

ASSESSMENT OF ARCHAEOLOGICAL RESOURCE IN AGGREGATE AREAS ON THE ISLE OF WIGHT

Results of NMP Mapping



Historic Environment Projects

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March 2010

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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

| | |
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| 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, traditionally 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.

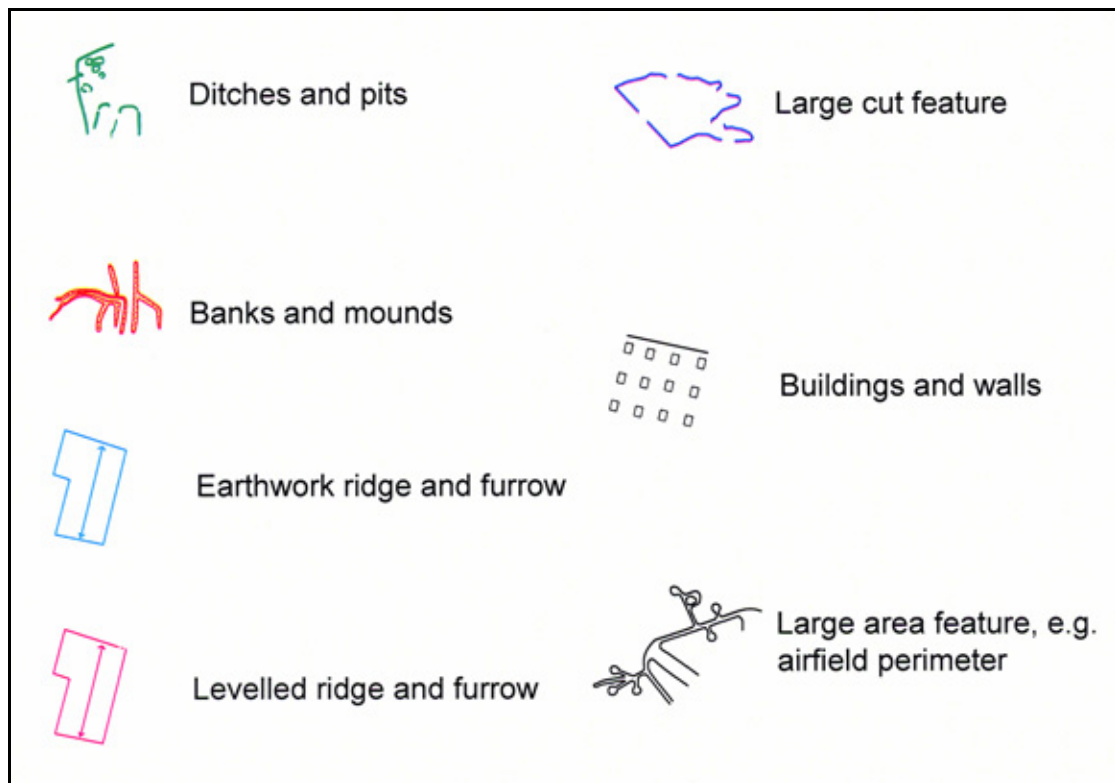


Figure 1. Conventions used on IOW NMP maps.

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).

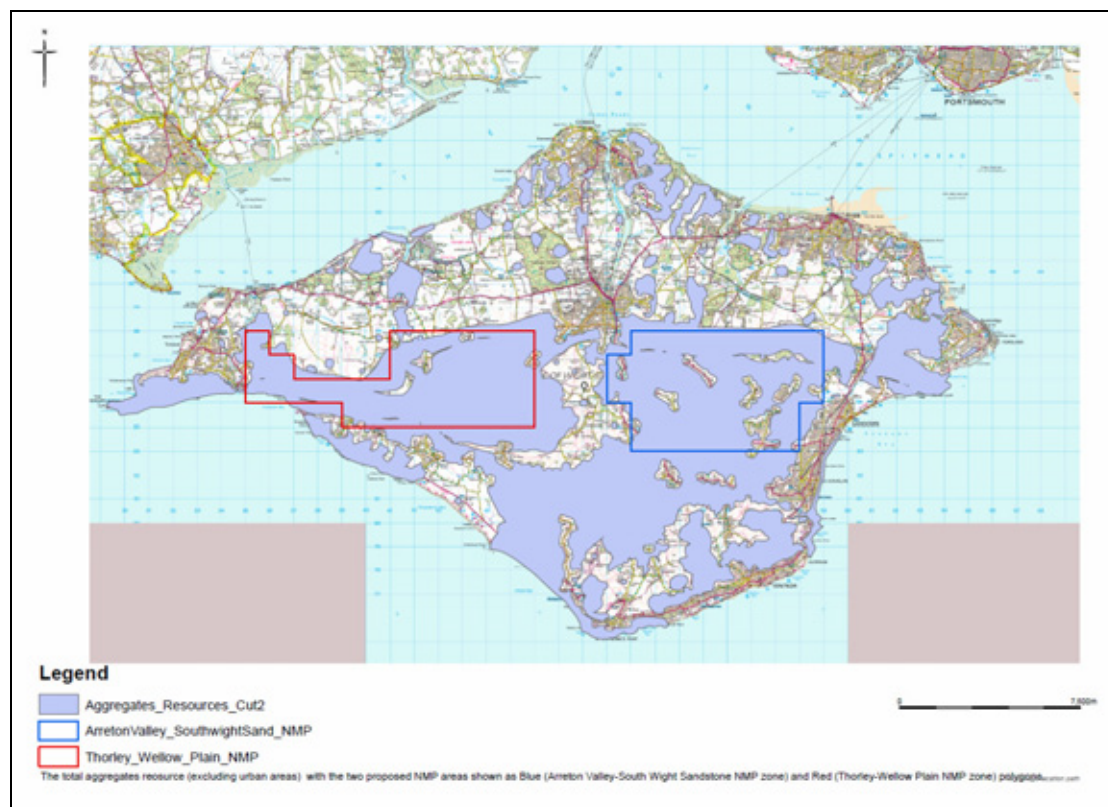


Figure 2. The project area showing the extent of the aggregate landscape and the two NMP mapping blocks.

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.

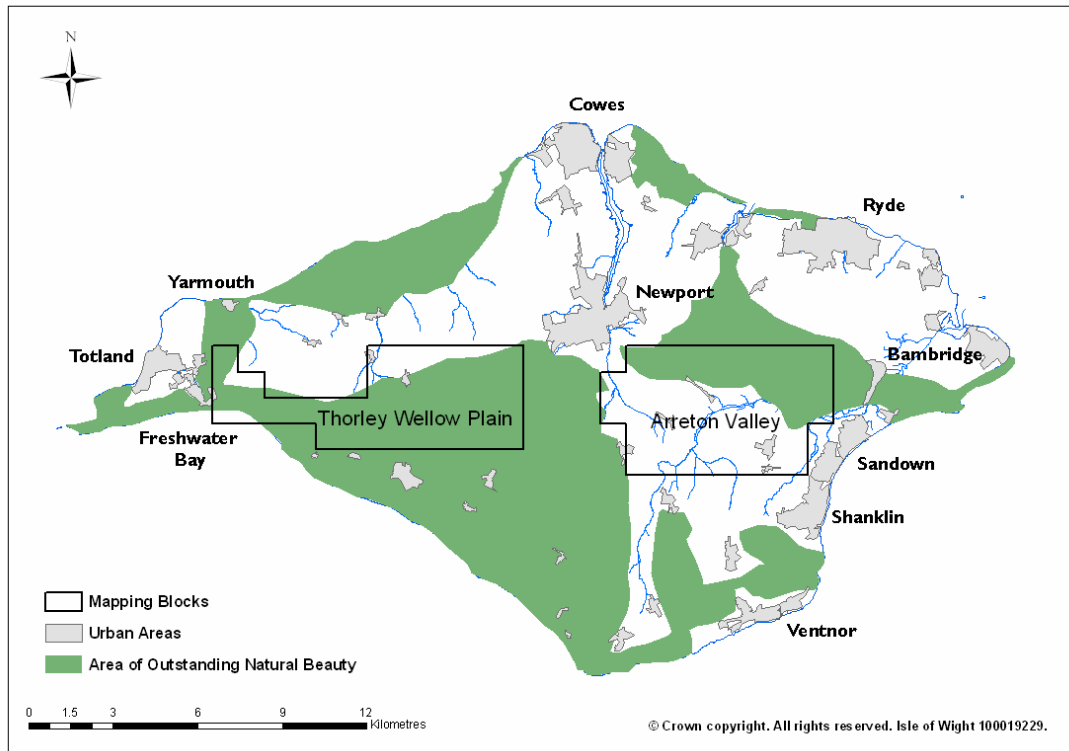


Figure 4. Isle of Wight AONB areas.

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

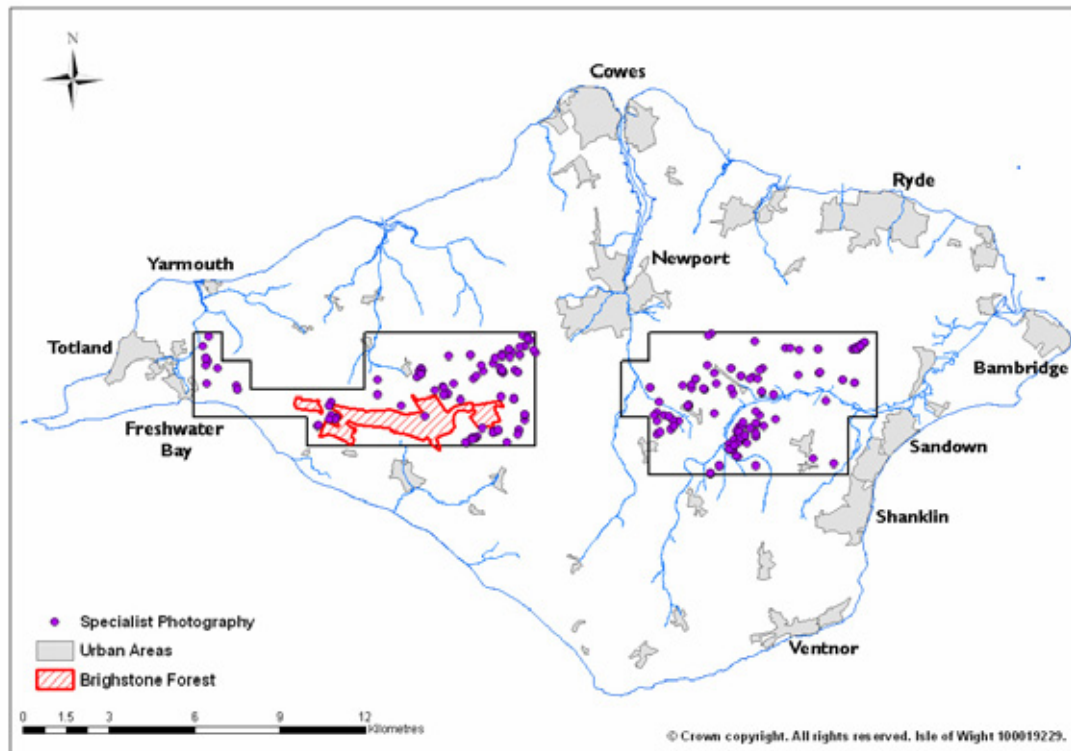


Figure 5. Distribution of sites in the project database mapped and recorded from specialist oblique photographs.

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 30th 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.

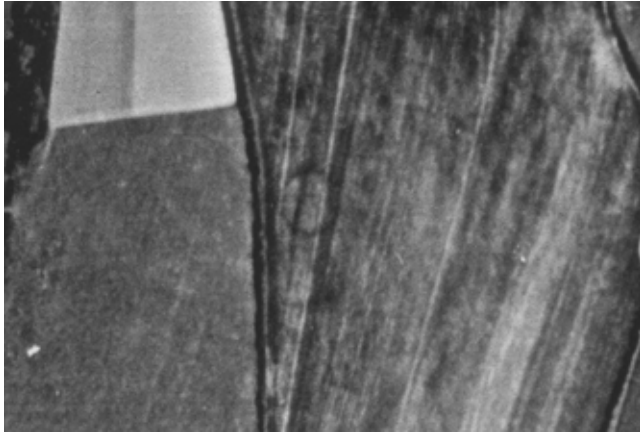


Figure 6. Site of a Bronze Age round barrow showing as cropmarks at Rowborough on a Crawford photo taken in the 1930s, (MIW480). Photograph: CCC 8521/3575 SZ4584/1 c.1930's English Heritage. NMR (Crawford Collection).

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 6th 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.

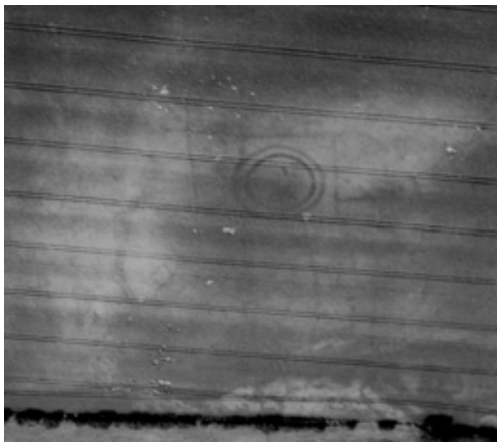


Figure 9: The same site at Heasley recorded in July 1996. The ring ditch is clearly set within a series of ditched field boundaries. Photograph: IOW 16990/13 © Isle of Wight Council.

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.

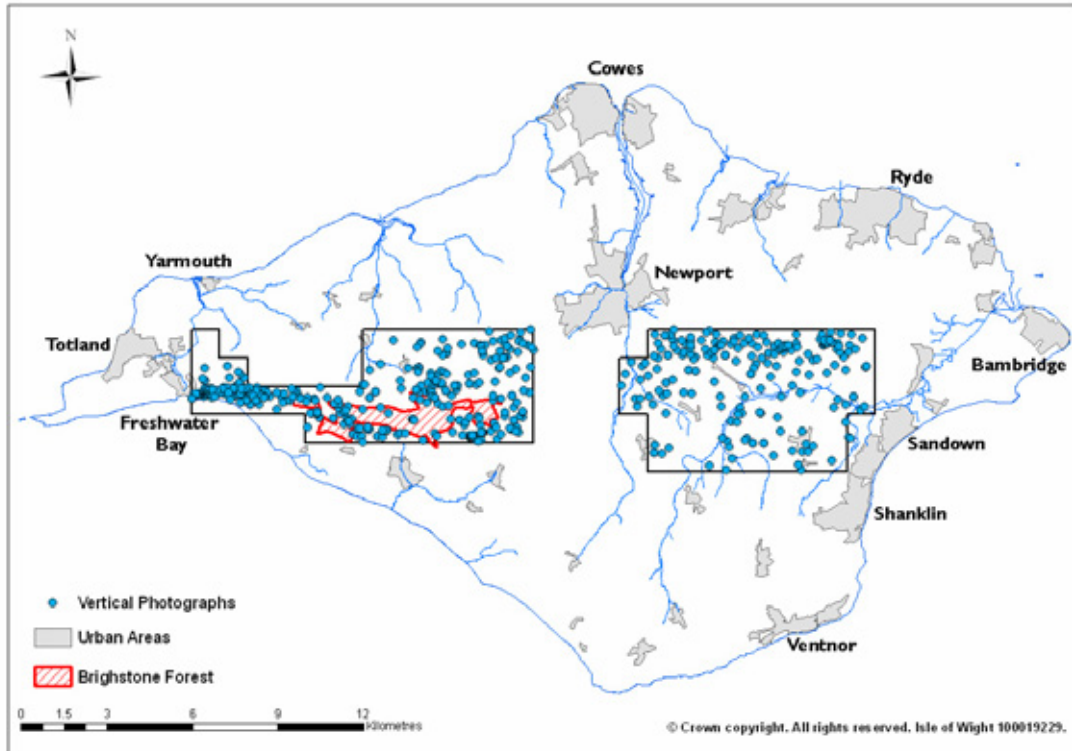


Figure 10. Distribution of sites in the project database mapped and recorded from vertical photographs.

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.

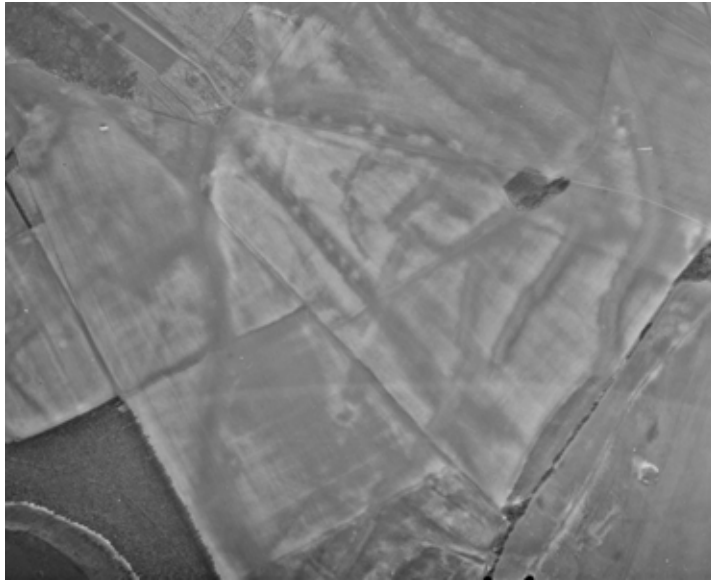


Figure 12. Celtic field system at Newbarn Down visible as cropmarks, (MIW411). This site has been photographed during several specialist oblique sorties; however it is arguably best recorded on this OS photograph taken in 1969. Photograph: OS/69082 Frame 218 7 April 1969 © Crown Copyright. Ordnance Survey

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).

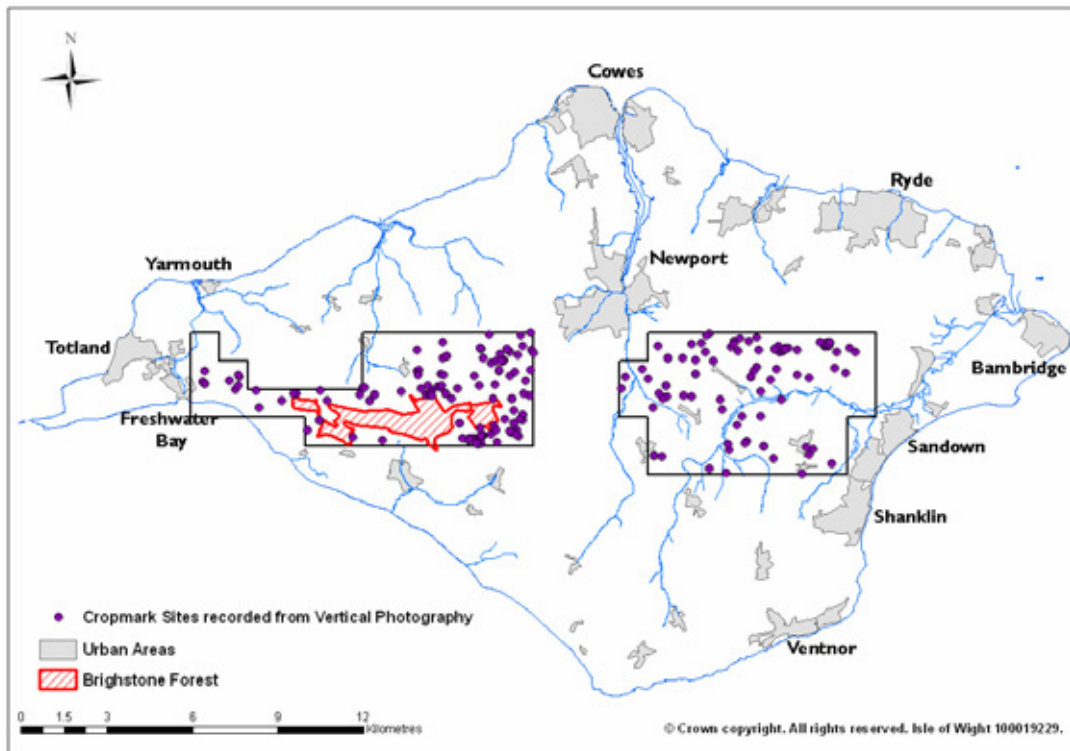


Figure 13. Distribution of cropmark sites in the project database mapped and recorded from vertical aerial photographs.

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

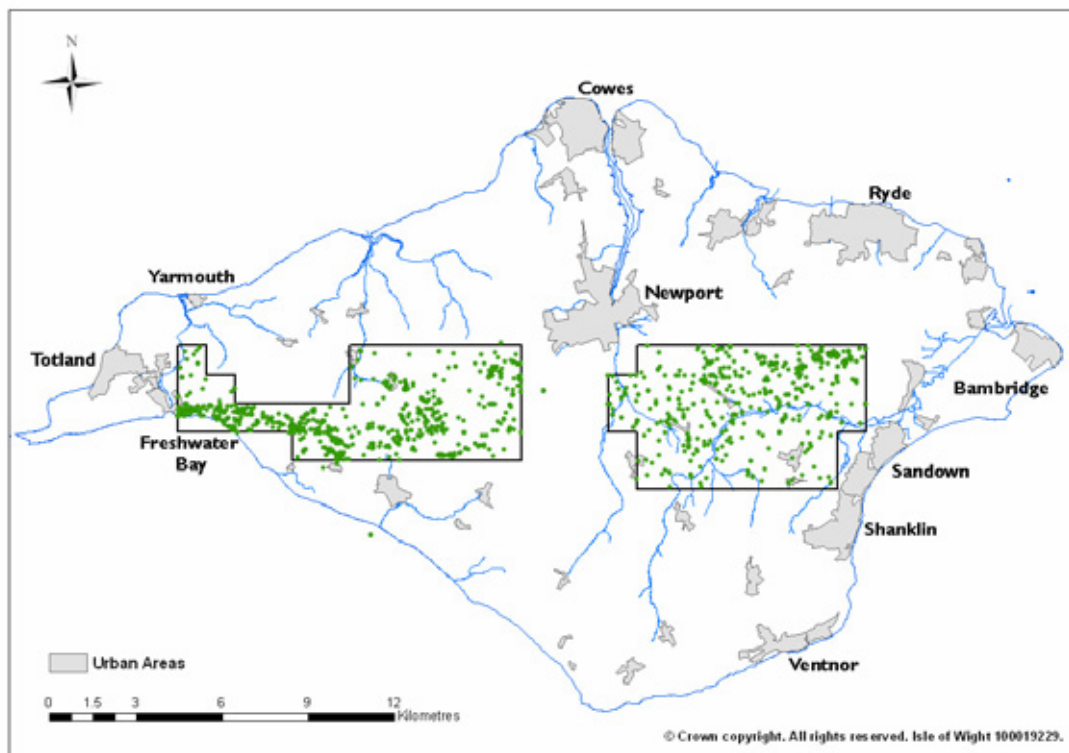


Figure 14. Distribution of all monuments recorded in the HER prior to the NMP project.

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 th) | 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.

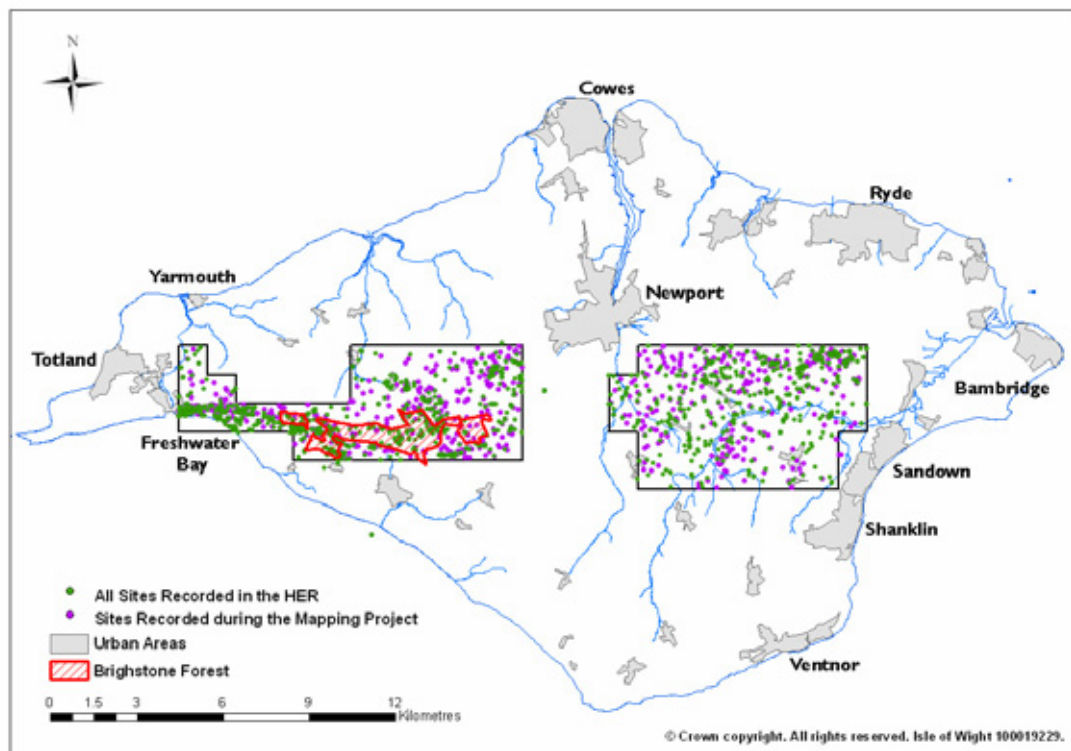


Figure 15. Distribution of all monuments recorded during the NMP project.

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.

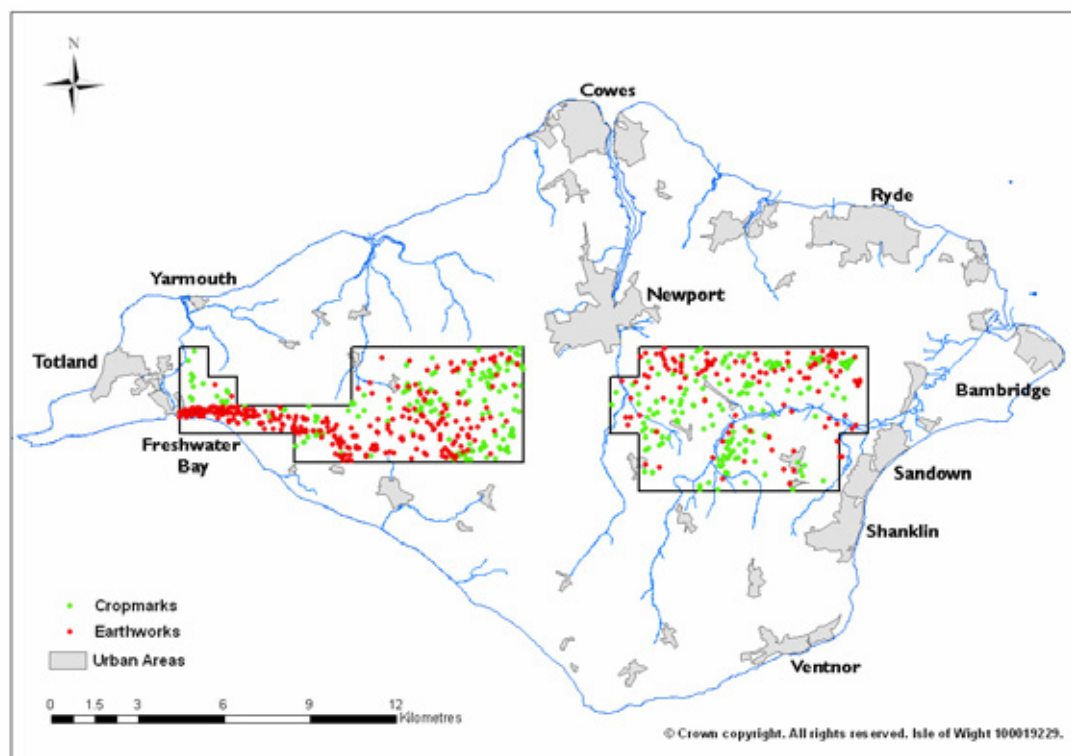


Figure 16. Distribution of sites recorded as earthworks and cropmarks within the NMP study area.

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)

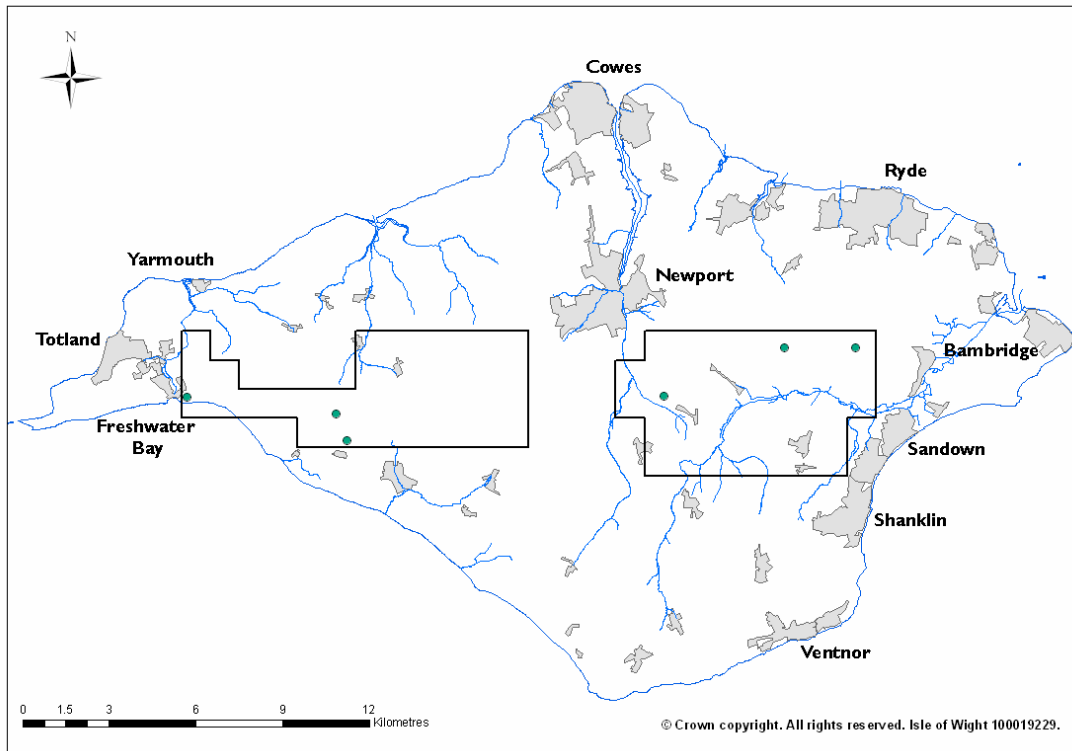


Figure 17: Distribution of Neolithic Sites.

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).

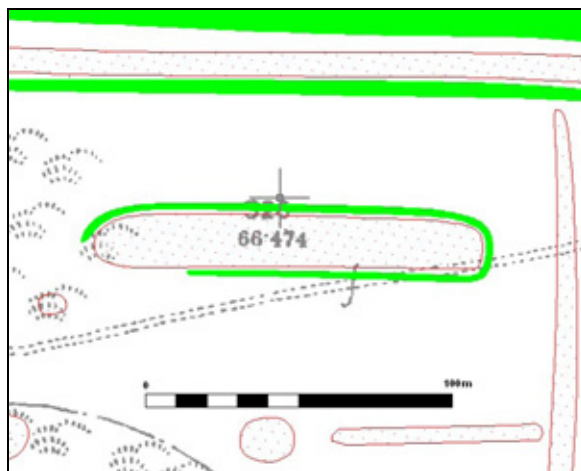


Figure 18. Potential Neolithic Long Barrow on Mersley Down. (Site ID 173799).

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).

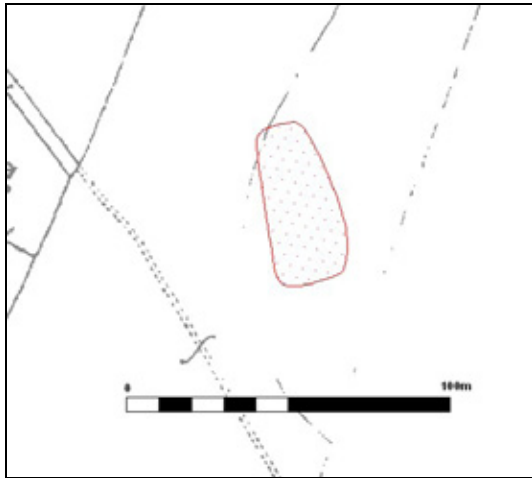


Figure 19. Potential Neolithic Long Barrow at Longdown, (Site ID 173853).

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).

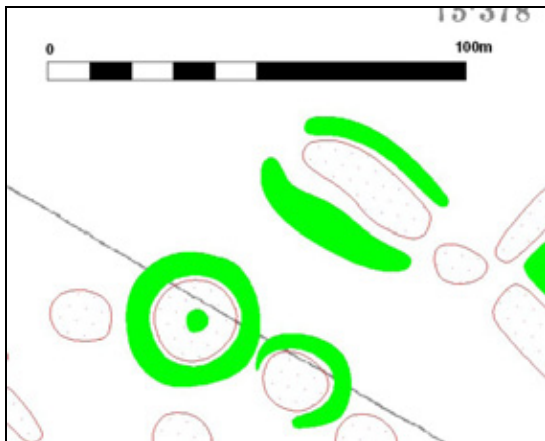


Figure 20. Potential Neolithic Oval Barrow on Middle West Down, (MIW1063).

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)

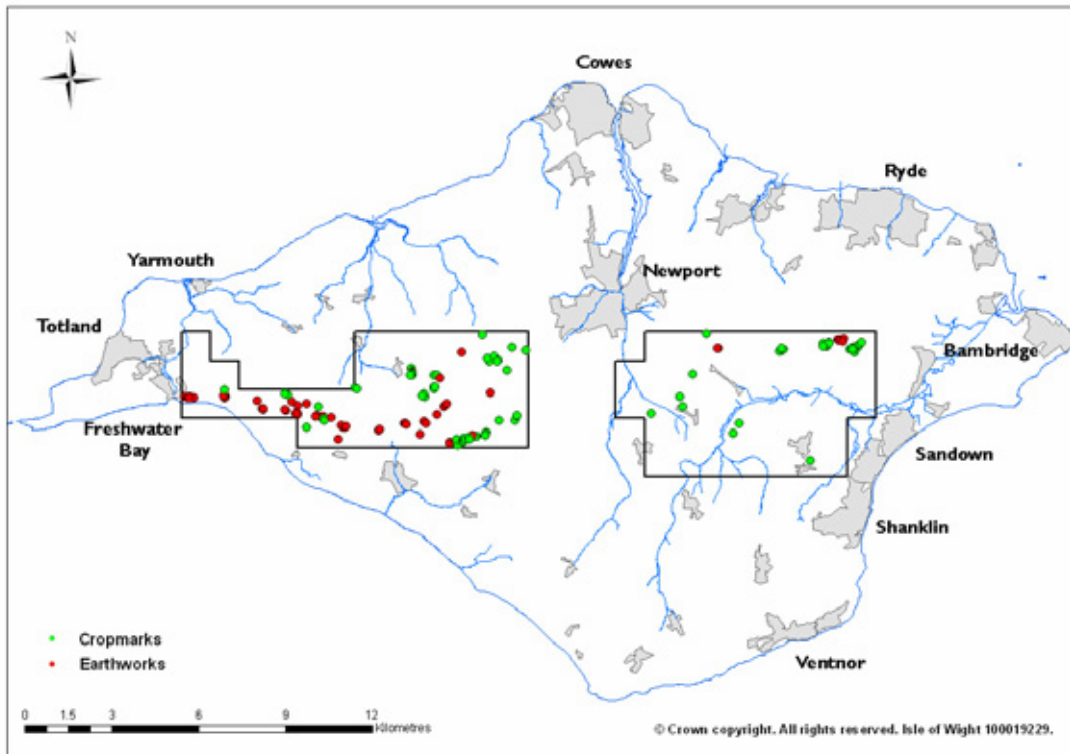


Figure 21. Distribution of Bronze Age Sites.

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.

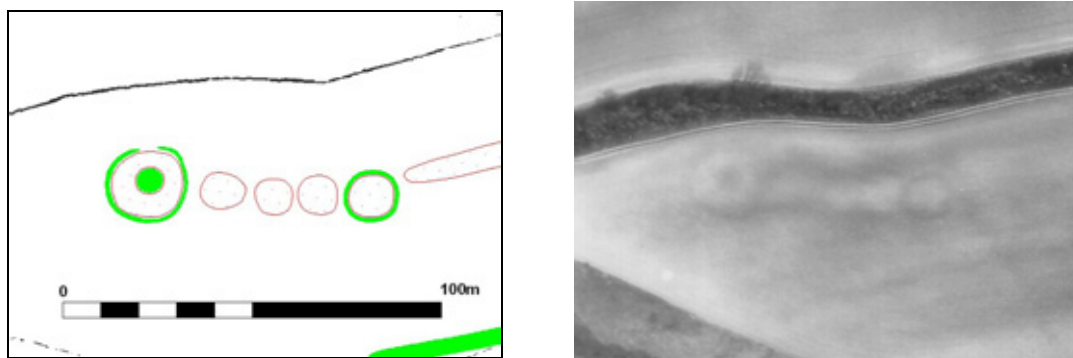


Figure 22. A Bronze Age barrow cemetery comprising five near contiguous barrows to the east of Cheverton Down. Only the western barrow with the central robber pit was recorded in the HER prior to the mapping project, (MIW6440). Photograph: OS/69084 Frame 141 8 April 1969 © Crown Copyright. Ordnance Survey. Map: © Crown Copyright and Landmark Information Group Licence no: 100019229.

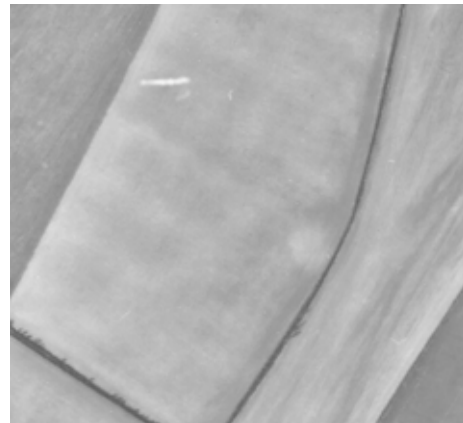
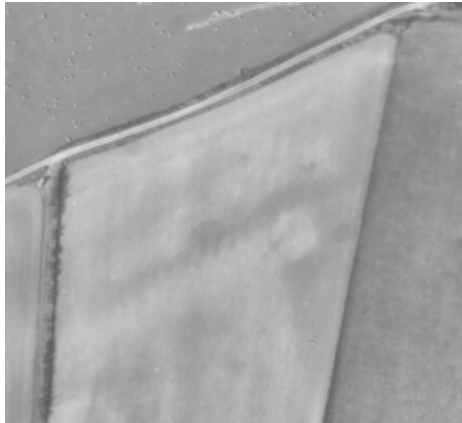


Figure 23. Two plough-levelled Bronze Age barrows lying 500m apart at Rowborough. Both sites are new to the mapping and are visible on the same Ordnance Survey photograph taken in 1969, (Site IDs 174306 and 174309). Photograph: OS/69084 Frame 139 8 April 1969 © Crown Copyright. Ordnance Survey

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)

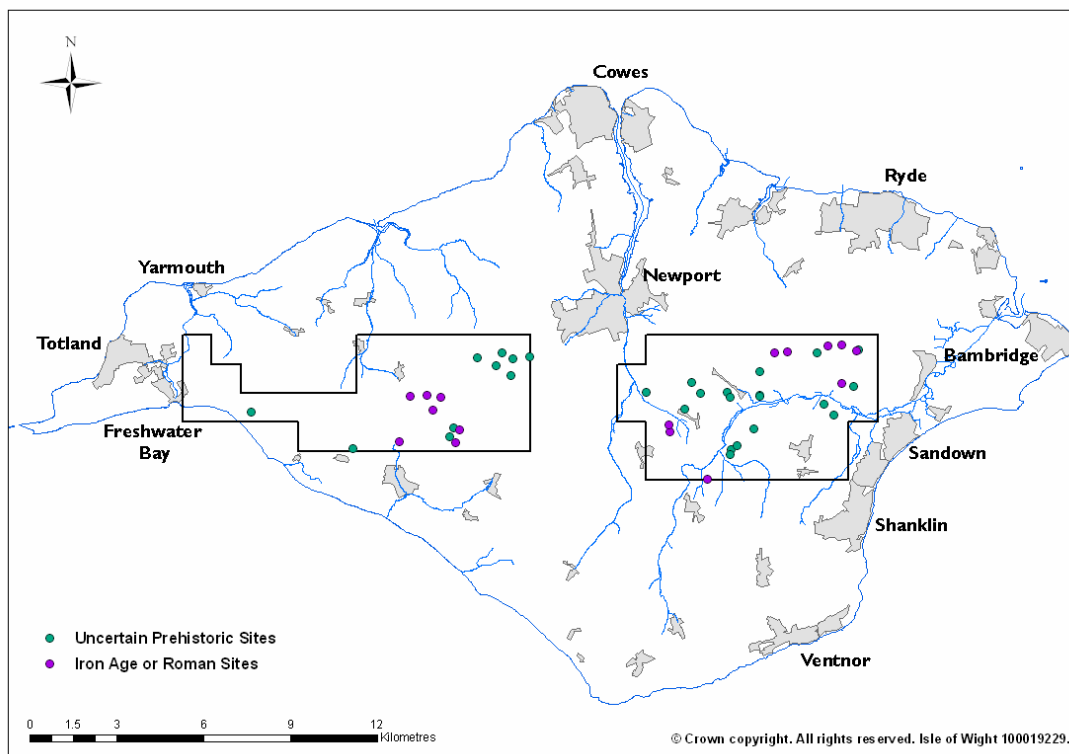


Figure 25. Distribution of Prehistoric sites.

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.

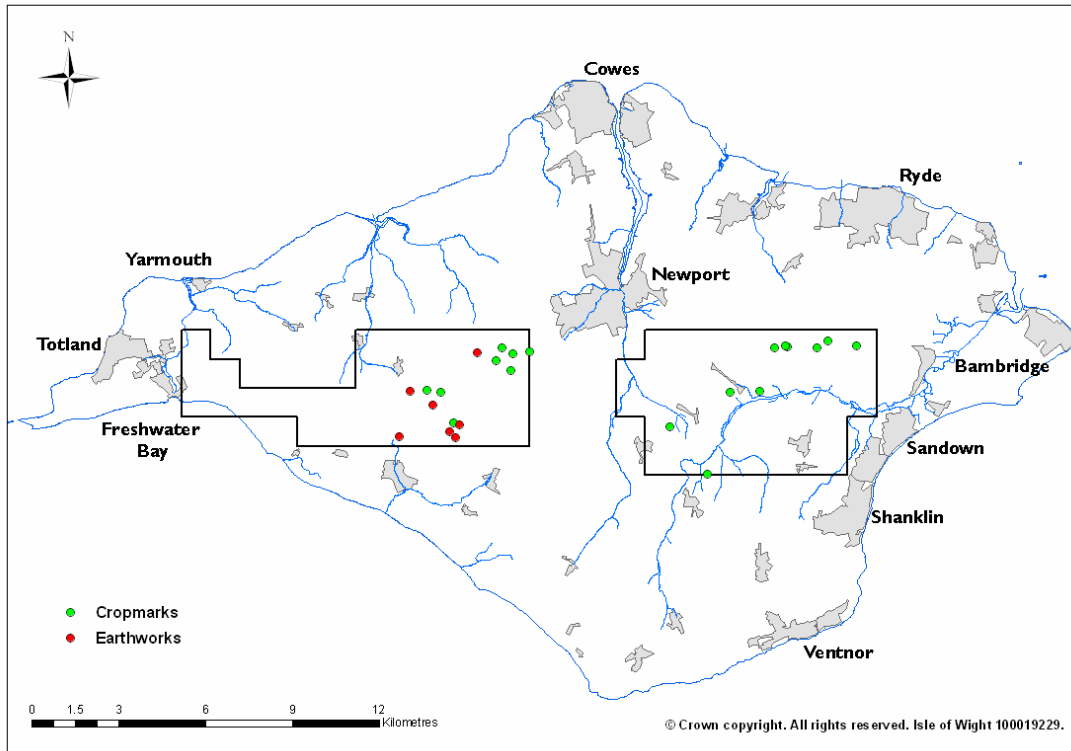


Figure 26. Distribution of Prehistoric field systems.

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.

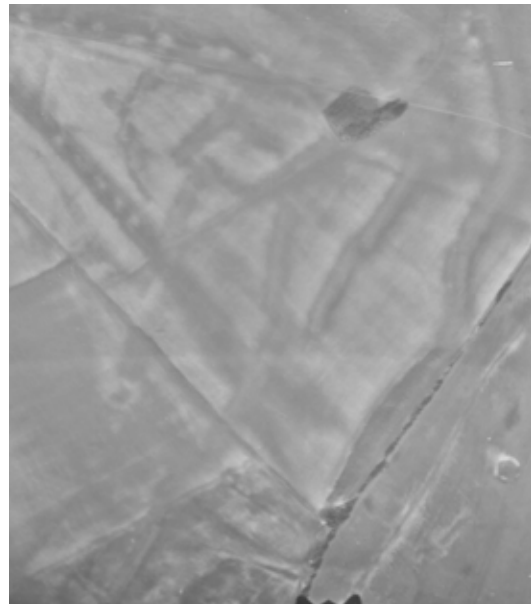
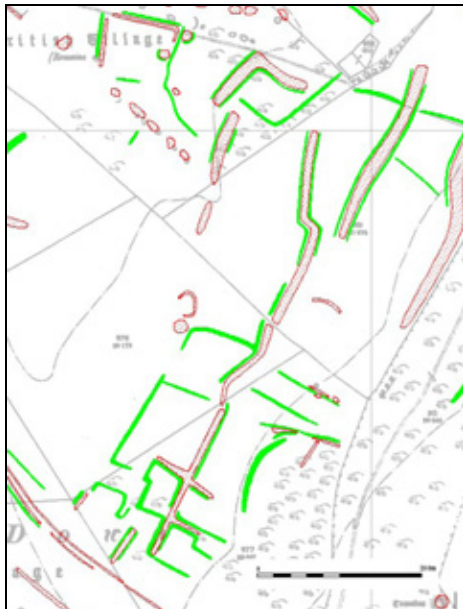


Figure 27. Celtic field system at Newbarn Down. To the west of the plough-levelled lynchets, several still survive as extant earthwork features, (MIW411). Photograph: OS/69082 Frame 218 7 April 1969 © Crown Copyright. Ordnance Survey Map: © Crown Copyright and Landmark Information Group Licence no: 100019229.

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.

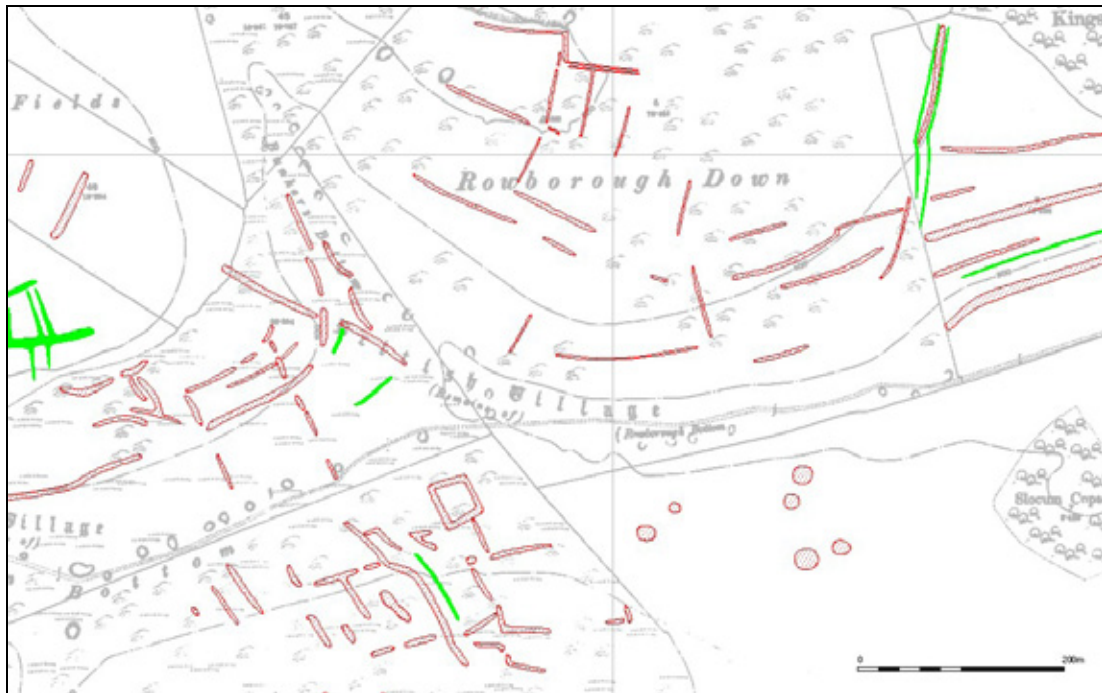


Figure 28. Celtic field systems at Rowborough and Cheverton Downs, (MIW290, MIW6583 and Site ID 174173). Map: © Crown Copyright and Landmark Information Group Licence no: 100019229.

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 Ashe 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 Ashe 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 lynchets 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 lynchets is due to a different original construction or the destruction of the lynchets 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.

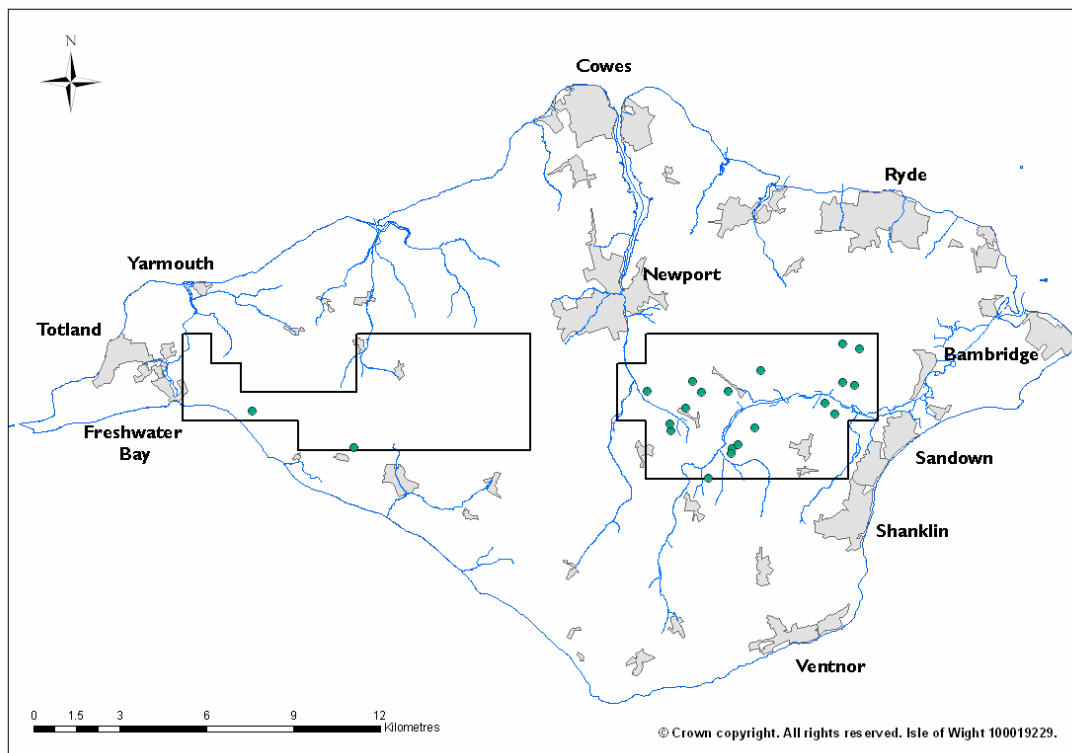


Figure 32. Distribution of Prehistoric settlements and enclosures.

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.

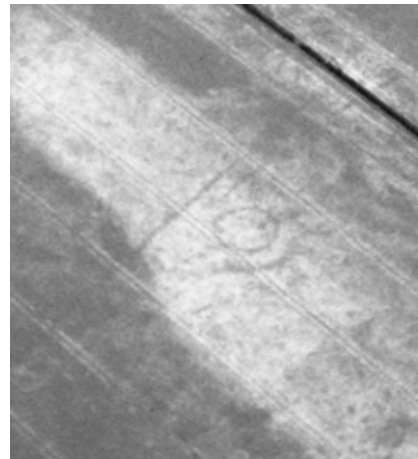
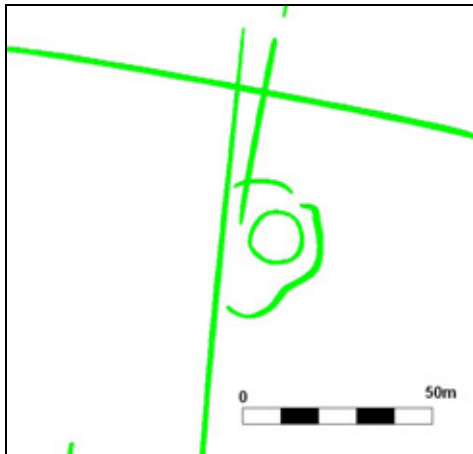


Figure 33. Later prehistoric enclosed round-house settlement, Hale, (MIW1912). Photograph: IOW 16987/08 ©Isle of Wight Council. Map: © Crown Copyright and Landmark Information Group Licence no: 100019229.

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).

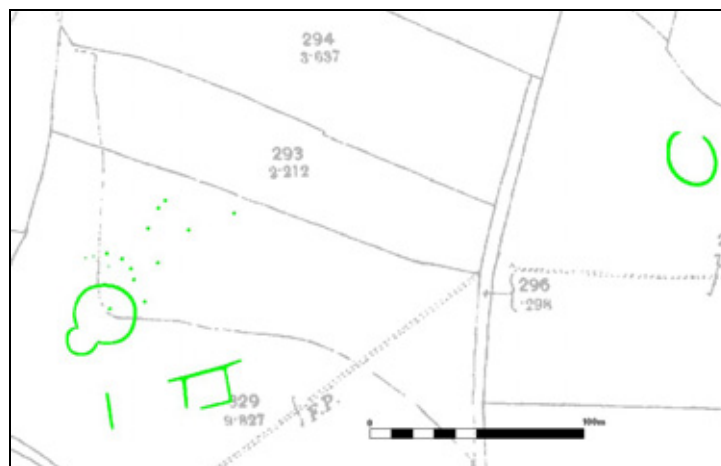


Figure 34. Two later prehistoric settlement enclosures at Merstone Farm, (MIW1879 and MIW961) Map: © Crown Copyright and Landmark Information Group Licence no: 100019229.

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.

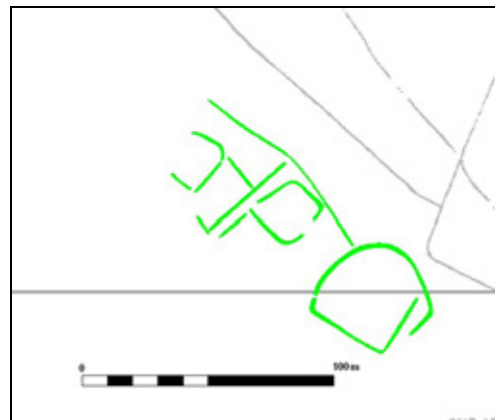


Figure 36. Later prehistoric settlement enclosures at Arreton, (MIW1877).

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.

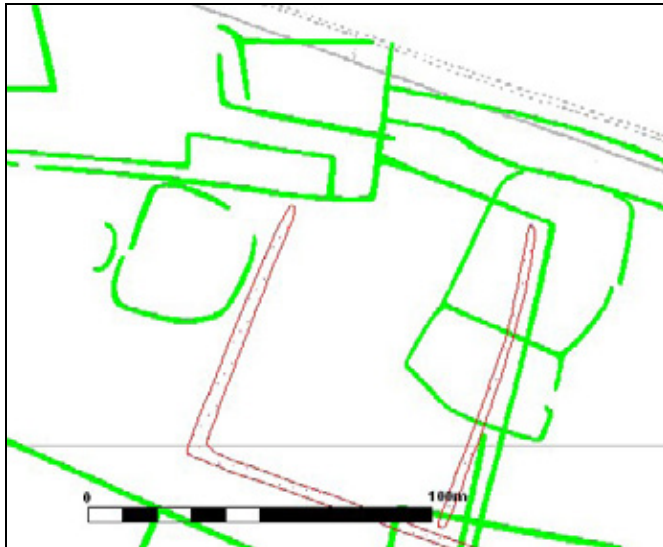


Figure 38. Later prehistoric settlement enclosures at Hale, (MIW1859).

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)

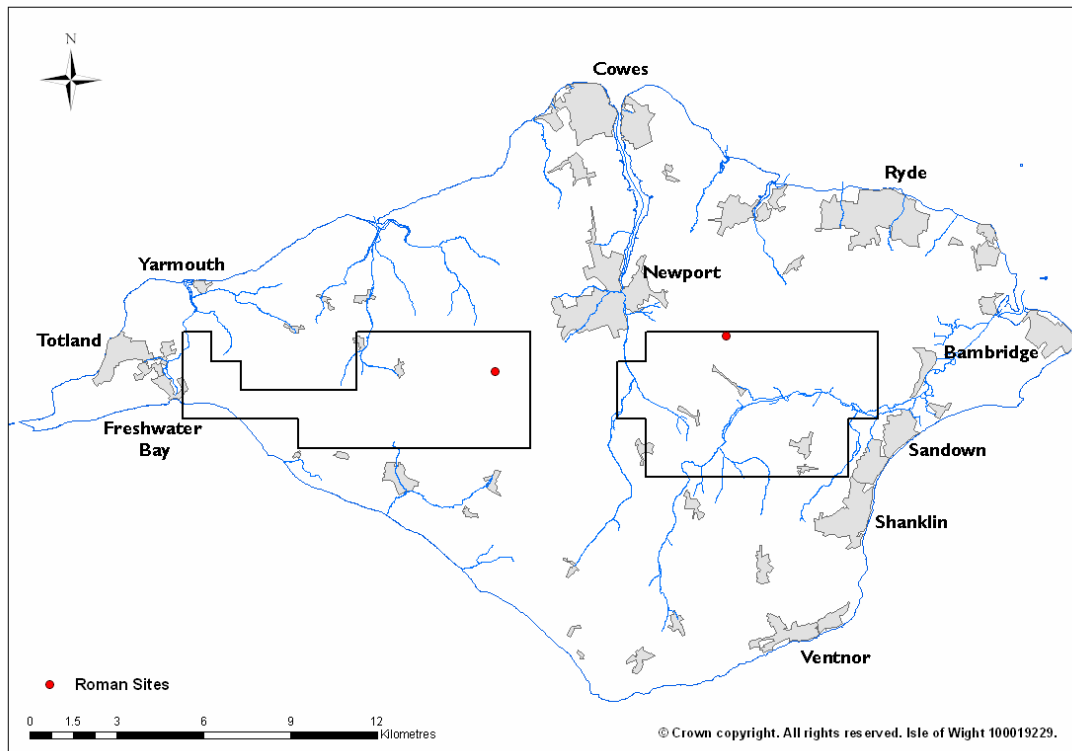


Figure 40. Distribution of Roman Sites.

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).

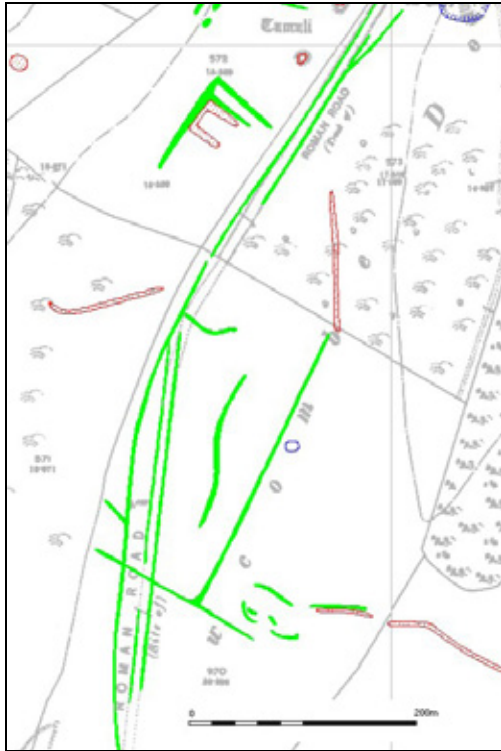


Figure 42. Site of a Roman Road on Bowcombe Down, (Site ID 174385). Photograph: CCC 8521/3577 SZ 4686/2 c.1930's English Heritage. NMR (Crawford Collection) Map: © Crown Copyright and Landmark Information Group Licence no: 100019229.

5.6 NMP results: Medieval sites (AD410 – AD1539)

5.6.1 The medieval period

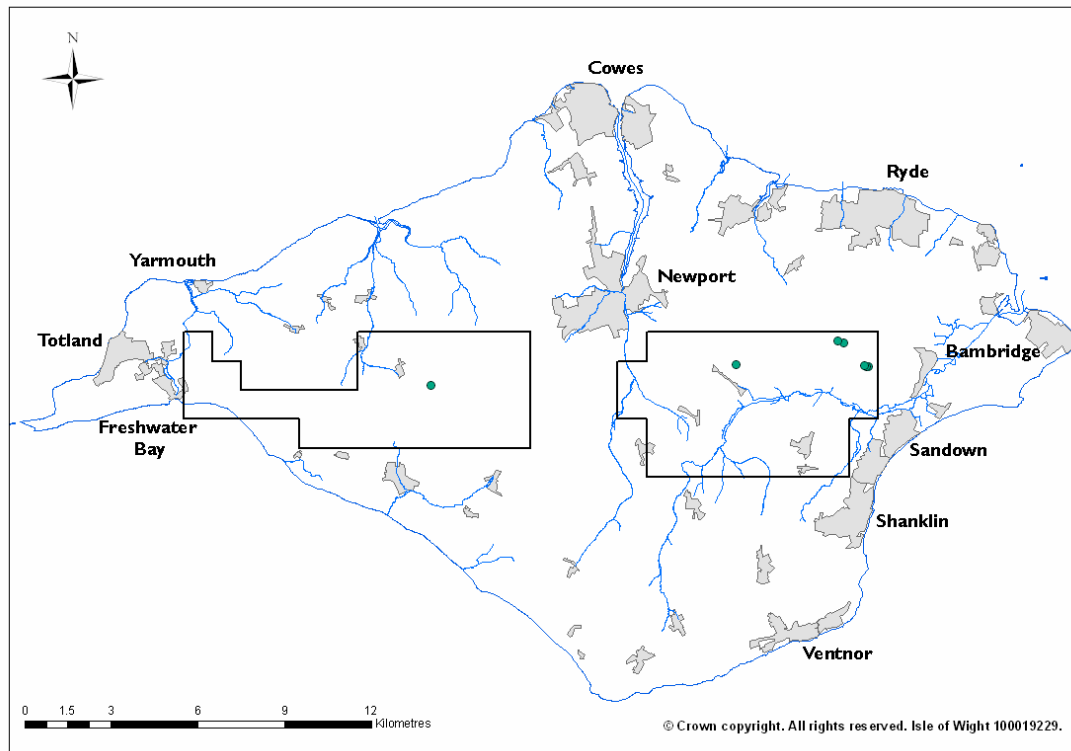


Figure 43. Distribution of medieval sites.

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.

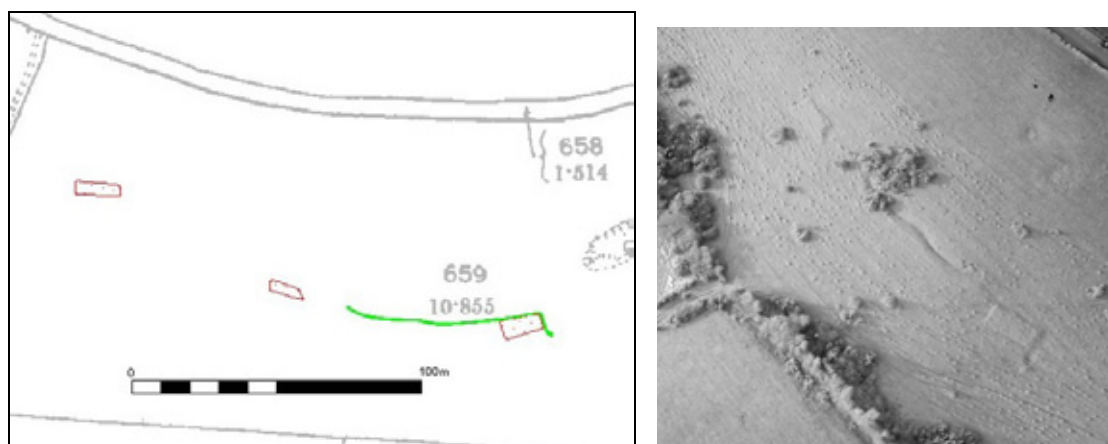


Figure 44. Three medieval pillow mounds to the south-west of Nunwell Down, (MIW 2098-2100). Photograph: IOW 6000/07 © Isle of Wight Council. Map: © Crown Copyright and Landmark Information Group Licence no: 100019229

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)

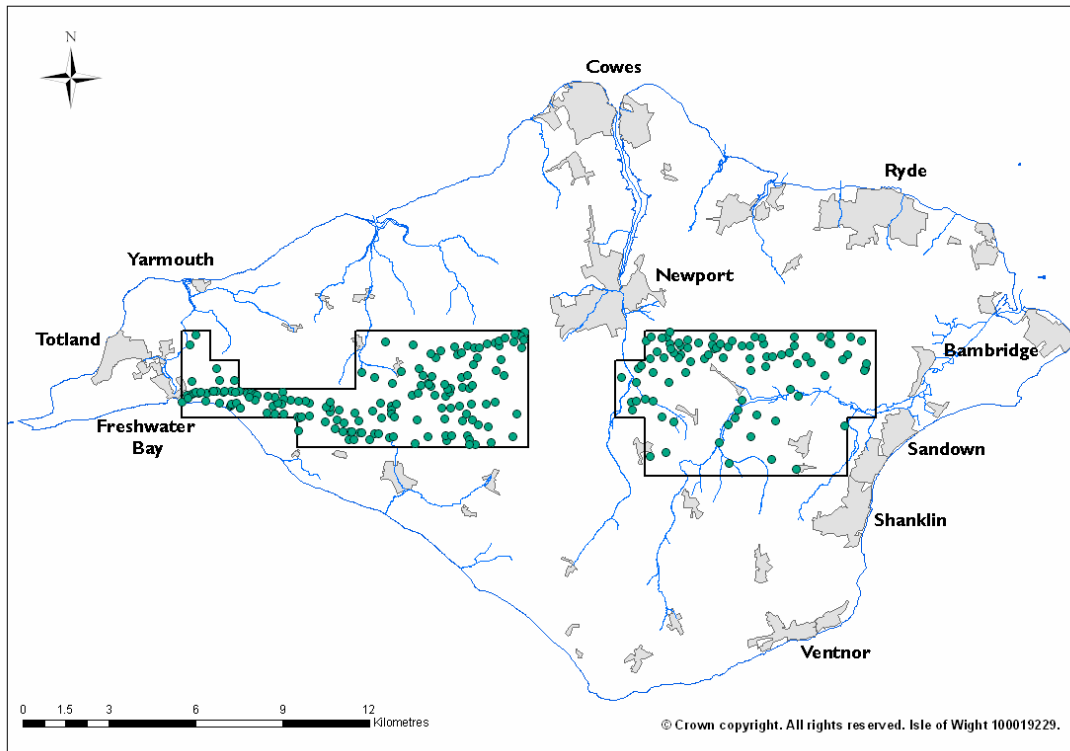


Figure 46. Distribution of post medieval sites.

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

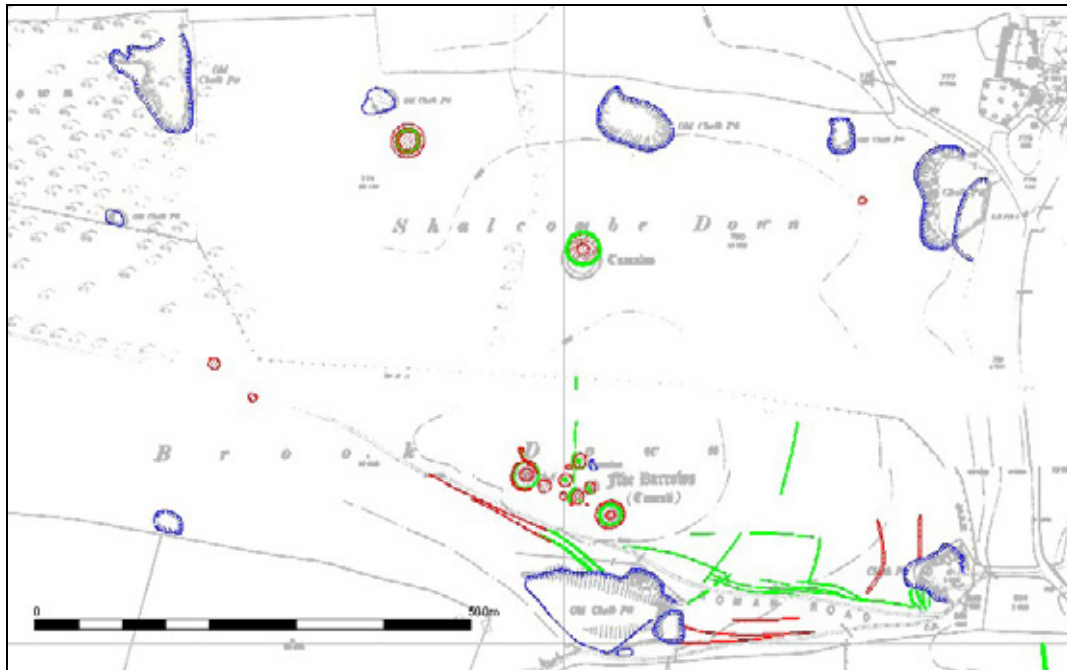


Figure 48. Post medieval chalk pits on Shalcombe Down. Map: © Crown Copyright and Landmark Information Group Licence no: 100019229

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.

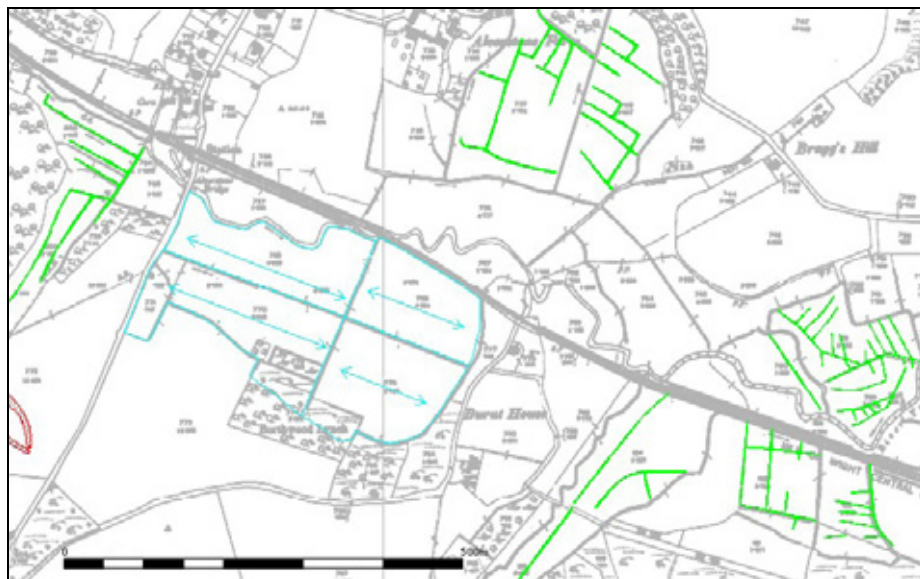


Figure 49. Post medieval drainage systems along the River Yar and its tributaries, (Site IDs 173776-80). Map: © Crown Copyright and Landmark Information Group Licence no: 100019229

5.8 NMP results: Historic (medieval or post medieval) sites (AD410 - AD1900)

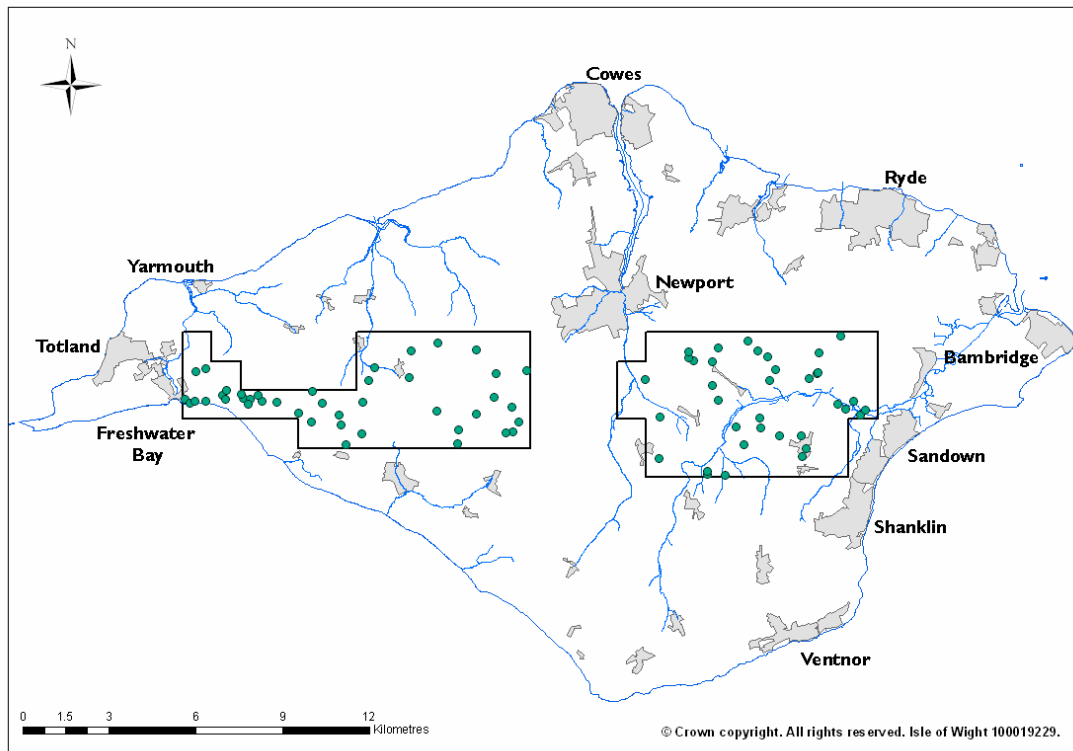


Figure 50. Distribution of Historic (medieval or post medieval) sites.

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

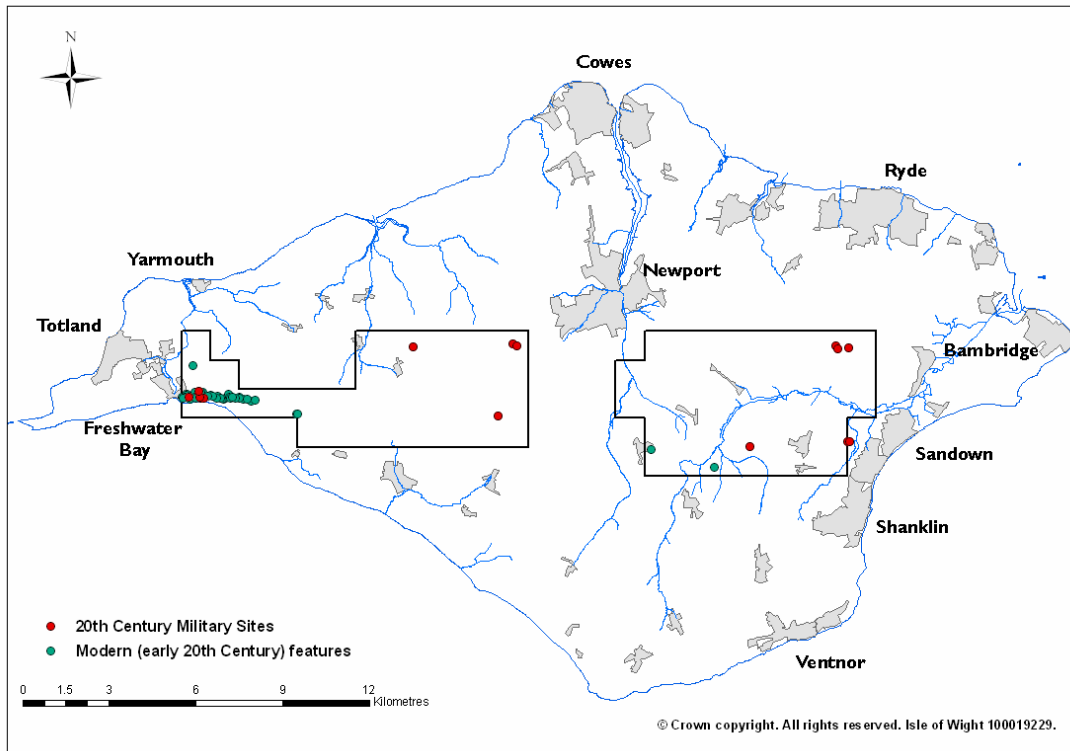


Figure 52. Distribution of twentieth century sites.

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

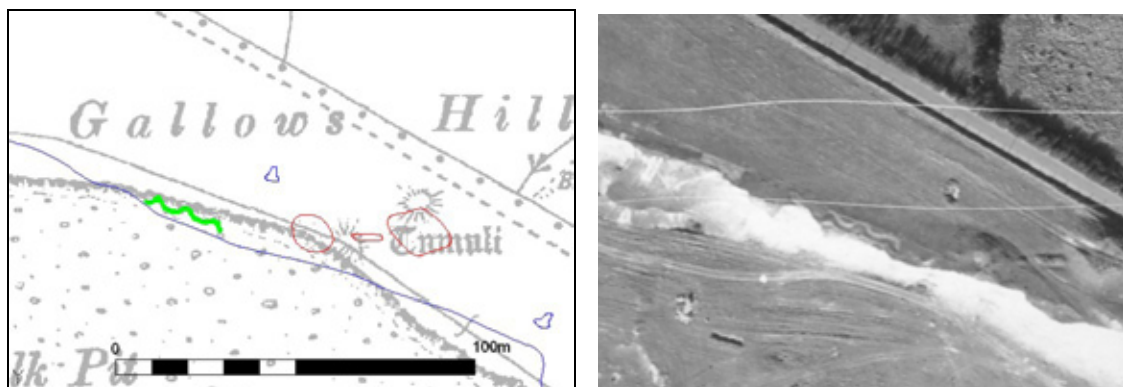


Figure 53. Possible site of nineteenth or early twentieth century military slit trenching at Gallows Hill, (Site ID 173738). Photograph: RAF 58/185 5119 17 February 1949 English Heritage (NMR) RAF Photography. Map: © Crown Copyright and Landmark Information Group Licence no: 100019229

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'.

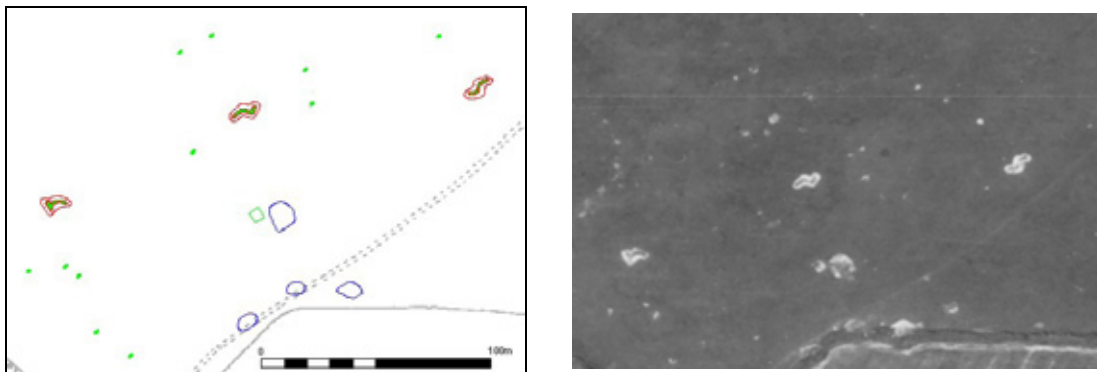


Figure 54. Twentieth century military slit trenching and fox-holes on Asheys Down, (Site ID 173838). Photograph RAF 106G/UK1665 Frame 4068 12 July 1946 English Heritage (NMR) RAF Photography. Map: © Crown Copyright and Landmark Information Group Licence no: 100019229

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.

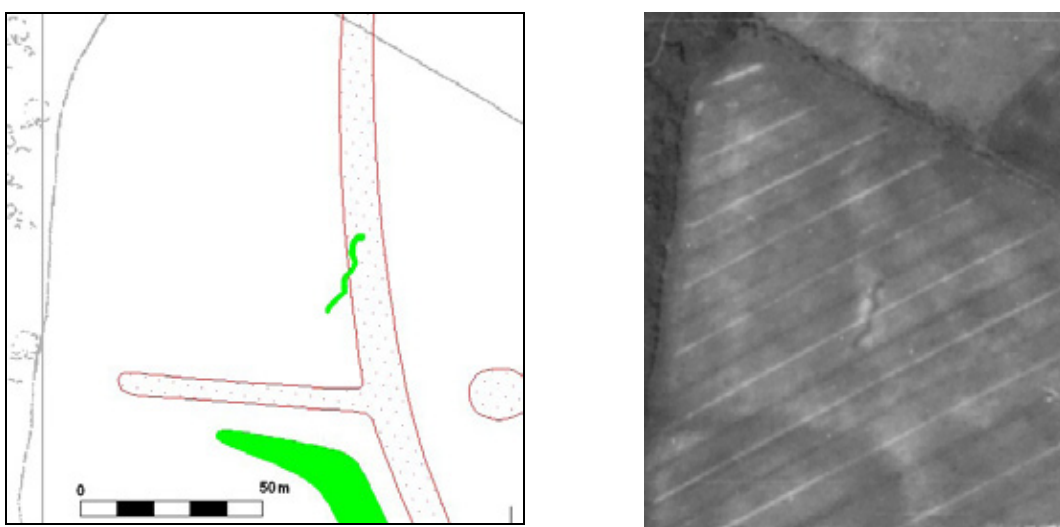


Figure 55. Twentieth century military slit trenching on Middle West Down, (Site ID 173784). Photograph RAF 106G/UK1665 Frame 4069 12 July 1946 English Heritage (NMR) RAF Photography. Map: © Crown Copyright and Landmark Information Group Licence no: 100019229

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.

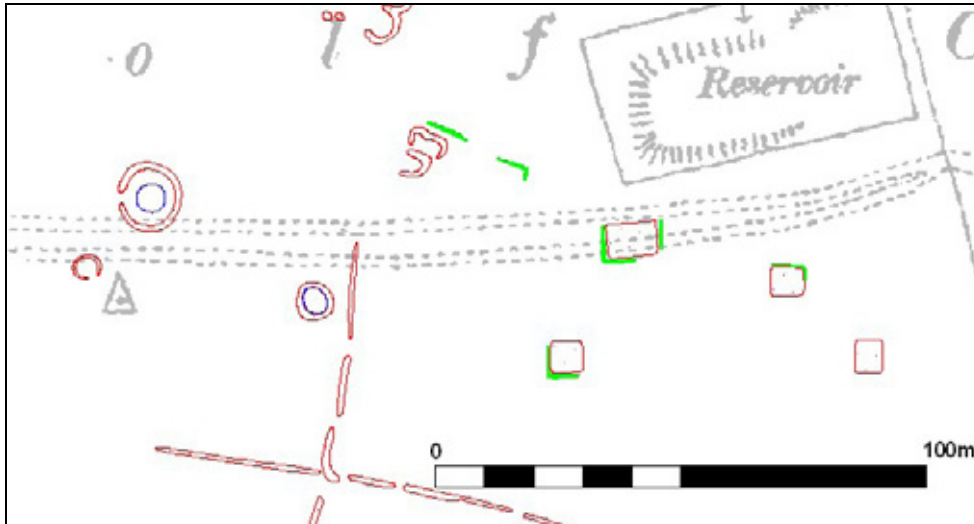


Figure 58. Site of a World War II searchlight battery (MIW1796) and associated features on Afton Down. Map: © Crown Copyright and Landmark Information Group Licence no: 100019229



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

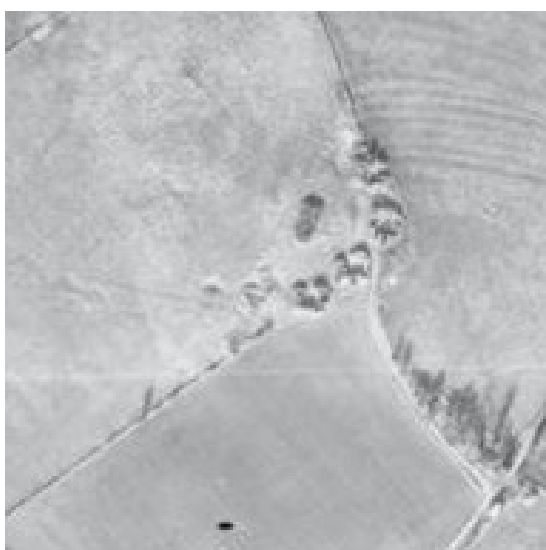


Figure 61. Site of a heavy anti-aircraft battery at Birdlip, Wiltshire. Photograph: RAF CPE/UK/1897 Frame 3426 12 December 1946 English Heritage (NMR) RAF Photography.

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).

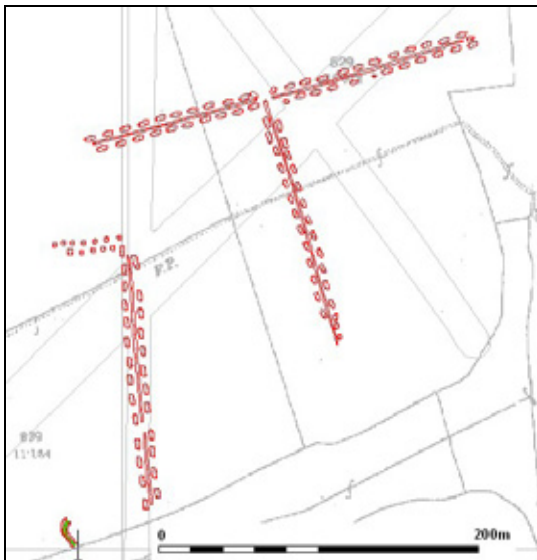


Figure 63. Anti-landing obstructions on Sandown Airfield, Lea Farm, (Site ID 173775). Photograph: RAF 106G/UK1411 Frame 4125 13 April 1946 English Heritage (NMR) RAF Photography. Map: © Crown Copyright and Landmark Information Group Licence no: 100019229

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.

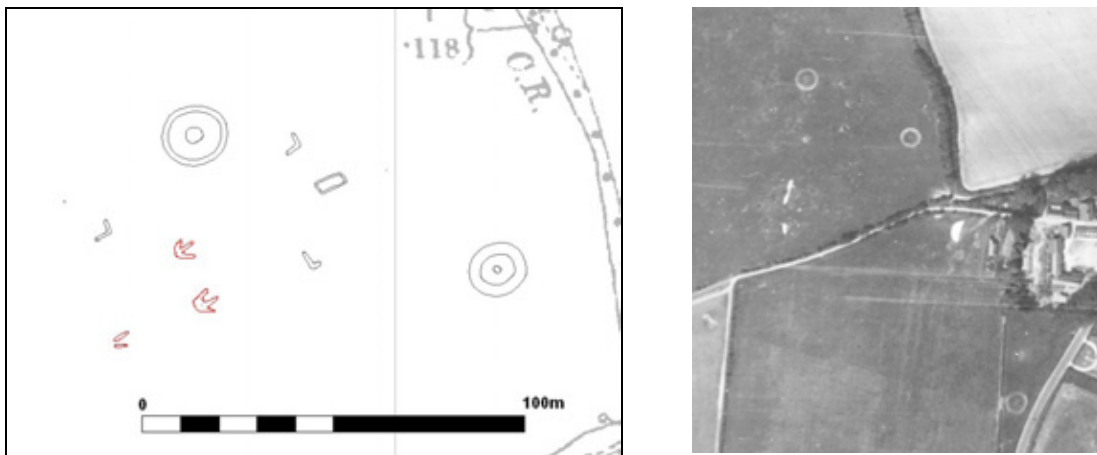


Figure 65. Circular features and associated structures of possible military origin at Rowborough, (Site ID 174330). Photograph: RAF 106G/UK1665 Frame 3083 12 July 1946 English Heritage (NMR) RAF Photography. Map: © Crown Copyright and Landmark Information Group Licence no: 100019229

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

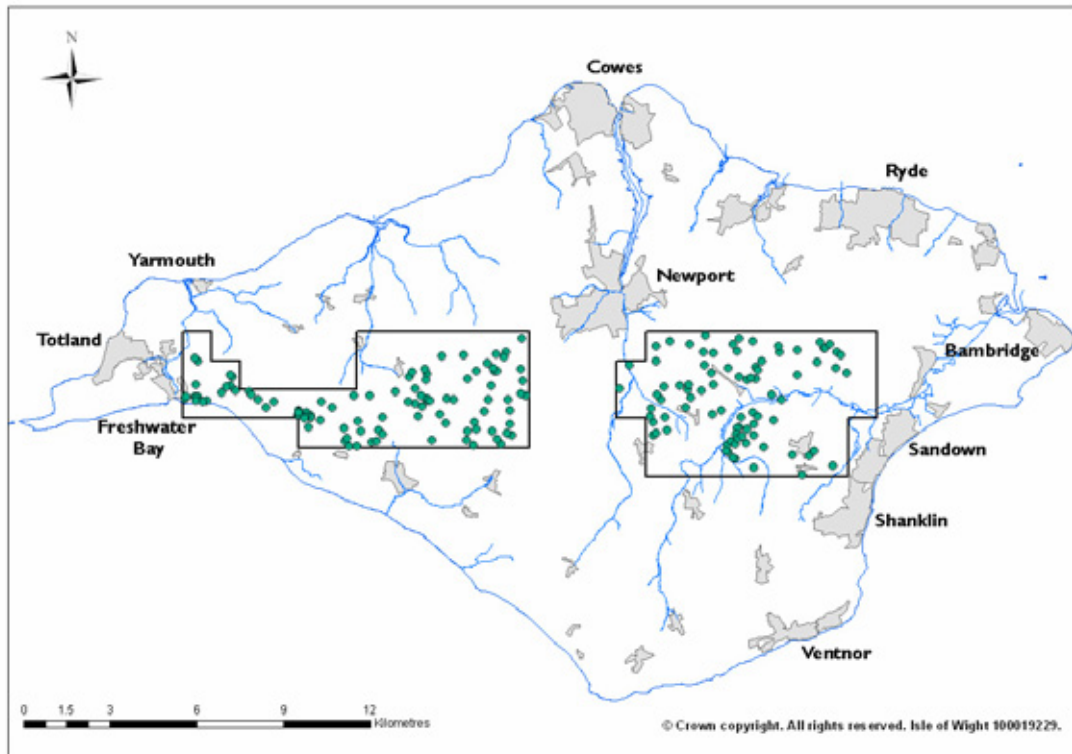


Figure 67. Distribution of undated sites.

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.

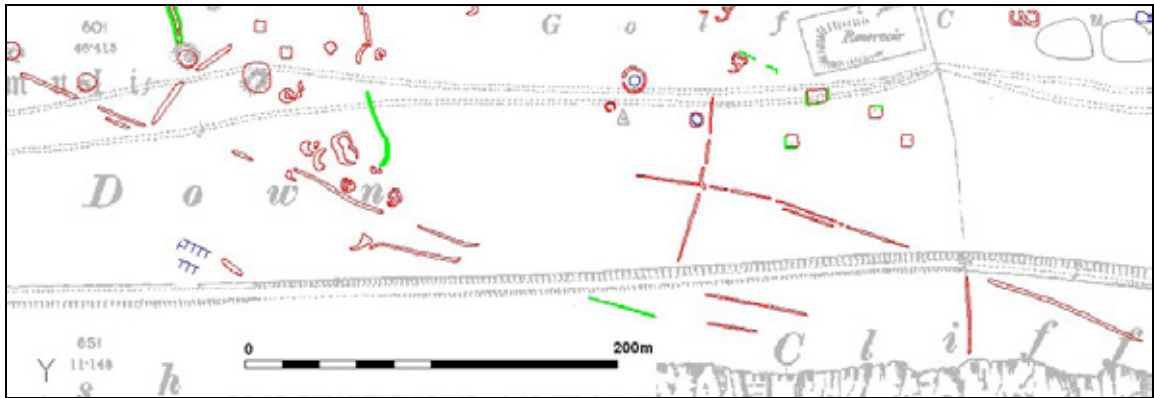


Figure 68. Undated field boundaries and trackways on Afton Down, (MIW2667, MIW2669, Site ID 174026 and 174035). Map: © Crown Copyright and Landmark Information Group Licence no: 100019229



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).

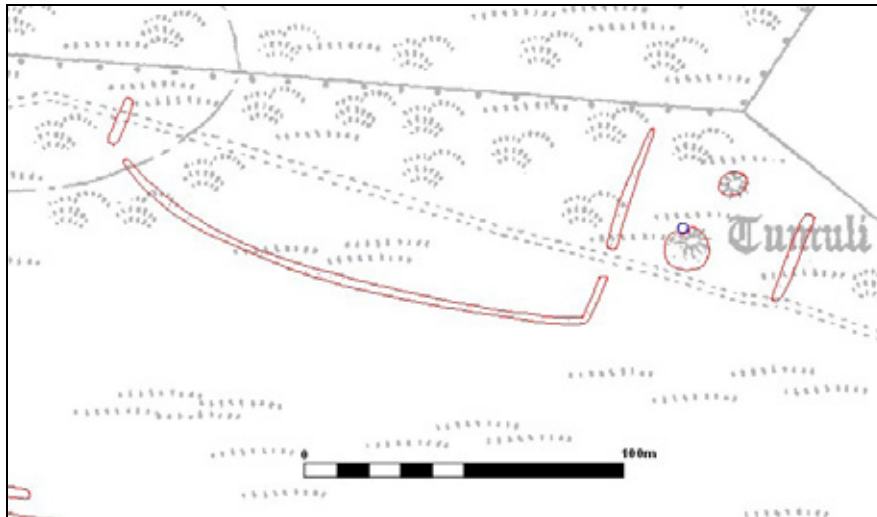


Figure 70. Undated enclosure and possible outwork on Mottistone Down, (MIW6289).
 Map: © Crown Copyright and Landmark Information Group Licence no: 100019229

At Calbourne a large rectilinear banked enclosure is visible as cropmarks (Figure 71). Like the Mottiston enclosure above, the Calbourne enclosure is co-located along with a Bronze Age barrow cemetery and therefore a prehistoric origin is possible.

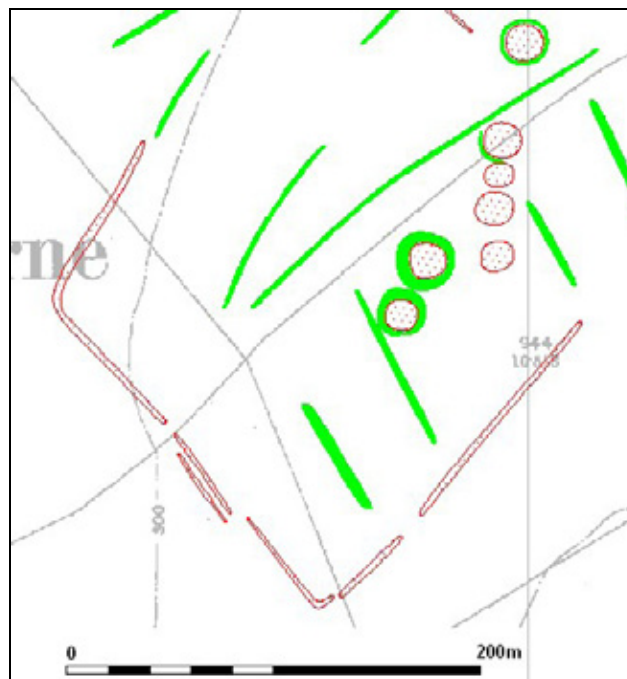


Figure 71. Enclosure and barrow cemetery at Calbourne, (MIW1778, MIW2354-60).
 Map: © Crown Copyright and Landmark Information Group Licence no: 100019229

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

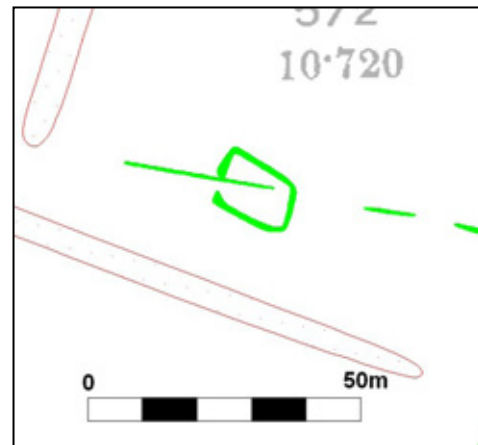


Figure 73. Undated rectilinear enclosures at Guards, (Site ID 173863).

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 combs (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 20th 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 1st 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 | Assign other monument Identifiers <i>Identity Method:</i> AHBR Number <i>Value:</i> AHBR monument HOB UID |
| Summary Text | Summary Long Text |
| District/Parish | Automatically generated by GIS |
| Period | Period NB tables will need to be correlated. |
| Site Type | Class scheme <i>Monument Type</i> Term |
| Form | Class scheme <i>Evidence</i> Term NB tables will need to be correlated. |
| NGR | Needs discussion to ascertain how to fill minimum fields |
| OS Number Populated with NMR number where one exists. | This field could be used to automate concordance, or pull out records which require concordance |
| Photos Date Source Serial Number | General Archive References Title: GAM number (may need some data concordance) Source number |
| | References of Archives to Monuments? Object Title and Object Number from NMR |
| | Associated Events: Generated from the NMR |
| Created By Created | Roles attached to Monument Name Date Organisation: automatically tag all records with Cornwall HES. |
| PRN | Other Monument Identifiers |

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