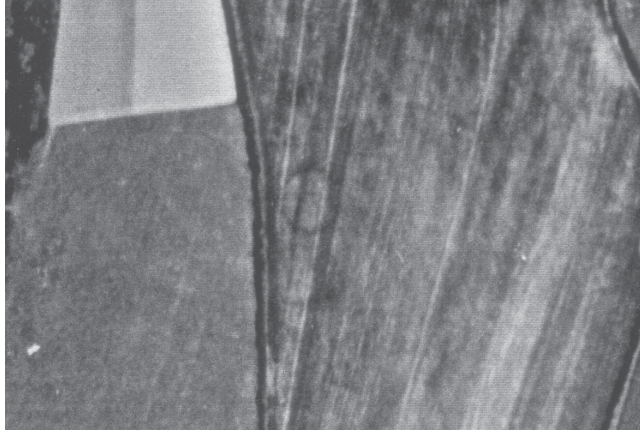


Figure 5. Distribution of sites in the project database mapped and recorded from specialist oblique photographs.

The earliest oblique aerial photographs consulted during the project are from the Crawford collection. Whilst exact dates are not available for all of these prints, they were taken by O.G.S Crawford in the 1920s and 1930s. The earliest dated print is from 30<sup>th</sup> June 1925. As well as being of considerable historic interest, these photographs provided the project valuable information at several different sites. In all 53 sites were plotted from early obliques of which 39 were new sites. Sites included: Bronze Age barrows (Figure 6), a Roman Road (Figure 41), military features likely to be of First World War date (Figure 56), fragments of field system and numerous extractive pits.

Flights undertaken by Cambridge University Committee for Air Photography from the 1960s onwards are another excellent source and have produced many photographs recording sites or details of sites not visible on any other images. In all 53 sites were plotted from the photographs in the CUCAP collection of which 31 are new sites. More systematic programmes of reconnaissance have been carried out by the IOW and the NMR since the 1970s and these sources provide the bulk of the oblique coverage: 48% of all sites mapped from obliques were transcribed from NMR oblique photography and 43% from the IOW oblique collection.





*Figure 6. Site of a Bronze Age round barrow showing as cropmarks at Rowborough on a Crawford photo taken in the 1930s, (MIW480). Photograph: CCC 8521/3575 SZ4584/1 c.1930's English Heritage. NMR (Crawford Collection).*

Oblique photographs taken in slanting sunlight (either during the winter months or in the early morning or late evenings of summer) are an ideal medium for defining earthwork monuments. Of the 391 sites mapped from oblique aerial photographs 44% are of earthwork sites (for an example, see Figure 7).



*Figure 7. Low earthwork banks of a field system and enclosure at Cheverton Down, clearly picked out in low sunlight on this image taken on 6<sup>th</sup> March 2003 (MIW290). The site was recorded as part of ongoing aerial reconnaissance by the English Heritage Aerial Survey team. Photograph: NMR 21980/08 SZ 4484/38 6 March 2003 © English Heritage. NMR*

The majority of sites recorded on oblique aerial photographs however, are plough-levelled features visible as cropmarks. Whilst cropmark sites have been photographed in the project area since the Crawford collection of the 1920s and 30s, substantial numbers of previously unrecorded sites were mapped from aerial photographs taken over the last two decades.

In addition, where sites had already been recorded by earlier aerial reconnaissance, substantial new information has also been added (Figures 8 and 9). This demonstrates that there is considerable potential for further discovery of sub-surface remains through continuing programmes of reconnaissance in the summer months.



*Figure 8: A double concentric ring ditch at Heasley recorded in July 1987, (MIW1602). Traces of linear banks are also visible. (MIW1602). Photograph: IOW 3922/28 © Isle of Wight Council.*



*Figure 9: The same site at Heasley recorded in July 1996. The ring ditch is clearly set within a series of ditched field boundaries. Photograph: IOW 16990/13 © Isle of Wight Council.*

The distribution of sites recorded from specialist oblique photography generally reflects the pattern of specialist photographic coverage over the project area. The main concentrations of sites are: a) in the Thorley Wellow Plain, on the chalk downland towards the east of the mapping block where there are extensive field systems showing as both cropmarks and earthworks and b) in the Arreton Valley to the south of the chalk on the Greensand where extensive cropmarks of field systems and settlement enclosures have been recorded. Few sites have been recorded from oblique photographs within Brighstone Forest where the extensive tree cover prevents the recording of surface features.

## **4.2 Vertical Photographs**

Vertical photographs provide coverage of all parts of the project area and were taken at regular intervals from the early 1940s until as recently as 2008. As part of the routine NMP process all vertical aerial photographs, with the exception of the Isle of Wight Council digital cover, were examined with a hand-held stereoscope. Viewing prints with a stereoscope provides a three-dimensional view of the landscape, including any extant archaeological features. The advantage of vertical photography is that large areas are usually surveyed; a potential disadvantage is that they are not always taken at the most favourable times of day or year to maximise the visibility of archaeological features. Nonetheless the value of vertical photography to the project cannot be overstated; 63% of all sites recorded in the project database were identified and transcribed from vertical photographs.

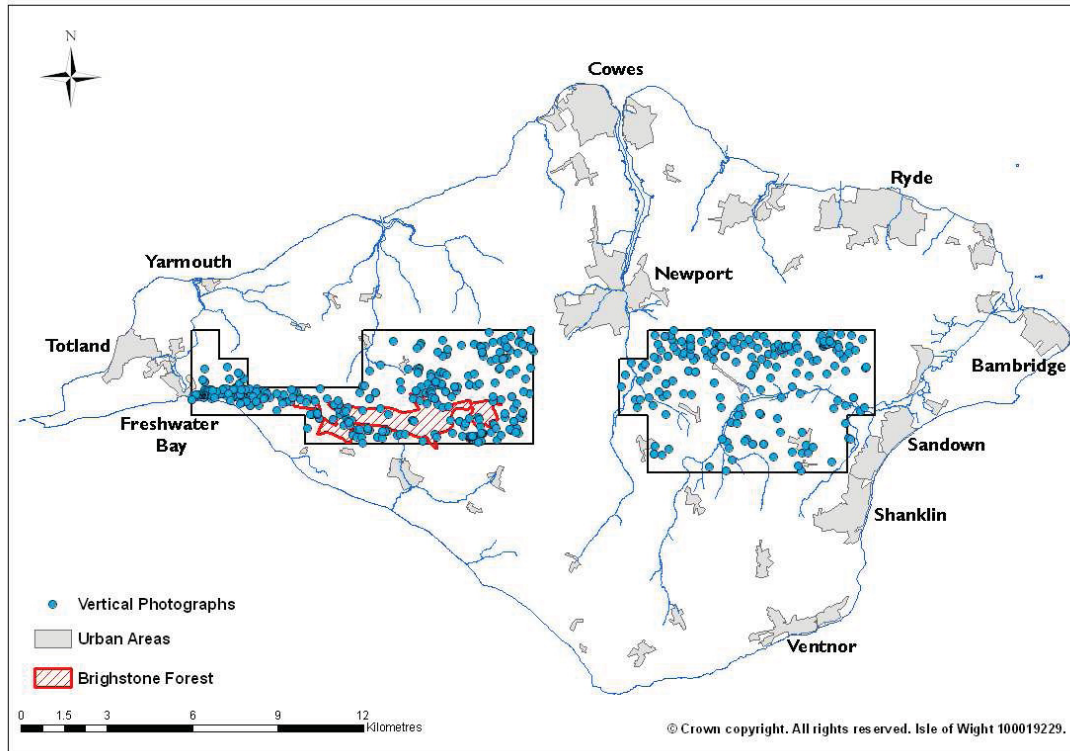


Figure 10. Distribution of sites in the project database mapped and recorded from vertical photographs.

A good range of sources of vertical photography were available to the project, and as a result a wide variety of archaeological site types were recorded. RAF photographs from the 1940s to the early 1960s were an important source of information for sites relating to twentieth century military features as well as post medieval extractive sites of which there are substantial numbers. RAF verticals were also the main source of information within Brighstone Forest and whilst only a few sites were identified in and around the forest, these early verticals proved to be an invaluable resource since the forest has become considerably more extensive and impenetrable to aerial photography since the 1950s.



Figure 11. Two Bronze Age barrows on Shalcombe Down, only visible on RAF vertical photographs taken in 1946, (MIW112 and MIW123). The site is now under Brighstone Forest. Photograph: RAF 106G/UK1665 Frame 4095 English Heritage (NMR) RAF Photography.

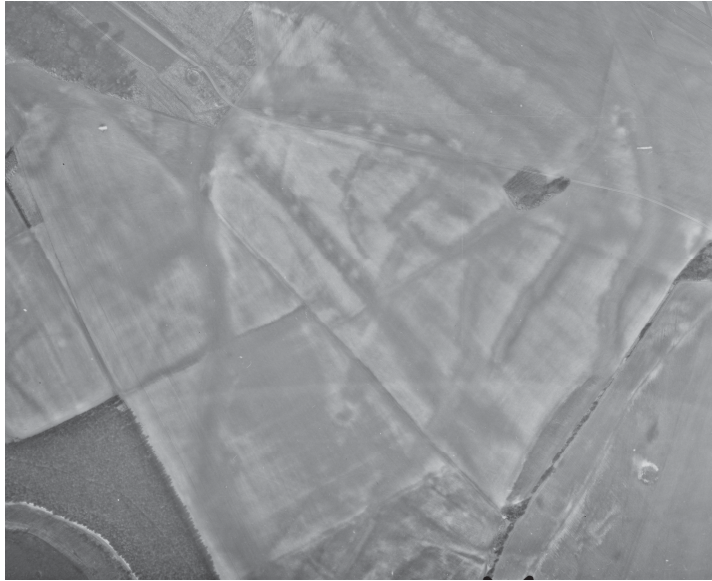


Figure 12. Celtic field system at Newbarn Down visible as cropmarks, (MIW411). This site has been photographed during several specialist oblique sorties; however it is arguably best recorded on this OS photograph taken in 1969. Photograph: OS/69082 Frame 218 7 April 1969 © Crown Copyright. Ordnance Survey

A large number of cropmark features were identified and transcribed from vertical photographs taken during the summer months, particularly in the years 1946, 1968/9, 1986 and 1996. The provision of a wide variety of sorties in addition to the RAF coverage: the 2008 IOW aerial digital photo tiles, the Ordnance Survey and the Meridian Airmaps collections, ensured that coverage from vertical photography was extremely good. In some cases the cropmarks on these photographs are as clear and detailed as those on oblique photography (see Figure 12).

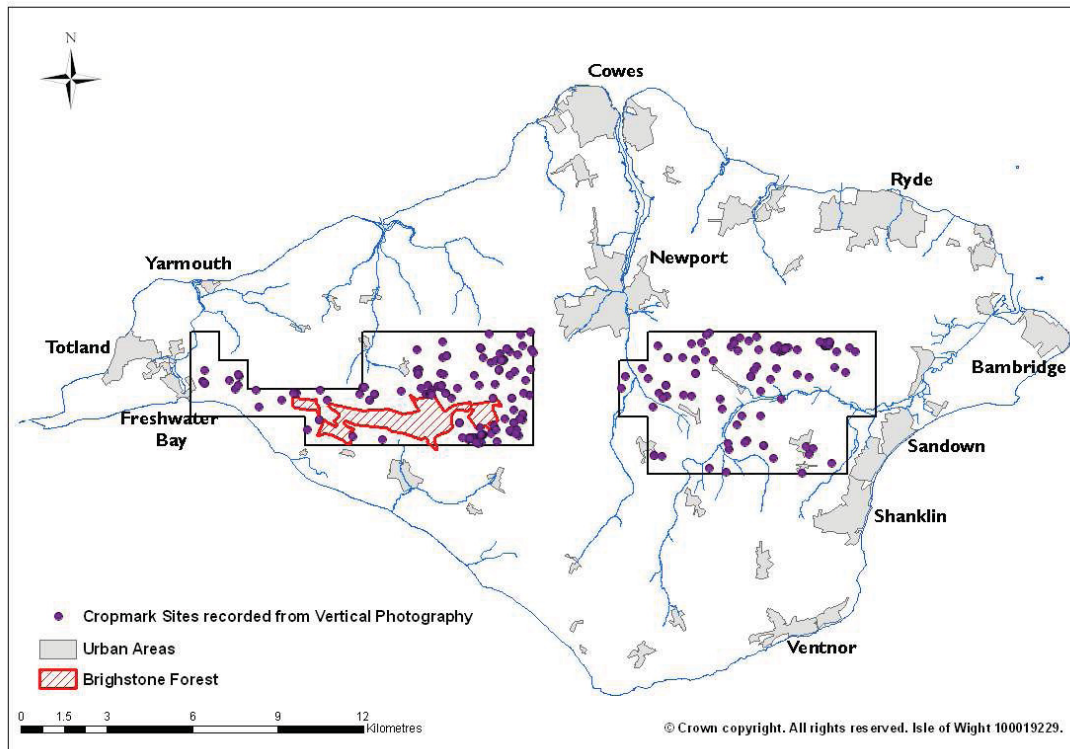


Figure 13. Distribution of cropmark sites in the project database mapped and recorded from vertical aerial photographs.

As a result of the project two main conclusions can be drawn with regard to analytical aerial survey in the Isle of Wight.

- The substantial numbers of sites recorded for the first time during this project clearly demonstrate the value of the systematic analysis of both oblique and vertical aerial photography. Further NMP work in the Isle of Wight is likely to provide comparable levels of baseline data enhancement.
- The distribution of cropmark sites recorded from vertical photographs (Figure 13) indicates that there is good potential for the further discovery of sub-surface remains, not already recorded within the various specialist oblique collections. Future targeted specialist aerial reconnaissance should be undertaken, particularly in the eastern portion of Thorley Wellow Plain where many previously unrecorded cropmark sites were identified from vertical aerial photographs.

## 5 Results of NMP mapping

### 5.1 Overview of results

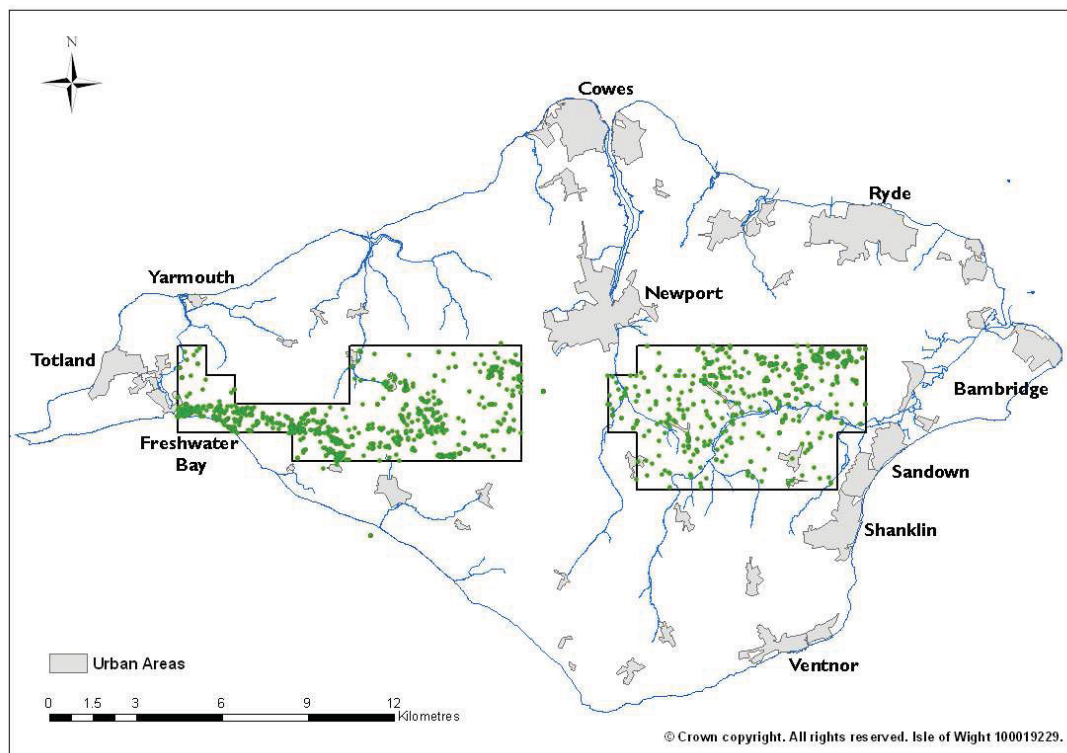


Figure 14. Distribution of all monuments recorded in the HER prior to the NMP project.

In general terms the nature of archaeological evidence available from aerial photographs determines the types of site recorded as part of NMP. Usually these are relatively substantial ditched or banked features either visible above ground as earthworks, or as cropmarks of sub-surface features. Historic photography provides details of earthworks and structures which have been denuded or levelled by ploughing, or otherwise destroyed or removed in the last 80 years.

#### 5.1.1 Numbers of sites in the project area

Prior to the mapping, the Isle of Wight HER contained records for 1287 archaeological sites within the two project areas. Many of these were for stratified and unstratified find spots, documentary evidence and extant buildings (site types which are outside of the NMP remit).

Of the 1287 sites listed however, 700 sites were for features visible as cropmarks and earthworks as well as structures and subsurface features (including excavated features).

During the NMP mapping project 819 monument records were created in the project data base for cropmarks and extant features, of which 533 were for sites previously unrecorded. The mapping project has therefore resulted in a 76% increase in the archaeological record for these types of site within the aggregate landscape of the two project areas from 700 to 1233. The numbers of sites recorded by period are listed in Table 1 below.

Period	Existing Sites	New Sites	Total
Neolithic	4	2	6
Bronze Age	122	59	181
Iron Age	9	7	16
Roman	2	0	2
Prehistoric	9	19	28
Medieval	6	1	7
Post Medieval	46	207	253
Modern (C20 <sup>th</sup> )	19	41	60
Historic	14	62	76
Uncertain	55	135	190
Totals	286	533	819

Table 1: Numbers of sites recorded in the project database.

Aerial photographic coverage and site visibility was greatly compromised by the tree cover of Brighstone Forest which was established soon after the war and now covers extensive areas of the south-eastern portion of Block 1 (Thorley Wellow Plain). Those sites which were identified in this area were mainly plotted from RAF photographs taken in the 1940s and some OGS Crawford oblique photographs taken in the 1920s and 30s before the tree cover was established.

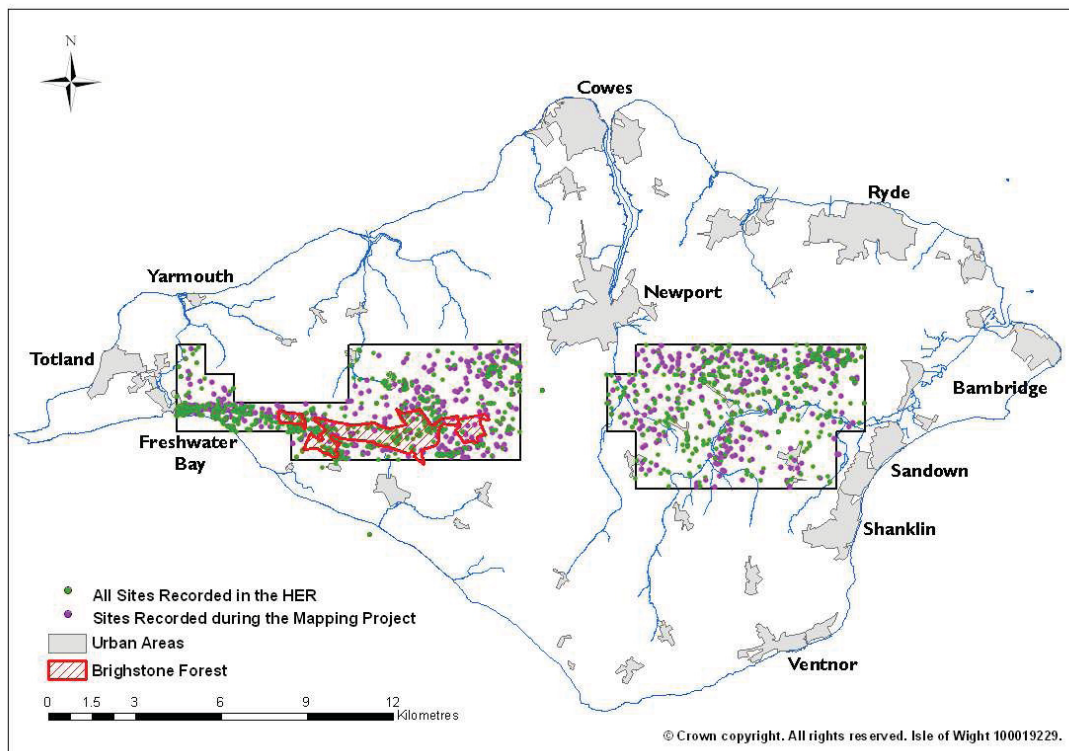


Figure 15. Distribution of all monuments recorded during the NMP project.

### 5.1.2 Form and survival of sites

Forty three percent of the monuments recorded during the mapping project were plough-levelled sites that were visible only as cropmarks (shown in green on the map

below, Figure 16). In the Arreton Valley area, these were primarily in the arable areas off the chalk downs. Conversely, the majority of the extant earthwork sites lay on the chalk, either within pasture or under Brighstone Forest.

The majority of the extant sites were of relatively recent origin (medieval, post medieval, modern or uncertain historic), whereas there was a tendency for earlier (prehistoric) sites to only be visible as cropmarks on the aerial photographs. This is largely due to widespread ploughing from the medieval period onwards which has resulted in the gradual levelling of prehistoric earthworks. Seventy eight percent of historic sites were showing as earthworks or structures whilst 61% of prehistoric sites (Neolithic, Bronze Age, Iron Age or uncertain prehistoric) were only visible as cropmarks.

The majority (71%) of prehistoric sites visible as earthworks were Bronze Age barrows and barrow groups. These extant barrows lie along the chalk downs and most have the benefit of statutory protection being Scheduled Monuments.

Of the 190 records where it was not possible to allocate a prehistoric or historic date with any degree of certainty (and therefore an 'uncertain' date was allocated), 66% were cropmark sites and this may be indicative of a prehistoric rather than historic origin.

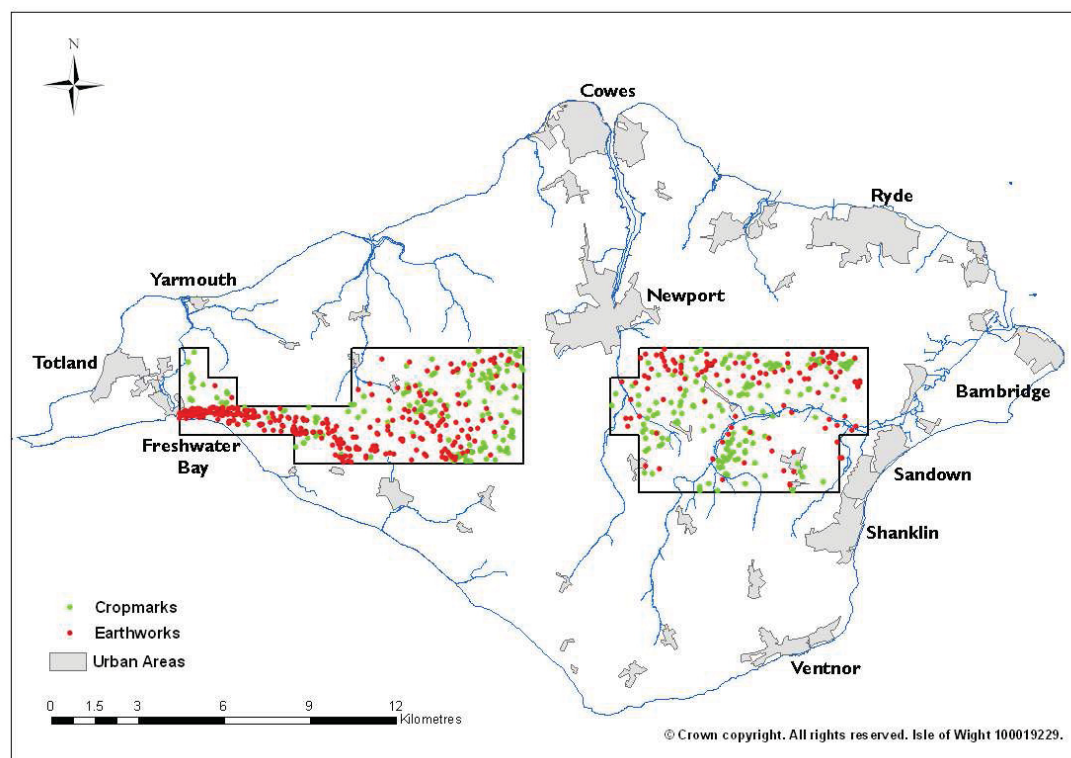


Figure 16. Distribution of sites recorded as earthworks and cropmarks within the NMP study area.

### 5.1.3 Date of sites recorded

Sites from all periods (bar the early medieval) were recorded, confirming the rich and varied archaeological resource contained within the aggregate landscape of the Isle of Wight.

Prehistoric features encountered included: Neolithic long barrows and a possible oval barrow, Bronze Age round barrows and barrow cemeteries, later prehistoric field systems, enclosures, settlements and ring ditches.



Two Roman sites were identified; the site of a Roman villa and a Roman road.

Few traces of medieval or post medieval settlement sites were recorded but many field boundaries and trackways were mapped. A small number of cultivation ridges, possibly ridge and furrow, were also plotted as well as several pillow mounds and enclosures. The majority of post medieval sites relate to extraction, both small scale local extractive pits as well as larger quarries. A number of drainage systems were recorded in the area to the west of Sandown.

Of the 60 modern sites recorded, 66% are golf course features on Afton Down, many of which had previously been recorded as part of an archaeological survey carried out for the National Trust by Wessex Archaeology in 2007 (Wessex Archaeology, 2007). In addition to these recreational features however, a number of twentieth century military and defensive remains were plotted including anti-landing aircraft obstructions at Sandown Airport and a possible heavy anti-aircraft battery at Five Houses.

## 5.2 NMP results: Neolithic sites (4,000BC - 2,200BC)

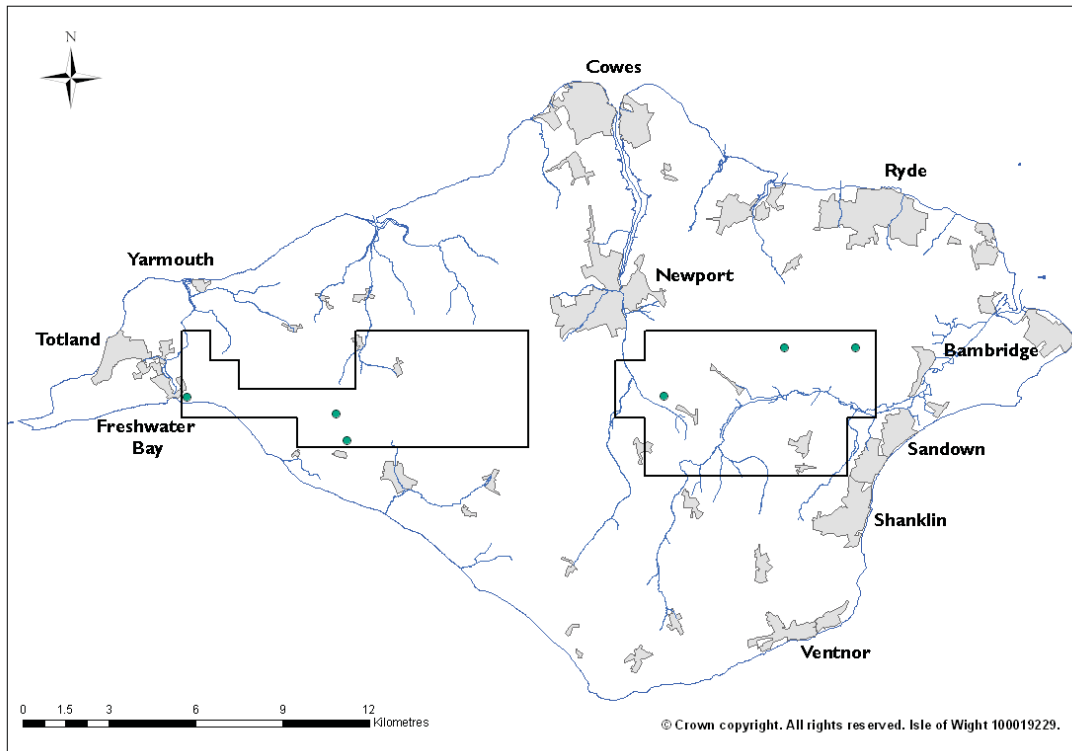


Figure 17: Distribution of Neolithic Sites.

Six sites of Neolithic or potentially Neolithic origin were identified during the mapping project, all of them barrows. Two monuments were completely new to the record and one re-interpreted as of potentially Neolithic rather than Bronze Age origin.

The first new site lies on the northern slope of Mersley Down and comprises a large plough-levelled mound, 125m long by 18m wide, flanked by a narrow ditch. This site has been tentatively interpreted as a Neolithic long barrow (Site ID 173799) due to its width and the presence of a surrounding ditch. The feature does however lie on the same alignment as an adjacent field system and may simply be a plough-levelled field lynchet associated with the prehistoric field system (MIW1043).

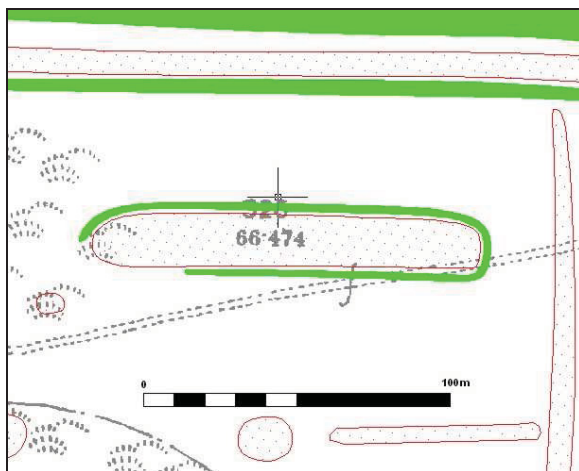
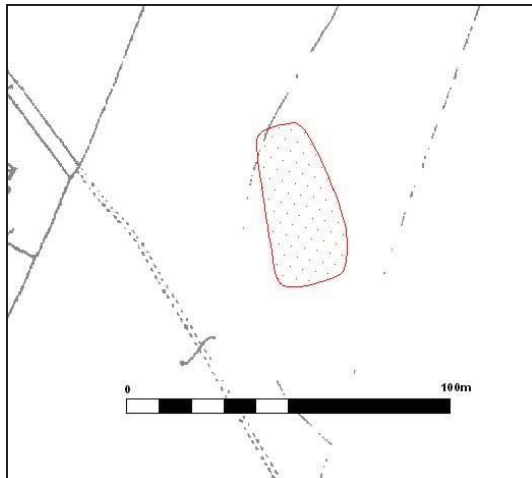


Figure 18. Potential Neolithic Long Barrow on Mersley Down. (Site ID 173799).

Map: © Crown Copyright and Landmark Information Group  
Licence no: 100019229.

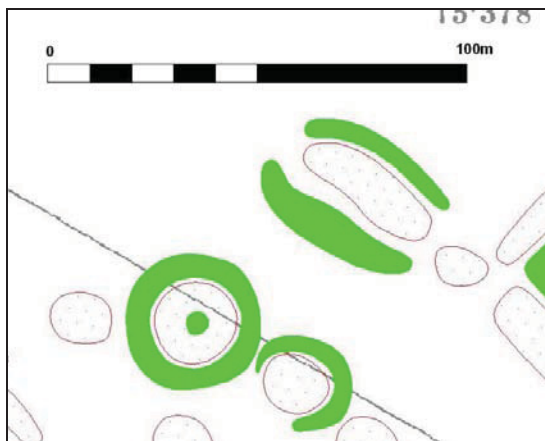
The site of a second plough-levelled mound, 52m by 25m, lies to the east of Longdown. On the basis of morphology the site has been flagged up as a potential Neolithic long barrow although a more recent origin for the cropmark is possible (Site ID 173853).



*Figure 19. Potential Neolithic Long Barrow at Longdown, (Site ID 173853).*

Map: © Crown Copyright and Landmark Information Group  
Licence no: 100019229.

A Bronze Age barrow cemetery was identified on Middle West Down by the Ordnance Survey (OS) Field Investigator in 1955. The oval nature of one of the barrows, (MIW1063), was noted during the mapping project. It may be the site of two contiguous barrows or the site of an oval barrow. Oval barrows are typically of later Neolithic date and may represent a transition between earlier long barrows and the true round barrows of the Bronze Age (e.g. Bradley 1992, Drewett 1975).



*Figure 20. Potential Neolithic Oval Barrow on Middle West Down, (MIW1063).*

Map: © Crown Copyright and Landmark Information Group  
Licence no: 100019229.

On the basis of aerial photographic evidence alone, the interpretations of these three sites are best regarded as tentative. There are only three previously known Neolithic communal burial sites on the island – the mortuary enclosure on Tennyson Down and long barrows on Afton Down and at Mottistone (Waller 2006b). Confirmation of these features as Neolithic monuments would obviously be an important finding and all three sites warrant further investigation.

### 5.3 NMP results: Bronze Age sites (2,200BC - 800BC)

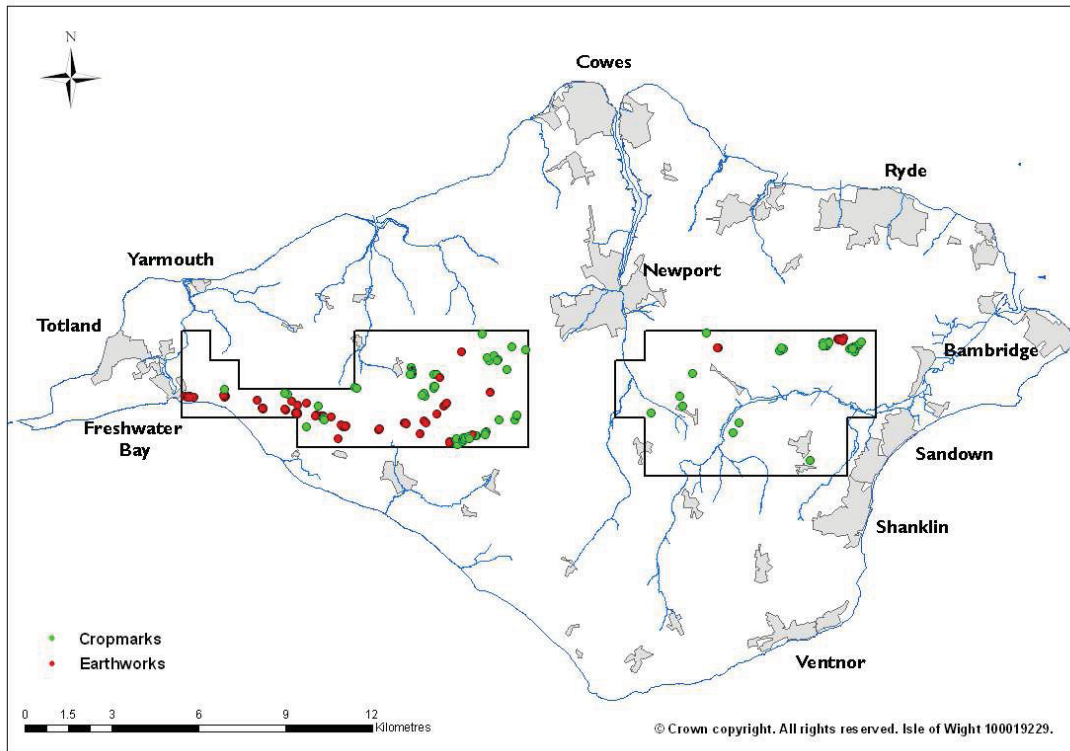


Figure 21. Distribution of Bronze Age Sites.

Bronze Age barrows were by far the most common type of prehistoric monument recorded during the project. In all 181 barrows were recorded, many grouped together within barrow cemeteries and most situated on the upper chalk ridges. Fifty-seven percent of these important ceremonial monuments survive as extant earthwork mounds and 90 are protected by scheduling.

Fifty-nine new barrow sites were identified during the mapping, of which 95% were visible as plough-levelled sites visible as cropmarks and soilmarks.

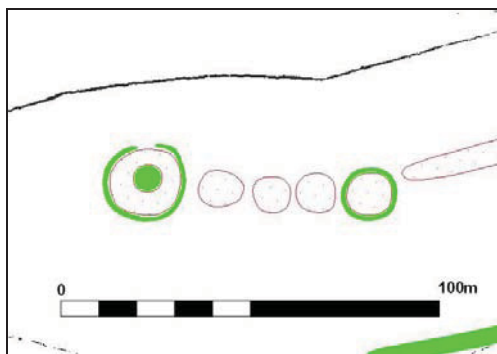


Figure 22. A Bronze Age barrow cemetery comprising five near contiguous barrows to the east of Cheverton Down. Only the western barrow with the central robber pit was recorded in the HER prior to the mapping project, (MIW6440). Photograph: OS/69084 Frame 141 8 April 1969 © Crown Copyright. Ordnance Survey. Map: © Crown Copyright and Landmark Information Group Licence no: 100019229.

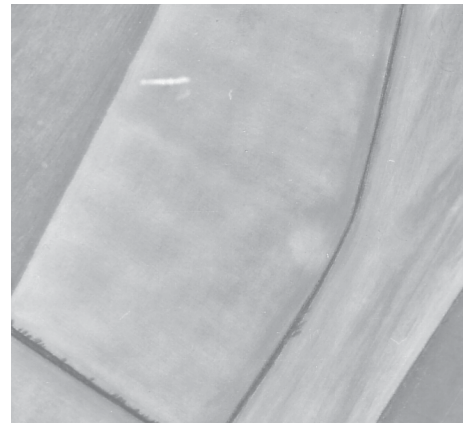
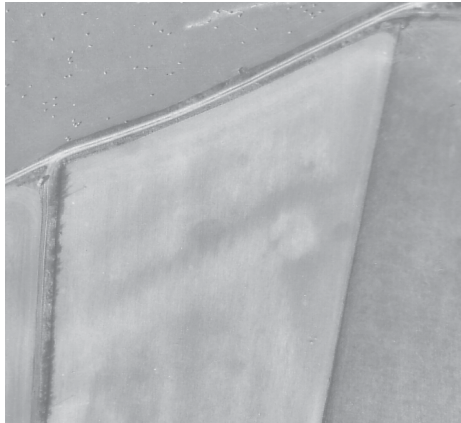


Figure 23. Two plough-levelled Bronze Age barrows lying 500m apart at Rowborough. Both sites are new to the mapping and are visible on the same Ordnance Survey photograph taken in 1969, (Site IDs 174306 and 174309). Photograph: OS/69084 Frame 139 8 April 1969 © Crown Copyright. Ordnance Survey

One site at Merston Farm comprises two conjoined circular ditched enclosures. It has been recorded in the project database as a later prehistoric settlement enclosure however it's near perfect circular ditches may be indicative of a ceremonial function. The site must therefore also be highlighted as potentially that of a conjoined Bronze Age barrow (Figure 24).



Figure 24. Potential site of a conjoined Bronze Age barrow at Merstone Farm, (MIW1879 and MIW961). Photograph: IOW 3920/04 © Isle of Wight Council.

Despite large numbers of barrows being previously recorded in the HER, the mapping has resulted in significant numbers of new sites being identified. Whilst the most recent assessment of the locations of these Bronze Age burial sites indicated that they were almost entirely confined to the higher downlands (Basford 1980), several of these new sites lie on lower arable land, off the chalk downlands. In this way the known distribution of this monument type has been significantly enhanced as a result of the project.

No Bronze Age settlement sites were previously recorded in the HER and none positively identified during the project. However, a number of cropmark enclosures and round houses were mapped during the project which might be evidence of Bronze Age settlement or, at least, have Bronze Age antecedents (see Section 5.4.3).

There is also evidence for large scale woodland clearance on the chalk downs during the Bronze Age (Waller 2006a) and it is likely that some of the field systems mapped in this area (Section 5.4.1) were first laid out in the middle or later Bronze Age.

#### 5.4 NMP results: Prehistoric sites (2,200BC –AD42)

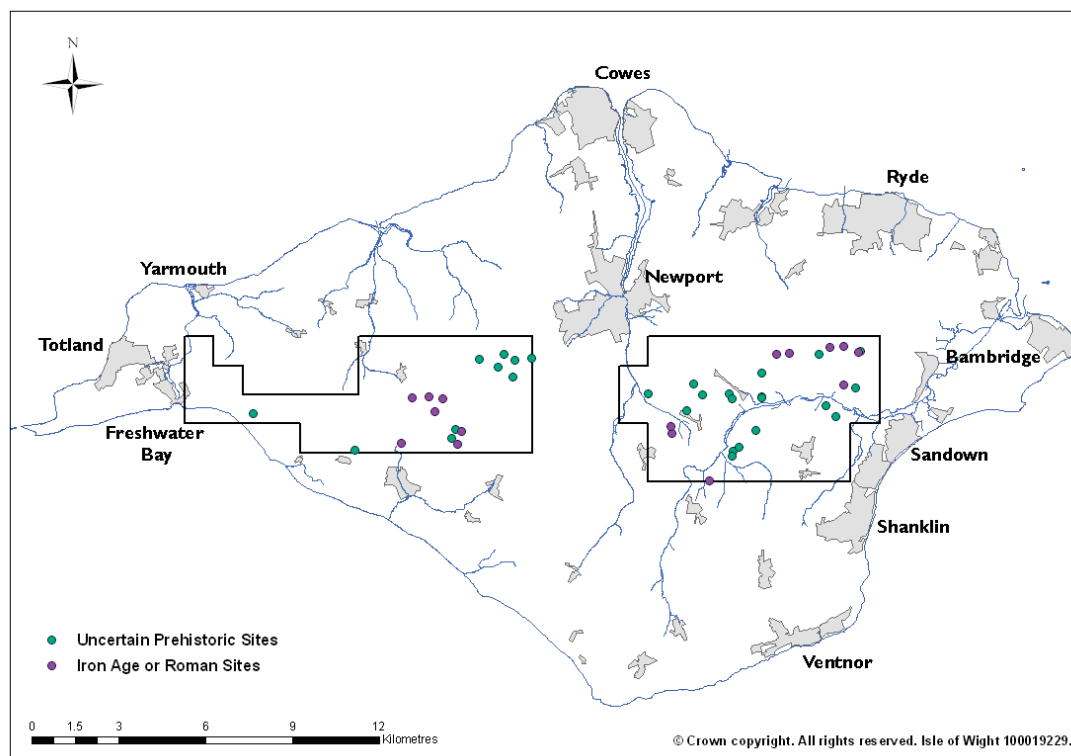


Figure 25. Distribution of Prehistoric sites.

Aside from the Neolithic and Bronze Age barrows described above, forty four sites were plotted during the mapping project and ascribed a generic prehistoric date in the accompanying project database. Of these, sixteen were more specifically dated to the Iron Age/Romano British period.

##### 5.4.1 Prehistoric Celtic field systems

Extensive areas of Celtic field system were plotted during the mapping project, particularly on the chalk ridges. These comprise a regular system of relatively small rectangular fields formed by wide lynchets. Many are primarily visible as cropmarks but in places they are still preserved as earthworks.

In all, 22 fragments of prehistoric field system were plotted, of which 68% were only visible as cropmarks. Most of those which did survive as earthworks were allocated a more specific Iron Age/RB date.

It is difficult from aerial photographic evidence alone to assign a specific date to, for instance, discrete enclosures, groups of pits or fragments of field system. Whilst many enclosures might be assumed to be Iron Age in date, some may represent continuity from the late Bronze Age and others may have continued in use into the Roman period.

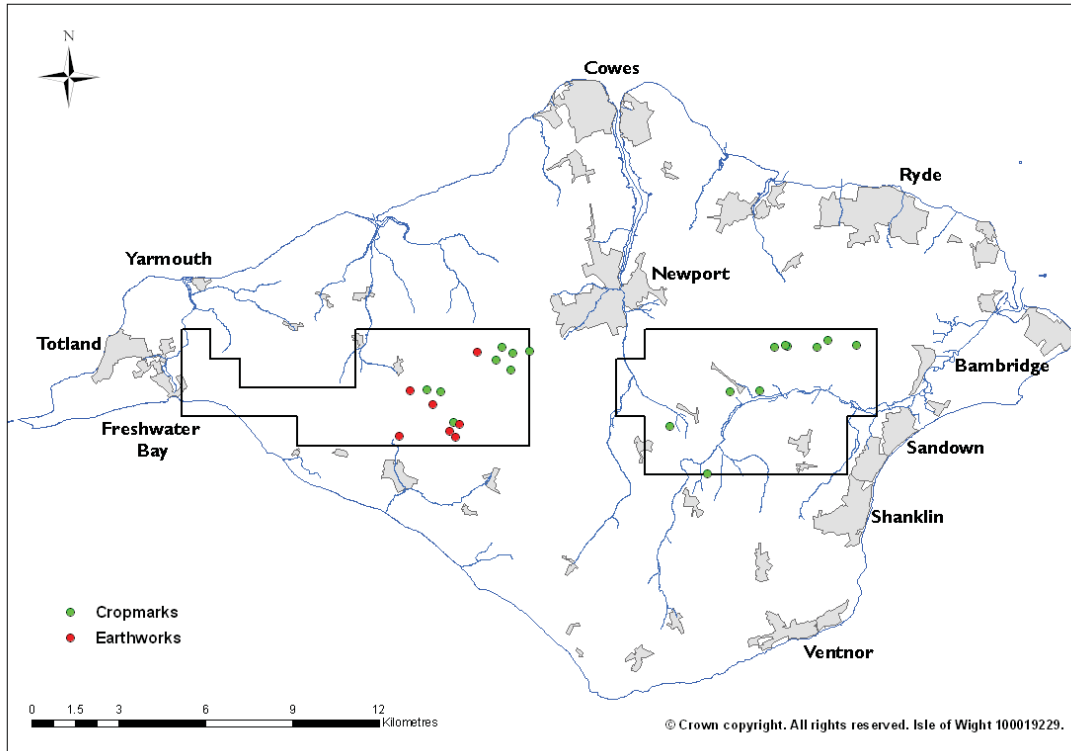


Figure 26. Distribution of Prehistoric field systems.

The field system at Newbarn Down (Figure 27) forms part of a more extensive enclosed landscape which includes field systems on Rowborough Down (MIW6583) and Cheverton Down (MIW290) to the south-east. These two systems have been recorded as uncertain in origin as they may be medieval in date although a prehistoric origin seems likely.

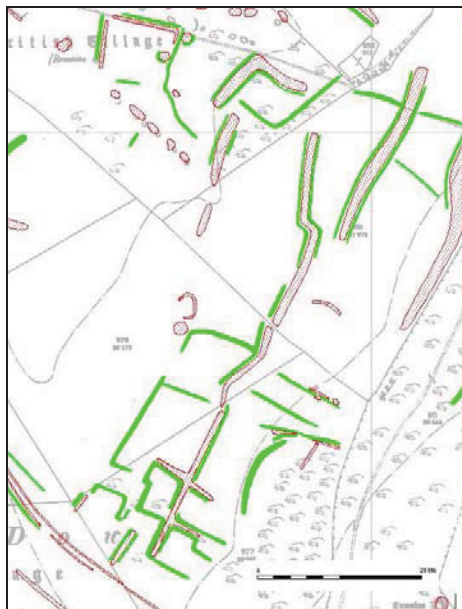


Figure 27. Celtic field system at Newbarn Down. To the west of the plough-levelled lynchets, several still survive as extant earthwork features, (MIW411). Photograph: OS/69082 Frame 218 7 April 1969 © Crown Copyright. Ordnance Survey Map: © Crown Copyright and Landmark Information Group Licence no: 100019229.

Whilst all three systems had previously been recorded in the HER, significant additional information concerning the nature and extent of the fields has been added as a result of the mapping project (Figure 28). This is especially true of the system on Rowborough Down.

The surviving field systems in this area are likely to be far more extensive than those actually plotted from the aerial photographs but much of the area to the west is now under Brighstone Forest and there aerial photography has its limitations.

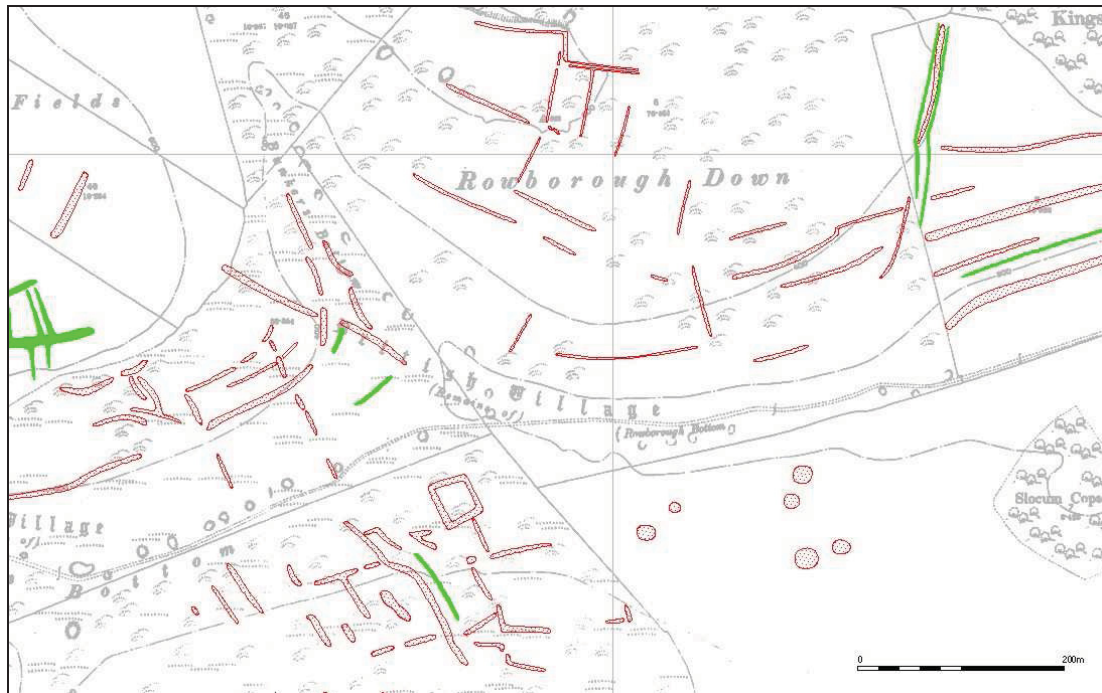


Figure 28. Celtic field systems at Rowborough and Cheverton Downs, (MIW290, MIW6583 and Site ID 174173). Map: © Crown Copyright and Landmark Information Group Licence no: 100019229.

There appears to be a relationship between the distribution of these Celtic fields and the extent of the underlying chalk, this being particularly noticeable to the north where the limit of the field systems coincides almost precisely with the edge of the chalk. In the Arreton Valley mapping area, this band of chalk is only 500m across on the ground but fragments of Celtic-type field systems are still present, for example on Ashey Down (Figure 29) and on Middle West Down overlying the earlier barrow cemetery (Figure 30).



Figure 29. Fragments of a Celtic-type field system on Ashey Down, (Site ID 173809)

Map: © Crown Copyright and Landmark Information Group Licence no: 100019229.





Figure 30. Prehistoric Celtic Field System on Middle West Down, (Site ID 173620). Photograph: IOW 19309/04 © Isle of Wight Council.

#### 5.4.2 Other field systems

To the south of the chalk in the Arreton Valley mapping area, the Celtic fields seem to give way to a different type of field system. These are defined by narrow ditches rather than the wide lynchetts of the Celtic fields and the most extensive example lies at Hale which is clearly a multi-phased system of some complexity, (Figure 31). It is uncertain whether the apparent lack of lynchetts is due to a different original construction or the destruction of the lynchetts by more extensive ploughing since medieval times.

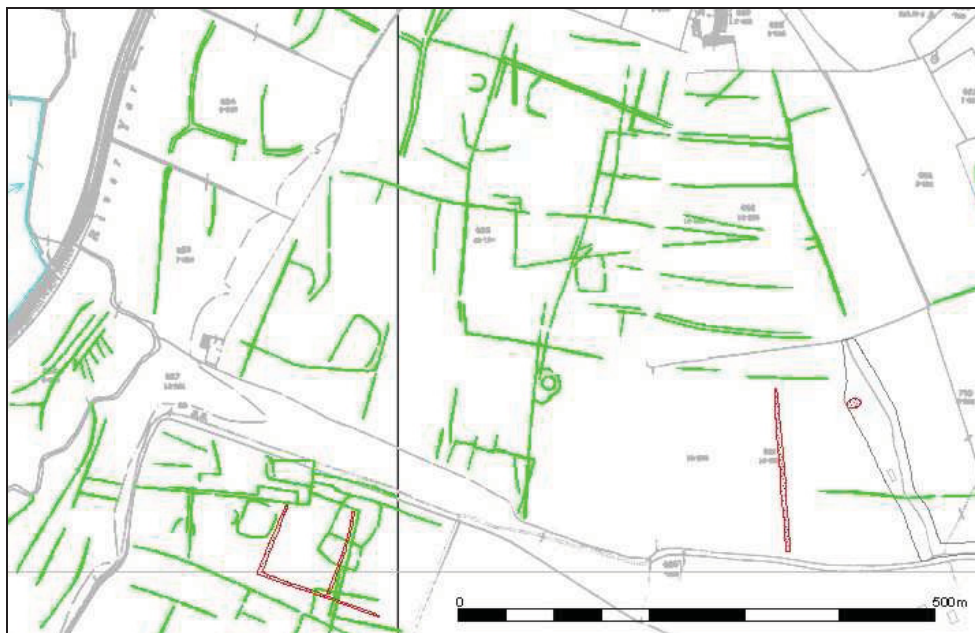


Figure 31. Multi-phased Field System at Hale, (MIW1900, Site IDs 173577-8 and 173672). Map: © Crown Copyright and Landmark Information Group Licence no: 100019229.

Contrasting with the Celtic systems on the chalk, these ditched field systems are typically associated with prehistoric settlement enclosures (see section 5.4.3 below) and whilst many of the ditched field systems have been allocated an uncertain date within the project database (since a medieval or post medieval origin is possible), where the systems are associated with evidence of prehistoric settlement, a prehistoric origin seems likely.

### 5.4.3 Prehistoric settlements and enclosures

Twenty two prehistoric settlement related features were identified including hut circles, ring ditches, rectilinear enclosures and pits. All were plough-levelled sites visible only as cropmarks and probably represent the locations of later prehistoric farmsteads.

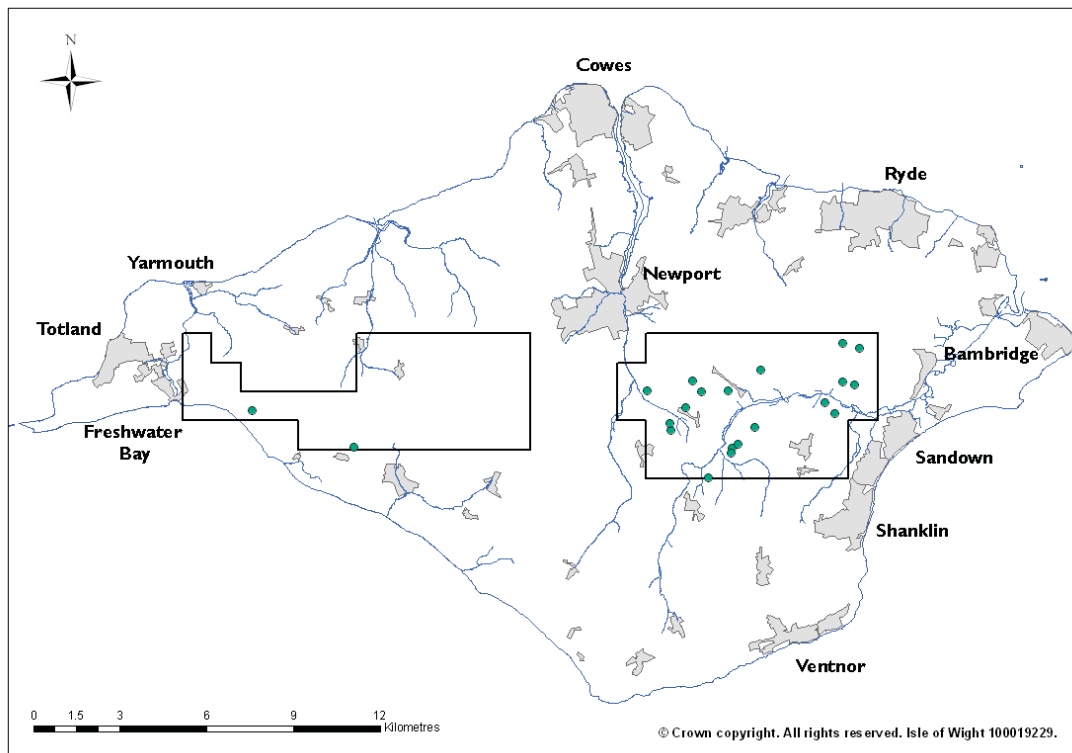


Figure 32. Distribution of Prehistoric settlements and enclosures.

**Hut circles and round houses.** The sites of several later prehistoric (Bronze Age or Iron Age) round-house settlements were plotted. One example lies within the field system described in section 5.4.2 above at Hale and appears to be an enclosed farmstead comprising a curvilinear ditched enclosure, 35m across with a north-east facing lightly in-turned entrance (Figure 33). The probable site of a round house, 14m across, is clearly visible within the enclosure which appears to abut one of the field boundaries of the Hale field system.

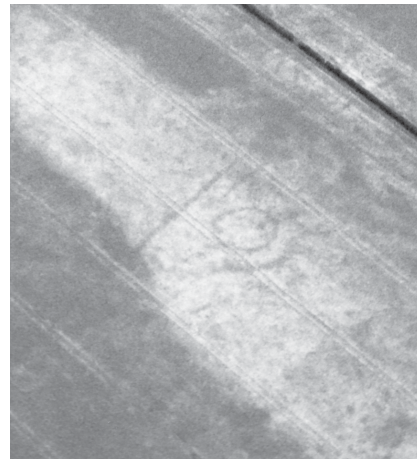
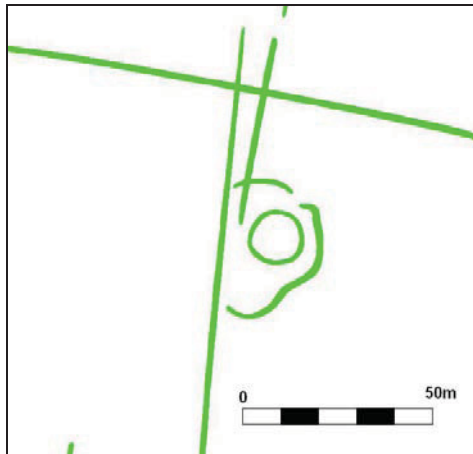


Figure 33. Later prehistoric enclosed round-house settlement, Hale, (MIW1912). Photograph: IOW 16987/08 ©Isle of Wight Council. Map: © Crown Copyright and Landmark Information Group Licence no: 100019229.

A second site lies at Merston Farm where two conjoined enclosures lie on a small island of gravel above a tributary stream of the River Medina. The larger of the two enclosures is 29m across and its close association with a number of pit-features perhaps indicates settlement-related activity although a ceremonial function cannot be ruled out (see also section 5.3 and Figure 24). To the east lies a second oval ditched enclosure which is also considered likely to be the site of a prehistoric enclosed settlement (Figure 34).

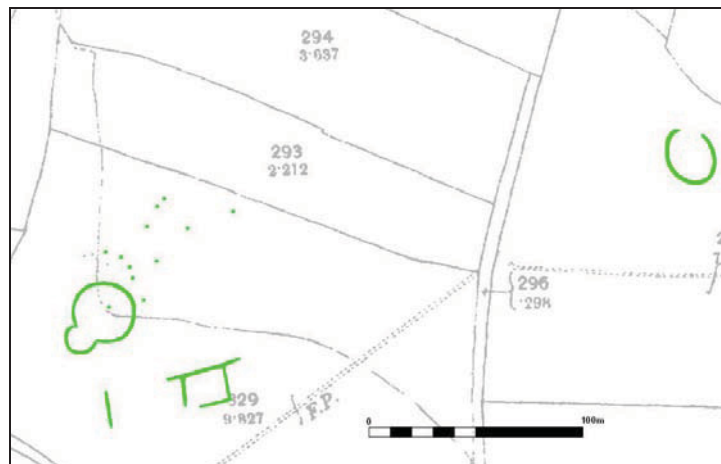


Figure 34. Two later prehistoric settlement enclosures at Merstone Farm, (MIW1879 and MIW961) Map: © Crown Copyright and Landmark Information Group Licence no: 100019229.

**Rectilinear settlement enclosures.** Several of the settlement enclosures are of more rectilinear than curvilinear form, indicating a probable late Iron Age or Roman origin. The site at Stone (Figure 35) is a large five-sided polygonal enclosure, almost 100m in its maximum dimension. Of most interest is a entrance midway along its western side which appears to have a complicated system of ditches perhaps forming a defensive outwork. There are hints of internal subdivisions within the main enclosure as well as fragments of a potentially contemporary field system.

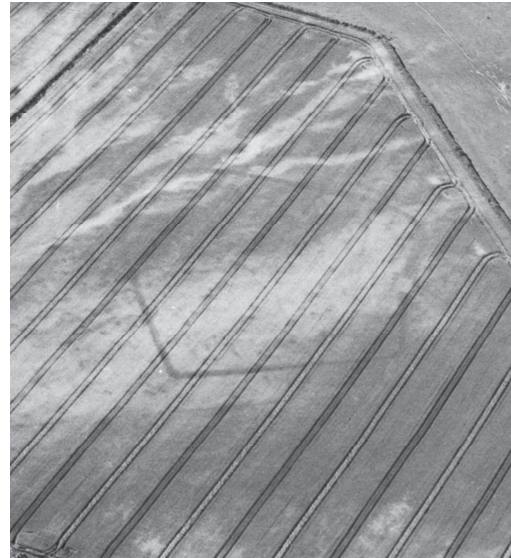
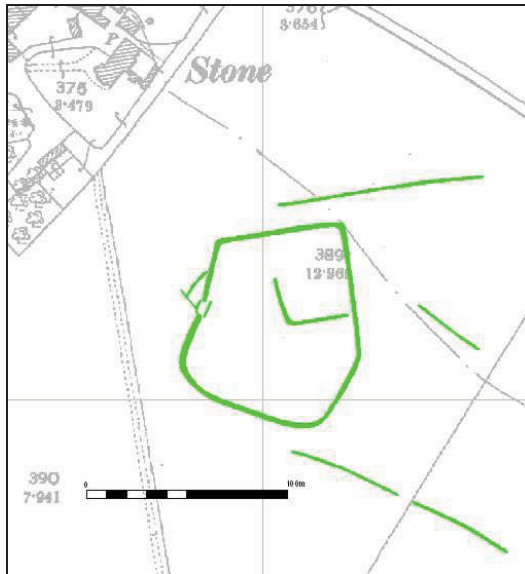


Figure 35. Later prehistoric settlement enclosure at Stone, (MIW946). Photograph: IOW 3918/23 © Isle of Wight Council. Map: © Crown Copyright and Landmark Information Group Licence no: 100019229.

In addition to single isolated enclosures, a small number of farmsteads comprising a group of enclosures have been identified during the mapping. It is uncertain whether these represent single phase settlements or multiple phases of enclosure indicating a degree of continuity of use of the site. On the southern England mainland complexes of small rectilinear enclosures similar to these are generally recognised as dating to the late Iron Age and Romano-British periods (eg Palmer 1984, 129).

Two examples lie within the vicinity of the modern village of Arreton and are shown in Figure 36 and 37 below. As with the previous site at Stone, the first (MIW1877) is set within a presumably contemporary ditched field system.

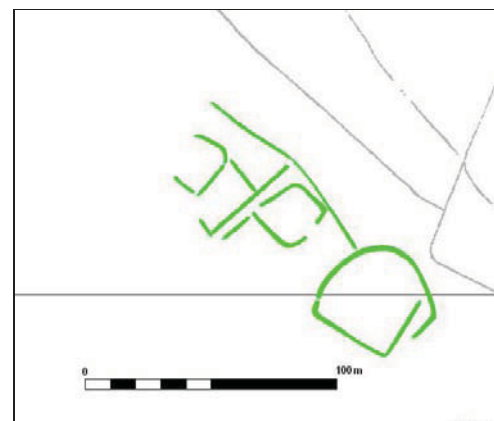


Figure 36. Later prehistoric settlement enclosures at Arreton, (MIW1877).

Map: © Crown Copyright and Landmark Information Group Licence no: 100019229.

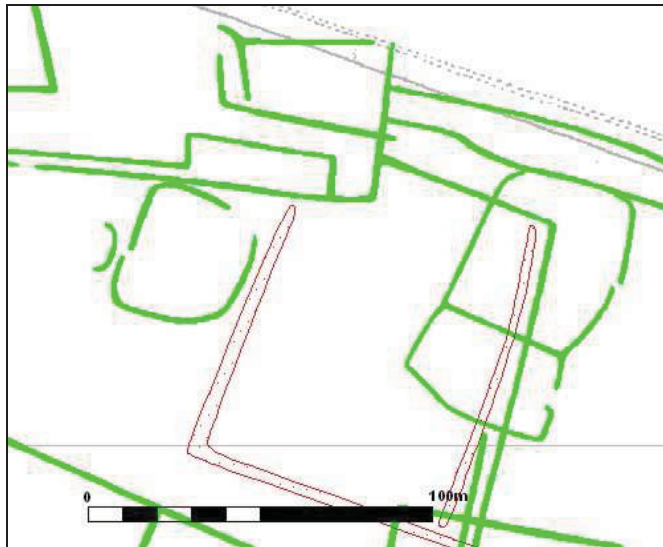
Figure 37. Later prehistoric settlement enclosures at Arreton, (MIW2093).

Map: © Crown Copyright and Landmark Information Group Licence no: 100019229.



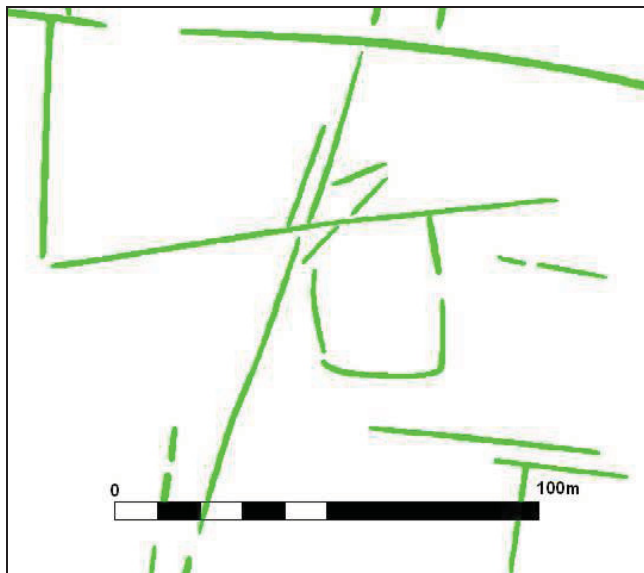
As previously mentioned (Section 5.4.2, Fig 31), a number of settlement enclosures lie within the extensive field systems at Hale. Many are rectilinear in form and are interpreted as late Iron Age or Romano-British in date, see Figures 38 and 39 below.

With regard to the location of these settlement enclosures in relation to the topography, initial investigations seem to show a patterning with a tendency for them to be located within 300m of a water source and 5-10m above the valley bottom. This is perhaps something to be investigated further once all of the data from the wider ALSF project has been collated.



*Figure 38. Later prehistoric settlement enclosures at Hale, (MIW1859).*

Map: © Crown Copyright and Landmark Information Group Licence no: 100019229.



*Figure 39. Later prehistoric settlement enclosures at Hale, (Site ID 173699).*

Map: © Crown Copyright and Landmark Information Group Licence no: 100019229.

## 5.5 NMP results: Roman sites (AD43 – AD409)

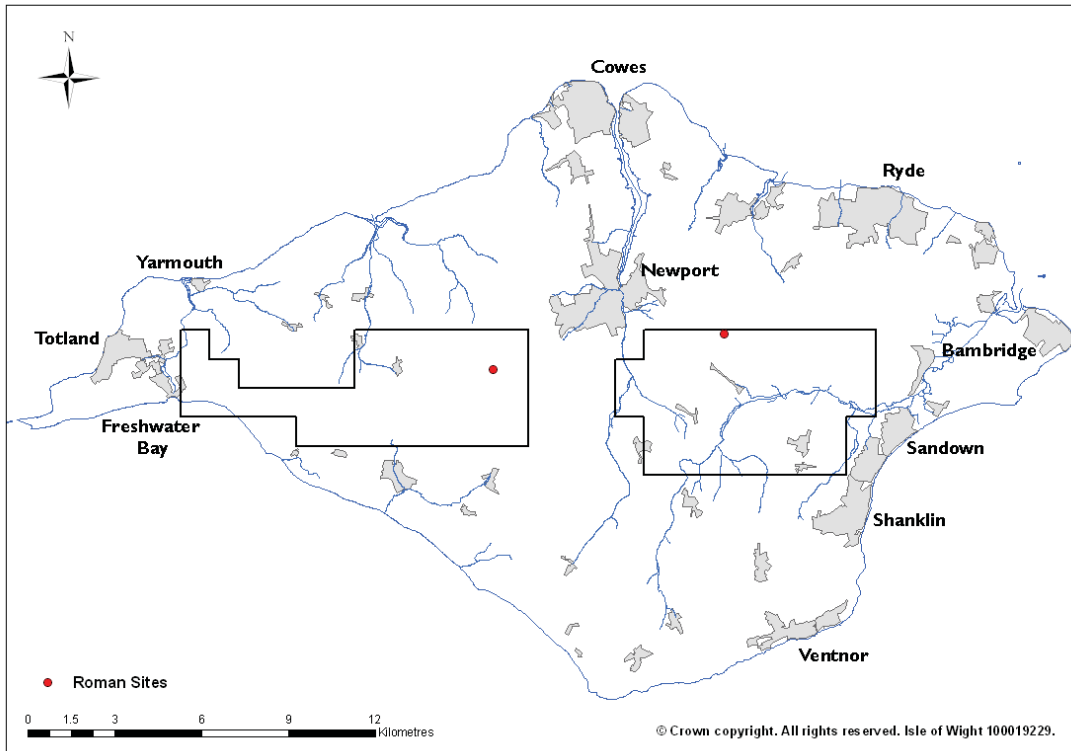


Figure 40. Distribution of Roman Sites.

Only two sites of Roman date were plotted during the mapping project, both of which had been recorded prior to the mapping.

The first is the site of Combley Roman Villa (Figure 41) where aerial photographs taken in 1977 show the ruined walls of the bath house and aisled building, exposed during the excavations carried out by L.R. Fennelly between 1968-1975 (Fennelly 1969).



Figure 41. Site of Combley Roman Villa, (MIW935). Photograph: NMR 1128/78-80 SZ 5387/3 27 April 1977 © Crown copyright. NMR

The second site is the line of the Roman road crossing Bowcombe Down which is marked on the both OS First and Second Edition maps. The line of the road was faintly visible as cropmarks on aerial photographs taken in the 1920s or 30s (Figure 42). In addition to the Roman Road, the line of a possibly earlier trackway is also visible; according to the National Monuments Record it is potentially Bronze Age in origin (AIME No: 1038517).

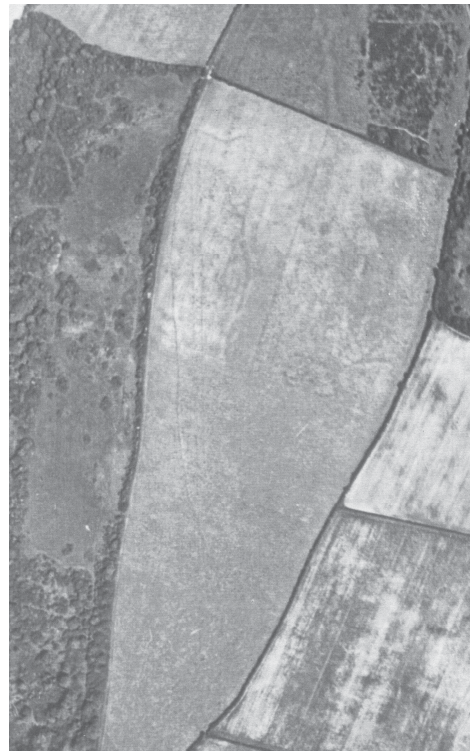
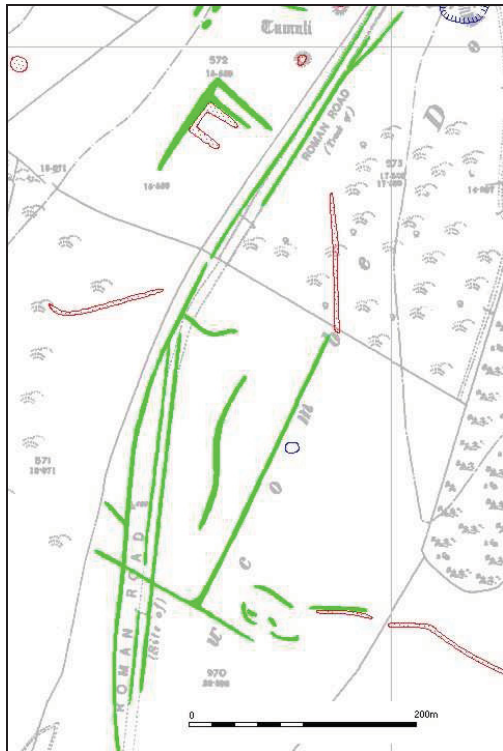


Figure 42. Site of a Roman Road on Bowcombe Down, (Site ID 174385). Photograph: CCC 8521/3577 SZ 4686/2 c.1930's English Heritage. NMR (Crawford Collection) Map: © Crown Copyright and Landmark Information Group Licence no: 100019229.

## 5.6 NMP results: Medieval sites (AD410 – AD1539)

### 5.6.1 The medieval period

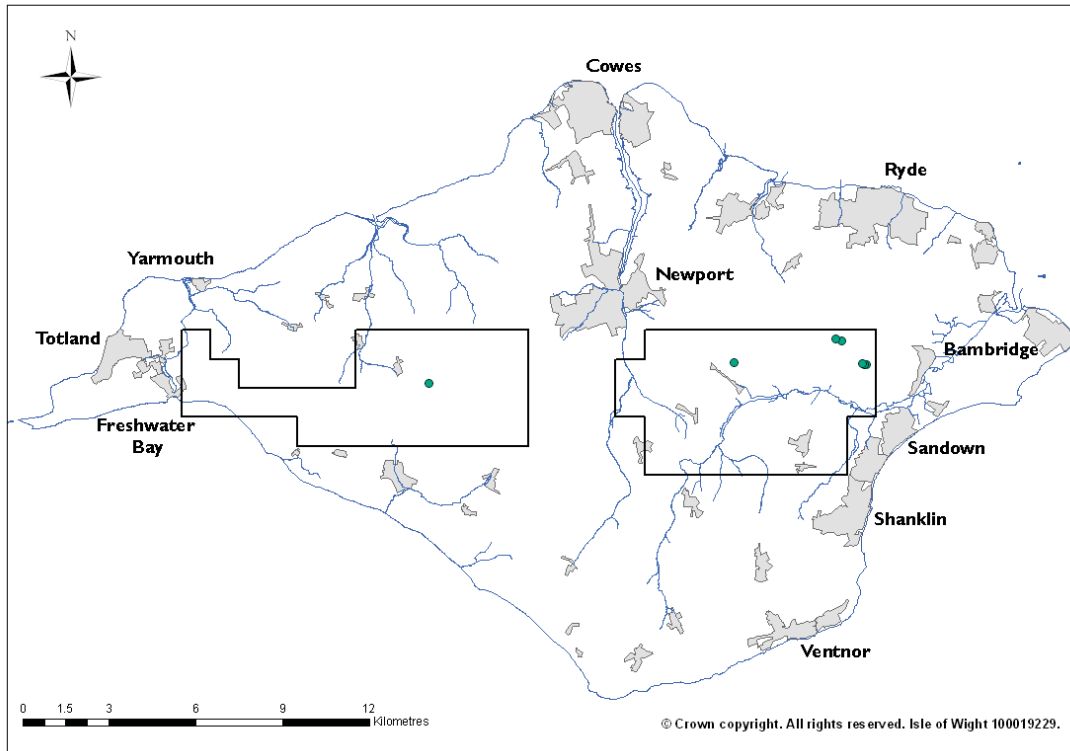


Figure 43. Distribution of medieval sites.

The medieval period is poorly represented in the HER and the mapping has not improved on this.

There were no features which could be positively identified as originating in the early medieval period (AD410-AD1065).

Only seven records were allocated a specifically later medieval date in the project database and of these six were already listed in the HER. Five of the seven sites were pillow mounds. All were located in the northern part of the Arreton Valley mapping block and were visible as extant earthworks on the aerial photographs.

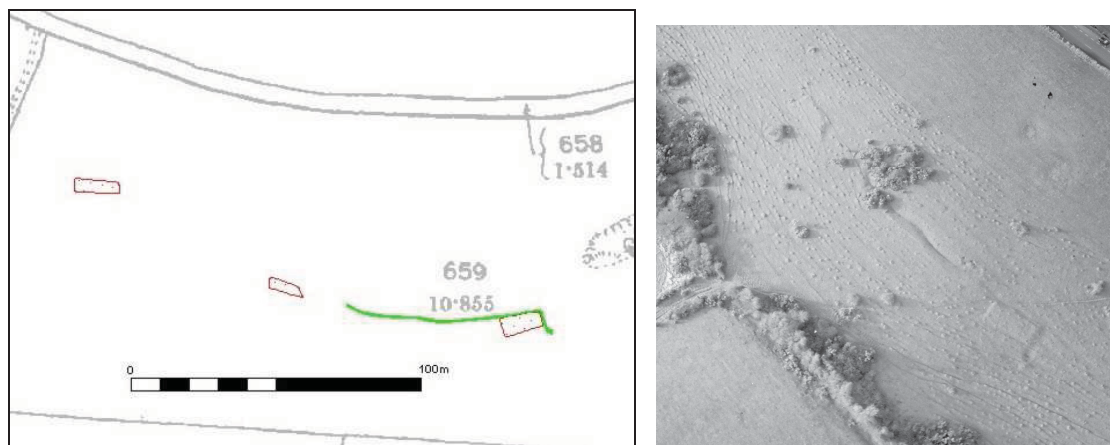


Figure 44. Three medieval pillow mounds to the south-west of Nunwell Down, (MIW 2098-2100). Photograph: IOW 6000/07 © Isle of Wight Council. Map: © Crown Copyright and Landmark Information Group Licence no: 100019229



Of the two remaining late medieval sites, one was a small area of ridge and furrow cultivation on Ashey Down (Site ID 173837) and the other rectilinear pastoral enclosure on Little Down (MIW412) (Figure 45). Excavations by P.G Stone in 1910 provided evidence for a medieval date for the enclosure and suggested that a barn had stood within the small inner earthwork enclosure in the 18th century (Stone 1912).

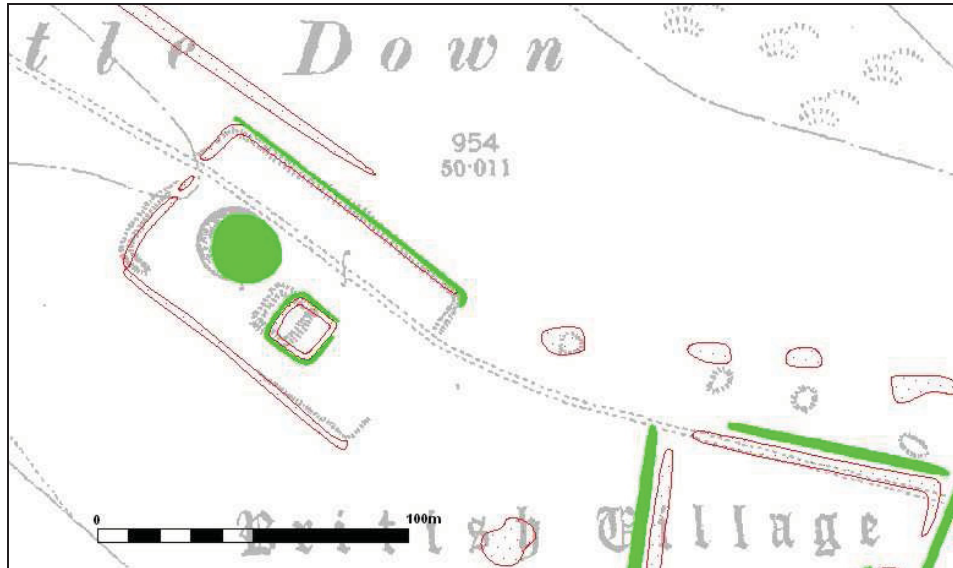


Figure 45. Late medieval pastoral enclosure at Little Down, (MIW 412). The internal square enclosure is the site of an eighteenth century barn and the circular feature the site of a post medieval pond, now concreted over. Map: © Crown Copyright and Landmark Information Group Licence no: 100019229

A number of other potentially late medieval sites were plotted, but as a post medieval date was also possible, they were recorded as 'historic' (AD410 - AD1900) within the project data-base. These sites are described in section 5.8 below.

## 5.7 NMP results: post medieval sites (AD1540 - AD1900)

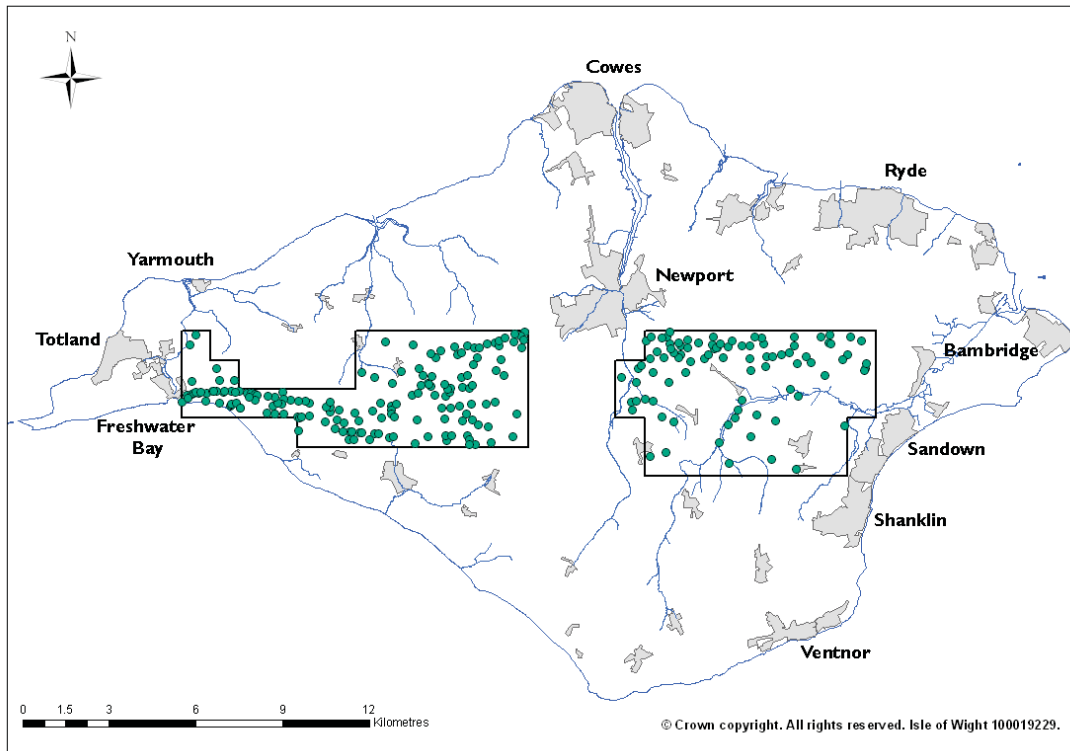


Figure 46. Distribution of post medieval sites.

During the project 253 post medieval sites were identified, amounting to almost a fifth of all site records in the project database. Of these, 83% were visible as earthworks and 81% were for new sites.

### 5.7.1 Extractive features

The majority (86%) of sites assigned a post medieval date are associated with mineral extraction. These include quarries, extractive pits including chalk, sand and gravel pits and spoil heaps. Many of these sites, particularly the larger pits and quarries are marked on the OS First and/or Second Edition maps. Numerous post medieval chalk pits lie along the chalk ridges, For example at Shalcombe Down where a large post medieval extractive pit cuts across earlier trackways and field boundaries below the barrow cemetery of Five Barrows.



Figure 47. Post medieval chalk pits on the lower slope of Shalcombe Down, (MIW11440 and MIW11471). Photograph: NMR 23003/09 SZ 3985/13 24 September 2003 © English Heritage NMR.

Map: © Crown Copyright and Landmark Information Group Licence no: 100019229

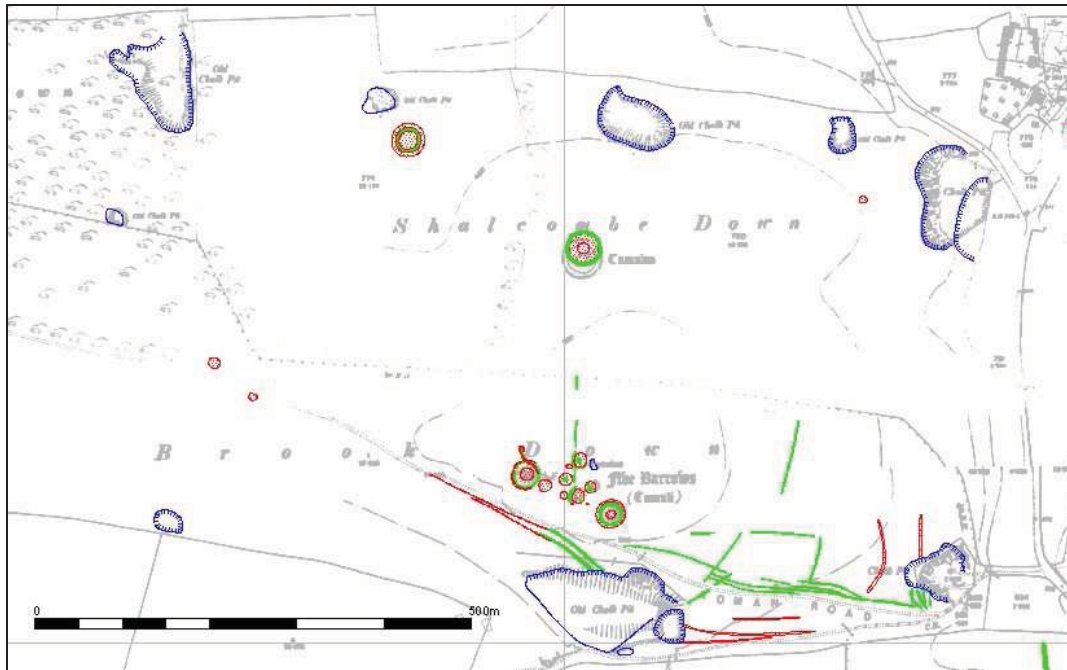


Figure 48. Post medieval chalk pits on Shalcombe Down. Map: © Crown Copyright and Landmark Information Group Licence no: 100019229

### 5.7.2 Agricultural features

Of the 253 post medieval sites recorded in the project database, a small number were associated with agricultural activity. These included parliamentary field boundaries which were distinguishable from medieval boundaries by their ruler-straightness, as well as drainage systems, dewponds and a sheep dip. Of the post medieval drainage ditches and drainage systems that were plotted, all bar one are located in the Arreton Valley mapping Block, to the west of Sandown along the River Yar and its tributaries. In many cases the main channels were already partially marked on the OS First or Second Edition maps although none had previously been recorded in the HER.

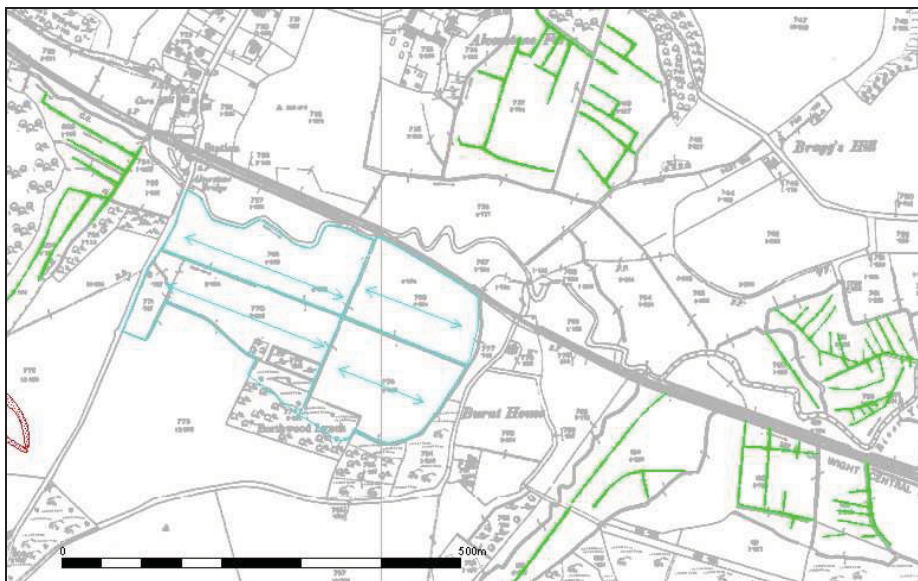


Figure 49. Post medieval drainage systems along the River Yar and its tributaries, (Site IDs 173776-80). Map: © Crown Copyright and Landmark Information Group Licence no: 100019229

## 5.8 NMP results: Historic (medieval or post medieval) sites (AD410 - AD1900)

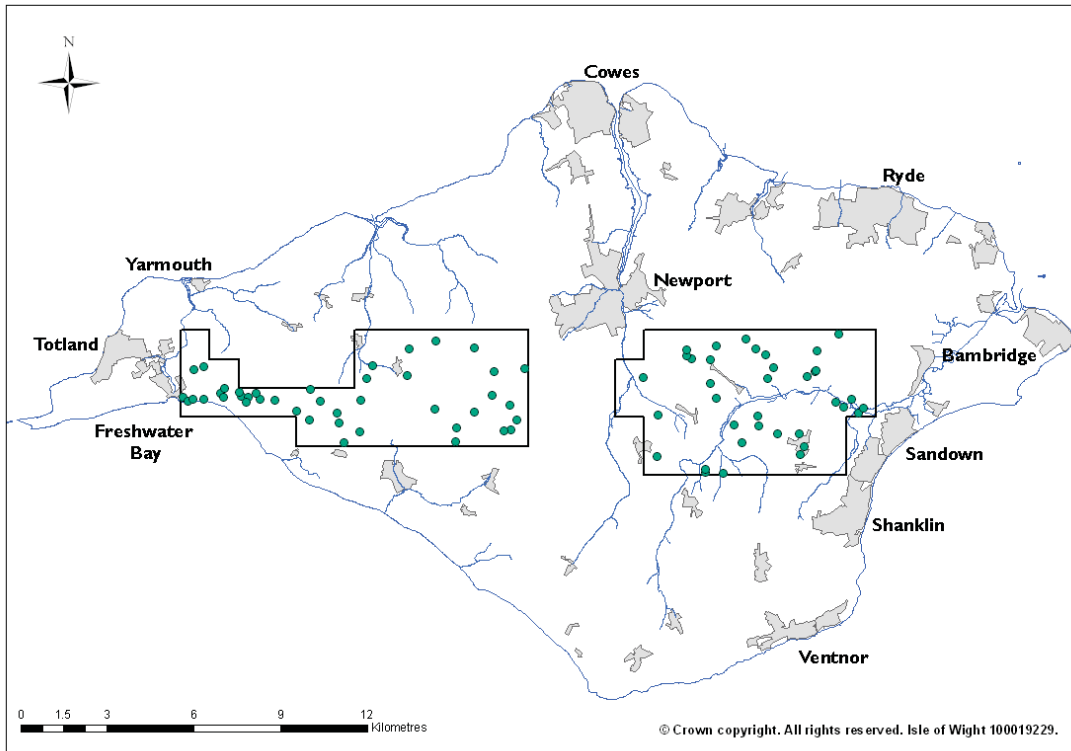


Figure 50. Distribution of Historic (medieval or post medieval) sites.

The nature of much of the evidence recorded during the project meant that for many sites it was difficult to ascribe a more precise date than medieval or later in origin. This was particularly true for agricultural features such as field boundaries, fragments of field systems, trackways and areas of parallel cultivation marks (ridge and furrow) which could have been medieval or post medieval in date. Other features such as extractive pits and drainage systems could be nineteenth (post medieval) or early twentieth century (modern) in origin. Where a more specific date could not be determined from the aerial photographic evidence, these sites were all recorded as historic in the project database.

Of the 76 records allocated an historic date, 52% were visible as plough-levelled cropmarks and the remaining 48% as upstanding earthworks. Fifteen sites had previously been recorded in the HER, the remaining 61 being new sites.

One site of note lies to the west of Rains Grove. Here a rectangular enclosure with possible fragments of two further enclosures are visible on aerial photographs and may be the site of an abandoned medieval or post medieval farmstead (Figure 51). The enclosures are set within fragments of a field system and to the south lie parallel cultivation marks, perhaps ridge and furrow. The site had previously been listed in the HER (MIW1813).



Figure 51. Site of a deserted farmstead of medieval or post medieval origin at Rains Grove, (MIW 1813). Photograph: IOW 6073/11-2 © Isle of Wight Council. Map: © Crown Copyright and Landmark Information Group Licence no: 100019229

## 5.9 NMP results: twentieth century sites

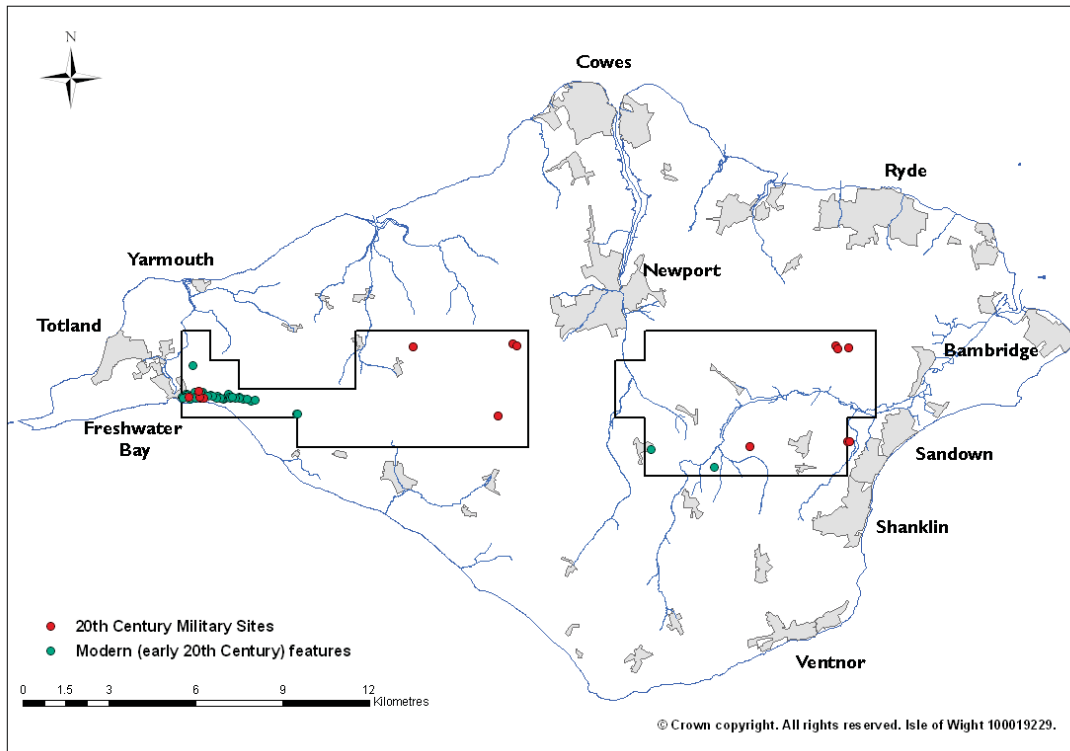


Figure 52. Distribution of twentieth century sites.

Sixty twentieth century sites were recorded during the course of the project. Of these, two thirds (41 sites) are new to the record. The majority survive as extant earthworks and only four are plough-levelled. Seventeen sites were interpreted as of military function (dating to the First or Second World War), and of the remainder, the majority (39) are golf course features.

### 5.9.1 Military Sites

#### 5.9.1.1 Slit Trenches

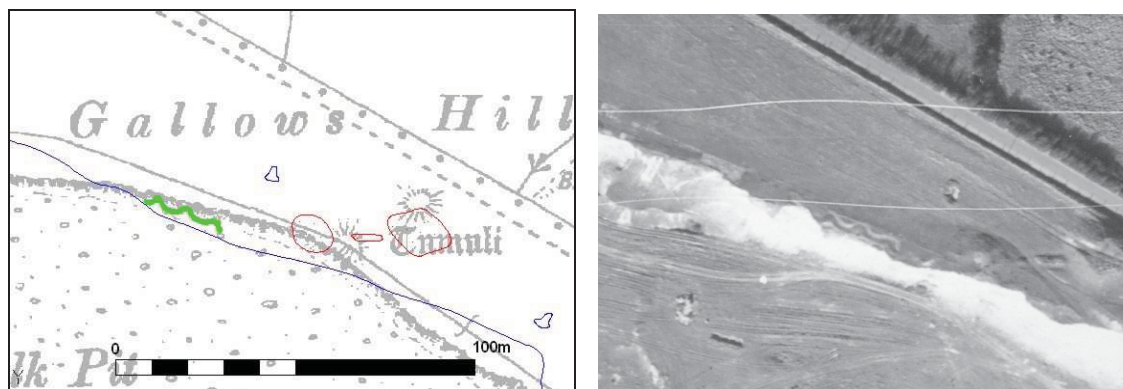
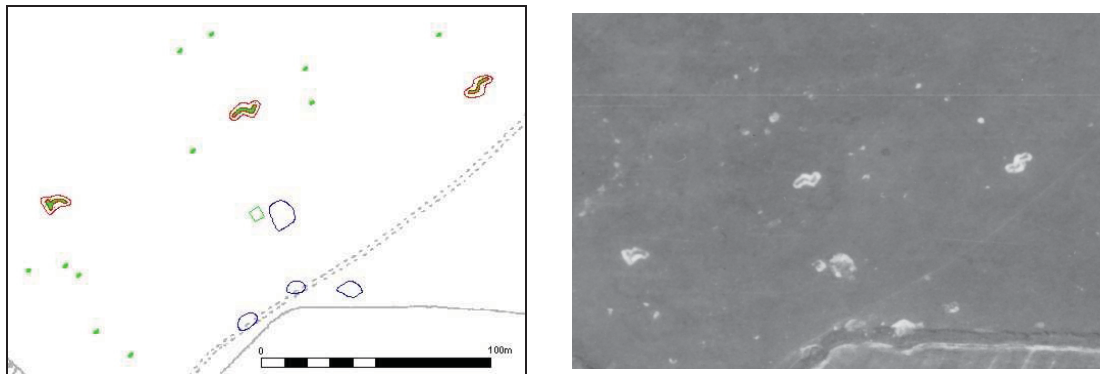


Figure 53. Possible site of nineteenth or early twentieth century military slit trenching at Gallows Hill, (Site ID 173738). Photograph: RAF 58/185 5119 17 February 1949 English Heritage (NMR) RAF Photography. Map: © Crown Copyright and Landmark Information Group Licence no: 100019229

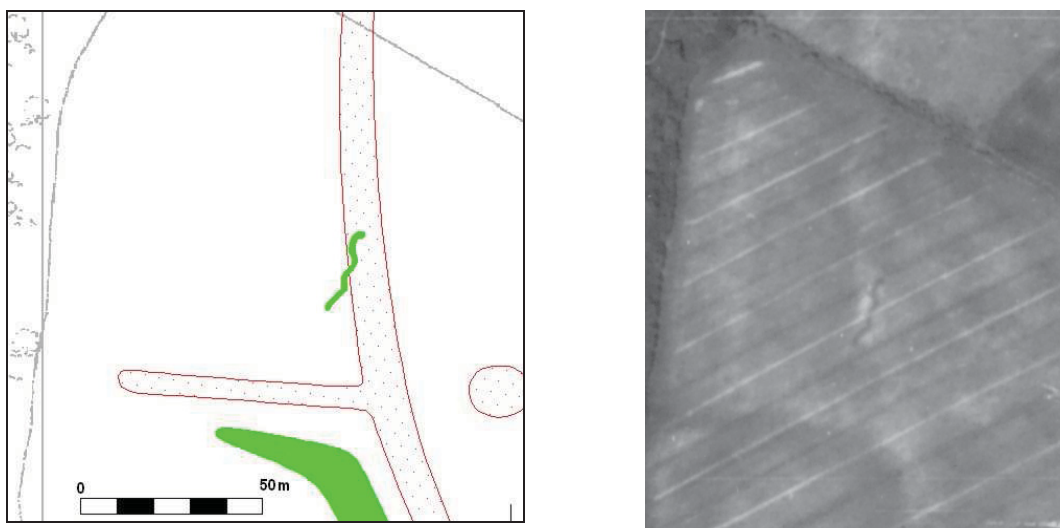
Four sites have been interpreted as early twentieth century practice trenching. These include a short single stretch of zigzag ditch on the very edge of the quarry at Gallows Hill, (Figure 53). This site is visible as earthworks on RAF photographs which were taken in 1949 and lies in the vicinity of a known road block built by the Highway Commission in 1815. It is possible therefore that the site is of earlier nineteenth century origin and may be a defensive position relating to the road block.

Two other sites of military training activity lie at the far north-east end of the Arreton Valley mapping area on Asheys and Middle West Down. The first at Asheys Down, where three short 's' shaped ditches with outer banks are visible as low earthworks on 1946 RAF aerial photographs (Figure 54). They are probably military slit trenches associated with the adjacent searchlight battery. The scatter of small pits in the vicinity may also be of military origin, possibly 'fox-holes'.



*Figure 54. Twentieth century military slit trenching and fox-holes on Asheys Down, (Site ID 173838). Photograph RAF 106G/UK1665 Frame 4068 12 July 1946 English Heritage (NMR) RAF Photography. Map: © Crown Copyright and Landmark Information Group Licence no: 100019229*

Just over 300m to the east of the Asheys Down site, a single stretch of zigzag trenching is visible as cropmarks on the same 1946 RAF photograph. It overlies the Celtic field system described in Section 5.4.1 (Figure 30) and is presumably also of twentieth century military origin.



*Figure 55. Twentieth century military slit trenching on Middle West Down, (Site ID 173784). Photograph RAF 106G/UK1665 Frame 4069 12 July 1946 English Heritage (NMR) RAF Photography. Map: © Crown Copyright and Landmark Information Group Licence no: 100019229*

Each of the preceding sites lie within the Arreton Valley area; however the final example lies in the north-east corner of Thorley Wellow Plain. It had been previously listed in the HER (MIW1796) as an enclosure of uncertain date in the basis of photographs taken in 1989 (Figure 56). However, RAF photographs taken in 1946 clearly indicate an early twentieth century military origin; the site presumably dates to the First World War as the features, possibly a practice command post, are visible on aerial photographs taken by OGS Crawford in the 1920s or 30s, (Figure 57).



Figure 56. *Park Place, enclosure, (MIW1796)*. Photograph IOW 6068/13 © Isle of Wight Council.



Figure 57. *Park Place, military slit trenching dating to the First World War, (MIW1796)*. Photographs: RAF 106G/UK1665 Frame 4083 12 July 1946 English Heritage (NMR) RAF Photography, (left) and CCC 11753/9330 SZ 4687/1 c.1930's English Heritage. NMR (Crawford Collection). (right).



### 5.9.1.2 Searchlight batteries

The sites of two searchlight batteries were recorded in the HER on Ashey Down and on Afton Down golf course. Features associated with these sites were identified during the project. On Afton Down, the site of the searchlight is clearly visible on aerial photographs (the near circular feature to the top left of the photo) (Figure 58 and 59), as is the site of an associated gun emplacement (the smaller circular earthwork to the right). The four rectangular features in the right of the photograph are of uncertain twentieth century function and may be bunkers associated with the search light battery or relate to the early twentieth century golf course located on the Down.

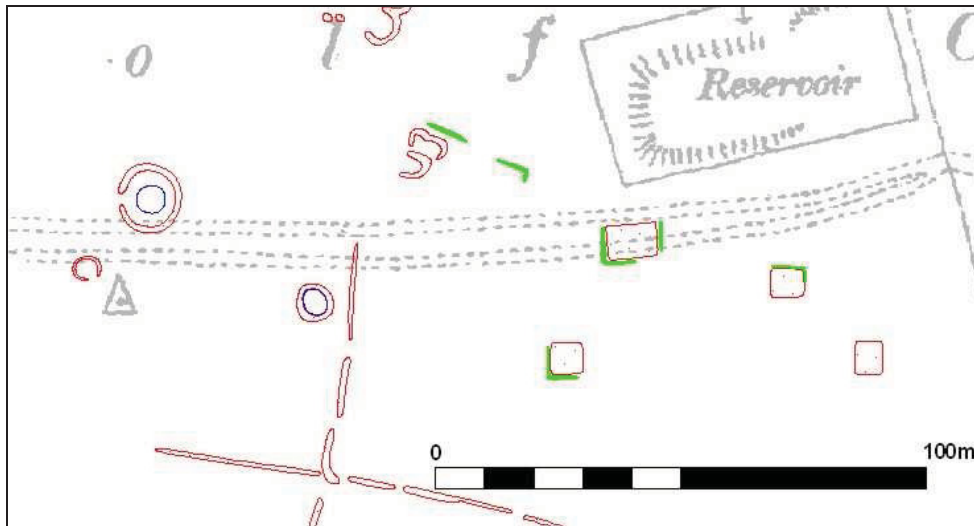


Figure 58. Site of a World War II searchlight battery (MIW1796) and associated features on Afton Down. Map: © Crown Copyright and Landmark Information Group Licence no: 100019229



Figure 59. Site of a World War II searchlight battery (MIW1796) and associated features on Aston Down. Photograph: NMR 1128/156-159 SZ3585/3 27 April 1977 © Crown Copyright. NMR

### 5.9.1.3 Anti-aircraft batteries and gun emplacements

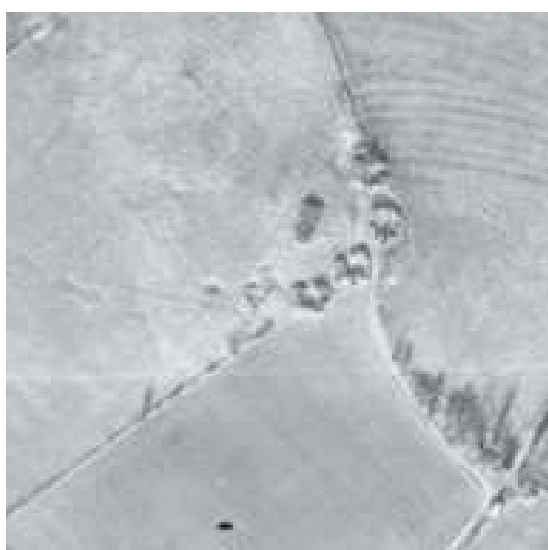
The site of a gun emplacement associated with the searchlight battery on Afton Down was already in the HER (MIW 11482) and was identified on the aerial photographs. The sites of two other potential gun emplacements had also been previously identified on Brook Down, dug into the hill slope in the vicinity of Five Barrows barrow cemetery (MIW 11481 and MIW11492).

In addition, the potential site of a heavy anti-aircraft battery was identified from the RAF 1946 photographs at Five Houses (Figure 60). The site consists of a group of four shallow earthworks regularly spaced on the west and south sides of a fifth earthwork. The site has been identified as the site of an anti-aircraft battery on the basis of site morphology; heavy anti-aircraft batteries generally comprise four gun emplacements surrounding a central command post. (See the similarity of the Five Houses site to the heavy anti-aircraft battery at Birdlip, Wiltshire, Figure 61).



*Figure 60. Five Houses, possible site of a heavy anti-aircraft battery, (Site ID 174280). Photograph: RAF 106G/UK1665 Frame 4089 12 July 1946 English Heritage (NMR) RAF Photography.*

Map: © Crown Copyright and Landmark Information Group Licence no: 100019229



*Figure 61. Site of a heavy anti-aircraft battery at Birdlip, Wiltshire. Photograph: RAF CPE/UK/1897 Frame 3426 12 December 1946 English Heritage (NMR) RAF Photography.*

Map: © Crown Copyright and Landmark Information Group Licence no: 100019229

### 5.9.1.4 Anti-landing obstructions

During 1940-41, many open areas were defended from enemy aircraft landings by the construction of anti-landing obstacles comprising linear banks and ditches or poles. Several linear features crossing Afton Down had previously been recorded as possible anti-glider defences in the HER although the aerial photographic evidence is not conclusive and an older origin seems possible (Figure 62).



Figure 62. Linear banks of uncertain date, potentially World War II anti-glider obstructions, (MIW11352-3). Photograph: NMR 23303/05 SZ 3585/25 24 September 2003 © English Heritage, NMR.

The open area of Sandown airport at Lea Farm was defended from enemy aircraft landings by a series of banks and ditches dug in short sections across the landing strips. These are visible on RAF aerial photographs taken in 1946 (Figure 62).

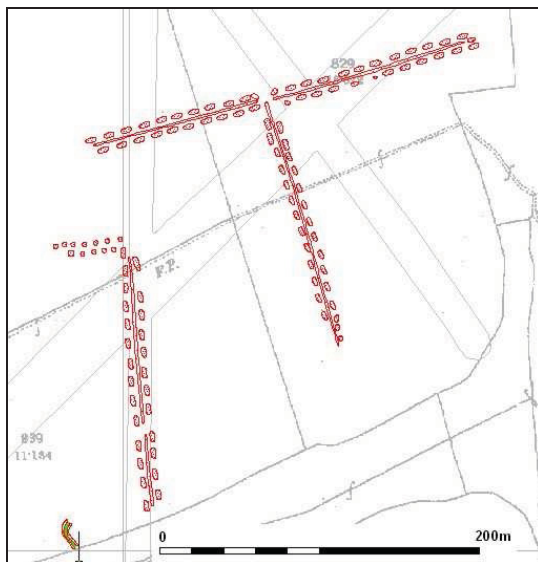


Figure 63. Anti-landing obstructions on Sandown Airfield, Lea Farm, (Site ID 173775). Photograph: RAF 106G/UK1411 Frame 4125 13 April 1946 English Heritage (NMR) RAF Photography. Map: © Crown Copyright and Landmark Information Group Licence no: 100019229

#### 5.9.1.5 Other military sites

Two other military sites of note were recorded during the mapping project. The first is at Guards, to the south of Hale, where a small group of Nissen huts are visible on RAF aerial photographs taken in 1946, lining the northern side of the lane, (Figure 63). This appears to be an isolated site, with no other military installations or camps visible in the vicinity. The site may have been used for road-side storage.



Figure 64. Nissen huts at Guards, Hale, (Site ID 173862). Photograph: RAF 106G/UK1663 Frame 4035 12 July 1946 English Heritage (NMR) RAF Photography.

The second site is more enigmatic. Three circular features are visible at Rowborough on the RAF 1946 photographs (Figure 64). They appear as bare-earth features and are approximately 15m across with a central structure (or site of a structure). Two lie close to each other in the same field and associated with other features and the third lies 200m to the south-east. The circular features are reminiscent of barrage balloon mooring sites; however there are no mooring structures visible and such sites are usually located in the vicinity of towns or other major installations. They may have a more mundane purpose such as cattle feeding; however they appear to be too large for this. The features have been recorded in the project database as uncertain modern features of probable military function.

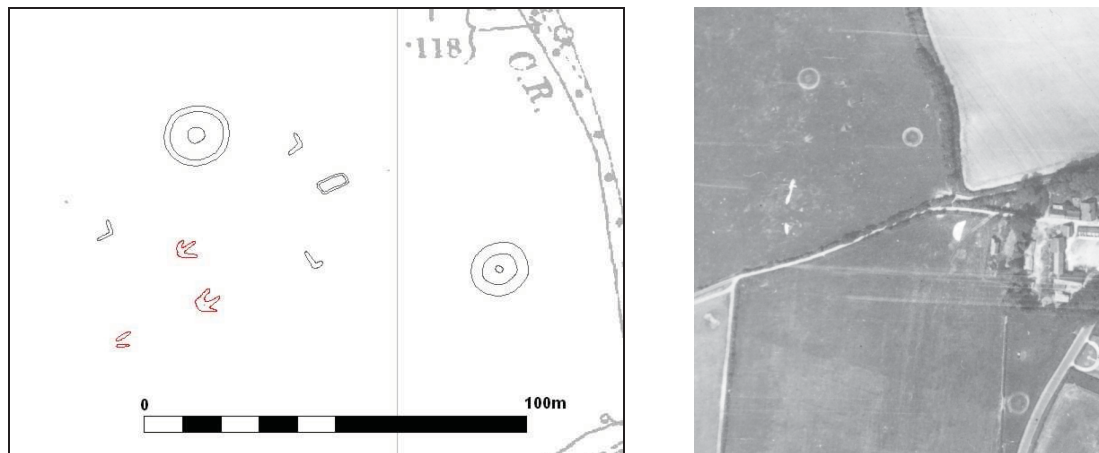


Figure 65. Circular features and associated structures of possible military origin at Rowborough, (Site ID 174330). Photograph: RAF 106G/UK1665 Frame 3083 12 July 1946 English Heritage (NMR) RAF Photography. Map: © Crown Copyright and Landmark Information Group Licence no: 100019229

Due to the short time-scales involved in the NMP element of this project, it was not possible to undertake further research into the documented impact of the war on the Isle of Wight. It is possible some of the sites plotted may have been listed in the exhaustive documentary sources of the period and that further research into this area may prove invaluable in providing more precise dating and interpretations for the features plotted.

### 5.9.2 Non-Military twentieth Century Sites

Of the 43 non-military sites, the majority (39) are golf course features associated with the extensive Freshwater Bay Golf Club which was established in 1894 and runs

along the chalk ridge at Afton Down, East Afton Down and Compton Down. Features included disused bunkers, greens and tees, a third of which were already recorded in the HER (Figure 66).

The other sites included a modern pipeline (mistakenly recorded as an archaeological site in the HER (MIW 1860)), and two extractive features.



*Figure 66. Early twentieth century golf course features on East Afton Down, (Site IDs 173999-174006). Photograph: OS/69082 Frame 205 7 April 1969 © Crown Copyright. Ordnance Survey*

## 5.10 NMP results: Undated sites

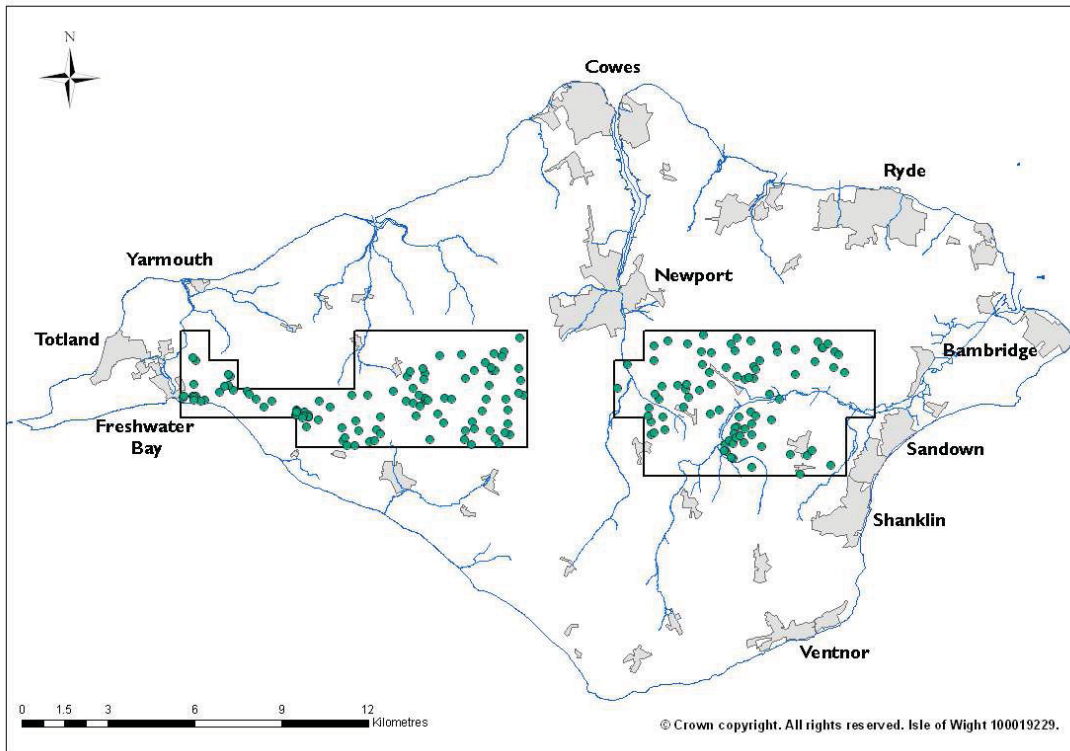


Figure 67. Distribution of undated sites.

A large number of sites were listed in the project database as of uncertain date. These are sites to which a more specific prehistoric or historic date could not be allotted with confidence and they include agricultural features such as field boundaries and field systems, trackways, mounds and enclosures. Many of these sites could well be of prehistoric origin. Of the 190 sites, the majority (66%) are visible on the aerial photographs as cropmarks and 72% were previously unrecorded.

### 5.10.1 Agricultural features

Just over half the undated sites are of agricultural origin and include field boundaries, field systems and lynchets. One example lies on the cliff-edge at Afton Down and comprises a fragmented system of banked field boundaries and trackways (Figure 68). Several of the elements of the system had been recorded separately in the HER, but the mapping indicates that they form part of a single system of linear features. These features, which extend across the more recent golf course, are being destroyed by erosion of the chalk cliffs and may be post medieval, medieval or prehistoric in origin.

Examples of other undated but potentially prehistoric field systems include the site at Rowborough (MIW6583) described previously in 5.4.1 (Figure 28) and at Rains Grove (Figure 69) where a previously unrecorded bank and ditched field system was plotted (Site ID 174383). Whilst some of the field boundaries appear to fit in with the modern field pattern (perhaps indicating an historic date) several phases of field enclosure are present and therefore the site may have prehistoric origins.

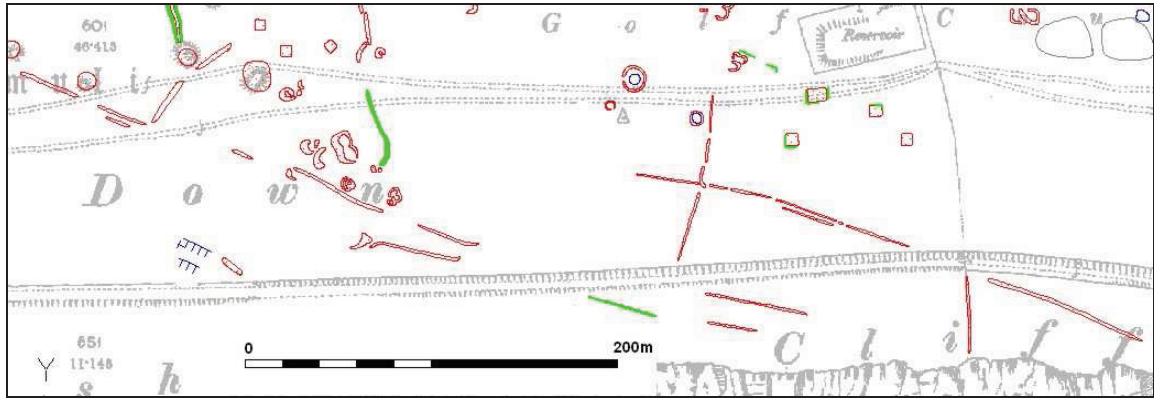


Figure 68. Undated field boundaries and trackways on Afton Down, (MIW2667, MIW2669, Site ID 174026 and 174035). Map: © Crown Copyright and Landmark Information Group Licence no: 100019229

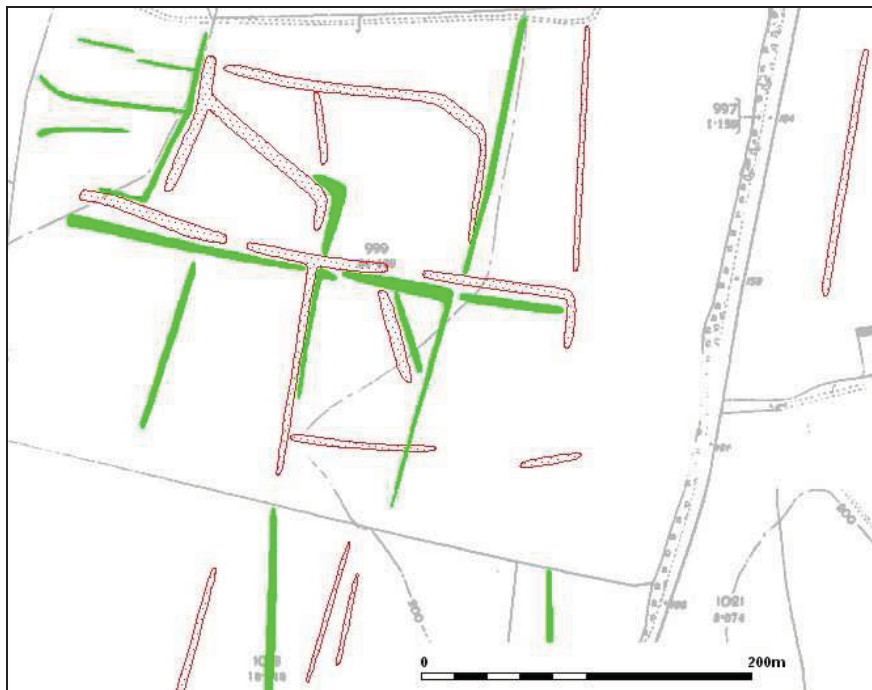


Figure 69. Undated field system at Rains Grove, (Site ID 174383). Map: © Crown Copyright and Landmark Information Group Licence no: 100019229

### 5.10.2 Enclosures

Twenty enclosures and fragments of enclosure were listed as of uncertain date, of which all but one were plough-levelled features.

The extant site lies on the eastern end of Mottistone Down and comprises three sides of a large banked enclosure is over 160m long. The site is located on the crest of the east-facing ridge and a short stretch of linear bank lying to the east of the main enclosure may be an outwork or cross-dyke. Two Bronze Age barrows lie between the enclosure and the eastern bank and whilst the site is listed in the HER as uncertain in origin, a later prehistoric origin is possible, (Figure 70).

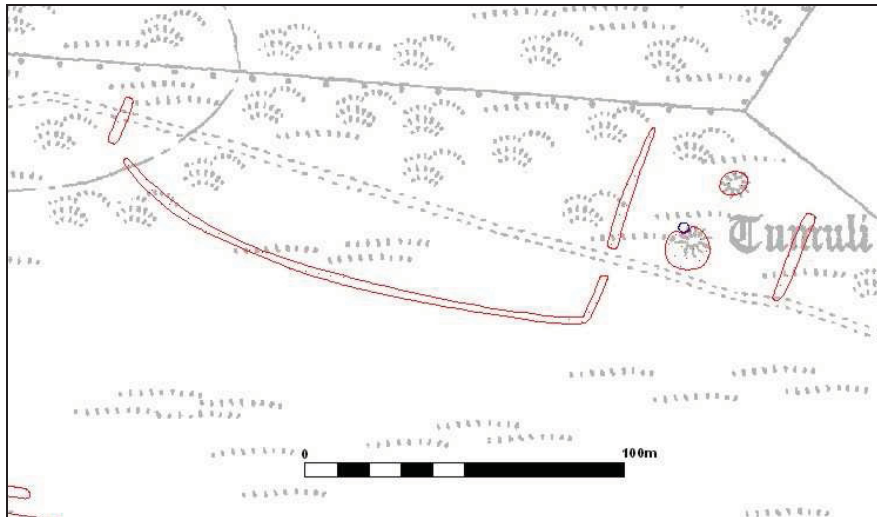


Figure 70. Undated enclosure and possible outwork on Mottistone Down, (MIW6289).  
Map: © Crown Copyright and Landmark Information Group Licence no: 100019229

At Calbourne a large rectilinear banked enclosure is visible as cropmarks (Figure 71). Like the Mottistone enclosure above, the Calbourne enclosure is co-located along with a Bronze Age barrow cemetery and therefore a prehistoric origin is possible.

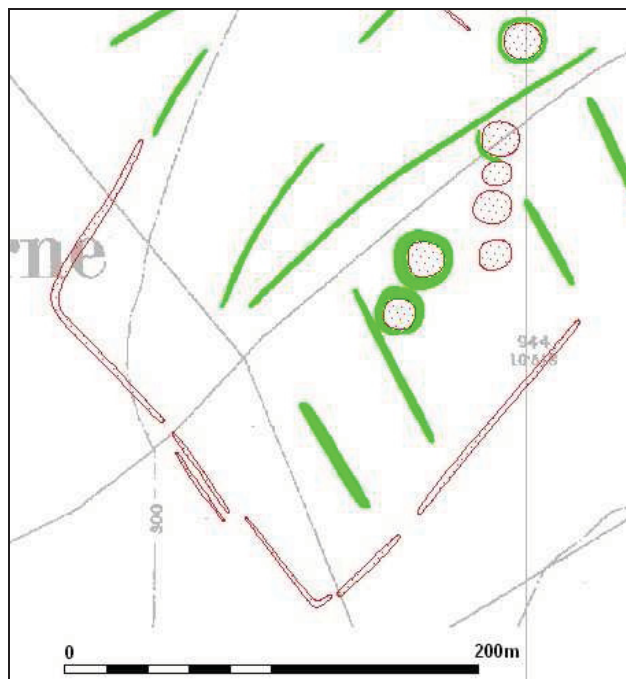


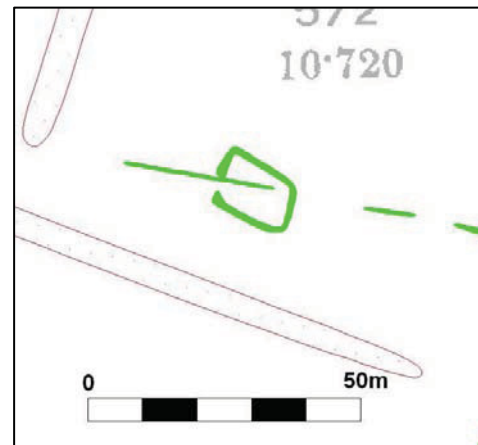
Figure 71. Enclosure and barrow cemetery at Calbourne, (MIW1778, MIW2354-60).  
Map: © Crown Copyright and Landmark Information Group Licence no: 100019229



Examples of other undated enclosures are illustrated in Figures 72 and 73 below.

*Figure 72. Undated rectilinear enclosure at Hale, (Site ID 173666).*

Map: © Crown Copyright and Landmark Information Group Licence no: 100019229



*Figure 73. Undated rectilinear enclosures at Guards, (Site ID 173863).*

Map: © Crown Copyright and Landmark Information Group Licence no: 100019229

## 6 Conclusions

The NMP mapping on the Isle of Wight identified 819 monuments of which 533 were previously unrecognised archaeological features. In terms of the kinds of sites potentially visible on aerial photographs (surface and sub-surface features (see Section 5.1), this amounts to a 76% increase in the archaeological record within the two project areas. In this respect the project fulfilled its aim of providing a fuller awareness of the range and extent of archaeological remains in the aggregate producing areas of the island.

The enhanced awareness of the archaeological resource of the aggregate landscape will facilitate management of the area's historic environment on two levels. Firstly at the site specific level; reviews of existing minerals planning permissions and the assessments of new applications for permission can be made from a better-informed position. Secondly at a strategic level; NMP mapping will help define those parts of the aggregate landscape most sensitive to development in the form of mineral extraction.

The enhancement of the baseline data will ensure more effective evaluations and the research framework which will in due course be developed from the wider project will provide a context into which future archaeological interventions are undertaken.

The main outcomes of the NMP mapping and recommendations for further survey and research are set out below.

### 6.1 Outcomes

Many of the sites recorded were post medieval extractive features and cultivation remains dating to the historic periods; however a significant number of prehistoric or Romano-British sites were identified as were a range of twentieth century military and recreational remains.

The results for the prehistoric periods have improved understanding of the nature and extent of prehistoric activity in the aggregate areas of the Isle of Wight.

It has been previously suggested that Neolithic downland burial sites may have been associated with spring-line settlements at the foot of the chalk scarps (Tomalin 1980). The numbers of these downland barrow sites has significantly increased with two further potential examples being noted during the mapping. In addition, a possible long barrow site has been identified off the chalk on the lower valley slopes of a tributary of the River Medina. This would be in keeping with previous indications of concentrations of Mesolithic and Neolithic activity along the three major rivers (Basford 1980). As only three Neolithic communal burial sites were previously known on the island, further investigation of these new sites is an important research aim.

The mapping confirms that Bronze Age funerary monuments extended right across the chalk downland. Even though large numbers of barrows were previously recorded in the HER, significant numbers of new sites have been identified. It has previously been noted that many barrow groups seem to be clustered around the heads of chalk combes (Tomalin 1980) and this phenomenon does still appear to be the case; however major barrow groups also lie along the long chalk ridges such as at Cheverton Down and Newbarn Down.

Prior to the mapping, the distribution of known round barrows was almost entirely confined to the higher downland areas of the landscape. This extent has been considerably widened with several examples of plough-levelled round mounds and ring ditches being located off the chalk ridges, particularly on the Lower Greensand of the Arreton Valley mapping block.

No Bronze Age settlement sites were previously recorded in the HER and none positively identified during the project. However, a number of cropmark enclosures and round houses were mapped during the project which might be evidence of Bronze Age settlement or, at least, have Bronze Age antecedents.

The later prehistoric settlement sites that have been recorded are extremely significant. Initial investigations into the location of these settlement enclosures in relation to the topography seem to show a patterning with a tendency for them to be located within 300m of a water source and 5-10m above the valley bottom. This is perhaps something to be investigated further once all of the data from the wider ALSF project has been collated.

The medieval period is still poorly understood with little evidence for medieval open fields. However the large number of field boundaries of historic and uncertain date which have been mapped during the project will inform any future research into the development of the historic landscape based on analysis of field patterns coupled with documentary evidence and Historic Landscape Characterisation.

The greatest numbers of sites recorded during the project were dated to the post medieval period (see Table 1, pg 25). This is a period that has traditionally been ignored by archaeological survey and field investigation (Waller 2006c). The current project is perhaps one of the first to systematically record post medieval sites. A fuller picture of the location and extent of extractive features visible on the available photographs will hopefully assist our understanding of the importance and extent of the extractive industry, particularly at a small, local scale.

Given its position, the Isle of Wight was of strategic importance during the Second World War and the remains of military installations can be found right across the landscape. As the majority of these sites were temporary installations and not designed for longevity (Waller 2006c), many leave no trace on the ground. Those that do survive are threatened by modern destructive forces: urban expansion, ploughing or recreational developments. For example at Afton Down; here the protection of many twentieth century military sites could be in direct conflict with its current land-use as a golf course. The systematic recording of military sites, particularly using the RAF vertical photographs taken during and soon after the war, has proved highly informative with many significant sites (for example the heavy anti-aircraft battery at Five Houses (Figure 59)) being recorded for the first time. Further research into the impact of the War on the Isle of Wight using the exhaustive documentary sources from the period may prove invaluable in providing more precise dating and interpretations for the features plotted.

## 6.2 Recommendations

- **Continuing aerial reconnaissance.** Whilst specialist aerial reconnaissance has been undertaken over the project area in recent decades, a large number of plough-levelled remains were identified from vertical photographs taken by the OS and by the RAF in the 1940s. There consequently remains considerable potential for the discovery of archaeological sites through a continuing programme of aerial reconnaissance.
- **Further NMP projects.** The significant numbers of important new sites recorded during the project demonstrate the effectiveness of NMP mapping on of the Isle of Wight. Further NMP projects on the island would be of great value, especially in those areas subject to continued ploughing.
- **Further investigation of sites recorded from aerial photographs.** Although a large number of sites have been recorded from aerial photographs on the island, a relative lack of field work and excavation means that little is known

about them. In particular the date and function of many features is unclear. A programme of ground-truthing of a representative sample of the sites recorded by NMP, involving field walking, geophysical survey and limited excavation, would significantly enhance current knowledge of the island's prehistoric, Roman and Saxon rural settlement.

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## 8 Project Archive

The HES project number is **PRA90630 (Isle of Wight)**

The project's documentary and drawn archive is housed at the offices of the Historic Environment Service, Cornwall County Council, Percuil Building, Old County Hall, Station Road, Truro, TR1 3AY. The contents of this archive are as listed below:

1. A project file containing the project design, project correspondence and administration.
2. This report held in digital form at: G:\Historic Environment (Documents)\NMP DATA\Isle of Wight\Project documents
3. The AutoCAD drawings held in digital form at: R:\Historic Environment (CAD)\CAD Archive\NMP Archive\Isle of Wight

# Appendix 1 Methodology

## Sources

### Aerial photograph collections

All readily available aerial photographs were consulted during the project. These were primarily from the two national collections which kindly provided the project with photographic loans sent to the project teams' offices in Truro:

1. The National Monuments Record (NMR) in Swindon which holds large numbers of aerial photographs of the project area. These include vertical prints taken by the Royal Air Force (RAF) and Ordnance Survey (OS) ranging in date from the 1940s to 1999. The NMR also holds a large collection of oblique prints; including military obliques taken by the Ministry of Defence (MOD) between 1941 and 1950 and a collection of specialist oblique prints, slides and digital images which were taken for archaeological purposes and range in date from the 1960' to the present day. In addition a small number of very earlier oblique images taken in the 1920's and 30's by OGS Crawford are held in the NMR collection. Address:

The National Monuments Record Centre (NMRC)

Kemble Drive

Swindon

SN2 2GZ

2. Cambridge University Committee for Aerial Photography (CUCAP). The CUCAP collection contains a small number of vertical photographs taken for a range of non-archaeological purposes. The collection also contains specialist oblique photography resulting from archaeological reconnaissance. Address:

Air Photo Library

Cambridge University

Unit for Landscape Modelling

Sir William Hardy Building

Tennis Court Road

Cambridge

CB2 1QB

3. In addition to these two national collections, the Isle of Wight Council (IOWC) holds a collection of vertical photography with good potential to provide a significant amount of data as well as a small number of specialist photographs held at the HER offices at Newport. These were provided to the project as digital images on CD. Address:

Isle of Wight Heritage Service

61 Clatterford Road

Carisbrooke

Nr Newport

Isle of Wight

PO30 1NZ



In total 2524 aerial photographs were consulted during the project. These consist of 1507 vertical prints, 991 specialist oblique photographs, and 26 military obliques.

The largest photographic collection was that of the NMRC. Available photographs consisted of 1231 verticals, 852 specialist obliques and 26 military obliques. A loan arrangement was put in place enabling the consultation of these photographs at Cornwall County Council's offices in Truro.

Available photographs contained in the collection held at CUCAP consisted of 201 verticals and 103 specialist obliques; these were loaned out at up to 100 photographs per loan.

Photographs in the IOWC collection amounted to 75 digital vertical images each covering a 1km sq tile. 46 oblique prints were also available. These were all provided as digital files on CD.

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

### **LiDAR**

The Environment Agency have undertaken LiDAR surveys of the country as the technique results in the production of a cost-effective terrain map suitable for assessing flood risk, measuring land topography and assessing coastal erosion and geomorphology.

The Environment Agency has agreed to provide EH with their complete catalogue of LiDAR data. The data is supplied as static .jpeg images derived from the full data. This data has no data manipulation capabilities but can be used in exactly the same way as conventional aerial photographs.

It was initially proposed that all readily available LiDAR tiles of the project area, held by EH during the lifetime of this mapping project, would be consulted. Only very limited cover existed for the project area however and in the end due to project time-constraints, it was decided that the LiDAR images would not be examined.

### **Previous transcription work**

Previous transcription work carried out by IOWC was provided to the project as ArcView shape files. These were imported into the AutoCAD drawing files as separate layers and consulted throughout the mapping phase.

### **Data sources**

#### ***Data from the Isle of Wight HER***

Arcview shapefiles of the relevant area showing details of archaeological sites recorded in the IOW HER were provided to the mapping team, as were copies of the full SMR reports for each record as Read-Only .rtf documents.

#### ***Data from the National Monuments Record***

Data from the National Monuments Record (NMR) Archives and Monuments in England (AMIE) database was provided to the project team for the study area. This data included details of all archaeological sites and was provided digitally in a series of PDF files and Arcview shapefiles.

### **Map Sources**

In addition to the current OS MasterMap data which was used as the primary source of control for the rectification and mapping, the historic mapping from the 19 and 20<sup>th</sup> centuries (Epoch 1 and 2) was consulted to further understand the archaeology of the project area and to aid interpretation of specific sites

## **Archaeological scope of the project**

All archaeological features were recorded, both plough-levelled and upstanding remains, dating from the Neolithic period to the twentieth century (pre-1945), including industrial and military features. Archaeological or historically significant sites appearing on the OS base map which have not been photographed, or which are completely obscured by vegetation, were not recorded. The project did not usually record structures still in use or fossilized in later structures that are still in use, e.g. buildings, field walls, canals, railways, leats and hedges, but if appropriate, some exceptions were made.

### **Plough-levelled features and earthworks**

All cropmarks and soilmarks representing buried "negative" features (i.e. ditches and pits), earthworks or stonework of archaeological origin were recorded. All earthwork sites visible on aerial photographs were recorded, whether or not they had previously been 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 project database included brief comment on preservation and visibility over the area mapped as well as any archaeological assessment.

### **Buildings and structures**

The foundations of buildings and structures which appear as ruined stonework, earthworks, cropmarks, soilmarks or parchmarks were recorded. Standing roofed or unroofed buildings and structures were not recorded unless there was no other adequate map record. However, in specific archaeological contexts (e.g. industrial and military complexes and country houses), or when associated with other cropmark and earthwork features, and particularly when buildings have been demolished since the photography (even if depicted by the Ordnance Survey), then it may have been appropriate to map them, in order to make an association explicit.

### **Industrial features and extraction**

Areas of industrial archaeology were recorded using the appropriate conventions where they can be recognised as pre-dating 1945. Roofed or unroofed buildings, when associated with other mapped features within industrial complexes, may have been recorded as described above.

All extractive features believed to pre-date 1945 were mapped. These included large-scale features such as quarries, pits and mines, as well as small-scale extraction of resources for immediately 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 larger military complexes such as airfields and camps was depicted using the 'extent of area' symbol. The major buildings and structures within military complexes as well as isolated military structures, e.g. pillboxes or buildings associated with searchlight batteries, were mapped and recorded.

### **Field boundaries and field systems**

All removed field boundaries and field systems were plotted where they were considered to pre-date the OS 1<sup>st</sup> Edition map (c.1880) and are not already recorded on any other OS map. Where post medieval field boundaries mapped by the OS

may be misinterpreted (e.g. within complex areas of archaeological features), these may have been plotted or mentioned in the text record.

### **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 be plotted. Similarly, the former existence of country houses either completely or partially demolished during the period of photography were be mapped. If the house is depicted by the OS then it will not be mapped but will be mentioned in the text record. Normally the whole complex of house, garden and park was be recorded using a single brief text record.

### **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 which are outside the Ordnance Survey sphere of interest were be 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 and geomorphological features visible on aerial photographs were not generally mapped. In exceptional circumstances however, they were plotted but only if their presence helped to define the limits of an archaeological site or if it was considered likely that an archaeological interpretation may have already been (or in future be) made in error, in which case the true origin of the features was discussed within the project database.

## **Transcription**

The results of the mapping were produced entirely in digital format using AutoCAD.

Information was derived from the photographs available in the collections identified above.

1. Oblique and vertical photographs were scanned.
2. Digital transformations of the archaeological features visible on the photographs were produced using AERIAL (Version 5.29). Digital copies of current OS 1:2500 MasterMap was used for control information and as a base for mapping in AutoCAD (Version Map3D 2010). All digital transformations will therefore be within a level of accuracy within 5m to true ground position, but typically less than 2.5m to the base map. Where necessary digital terrain models (DTM) were used to aid more accurate rectification of the photographs.
3. The rectified images were imported into the relevant AutoCAD drawings.
4. Archaeological features were digitally transcribed in AutoCAD according to a nationally agreed layer structure and using agreed line and colour conventions as specified by Aerial Survey and Investigation (EH 2010).
5. Polygons were drawn around each separate monument to define its extent. Object data was attached to the monument polygons and archaeological features in AutoCAD in a table called RECORD. This recorded the Unique Project Identifier numbers (MONARCH UID) for record in the project database and within the NMR and Isle of Wight HBSMR databases.
6. Map Note Sheets (MNS) were maintained for each OS quarter sheet within the survey area. MNS record the progress of each sheet and the sources used.
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.

## **Data processing**

### **Project database**

An Access database (the project database) was used for data processing. The database automatically generated unique Project ID numbers and contained fields enabling monument indexing to be carried out to NMR and ALGAO standards, including fields for cross referencing to existing NMR and SMR records. Appropriate data was entered into this database for each archaeological feature mapped.

### **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 HBSMR number of any site with an existing Isle of Wight SMR 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.

### **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.

### **Data exchange**

The data mapped during the project was provided to Isle of Wight Council as a series of shapefiles with the attributes contained in the access database attached. This layer would function immediately as a data source in the GIS. A copy of the project database was also sent to Isle of Wight Council. The creation of new records in the Isle of Wight HER will be carried out by Isle of Wight Council as part of the enhancement of the HER using the project database. One shapefile was produced for each NMP mapping block and these were provided to Isle of Wight Council on the completion of Block as the project progressed.

Copies of the mapping will be provided to the NMR in AutoCAD format suitable for incorporation in to the EH Corporate GIS. A copy of the project database will also be sent to the NMR so that the data can be transferred to the NMR AMIE database.

All data supplied to the NMR and IOWC will be to NMP monument recording standards. Proposed fields for data migration are in line with EH minimum standards for monument recording and are tabled below.

Copies of the Project Design, Final Report and all other relevant project documentation will be deposited at IOWC and the NMR. The PDF version of the report will be deposited with Archaeology Data Service (ADS).

### **Project outcome**

A series of AutoCAD drawings was produced showing all archaeological features visible on aerial photographs for each of the two mapping blocks.

The project Access database containing information and descriptions of all archaeological sites mapped during the project was populated with 816 records.

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

PROJECT DATABASE FIELD(s)	AIME DATABASE FIELD(s)
OS Map	Quarter Sheet
AHBR no	<b>Assign other monument Identifiers</b> <i>Identity Method:</i> AHBR Number <i>Value:</i> AHBR monument HOB UID
Summary Text	<b>Summary</b> <b>Long Text</b>
District/Parish	Automatically generated by GIS
Period	<b>Period</b> NB tables will need to be correlated.
Site Type	<b>Class scheme</b> <i>Monument Type</i> <b>Term</b>
Form	<b>Class scheme</b> <i>Evidence</i> <b>Term</b> NB tables will need to be correlated.
NGR	Needs discussion to ascertain how to fill minimum fields
<b>OS Number</b> Populated with NMR number where one exists.	This field could be used to automate concordance, or pull out records which require concordance
<b>Photos</b> Date Source Serial Number	<b>General Archive References</b> Title: GAM number (may need some data concordance) Source number
	<b>References of Archives to Monuments?</b> Object Title and Object Number from NMR
	<b>Associated Events:</b> Generated from the NMR
<b>Created By</b> <b>Created</b>	<b>Roles attached to Monument</b> Name Date Organisation: automatically tag all records with Cornwall HES.
PRN	<b>Other Monument Identifiers</b>

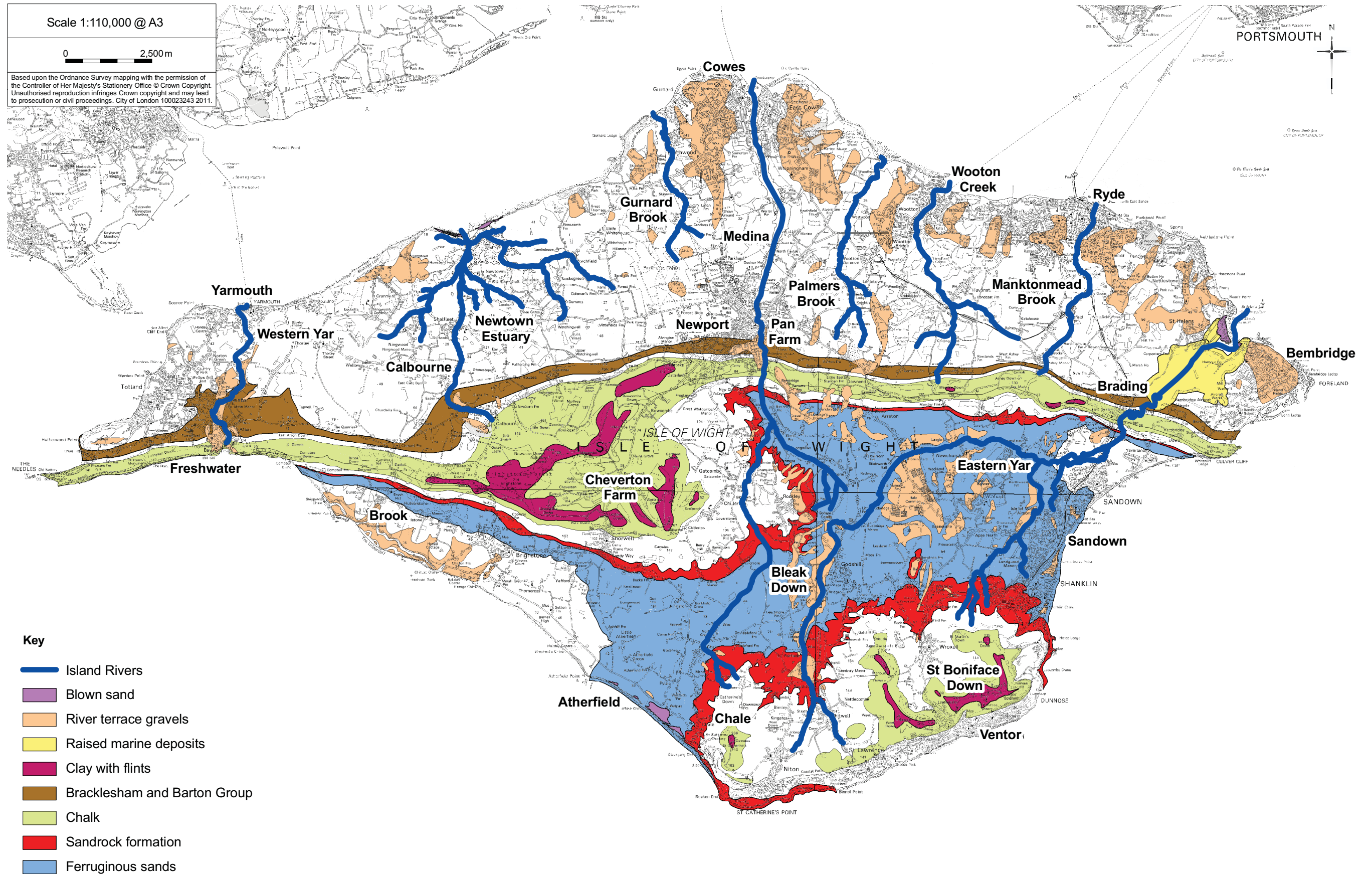
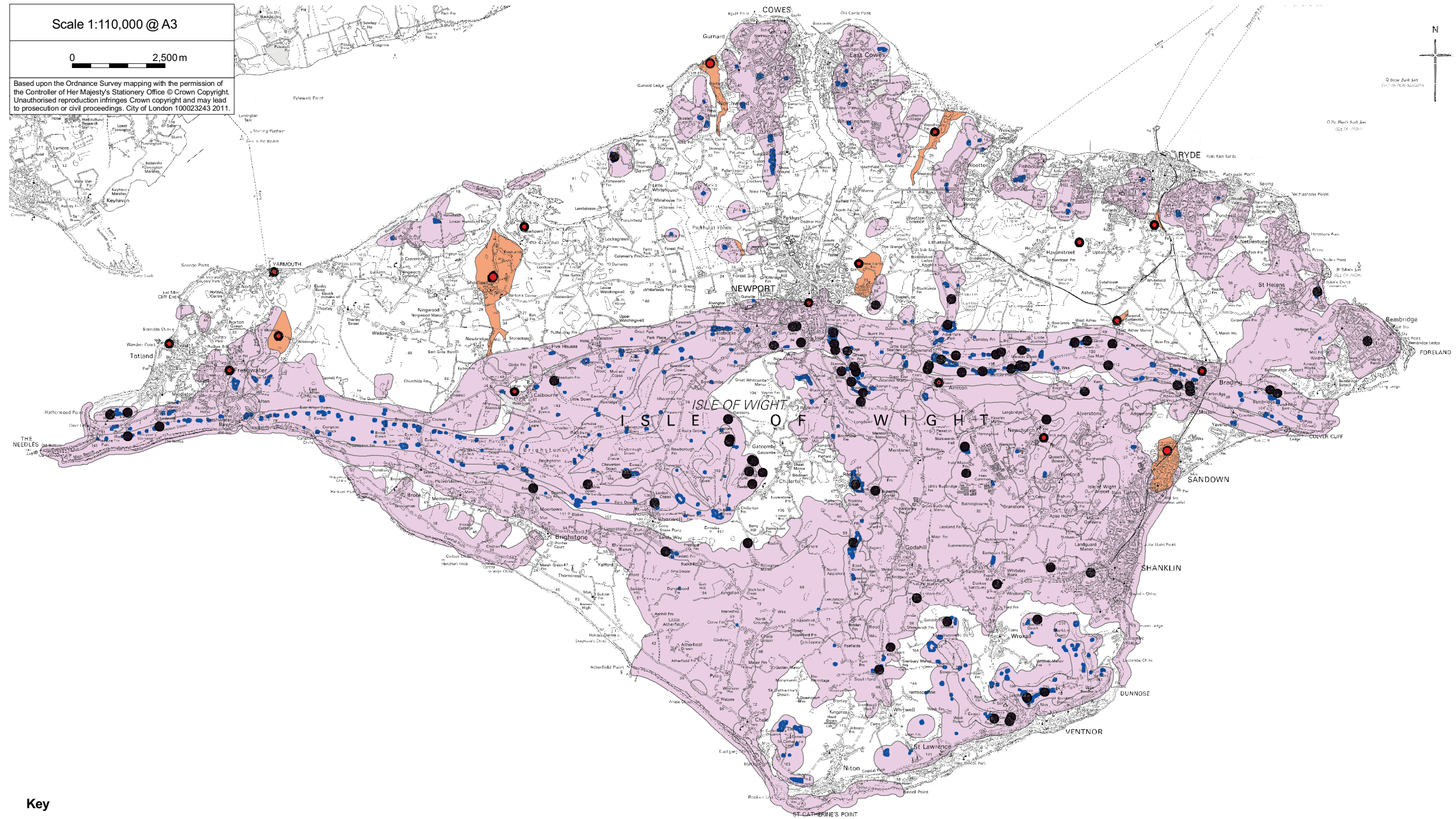


Fig 1 Aggregate geologies identified from BGS mapping

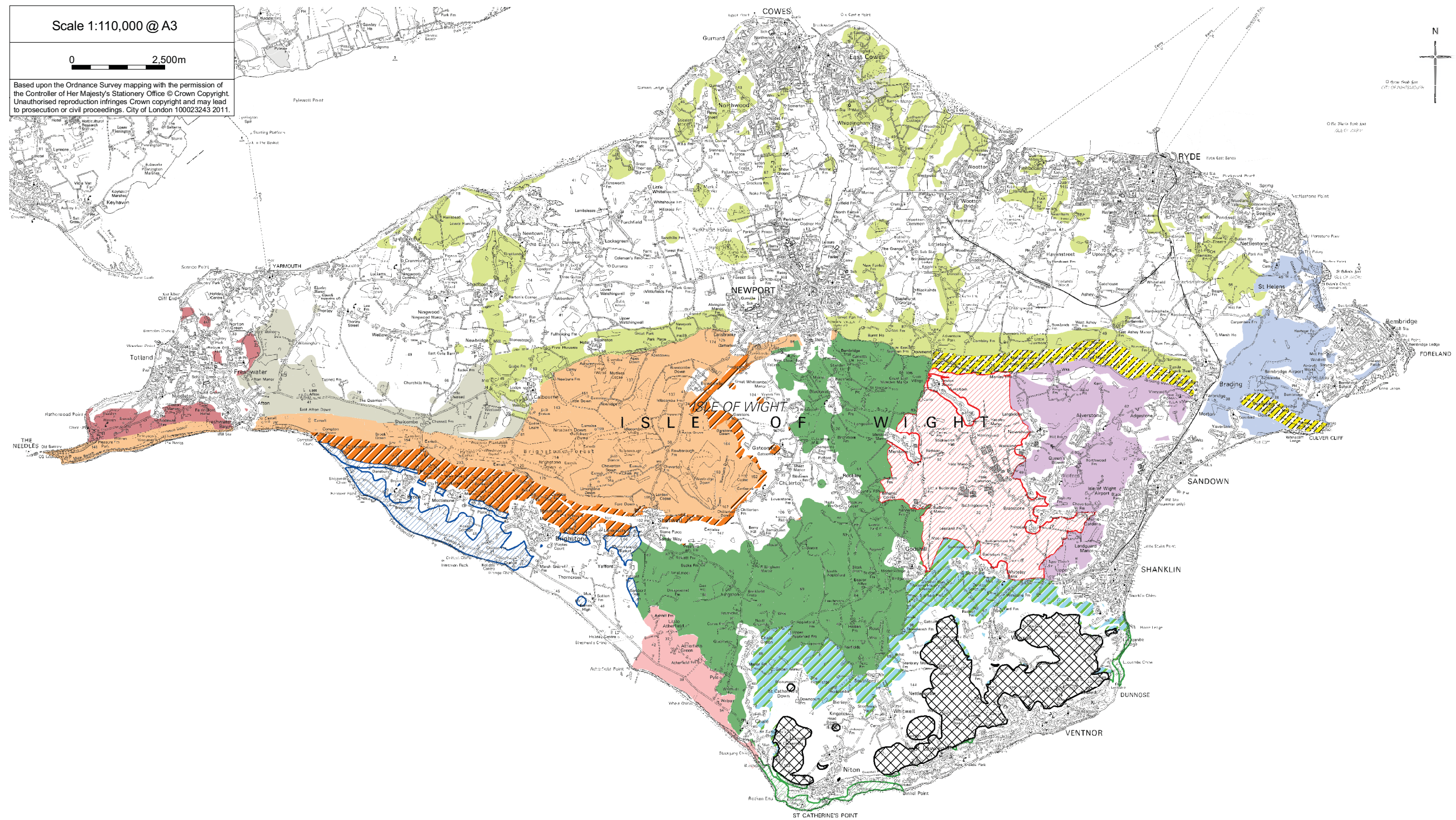


**Key**

- extraction sites on the Brit Pits database
- extraction sites outside BGS mapped aggregate geology
- ▭ historic extraction sites
- additional gravel deposits
- aggregate geology (from BGS)

Fig 2 Aggregate resource showing additional gravel deposits. (A list of the individual past and present extraction sites is in Appendix 1)





**Key**

South Wight Sandstone (SWS)	West Wight Chalk Downland (WWCD)	Brading Haven Bembridge Isle (BHBI)	East Wight Chalk Ridge (EWCR)	South Wight Downland Edge (SWDE)
Atherfield Coastal Plain (ACP)	Thorley Wellow Plain (TWP)	Newchurch Sandown (NS)	South West Wight Coastal Zone (SWWCZ)	Arreton Valley (AV)
Northern Lowlands (NL)	Freshwater Isle (FI)	West Wight Downland Edge (WWDE)	South Wight Downland (SWD)	Undercliff

Fig 3 The Project Area showing the project study areas

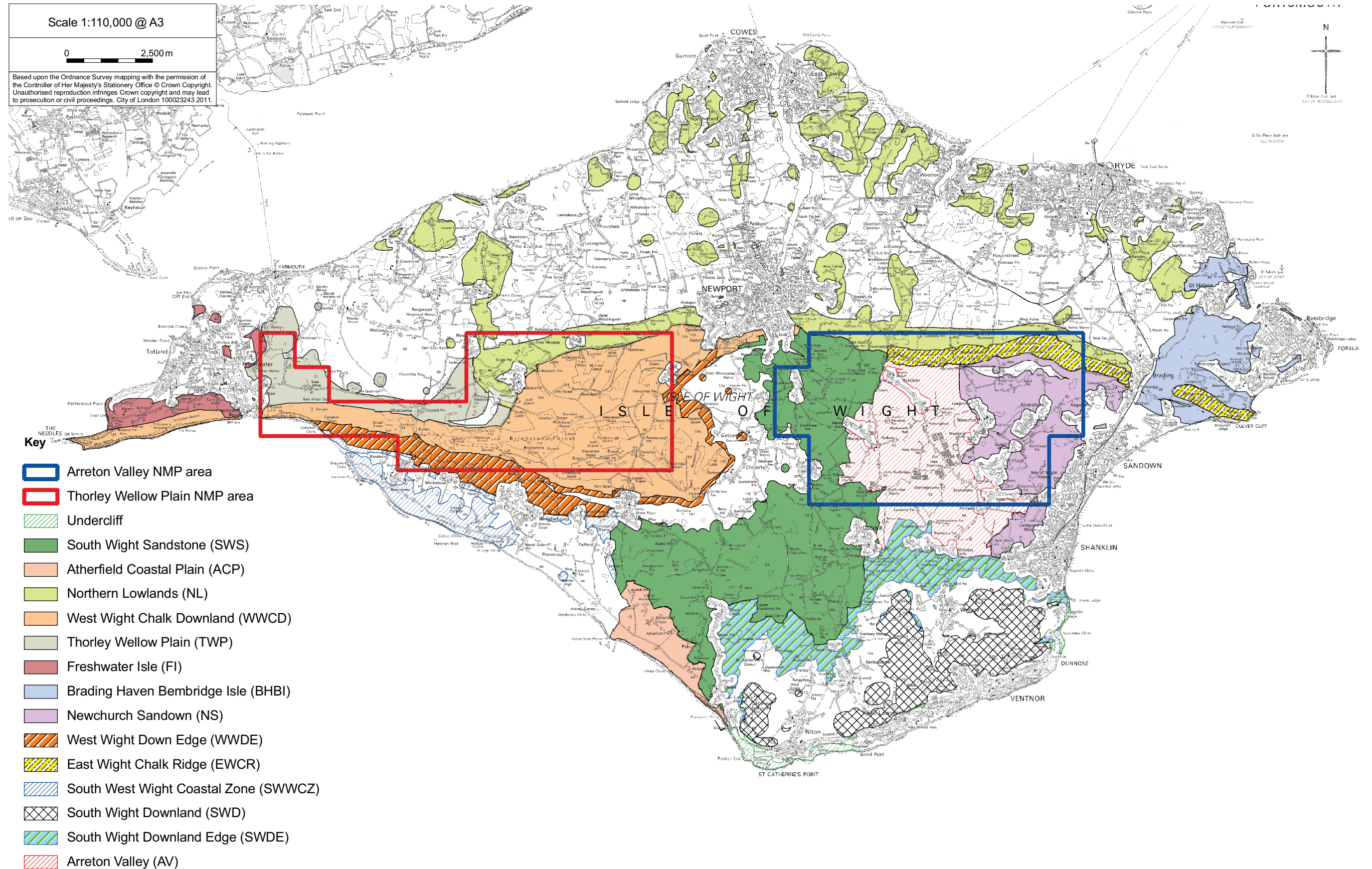


Fig 4 NMP sample areas

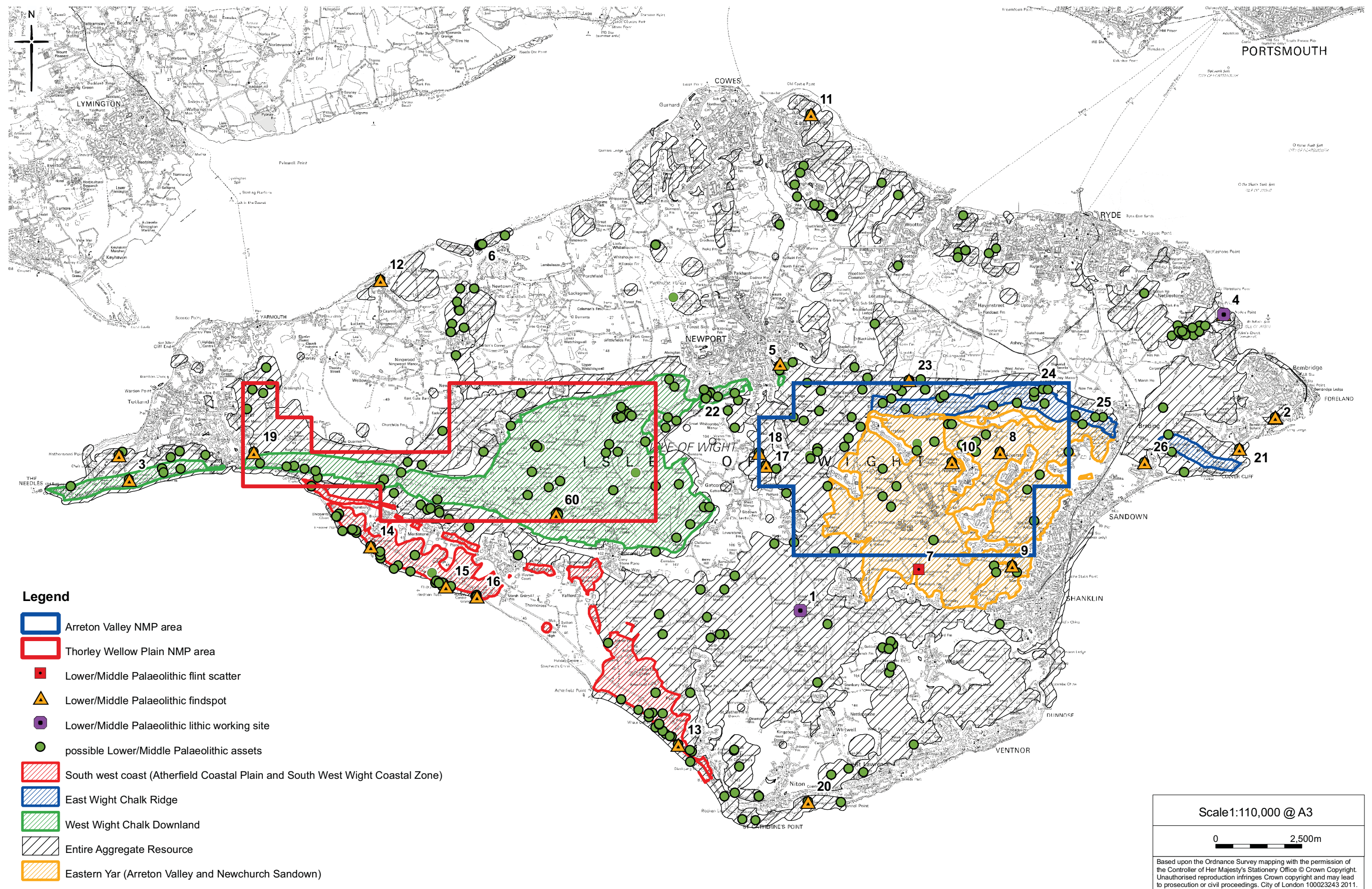


Fig 5 Lower/Middle Palaeolithic assets

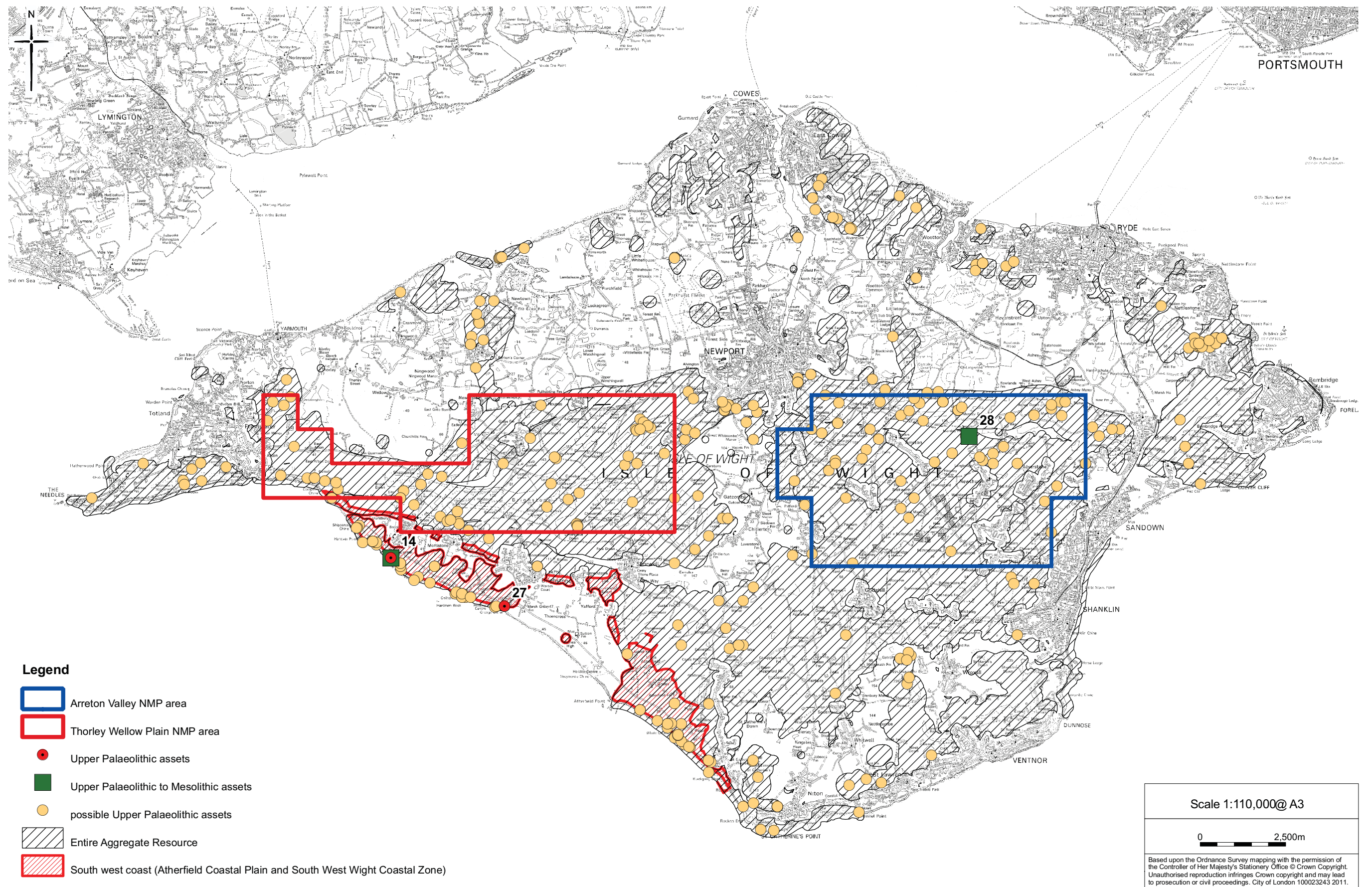


Fig 6 Upper Palaeolithic assets

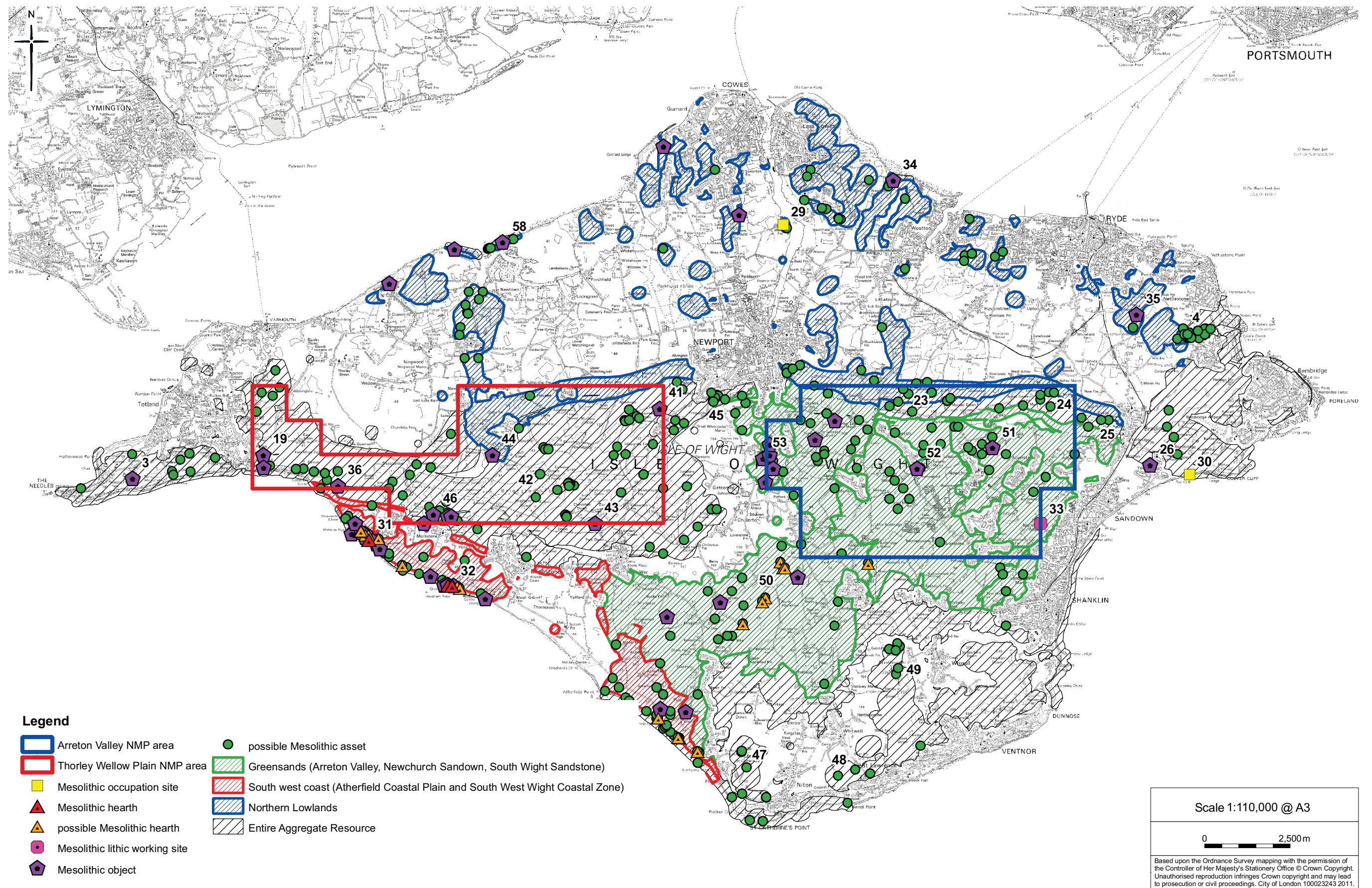


Fig 7 Mesolithic assets

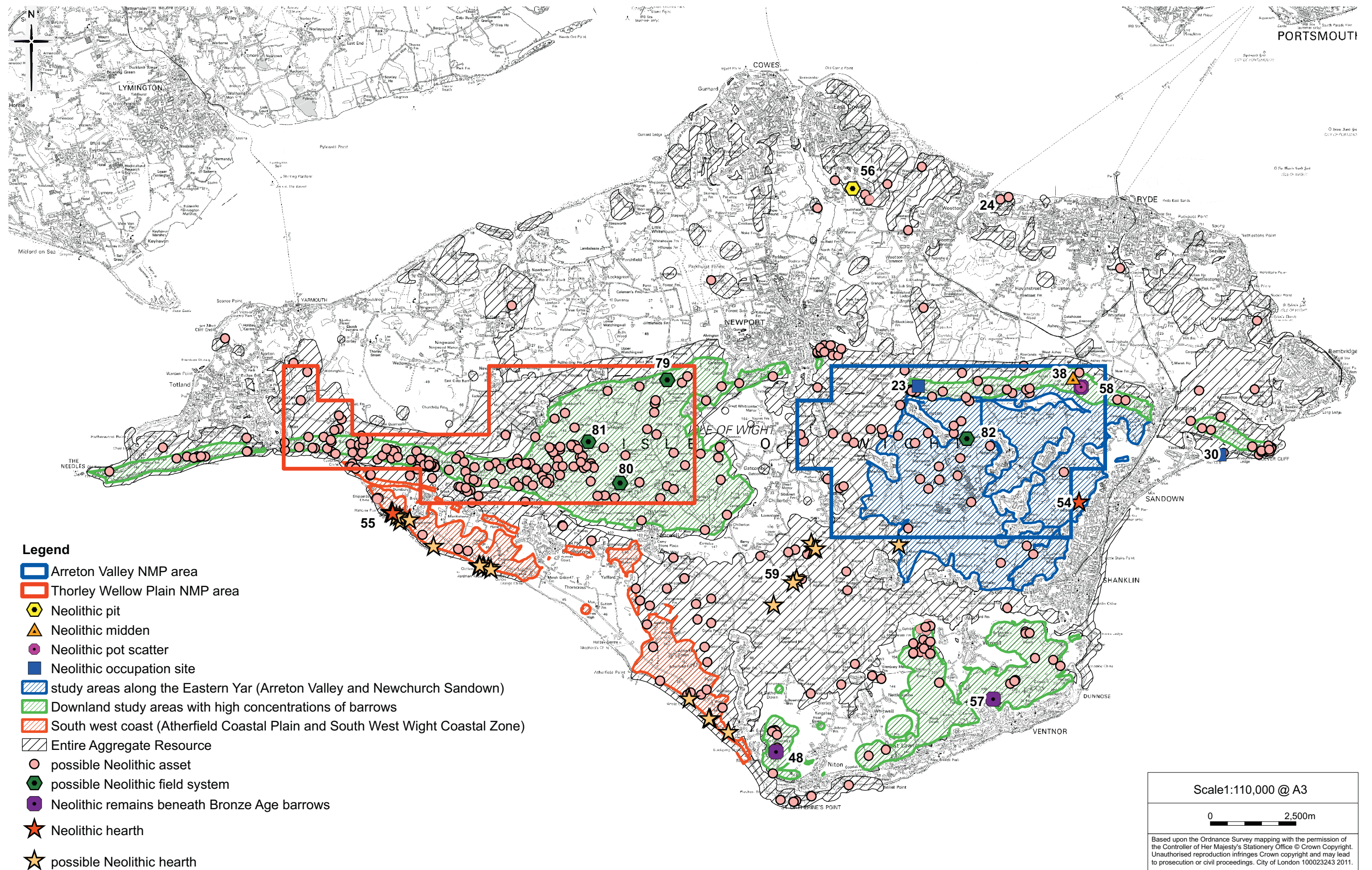


Fig 8 Neolithic domestic assets

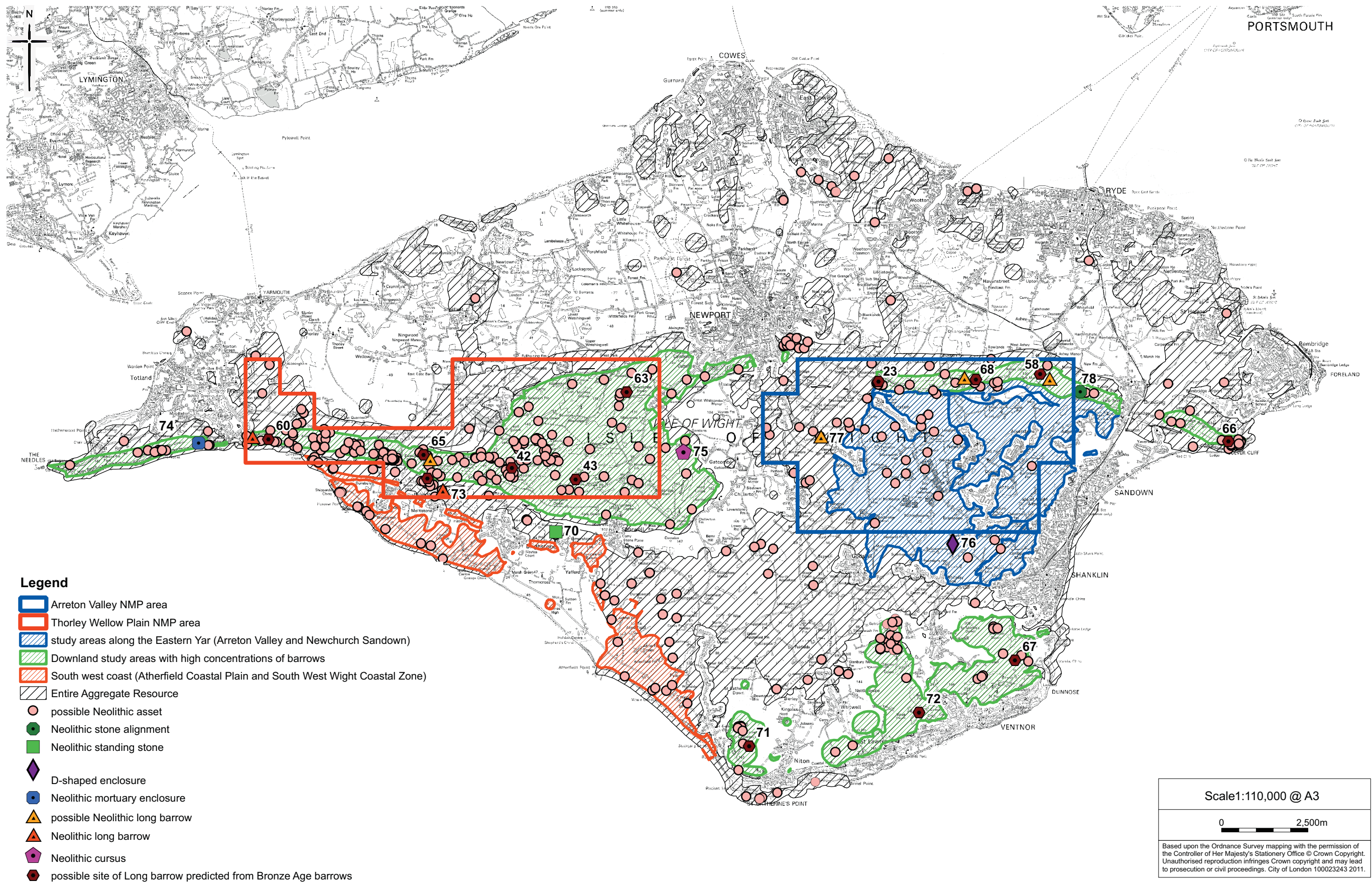


Fig 9 Neolithic religious, ritual or funerary assets

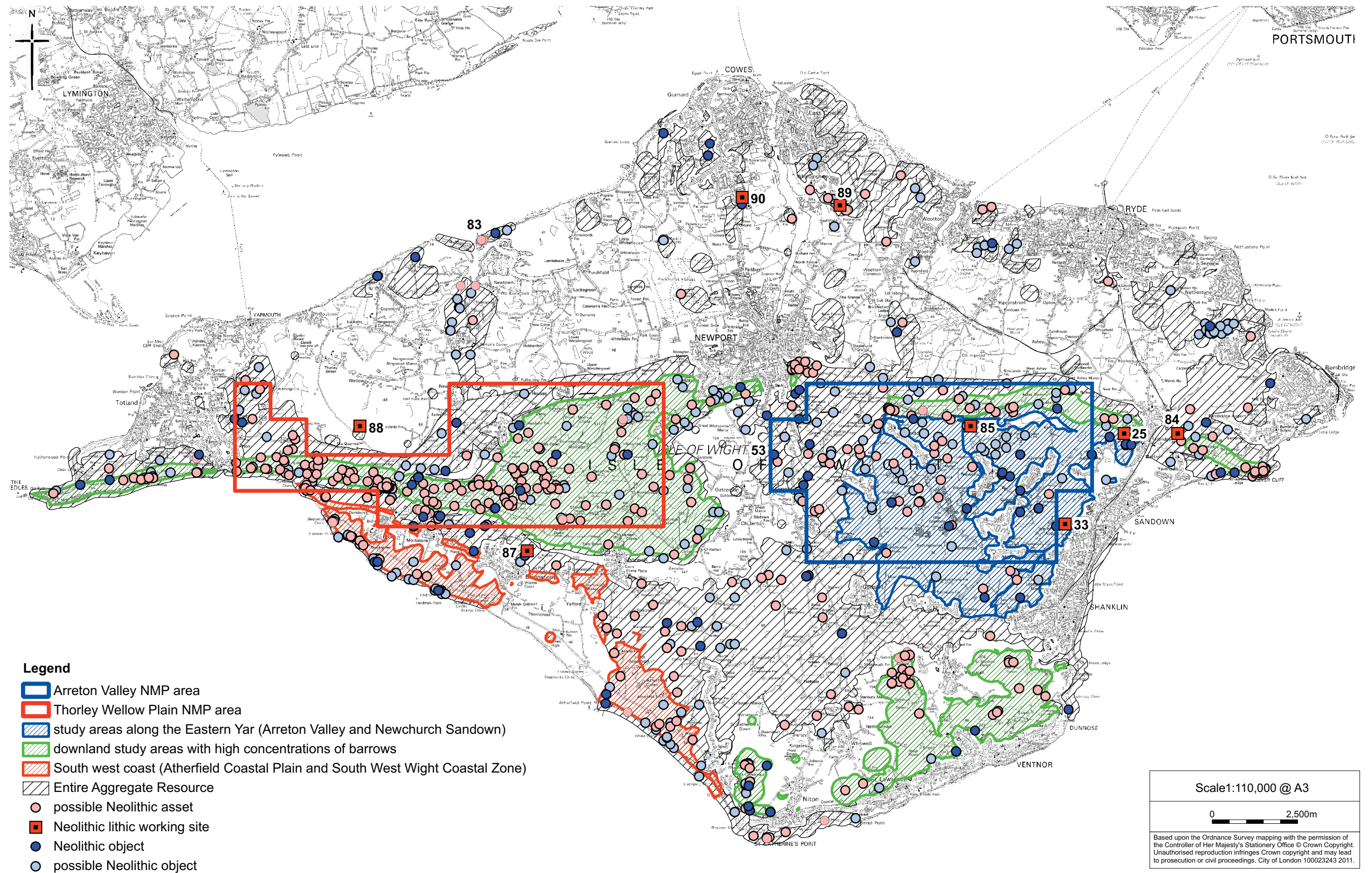


Fig 10 Neolithic industrial and object assets



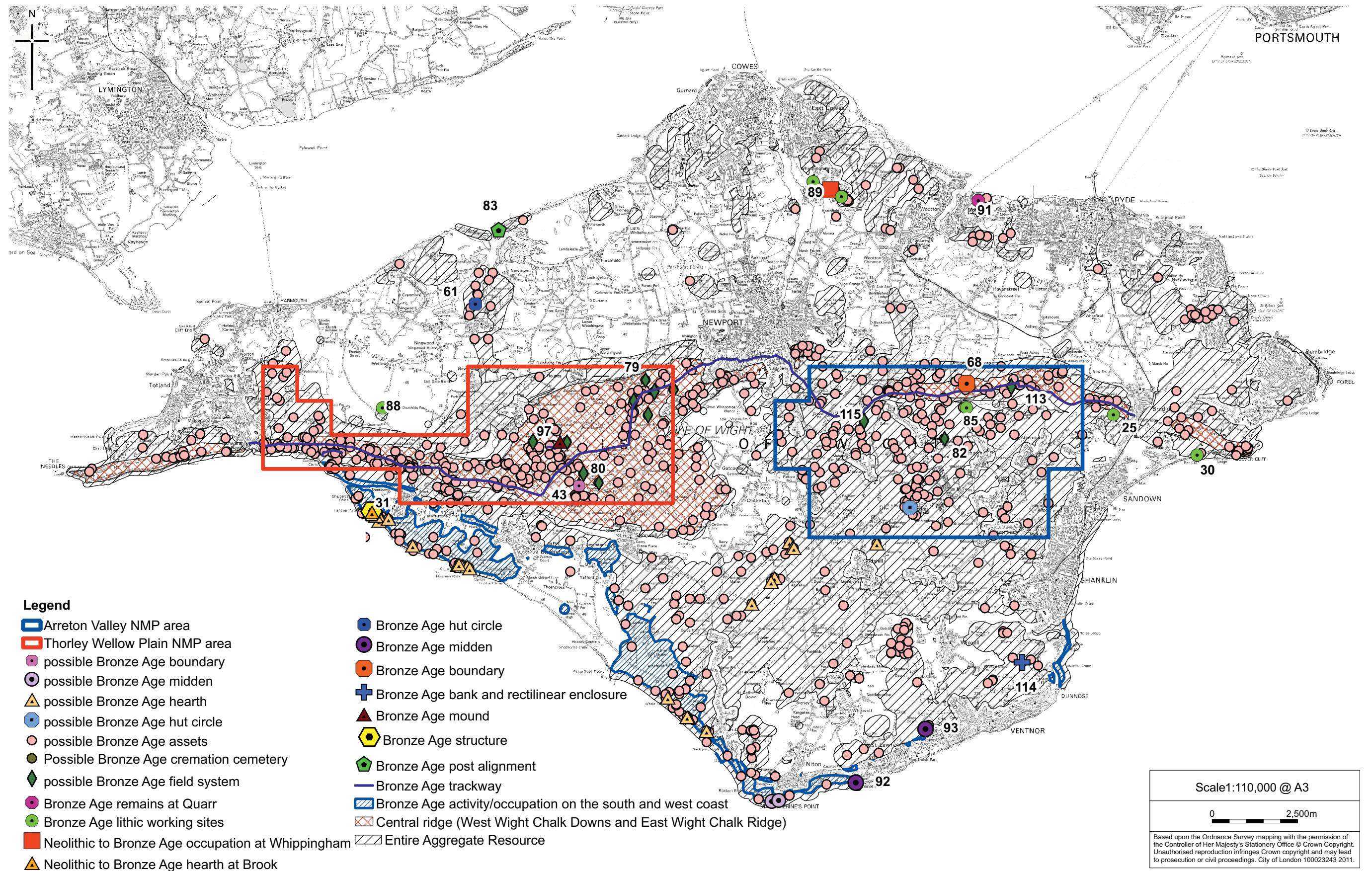


Fig 11 Bronze Age domestic, industrial, unassigned and agricultural assets

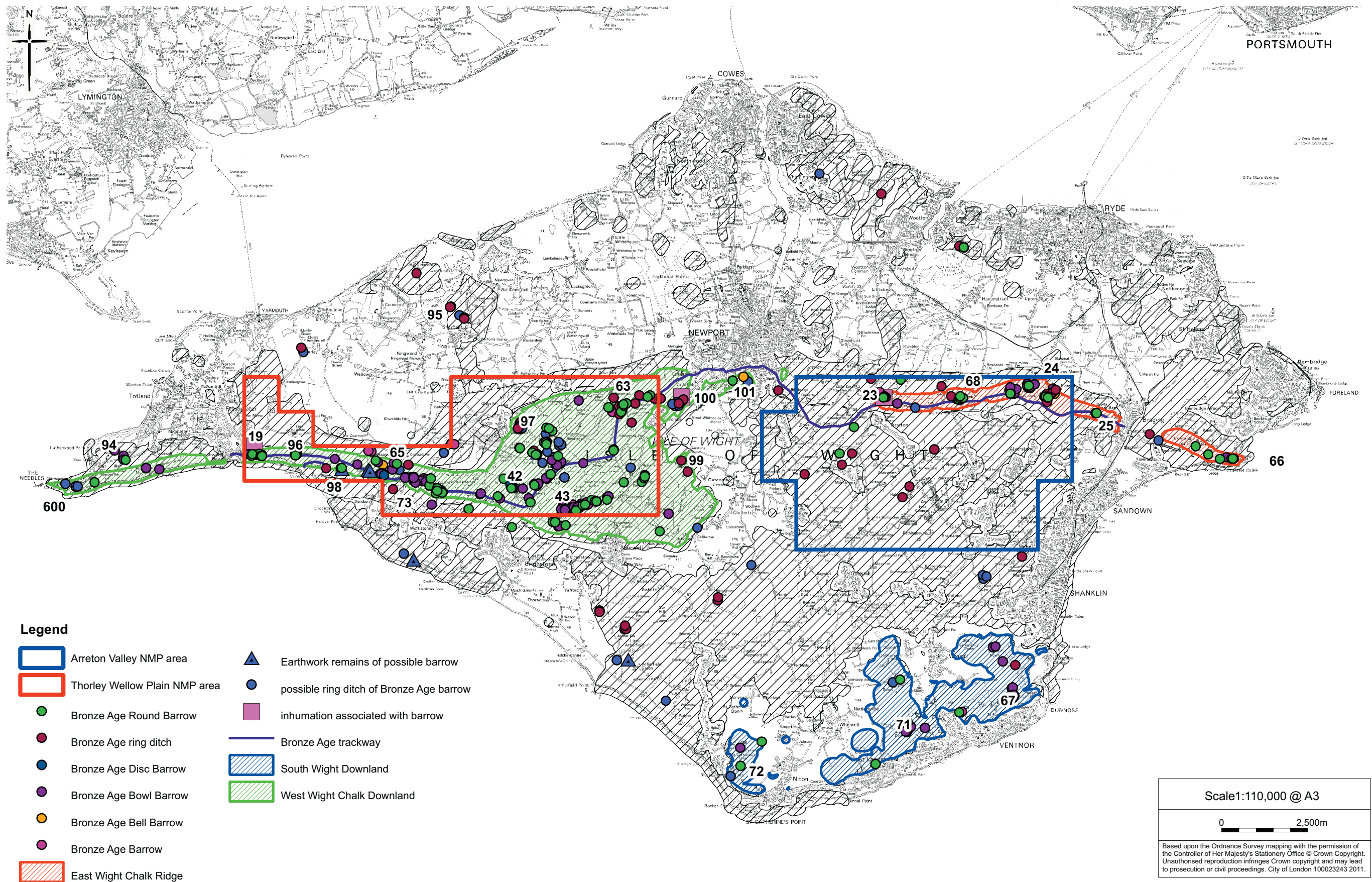


Fig 12 Early Bronze Age religious, ritual or funerary assets

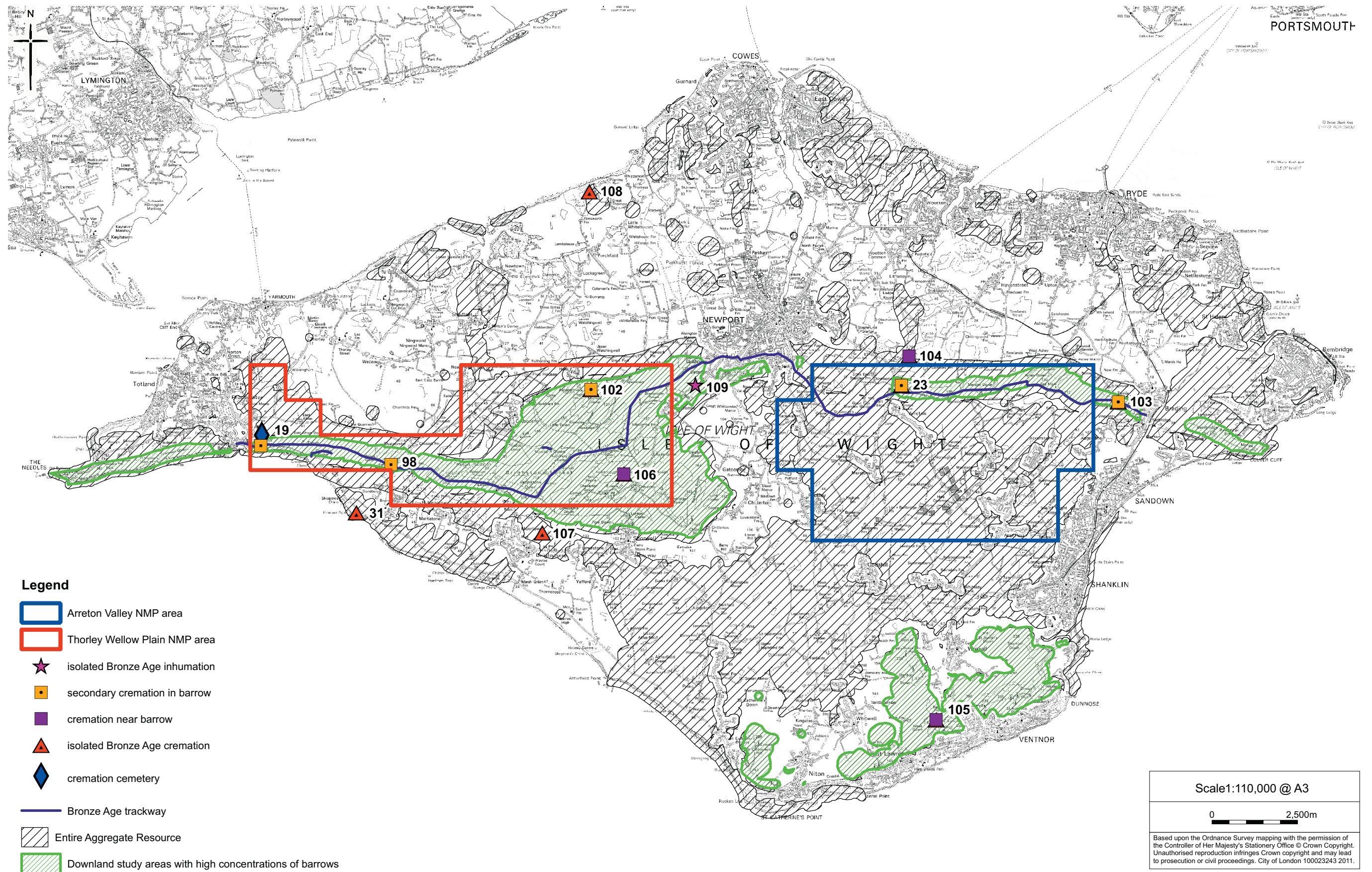


Fig 13 Middle and late Bronze Age religious, ritual or funerary assets

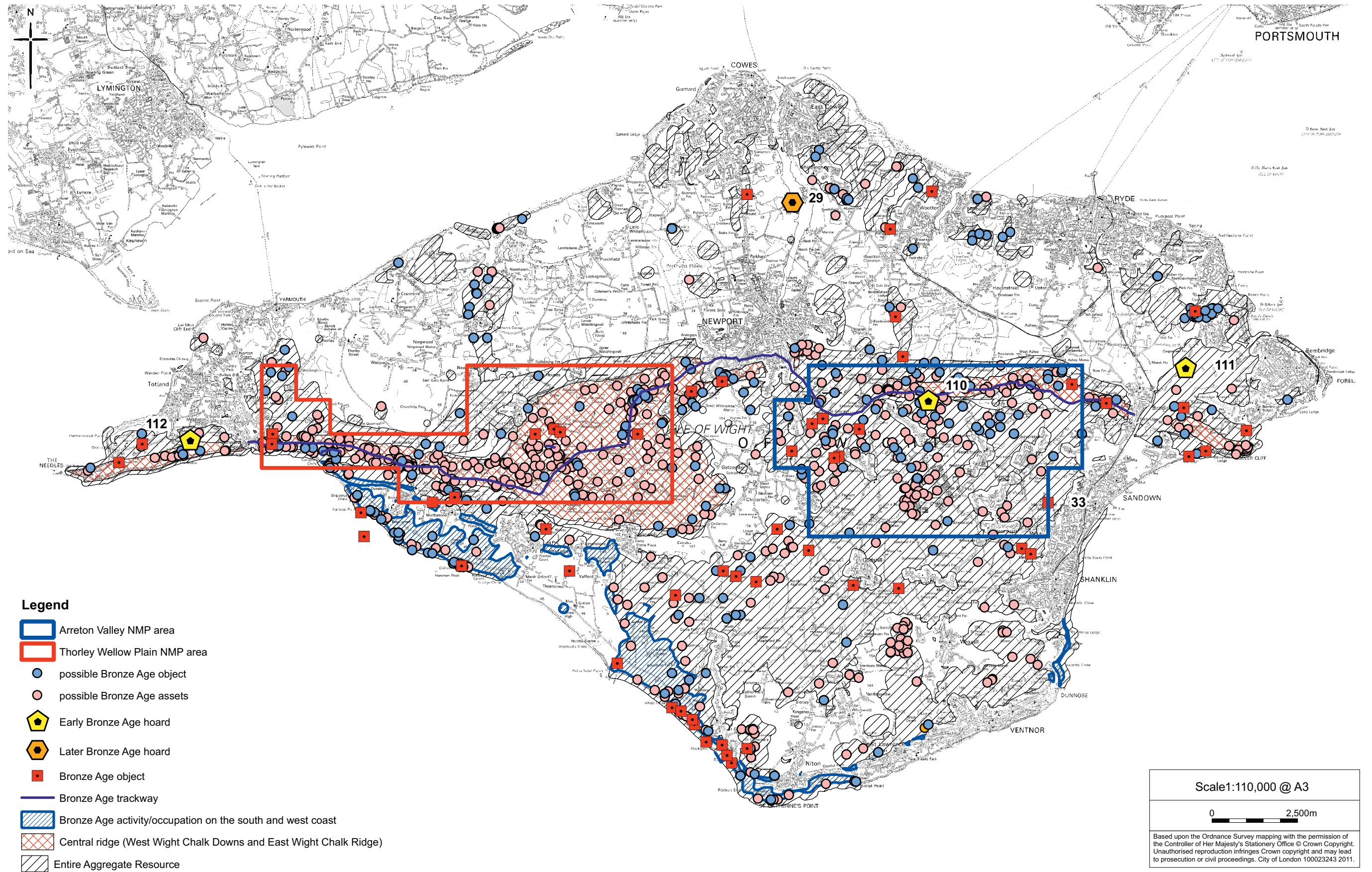


Fig 14 Bronze Age hoards and objects

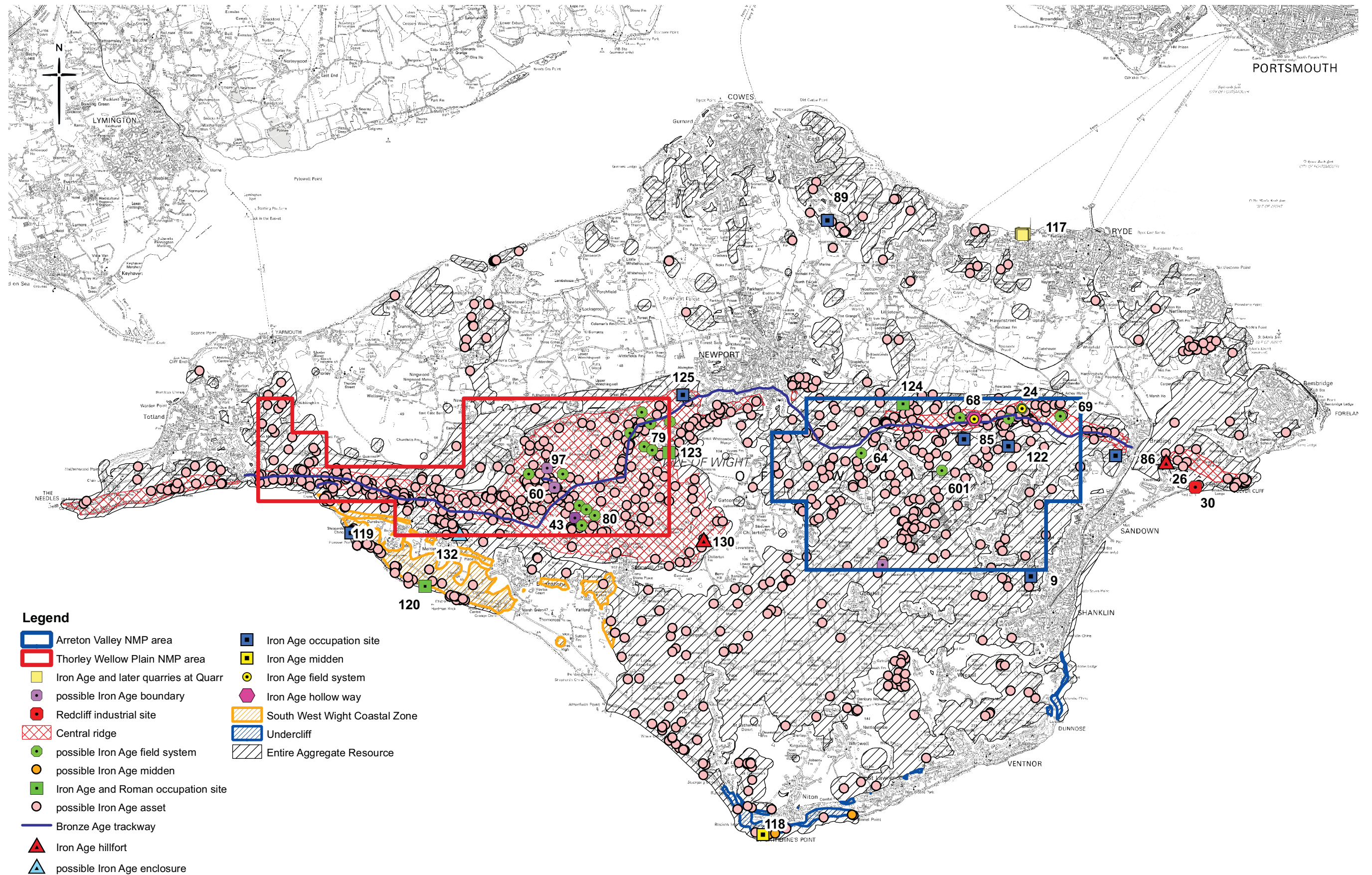


Fig 15 Iron Age domestic, industrial, defence and agricultural assets

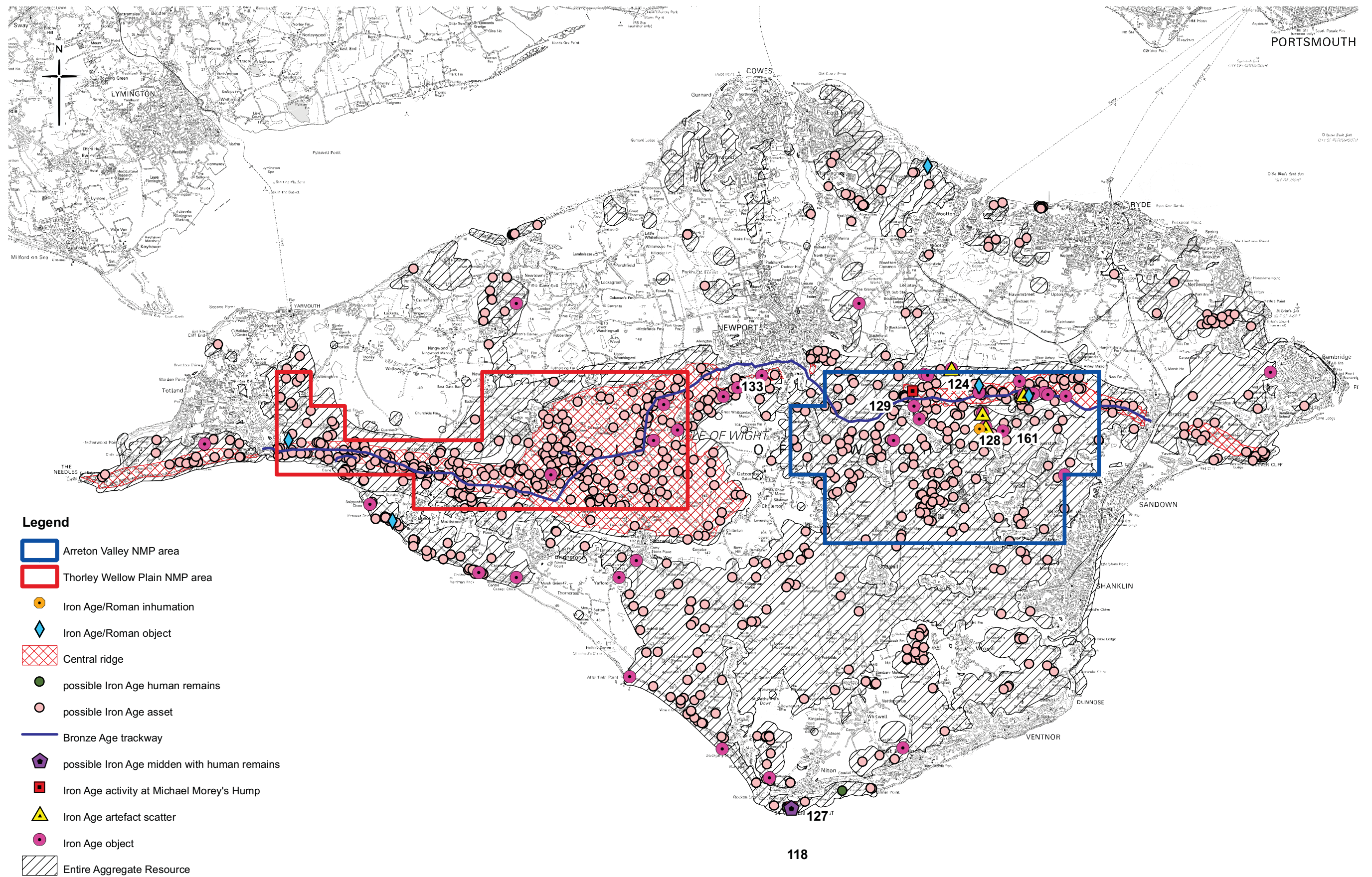


Fig 16 Iron Age religious, ritual and funerary assets

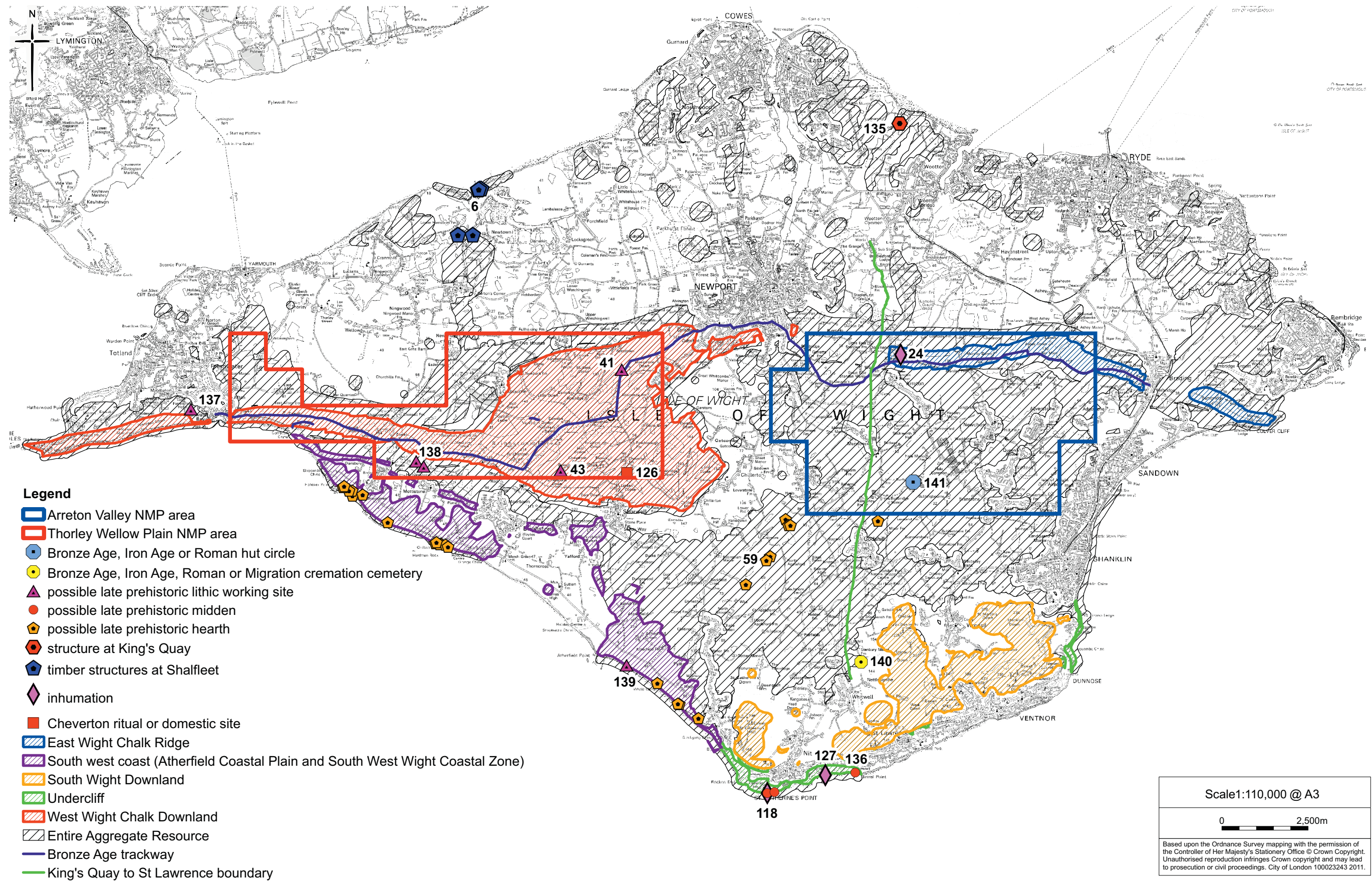


Fig 17 Undated assets representing activity of the later prehistoric or later periods

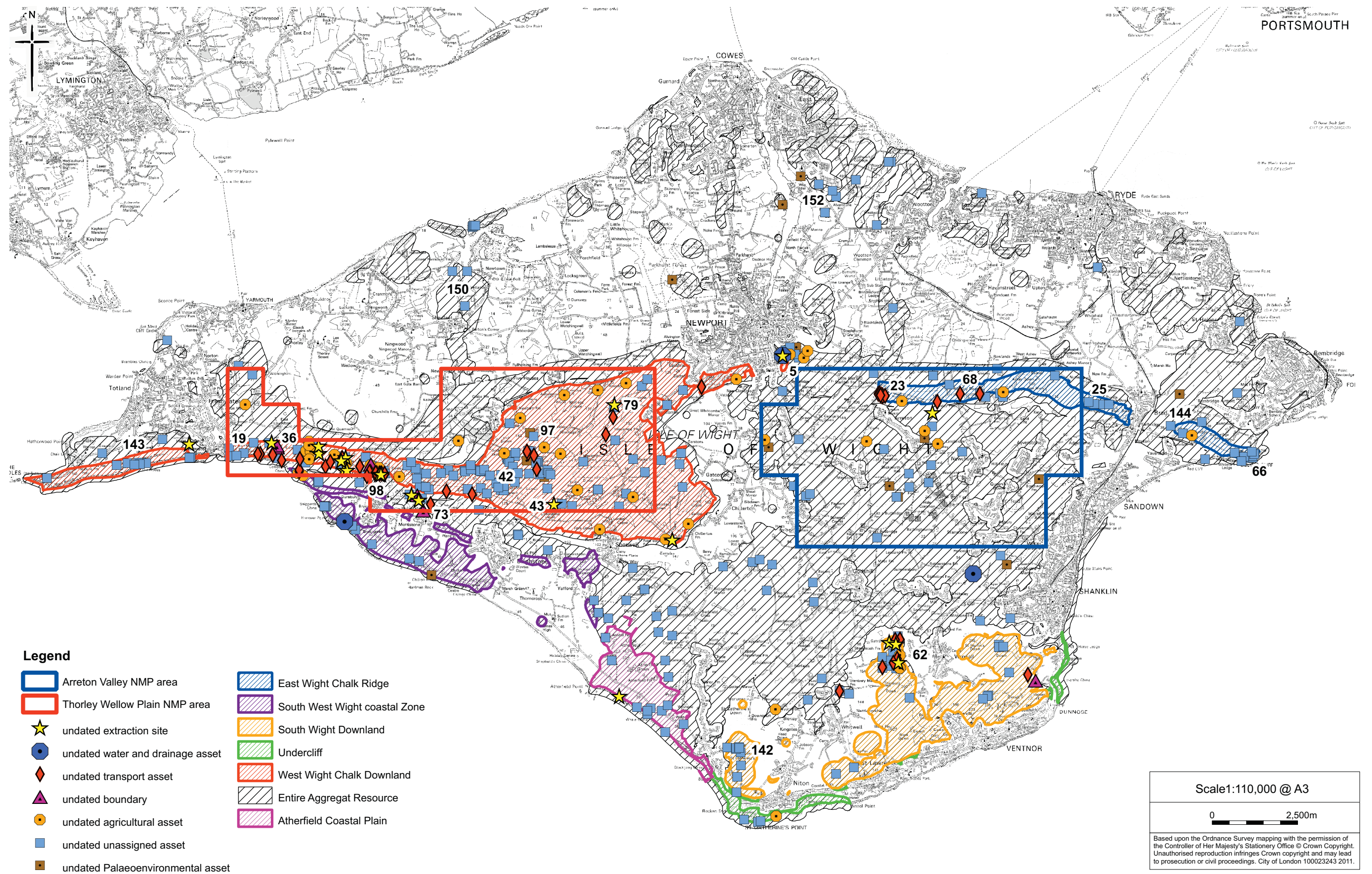


Fig 18 Undated assets representing diffuse landscape features of the late prehistoric or later periods



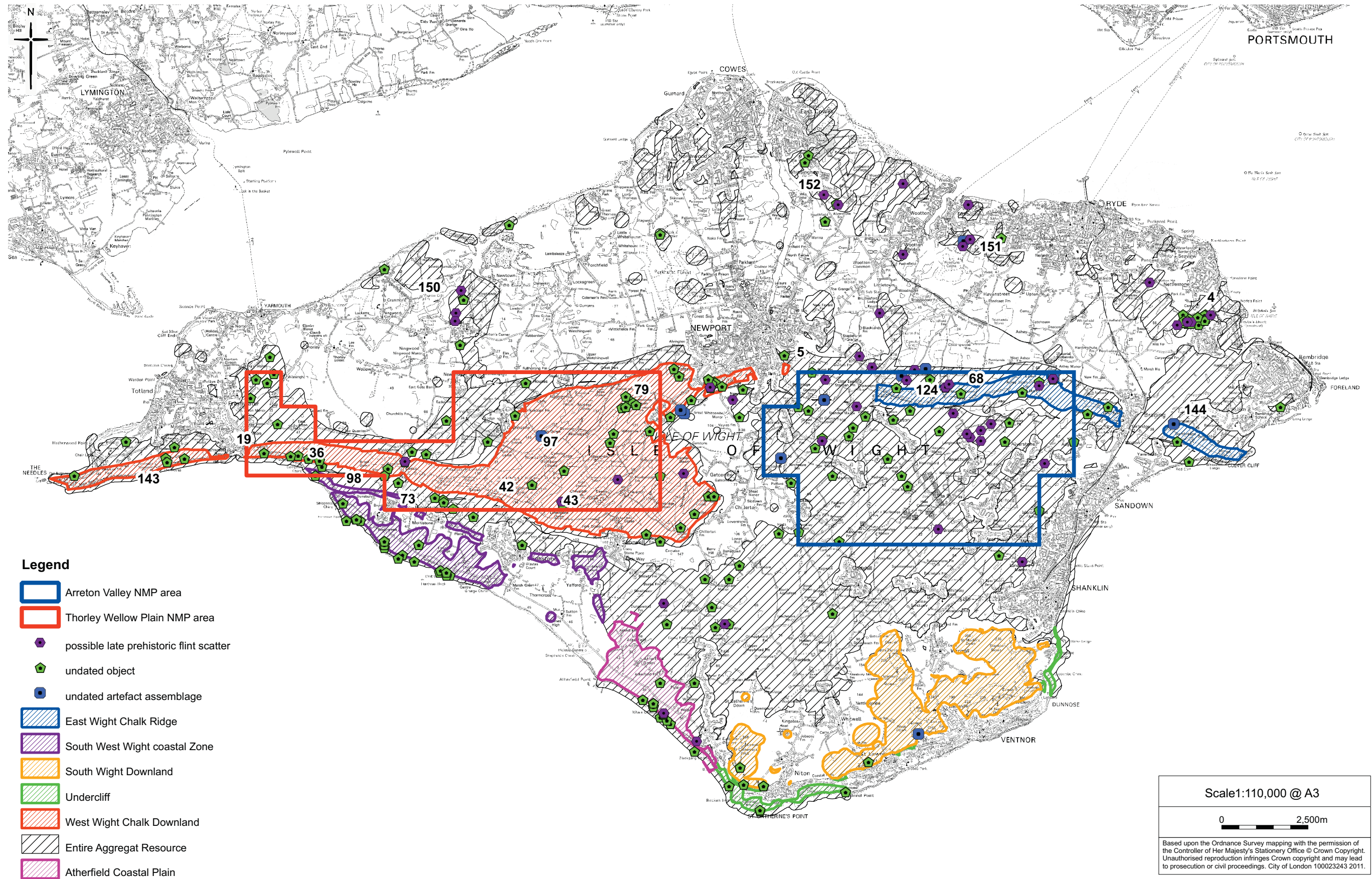


Fig 19 Undated objects of the late prehistoric or later periods

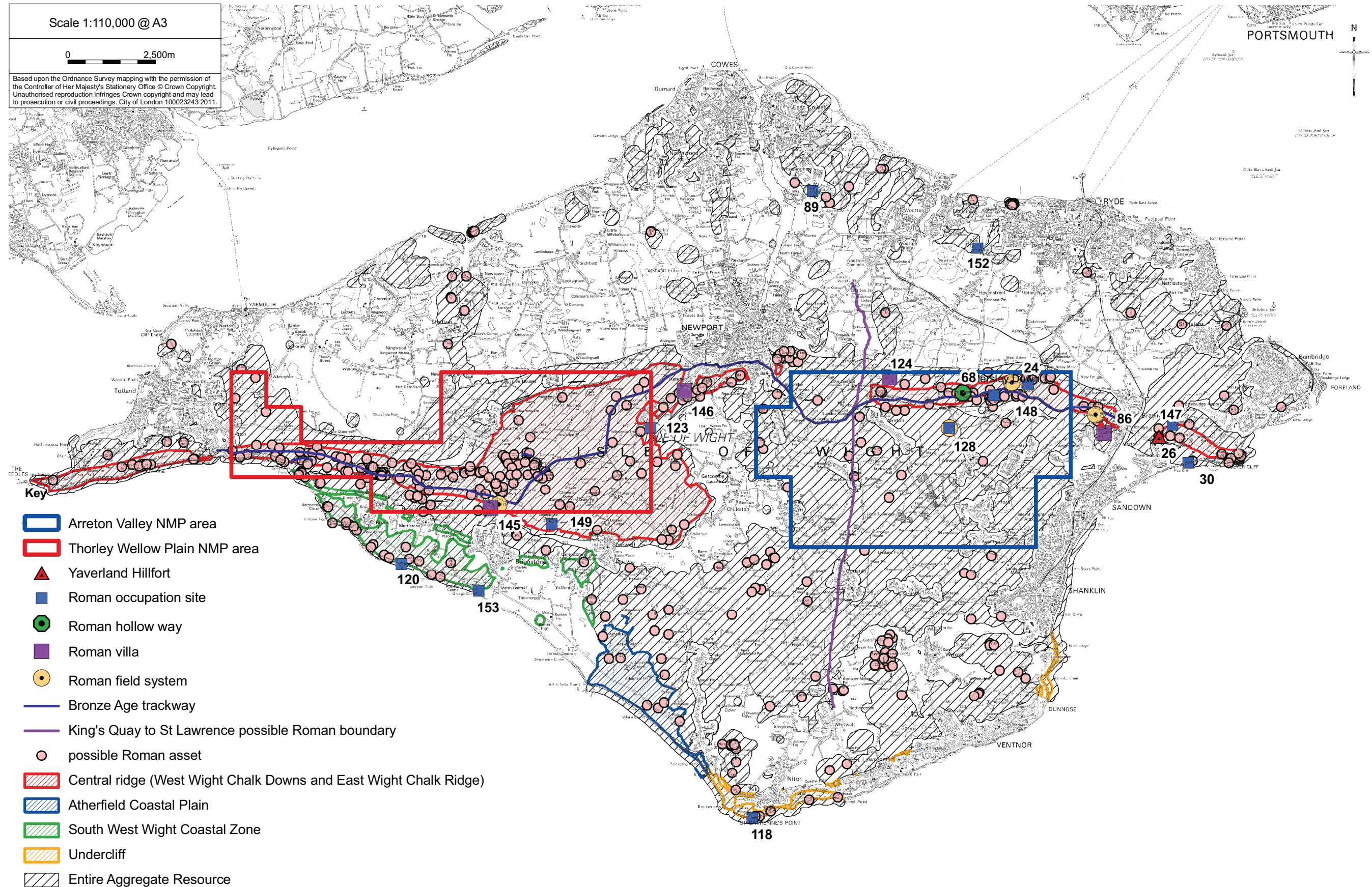


Fig 20 Roman domestic, defence, agricultural and transport assets

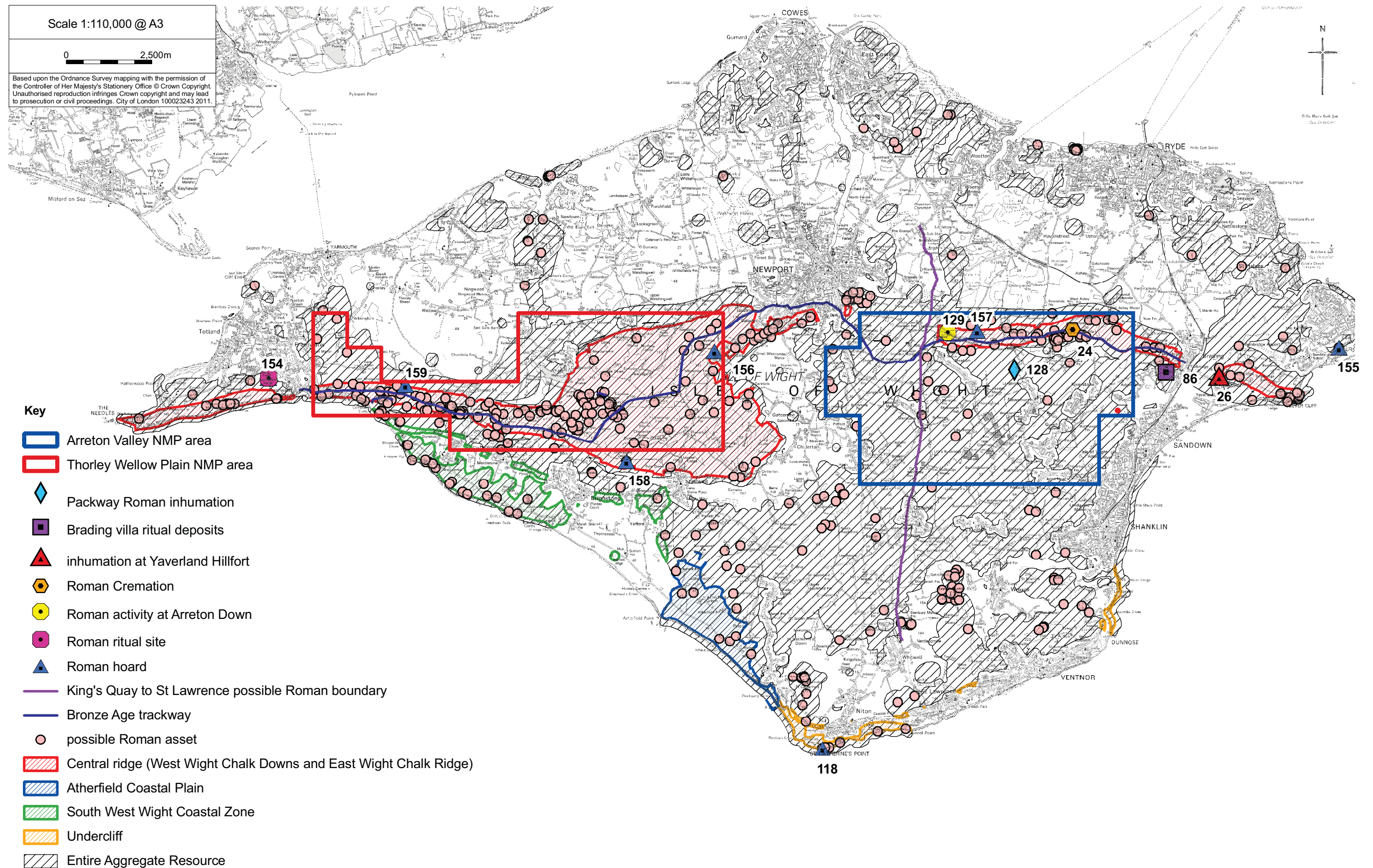


Fig 21 Roman religious, ritual and funerary assets and hoards

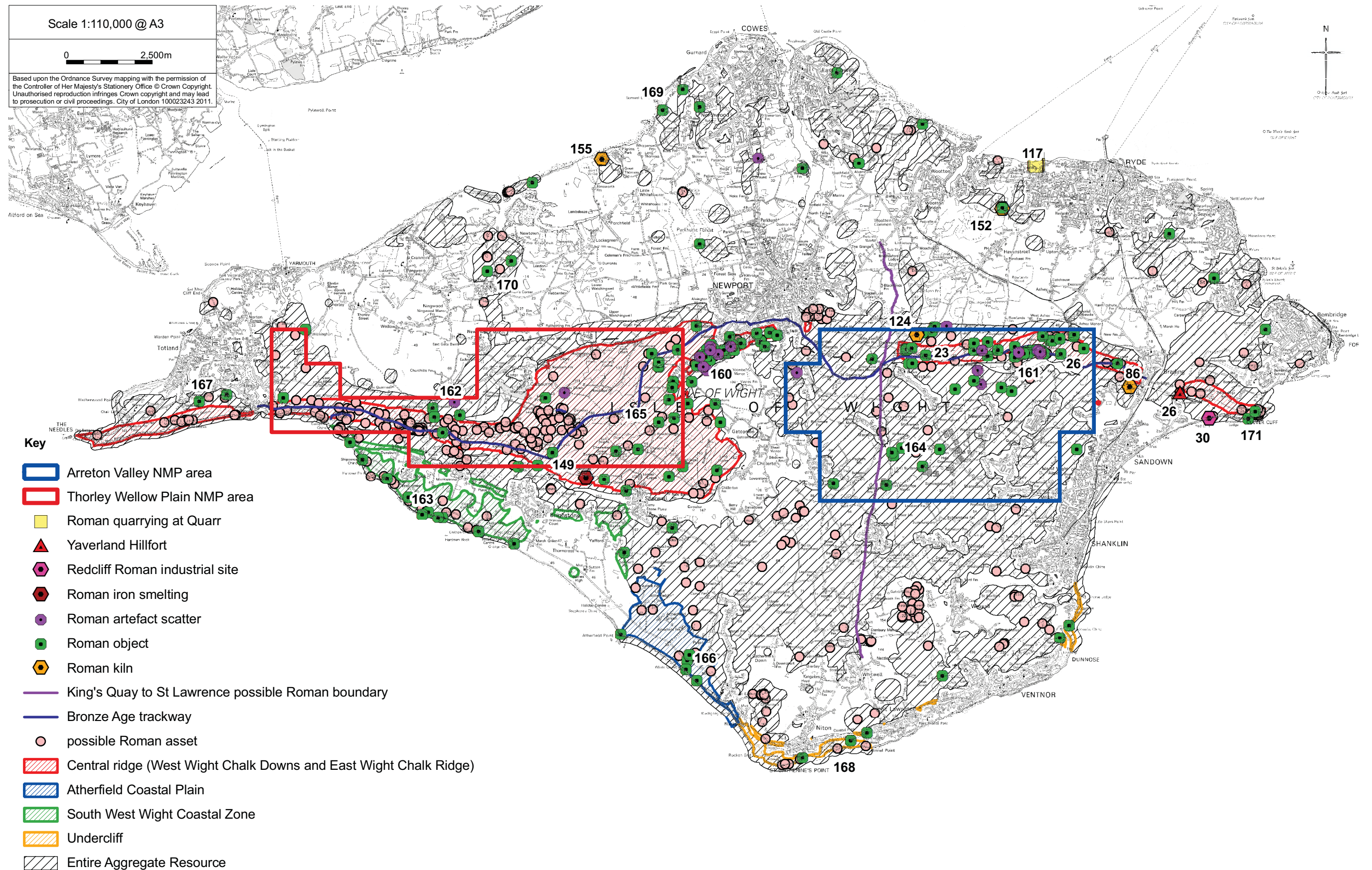


Fig 22 Roman objects and industrial assets

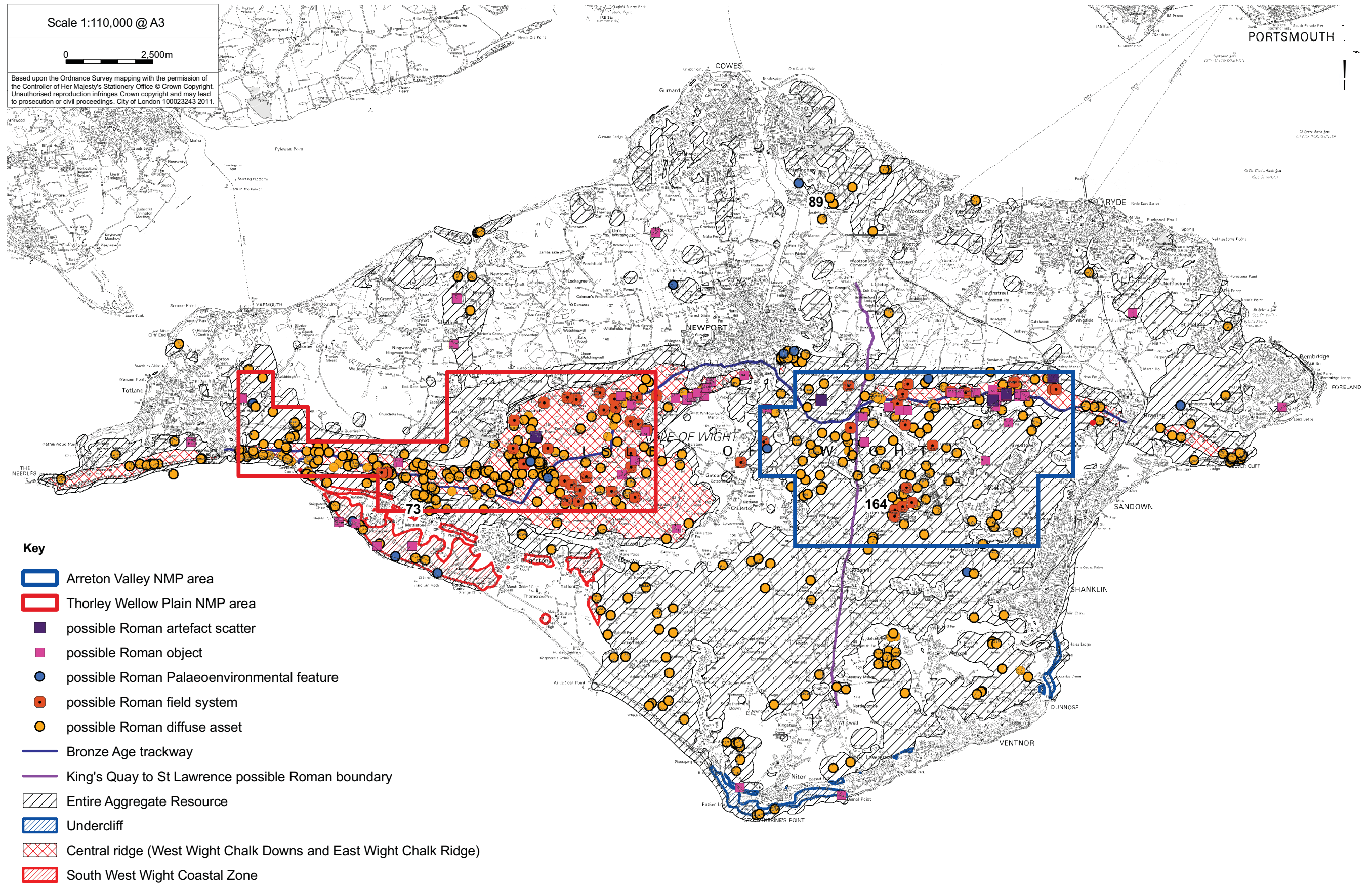


Fig 23 Possible diffuse Roman assets

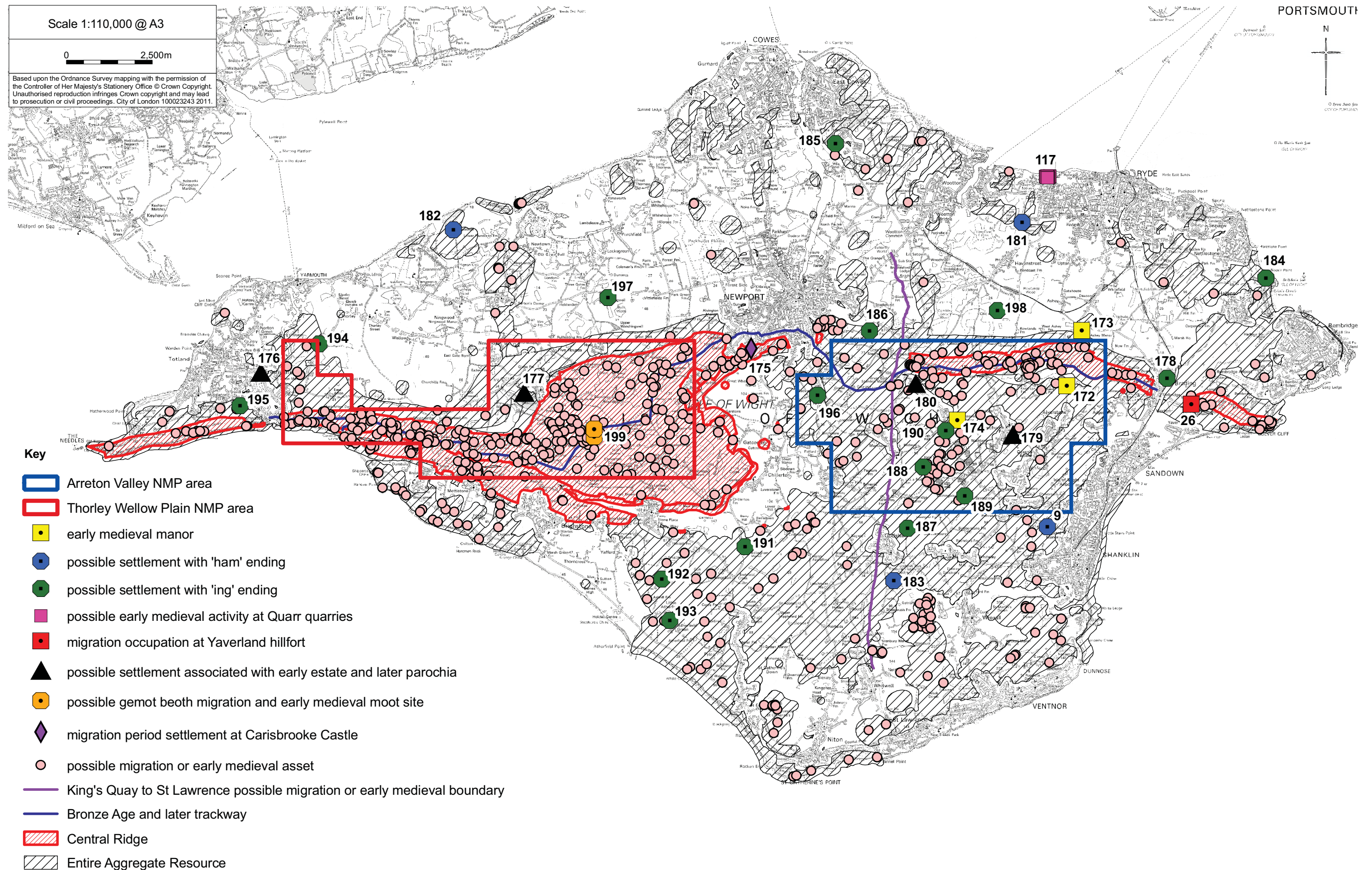


Fig 24 Migration and early medieval period domestic, defence, industrial and civil assets

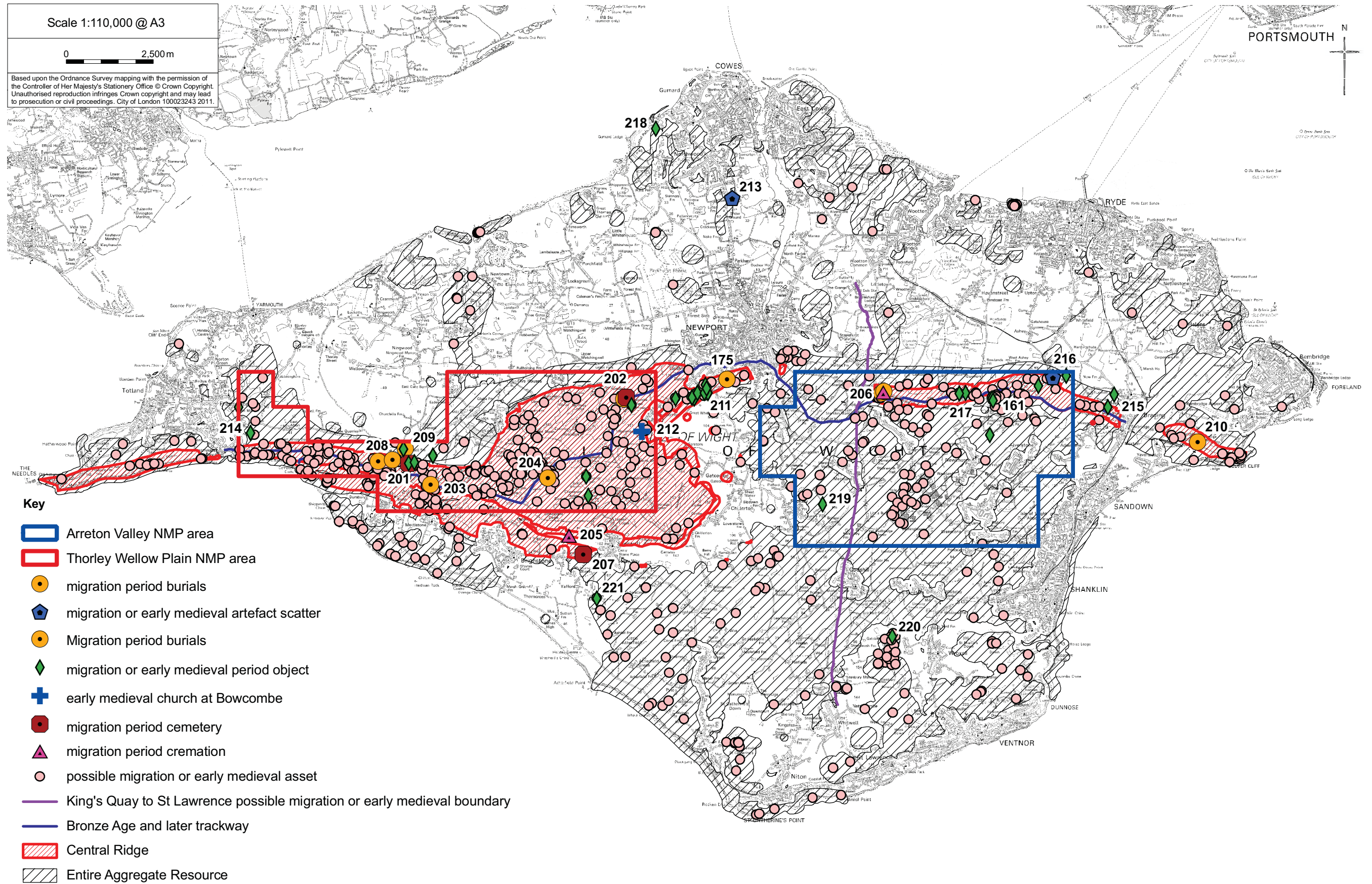


Fig 25 Migration and early medieval period objects and religious, ritual and funerary assets

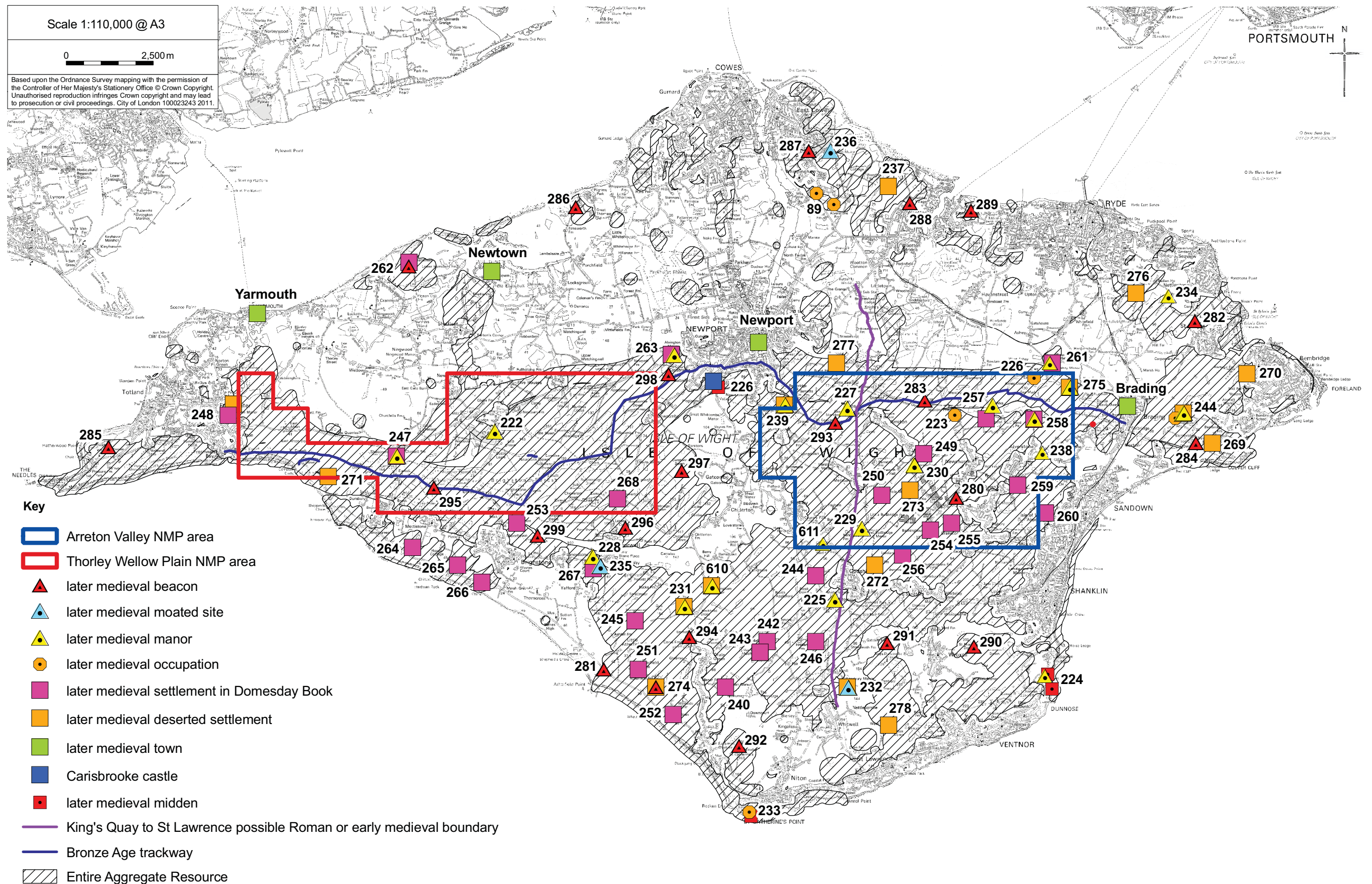


Fig 26 Later medieval domestic and defence assets



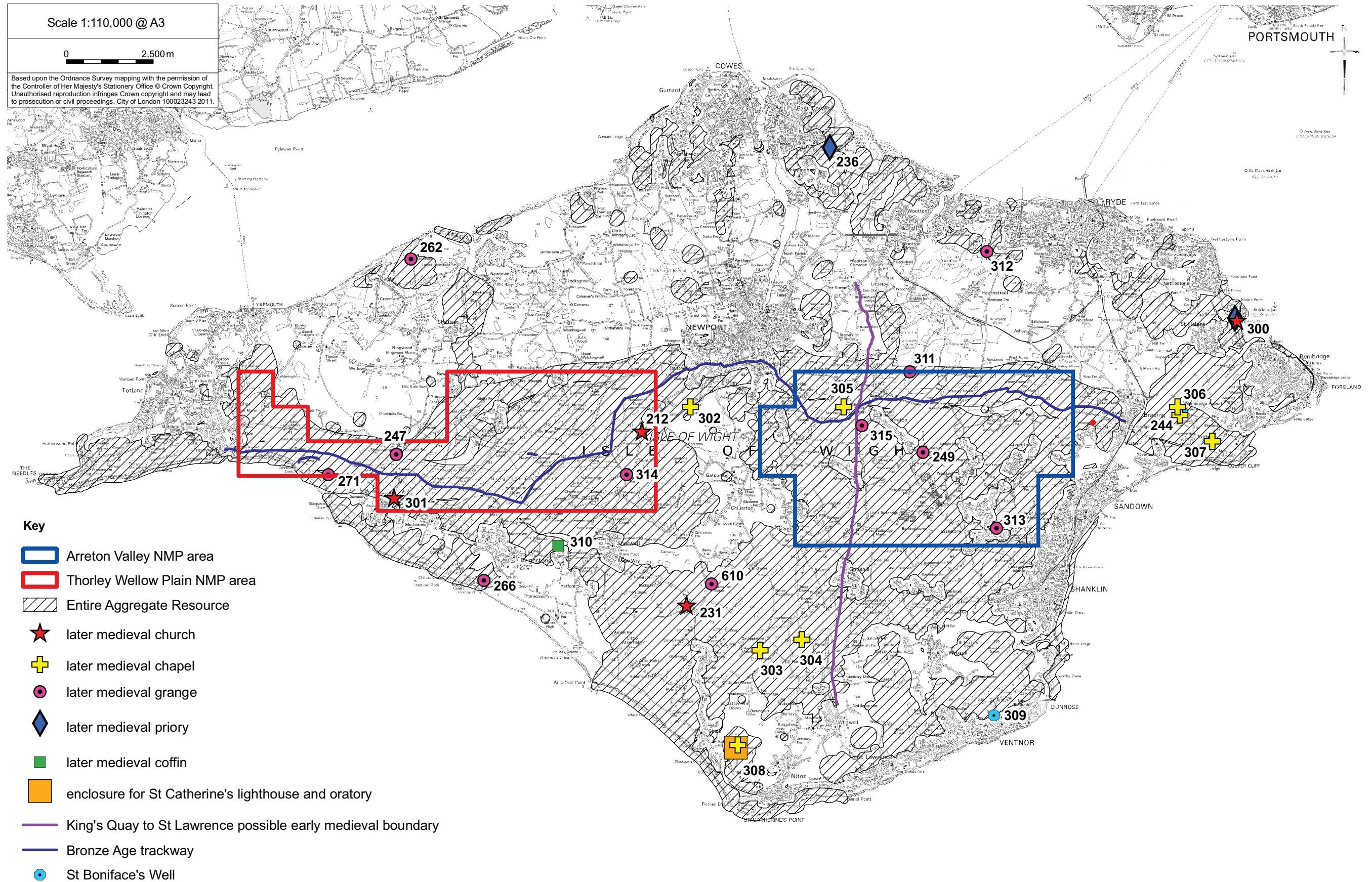


Fig 27 Later medieval religious, ritual or funerary assets

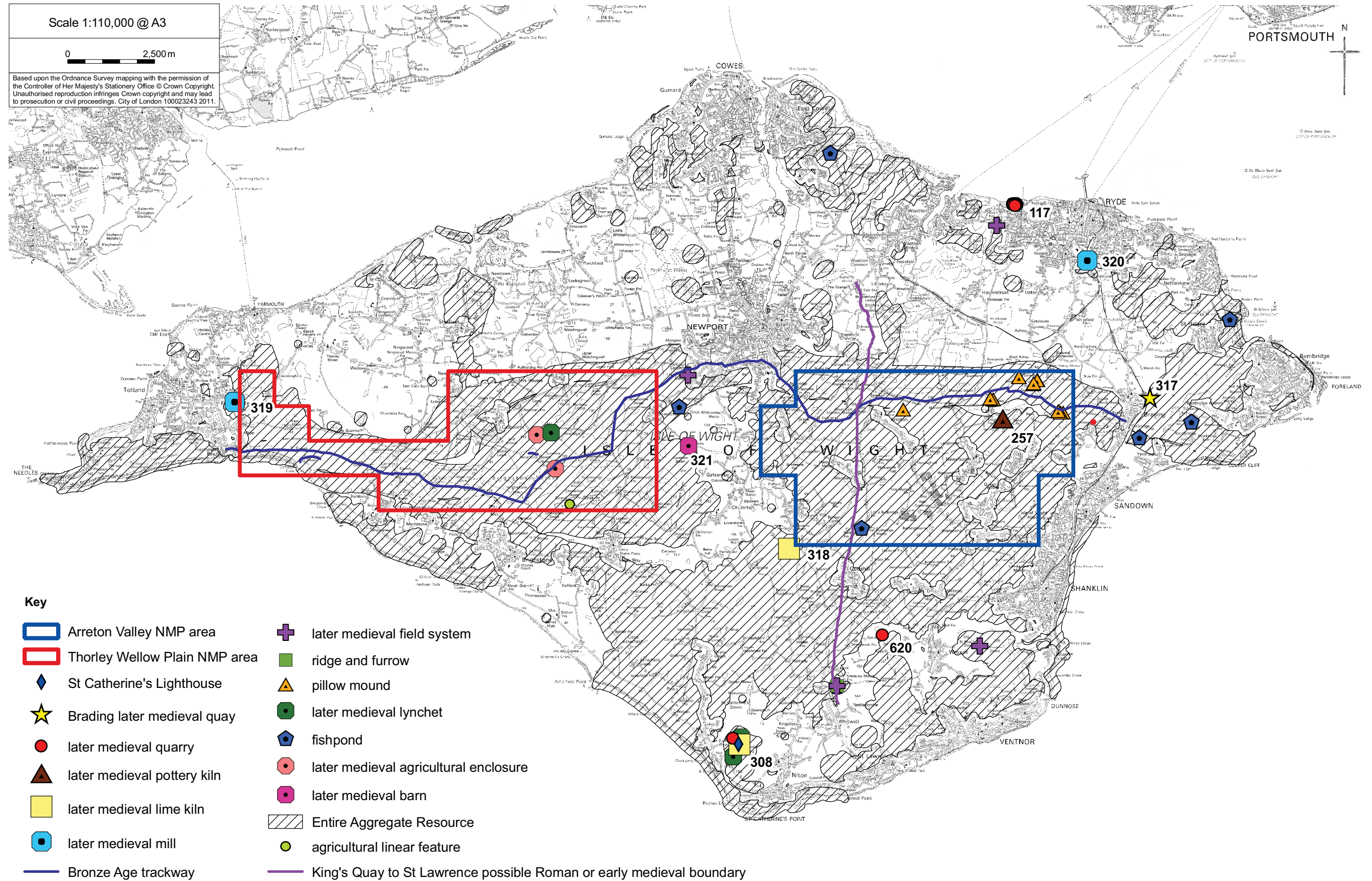


Fig 28 Later medieval agricultural, maritime and industrial assets

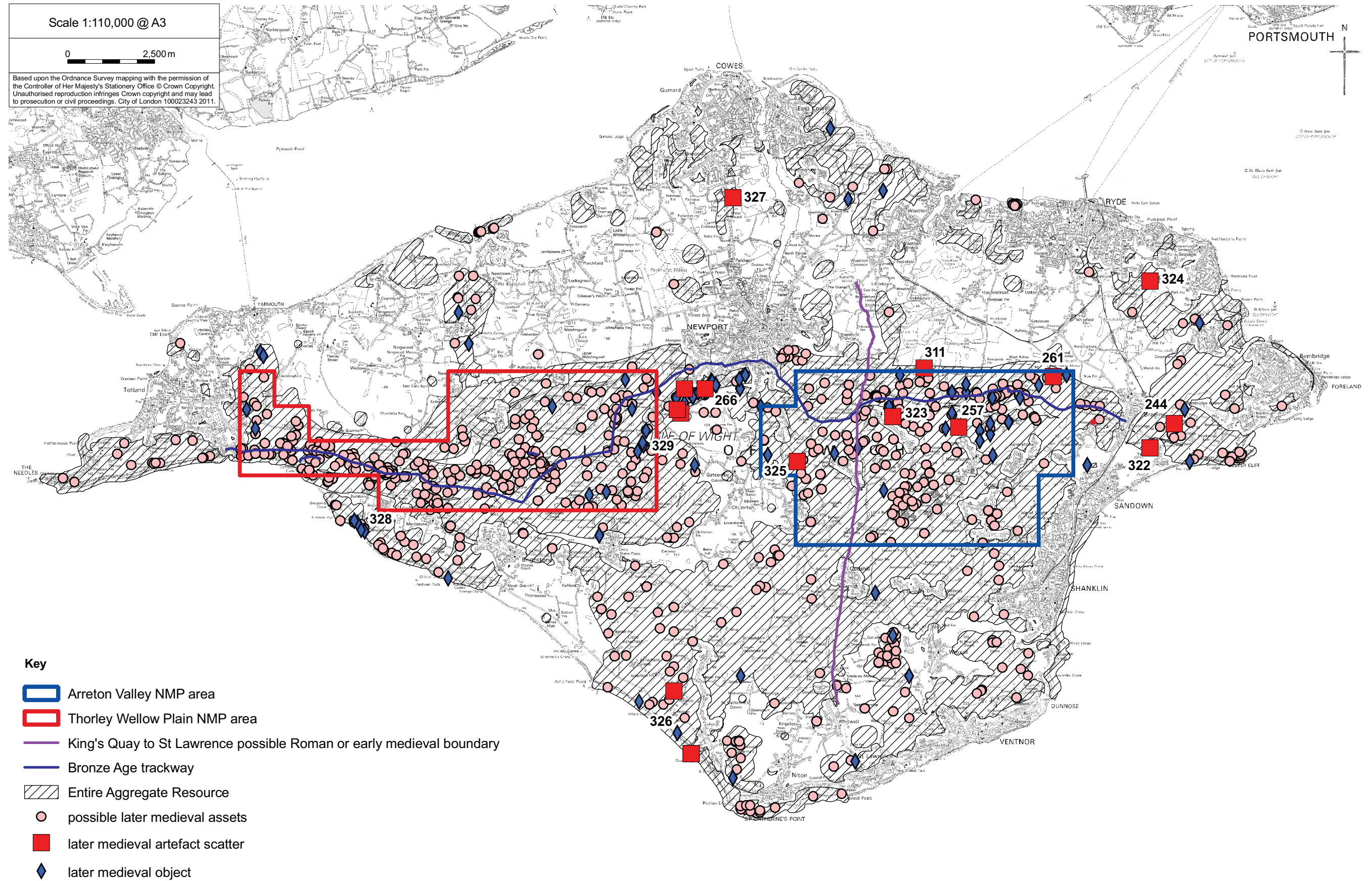


Fig 29 Later medieval objects

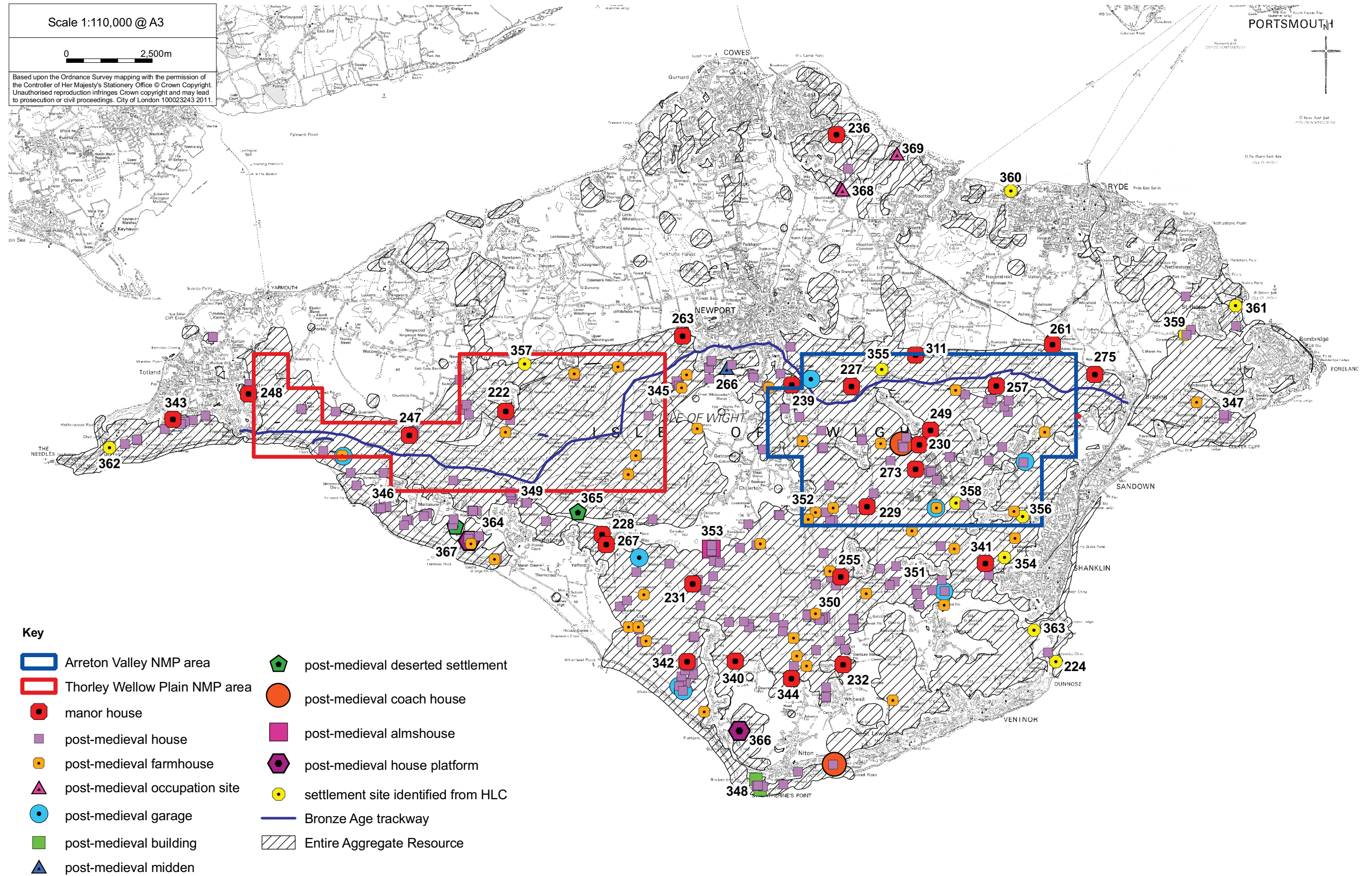


Fig 30 Post-medieval domestic assets

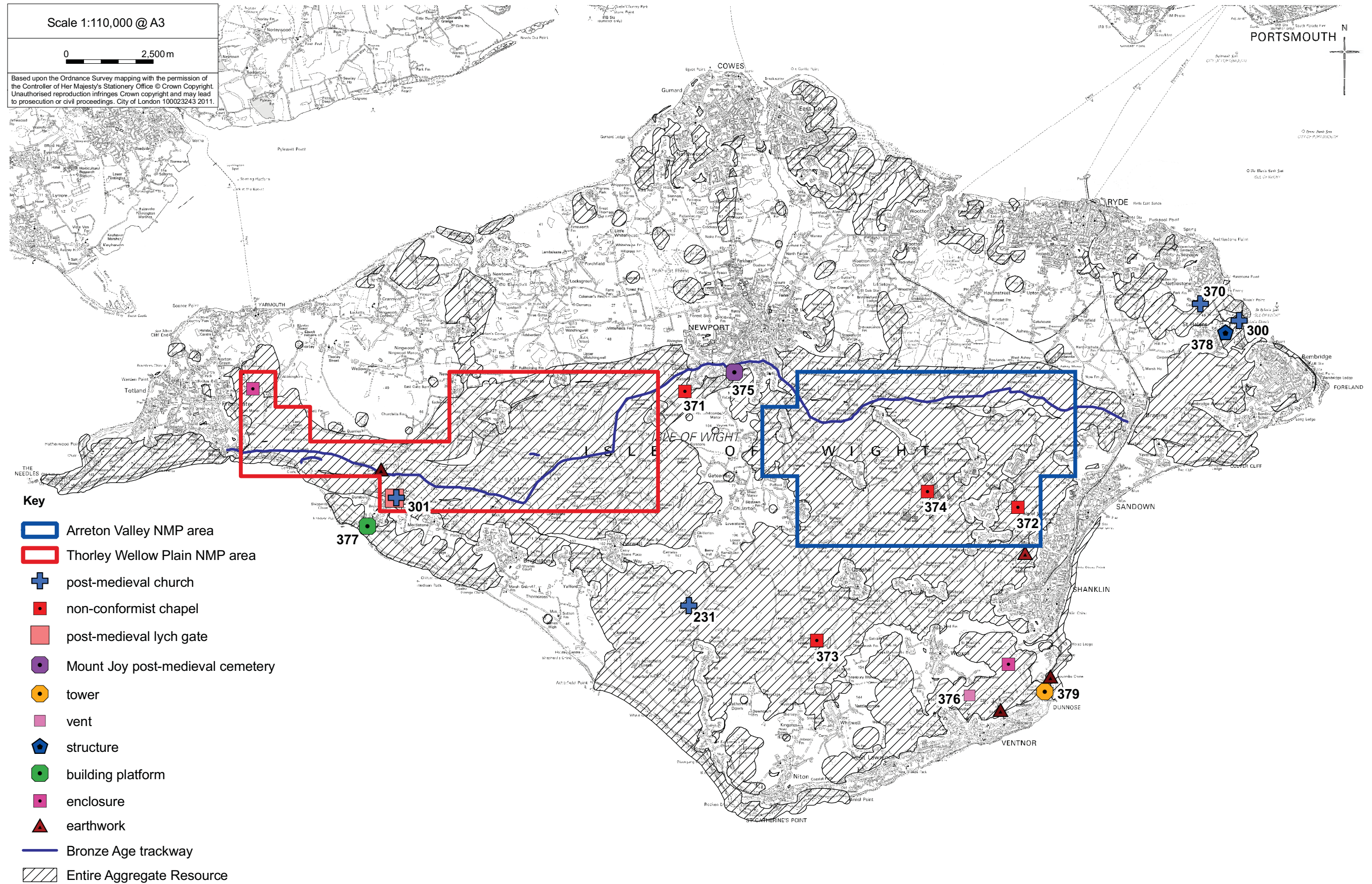


Fig 31 Post-medieval unassigned and religious, ritual and funerary assets

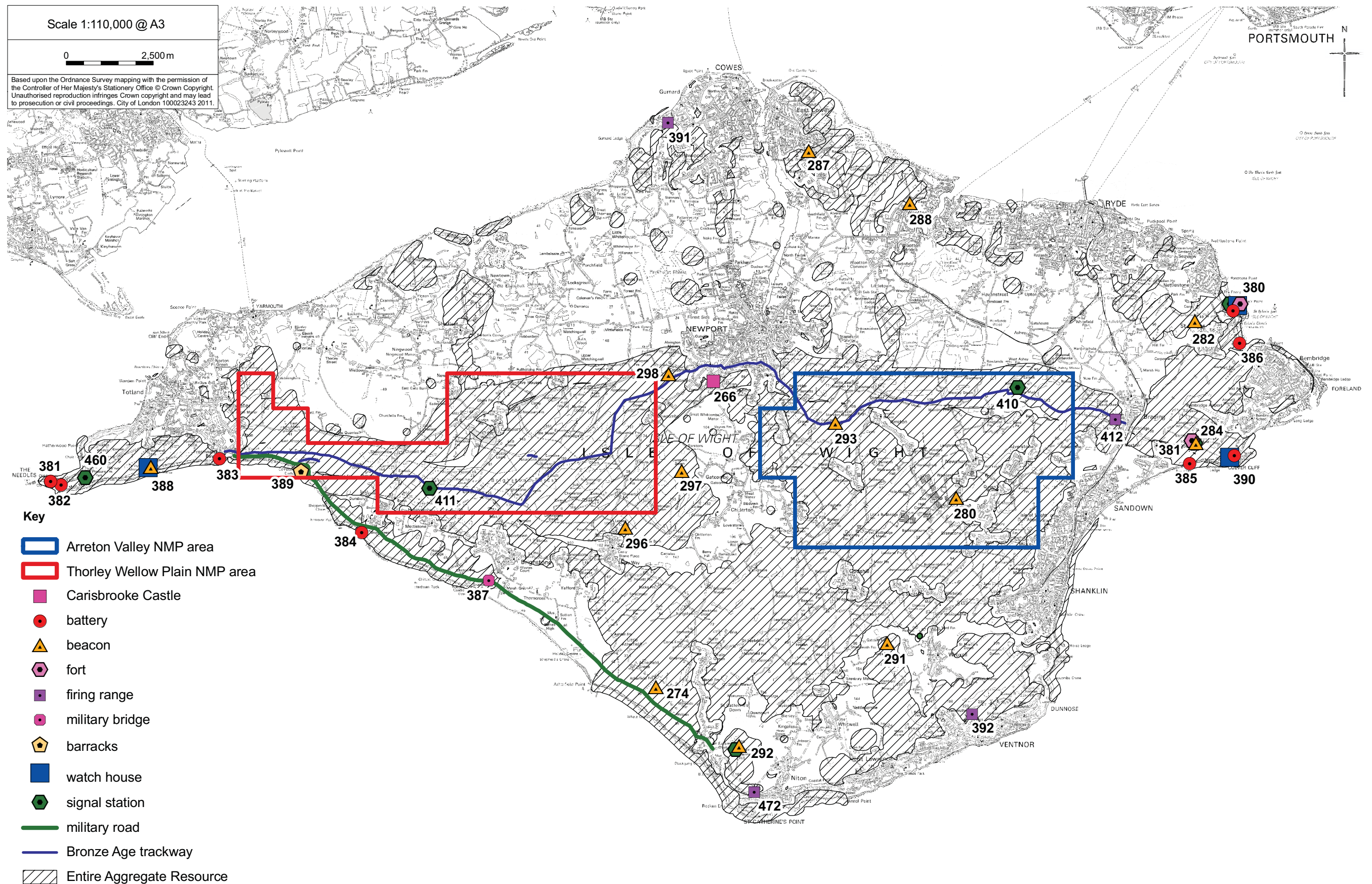


Fig 32 Post-medieval defence assets

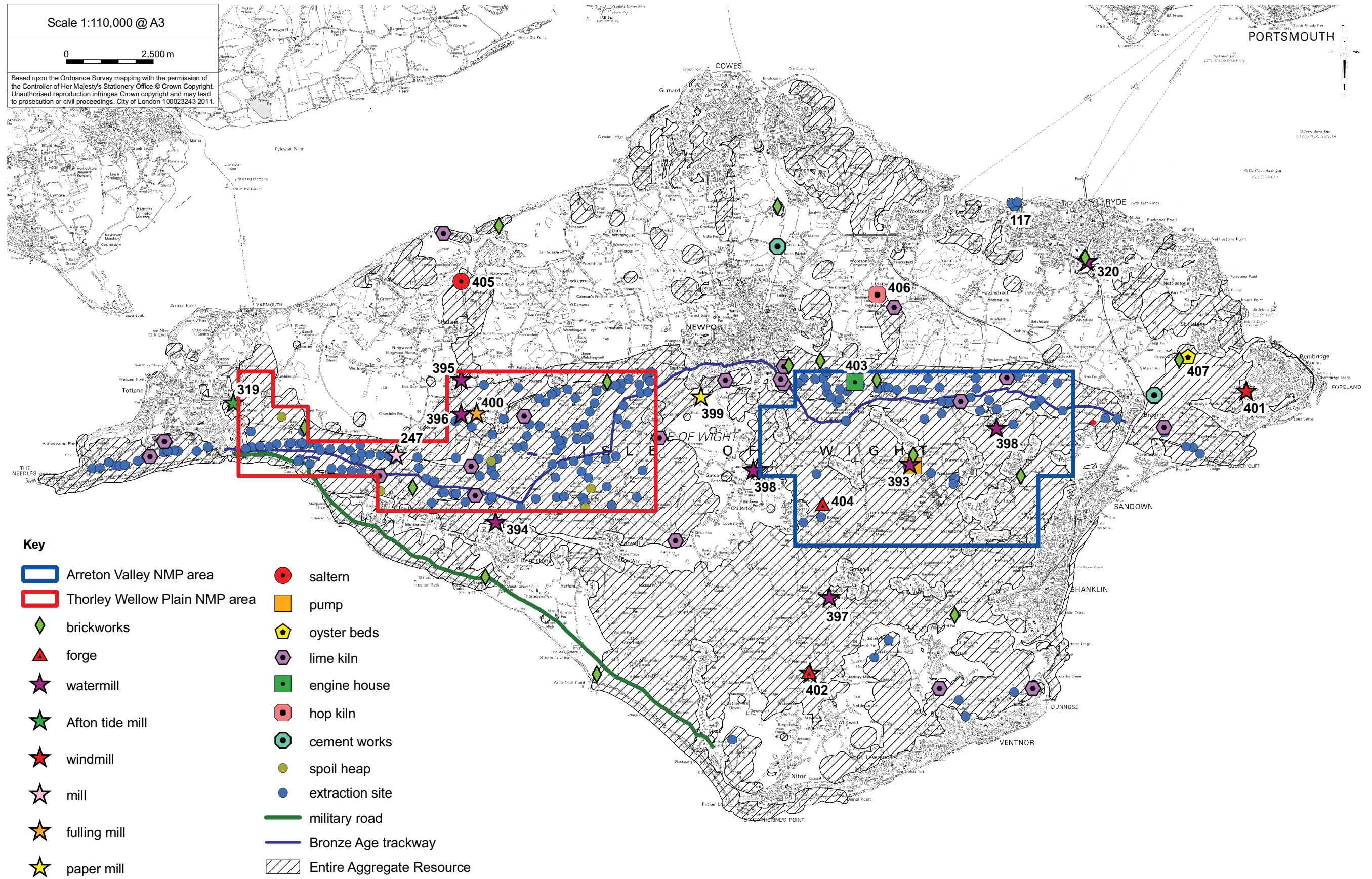


Fig 33 Post-medieval industrial assets

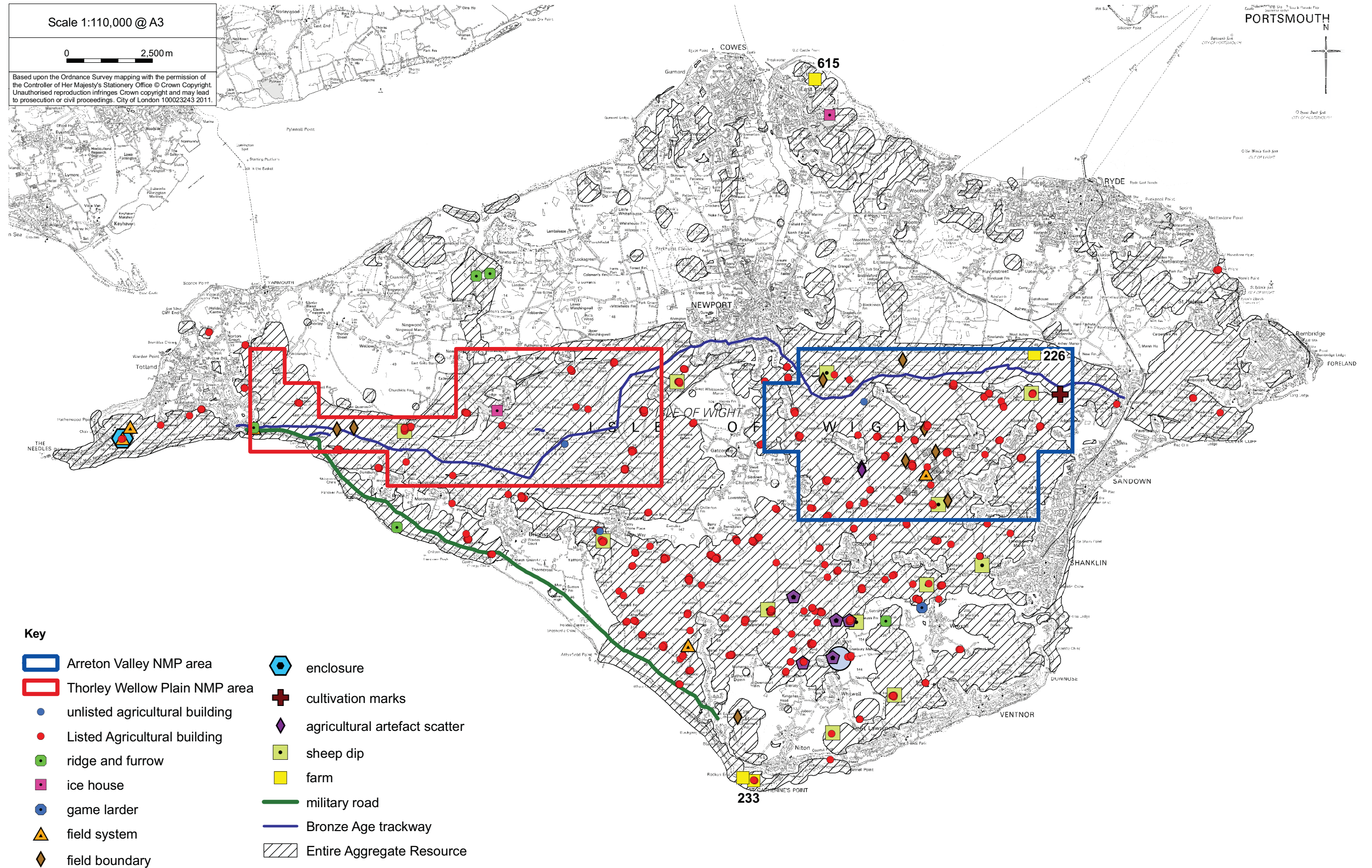


Fig 34 Post-medieval agricultural assets



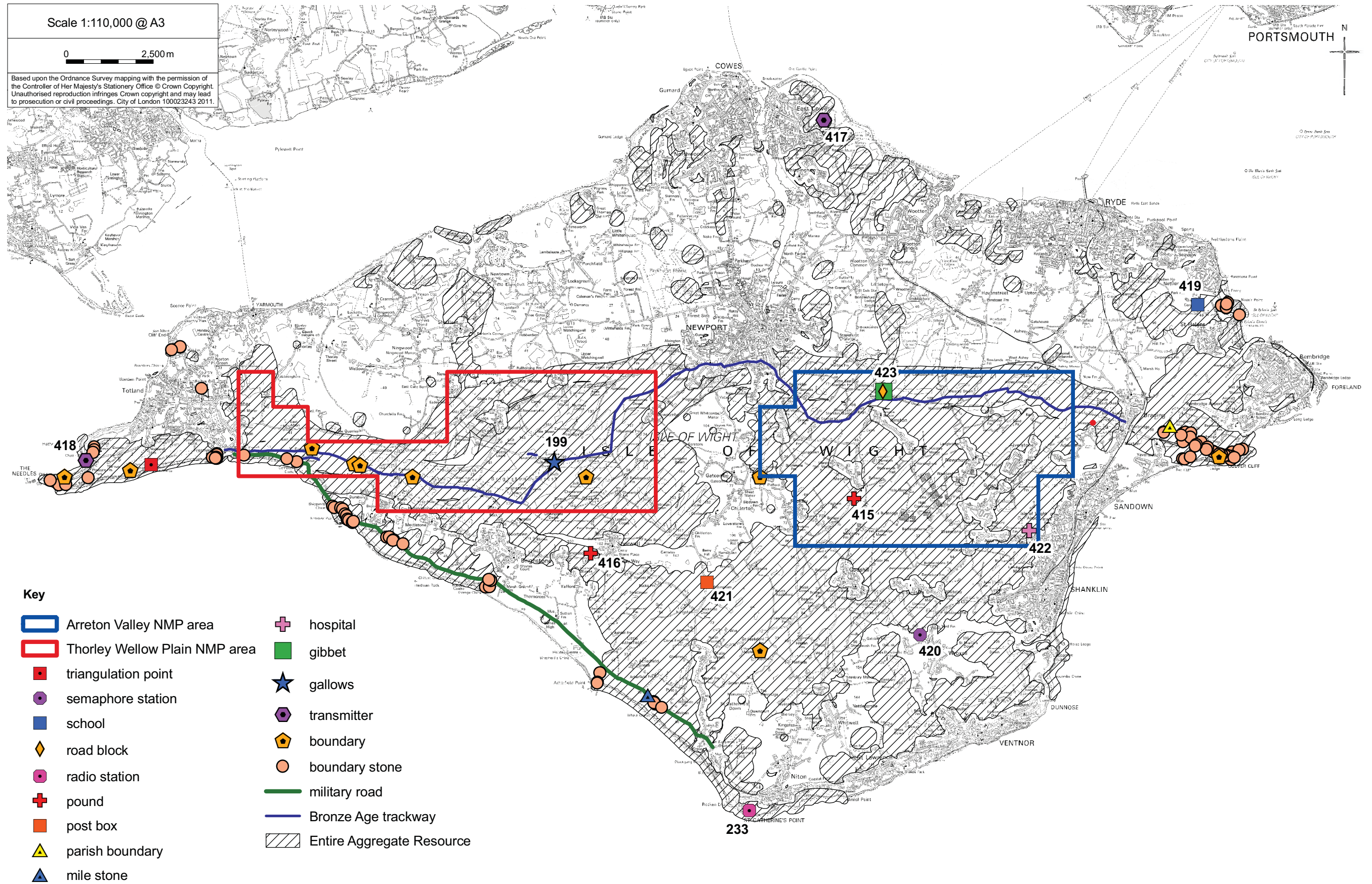


Fig 35 Post-medieval civil assets

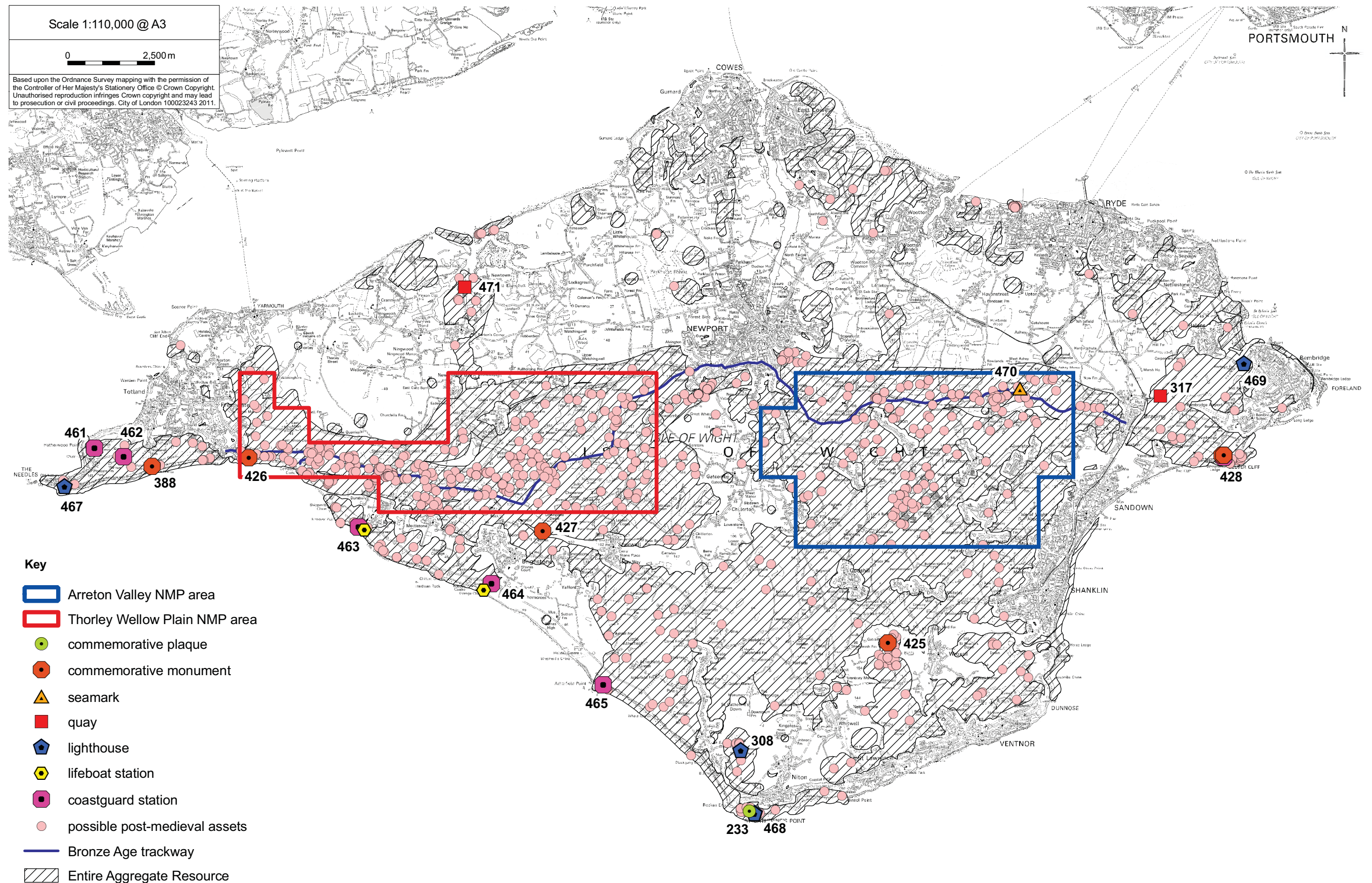


Fig 36 Post-medieval commemorative and maritime assets and possible post-medieval assets

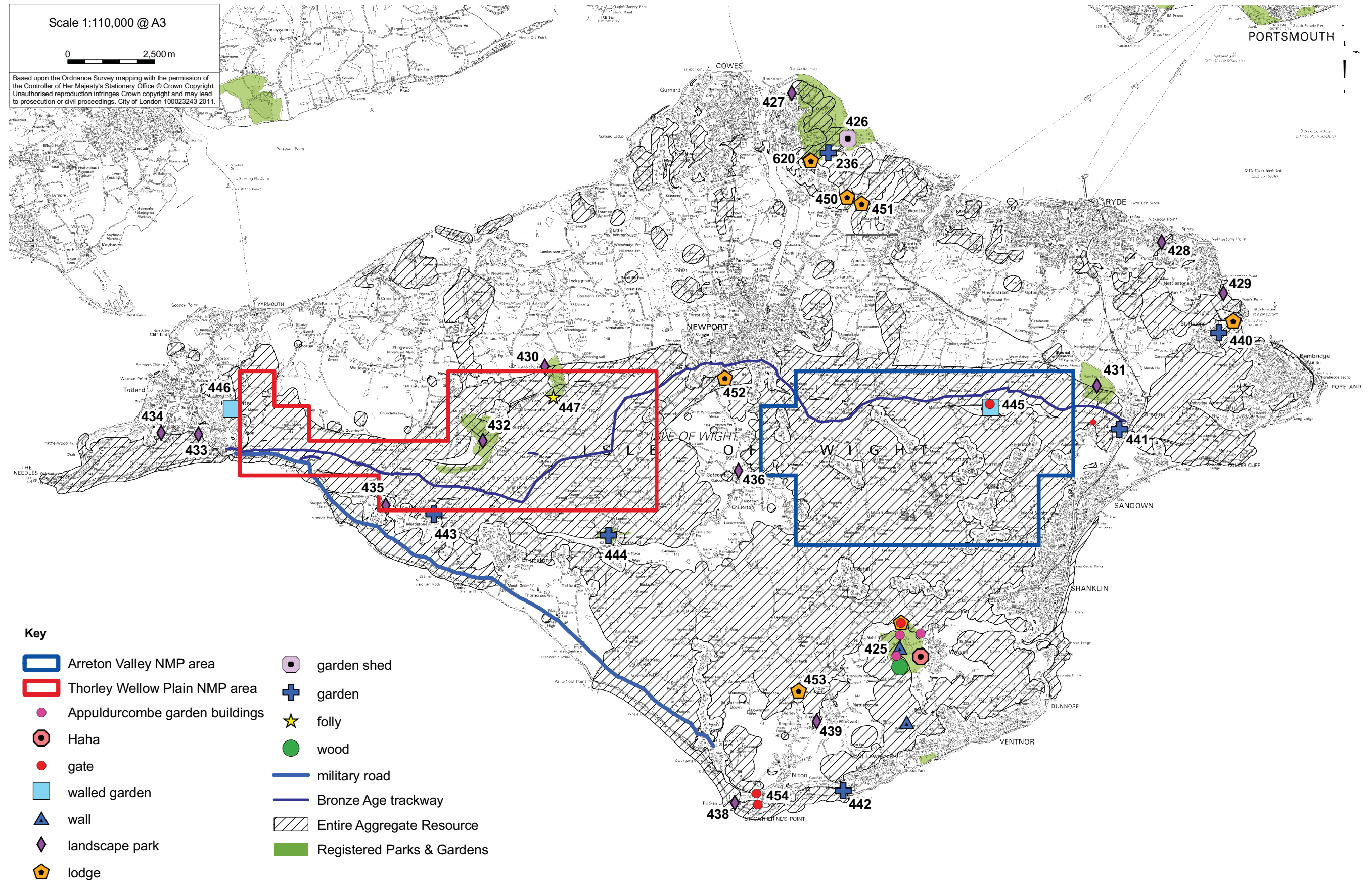


Fig 37 Post-medieval parks and gardens

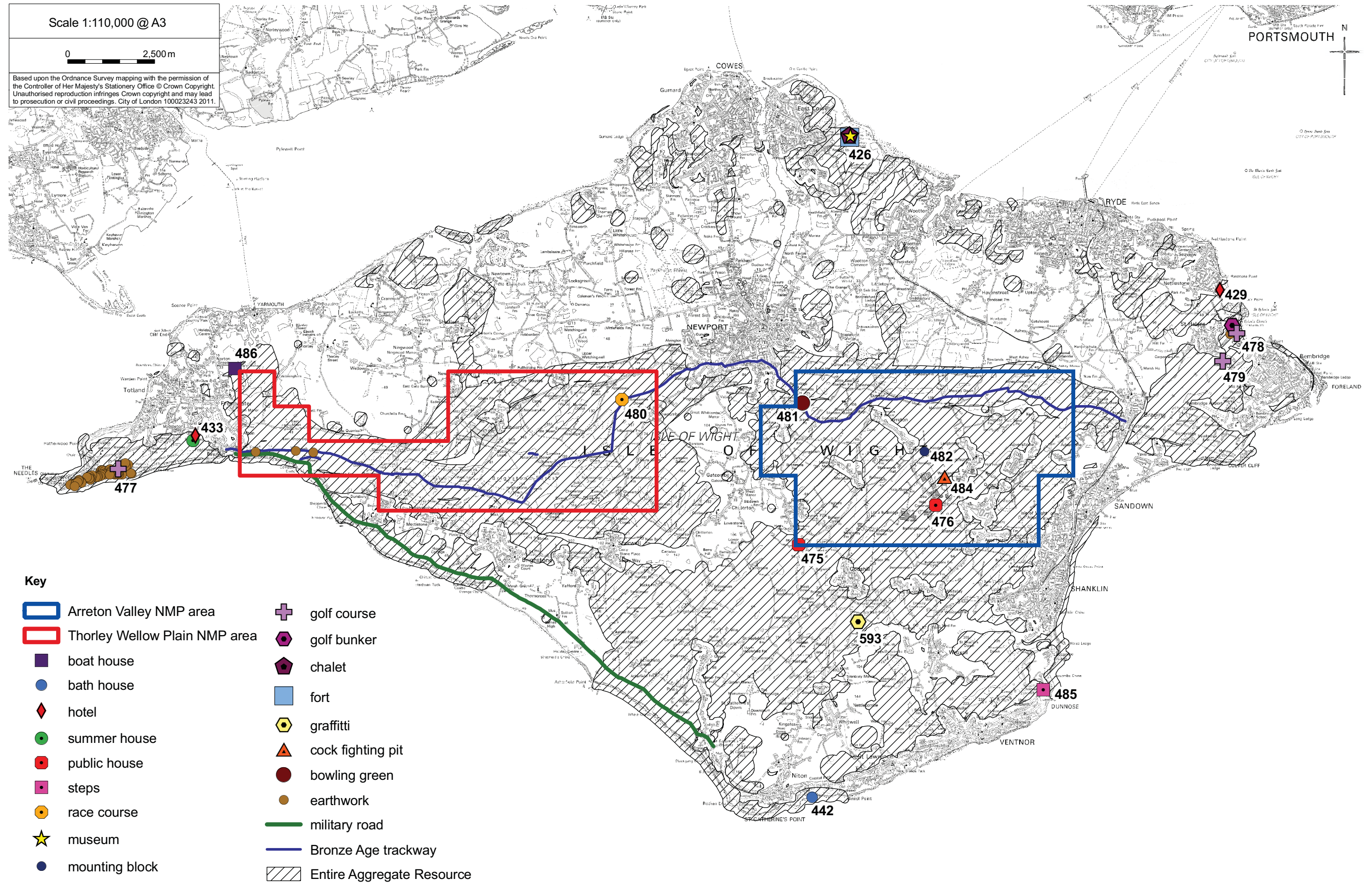


Fig 38 Post-medieval recreational assets

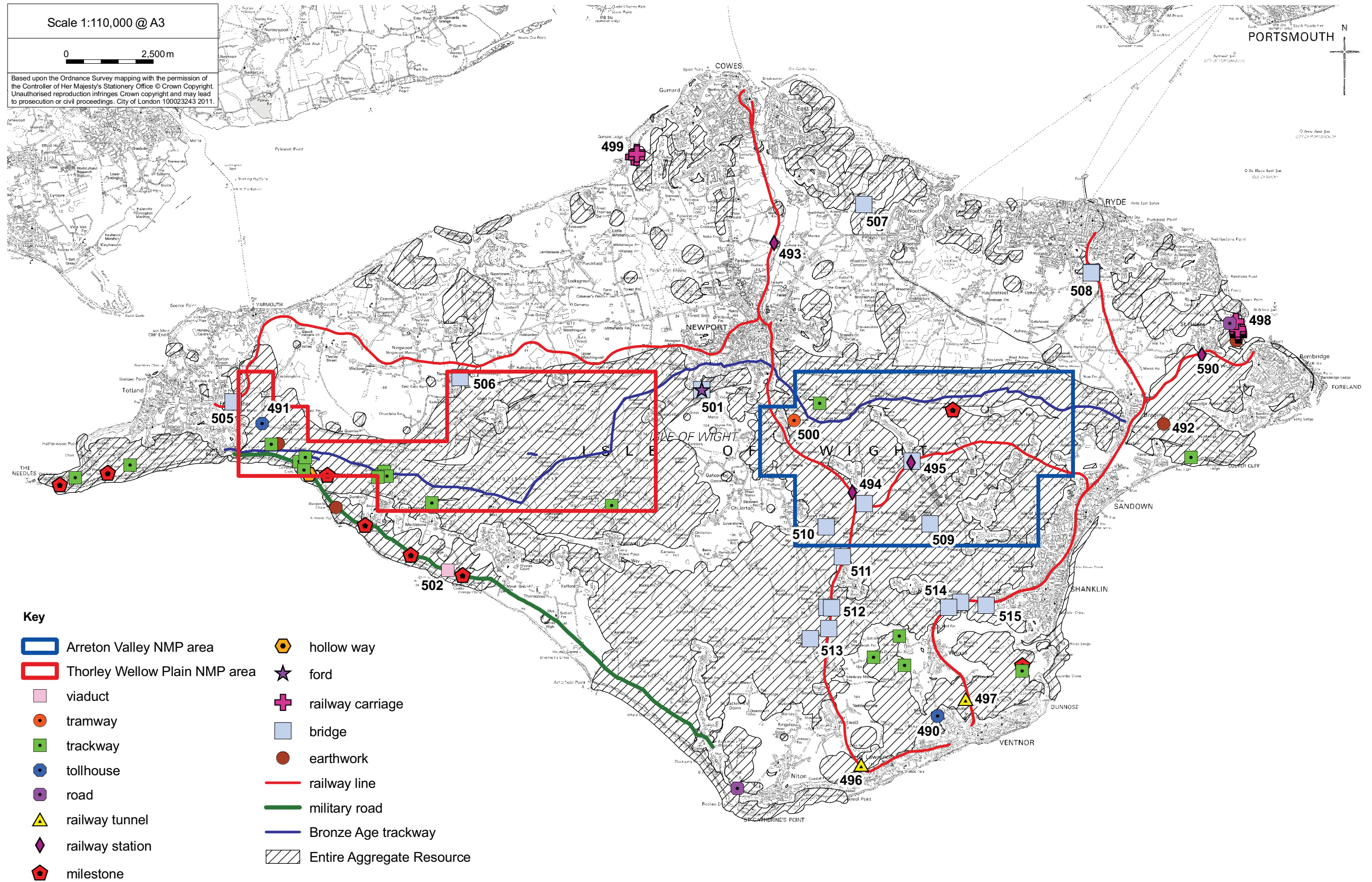


Fig 39 Post-medieval transport assets

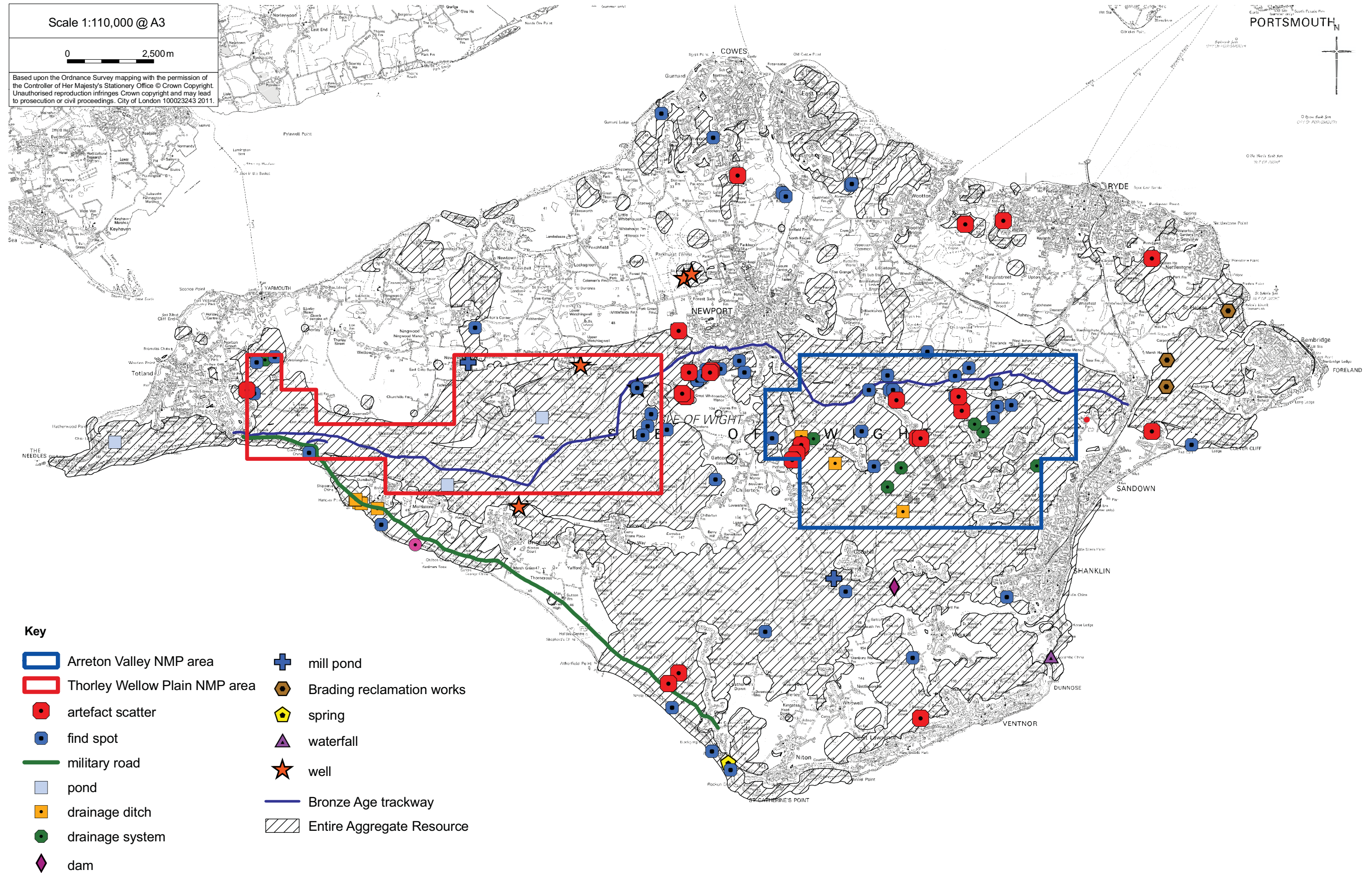


Fig 40 Post-medieval objects and water and drainage assets

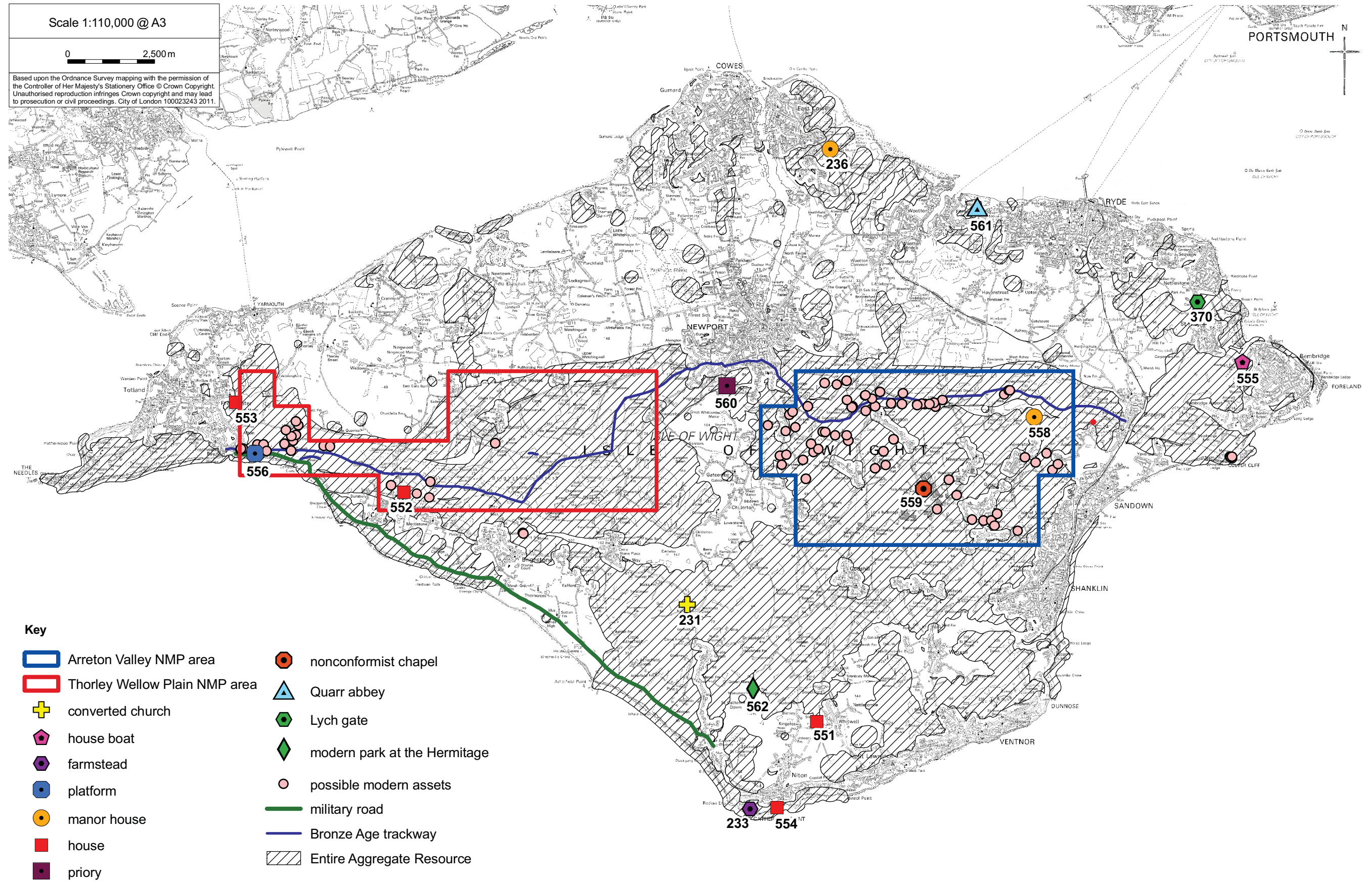


Fig 41 Modern domestic, religious ritual or funerary assets and parks and gardens

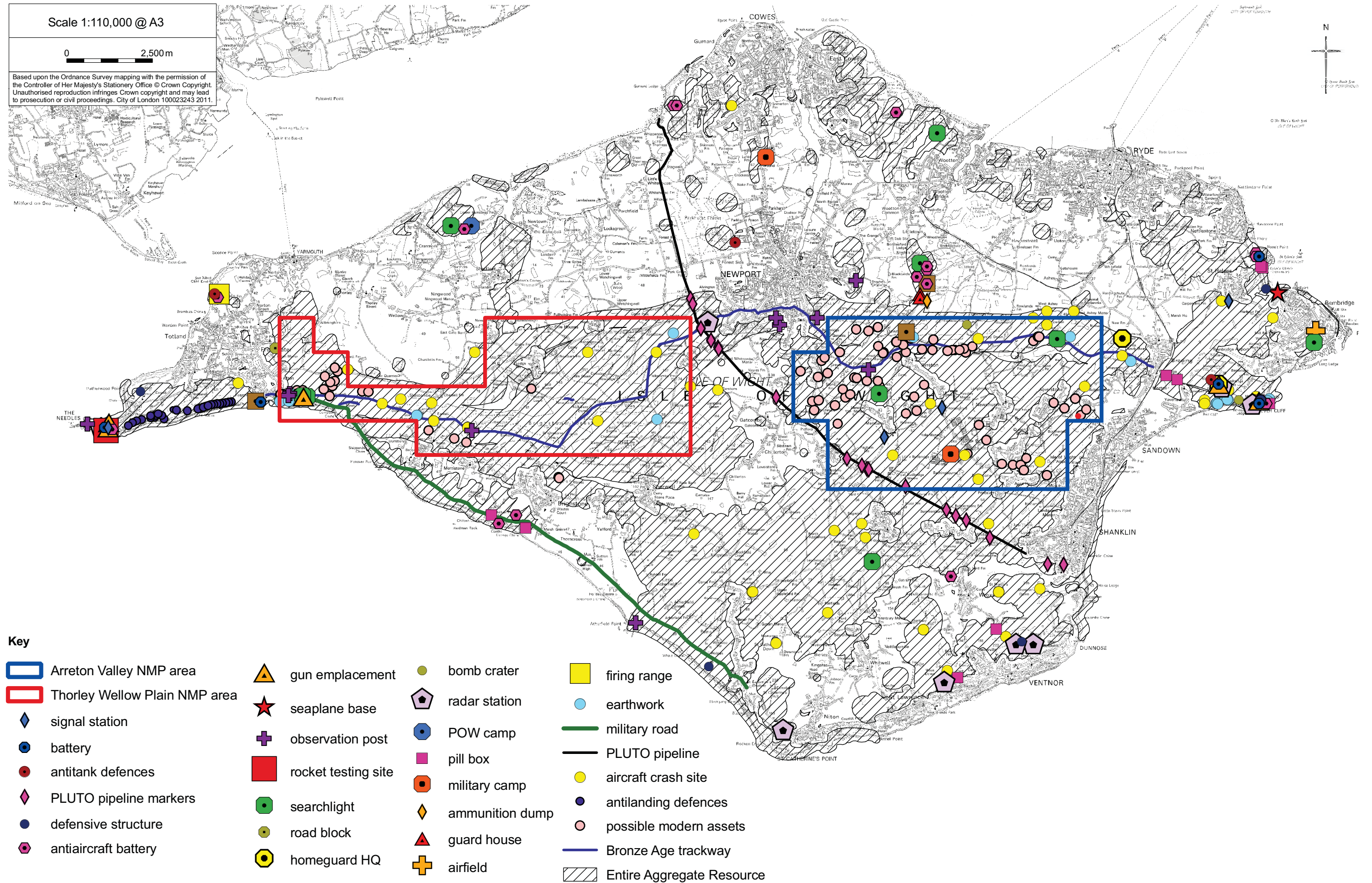


Fig 42 Modern defence assets



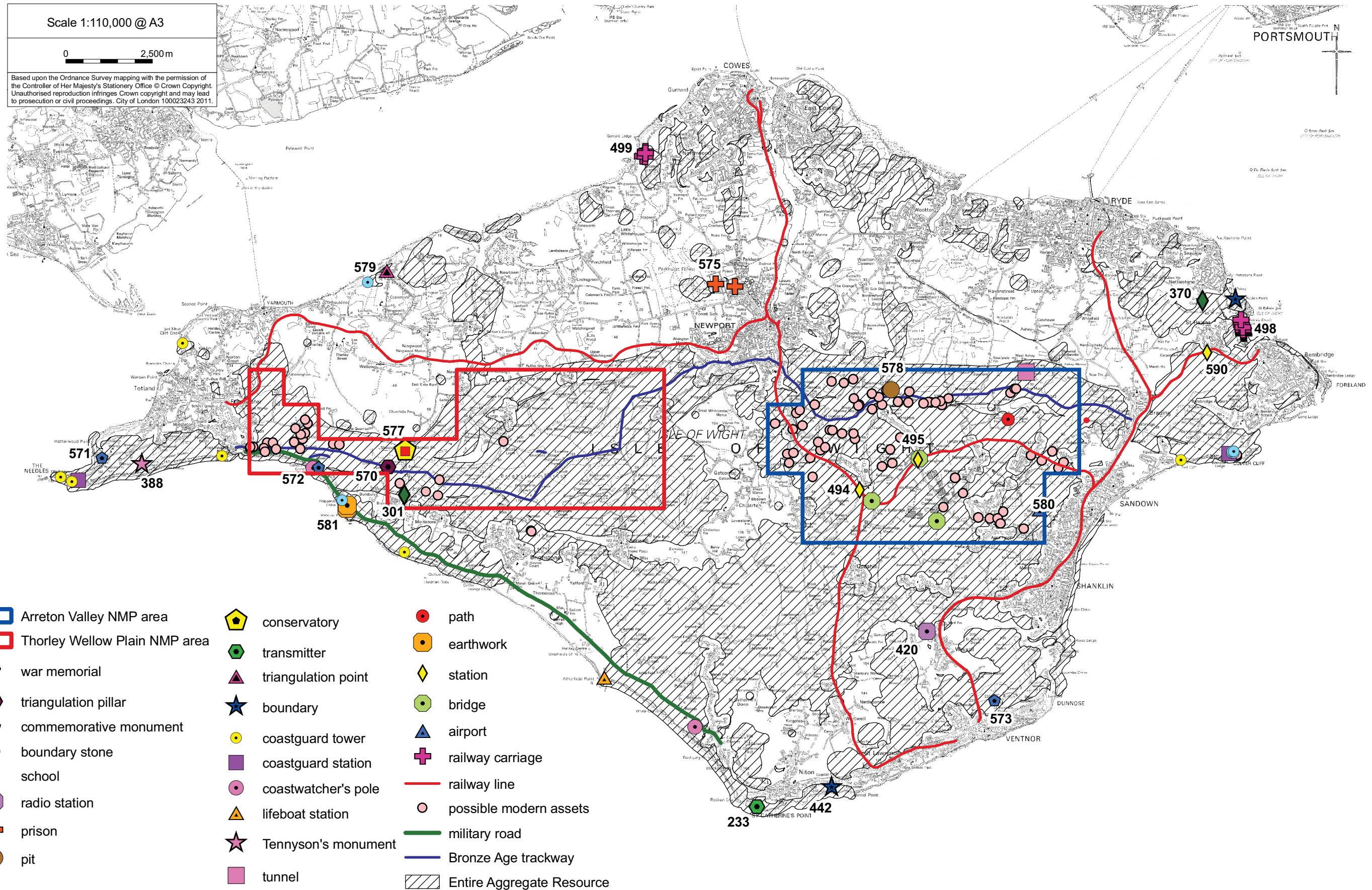


Fig 43 Modern civil, commemorative, maritime and transport assets

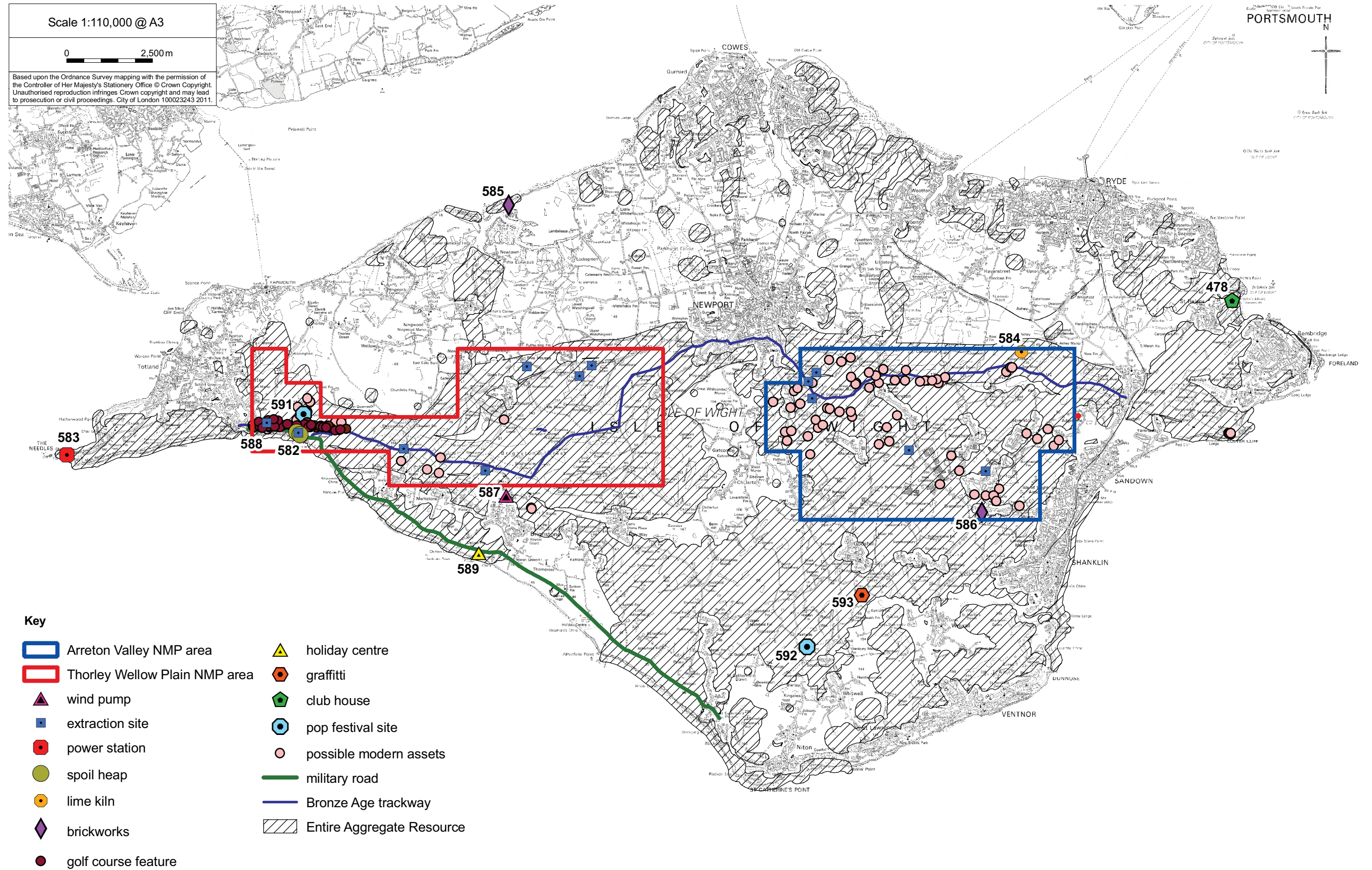


Fig 44 Modern recreational and industrial assets

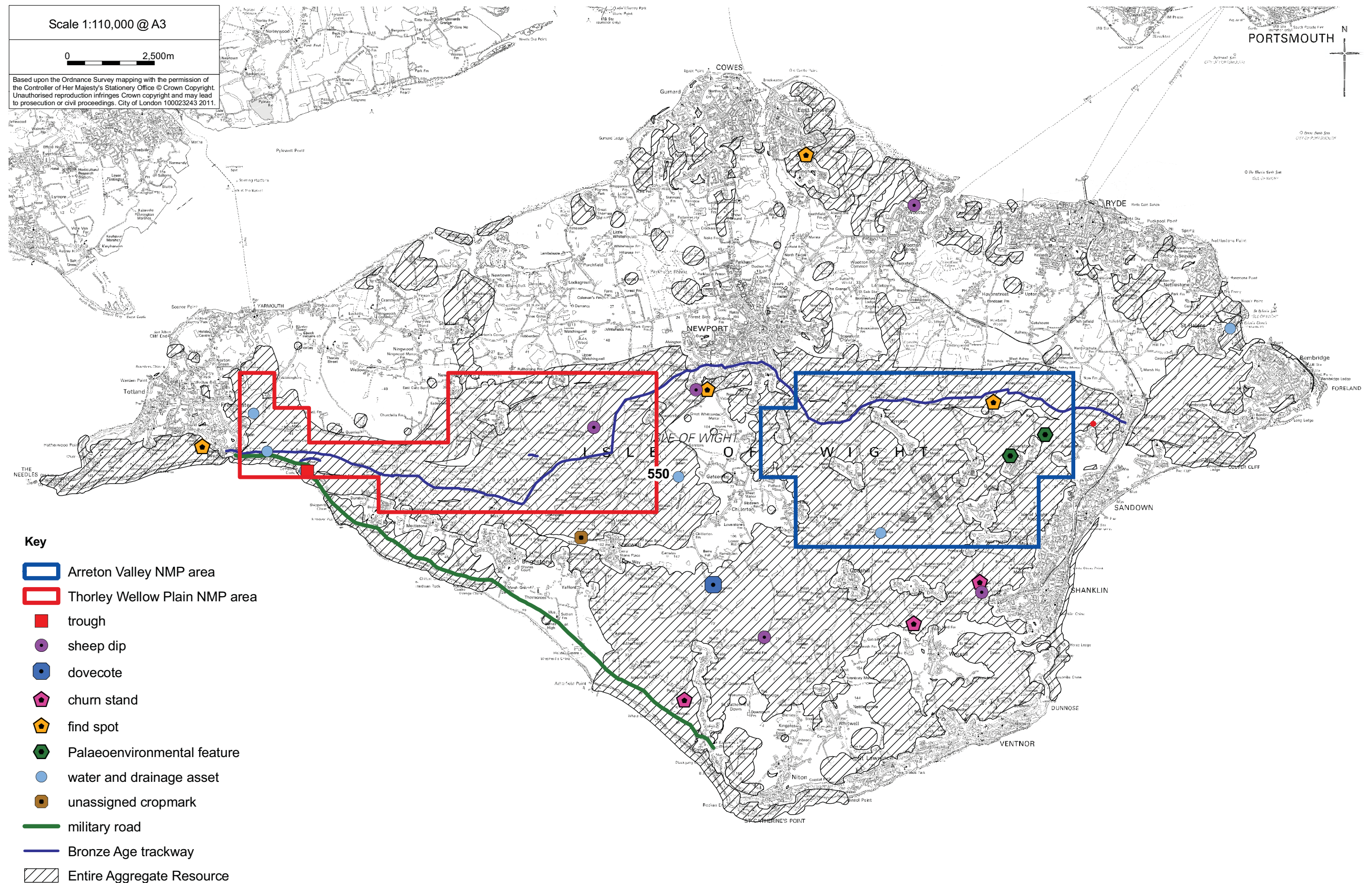


Fig 45 Modern water and drainage, agricultural, objects, palaeoenvironmental, and unassigned assets

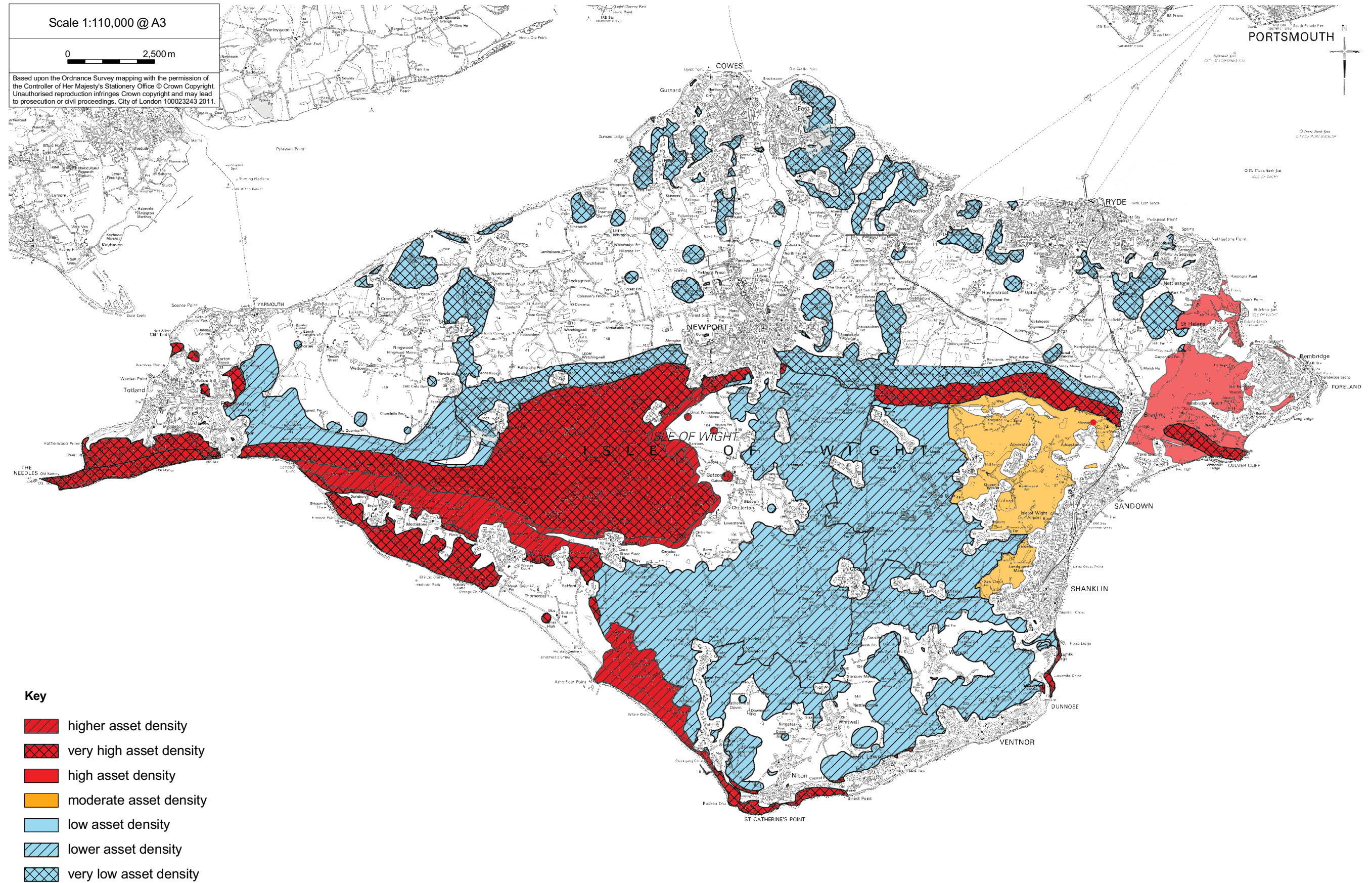


Fig 46 Asset density by study area

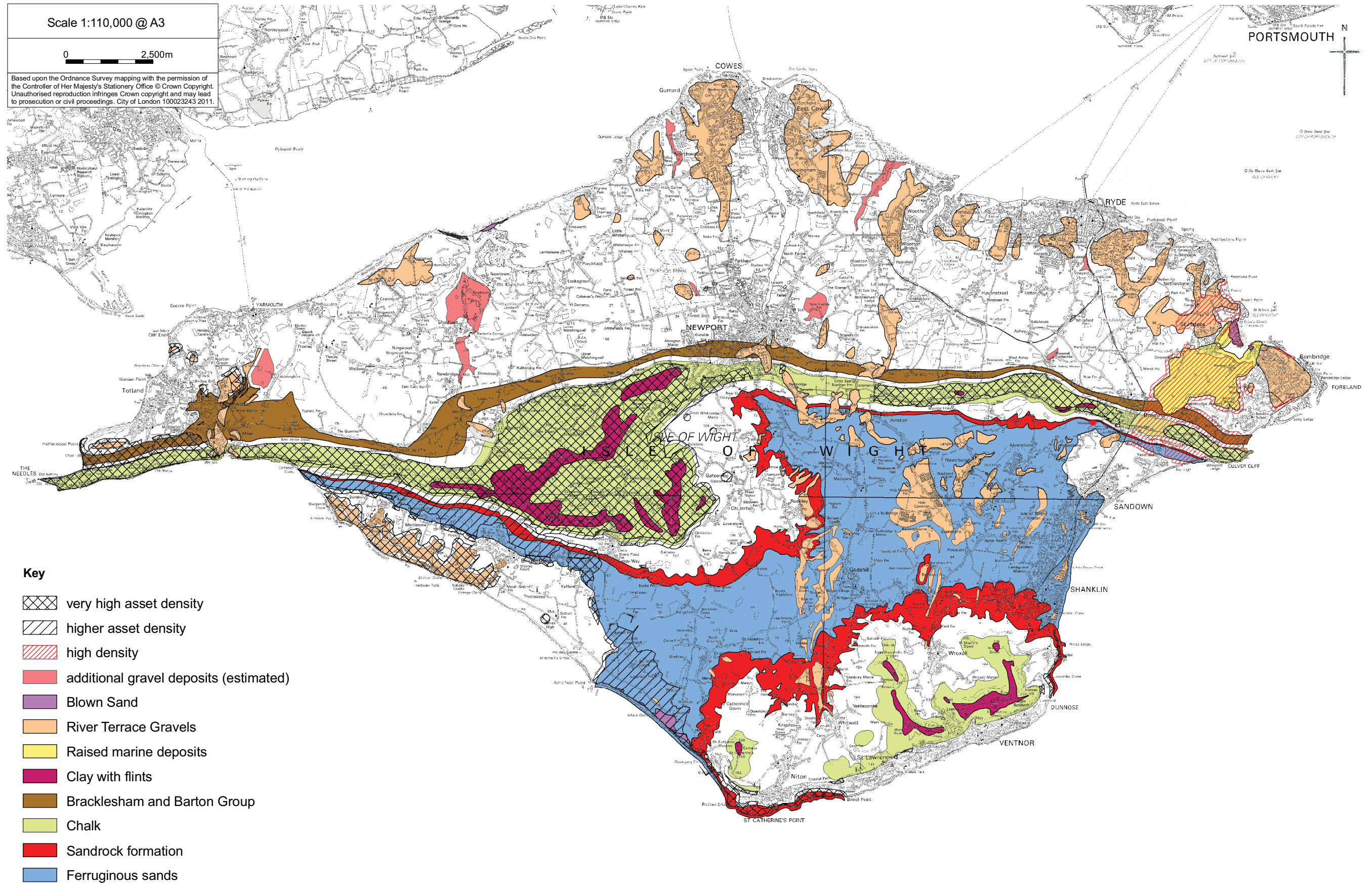


Fig 47 Asset density by geology type