



# Army Basing Programme (ABP) Larkhill Area 2016 (RSGGEN)

Post-excavation Assessment



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## Summary

Wessex Archaeology was commissioned by Aspire Defence Capital Works (ADCW) to undertake archaeological mitigation works comprising a watching brief and subsequent strip, map and sample excavation of development Area 2016 (RSGGEN) in the south-eastern corner of Larkhill Camp, Wiltshire, centred on NGR 413470 144423.

The works were carried out as a condition of planning permission granted by Wiltshire Council (16/00032/FUL) for the construction of a new grass sports pitch as part of the Army Basing Programme (ABP), a major programme of construction involving the reconfiguration and refurbishment of existing military facilities on Defence Training Estate Salisbury Plain. The works have been preceded by a desk-based assessment (DBA). The watching brief and subsequent excavation were undertaken from 5 June to 4 July 2018.

The purpose of this report is to provide provisional results for Area 2016 and to assess their potential to address the research aims outlined in the written scheme of investigation (WSI). In due course the combined findings of the wider mitigation works relating to the ABP will be assessed, and a combined updated project design produced containing revised and final proposals for analysis, public dissemination of the results through publication, and arrangements for the curation of the archive.

The excavation has added some significant new information to the understanding of the prehistoric occupation of the land occupied by Larkhill Camp. Evidence of Middle Neolithic and Beaker activity was identified in the form of numerous pits and two inhumations. Radiocarbon analysis has provided a Late Neolithic to Early Bronze Age date range for one of the inhumations. Dating for these features also came in the form of pottery; namely Middle Neolithic Peterborough Wares and Beaker ceramics. Additionally, worked flint, burnt flint and animal bone was also recovered. The features were largely concentrated within two small areas; a cluster of twelve pits in the centre of site and a small scatter of features, including the two graves, in the eastern corner. Furthermore, part of an undated but probably prehistoric roundhouse was exposed along the north-eastern edge of site.

The site also provided additional evidence for the historic use of Larkhill military camp. Post holes and footings relating to WW1 military prefabricated buildings were identified and these correspond with structures depicted on an OS map of the camp from 1925–6. These buildings are not shown on the 1948 OS map, suggesting that they were demolished following WW1.



## **Acknowledgements**

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The fieldwork was directed by Dave Murdie and Jamie McCarthy, with the assistance of Cordelia Laycock, Anna Smaldone, Eleanor Legg, Emma Robertson, Yohan Paci and Robin Whitman. Environmental samples were processed by Sam Rogerson, Jenna Jackson, Elizabeth Foulston and Jenny Giddins, and the flots sorted by Nicki Mulhall. This report has been edited by Phil Andrews and the project was managed by Ruth Panes on behalf of Wessex Archaeology.



# LARKHILL CAMP ABP WORKS

## Post-excavation Assessment

### 1 INTRODUCTION

#### 1.1 Project and planning background

- 1.1.1 Wessex Archaeology was commissioned by Aspire Defence Capital Works (ADCW) to undertake archaeological mitigation works comprising a watching brief and subsequent strip, map and sample excavation of development Area 2016 (RSGGEN) in the south-eastern corner of Larkhill Camp, Wiltshire, centred on NGR 413470 144423 (**Figure 1**).
- 1.1.2 The work was carried out as a condition of planning permission, granted by Wiltshire Council (15/06682/FULL), approved in April 2016, for the redevelopment of Larkhill Camp. Area 2016 will comprise the construction of a new grass sports pitch and associated access road.
- 1.1.3 The mitigation works were part of ongoing archaeological works covering Larkhill, Bulford, Perham Down and Tidworth military camps. A desk-based assessment (DBA) was prepared for the entirety of Larkhill Camp in 2014 (Wessex Archaeology 2014). Following discussions with the Client and the Wiltshire Assistant County Archaeologist it was decided that the groundworks associated with the construction of the sports pitch would be monitored as an archaeological watching brief rather than undertaking the archaeological trial trench evaluation that was originally proposed in the Written Scheme of Investigation (WSI) (Wessex Archaeology 2015). Following the identification of significant archaeological remains it was agreed that the project would immediately progress to an archaeological strip, map and sample excavation.
- 1.1.4 The mitigation works were undertaken in accordance with the WSI, which details the aims, methodologies and standards to be employed, for both the fieldwork and the post-excavation work (Wessex Archaeology 2015). Clare King of Wiltshire Council Archaeological Services approved the WSI prior to fieldwork commencing. The watching brief and subsequent excavation were undertaken between 5 June and 4 July 2018.

#### 1.2 Scope of the report

- 1.2.1 The purpose of this report is to set out the provisional results of the excavation and, furthermore, to assess their potential to address the research aims outlined in the WSI.

#### 1.3 Location, topography and geology

- 1.3.1 Larkhill Camp is sited approximately 3 km north-west of Amesbury and 14 km north of Salisbury. The southern edge of the proposed development area at Larkhill Camp is situated some 1.9 km north of Stonehenge.
- 1.3.2 Larkhill Camp is currently home to the Royal School of Artillery. The military facility contains a considerable number of structures including accommodation blocks, messing and recreation facilities, technical support, administration, stores and the main training complex. The site also contains several large parcels of open ground (including sports pitches and training grounds) particularly to the west and north, and to the west of Sterling Barracks.





- 1.3.3 Much of the central part of the camp is structured around a rectilinear gridded street plan. The main arterial route bisecting Larkhill Camp, the Packway, also defines the northern boundary of the Stonehenge part of the World Heritage Site (WHS) of Stonehenge, Avebury and Associated Sites.
- 1.3.4 The military facility is largely self-contained, set as it is amid the open and underdeveloped expanse of Salisbury Plain. Several fields, particularly immediately to the south of the camp, are under arable cultivation, though undeveloped grassland predominates beyond. The majority of the surrounding landscape to the north forms part of the military training grounds. A number of plantations are located around the perimeter of the camp.
- 1.3.5 The excavation area is located in the south-east corner of the camp, approximately 200 m north of the Packway (**Figure 1**). Prior to excavation the site was occupied by open greenspace bisected by a gravel track providing access to the paddocks to the south–west.
- 1.3.6 The excavation area is located on ground that slopes gently from north to south, dropping from approximately 126 m above Ordnance Datum (aOD) to 118 m aOD.
- 1.3.7 The underlying geology is mapped as Cretaceous Chalk of the Newhaven formation with no overlying superficial deposits (British Geological Survey online viewer).

## **2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND**

### **2.1 Introduction**

- 2.1.1 Larkhill Camp is located within an area of unparalleled importance in terms of prehistoric archaeology. The southernmost edge of the camp lies within the Stonehenge portion of the Stonehenge, Avebury and Associated Sites WHS, while the entirety of the military camp also lies within an Area of Special Archaeological Significance, as defined within the 2011 Salisbury District Local Plan.
- 2.1.2 A detailed account of the archaeological and historical background of Larkhill Camp can be found within the DBA (Wessex Archaeology 2014) which considered the recorded historic environment resource within a 1 km study area around Larkhill Camp to assess the historical and archaeological potential. A summary relating specifically to Area 2016 RSGGEN within Larkhill Camp can be found below.

### **2.2 Previous works related to the development**

- 2.2.1 In June 2006 Wessex Archaeology carried out an archaeological watching brief monitoring groundworks on the site of a new training building in the eastern part of Larkhill Camp, approximately 250 m north-east of Area 2016. A small assemblage of residual Bronze Age worked flint was recovered from the overburden and extensive traces of former 20th century structures were also identified (Wessex Archaeology 2006).
- 2.2.2 During the summer of 2017 Wessex Archaeology carried out an archaeological strip, map and sample excavation of Areas 2002 ABHGEN and 2003 ABJGEN in the northern part of Larkhill Camp. Extensive evidence of activity dating to the Middle Neolithic, Beaker and Middle Bronze Age was identified across the two areas. Thirteen Middle Neolithic pits were found within Area 2002, containing a range of artefacts including pottery, flint tools and butchered animal bones. Multiple pits containing material dating to the Beaker period were identified, two of which contained small quantities of disarticulated human bone. The later prehistoric period was represented by several inhumation burials radiocarbon dated to the Middle Bronze Age, and an extensive field and trackway system, with two of the ditches

containing child burials (one neonate, one juvenile). A single roundhouse was also found, of likely prehistoric date, although no datable material was recovered from it (Wessex Archaeology 2018).

## 2.3 Archaeological and historical context

### *Neolithic 4000–2200 BC*

2.3.1 Significant remains of Neolithic date are known within the boundary of Larkhill Camp. To the immediate north-west of the camp, just outside the perimeter, is the scheduled monument of Knighton long barrow (National List ID 1010052). The barrow is orientated east to west. The mound is approximately 60 m long and 20 m wide and is flanked by two 12 m wide ditches which are very deep and well defined. The total width of the monument is c.44 m. It would appear that this barrow was deliberately located in a prominent position, possibly in order to create intervisibility with other contemporaneous monuments such as the Neolithic causewayed enclosure at Robin Hoods Ball (National List ID 1009593) to the north-west (English Heritage 2009), and the recently discovered causewayed enclosure overlooking the former Stonehenge Golf Course to the east of Larkhill Camp (Field and McOmish 2017; Wessex Archaeology forthcoming).

2.3.2 Within the southern portion of the camp, 30 m north of the Packway, is another scheduled Neolithic long barrow (National List ID 1012167). The barrow mound, which is orientated north-west to south-east, is up to 1.1 m high, 46 m long and 16 m wide. Flanking the mound on the north-east and south-west sides are ditches visible as earthworks up to approximately 7 m wide from which material was quarried during construction of the monument.

### *Bronze Age 2200–700 BC*

2.3.3 During the Early Bronze Age, Stonehenge, together with Avebury, would have been a major centre for the region and possibly for north-western Europe. Stonehenge continued to be a focal point and a component of a structured ceremonial landscape in which inter-visibility with other monuments and spaces is likely to have been important.

2.3.4 Ceremonial traditions underwent a significant change during the Early Bronze Age with new funerary monuments, such as round barrows, adopted for prominent burials. Round barrows are the commonest class of monument in the Larkhill area, and many survive as upstanding earthworks. A substantial number of probable barrows, evidenced by cropmarks of ring ditches, also exist in the area, while others, previously documented, have now been lost due to modern development. The majority of barrows are sited on the crests of ridges overlooking river valleys and major dry valleys, with many grouped together in barrow cemeteries.

2.3.5 Given the nature and density of prehistoric archaeology in the area, it is considered that further ceremonial and funerary monuments may once have existed within Larkhill Camp boundary. It is possible that any such examples may have gone un-recorded either because of a lack of above ground remains, levelling or they were simply omitted from the first accurate cartographic surveys. Subsequent development of the military camp would have diminished the possibility of identifying such features from aerial photographs. It is possible that, although remains associated with such monuments may not be visible above ground, any buried archaeology associated with them may be of considerable significance, potentially equivalent to that of Scheduled Monuments and of value to research objectives concerned with the development of the WHS (Wessex Archaeology 2014).

### *Modern AD 1800-present*

- 2.3.6 Area 2016 RSGGEN's location within the military camp, aerial photographs and historic mapping (Wessex Archaeology 2014) indicate former military structures were situated in the area and there is a potential for military practice trenches to also be present.

## **3 AIMS AND OBJECTIVES**

### **3.1 Aims**

- 3.1.1 The general aims of the excavation, as stated in the WSI (Wessex Archaeology 2015) and in compliance with the ClfA's *Standard and guidance for archaeological excavation* (ClfA 2014a), were:

- Determine the presence or absence of archaeological remains across the proposed ABP development areas and, should remains be present, to ensure their preservation by record to the highest possible standard;
- Identify, within the constraints of the methods employed, the extent, date, character, relationship, condition and significance of archaeological features, artefacts and deposits;
- Establish the stratigraphic sequence within the proposed ABP development areas, assess the degree of pre-existing impact to sub-surface horizons, and to document the potential for and the extent and survival of archaeologically significant buried deposits;
- Place any identified archaeological remains within their historical context, particularly with reference to the known archaeology of the Salisbury Plain area; and
- Present the results of the investigative work in sufficient detail (via the production of interim reports and a final unified report) to allow informed decisions to be made concerning the archaeological potential of the proposed ABP development areas and to inform the scope and nature of any requirements for any further fieldwork.

## **4 METHODS**

### **4.1 Introduction**

- 4.1.1 All works were undertaken in accordance with the detailed methods set out within the WSI (Wessex Archaeology 2015) and in general compliance with the standards outlined in ClfA guidance (ClfA 2014a). The methods employed are summarised below.

### **4.2 Fieldwork methods**

#### *General*

- 4.2.1 The topsoil/overburden was removed in level spits using a 360° excavator equipped with a toothless bucket, under the constant supervision of the monitoring archaeologist. Machine excavation proceeded in level spits until the archaeological horizon or the natural geology was exposed.
- 4.2.2 Where necessary, the surface of archaeological deposits was cleaned by hand to aid visual definition. A sample of archaeological features and deposits identified was hand-excavated, sufficient to address the aims of the excavation. A sample of natural features such as tree-throw holes was also investigated.

- 4.2.3 Spoil derived from both machine stripping and hand-excavated archaeological features was visually scanned for the purposes of finds retrieval. Where found, artefacts were collected and bagged by context. All artefacts from excavated contexts were retained, although those from features of modern date (19th century or later) were recorded on site and only a sample, all relating to WW1 activity, were retained.
- 4.2.4 All buried services were identified with a Cable Avoidance Tool (CAT) and Genny and were avoided entirely leaving a 5 m buffer either side of the service as stated in the Project Risk Assessment and Method Statements (RAMS).
- 4.2.5 The proposed methodology for Area 2016 set out in the WSI was for the excavation of five evaluation trenches. After consultation with the Client and the Assistant County Archaeologist for Wiltshire this methodology was revised to an archaeological watching brief. Following the identification of significant archaeological remains during the watching brief the methodology was updated to a strip, map and sample excavation.

#### *Recording*

- 4.2.6 All archaeological features and deposits were recorded using Wessex Archaeology's pro forma recording system. A complete drawn record of excavated features and deposits was made including both plans and sections drawn to appropriate scales (generally 1:20 or 1:50 for plans and 1:10 for sections), and tied to the Ordnance Survey (OS) National Grid. The Ordnance Datum (OD: Newlyn) heights of all principal features were calculated, and levels added to plans and section drawings.
- 4.2.7 A Leica GNSS connected to Leica's SmartNet service surveyed the location of archaeological features. All survey data is recorded in OS National Grid coordinates and heights above OD (Newlyn), as defined by OSGM15 and OSTN15, with a three-dimensional accuracy of at least 50 mm.
- 4.2.8 A full photographic record was made using digital cameras equipped with an image sensor of not less than 10 megapixels. Digital images have been subject to managed quality control and curation processes, which has embedded appropriate metadata within the image and will ensure long term accessibility of the image set. Photos of all human remains were taken using a Pentax K-50 mounting SMC Pentax-DAL AL WR 18–55 mm lens for the purpose of producing a photogrammetric model. The number of photographs, photograph overlap, lens focal length and distance to subject were adjusted to suit the subject and site conditions.
- 4.2.9 All models were processed in Remake software (Autodesk, now superseded by Recap) and geo-referenced using GPS reference control points with a maximum tolerance of 30 mm. All models were exported as geo-referenced .obj files and added to the AutoCAD project drawing as scaled images.

### **4.3 Artefactual and environmental strategies**

#### *General*

- 4.3.1 Appropriate strategies for the recovery, processing and assessment of artefacts and environmental samples were in line with those detailed in the WSI (Wessex Archaeology 2015). The treatment of artefacts and environmental remains was in general accordance with: *Guidance for the collection, documentation, conservation and research of archaeological materials* (ClfA 2014b) and *Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation* (English Heritage 2011).

### *Human remains*

- 4.3.2 The human remains were removed under the terms of a Licence for the Removal of Human Remains held by Wessex Archaeology (Ref: 17-0096, dated 27 April 2017). The excavation and post-excavation assessment of human remains was in accordance with Wessex Archaeology protocols, and undertaken in-line with current guidance documents (eg, McKinley 2013) and the standards set out in ClfA Technical Paper 13 (McKinley and Roberts 1993).

## **4.4 Monitoring**

- 4.4.1 Martin Brown, Assistant County Archaeologist of Wiltshire Council Archaeological Service, monitored the watching brief and subsequent excavation on behalf of the Local Planning Authority. Any variations to the WSI, if required to better address the project aims, were agreed in advance with both the client and Martin Brown.

## **4.5 Methods of stratigraphic assessment and quantity of data**

- 4.5.1 All hand written and drawn records from the excavation have been collated and checked for consistency and stratigraphic relationships. Key data has been transcribed into an Access database for assessment, which can be updated during any further analysis. The excavation has been preliminary phased using stratigraphic relationships and the spot dating from artefacts, particularly pottery. **Table 1** (below) provides a quantification of the records from the excavation.

**Table 1** Quantification of excavation records

Type	Quantity
Context records	87
Context registers	3
Trench records	2
Daybook records	22
Graphics (A4 and A3)	33
Graphics registers	2
Environmental sample records	17
Environmental sample registers	1
Object registers	1
Digital photographs	398
Photographic registers	9

## **5 STRATIGRAPHIC RESULTS**

### **5.1 Introduction**

- 5.1.1 Archaeological evidence of prehistoric activity was identified across the site (**Figure 2**). Features were largely concentrated within two small areas; a cluster of twelve pits in the centre of site and a small scatter of features, including two graves, in the eastern corner. Along the north–eastern edge of site, approximately 20 m north of the eastern features, part of a prehistoric roundhouse was exposed. There was also evidence of activity dating from WW1 in the form of post holes and footings relating to military prefabricated buildings.
- 5.1.2 There was extensive modern disturbance in the form of redundant pipe trenches, pathways and trackways. The site was bisected by an existing stone trackway that formed an access route to the paddocks located to the south–west. This trackway was formed of a bedding



layer of crushed stone which directly overlay the natural geology. Prior to excavation the remainder of the area was greenspace.

## 5.2 Soil sequence and natural deposits

- 5.2.1 The overburden across the bulk of site consisted of modern turf/topsoil with an average thickness of 0.27 m, overlying natural chalk. Much of this material would have been imported following the demolition of the WW1 military structures. There was no surviving evidence of any original topsoil or subsoil.
- 5.2.2 The natural geology consisted of chalk with periglacial scarring.
- 5.2.3 The access road to the north of site (see **Figure 1**) showed slightly different stratigraphy, although this relatively narrow strip was only machined to a depth of 0.32 m and did not, therefore, expose the natural chalk; the sequence was exposed within a hand dug test pit. The overburden consisted of 0.13 m of topsoil/turf overlying 0.07 m of modern made ground. This sealed the original topsoil which was 0.24 m thick, and this in turn overlay 0.26 m of subsoil.

## 5.3 Early Neolithic 4000–3350 BC

- 5.3.1 Only a single feature contained evidence for possible Early Neolithic activity. Pit **16676** was located within the central cluster of pits (**Figure 2**) and measured 0.6 m in diameter and was 0.18 m deep. A possible Early Neolithic axe thinning flake was recovered from the upper fill of the pit, however due to the tertiary nature of the deposit it is possible that the find may be residual. The vast majority of the other pits within the cluster produced no dating evidence, but the few that did contained pottery dating to the Middle Neolithic (see below).

## 5.4 Middle Neolithic 3350–2850 BC

- 5.4.1 Pits **16610** and **16652** contained Middle Neolithic pottery (**Figure 2**). Pit **16610** was located within the central cluster of pits, whilst pit **16652** was approximately 7 m south of this cluster.
- 5.4.2 Pit **16610** was sub-circular, measured 1 m by 0.9 m, and was 0.58 m deep with steep, straight sides and a flat base (**Plate 1**). Numerous fragments of Middle Neolithic Peterborough Ware were recovered from deposit 16611, the lowest fill of the feature. This deposit consisted of a loosely compacted pale brown silt with chalk and flint inclusions. The pottery sherds were largely from a single vessel but were spread throughout the deposit, suggesting the vessel was deposited in pieces or broke during deposition. The overlying fill (16612) consisted of mid-brown clayey silt with chalk and flint inclusions. The pit's uppermost fill (16613), which consisted of dark brown silt, showed evidence of having been disturbed by modern truncation.
- 5.4.3 Pit **16652** was sub-circular, measured 1.6 m by 1.56 m and was 0.88 m deep with steeply sloping sides and a flat base (**Plate 2**). It contained a relatively large number of finds including a range of pottery, struck flint, animal bone and an antler pick. The majority of the pottery was identified as probable Middle Neolithic Peterborough Ware, however a small number of Beaker and Romano-British sherds were also recovered. The large difference in quantity between the probable Neolithic pottery and later material, coupled with the fact that the later pottery was recovered from the uppermost fill within the pit, suggests that the pit was Middle Neolithic in date and that the later pottery was intrusive. The antler pick, as well as some fragments of animal bone and a single sherd of pot, was recovered from deposit 16654, which was the first major deposit following the primary fill of the pit. The pick was recovered from the interface of this deposit and the primary fill below, placing it only 0.06 m above the base of the feature. The bulk of the finds, including the majority of the Neolithic

pottery, was recovered from deposit 16656 in the upper half of the pit. This deposit consisted of mid-brown clayey silt with flint and chalk inclusions.

## 5.5 Beaker 2400–1800 BC

- 5.5.1 Beaker ceramics were recovered from an inhumation burial within a pit, a second pit which contained disarticulated human remains, and two other pits. The features were distributed across the site. The inhumation burial, the pit containing disarticulated human remains and another pit were in a cluster of three in the eastern corner of site. One pit was south of the central cluster of 12 mainly undated but possibly contemporary pits, and the other pit was isolated near the southern corner of site (**Figure 2**).
- 5.5.2 Grave **16617** containing inhumation burial 16685 was cut into the top of circular pit **16688**. The shape of the pit and formation of the deposits suggest that the pit and grave were broadly contemporary, with the pit being reused for burial. Radiocarbon analysis of a sample taken from 16685 has provided a date range of between 2340 and 2140 BC. This pit was located in the eastern corner of site, within a small cluster of three features including Beaker pits **16615** and **16619**. Pit **16688** was sub-circular, measured 1.23 m by 1.16 m and was 0.8 m deep. It had steep, straight sides and a flat base. Surviving material beneath the grave consisted of a mid-greyish black deposit of silt on the base of the pit containing charcoal, a few fragments of Beaker pot, burnt flint and animal bone. Environmental sampling of this material recovered charred plant remains of flax and cereal grains. This deposit was sealed with a 0.14 m thick layer of chalk which formed the base of the grave. This suggests that prior to being backfilled and reused for burial, the pit may have been used for storage, possibly for grain.
- 5.5.3 Grave **16617** was cut into the top of pit **16688**, with the inhumation at a depth of 0.6 m (**Plate 3**). The grave contained a subadult female (16685), aligned east to west, laid crouched on the right side with the head to the east, facing north. The right forearm was bent upwards and the left was placed across their abdomen. Preservation of the bone was good with around 85% of the skeleton surviving. The grave was backfilled with a mid-greyish brown silty clay with chalk and flint coarse components. A few small fragments of human bone were found within this deposit, a result of root and minor burrowing disturbance. Beaker pottery was also recovered from this fill, mostly in the eastern half of the grave.
- 5.5.4 Pit **16619** was located 2 m south of pit **16688**. It measured approximately 1 m in diameter and was 0.4 m deep with steep, straight sides and a flat base. It contained the disarticulated remains of a juvenile just above the base (**Plate 4**). The most notable feature of this burial was the evidence for a well-healed trephination in the skull (see section **6.5** below for more detail) (**Plate 5**). This is significant due to the rarity of examples of this form of surgical procedure from the Bronze Age, with this example possibly unique as it was performed (successfully) on a juvenile; previously recorded Bronze Age examples, several from Wiltshire, were all on adults. The pit was backfilled with a mid-brown silty loam with flint and chalk inclusions. Fragments of Beaker pottery were recovered along with worked flint, burnt flint, burnt animal bone, fragments of sarsen stone and a pierced stone bead.
- 5.5.5 Pit **16615** was located 0.2 m south–east of pit **16617**. It was circular, measured 0.52 m by 0.48 m and was 0.23 m deep with steep, straight sides and a flat base. It contained a single fill from which four sherds of Beaker pot were recovered along with fragments of animal bone and some worked flint.
- 5.5.6 Pit **16634** was located near the southern corner of site, with no other archaeological features within the vicinity. It was sub-circular, measured 1.47 m in diameter and was 0.63 m deep

with steep, straight sides and a concave base. It contained three phases of deposition, with Beaker pottery recovered from the uppermost fill along with some worked flint.

## 5.6 Romano-British AD 43–410

5.6.1 Only three sherds of Romano-British pottery were recovered. Two were intrusive in Middle Neolithic pit **16652**, while the other was from pit **16681** which was located within (undated) roundhouse **16679** (**Figure 2**).

5.6.2 Pit **16681** was somewhat irregular in shape, measured 0.57 m by 0.48 m and was 0.08 m deep. The fill comprised almost entirely of flint nodules, perhaps forming a lining to the feature. However, there was no evidence of *in-situ* burning within the feature to suggest that it may have been a hearth.

## 5.7 Uncertain date

5.7.1 There were many features on the site that produced no datable material (**Figure 2**). Of the central cluster of twelve pits (group number **16677**), **16610** provided dating evidence in the form of Middle Neolithic pottery (see above). Pit **16676** within the cluster contained a possible Early Neolithic axe thinning flake, although this could be residual and thus cannot be taken to reliably date the feature. The cluster as a whole measured approximately 8 m long and 3 m wide and formed a linear arrangement aligned north-east to south-west. It is possible that some, if not all, of the pits within the cluster are of a similar, Neolithic date due to their close proximity to **16610**, however this cannot be confirmed. The pits varied in size and shape, most of them circular or sub-circular, and all contained chalk-rich fills, with the evidence suggesting they had been rapidly backfilled.

5.7.2 Roundhouse **16679** was partially exposed along the north–east edge of site, towards the eastern corner (**Figure 2**). What was exposed consisted of four post holes forming a broadly semi-circular shape in plan (**Plate 6**). The partially exposed structure measured more than 5 m across. The post holes were evenly spaced approximately 1.8 m apart. All four were of similar shape and size, measuring on average 0.3 m in diameter and 0.3 m deep with steep, straight sides and a concave base. The fills were also similar, consisting of a mid-greyish brown silty clay with chalk and flint inclusions. No finds were recovered from any of the post holes so their date is uncertain. Although Bronze Age roundhouses are known in the general vicinity, there is evidence for Iron Age activity from Area 2002 within the camp and it is, therefore, more likely that this structure is also Iron Age, or possibly Early Romano-British. Pit **16681** containing a single sherd of Romano-British pottery was located in the north-west part of the structure, although it is unknown whether the pit and structure were related.

## 5.8 Military Remains

5.8.1 Extensive modern disturbance was recorded across the site. While most of this relates to post-war activity up to the present day, some of it is related to World War I and World War II activity (**Figure 2**).

5.8.2 A relatively large number of post holes/post pads were identified across the site, with groups of them defining rectangular structures aligned north-west to south-east. These post holes/pads were square in shape the larger measuring 0.7 m across and the smaller 0.4 m. These appear to relate to World War I prefabricated buildings depicted on an OS map of the base from 1925–6 (Wessex Archaeology 2014). The OS map of 1948 no longer depicts these structures, suggesting that they were demolished sometime prior to this.

- 5.8.3 Military trenches were observed in the south-eastern part of the Site. One of the trenches was subject to investigation, the trench measured 1.74 m by 0.65 m in area and 0.8 m in depth. The trench had vertical, straight sides and a flat base, and is understood to represent a possible post WWII slit trench. Iron sheeting and two nails (one with an attached washer) was recovered from the trench backfill. The slit trench would have provided protection during combat, and the location of the trenches at the top of the slope suggests the trench may have been utilised as a fire trench towards the valley base to the south west.

## 6 ARTEFACTUAL EVIDENCE

### 6.1 Introduction

- 6.1.1 The material was mostly recovered from a series of discrete features (graves and pits) largely of Neolithic and Bronze Age date.
- 6.1.2 All finds have been quantified by material type within each context, and totals by material type are presented in **Table 2**. This section discusses the finds by material type; on this information is based an assessment of their potential to contribute to an understanding of the site, and a statement of any proposed further analysis considered necessary to achieve this.

**Table 2** Finds totals by material type (no./weight in grammes)

Type	No./weight (g)	
Pottery	98	1273
Burnt Flint	572	15,538
Worked Flint	372	5030
Copper Alloy	1	4
Iron	10	81
Stone	5	1970
Worked Bone	1	21
Fired Clay	1	1
Human bone	148	-
Animal Bone	193	653

### 6.2 Pottery

- 6.2.1 The primary dating evidence for the site has been provided by the pottery, which is predominantly of Middle Neolithic and Beaker date. The remainder of the assemblage consists of sherds of Food Vessel, unidentifiable prehistoric and material of Romano-British date. The condition of these sherds varies: those from the pit groups are generally better-preserved than the material from other features although – given the nature of the Middle Neolithic fabrics – this is not always the case and much of the assemblage can be characterised as small and abraded, even from sealed deposits.

#### *Neolithic*

- 6.2.2 Middle Neolithic Peterborough Wares were recovered from pits **16610** and **16652**.
- 6.2.3 Pit **16610** contained fragments of a single vessel of the Ebbsfleet sub-style. Surviving sherds include a fragment of an in-turned rounded rim decorated with impressed crescents (perhaps finger nails or the end of a small sharpened stick or bone) across the top, with a line of diagonal impressions (more obviously finger nails) immediately below the rim on the exterior surface. The interior surface above the cavetto has two horizontal lines of finger-

tip and nail impressions, while the cavetto itself has a single line of larger and deeper fingertip impressions. The rest of the vessel is undecorated, although at least the lower portions of the interior and exterior surfaces appear to have been wiped with a pad of vegetable matter. No base sherds survive.

- 6.2.4 Pit **16652** contained a group of sherds including Romano-British (probably intrusive) and unidentified probable prehistoric material, among which were a group of 22 sherds that may be Peterborough Ware. The forms and decoration would not be out of place among a Mortlake assemblage, although the fabrics are rather hard, and not especially heavily flint-tempered. The most likely sherd is a single fragment of body/cavetto angle decorated with incised chevrons on the body and vertical incisions in the cavetto below, these overlapping with deep small circular pits, too regular to be made with fingers and probably stick impressions. Another 20 sherds and crumbs derive from another sandy flint-tempered vessel, very thick walled, decorated with short lines of twisted cord arranged in irregular rows. If these sherds are not Peterborough Ware, then they may perhaps derive from Coarse Beakers. One other sherd, with large deep stick impressions, may also derive from a Peterborough Ware vessel.

*Beaker*

- 6.2.5 Beaker ceramics were recovered from grave **16617** and five pits (**16615**, **16619**, **16634**, **16652** and **16688**).
- 6.2.6 Grave **16617** contained 18 sherds from at least three vessels. Of these, 12 sherds came from the base (75% complete) and wall of a vessel decorated with alternating blank and horizontally comb-impressed panels. A single sherd came from the plain rounded rim of a finer vessel similarly decorated with alternating blank and horizontally comb-impressed panels. The remaining five sherds are small, and only three are decorated. The fabrics are all similar and may derive from one vessel decorated with infilled opposed chevrons between horizontal lines of comb impression.
- 6.2.7 Pit **16615** contained four sherds from three vessels. One was represented by a fragment of flat rim with downward-pointing filled triangles below executed with a square-toothed comb. Two sherds came from a vessel decorated with at least three horizontal lines of rectangular-toothed comb impression. One small abraded sherd has a complex (but indistinguishable) geometric motif executed with a square-toothed comb.
- 6.2.8 Pit **16619** contained eight crumbs that could be from a Beaker, a single sherd decorated with very fine (but abraded) twisted cord arranged in overlapping horizontal lines, and a base/wall angle decorated with very fine (almost pricked) impressions arranged in infilled downward-pointing triangles, with two parallel rows of horizontal lines bounding a narrow zone of small circular dots.
- 6.2.9 Pit **16634** contained a single abraded plain body sherd of probable Beaker date in its uppermost fill.
- 6.2.10 Pit **16652** contained a mixed assemblage including Neolithic and Romano-British material. Beaker sherds include two from a thin-walled vessel decorated with impressions made with the end of a small (bird?) bone, two sherds decorated with incised lines (one with diagonal incisions below) and six small plain fragments.
- 6.2.11 Pit **16688** contained five small crumbs, one decorated with two lines of rectangular comb impressions.



### *Food Vessel*

- 6.2.12 A single bevelled rim from pit **16652** may belong to a Food Vessel. Below the rim is a shallow horizontal groove at the top of a shallow neck. Below the neck, the body is decorated with (very abraded) stab marks.

### *Prehistoric*

- 6.2.13 A single sherd – too small and featureless to allow secure identification – from among the fills of pit **16652** has been classified as prehistoric.

### *Romano-British*

- 6.2.14 Romano-British material is limited to two greyware sherds from pit **16652**, one a base, and a South-East Dorset Black Burnished Ware rim from pit **16681**.

## **6.3 Worked flint**

### *Introduction*

- 6.3.1 A total of 265 pieces of worked flint were recovered from 24 contexts, as shown in **Table 3**.
- 6.3.2 The condition of the flint is consistent both within the assemblage and with the previous phase of work from Larkhill Camp (Gittins 2018). This condition is generally poor, showing considerable patina and some frost damage. There are no mint condition pieces. The raw material is also similar to the previous phase of work, comprising light to dark grey flint, which is of poor quality with cherty inclusions, and with a medium to thin buff-coloured cortex. Medium sized nodules of flint were most likely collected from the local drift geology.

**Table 3** The composition of the flint assemblage

<b>Flint Types</b>	<b>No.</b>	<b>% of assemblage</b>
<b><i>Retouched tools:</i></b>		
Scraper	4	1.51
<i>Retouched tools sub-total</i>	4	1.51
<b><i>Debitage:</i></b>		
Flake cores (incl. broken)	6	2.27
Axe thinning flake	1	0.37
Flakes (incl. broken)	198	74.72
Blades (incl. broken)	1	0.37
Debitage (angular shatter)	16	6.04
Chips/microdebitage	39	14.72
<i>Debitage sub-total</i>	261	98.49
<b>Total</b>	<b>265</b>	<b>100</b>

### *Chronology*

- 6.3.3 This assemblage is entirely lacking in chronologically diagnostic pieces. Four scrapers comprise the entire retouched portion of the assemblage, but none of them are useful for dating.
- 6.3.4 The possible axe thinning flake from upper fill 16674 of pit **16676** indicates an earlier prehistoric date and is likely to be Early Neolithic rather than Mesolithic given the context and the flake technology indicated by the remainder of the context.

6.3.5 The blade in fill 16682 of Beaker pit **16619**, along with the longer finer flakes, might suggest an Early Neolithic date, and therefore re-deposited, but blades are also found in later Neolithic assemblages.

6.3.6 Otherwise, the limited number of pieces recovered from each context makes estimations of date difficult – primarily because distinguishing differences in flake technology in such limited quantities in isolation is impossible.

#### *Technology*

6.3.7 The flaking method employed is similar across most of the site. However, the larger nodules used for the pieces in fill 16616 of grave **16617** and fill 16682 of pit **16619** appear to have provided a greater degree of control over flaking, particularly on the core surface, producing larger and longer finer flakes, which contrast with the squatter flakes from more crudely reduced cores in the secondary fill 16614 of pit **16615**, primary fill 16611 of Middle Neolithic pit **16610** and secondary fill 16612 of the same pit. These pieces would not look out of place in a Beaker assemblage however.

6.3.8 Taken as a whole the assemblage appears to be Middle Neolithic through to Early Bronze Age.

#### *Distribution*

6.3.9 The largest concentrations of flint came from fill 16616 of grave **16617**, fill 16618 of Bronze Age pit **16619** and secondary fill 16657 of pit **16652**.

### **6.4 Burnt flint**

6.4.1 Overall, 15,383g of burnt flint were recovered from 15 contexts. The greatest concentration occurred in fill 16616 of grave **16617**, fill 16618 of Beaker pit **16619** and fill 16624 of pit **16625** – all greater than 1kg, with fill 16624 containing the greatest weight at 9891 g. Grave **16617** and pit **16619** have the largest concentration of both burnt flint and worked flint pieces – however, none of the burnt flint appears to contain worked pieces and is comprised entirely of heavily burnt broken-up flint.

### **6.5 Human bone**

#### *Introduction*

6.5.1 Human bone was recovered from three contexts within two adjacent features (**16617** and **16619**, set approximately 2 m apart) situated in the south-western corner of Area 2016. The burial in grave **16617** had been made crouched on the right side, the body having slumped back slightly post-depositionally. The bone at the base of pit **16619** showed some semblance of anatomical order and might represent the remains of an inhumation burial made there. However, were this to have been the case, there had been substantial subsequent disturbance/manipulation with some skeletal elements being lost/removed and fragments from all skeletal areas being redeposited in the overlying fill 16618 (**Table 4**).

6.5.2 A sample of bone from grave 16617 was submitted for radiocarbon analysis and returned a date of between 2340 to 2140 BC. Fragments of Beaker pottery were also found in both features (see above). Although the vessels were potentially placed to accompany the human remains, in both cases they were fragmentary and not found in direct association with the bone but deposited/scattered in the overlying fills. Irrespective of the physical relationship between the two materials, the pottery does at least indicate a Beaker date for the mortuary deposits.

6.5.3 Mortuary deposits of a similar date have been found elsewhere in the immediate vicinity. Disarticulated and redeposited bone was recovered from two pits some 700–900 m to the north in Areas 2002 and 2003 of this project. At least two Beaker period graves have been found some 750–800 m to the east – including the triple burial of an infant and two juveniles – during the archaeological investigations linked to the Larkhill East and West SFA project (WA 107947, 113931, 113936 and 115984).

*Methods*

6.5.4 The human remains were subject to a rapid scan to assess the condition of the bone, demographic data, potential for indices recovery and the presence of pathological lesions. Assessments were based on standard ageing and sexing methods (Beek 1983; Buikstra and Ubelaker 1994; Scheuer and Black 2000). Grading for preservation of the unburnt bone according with McKinley (2004, fig. 6).

*Results*

6.5.5 A summary of the results is presented in **Table 4**.

**Table 4** Human bone

context	cut	deposit type	quantification	age/sex	pathology	comment
16618	16619	R pit fill	20 frags	juvenile 7–8 yr		1-2 slight degraded, old & fresh breaks; above 16682, sample whole depth no definition; some bones look too small for age indicated by teeth & main skull fragments (same in 16682, small child, ?malnourished) = 16682
16682	16619 (0.40)	R pit fill	20%	juvenile 7–8 yr	trephination – superior central frontal (16mm internal 15 mm external)	lower 0.12 m of fill; 0–1, old & fresh breaks, skull should largely reconstruct; cranium almost complete – all frontal, most occipital, large part parietals, right temporal, left maxilla & all mandibular arc; few axial elements (rib, innominate & cervical vert); femur & humerus shaft (very small, equiv. modern 3–4 yr old); whole-earth recovery of this fill.
16685	16617 (0.40)	crouched burial (right)	85%	subadult 14–16 yr ??female	cortical defect – left clavicle	root eroded (2), some recent breaks, trabecular 'pock-marked' ?fungal activity (2); skull heavily fragmented, some reconstruction required

KEY: R – redeposited;

6.5.6 Both features had survived to around 0.40m in depth and there is no evidence for bone loss due to horizontal truncation. The removal of skeletal material from pit **16619** as a consequence of ancient disturbance/revisiting has been outlined above. There is no direct evidence for disturbance of the remains within grave **16617**, although the condition of the potentially associated pottery vessel might indicate that some deliberate post-burial activity was undertaken.

6.5.7 The bone is generally in good condition (Grades 1–2), showing slight surface erosion due root/fungal activity as is commonly observed in remains from the area. Much of the bone is fragmented, generally featuring breaks of long standing caused by the pressure of the

overlying soil matrix on the relatively thin and fragile immature bone, exacerbated by the later disturbance in the case of that from pit **16619**.

- 6.5.8 The remains of two immature individuals are represented (**Table 4**), the relatively few fragments of bone from context 16618 clearly deriving from the same individual as represented in the underlying context 16682.
- 6.5.9 Pathological lesions were observed in the remains of both individuals. The cortical defect in the left clavicle of the subadult from grave **16617** is likely to relate to a traumatic injury wrenching the costo-clavicular ligament. The juvenile from pit **16619** has a small, well-healed trephination in the centre of the frontal bone close to the coronal suture (**Plate 5**). Although there is evidence for such cranial surgery from the Neolithic onwards in the British Isles, the numbers of early prehistoric examples are relatively few with most dating to the post-Roman/early medieval period. Several of the reported Bronze Age examples were found in Wiltshire, from sites in relatively close proximity to Larkhill (Ashbee 1978; Christie 1967; Green and Rollo-Smith 1984; Roberts and McKinley 2003). The majority of those who experienced this treatment were adults, including 74% of those in the 2002 survey of British trepanations by Roberts and McKinley; there were no stated cases of such surgery being undertaken on children, though the 11 cases within the survey for which no age was specified could have included some. The reasons for such an intervention could be varied; skull trauma – the relieving of a depressed fracture – generally leaves other evidence of having occurred, but in many cases there is no clear evidence to suggest an associated injury. Treatment of migraine, epilepsy and ‘possession’ are amongst the potential reasons for surgery of this type (*ibid*; Roberts 2000) which, given the evidence for healing in the majority of cases, if not efficacious in solving the reason for intervention at least suggests the surgery itself was successful.

## 6.6 Animal bone

### *Introduction*

- 6.6.1 A total of 197 fragments (or 653 g) of animal bone came from six pits, one grave, one pit containing disarticulated human bone and a possible structure. Once conjoins and associated bone groups (or ABGs) are accounted for the total falls to 148 fragments (**Table 5**).

**Table 5** Animal bone: number of identified specimens present (or NISP)

Species	M Neolithic & Beaker	Prehistoric	Total
Cattle	6	2	8
Sheep/goat	12	-	12
Pig	3	2	5
Red deer	3	1	4
Roe deer	1	-	1
<b>Total identified</b>	<b>25</b>	<b>4</b>	<b>30</b>
<b>Total unidentifiable</b>	<b>89</b>	<b>29</b>	<b>118</b>
<b>Overall total</b>	<b>114</b>	<b>33</b>	<b>148</b>

### *Methods*

- 6.6.2 The assemblage was rapidly scanned and assessed following current guidelines for best practice (Baker and Worley 2014). Information quantified includes species, skeletal element, preservation condition, fusion and tooth ageing data, butchery marks, metrical data, gnawing, burning, surface condition, pathology and non-metric traits. This information was directly recorded into a relational database (in MS Access) and cross-referenced with relevant contextual information.

## Results

### Preservation condition

- 6.6.3 The animal bones are well-preserved but show signs of root etching. Gnaw marks are apparent on only one fragment. The assemblage has not therefore been adversely affected by taphonomy or the bone chewing habit of scavenging carnivores.

### Beaker

- 6.6.4 Fragments of animal bone came from pits **16615** and **16652** (the latter possibly Middle Neolithic). The identified elements are all from **16652** and comprise pieces of cattle femur shaft and skull. Pits **16619** and **16688** contained significantly more bone fragments than the other features including a relatively large number of burnt fragments. The identified fragments from **16619** include pieces of sheep/goat skull, femur, tibia and metapodials, and cattle humerus and metacarpal. Burnt fragments of red deer antler and a roe deer metacarpal also came from the grave. The identified fragments from **16688** include sheep/goat foot bones and a cattle pelvis. A burnt fragment of sheep/goat tibia came from grave **16617**.

### Prehistoric

- 6.6.5 Bone fragments came from four broadly dated prehistoric pits and a possible structure. The identified bones from pits include a cattle humerus (**16626**) and calcaneus (**16665**), a pig third molar (**16625**) and the partial skeleton of a neonate (**16652**), and a large piece of red deer antler (ON 35). Patches of burning on the antler beam, just below the trez tine, indicate that the application of heat was used to break the antler into proximal and distal halves. A single unidentifiable fragment of bone came from post hole **16651**, part of possible structure **16679**.

## 6.7 Stone

- 6.7.1 Fragments of stone were recovered from grave **16617** and pit **16619**. All are angular fragments of sandstone (sarsen), some with smoothed faces and possibly from querns, although none are obviously worked.
- 6.7.2 A pierced stone bead came from pit **16619**.

## 6.8 Other material

- 6.8.1 Other material was limited to a worked bone point (a cattle distal metatarsal, split axially) from pit **16619**; an iron nail shank from pit **16619**; iron sheeting and two nails (one with an attached washer) from slit trench **16633**; a copper alloy Australian Army officer-rank insignia in the form of the word 'Australia' from the topsoil in Area 2016; and a featureless fragment of fired clay from pit **16619**.

## 7 ENVIRONMENTAL EVIDENCE

### 7.1 Introduction

- 7.1.1 A total of 17 bulk samples were taken from a range of features of probable Middle Neolithic, Beaker and Romano-British date for the recovery of environmental evidence and human remains. Six samples were processed for the recovery of skeletal material. Eleven samples were processed and assessed for the presence of environmental evidence.



## 7.2 Aims and methods

- 7.2.1 The purpose of this assessment is the evaluation of the quality of environmental remains preserved at the site and the potential for further analysis to address specific site archaeological issues and to provide archaeobotanical data valuable for wider research frameworks.
- 7.2.2 The size of the bulk sediment environmental samples varied between 1.5 and 42 litres, and on average was around 17 litres. They were processed by standard flotation methods; the flot retained on a 0.25 mm mesh, residues fractionated into 4 mm and 1 mm fractions and dried. The human remains samples were processed by wet-sieving on a 9.5 mm and 1 mm mesh. The coarse fractions (>4 mm) were sorted, weighed and discarded. The flots were scanned using a stereo incident light microscopy at magnifications of up to x40 using a Leica MS5 microscope. Different bioturbation indicators were considered, including the percentage of roots, the abundance of modern seeds and the presence of mycorrhizal fungi sclerotia (e.g. *Cenococcum geophilum*) and animal remains, such as earthworm eggs and insects, which would not be preserved unless anoxic conditions prevailed on site. The preservation and nature of the charred plant and wood charcoal remains was recorded, as well as the presence of other environmental remains such as molluscs, animal bone and insects.
- 7.2.3 Preliminary identifications of dominant or important taxa are noted below, following the nomenclature of Stace (1997) for wild plants, and traditional nomenclature, as provided by Zohary and Hopf (2000, tables 3, page 28 and 5, page 65), for cereals. Abundance of remains is qualitatively quantified (A<sup>\*\*\*</sup> = exceptional, A<sup>\*\*</sup> = 100+, A<sup>\*</sup> = 30–99, A = >10, B = 9–5, C = <5) as an estimation of the minimum number of individuals and not the number of remains per taxa.

## 7.3 Results

- 7.3.1 The flots were of variable volumes (**Appendix 1: Table 6**), and there were variable numbers of roots and modern seeds that may be indicative of some stratigraphic movement and the possibility of contamination by later intrusive elements in some of the samples. Terrestrial molluscs were present in all samples, as well as charcoal fragments of mature wood. Remains of small animal bones were also present in two of the samples. Charred material was preserved in variable conditions.
- 7.3.2 The samples from Beaker pit **16688** provided a fairly well preserved assemblage of charred plant remains dominated by the seeds of flax (*Linum* sp.) and cereal grains, mostly of barley (*Hordeum vulgare*) but also including a small amount of spelt or emmer (*Triticum dicoccum/spelta*) grains and chaff (glume base). Other remains present were those of hawthorn (*Crataegus monogyna*) stones and docks (*Polygonum* sp.). These samples contained a minimal amount of bioturbation.
- 7.3.3 The samples from the other pits were more substantially bioturbated and contained a small amount of poorly-preserved charred plant remains such as hazel (*Corylus avellana*) nutshell fragments and cereal grains, some of them not identifiable beyond tribe level (Triticeae), and including some large specimens which may be intrusive.

## 8 RADIOCARBON DATING

### 8.1 Introduction

- 8.1.1 A sample of human bone was submitted for radiocarbon dating, providing a Late Neolithic/Early Bronze Age result for the funerary activities on site.

## 8.2 Methods

8.2.1 A radiocarbon dating sample of 1.6 g of human bone (left femur) from 16685 was submitted to the Scottish Universities Environmental Research Centre (SUERC), University of Glasgow. Detailed descriptions of the methods employed by the SUERC Radiocarbon Laboratory can be found in Dunbar et al. (2016). The calibrated age ranges were calculated with OxCal 4.2.3 (Bronk-Ramsey and Lee 2013) using the IntCal13 curve (Reimer et al. 2013) and are quoted as uncalibrated years before present (BP), followed by the lab code and the calibrated date-range (cal. BC) at the  $2\sigma$  (95.4%) confidence, with the end points rounded out to the nearest 10 years.

## 8.3 Results

8.3.1 The sample was successfully measured (SUERC-87939) providing a Late Neolithic/Early Bronze Age result (3794±30 BP: 2340-2140 cal. BC). The isotopic values of the individual (-21.1‰  $\delta^{13}\text{C}$  and 8.6‰  $\delta^{15}\text{N}$ ) are consistent with a terrestrial diet, with no significant input from aquatic resources that may have a reservoir effect.

**Table 6** Radiocarbon dates from Larkhill Camp

Lab. Ref	Sample reference	Material	Date BP	$\delta^{13}\text{C}$	$\delta^{15}\text{N}$	calibration (2 sig. 95.4%)	Phase
SUERC-87939	109516 (16685)	Bone (human): Left femur	3794±30	-21.1‰	8.6‰	2340-2140 cal. BC	Late Neolithic/Early Bronze Age

## 9 STATEMENT OF POTENTIAL AND PROVISIONAL FURTHER RECOMMENDATIONS

### 9.1 Stratigraphic potential

- 9.1.1 The archaeological mitigation works undertaken in Area 2016 in July 2018 have added significant new information to what is already known about the prehistoric archaeology of the land occupied by Larkhill Camp, especially when considered along with the results of the excavation of Areas 2002 and 2003 (Wessex Archaeology 2018).
- 9.1.2 Neolithic pits have been recorded widely within the landscape of Salisbury Plain notably during the more recent ABP excavations at Tidworth and Bulford (Wessex Archaeology forthcoming b), and the two Middle Neolithic pits at Larkhill add to this evidence, particularly as features of this period are relatively uncommon. The more substantial evidence for Beaker occupation is an important new discovery. Within the area investigated, the main activity involved the digging of pits for either storage and/or 'rubbish' disposal and burial. The Beaker features provide evidence for the types of crops that were being grown, as well as informing on mortuary practices. The evidence for trephination on a child from the Beaker period is of particular importance due to the rarity of such evidence, this possibly being a unique example for this period.
- 9.1.3 The modern archaeology recorded provides additional evidence for the historical use of Larkhill Military Camp, which prior to the ABP works had received mixed levels of historical recording. The evidence for the military prefabricated shelters were recorded on Ordnance Survey maps from the time, and so their discovery only confirms their exact locations within the context of the camp.

## 9.2 Finds potential and further recommendations

- 9.2.1 Of most interest within this assemblage are the Neolithic and Early Bronze Age (Beaker) ceramics, the associated flint, the bead, and the animal and human bone. Peterborough Ware pottery is not commonly found in the locality, and this group represents an important assemblage to add to that discovered recently at West Amesbury. Further analysis of the ceramics will help to establish their closest affinities and, combined with radiocarbon dating, may enable refinement of the typological sequence.
- 9.2.2 The bead and worked bone point should be fully described and illustrated. The insignia should be photographed. The other material groups and the later ceramics have limited further potential and do not merit further more detailed work.

### *Pottery*

- 9.2.3 The Neolithic and Early Bronze Age pottery should be recorded in full, in accordance with the nationally recognised guidelines (PCRG, SGRP and MPRG 2016). This will enable more thorough comparisons with other similarly dated collections from the region. All of the featured prehistoric pottery should be illustrated.
- 9.2.4 The early prehistoric pottery will be analysed following the standard Wessex Archaeology recording system for pottery (Morris 1994), which concurs with nationally recommended guidelines (PCRG 2010), and which is based on the definition of fabrics and forms. The pottery will be described and discussed in relation to ceramic tradition, with any chronological implications (including information from radiocarbon dating). The featured prehistoric sherds will be illustrated.

### *Flint*

- 9.2.5 The material from the pit groups should be compared to that from the earlier phase of ABP work at Larkhill in greater detail and would benefit from some metrical analysis not only to compare it to previous phases of work, but to help with chronological distinctions.

### *Human Bone*

- 9.2.6 Analysis of the bone will provide more detailed demographic data, confirming the minimum number of individuals (MNI) and their sex, and refining their age. Reconstruction will be required to enable the recovery of metric data which will assist in assessment of age and potentially health related issues, and it might be possible to calculate the cranial index in the case of the subadult. A full record and study of the pathological lesions will enable a broad assessment of the health of individuals and, by comparison with contemporaneous data, some indication of their social status.
- 9.2.7 Examination and comparative study of the mortuary rites applied to different individuals contributes towards widening our understanding of attitudes to the dead within the temporal range represented. These two mortuary deposits form part of an extensive and important multi-period mortuary landscape on the south-eastern margins of Salisbury Plain and the Stonehenge Environs. Most of the previously recovered prehistoric remains, as here, derived from singletons and small burial groups. Whilst both inhumation and cremation burials of Beaker and Early Bronze Age date have been recovered from sites in the wider vicinity, cremation appears to have represented the predominant rite across the range, illustrating the importance of the findings recorded here in furthering our understanding of mortuary practices in the region. Recently investigated examples from the area include the late Neolithic cremation burial recovered from MoD Durrington 1km to the west (Thompson and Powell 2018), the multi-period and multi-rite mortuary landscape at Amesbury Down some 6km to the south-west (Powell and Barclay forthcoming; McKinley forthcoming; 2017),

and the multi-rite Beaker–Early Bronze Age barrow cemetery at Porton approximately 9km to the south-west (Andrews and Thompson 2016).

- 9.2.8 Taphonomic factors potentially affecting differential bone preservation will be assessed. The age of individuals will be further considered using standard methodologies (Beek 1983; Buikstra and Ubelaker 1994; Scheuer and Black 2000). Sex will be assessed from the sexually dimorphic traits of the skeleton (Bass 1987; Buikstra and Ubelaker 1994); however, given the recognised lack of dimorphism in the immature skeleton, it is proposed that samples of tooth enamel from both individuals be submitted for specialist analysis of the peptides to confirm their sex (Stewart *et al.* 2017).
- 9.2.9 Measurement will be taken where possible and skeletal indices will be calculated where the required data can be recovered (Bass 1987; Brothwell and Zakrzewski 2004). Non-metric traits will be recorded (Berry and Berry 1967; Finnegan 1978). Pathological lesions are recorded in text and via digital photography; some lesions will warrant photographing for publication purposes.
- 9.2.10 A bone sample from Grave 16617 subject to radiocarbon analysis gave a Late Neolithic/Early Bronze Age date for the burial. It is recommended that a bone sample from the second grave is also submitted for radiocarbon analysis to confirm the date of the mortuary activity, and to potentially assist with closer dating of the ceramic remains from both features. This data will enable the remains and the mortuary rites being practiced to be placed and studied in their correct temporal contexts.

#### *Animal Bone*

- 9.2.11 The small assemblage of animal bones from the Middle Neolithic and Beaker pits and a grave merits further consideration to record detailed information relating to age, biometry and butchery and place the assemblage within a wider context. Contemporary features have been recorded from several nearby locations including Areas 2002 and 2003 to the southeast (Wessex Archaeology 2018) and other sites investigated as part of the Army Basing Programme at Bulford (Wessex Archaeology 2019a), Larkhill (Wessex Archaeology forthcoming) and Tidworth (Wessex Archaeology 2019b). The corpus of data from these sites should provide a good bases for discussion and wider comparison.
- 9.2.12 Further radiocarbon dates should be obtained from selected contexts, preferably associated with significant assemblages of pottery or flint but also a few of the broadly dated features such as the partial pig skeleton from prehistoric pit **16652**.
- 9.2.13 The assemblage will be analysed following recent recommendations (Serjeantson 2011, 102–3; Worley and Serjeantson 2014) and the recording of age, biometric and butchery data will follow current established methods and guidelines (Baker and Worley 2014).

### **9.3 Environmental potential and further recommendations**

- 9.3.1 The charred assemblage from the cremation burial is highly significant as the plant remains are well-preserved and may evidence the ritual deposition of plant products as part of the funerary rite or could represent the re-use of a possible storage pit with burnt remains for the deposition of human remains. The assemblage is dominated by cereal grains (barley mostly but also hulled wheat) and wild plant seeds (mostly wild flax, either fairy flax or pale flax). Whilst the former were probably crop products, the latter may have acted as weeds in crop fields or may have been intentionally gathered for the exploitation of their oil. To verify the consistency of the charred plant assemblage with the human remains, radiocarbon dating of both elements (charred plant remains and human remains) is essential.

- 9.3.2 The remainder of the environmental evidence from the bulk sediment samples has limited potential for further analysis as the environmental evidence is poorly-preserved and probably contains intrusive material. Because of the high incidence of intrusion processes in this type of deposit, and the importance of the correct understanding of these evidence within the framework of early agriculture within Neolithic societies, it is suggested that several items are radiocarbon dated before any further work is carried out. The samples for radiocarbon dating should include a sample of cereal grain and a sample of a wild plant (typically, a hazel nutshell fragment) from a selection of key assemblages (three features).
- 9.3.3 The samples proposed for analysis are indicated with a “P” in the analysis column in **Appendix 1: Table 6**. All identifiable charred plant macrofossils will be extracted from the <4 residues and the flot. The analysis will involve the full quantification of the charred plant assemblages and scientific dating. Further work on the identification of the flax species is also required. At least three radiocarbon samples (one barley grain, one flax seed and one human bone fragment) from the cremation grave will be submitted. The dates will be calculated using the IntCal13 calibration curve (Reimer *et al.* 2013) and the computer program OxCal (v4.2.3) (Bronk Ramsey and Lee 2013) and cited at 95% confidence.

## 10 STORAGE AND CURATION

### 10.1 Museum

- 10.1.1 The archive resulting from the excavation is currently held at the offices of Wessex Archaeology in Salisbury. It is recommended that the project archive be deposited with Salisbury Museum on completion of the project.

### 10.2 Transfer of title

- 10.2.1 Every effort will be made to persuade the legal owners of any artefacts recovered, to transfer ownership to the museum in a written agreement.

### 10.3 Preparation of archive

#### *Physical archive*

- 10.3.1 The complete physical site archive, which includes paper records, graphics, artefacts and ecofacts, will be prepared following the standard conditions for the acceptance of excavated archaeological material by the Somerset Heritage Service, and in general following nationally recommended guidelines (SMA 1995; ClfA 2014c; Brown 2011).

- 10.3.2 The physical archive currently comprises:

- 10 boxes (cardboard or airtight plastic) of artefacts and ecofacts
- 2 files of written and drawn records

- 10.3.3 Some rationalisation of the archive is anticipated, particularly of the environmental boxes, which currently include unsorted residues.

#### *Digital archive*

- 10.3.4 The digital archive generated by the project, which will include born-digital data (survey data, databases and spreadsheets, photographs and reports) as well as a scanned security copy of the physical records (see below), will be deposited with the Archaeology Data Service (ADS) to ensure its long-term curation. Digital data will be prepared following ADS guidelines (ADS 2013 and online guidance), and accompanied by full metadata.



10.3.5 The digital archive (which includes all born-digital data, and digital copies made of all other relevant written and drawn data) will be deposited with the Archaeological Data Service (ADS). The digital archive will be compiled in accordance with the standards and requirements of the ADS, as set out on the ADS website.

#### **10.4 Conservation**

10.4.1 Finds which may be considered as vulnerable, and thus potentially in need of conservation treatment, comprise the few, relatively modern metal objects.

10.4.2 Metal objects have already been X-rayed (see above), and the X-ray plates will act as a basic record for objects which may suffer further deterioration, and which may not be recommended for long-term curation.

#### **10.5 Storage**

10.5.1 No charge will be made for the temporary storage of finds or archives during the period when Wessex Archaeology are undertaking analysis or report preparation.

10.5.2 However, if, after completion and submission of the report, finds and archives cannot be deposited with the relevant museum due to circumstances beyond Wessex Archaeology's control, a charge may be made for storage.

#### **10.6 Selection policy**

10.6.1 Wessex Archaeology follows national guidelines on selection and retention (SMA 1993; Brown 2011, section 4), which allow for the selective retention of material considered to have a low potential for future academic research or other use.

10.6.2 In this instance, it is proposed that the following categories are targeted for selective retention:

- Burnt flint.
- Metalwork

10.6.3 The selection policy will be agreed with Salisbury Museum and fully documented in the project archive. All finds concerned either have already been, or will be, recorded to an appropriate archive level before any discard is carried out.

10.6.4 The discard of environmental remains and samples follows nationally recommended guidelines (SMA 1993; 1995; English Heritage 2002).

#### **10.7 Security copy**

10.7.1 In line with current best practice (Brown 2011), on completion of the project a security copy of the written records will be prepared, in the form of a digital PDF/A file. PDF/A is an ISO-standardised version of the Portable Document Format (PDF) designed for the digital preservation of electronic documents through omission of features ill-suited to long-term archiving.

#### **10.8 OASIS**

10.8.1 An OASIS online record (<http://oasis.ac.uk/pages/wiki/Main>) has been initiated, with key fields completed and a .pdf version of the final report will be submitted. Subject to any contractual requirements on confidentiality, copies of the OASIS record will be integrated

into the relevant local and national records and published through the Archaeology Data Service ArchSearch catalogue.

## **11 COPYRIGHT**

### **11.1 Archive and report copyright**

11.1.1 The full copyright of the written/illustrative/digital archive relating to the project will be retained by Wessex Archaeology under the *Copyright, Designs and Patents Act 1988* with all rights reserved. The client will be licenced to use each report for the purposes that it was produced in relation to the project as described in the specification. The museum, however, will be granted an exclusive licence for the use of the archive for educational purposes, including academic research, providing that such use conforms to the *Copyright and Related Rights Regulations 2003*. In some instances, certain regional museums may require absolute transfer of copyright, rather than a licence; this should be dealt with on a case-by-case basis.

11.1.2 Information relating to the project will be deposited with the Historic Environment Record (HER) where it can be freely copied without reference to Wessex Archaeology for the purposes of archaeological research or development control within the planning process.

### **11.2 Third party data copyright**

11.2.1 This document and the project archive may contain material that is non-Wessex Archaeology copyright (eg, Ordnance Survey, British Geological Survey, Crown Copyright), or the intellectual property of third parties, which Wessex Archaeology are able to provide for limited reproduction under the terms of our own copyright licences, but for which copyright itself is non-transferable by Wessex Archaeology. Users remain bound by the conditions of *the Copyright, Designs and Patents Act 1988* with regard to multiple copying and electronic dissemination of such material.

## REFERENCES

- ADS 2013 *Caring for Digital Data in Archaeology: a guide to good practice*. Archaeology Data Service and Digital Antiquity Guides to Good Practice
- Andrews, P and Thompson, S, 2016 An Early Beaker funerary monument at Porton Down, Wiltshire. *WAM* 109: 38–82
- Ashbee, P, 1978 Amesbury Barrow 51: Excavation 1960. *WAM* 70/71, 1–60
- Baker, P and Worley F, 2014 *Animal Bones and Archaeology: guidelines for best practise*. Historic England
- Bass, W M, 1987 *Human Osteology*. Missouri Arch Soc
- Beek, G C van, 1983 *Dental Morphology: an illustrated guide*. Bristol: Wright PSG
- Berry, A C and Berry, R J, 1967 Epigenetic variation in the human cranium. *J Anatomy* 101(2), 261–379
- British Geological Survey online viewer <http://mapapps.bgs.ac.uk/geologyofbritain/home.html> (accessed 19/06/2019)
- Bronk Ramsey, C and Lee, S, 2013 Recent and planned development of the Program OxCal. *Radiocarbon* 55, (2-3), 720-30
- Brothwell, D and Zakrzewski, S, 2004 Metric and non-metric studies of archaeological human remains, in M Brickley and J I McKinley (eds), *Guidelines to the Standards for Recording Human Remains*. British Association for Biological Anthropology and Osteoarchaeology and Institute for Field Archaeology, 24–30
- Brown, D H, 2011 *Archaeological Archives: a guide to best practice in creation, compilation, transfer and curation* (revised edition). Archaeological Archives Forum
- Buikstra, J E and Ubelaker, D H, 1994 *Standards for data collection from human skeletal remains*. Arkansas Archaeological Survey Research Series 44
- Christie, P M, 1967 A barrow-cemetery of the second millennium B.C. in Wiltshire, England. *Proceedings of the Prehistoric Society* 33 (12), 336–68
- Finnegan, M, 1978 Non-metric variations of the infracranial skeleton. *J. Anatomy* 125(1), 23–37
- ClfA 2014a *Standard and Guidance for Archaeological Excavation*. Reading, Chartered Institute for Archaeologists
- ClfA 2014b *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials*. Reading, Chartered Institute for Archaeologists
- ClfA 2014c *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives*. Reading, Chartered Institute for Archaeologists
- Dunbar, E, Cook, G, Naysmith, P, Tripney, B, and Xu, S 2016 AMS 14C Dating at the Scottish Universities Environmental Research Centre (SUERC) Radiocarbon Dating Laboratory. *Radiocarbon* 58 (1), 9-23

English Heritage 2009 *Stonehenge World Heritage Site Management Plan 2009*

English Heritage 2011 *Environmental Archaeology: a guide to theory and practice of methods, from sampling and recovery to post-excavation*. Swindon, Centre for Archaeology Guidelines

Field, D and McOmish, D, 2017 *The Making of Prehistoric Wiltshire*. Amberley Publishing.

Gittins, E K, 2018 'Worked flint' in Wessex Archaeology Army Basing Programme (ABP) Larkhill Areas 2002 (ABHGEN) and 2003 (ABJGEN) Post-excavation Assessment. Unpublished client report ref. 109516.11, 19–21

Green, C and Rollo-Smith, S, 1984 The excavation of eighteen round barrows near Shrewton, Wiltshire. *Proceedings of the Prehistoric Society* 50, 255–318

McKinley, J I, 2004 Compiling a skeletal inventory: disarticulated and co-mingled remains, in M Brickley and J I McKinley (eds), *Guidelines to the Standards for Recording Human Remains*. British Association for Biological Anthropology and Osteoarchaeology and Institute for Field Archaeology, 13–16

McKinley, J I, 2013 Cremation: excavation, analysis, and interpretation of material from cremation-related contexts in S Tarlow and L Nilsson Stutz (eds), *The Oxford Handbook of the Archaeology of Death and Burial*. Oxford University Press, 147–171

McKinley, J I, 2017 King's Gate, Amesbury Down, Wiltshire (85685): Human Bone Assessment (client report for WA)

McKinley, J I and Roberts C, 1993 *Excavation and Post-excavation Treatment of Cremated and Inhumed Human Remains*. Reading. ClfA Technical Paper 13.

McKinley, J I, forthcoming Human bone and aspects of the mortuary rites, in A B. Powell and A J Barclay, *Between and beyond the monuments: prehistoric activity on the downlands south-east of Amesbury*. Wessex Archaeology Monograph

Morris, E L, 1994 *The Analysis of Pottery*. Salisbury: Wessex Archaeology Guideline 4

PCRG 2010 *The Study of Later Prehistoric Pottery: general policies and guidelines for analysis and publication*. Prehistoric Ceramics Res. Group, Occas Paper 1/2 (revised ed)

PCRG, SGRP and MPRG 2016 *A Standard for Pottery Studies in Archaeology*. Medieval Pottery Research Group

Powell A B and Barclay A J, forthcoming *Between and Beyond the Monuments: prehistoric activity on the downlands south-east of Amesbury*. Wessex Archaeology Monograph

Reimer, P J, Bard, E, Bayliss, A, Beck, J W, Blackwell, P G, Bronk Ramsey, C, Buck, C E, Cheng, H, Edwards, R L, Friedrich, M, Grootes, P M, Guilderson, T P, Heaton, T J Hoffmann, D L, Hogg, A G, Hughes, K A, Kaiser, K F, Kromer, B, Manning, S W, Nui, M, Reimer, R W, Scott, E M, Southon, J R, Staff, R A, Turney, C S M; van der Plicht, J, 2013 IntCal13 and Marine 13 Calibration Curve, 0–50,000 Years BP. *Radiocarbon* 55 (4) 1869–1887

Roberts, C, 2000 Trauma in biocultural perspective: Past, present and future work in Britain, in M. Cox and S. Mays (eds), *Human Osteology in archaeology and forensic science*. London, Greenwich Medical Media, 337–56

- Roberts, C and McKinley, J I, 2003 Review of trepanations in British antiquity focusing on funerary context to explain their occurrence, in R Arnott, S, Finger and C U M Smith, *Trepanation: History, discovery, theory*. Abingdon, Swets and Zeitlinger, 55–78
- Scheuer, L and Black, S, 2000 *Developmental Juvenile Osteology*. London, Academic Press
- Serjeantson, D, 2011 *Review of Animal Remains from the Neolithic and Early Bronze Age of Southern Britain (4000 BC–1500 BC)*. English Heritage Res. Dep. Rep. Ser. No. 29-2011
- SMA 1993 *Selection, Retention and Dispersal of Archaeological Collections*. Society of Museum Archaeologists
- SMA 1995 *Towards an Accessible Archaeological Archive*. Society of Museum Archaeologists
- Stace, C, 1997 *New flora of the British Isles* (2<sup>nd</sup> edition), Cambridge, Cambridge University Press
- Stewart, N A, Gerlach, R F, Gowland, R L, Gronc, K G. and Montgomery, J, 2017 Sex determination of human remains from peptides in tooth enamel, *Proceedings of the National Academy of Sciences of the United States of America*  
[www.pnas.org/cgi/doi/10.1073/pnas.1714926115](http://www.pnas.org/cgi/doi/10.1073/pnas.1714926115)
- Thompson, S and Powell, A B, 2018 *Along Prehistoric Lines: Neolithic, Iron Age and Romano-British Activity at the Former MOD Headquarters, Durrington, Wiltshire*. Salisbury, Wessex Archaeology Occasional Paper
- Tuiver, M and Reimer, PJ 1986 A computer program for radiocarbon age
- Wessex Archaeology 2006 *LBTA Building, Larkhill Garrison, Durrington, Wiltshire: Archaeological Watching Brief Report*. Unpublished report ref. 62980.01
- Wessex Archaeology 2014 *Project Allenby/Connaught, Larkhill, Wiltshire: Archaeological Desk Based Assessment*. Unpublished report ref. 101480.41
- Wessex Archaeology 2015 *Army Basing Programme (ABP) Bulford, Larkhill, Perham Down and Tidworth Military Camps: Written Scheme of Investigation and Project Design for Archaeological Works*. Unpublished report ref. 106920.01
- Wessex Archaeology 2018 *Army Basing Programme (ABP) Larkhill Areas 2002 (ABHGEN) and 2003 (ABJGEN): Post-excavation Assessment*. Unpublished report ref. 109516.11
- Wessex Archaeology 2019a *Bulford Service Family Accommodation, Bulford, Wiltshire: post-excavation assessment*. Unpublished client report ref. 200770.01
- Wessex Archaeology 2019b *Land Adjacent to Dean's Close, Tidworth, Wiltshire: post-excavation assessment*. Unpublished client report ref. 111521.01
- Wessex Archaeology forthcoming a *Larkhill SFA: post-excavation assessment and updated project design*. Unpublished client report ref. 200770.02
- Wessex Archaeology forthcoming b *Archaeological excavation report for Bulford Anglo Saxon Cemetery and Neolithic landscape*.





- Worley, F and Serjeantson D, 2014 The importance of red deer antlers for the creation of Neolithic monuments, in N Sykes and M Masseti (eds), *Cervids in Society: deer in time and space*. Oxford, Windgather Press, 119–31
- Zohary, D and Hopf, M, 2000 *Domestication of plants in the Old World: the origin and spread of cultivated plants in West Asia, Europe, and the Nile Valley* (3rd edition). Oxford, Clarendon Press



## APPENDICES

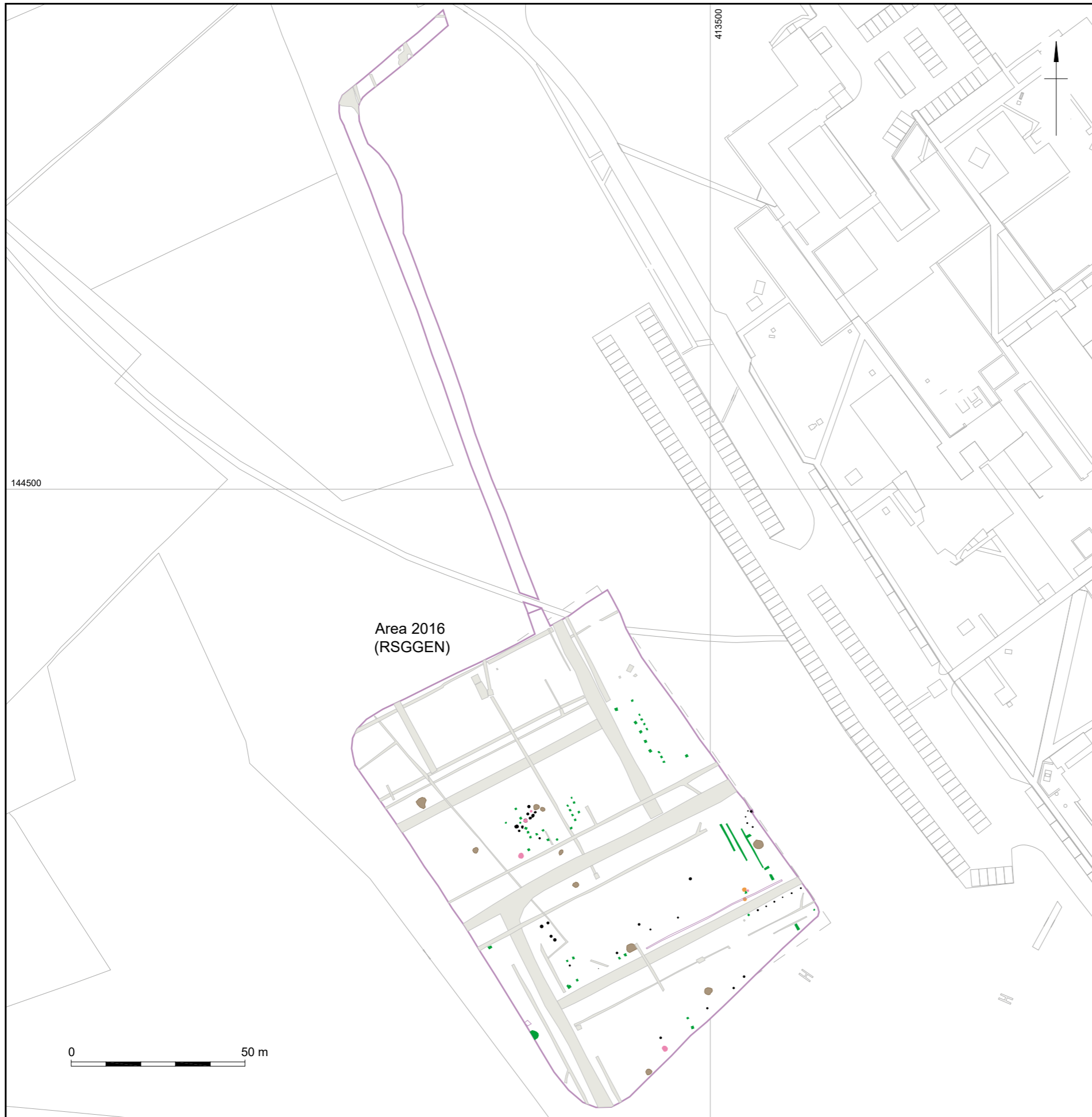
### Appendix 1: Environmental Data

**Table 7** Assessment of the environmental evidence

Feature	Context	Sample	Vol (l.)	Flot (ml.)	Bioturbation proxies	Grain	Chaff	Cereal Notes	Charred Other	Charred Other notes	Charcoal >4/2 mm	Charcoal	Other	Analyses	Preservation
<b>Middle Neolithic</b>															
16610	16611	1098	39	110	5%, C	-	-	-	-	-	Trace	Mature	Moll-t (A***)	-	-
16610	16646	1099	1.5	5	1%	-	-	-	-	-	Trace	Mature	Moll-t (A**)	-	-
16652	16654	1100	36	50	2%, I	-	-	-	C	<i>Corylus avellana</i> shell	<1 ml	Mature	Moll-t (A***)	-	Poor, quite small rounded fragments
16619	16618	1101	42	125	30%, A, E, I	B	-	<i>Triticum</i> sp., <i>Hordeum vulgare</i> , Triticeae	C	<i>Corylus avellana</i> shell	6 ml	Mature, inc. one piece of possible cut roundwood	Moll-t	-	Heterogeneous, fair shell fragment but some grains may be intrusive
<b>Beaker</b>															
16688	16687	1112	9	50	5%, I	A	-	<i>Triticum</i> sp. (inc. <i>dicoccum/spelta</i> ) (B), <i>Hordeum vulgare</i> (B)	A*	<i>Linum</i> sp.	15 ml	Mature	Moll-t	P	Fair
16688	16687	1113	9	45	1%, C, I	A	-	<i>Triticum</i> sp. (inc. <i>dicoccum/spelta</i> ) (C), <i>Hordeum vulgare</i> (A)	A*	<i>Linum</i> sp., indet., <i>Crataegus monogyna</i>	20 ml	Mature	Moll-t, Sab	P	Fair
16688	16687	1114	7	45	5%, C, I	A	C	<i>Triticum</i> sp. (inc. <i>dicoccum/spelta</i> ) grains (C) and glume base, <i>Hordeum vulgare</i> grains (A)	A	<i>Linum</i> sp., indet.	20 ml	Mature	Moll-t	P	Fair



Feature	Context	Sample	Vol (l.)	Flot (ml.)	Bioturbation proxies	Grain	Chaff	Cereal Notes	Charred Other	Charred Other notes	Charcoal >4/2 mm	Charcoal	Other	Analyses	Preservation
16688	16687	1115	8	45	1%, C, I	A	-	<i>Triticum cf. spelta</i> (C), <i>Hordeum vulgare</i> (A)	A	<i>Linum</i> sp., <i>Crataegus monogyna</i> , <i>Polygonum</i> sp., indet.	20 ml	Mature	Moll-t, Sab	P	Fair
<b>Romano-British?</b>															
16681	16680	1103	10	60	80%, B, E, I	-	-	-	-	-	4 ml	Mature	Moll-t		-
<b>Undated</b>															
16625	16624	1097	29	40	75%, C, E, I	-	-	-	-	-	4 ml	Mature	Moll-t		-
16651	16649	1104	10	25	75%, C, E, I	C	-	Triticeae	C	Vicieae	Trace	Mature	Moll-t, slag		Poor



- Mitigation area
- Strip, map and record excavation
- Prehistoric archaeology
- Military archaeology
- Undated archaeology
- Burial
- Tree throw
- Disturbance

Coordinate system: OSGB36 (OSTN15/OSGM15)

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Site location plan

Figure 1



Detailed plan of archaeology

Figure 2





Plate 1: Pit 16610, view from south-west, 1.0 m scale



Plate 2: Pit 16652, view from west, 1.0 m and 0.5 m scales


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Plate 3: Inhumation 16685 in grave 16617, view from west, 0.5 m scale



Plate 4: Human remains in pit 16619, view from ENE, 0.5 m and 0.2 m scales


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Plate 5: Trepanning of the juvenile skull within pit 16619, view from ENE, 0.05 m scale



Plate 6: Roundhouse 16679, view from east, 2.0 m scale

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