NAA

ARCHAEOLOGICAL EVALUATION REPORT

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LAND AT HORNSEA LEISURE PARK, HORNSEA, EAST RIDING OF YORKSHIRE

prepared for

Hornsea Leisure Ltd

Project No.: 2005

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Summary

This document presents the results of a trial-trench evaluation carried out between 21st of October and 8th of November 2019 on land at Hornsea Leisure Park, Hornsea, East Riding of Yorkshire (NGR TA 19833 49243). The site is located approximately c.1.6km north of the centre of the town of Hornsea.

The work was undertaken by Northern Archaeological Associates (NAA) on behalf of Hornsea Leisure Ltd. It was recommended by the Development Management Archaeologist at Humber Archaeology Partnership (HAP) as advisers to the East Riding of Yorkshire Council in order to inform the submission of a planning application for the proposed expansion of facilities at the site.

The Proposed Development Area (PDA) spans a 8.35ha area of former agricultural land divided into two separate zones. The first (PDA A) is a 2.2ha site located in the north-west corner of the existing leisure park. The second (PDA B) is a 6.15ha site situated on agricultural land to the south. A larger study area was assessed in relation to PDA A (covering 5.25ha in total) in order to establish the extent of the known DMV of Northorpe, on the west side of the area. A total of 24 trenches covering an area of c.0.2ha were excavated across the study area.

Trial trenching in the centre of PDA A (to the north of the existing site-access road) identified two partial ring-gullies and boundary ditches that may indicate the presence of prehistoric remains. Excavation also confirmed the presence of medieval remains relating to the known Deserted Medieval Village (DMV) of Northorpe, located to the west of PDA A, as well as evidence of medieval ridge-and-furrow field systems. Results identified a likely back boundary to the remains of tofts and crofts associated with the DMV which correlate with previous results from both geophysical survey and excavation. The trenching identified a natural paleochannel running north to south across the centre of the site, associated with a stream visible on early-19th-century maps of the area. A post-medieval boundary was also recorded, possibly associated with later land improvements.

Investigations in the south-west of PDA B were focused on assessing the extent of potential prehistoric remains associated with a henge monument (NHLE 1423379) identified in an adjacent field. The trial trenching found no evidence of significant prehistoric remains extending

into PDA B, although a possibly prehistoric boundary ditch was identified on the north side of the site. A small number of flint artefacts were recovered from PDA B, although they are all considered to be residual.

Trial trenches excavated in PDA B identified the remains of a number of medieval ridge-and-furrow field systems on various alignments across the area, and several boundaries thought to be associated with one or more of these field systems were identified in the north-east of PDA B. Lastly, excavations identified a large area of organic deposits in the eastern part of PDA B. This was initially interpreted as a peat bog, but it was not possible to conduct further investigation and sampling due to subsequent flooding on site. Since then, geo-technical investigations have clarified that the material is not peat and does not penetrate beneath the upper deposits. However, there is still potential for the survival of archaeologically significant ecofacts.

The remains identified at Hornsea Leisure Park represent evidence of an agricultural landscape with possible prehistoric origins. The results of the trial trenching suggest that remains of the prehistoric henge monument identified to the south of PDA B do not extend inside the boundary of the PDA. Some evidence of possible prehistoric field systems and settlement was identified in PDA A and PDA B but the archaeological potential should be considered low in both areas. Trenches to the west of PDA A confirmed the presence of medieval remains associated with a known DMV. The back boundary of the settlement was also clearly established, dividing the core of activity from the ploughlands which extend across PDA A. The results also indicate a strong element of continuity between the medieval field systems identified in the trial trenching and the post-medieval field boundaries identified in historic mapping.

The evaluation has provided sufficient information to be able to characterise the archaeological potential of the PDA. It is considered that there is a moderate potential for construction works to have an impact on remains of archaeological significance, which can be suitably mitigated by a programme of archaeological works. No further investigation is recommended.

1.0 INTRODUCTION

1.1 This document presents the results of a programme of trial-trench evaluation undertaken at Hornsea Leisure park, Hornsea, East Riding of Yorkshire (NGR TA 19833 49243; Fig. 1). The work was completed by Northern Archaeological Associates (NAA) for Hornsea Leisure Ltd over a period of three weeks from 21st October 2019 to 8th November 2019.

1.2 This programme of evaluation was recommended by the Development Management Archaeologist at Humber Archaeology Partnership (HAP), advisers to the East Riding of Yorkshire Council, in order to inform the submission of a planning application for the expansion of the existing caravan park. The proposed development area (PDA) covers approximately 8.35ha of former agricultural land divided into two separate areas. The first (hereafter 'PDA A') is a 2.2ha site located in the north-west corner of the existing leisure park and the second (hereafter 'PDA B') is a 6.15ha site situated on agricultural land to the south (Fig. 2). PDA B is sub-divided into two fields; Field A to the east and Field B to the west.

1.3 A larger 5.25ha study area was evaluated as part of PDA A. This extended further west to border the Atwick Road, and south to the field boundary on the south side of the access road. This was in order to assess the extent of the known Deserted Medieval Village (DMV) of Northorpe.

1.4 Across the site, 24 trenches were excavated to assess the presence, significance and extent of any archaeological remains. In total, this comprised a c.0.2ha, which was approximately 2% of the overall development area. Originally, it was intended to excavate a further two trenches in PDA A, covering an additional 0.14ha but, with the agreement of the HAP Development Management Archaeologist, these were not excavated.

1.5 All work was carried out in accordance with a Written Scheme of Investigation prepared by NAA in October of 2019 (NAA 2019b) and approved by the HAP Development Management Archaeologist and Historic England Inspector of Ancient Monuments, and compiled with relevant standards, guidance and best practice published by Historic England (2015a; 2015b), the Chartered Institute for Archaeologists (CIfA 2014a; 2014b; 2014c) and English Heritage (1995; 2008).

2.0 LOCATION, TOPOGRAPHY AND GEOLOGY

Location

2.1 Hornsea Leisure Park is located c.1.6km to the north of the centre of Hornsea, in the East Riding of Yorkshire (Fig. 1). The PDA comprises two separate areas: PDA A centred at NGR TA 19598 49273 and PDA B centred at NGR TA 19746 49168 (Fig. 2).

2.2 PDA A is situated in the north-west corner of the leisure park and comprised 2.2ha of amenity grassland. However, in order to assess the extent of the known DMV of Northorpe a larger study area was evaluated. This covered 5.25ha in total and included an access road to the park, site office, caravan showground and three balancing ponds. It was bounded to the west by the Atwick Road (B1242), to the north and south by hedges and fencing and to the east by a hedge and gate separating the site from the rest of the leisure park.

2.3 PDA B comprised c.6.15ha of agricultural land under arable cultivation to the south of the existing leisure park. The area was split into two adjacent fields: Field A to the east and Field B to the west. Field A was bordered to the north by the leisure park, to the east by Cliff Road and to the south by agricultural land. Field B lay immediately west of Field A. It was bordered to the north-east by the leisure park and to the north-west by a field with upstanding ridge-and-furrow earthworks. To the west, was Northrop Farm and to the south the site was bordered by arable farmland containing the 'East Field Cropmark', a Schedule Monument (NHLE 1423379) interpreted as a Neolithic henge with later Bronze Age settlement.

Topography and land use

2.4 Within the PDA A the ground was fairly level ranging in height from c.17.5m above Ordnance Datum (aOD) at the lowest point in the north to c.18.5m aOD at the highest point, to south-east. PDA B was located on a gentle east-facing slope, ranging from c.18m aOD in the west to c.17.25m aOD in the east.

2.5 Both sites are former agricultural land, associated with Northorpe Farm. At the time of the survey PDA A was in use as amenity grassland associated with the western entrance into the park.

Geology and soils

2.6 The solid geology of the area consists of sandstones of the Rowe Chalk Formation, underlying, superficial deposits largely consisting of Devensian till (British Geological Survey 2019).

2.7 The soils in the area have been mapped as Holderness Association (Soil survey of England and Wales 1983). These comprise slowly permeable fine loamy and moderately permeable course loamy soils on chalky till and glaciofluvial drift (Jarvis *et al.* 1984, 273).

3.0 SUMMARY ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

3.1 The cultural heritage summary that accompanied the geophysical survey (NAA 2019a) has been used to inform the following section, as well as evidence gathered during an earlier phase of work conducted in PDA A between 2012 and 2015 (NAA 2012, NAA 2015).

Designation heritage assets

3.2 A Scheduled Monument (NHLE 1423379), described as 'East Field crop mark site centred 300m SSE of Northorpe', is located in the field immediately south of PDA B (Fig. 3). The cropmark was first identified by Historic England's Aerial Reconnaissance team in 2010, although not designated until April 2015. It is described in the listing as a roughly circular cropmark, c.50m in diameter, interpreted as a henge monument dating to the Late Neolithic (2800-2000BC) (Historic England 2019).

3.3 The boundary of the scheduled area ran along the hedge on the south side of PDA B. This placed the site outside the designated area and meant that Scheduled Monument Consent was not required for the evaluation. However, given the significance of the monument, and the potential for related archaeology to extend north into PDA B, the trenching strategy was discussed and agreed in advance with the Historic England Inspector of Ancient Monuments Dr Keith Emerick.

Non-designated heritage assets

Prehistoric to Roman

3.4 The Neolithic henge monument situated to the south of PDA B (NHLE 1423379) is the greatest indicator of prehistoric activity in the area. The monument appears to comprise a circular enclosure, some 50m in diameter, with an entrance on the south-east side. The enclosure is formed of three or more ditches roughly 6-8m across, surrounding a possible internal structure c.15m in diameter, possibly a related ritual building or structure.

3.5 The henge was later re-purposed as a Bronze Age ringworks, set within a Late Bronze Age (1000-750BC) co-axial field system. This is set on a south-east to north-west alignment along a slight ridge. Two large rectilinear enclosures, apparently defined by substantial ditches, can be seen in the aerial photographs of the site (Fig. 3). The northernmost line deviates to accommodate the monument, indicating that the structure was extant in some form when the field system was set out. Aerial photographs of the site do not show the linear crop marks extending north into PDA B.

3.6 No evidence of prehistoric activity was found in PDA A during the strip, map and record excavations in 2015 (NAA 2015); although the extent of this work was limited. Similarly, no other prehistoric sites or finds have been recorded within the vicinity of the Hornsea Leisure Park site, although prehistoric artefacts have been recovered from the wider area, including flint arrowheads and scrapers collected in the area between Atwick and Hornsea (Harrison 2005, 33-5). However, elsewhere in the country, henge monuments of this type often form part of an extensive, multi-period ritual landscape, covering a wide area (Historic England 2018). Indeed, 9km south-west of the leisure park, a well-preserved henge site has recently been excavated at Little Catwick Quarry (NGR TA 132 465). This may suggest an extensive prehistoric ritual landscape extending across the coastal zone. Similar sites have been found at Thornbrough in North Yorkshire (NMLE 1004912), where 10 henges have been recorded within a 10km of each other.

3.7 Evidence of Iron Age and Roman activity in the area is largely limited to findspots, including two Roman greyware pots recovered from the eroding cliff at Atwick. The exception to this is a probable Iron Age chariot Burial excavated at Hornsea (Harrison 2005, 53-9).

Early medieval

3.8 Scarce evidence of early-medieval activity has been identified in the area in addition to the discovery of a 6th-century cemetery (HAP Historic Environment Record (HER) 3547) during the construction of the Hydro Hotel in Hornsea. A bone comb, found on the beach, is the only other evidence of activity dating to this period (HAP HER 3548).

Medieval

3.9 The former medieval hamlet of Northorpe (HAP HER 8893) lies to the east of Atwick Road, extending into the south-west part of PDA A. The first documentary reference to the settlement is 1198. The township of Torp (Thorpe) was recorded in the 1086 Domesday Survey, although it is unclear whether this refers to Northorpe or Southorpe. In 1377, the poll-tax register lists seven taxpayers at Northorpe, 28 tenants at Southorpe and 264 at Hornsea, indicating that Northorpe was a relatively small settlement.

3.10 An indication of the extent and layout of the settlement can be inferred from the 1809 enclosure map (ERALS IA/82; Fig. 9). This shows that the layout of the medieval settlement and associated field system was partially persevered into the early 19th century. The map also depicts a series of small irregular plots set slightly back from the Atwick Road, which are thought to correspond to the boundaries of medieval garths.

3.11 Both the 2012 geophysics survey and later 2015 excavations confirmed the presence of a series of medieval enclosures in the south-west corner of PDA A, close to Northorpe Farm. In addition, upstanding ridge-and-furrow cultivation visible in the small group of fields to the east of Northorpe Farm suggests that the surrounding area was under arable cultivation in the medieval or immediate post-medieval period.

Post-medieval and modern

3.12 There are no documentary references to Northorpe after the 17th century, and the settlement appears to have been largely abandoned by this period. Notably there are no buildings shown on the 1809 enclosure map.

3.13 By the publication of the 1852 First Edition six-inch Ordnance Survey (OS) map, most of the Northorpe garths had disappeared as part of post-enclosure field rationalisation. Northorpe Farm was constructed sometime between 1852 and 1890. A smaller farmstead, Northorpe Cottage, was also built to the south during this period. The

associated field layout remained little altered until the establishment of the leisure park in the 1970s.

Previous archaeological work

3.14 Between 2012 and 2015, a series of archaeological investigations were carried out in the PDA A study area in advance of the construction of the access road, balancing pond and reception area. An archaeological appraisal (NAA 2012) and geophysics survey of the area (Phase SI 2013) was conducted in 2012. This was followed by strip, map and record excavation during development in 2015 (NAA 2015).

3.15 The remains of nine ditches or gullies and a single pit were recorded during the excavations. These were interpreted as medieval boundary features associated with one or more plots of land (garths) at the north end of the Deserted Medieval Village (DMV) of Northorpe, located to the west of PDA A. Pottery recovered from these features was dated to between the 12th and 14th centuries. The absence of any later finds from the site suggests the village, or hamlet, may have contracted during the late 14th or 15th century, with settlement eventually focused on Northorpe Farm. Some evidence of post-medieval ridge-and-furrow field systems was identified on the east of the excavation.

3.16 As part of preliminary archaeological investigations associated with the current development, a geophysical survey was conducted across PDA B in July 2019 (NAA 2019a). Results in the field to the south-east of the leisure park (Field A) were inconclusive and identified a number of amorphous anomalies of an unknown origin; while in the south-west (Field B), several curvilinear, rectilinear and amorphous anomalies were recorded. These appeared to lie beneath medieval ridge and furrow and as such possibly related to prehistoric activity. The results of the survey informed the evaluation strategy and preparation of the Written Scheme of Investigation (WSI) (NAA 2019b).

4.0 AIMS AND OBJECTIVES

Archaeological trial trenching

4.1 The principal aim of the archaeological trial trenching was to assess the potential for the presence of sub-surface archaeological remains. Where potential was established, the trial trenching aimed to confirm the location, extent, nature, date and significance

of such remains. This information will inform the preparation of a subsequent heritage impact assessment and suitable mitigation strategy.

4.2 The objectives of the archaeological trial trenching were to:

- establish the presence, nature, extent, preservation and significance of any archaeological remains within the trenches;
- provide a detailed record of any such archaeological remains;
- recover and assess any associated structural, artefactual and environmental evidence;
- determine which areas within the footprint of the proposed development require archaeological mitigation in the form of preservation in situ, open-area investigation in advance of construction, or monitoring of soil stripping during construction works;
- prepare an illustrated report on the results of the trial trenching to be deposited with the East Riding HER held by the HAP;
- evaluate the potential for further unrecorded significant archaeological remains to be present across the PDA; and
- undertake a scheme of work in line with current professional standards (English Heritage 2008, CIFA 2014b).

5.0 METHODOLOGY

5.1 All work was carried out in accordance with the WSI (NAA 2019b) approved in advance by both HAP and Historic England.

Trial trenching

5.2 Twenty-six trial trenches were located and set out using sub-centimetre-accurate GPS survey equipment tied to the British National Grid. The proposed size of the trenches and strategy for their location was set out in the WSI (NAA 2019b; Table 1). Trench 7 in PDA B (Field B) had to be moved due to flooding. This was moved c.25m east from its original position, but still situated to assess the targeted geophysical anomaly.

5.3 Work initially began in Field B on the west side of PDA B, perceived to be the area of highest archaeological potential. It then progressed to Field A on the east side of PDA B, and finally PDA A in the north-west corner of the park. Communication was maintained throughout with Historic England and HAP, and a site visit was made by the

Development Management Archaeologist on the 31st October 2019. At this time, all of the trenches in PDA B were open and two of the trenches in PDA A. All work was approved and no further site visits were requested.

Limitations

5.4 During the evaluation works, adverse weather conditions and water management issues caused significant problems. Pumps were employed but could not keep pace with the inundation, and the flooding of trenches was a major issue in weeks two and three of the project. This forced a reassessment of the trenching strategy, which was informed by the initial results and discussed in advance with all parties. The weather conditions also effected the quality of the photographic and drawn record. In a number of cases the primary photographic record of a trench comprises 'safety shots' taken following machine excavation but prior to cleaning. Where significant archaeology was identified, every effort was made to appropriate clean and record all related features.

5.5 It was decided, in consultation with HAP and the client, that trenches 19 and 26, situated to the north-west and south-east of PDA A, would be left unexcavated as they were lower priority. In the case of Trench 19 the presence or absence of medieval remains had been established in other trenches, and Trench 26 was a low potential sampling trench testing a 'blank' area in the geophysics.

Machine excavation

5.6 The initial site works comprised the stripping of the footprint of the trenches. A back-acting mechanical excavator was used to remove the overburden (vegetation, turf, loose stones, topsoil and subsoil etc.) under archaeological supervision to the level of significant archaeological deposits, or the natural geology, whichever was encountered first. There after all archaeological work was undertaken by hand.

5.7 In some cases, due to flooding, trenches were mechanically 'recleaned' under archaeological supervision, to facilitate the recording of identified features.

Hand excavation

5.8 Where features or deposits of archaeological interest were exposed, the archaeologist cleaned, assessed, excavated by hand and recorded these features as appropriate to characterise the archaeology and ensure recovery of artefactual evidence.

5.9 In particular, hand excavation concentrated on determining relative chronology between features and examined a representative sample of the different types of features present. Hand excavation was based on the following sampling strategy:

- 100% excavation of any features of ritual or ceremonial nature (including burials);
- up to a 50% sample of each individual domestic, industrial, or settlement-related feature;
- at least 50% of discrete features such as postholes and pits, while smaller features (such as stake holes) were fully excavated;
- a sample of up to 20% of the overall length of linear features, a minimum of 1m section within the trench; and
- any intersections of features to help determine relative chronology.

Recording

5.10 A drawn record of all archaeological features was made at an appropriate scale. Hand-drawn trench plans were made of trenches at a suitable scale. Sections were drawn at a scale of 1:10 or 1:20, and their locations identified on the relevant trench plan. Representative sections of blank trenches were also drawn. Drawings included appropriate data on levels relative to Ordnance Datum. Information was transferred to AutoCAD to be reproduced for inclusion in this report.

5.11 Written descriptions of archaeological features were made on pro-forma context sheets that conform to standard archaeological recording conventions.

5.12 A photographic record of the site was maintained using digital photography.

Finds recording

5.13 All finds processing, conservation work and storage has been carried out in compliance with guidelines issued by the Chartered Institute for Archaeologists (CIfA 2014a). Pottery and animal bone were collected as bulk finds. Provision was made for significant artefacts to be three-dimensionally recorded prior to removal. Finds were appropriately recorded and processed and submitted for post-excavation assessment.

5.14 All finds recovered were appropriately packaged and stored under optimum conditions. Finds recovery and storage strategies are in accordance with published guidelines (English Heritage 1995; Watkinson and Neal 2001).

Environmental sampling

5.15 Paleoenvironmental samples were taken from appropriate deposits and assessed in terms of environmental potential. The sampling strategy was restricted by ground conditions during excavation, with fewer samples taken than would otherwise have been collected.

General

5.16 Following excavation and recording, all trenches were signed off by HAP before permission to backfill was granted. The trenches were backfilled by the client.

6.0 RESULTS

6.1 The results of the evaluation are described geographically and, broadly, in numerical order beginning in PDA B. Trenches devoid of archaeology have been described summarily. The location and orientation of the observed features are shown on figures 4, 5 and 6, in relation to the geophysical survey results.

PDA B

6.2 A total of 16 trial trenches were excavated across PDA B. These were situated in areas of potential archaeological interest identified by geophysical survey (NAA 2019a).

Field B (Fig. 4)

6.3 Ten trenches were excavated in Field B. Trenches 1, 2 and 3 were situated on the west side of the field (Fig. 4). Trench 1 (Plate 1), in the north-east corner, was located to evaluate the potential for the survival of archaeological remains beneath a block of ridge and furrow identified on the geophysical survey. Further south, trenches 2 and 3 (Plates 3 and 4) were placed to investigate curvilinear geophysical anomalies with a large amorphous anomaly in it centre. This lay immediately north of the cropmark henge site. These trenches did not contain prehistoric material or other significant archaeological remains, although all three contained furrows on an approximate north-east to south-west alignment. These probably represent the remains of the medieval field system associated with the DMV to the west of PDA A.

Plate 1: overview of Trench 1, looking south-west with furrows clearly visible (scales shown 2 x 1m).

Plate 2: overview of Trench 2, looking west with furrow clearly visible running across the area (scales shown 2 x 1m).

Plate 3: overview of Trench 3, looking south, with furrows running diagonally across the area.

6.4 Trenches 4, 5 and 7 were located in the centre of Field B and were intended to test various positive linear anomalies identified on the geophysical survey, interpreted as a possible continuation of the prehistoric enclosure boundaries identified as crop marks in the adjacent field. Trench 4 (Plate 4) was also intended to investigate a possible curvilinear anomaly extending south from the northern edge of the field (Fig. 4).

6.5 Trench 7 had to be moved c.25m east from its original position to avoid and area of flooding in a low-lying portion of the field.

6.6 No significant archaeological features were discovered in any of these trenches, although the presence of a buried soil (**70**) was observed. This is likely to have been preserved or deposited in a natural dip in the field. It is notable that drainage across this area was poor and it remained waterlogged throughout much of the excavation. The northern limit of the deposit was observed at the southern end of Trench 4 (Plate 4) but was not present further to the east in Trench 6, indicating the material ends somewhere between the two. This appears to correspond with an old field boundary shown on the 1854 First Edition Ordnance Survey (OS) map that remained extant until the middle of the 20th century. A sondage was cut in Trench 4 through deposit **70**. This established a depth of 0.6m down to natural deposits, although a greater depth was observed at the southern end of the trench during machining.

6.7 A single worked flint was recovered from **70** in Trench 5. This was a thumbnail scraper struck off tertiary flake, retouched at the distal end and along one mesal edge. Based on form, this has been dated to the Late Neolithic to Early Bronze Age (2500-2000BC). No other material was recovered, but conditions were poor.

*Plate 4: overview of Trench 4, looking south. Sondage through buried soil (**70**) visible at the southern end of the trench.*

Plate 5: overview of Trench 7, looking south.

Plate 6: overview of Trench 6, looking east.

6.8 Trench 6 (Plate 6) was situated on the north side of Field B and positioned to test a linear anomaly running on a north-east to south-west alignment identified on the geophysics (Fig. 4). No archaeological features or deposits were identified, and the linear anomaly is thought to relate to a change in the natural geology.

6.9 Trench 8 (Plate 7) was located east of Trench 6, on the northern edge of Field B. A significant boundary ditch or gully (**73**) was recorded crossing the trench obliquely on a north-west to south-east alignment (Plates 8 and 9). As observed, **73** was no more than 3m wide and 0.36m deep and contained a single homogenous deposit (**72**). This comprised light-grey, clayey silt with very infrequent manganese flecking and infrequent sub-angular gravel inclusions.

6.10 Ditch (**73**) was cut by a later ditch (**75**) on a similar alignment. This may represent a later iteration of the same boundary and was observed at a maximum width of 4.5m and depth of 1m (Fig. 8). It contained three fills (**74**, **76** and **77**) and truncated an earlier linear feature to the east. Basal fill **74** comprised mid-grey, slightly sandy clayey silt with frequent small sub-angular gravel inclusions and was not more than 0.14m deep by 0.6m wide. It was sealed by deposit **76** which consisted of mid-yellowish grey, silty clay with infrequent sub-angular gravel inclusions that was not more than 0.4m deep by 2.9m wide. Deposit **76** was in turn sealed by deposit **77** which comprised a mid- to dark-grey, clayey silt fill with frequent gravel, and infrequent large rounded, stone

inclusions. This was not more than 0.6m deep by 4.5m wide. A fragment of worked flint, some animal bone and a single fragment of Roman pottery was recovered from fill **77**. The pottery was a piece of Sandy coarse ware dating to the 1st century AD. Both features **73** and **75** were sealed by topsoil (**3**).

Plate 7: overview of Trench 8, looking east.

*Plate 8: overview of ditch **75** within Trench 8, looking south-east (scales shown 1m).*

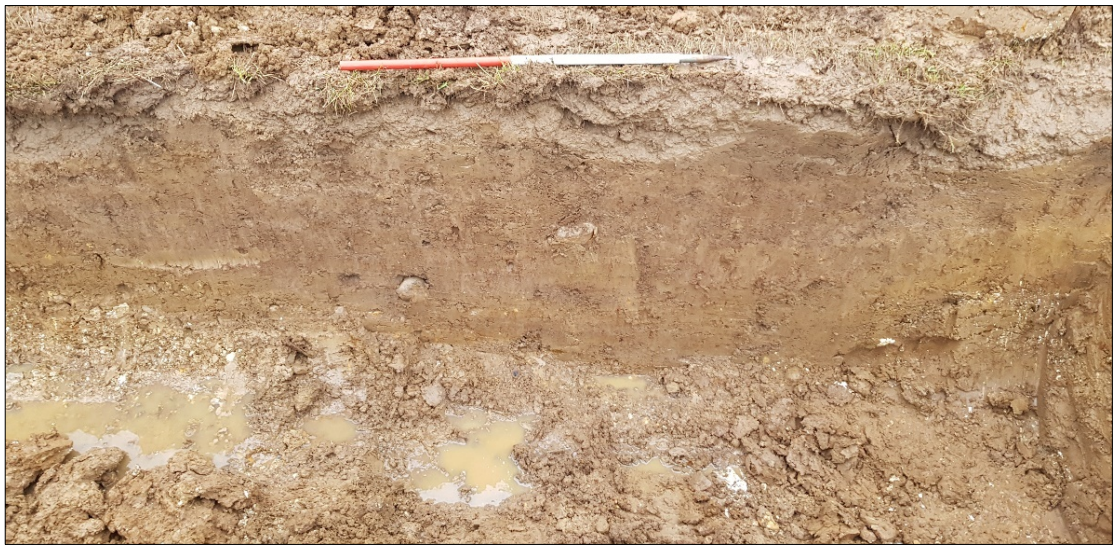

*Plate 9: north-facing section through ditches **73** and **75** (scale shown 1m).*

Plates 10, 11: overview of Trench 9, looking south (left) and Trench 10 (looking north-east).

6.11 Trenches 9 and 10 (Plates 10, 11) contained no significant archaeological remains. In Trench 10, ridge-and-furrow remains were recorded on an alignment different from that identified in trenches 1, 2 and 3. Four evenly spaced furrows were recorded on an approximate north-to-south alignment.

Field A (Fig. 5)

6.12 Six trial trenches were excavated in Field A, on the east side of PDA B. Trenches 11, 12 and 13 (Plates 12, 13 and 14), in the south-west section of the field, all contained evidence of ridge and furrow, but no significant archaeological features. The furrows recorded were on an approximate north-to south-alignment, similar to those identified in the eastern half of Field A.

Plates 12,13: overview of Trench 11, looking north-east (left) and Trench 12, looking south (right).

6.13 Trenches 14 and 15 were situated in the centre of Field A and identified the presence of a humic peat-like deposit (**68**) that covered all of Trench 14 (Plate 15) and extended north into the southern end of Trench 15 before petering out. The height of the top of the deposit was observed at 16.38m OD in Trench 4 and 16.63m OD in Trench 15. The depth was not established due to waterlogging. Geo-environmental borehole sampling commissioned by the client after the evaluation has classified the deposit as an 'organic material' that was limited only to upper deposits and therefore not classed as peat. This was 'limited and localised' in nature, reaching a maximum thickness of 1.10m (*pers. comm.* Andrew Cuthbert, Roberts Environmental Limited).

6.14 Deposit (**68**) was sealed by a layer of made ground (**69**) which comprised a mixed dump

of light-grey, silty clay and sealed by topsoil (**3**).

Plate 14: overview of Trench 13, looking east.

*Plate 15: overview of Trench 14, looking south-east, showing deposit **68** extending across the entirety of the trench.*

*Plate 16: overview of Trench 15 looking north showing peat-like material (**68**) in the foreground.*

6.15 Trench 16 (Plate 17) was situated at the eastern edge of Field A (Fig. 5). The remains of three narrow linear features on differing alignments were recorded within the trench, none of which were identified on the geophysics. At the north end the trench was crossed by a gully (**12**) (Plate 18) on an approximate north-east to south-west alignment. This had a maximum width of 0.65m and depth of 0.22m and extended beyond the trench limits in either direction. The feature was filled by a single deposit (**13)** along its entire length. This comprised a mid-brownish grey, sandy silty clay with occasional sub-angular stone inclusions. A single sherd of medieval pottery, dating to from the 12th to 14th century, was retrieved from this context.

6.16 In the middle of the trench, a second gully (**14**) was identified crossing the first on an approximate north-west to south-east alignment (Plate 19). This was larger than the first,

measuring 0.96m wide by 0.43m deep, and it extended beyond the limit of excavation on either side of the trench. It was filled by two deposits: fill **16**, interpreted as the initial silting up of the gully; and fill **15**, a backfilling event after the gully had gone out of use. Fill **16** comprised a mid- to light-yellowish brown, silty clay with very infrequent manganese flecking and occasional sub-angular stone inclusions. This was not more than 0.23m thick. It was overlain by deposit **15**; a light to mid-grey, silty clay with no visible inclusions that was not more than 0.2m thick or 0.5m wide and was observed along the entire length of the feature within the trench.

Plate 17: overview of trench 16, looking north-east (scale shown 1m).

*Plate 18: section through gully **12**, looking west (scale shown 0.5m).*

*Plate 19: section through gully **14**, looking north-east (scale shown 0.5m).*

6.17 At the southern end of Trench 16, approximately 10m south-east of gully **14**, another possible linear feature (**80**) was identified crossing the trench on a north-east to south-

west alignment, roughly perpendicular to **14**. However, a cut could not be established during excavation. The colour change clearly visible on the surface may, therefore, be natural staining or could relate to a truncated feature no longer identifiable.

6.18 At the southernmost end of Trench 16 a buried soil horizon (**11**) was identified under a distinct layer of subsoil (**10**) (Plate 20; Fig. 7) that was not identified elsewhere in the area. Both deposits were removed by machine and recorded in section. No features were identified cutting through either deposit during the evaluation. Buried soil **11** comprised moderate, mid-greyish brown, slightly sandy, clayey silt, and was observed at a maximum thickness of 0.25m and extended c.5m from the southern limit of the trench. It (**11**) was sealed by a layer of subsoil (**10**) which consisted of fairly compact, light-yellowish-brown, silty clay with very infrequent manganese inclusions. Subsoil **10** was observed at a maximum thickness of 0.2m and extended 10m from the southern limit of the trench.

*Plate 20: buried soil **11** in section, looking south-west (scales shown 0.5m and 1m).*

PDA A (Fig. 6)

6.19 Ten trial trenches were originally to be excavated across the PDA A study area but, following discussions with the HAP Development Management Archaeologist, trenches 19 and 26 on the north-west and south-east extremes of the area were not excavated.

6.20 Trenches 17, 18 and 21 were located in the south-west corner of the wider PDA A study area and were intended to assess the preservation and extent of archaeological remains associated with the known DMV on the east side of Atwick Road (B1242). Medieval remains were identified in all three trenches and there was a strong correlation between the features identified and the results of archaeological investigations in 2015 (NAA 2015).

Plate 21: overview of Trench 17, looking south.

6.21 Trench 17 (Plate 21) ran parallel to the south-western boundary of the study area. Three linear features (**30**, **33** and **79**) were identified, broadly parallel to one another, crossing the trench on a north-east to south-west alignment. The two more substantial features (**30** and **79**) were thought to represent back-plot boundaries associated with the DMV. Feature **33** was less substantial and may represent an internal sub-division or enclosure within a back-plot.

6.22 Boundary ditch **30** was observed 7m from the southern limit of Trench 17 (Plate 22). The ditch (**30**) had a maximum width of 1.96m and depth of 0.54m and contained two

fills (**31** and **32**). The basal fill (**31**) comprised fairly compact, mid-brownish grey, silt clay not more than 0.24m thick and 1.2m wide and included 2 pieces of fired clay and an Iron object thought to be a rivet or clench both. It was sealed by deposit **32** which was similar to deposit **31** but with moderate compaction, a slightly browner appearance and had a higher silt content than the previously described deposit. Deposit **32** was not more than 0.3m deep and 1.96m wide, with occasional degraded limestone inclusions. Both fills of ditch **30** were heavily waterlogged at the time of excavation.

*Plate 22: section through ditch **30**, looking west (scale shown 2m).*

*Plate 23: section through gully **33**, looking south-west (scale shown 0.5m).*

6.23 Boundary gully **33** was identified half-way along Trench 17, suggesting a possible sub-division within one of the back-plots associated with the DMV. It extended approximately 2m across the trench on a north-east to south-west alignment. Where excavated, it was not more than 0.15m deep and 0.6m wide and contained a single fill (**34**) consisting of moderately compacted, light- to mid-brown, silty clay with infrequent degraded limestone inclusions. Fill **34** was found to contain two re-fitting fragments of iron forming a domed object, too otherwise degraded to identify.

6.24 At the northern end of the trench a more extensive ditch (**79**) was identified, but excavation of this feature had to be abandoned due to rising water levels. Nevertheless, the nature of the feature was identified and recorded. It appeared to correlate with a back-plot boundary clearly visible on the geophysical survey, and a ditch recorded to the east during the 2015 excavations (NAA 2015).

Plate 24: overview of Trench 18, looking south-west.

6.25 Trench 18 (Plate 24), to the north-east of Trench 17, contained two linear features (**24** and **38**) and a small pit (**17**). At the west end, ditch **24** extended from the south-west corner of the trench on an approximate east-to west-alignment for 25m along the south side (Plate 25). It was 0.4m wide by 0.3m deep and contained a single fill deposit (**25**) that comprised a moderately compacted mid-greyish-brown clay silt with infrequent small sub-angular stone inclusions. Ditch (**24**) is likely to represent a sub-division between back-plots forming part of the DMV identified in this area. A sherd of Humber ware, dated to the late 13th to 14th century, was recovered from fill **25**.

*Plate 25: partial section through ditch (**24**), looking west (scale shown 0.25m).*

6.26 To the east of ditch **24** was a second, much larger ditch (**38**) running on a north-to-south alignment (Plate 26). This extended 2m across the width of the trench and was only partially excavated due to the presence of modern drainage that could not be disturbed. However, the ditch (**38**) lined up with a boundary previously investigated during excavations in 2015 (NAA, 2015). The feature aligns with the back boundary of the DMV shown the 1809 enclosure map (ERALS IA/82) and appears to have marked the eastern extent of the medieval settlement.

6.27 Approximately 4m from the eastern end of the trench, a shallow, amorphous pit was excavated (**17**) measuring 1.3m north-west to south-east and 0.8m south-west to north-east. This was c.0.1m deep and contained a single fill (**18**) with no dateable material. The form of the feature, and nature of the fill, suggests it is the base of a tree throw.

6.28 Trench 20 (Plate 26) was located in the north-west part of PDA A, close to the northern extent of the proposed development. The trench contained two furrows that ran parallel on a north-east to south-west alignment. A later ditch (**42**), measuring 2.6m wide, was identified cutting through the furrows on an approximate north to south alignment. This contained a single fill (**43**).

Plate 26: overview of Trench 20, looking north-east.

6.29 Nine metres west of ditch **42,** a second linear feature was identified (**44**) running parallel to the first. This measured 0.6m in width and contained a single fill (**45**). No dateable features were recovered and there was no stratigraphic relationship with either the ridge and furrow observed at the eastern end of the trench or ditch **42**.

6.30 Trench 21 (Plate 27), to the south-east of Trench 18, contained the remains of a partial furrow in the south-east corner that ran on a north-east to south-west alignment, indicating that the trench lay in the medieval ploughlands outside the main settlement. Parallel with the furrow was a much wider linear feature (**28**) running north-east to south-west (Plate 28). This was observed at a maximum depth of 0.48m and width of 5.21m. It contained a single deposit (**29**) that consisted of moderate to loosely compacted, mid-brown, slightly sandy, silty clay with occasional sub-angular stone inclusions with a maximum diameter of c.0.1m. The feature may represent a holloway or seasonal trackway across the ploughlands.

Plate 27: overview of Trench 21, looking east.

*Plate 28: section through possible holloway (**28**), looking south-west (scales 0.25m and 1m).*

6.31 Trench 22 (Plate 29) was situated in the centre of PDA A, and no significant archaeological remains were identified in it. A natural paleochannel (**65**) (Plate 30) was

recorded running obliquely through the southern half of the excavation, which continued into Trench 23.

Plate 29: overview of Trench 22, looking north-west.

6.32 Trench 23 (Plate 30; Fig. 6) was situated in the centre of PDA A. The natural paleochannel (**65**) identified in Trench 22 continued south into this area. Features of archaeological origin were a partial ring-gully (**54**) and a boundary ditch (**56**, **59**) cut through the paleochannel. The latter was a continuation of the linear feature identified further to the south during the excavation of the access road in 2015 (NAA 2015).

6.33 The paleochannel was only partially excavated, although its full extent was observed and recorded in plan (Plates 31-32). It ran on an approximate north-west to south-east alignment, with a maximum width of 18.5m and depth of 1.4m. Five deposits (**61**, **62**, **63**, **64** and **66**) were recorded within the paleochannel, all of which were naturally formed representing various flood and silting episodes.

Plate 30: overview of Trench 23, looking west.

*Plate 31: sondage excavated through paleochannel **65** in Trench 23, looking north-west (scale shown 1m).*

*Plate 32: section through paleochannel **65**, cut by ditches **59** and **56**, looking north-east (scale shown 2m).*

6.34 Basal fill **64** was identified in the deepest part of the base of the paleochannel. This deposit (**64**) comprised fairly compact, light- to mid-grey clay with occasional manganese flecking and infrequent degraded limestone inclusions. It is thought to represent gradual alluvial infilling of the feature as it was formed of fine, well-sorted clay particles. The deposit was not fully excavated but, where observed, in section was not more than 0.28m thick and did not extend more than 3m in width. It was sealed by a secondary alluvial deposit (**63**).

6.35 Deposit **63** comprised fairly compact, mottled light-grey and light-yellowish-brown clay with occasional degraded limestone inclusions. The fill (**63**) was thought to be an alluvial deposit, its mottled appearance being a consequence of particles in suspension. A lense (**66**) of organic material was observed within the deposit; this consisted of moderately compacted, light-yellowish-brown and very dark-grey silt clay with a high organic content. It was a maximum of 0.25m thick and 0.7m wide in section and did not extend the full width of the trench. Deposits **63** and **66** were not fully excavated. Fill **63** was not more than 0.3m thick and was observed extending at least 4.8m in the excavated portion of the paleochannel (**65**). Fill **63** was sealed by deposit **62**.

6.36 Deposit **62** consisted of fairly compact, mid-grey silt clay with occasional sub-angular sandstone inclusions that appear to have settled at the interface with the lower fill (**63**). It (**62**) was sealed by a mixed deposit (**61**) that comprised a fairly compact, mixed light-grey and mid-brown, silt clay with occasional rounded sandstone inclusions. This was observed at a maximum thickness of 0.5m and extended roughly 20m east to west within the trench, beyond the line of the paleochannel (**65**) as identified in plan. This possibly represented a deliberate post-medieval levelling event because it infills a natural dip formed by the earlier paleochannel.

6.37 At the western end of Trench 23 a possible partial ring-gully (**54**) was identified (Plate 33). This described an arc extending 9m along the northern edge of the trench (Fig. 6). It had a U-shaped profile and was not more than 0.75m wide or 0.4m deep. It was filled by a single mixed deposit (**55**) that consisted of fairly compact, mottled mid-grey and light-yellowish-brown clay with infrequent manganese flecking throughout. Pieces of fired clay were recovered from the deposit, but these have proved undatable. The feature was sealed by topsoil (**3**).

*Plate 33: section through partial ring-gully **54**, looking south-west (scales shown 0.25m and 0.5m).*

6.38 In the middle of the trench, the top fill of the paleochannel (**61**) was cut by a ditch (**59**) that ran through the trench on a north-west to south-east alignment. This had a shallow

u-shaped profile and was not more than 0.4m wide and 0.2m deep. It contained a single fill (**60**) that comprised loose to moderately compacted mid-brown, clayey silt with infrequent degraded limestone inclusions. The feature corresponded to a substantial post-medieval boundary visible on the 1809 enclosure map. Further evidence of the boundary ditch was also identified to the south during the excavation of the access road in 2015 (NAA 2015).

6.39 A later recut (**56**) was observed cutting through the western extent of ditch **59** (Plate 34). This crossed the trench on a similar north-west to south-east alignment (Plate 33). The ditch (**56**) had a steep V-shaped profile in section and contained two distinct fills. A primary deposit (**58**) that comprised fairly loose, dark-greyish-brown clayey silt. This had a high organic content, specifically decomposing straw, and was thought to represent a bale of straw or hay deposited in the base of the ditch during its final period of use (Plates 32, 33). A similar deposit was recorded in earlier 2015 excavations. Anecdotally, the practice of using bales of straw to slow flow of water along a ditch has been observed locally where flooding was an issue. Deposit **58** was rectangular in section, deposited in the base of ditch **56**, on the eastern edge of the feature.

*Plate 34: section through ditch **56**, looking north-west (scale shown 2m).*

6.40 Deposit **58** was sealed by deposit **57** which appeared to represent a deliberate backfilling event, putting ditch **59** out of use and sealing the boundary. Backfill **57**

consisted of moderate to loosely compacted, mid-greyish brown, clayey silt with occasional daub and charcoal inclusions of a diameter less than 0.02m. This deposit was sealed by topsoil (**3**).

Plate 35: overview of Trench 24, looking north-east.

*Plate 36: section through ditch **35**, looking south-east (scales shown 2 x 1m).*

6.41 Trench 24 (Plate 35) extended 20m along the northern boundary of PDA A. It contained a single ditch (**35**) on an approximate north-west to south-east alignment. The ditch had a wide V-shaped profile in section with a rounded base (Plate 36). It was 1.1m wide, had a maximum depth of 0.45m and was filled by two deposits (**36** and **37**). Fill **37** at the base of the ditch comprised fairly compact, mid-grey clay not more than 0.25m thick or 0.38m wide. This was sealed by deposit **36** that consisted of a moderately compacted, dark-grey silty clay with infrequent charcoal flecking. This had a maximum depth of 0.2m and was 1.1m wide. The ditch was sealed by a subsoil (**71**) which was not identified in other trenches across the area and may be related to modern landscaping efforts.

6.42 Trench 25 (Plate 37; Fig. 7) was located in the north-east corner of PDA A. A furrow (**46**) was identified at the west end of the trench, aligned approximately north-east to south-west. Further east, a shallow discrete feature (**52**) was recorded, which may represent the truncated remains of a pit. No associated finds or other anthropogenic material were recovered from the fill (**53**). In the centre of the trench the remains of a boundary ditch (**67**) was identified in plan. This might possibly represent a continuation of ditch **35** identified in Trench 24.

Plate 37: overview of Trench 25, looking west.

6.43 To the north of ditch **67** a curvilinear gully (**50)** (Plate 37) was identified, describing a slightly irregular arc over 12m and approximately 19m from the eastern end of Trench 25. This feature (**50**) may be a part of a larger ring-gully, although that is less likely because of the arc's irregular shape.

6.44 A section excavated through both ditch **67** and curvilinear gully **50** had to be abandoned due to rising ground water within the trench. However, enough information was recovered to characterise the nature and significance of the archaeological remains.

*Plate 38: overview of truncated pit (**52**), looking west (scale shown 0.5m).*

7.0 THE FINDS

Ceramic building material (C. Antink)

7.1 Five fragments of ceramic building material (CBM) were recovered of which only two could be dated. A single piece of post-medieval pantile was recovered from the fill of a furrow in Trench 2, and a fragment of modern land-drain came from the fill of ditch **30** in Trench 17. The other three pieces were non-diagnostic or unstratified.

Pottery and clay pipe (C. Britton)

7.2 A total of 32 fragments (355.4g) of pottery was recovered during the evaluation, ranging from Roman (a single sherd) to post-medieval in date. Six fragments of fired clay were also recovered from the fill of a potential ring-gully (**55**) in Trench 23. A single clay-pipe fragment (1.8g) was dated from 17th to 18th century from the top of a furrow in Trench

2. The miscellaneous material consisted of natural chalk and natural stone (39.7g) all of which were undiagnostic.

7.3 A single sherd (5.3g) of Roman pottery was recovered from the tertiary fill (**77**) of ditch **75** in Trench 8 on the north side of PDA B. This was a sandy coarse ware probably from a domestic hollow vessel dating to the 1st century AD (Stephen Wadeson, pers. comm).

7.4 A total of 25 sherds (312.1g) of medieval pottery were recovered from across the site. The assemblage dated rom the 11th to 15th century and was all British in origin and was probably produced solely within East Yorkshire. The wares were solely domestic, encompassing forms such as jugs, pitchers and additional unidentifiable hollow wares. Most of the pottery dated between the 12th and 14th centuries with only a couple of sherds dating to 11th century, and three possibly dating to the 15th century.

7.5 Most of the medieval pottery was recovered from PDA A study area and almost certainly related to the DMV of Northorpe on the west side of the site. The absence of material after the 15th century suggests that the village contracted soon after this period. Only two pieces of medieval pottery were recovered from PDA B – one from the fill of a furrow (**2**) and the other from a ditch (**12**) – clearly indicating that the southern field was agricultural land by this period and remained so to the present day.

7.6 A total of six sherds (38g) of post-medieval pottery was recovered from across the site, all were table wares post-dating the 17th century and were probably associated with the nearby Northorpe Farm. A single fragment of clay-pipe stem was recovered dating to the 17th to 18th century. This was probably British in origin and made from ball clay.

7.7 Taken together, the pottery assemblages indicated that the area excavated at Hornsea saw continuous human occupation throughout the medieval to post-medieval periods, and that the communities were domestic in nature.

7.8 Miscellaneous finds from the site included fired clay, chalk and stone fragments and were undiagnostic in date. Eight fragments of fired clay were recovered, two from ditch fill **31** and six from the fill (**55**) of one of the possible ring gullies (**54**). None of the fragments, however showed any evidence of metallurgical residues. As all the fragments were therefore undiagnostic, it was difficult to distinguish between deliberate or accidental firing.

Lithic material (B. Bishop)

7.9 A total of four pieces of struck flint and a single fragment of unworked burnt stone were recovered from site. All are thought to be residual and were recovered from contexts where other later material was also recovered or from unstratified deposits. The assemblage of struck flint were all made from material thought to have been locally available from within the immediate drift geology. These comprised two retouched scrapers, a decortication flake and a small conchoidally fractured fragment. None of the material was chronologically diagnostic but the form of two the scrapers would suggest they broadly date to the Later Neolithic or Early Bronze Age. The other fragments are not diagnostic and can only be dated very generally to the prehistoric period. The unworked burnt stone is heated to the extent that it has started to become 'fire crazed' but has not changed colour, by itself however it is undateable. The Lithic assemblage demonstrates prehistoric occupation of site probably during the Later Neolithic or Early Bronze age, but by itself this residual assemblage can only suggest a low-key and probably very temporary occupation.

Iron, glass and metalworking debris (J. Shoemark)

7.10 A total of two iron artefacts, a single glass fragment and metalworking waste from three contexts were retrieved during the evaluation. The iron artefacts were both retrieved from Trench 17 in the south-west corner of PDA A. A rivet or clench bolt was found in fill **31** of ditch **30** and two refitting fragments of a heavily corroded iron object was recovered from fill **34** of gully **33**. The fragments appear to form a slightly domed object which may have been a fitting but represents insufficient remains for accurate identification. A small fragment of non-diagnostic ironworking slag was recovered form soil samples taken from fill **77** of ditch **75**, alongside 4.6g of magnetic matter. A Further 4g of magnetic matter was recovered from fill **76** of ditch **75** and 0.2g from the fill of paleochannel **65**, all from soil samples. None of the magnetic matter retrieved was found to contain any hammerscale and cannot be treated as diagnostic of metalworking activity. The single fragment of glass was too small to be identifiable but considered to be post-medieval or modern on the basis of its condition.

Paleoenvironmental analysis (R. Putland)

7.11 Four environmental samples were taken during evaluation; from the paleochannel (**65**), fills of ditch **75** and fill of ditch **24**. These indicated the potential for the preservation of archaeobotanical material as well as terrestrial mollusc (snails). However, while both

were present in all the samples processed, the amount retrieved was not enough to draw any confident conclusions and therefore no further work was undertaken.

8.0 DISCUSSION

8.1 Evidence of prehistoric activity across the PDA was sparse, and largely restricted to PDA A on the north-west side of the leisure park where two possible ring-gullies were identified in the centre of this area, on the north side of the existing access road. A partial gully (**50**) was excavated in Trench 25, and a second partial gully (**54**) in Trench 23. In both cases the features were relatively shallow (> 0.4m deep) suggesting considerable truncation by later ploughing. Ridge-and-furrow cultivation on an east-to-west alignment was evident on the 2012 geophysics, and a furrow corresponding with this alignment was recorded at the north-west end of Trench 23 and the southern end of Trench 20.

8.2 No pottery or artefacts were recovered to either ring-gully (**50**, **54**), although fragments of fired clay were recorded from the fill of **54**. However, based on the extrapolated size and form of the remains, the features can be dated typologically as Bronze Age or Early Iron Age, indicating settlement activity in the area during this period. Notably, no prehistoric features were recorded to the south and east of the site during the 2015 archaeological excavations along the access road (NAA 2015). This suggests that any significant prehistoric remains are likely to be restricted to a small area within the centre of PDA A. To the north, the single linear feature recorded in Trench 24 (**35**) and the smaller of the two ditches in Trench 20 (**44**) could be evidence of a related field system continuing north, although no dateable material was recovered from either.

8.3 There was no significant evidence of prehistoric activity identified in PDA B, just three pieces of worked flint that were dated typologically to the Early Bronze Age. One of these, a primary flake, was recovered from the tertiary fill (**77**) of ditch **75** in Trench 8 on the north side of the PDA. This also contained a fragment of 1st-century Roman pottery, strongly suggesting this may be an early feature and possibly a continuation of the prehistoric field system shown on aerial photograph to the south of PDA B (Fig. 3), although on a slightly different alignment.

8.4 The second flint artefact, a thumbnail scraper, was recovered from a buried soil horizon (**70**) in Trench 5. This deposit was also identified in Trench 7 and at the southern end of Trench 4 and corresponded with a strong linear response on the geophysics survey

(NAA 2019a). The 1809 enclosure map (ERALS IA/82; Fig. 9) shows a water course in this location, running across PDA B on a south-east alignment and venting out at the coast, just to the south of what is now Marine Drive. The irregular line of the water course suggests it was a natural stream rather than cut drainage. By the publication of the 1852 OS map the stream had been diverted or culverted where it ran across the East Field (PDA B), although a short section survived above ground to the north. This crossed PDA A on a north-to-south alignment. This is associated with the paleochannel (**65**) recorded in Trenches 22 and 23.

8.5 The section excavated through the paleochannel in Trench 23 provided an indication of the size and depth of the stream and deposition profile. A similar matrix might be anticipated in association with the feature crossing PDA B. A section excavated through deposit **70** in Trench 4 established a depth of 0.6m. This was probably cut through a section of bank, with deposit (**70**) forming the upper fill of the channel. This is likely to be a 19th-century infill deposit associated with the blocking of the water course. It was noted at the time of excavation that deposit **70** was much deeper at the southern end of the Trench 24; however, it was not possible to extend excavation due to waterlogging.

8.6 The buried soil horizon observed in Trench 5 is beyond the immediate limit of the channel, but may represent an episode of flooding along the course of the stream. Alternatively, it could be backfill deposits associated with the 19th-century land improvement. This suggests that the provenance of the flint scraper is not secure, and the potential for the survival of any prehistoric material beneath the buried soil is minimal.

8.7 The only evidence of Roman activity on the site was the fragment of Roman pottery recovered from the tertiary fill of ditch **75** in Trench 8. This may indicate there was Roman activity somewhere in the vicinity of the PDA, but the overall potential for the presence of significant archaeology relating to this period is considered to be low.

8.8 The majority of the features identified across both PDA A and B were medieval in date and relate to the DMV to the west of PDA A and its associated arable field system. In Trench 17, a series of plot boundaries (**30**, **33**, **79**) were recorded extending east from the Atwick Road. In Trench 18, a large north-to-south ditch (**24**) was identified, marking the eastern extent of the settlement and dividing the back-plots of the village from the associated ploughlands beyond. Ridge-and-furrow cultivation on various alignments were recorded across both PDAs in Trenches **2**, **3**, **4**, **6**, **8**, **9**, **10**, **11**, **12**, **13**, **20**, **21** and

25, suggesting that the area has been in continual agricultural use since at least the 13th century. A holloway (**28**) recorded in Trench 21 probably provided access from the village out to the ploughlands.

8.9 On the east side of PDA B, the features identified in Trench 16 may be medieval in date, possibly relating to activity on the west side of Cliff Road. The 1809 enclosure map shows the area on the east side of the road divided into numerous strips that look to be medieval in origin, and there may have originally been a similar division of land on the road. Pottery dating to the 12th to 14th century was recovered from the fill (**13**) of one (**12**) of the two linear features identified in this area.

8.10 Based on the pottery sequence, it is likely that the village of Northorpe contracted during the late-14th to 15th century. The outline of the medieval settlement is shown on the 1809 enclosure map, including the distinct east boundary, but no dwellings are extant. Northorpe Farm remained in occupation, farming the surrounding fields, which probably remained in cultivation throughout the post-medieval period. By the late-18th century an increased demand for agricultural production saw the implementation of land improvements across the area, including diverting the water course in PDA B and the rationalisation of the field system. This process continued into the 20th century.

8.11 Ditch (**59**) and later recut (**56**), both recorded in Trench 23, were the largest of the post-medieval features recorded, and were associated with this phase of land improvement, beginning in the late-18th and extending into the 19th century. Notably, the 1925 OS map (not reproduced) shows a small structure on the west bank of the water course (just west of the north end of Trench 22), which may be a pumphouse. No evidence of this remains above ground.

8.12 The origins of the organic material recorded in Trenches 14 and 15 are uncertain. There was limited archaeological investigation of these during the excavation because of the poor weather conditions. Later geo-technical investigations conducted on behalf of the client have shown the extent of the deposit to be limited. However, there is moderate potential for the survival of archaeologically significant ecofacts.

9.0 CONCLUSIONS

9.1 The purpose of the archaeological evaluation detailed in this report was to assess the potential for the presence of sub-surface archaeology across the PDA. In conclusion,

the trial trenching has shown that within PDA A, on the north side of the leisure park, there is low potential for the survival of archaeological features and deposits associated with prehistoric settlement. This is likely to be Bronze Age or Early Iron Age in date and possibly contemporary with the later re-use of the Neolithic henge monument to the south of PDA B. Such remains, based on the observed levels of preservation and extent, are considered to be of local significance. No evidence of Neolithic activity was found and, similarly, no evidence of ritual activity post-dating the henge.

9.2 The only evidence of possible prehistoric activity in PDA B was a large boundary ditch in Trench 8, on the north side of Field B. Worked flint and a fragment of 1st-century Roman pottery were found in the tertiary fill of this feature, suggesting an early date, and it may be a continuation of the Bronze Age field system associated with the later re-use of the henge. This is considered to be of local significance.

9.3 To the west of PDA A there was extensive evidence of medieval activity associated with the DMV of Northorpe. This is considered to be of local significance. The evaluation clearly established the eastern extent of the village, defined by a large boundary ditch that separated the settlement from its associated ploughlands to the east. Evidence of post-medieval activity was moderate to low and of local significance, predominantly associated with later land improvement.

9.4 In summary, the remains identified at Hornsea Leisure Park represent evidence of an agricultural landscape with possible prehistoric origins. The results of the trial trenching suggest that remains of the prehistoric henge monument identified to the south of PDA B do not extend inside the boundary of the PDA. Some evidence of possible prehistoric field systems was identified in PDA A and PDA B but the archaeological potential for remains from settlement should be considered low in both areas. Trenches in the western part of the wider PDA A study area confirmed the presence of medieval remains associated with a known DMV and a back boundary separating the settlement core from the ploughlands to the east. Notably, the settlement core lay outside the proposed development area. The results also indicate a strong element of continuity between medieval field systems identified in the trial trenching and post-medieval field boundaries identified in historic mapping.

10.0 ARCHIVE DEPOSITION

10.1 The full archive from the archaeological investigations, including paperwork, drawings, photographs, and digital data, is to be deposited with the East Riding Museum. Copies of all reports will be deposited with the Historic Environment Record (HER) held by HAP, and an online OASIS entry has been completed (Oasis ref: northern1-381939). All finds have been recommended for discard.

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APPENDIX A

CONTEXT CATALOGUE

Context	Interpretative description	Trench	Finds, sample	Date?	Comments
1	cut of furrow	2		med/post med	
2	fill of furrow 1	2	12/13th c pot, 17/18th c clay pipe, pantile		
3	topsoil				
4	subsoil				
5	natural				
6	cut of furrow	10		med/post med	
7	fill of furrow 6	10	19/20th c pot	med/post med	
8	cut of furrow	10		med/post med	
9	fill of furrow 8	10		med/post med	
10	subsoil	16			
11	colluvium	16			Not seen anywhere else onsite
12	cut of ditch	16		med	
13	fill of ditch 12	16	12/14th c pot	med	
14	cut of ditch	16		unknown	
15	secondary fill of ditch 14	16		unknown	
16	primary fill of ditch 14	16			
17	cut of pit	18		unknown	Probably natural – tree throw
18	fill of pit 17	18		unknown	As above
19	subsoil	18			
20	natural	18			
21	field drain	18		modern?	Post-med/Modern field drain?
22	fill of field drain 21	18		modern?	
23	fill of field drain 21	18		modern?	
24	cut of ditch	18		medieval	DMV back-plot boundary
25	fill of ditch 24	18	12/14th c pot	medieval	
26	void	18			
27	void	18			
28	cut of holloway/furrow	21		med/post med	
29	fill of holloway/furrow 28	21		med/post med	
30	cut of ditch	17		med	DMV back-plot boundary
31	fill of ditch 30	17	12/15th c pot, chalk, land drain, fired clay	med/post med	
32	fill of ditch 30	17		med/post med	

33	cut of gully	17		med	
34	fill of gully 33	17		med/post med	
35	cut of ditch	24		med	DMV back-plot boundary
36	primary fill of ditch 35	24		med	
37	secondary fill of ditch 35	24		med/post med	
38	cut of ditch	18		medieval	Boundary of back-plots
39	fill of ditch 38	18		med/post med	
40	cut of furrow	20		med/post med	
41	fill of furrow 40	20		med/post med	
42	cut of ditch	20		post med	Cut through furrows
43	fill of ditch 42	20		post med	
44	cut of ditch	20		post med	
45	fill of ditch 45	20		post med	
46	cut of furrow	25		med/post med	
47	fill of furrow 46	25	12th-14th c pot	med/post med	
48	cut of ditch	25		med/post med	
49	fill of ditch 48	25			
50	cut of ditch	25		prehistoric?	
51	fill of ditch 50	25		prehistoric?	
52	cut of pit	25		unknown	
53	fill of pit 52	25		unknown	
54	cut of ring ditch	23		prehistoric?	
55	fill of ring ditch 54	23	Fired clay	prehistoric?	
56	cut of ditch	22		post med	Recut of ditch 59
57	secondary fill of ditch 56	22		post med	
58	primary fill of ditch 56	22		post med	
59	cut of ditch	23		post med	Ditch visible on 1809 enclosure map
60	fill of ditch 59	23		post med	
61	fill of paleo-channel 65	23		natural	
62	fill of paleo-channel 65	23		natural	
63	fill of paleo-channel 65	23		natural	
64	fill of paleo-channel 65	23		natural	
65	cut of paleo-channel	23		natural	
66	fill of paleo-channel 65	23		natural	
67	unexcavated boundary ditch	25		post med?	Possible continuation of 35 in trench 24
68	organic deposits	14, 15		unknown	Natural – unknown deposition date
69	made ground	14		modern	

70	buried soil horizon	4, 5, 7		unknown	Likely to be post med plough soil
71	subsoil	24			
72	fill of ditch 73	8		unknown	
73	cut of ditch	8		unknown	
74	primary fill of ditch 75	8		unknown	
75	cut of ditch	8		unknown	Later feature cut through fill (**73**) of ditch 73
76	secondary fill of ditch 75	8		unknown	
77	tertiary fill of ditch 75	8	1st c pottery	unknown	Pottery likely to be residual.
78	unstratified finds	-	12th -20th c pot		
79	unexcavated ditch	17		medieval	
80	remnant of ditch	16		unknown	May be natural staining

APPENDIX B

CERAMIC BUILDING MATERIAL REPORT

Chrystal Antink

INTRODUCTION

This report details the ceramic building material (CBM) recovered from excavations at Hornsea Leisure Park.

METHOD

The CBM was examined following the Minimum Standards for Recovery, Curation, Analysis, and Publication for Ceramic Building Material (Archaeological Ceramic Building Materials Group, 2002). Fragments were recorded in a Microsoft Access database following McComish (2012, 122) by count, weight, form, and surviving complete dimensions. Any unusual firing characteristics, stamps, and external effects were noted. Fabrics were not recorded.

OUTLINE OF THE ASSEMBLAGE

Five fragments of CBM were recovered, totalling 130g. Three were non diagnostic and could not be assign a period; one could be classified as post-medieval, and one modern (table 1). A pantile, a land drain, and a tile were all identified.

Table 1: Summary of CBM

Context	Trench	Description	Form	Period	Count	Weight	Height
2	2	Fill of furrow	Undiagnostic	Unknown	1	2	
2	2	Fill of furrow	Pantile	Post-Medieval	1	20	16
31	17	Fill of ditch 30	Land drain	Modern	1	7	9
78		Unstrat	Undiagnostic	Unknown	1	5	
78		Unstrat	Tile	Unknown	1	96	16

PROVENANCE OF OBJECTS

Two of the fragments came from the fill of a furrow, one from the fill of a ditch, and two were unstratified. There is not enough material for their provenance to be meaningful.

DISCUSSION

The ceramic building material cannot be interpreted meaningfully: the fragments were too sparse, and either undiagnostic or post-medieval to modern in date.

RECOMMENDATIONS

The CBM need not be retained and can be discarded prior to archiving of the site.

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APPENDIX C

POTTERY, CLAY PIPE AND MISCELLANEOUS MATERIALS ASSESSMENT

Charlotte Britton

INTRODUCTION

This report discusses the pottery, clay pipe and miscellaneous materials recovered from the 2019 archaeological excavations at Hornsea Leisure Park.

A total of 32 fragments (355.4g) of pottery was recovered that ranged from Roman to post-medieval in date, and a single clay-pipe fragment (1.8g) was recovered that dated from 17th-18th century. The remaining material consisted of chalk, fired clay, and stone (48.4g) and was undiagnostic in date, although did indicate possible human activity in the area.

METHOD

The pottery was examined in accordance with Barclay *et al.* (2016) and was assessed by eye on 18th December 2019. The material was organised by stratified deposit (context) and quantified by count and weight (Table C1). Wares and date were identified where possible, and vessel form and decoration were documented where practicable.

Table C1: pottery by context with count and weight

Context	Count	Weight (g)
2	1	6.5
7	1	1.3
13	1	1.9
25	5	38.3
31	14	131.3
47	1	52.6
77	1	5.3
78	8	118.2
Total	32	355.4

The remaining finds were also recorded on 18th December 2019 in a Microsoft Access database. The clay pipe was examined in accordance with Higgins (2019) and the miscellaneous material was recorded in accordance with the national finds standards and find type specific guidance where possible (English Heritage 2008, Chartered Institute for Archaeologists (CIfA) 2014). The material was organised by stratified deposit (context) and quantified by count and weight (Table C2).

Table C2: clay pipe by period, count and weight

Context		2		31		32		55		76		Total count	Total weight (g)
Material	**Period**	**Ct**	**W(g)**	**Ct**	**W(g)**	**Ct**	**W(g)**	**Ct**	**W(g)**	**Ct**	**W(g)**		
Chalk	Unknown			4	21.9	1	3.7					5	25.6
Clay Pipe	17th-18th century	1	1.8									1	1.8
Fired Clay	Unknown			2	6.9			6	11.1			6	18
Stone	Unknown									1	3	1	3
Total		1	1.8	4	21.9	1	3.7	6	11.1	1	3	13	41.5

OUTLINE OF THE ASSEMBLAGE

The pottery

The assemblage dated to the Roman (1st century AD), medieval (11th-16th century) and post-medieval (17th-20th century) periods (Table 3).

A single sherd (5.3g) of Roman pottery was recovered from ditch fill 77 and was a sandy coarse ware likely from a domestic hollow vessel, dating to the 1st century AD (Stephen Wadeson, pers. comm).

A total of 25 sherds (312.1g) of medieval pottery were recovered from across the site; these ranged from good to very good in condition. The assemblage dated to the 11th-16th century and represented a maximum of 16 vessels. All the material present was British in origin and was probably produced within the local region. The assemblage encompassed solely utilitarian wares and the forms identified were typical of the period, encompassing forms such as jugs, pitchers and additional unidentifiable hollow wares. The fabrics and wares were highly typical of the period and surrounding area, with all the material likely being produced within East Yorkshire, potentially originating from production sites in the immediate or adjacent regions. Known centres included those located at Beverley, Hull and Wharram Percy. The assemblage included various gritty and sandy wares, splashed wares, Humber ware types and Staxton ware types, all known to be produced at these production centres during this period and were therefore typical of the East Yorkshire area (McCarthy and Brooks 1988, 237-243).

A total of six sherds (38g) of post-medieval pottery was recovered from across the site. The assemblage dated to 17th-20th century and represented a maximum of six vessels, all in very good condition. All the pottery present was British in origin, most likely produced within the local region, and the wares identified were highly typical of the period. They encompassed solely table wares and included: Glazed red sandy ware, slipware and whiteware. The forms identified were typical of the period, taking the form of hollow wares and a possible open form.

The clay pipe

The clay pipe dated to the post-medieval period (17th-18th century) and consisted of a single stem fragment that was in a good condition. The pipe was probably British in origin and produced within the local region. It was made from ball clay and the burnishing was average in condition. Although fragmentary, the stem was straight, and the bore hole measured 6/64 inch in diameter, indicating that it dated to 17th-18th century.

The miscellaneous material

The remaining assemblage consisted of fired clay, chalk and stone fragments and were undiagnostic in date.

The fired clay assemblage consisted of eight fragments (18g) from ditch fills **31** and **55**. The fragments recovered from 55 were featureless oxidised orange-red and partially reduced in colour, whereas the fragments recovered from ditch fill 31, were heavily reduced to black in colour. None of the fragments, however showed any evidence of metallurgical residues. As all the fragments were therefore undiagnostic, it was difficult to distinguish between deliberate or accidental firing. It was clear from the fabric colours and lack of intense vitrification, that the clay had not been subject to extremely high temperatures, and so was probably a by-product of a domestic hearth, oven or other similar processes that took place on site, rather than industrial processes such as kilns or furnaces.

The chalk and stone assemblage consisted of six fragments (28.6g) recovered from ditch fills **31**,**32** and **76**. All fragments were natural and, therefore, could tell us nothing more about the site. A small amount of the chalk, however, had been burnt and so, like the fired clay, may have been a by-product of a domestic high-temperature process that took place on site.

PROVENANCE OF OBJECTS

Some of the medieval pottery assemblage was recovered from unstratified layer **78** and therefore residual. The remaining pottery and small finds assemblages, however, were recovered from ditches, gullies and furrow fills across the entire site, and thus were likely recovered from primary deposition contexts.

DISCUSSION

The pottery

The single sherd of Roman pottery recovered was likely associated with the preparation or storage of food, and so was domestic in nature (Stephen Wadeson, pers. comm). Such a limited assemblage could either indicate there was no occupation within the immediate area at the time or reflect limited recovery. As such, there is the potential for further Roman material associated with the site to be recovered in the future.

The medieval and post-medieval pottery assemblages were both domestic in nature, typical of the region and consistent with what is understood of the ceramic sequence during the periods, in the general area. Much of the material was recovered from stratified contexts so it had high potential to inform us about the people inhabiting the site at Hornsea. However, as the material was typical for the area, its significance to pot studies beyond this site is very low.

The medieval assemblage encompassed pottery types probably produced solely within East Yorkshire and spanned throughout the early to mid-medieval periods, indicating that the site at Hornsea was inhabited throughout, and was continuously domestic in nature. The forms present within the medieval assemblage were solely utilitarian, for the preparation and consumption of food. The medieval pottery recovered displayed characteristic traits, such as green-and-yellow lead and copper glazes. However, the lack of any further decoration intimated that the domestic community that inhabited the site during this time was likely rural and simple. The assemblage

therefore likely derived from the the township of Torp (Thorpe), known to be inhabited during this time (NAA 2019, 6).

The wares and forms present within the post-medieval assemblage encompassed solely table wares and were likely associated with the domestic settlement such as the farm or farmstead located at the site between the 19th and 20th century (NAA 2019,7).

Taken together, the pottery assemblages indicated that the area excavated at Hornsea saw continuous human occupation throughout the Roman to post-medieval periods, and that the communities were domestic in nature.

The clay pipe

Clay pipes were disposable items during the post-medieval period, often used only a few times before they were thrown away and, therefore, their potential for dating a context is high (Pearce 2015, 286). Accessing this potential relies on being able to date the pipe accurately. This can be achieved through decoration or a maker's mark because certain producers were known to be operating at certain times. However, as there were no identifiable maker's mark present on the stem recovered at Hornsea, little can be said about its provenance. Although it was burnished, the stem appeared to be poorly finished and the lack of decoration indicated that the pipe was common in style and likely a cheap example at the time. It is probable, therefore, that it was made locally and came from a rural community. The clay-pipe stem provided little information about the features excavated on site, beyond possibly indicating that leisure and recreational activities took place in the area during the 17th-18th centuries.

The miscellaneous material

The small assemblage of miscellaneous material recovered at Hornsea Leisure Park suggested that firing took place on site at some point, and that this firing was likely domestic in nature, suggesting human activity.

RECOMMENDATIONS

All the pottery and clay pipe recovered dated from the Roman to the post-medieval period and ranged from good to very good condition. Although a lot of the material was well-stratified, the assemblage was highly typical of the periods and region. Similarly, the small assemblage of miscellaneous materials recovered from Hornsea indicated human domestic activity at the site but was undiagnostic in date. No further study is recommended, and all the finds are recommended for discard

Table C3: pottery by ware with period, count and weight

Context		2		7		13		25		31		47		77		78		Total count	Total weight (g)
Ware	**Period**	**Ct**	**W(g)**	**Ct**	**W(g)**	**Ct**	**W(g)**	**Ct**	**W(g)**	**Ct**	**W(g)**	**Ct**	**W(g)**	**Ct**	**W(g)**	**Ct**	**W(g)**		
Fine gritty ware	13th-14th century															1	6.8	1	6.8
Fine sandy ware	12th-14th century					1	1.9											1	1.9
Glazed red sandy ware	16th-17th century															1	12.4	1	12.4
Gritty sandy ware	12th-14th century									1	16.3	1	52.6					2	68.9
Gritty ware	12th-13th century									1	6.1							1	6.1
Humber ware	13th-late 14th century							1	14.1									1	14.1
Humber ware?	13th-late 14th century									8	83.6							8	83.6
Oxidised sandy ware	12th-13th century							2	6.3									2	6.3
Painted whiteware	19th century															1	0.5	1	0.5
Red sandy ware	13th century									1	6							1	6
Reduced gritty ware	12th-14th century															1	70.7	1	70.7
Reduced sandy ware	12th-13th century	1	6.5															1	6.5
Reduced ware	13th-15th century									1	1.7							1	1.7
Sandy coarse ware	1st century AD													1	5.3			1	5.3
Sandy gritty ware	12th-14th century															1	4	1	4
Slipware	18th century															1	1.3	1	1.3
Slipware?	18th century															1	21.9	1	21.9
Splashed ware - Oxidised	11th-13th century							2	17.9									2	17.9
Staxton ware?	12th-15th century									2	17.6							2	17.6
Whiteware	19th-20th century			1	1.3											1	0.6	2	1.9
Total		1	6.5	1	1.3	1	1.9	5	38.3	14	131.3	1	52.6	1	5.3	8	118.2	32	355.4

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APPENDIX D

LITHICS ASSESSMENT

Barry Bishop

INTRODUCTION

The archaeological investigations at the above site resulted in the recovery of four pieces of struck flint and a single fragment of unworked burnt stone. The assemblage has been comprehensively catalogued by context and this includes further descriptive details of the material (Table D1). This report summarises the data in the catalogue; it quantifies and describes the material and presents a preliminary assessment and outline of its significance.

METHOD

The assemblage was recorded following standard technological and typological classifications and largely follows the methodology of Inizan et al (1999) with modifications and additions as indicated in the text by the author. Measurements were taken following the methodology of Saville (1980).

Five small unworked Wolds flint pebbles were also recovered during the investigations; these have been catalogued but as they show no evidence of modification are not discussed further in this report.

OUTLINE OF THE ASSEMBLAGE

In total four pieces of struck flint were recovered during the investigations, these comprising two retouched implements, a decortication flake and a small conchoidally fractured fragment. All four pieces were small and made from a fine-grained 'glassy' mid to dark brown or grey flint with a worn cortex which is likely to have been gathered either from the local Devensian tills or beach deposits (Henson 1985; Young 1984).

PROVENANCE OF THE OBJECTS

The two retouched pieces were recovered from an unstratified deposit in Trench 4 and from buried soil (**70**) in Trench 5. A small a small flake was recovered from tertiary fill **77** of ditch **75** in Trench 8 and a further fragment was retrieved from a ditch fill **31**. All the material was found in contexts where it should be considered residual.

DISCUSSION

The two retouched pieces are remarkably similar in terms of size, shape and the nature of their retouch, which comprises shallow flaking along one of their lateral edges and steeper retouch around the remaining margins, although both had fragmented to some extent and had suffered from post-depositional attrition, hampering firm identification. This has also obscured most use-wear traces although both do seem to have experienced moderate to heavy wear, consistent with cutting and/or scraping actions on moderately hard material such as soft wood or leather. Neither are chronologically diagnostic but the flakes were well struck and the shallow retouch,

particularly that on the example from context [70], is competently executed and not dissimilar to that used to make plano-convex knives, which together would suggest a Later Neolithic or Early Bronze Age date. The remaining two pieces comprise a small primary flake recovered from context [77] in Trench 08 and a small fragment, possibly from a thermally disintegrated core, from context [31]; unfortunately neither is diagnostic and they can only be dated broadly to the prehistoric period.

A fragment of unworked burnt stone, comprising a fragment of brittle, porcelain-like Wolds flint that had been heated to the extent that it had started to become 'fire-crazed' but not changed colour, was found in context [31]. This was most probably burnt by being in close proximity to a ground-set hearth, but by itself is no longer dateable.

Significance

The main significance of the struck flint is that it demonstrates prehistoric occupation at the site, most probably during the Later Neolithic or Early Bronze Age. However, by itself, the assemblage can only suggest low-key and probably very temporary occupation and can contribute little to understandings of the precise chronology or nature of the activities represented.

RECOMMENDATIONS

Due to the size of the assemblage this report and accompanying catalogue is all that is required for the purposes of archiving and no further analytical work is warranted. It does, however, provide evidence for prehistoric activity at the site and can contribute to wider appreciations of prehistoric landscape use in the area. It is therefore recommended that it is recorded in the Historic Environment Record and a brief mention included in any published account of the fieldwork.

Table D1: Lithics Catalogue

Context	Location	Decortication flake	Retouched	Conchoidal chunk	Burnt stone (no.)	Burnt stone (wt:g)	Natural	Colour	Cortex	Condition	Suggested dating	
25	Tr. 18						1	Opaque light grey	None	Rolled	Natural	Small sub-angular pebble of Wolds flint
31	-			1				Opaque mottled mid brown	Thin, hard	Slightly chipped	Preh.	Small, fragment from a disintegrated core
31	-				1	3		Opaque mottled mid brown	None	Burnt	Undated	Lightly burnt fragment, no other evidence of working
32	-						1	Opaque light grey	None	Chipped	Natural	Small sub-angular pebble of Wolds flint
70	Tr. 05		1					translucent mottled dark grey	None	Chipped	Neo/EBA	Scraper / cutting implement made on a small flake with well executed, medium, semi-invasive scalar retouch along its right lateral margin and fine, steep retouch around its distal end and extending along its left lateral margin. Moderate wear. Much of the left margins has broken off. 28x23x5mm
77	Tr. 08	1						Semi-translucent mid grey	Thin, worn	Slightly chipped	Preh.	Quite narrow but undiagnostic primary flake
Unstrat	Tr. 04		1					Translucent mid brown	None	Chipped	Neo/EBA	Scraper / cutting implement made on a small thick flake with parallel dorsal scars and with rather irregular, fine, inverse, moderately shallow retouch along left margin and with some steep retouch and notching along right margin. Both margins show evidence of heavy wear / battering. Distal end missing. >28x22x6mm
Unstrat	Tr. 08						4	Opaque light grey	None	Slightly chipped	Natural	Small sub-angular pebbles of Wolds flint

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APPENDIX E

IRON, GLASS AND METALWORKING DEBRIS

Julie Shoemark

INTRODUCTION

This report presents an assessment of the iron, glass and industrial waste recovered during archaeological intervention at Hornsea Leisure Park, Hornsea, East Riding of Yorkshire (NGR TA 19833 49243).

METHOD

The finds were assessed on 27th January., X-rays were not taken of the ferrous objects as it was considered that they were unlikely to aid identification due to the fragmentary nature of one object and the clear form exhibited by the other. The assemblage was assessed by material, quantified by count and weight and was assigned a functional group after Crummy (1983).

OUTLINE OF THE ASSEMBLAGE

Fasteners and Fittings (one object)

A single iron rivet or clench bolt was recovered from fill **31** of ditch **30**. Rivets were usually used to hold together two sheets of iron, while clench bolts were more commonly used to hold together overlapping pieces of wood (Zori, 2007). Zori (*ibid*) notes that the two terms have been applied inconsistently across archaeological literature.

Metalworking debris

A small fragment of non-diagnostic ironworking slag was recovered from soil samples taken from fill **77** of ditch **75** in Trench 8 along with 4.6g of magnetic matter. A further 4g of magnetic matter was also recovered from fill **76** of ditch **75** and 0.2g was recovered from fill **66** of paleochannel **65** in Trench 23. There was no bonafide hammerscale in any of the three bags of magnetic matter (Cubitt, pers. comm).

Unknown function (two objects)

The single fragment of glass from fill **9** of furrow **8** is too small for a form to be identified, however, the condition of the glass indicates a post-medieval or modern date (Historic England, 2018).

A heavily corroded iron object broken into two refitting fragments and three smaller flakes was recovered from fill **34** of gully **33**. Due to the fragmentary nature of the object it was considered that an x-ray would not reveal any additional diagnostic features. The object appears to have been slightly domed and may have been a fitting, however, insufficient remains for accurate identification.

PROVENANCE OF OBJECTS

A single shard of glass was recovered from fill **9** of furrow **8** in Trench 10. Two iron objects were recovered from Trench 17, one from fill **34** of gully **33** and one from fill **31** of ditch **30**.

A single lump of undiagnostic slag and 16.4g of magnetic matter was recovered from the secondary and tertiary fills of ditch **75** in Trench 8. 0.2g of undiagnostic magnetic matter were recovered from fill **66** of paleochannel 65 in Trench 23.

DISCUSSION

The single glass fragment is, by itself, undiagnostic. It is likely to be of post-medieval or modern date, however, by itself it provides no useful information. It is not possible to state how the shard was deposited.

The rivet or clench is not typologically dateable. As with most iron objects they are utilitarian and very little change in form is evident over a long period. The example discussed here derived from a ditch fill which contained medieval pottery of 12th – 15th century date (Britton, 2020) and a fragment of modern land drain (Antink, 2020) and is likely to be of medieval date or later. By itself it does not provide sufficient evidence for a structure in the vicinity and the mixture of material from the fill indicate that it may have been redeposited from elsewhere.

Based on the metalworking debris recovered from Trench 8 and Trench 23 it is not possible to comment about past metalworking at this site. A single fragment is not proof of activity and it is not clear how it came to be incorporated into the site.

None of the finds are closely dateable, however, all are likely to be of medieval date or later and are typical of domestic activity during this period. They are likely to be associated with the deserted medieval settlement or Northorpe farm. Taken as an assemblage, no further useful information can be extrapolated about the dating of the site, or activities undertaken.

RECOMMENDATIONS

It is recommended that unless further archaeological work is to be undertaken on the site, the entire assemblage should be discarded as the assemblage can provide no further information and contains no dateable or typologically distinct objects.

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APPENDIX F

PALEOENVIRONMENTAL ANALYSIS

Robin Putland

INTRODUCTION

This report covers the material recovered from four environmental samples taken during evaluation trial trenching at Hornsea Leisure Park. These indicated the potential for the preservation of archaeobotanical material as well as terrestrial mollusc (snails). However, while both were present in all three samples processed, the number retrieved was not enough to draw any confident conclusions and, therefore, no further work was undertaken.

METHOD

The samples were initially processed by floatation in siraf tanks and the residue then sorted by eye once dry. The flots were sorted under a microscope at X3 magnification. All work was undertaken in accordance with recognised guideline and NAA standards (Jones 2011; Clay and Baines 2019).

OUTLINE OF THE ASSEMBLAGE

Three features were sampled; the paleochannel (**65**), ditch **75** and ditch **24**. A sample was taken from the paleochannel (**65**) in Trench 23. Two were taken from ditch **75** in Trench 8; the first from the secondary fill (**76**), and the second from the primary fill (**77**). Charcoal flecks were recovered from all three samples; however, due to their small size, no further analysis is recommended. The paleochannel sample contained one wild seed, which although identifiable was not analysed because by itself it had no archaeological merit. A piece of modern moss was also recovered and may represent modern contamination in the sample. The fourth sample was taken from the fill (**25**) of ditch (**24**) in Trench 18. Two snails were recovered from **25**; these were also not identified but retained.

PROVENANCE OF OBJECTS

The modern moss recovered from the fill of the paleochannel (**65**) indicates that there is the possibility of contamination either as a result of bioturbation in the sediment or from modern material from the surrounding environment. The seeds and snails from the successive fills may have been preserved in situ; however, the potential that they are modern in origin cannot be ruled out with such low counts.

DISCUSSION

The assemblage is of low potential; the low count of archaeobotanical and molluscan specimens makes any further work not statistically viable as no inferences can safely be drawn. The presence of the archaeobotanical and molluscan specimens demonstrates the potential for organic material to be preserved at this site, an observation which may be of use if any further work is carried out.

RECOMMENDATIONS

While this assemblage on its own has low archaeological potential, if any further work was to be carried out at this site, this material should be integrated into it and as such should be retained.

REFERENCES

Jones, D. M. (2011) *Environmental Archaeology A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (second edition).* [Online] Available at: https://historicengland.org.uk/images-books/publications/environmental-archaeology-2nd/environmental_archaeology/

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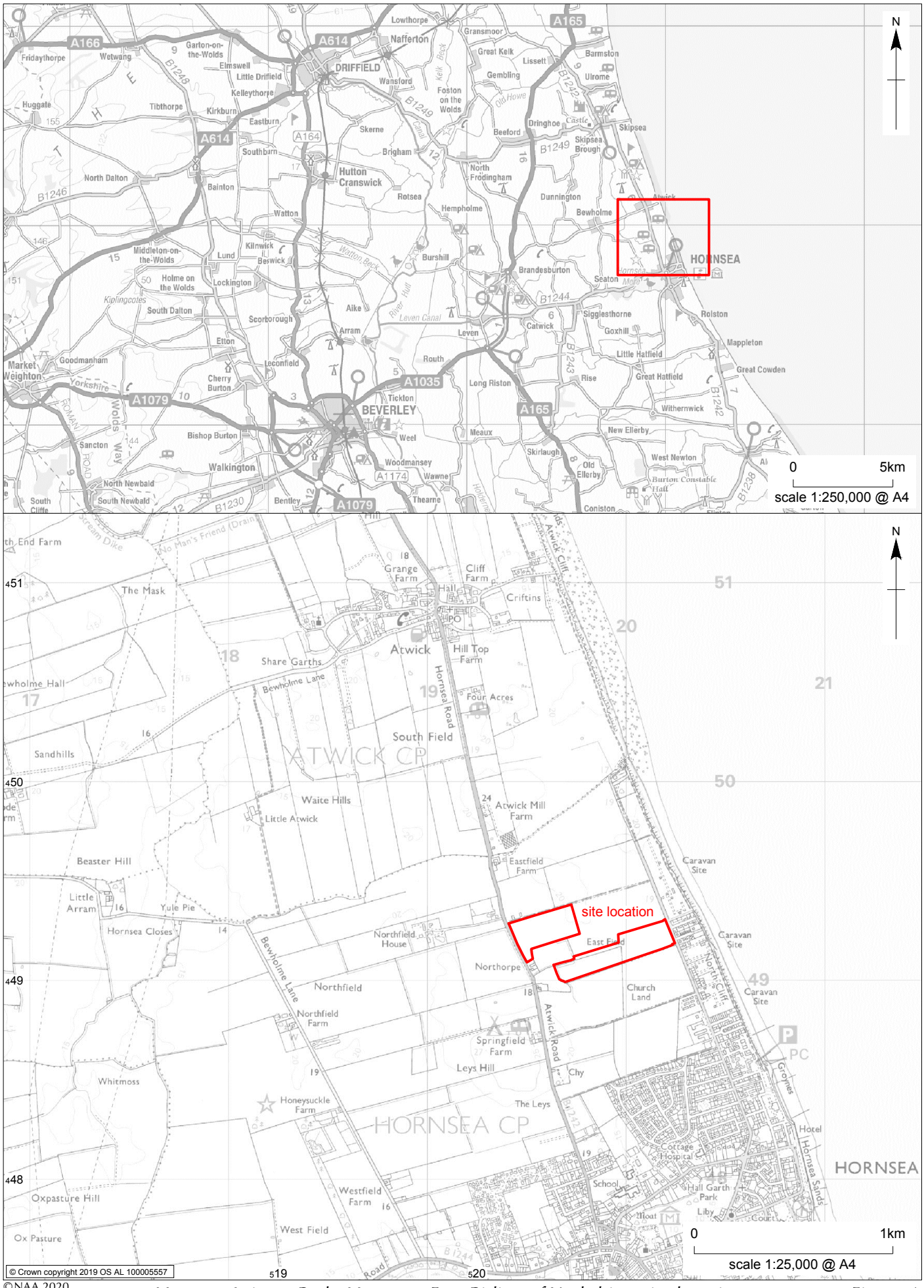
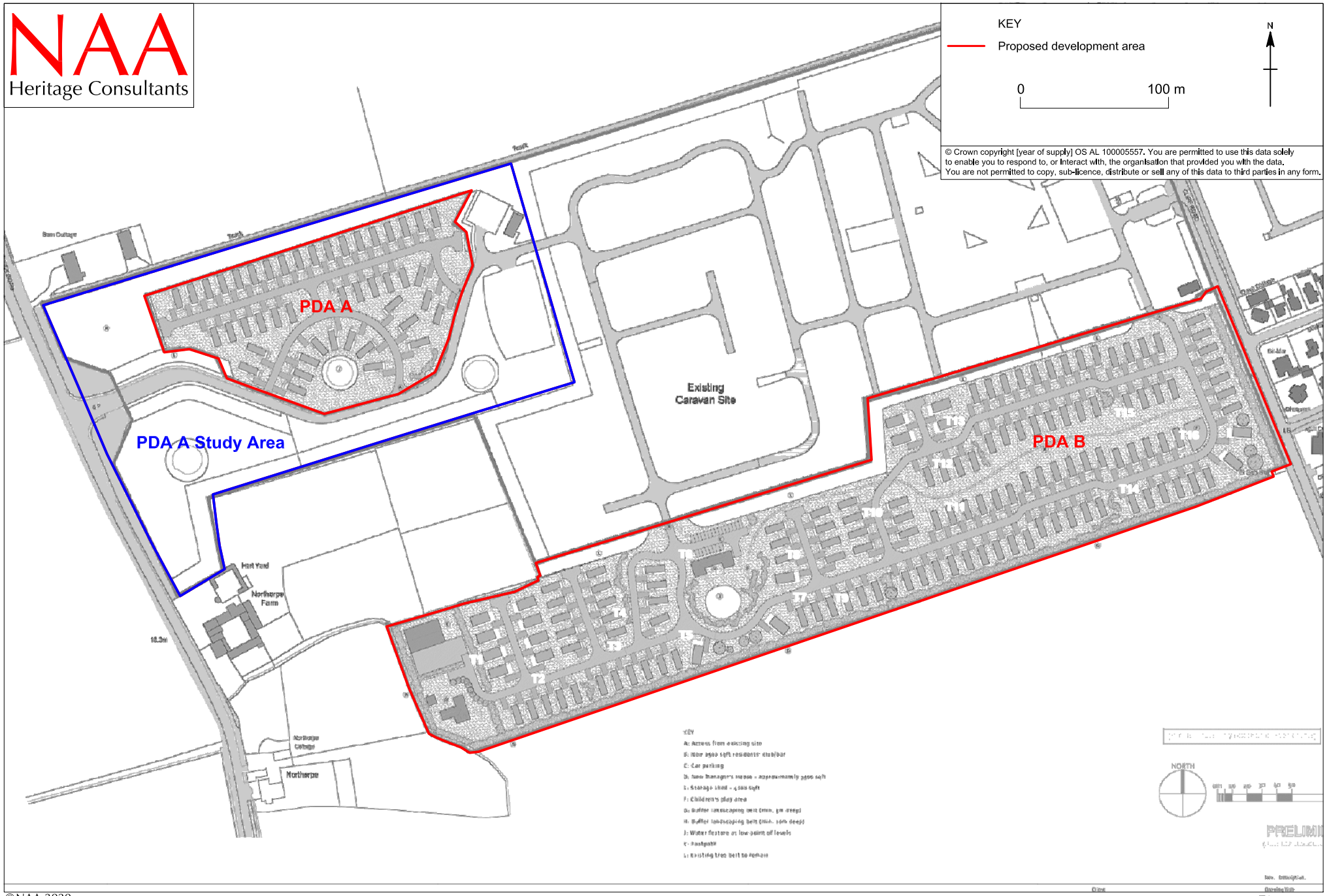


Hornsea Leisure Park, Hornsea, East Riding of Yorkshire: site location *Figure 1*



Hornsea Leisure Park, Hornsea, East Riding of Yorkshire: proposed development areas

Figure 2

NAA
Heritage Consultants

PDA A Study Area

T17 T18 T19 T20 T21 T22 T23 T24 T25 T26

Phase Site Investigations 2013

Existing Caravan Site

T1 T2 T3 T4 T5 T6 T7 T8 T9 T10 T11 T12 T13 T14 T15 T16

Field A

Field B

PDA B

NAA 2019 survey data

Horst Yard

Northorpe Farm

Northorpe Cottage

Northorpe

Area B

0 100 m

scale 1:2500 @ A3

N

3nT

-2nT

Pallette:grey55.ptt

Based on survey data supplied by: wildblood macdonald ref: 2587 (SK)12 survey date: February 2019

KEY
A: Access from existing site
B: New 2500 sqft residents' club/bar
C: Car parking
D: New Manager's House - approximately 2500 sqft
E: Storage shed - 1500 sqft
F: Children's play area
G: Buffer landscaping belt (min. 5m deep)
H: Buffer landscaping belt (min. 10m deep)
J: Water feature at low point of levels
K: Footpath
L: Existing tree belt to remain

NORTH

0m 10 20 30 40 50 100

PRELIMINARY

Y:\Current\2005_Hornsea_Leisure_Park_2019\Illustrations\Survey\Geophysics\Working Illus\cropmark-EHwebsite_r.jpg

wildblood macdonald
Parkhill Studio, Parkhill, Walton Road
Wetherby, LS22 5QZ
t 01937 585215 f 01937 580329
www.wildblood-macdonald.com

Client: Shorewood Leisure Group

Project: Leisure development at Land at Hornsea Leisure Park

Drawing Title: Sketch layout/Pre app
Scale @ size: 1:2500@A1
Job No.: 2587
Dwg No.: (SK)12
Revision:
Date drawn: Feb 2019
Status: Sketch
Drawn by: KL
Check: MB

KEY
- trench with features
- trench with no features
- unexcavated trench
- feature within trench
- furrow within trench
- buried soil
- organic soil
- post 2015 development
- development area

AP by Historic England's Aerial Reconnaissance team

Based on geophysical survey data supplied by: Phase Site Investigations ref: ARC_929_341_01 survey date: 01/2013

Hornsea Leisure Park, Hornsea, East Riding of Yorkshire: evaluation trench locations overlain on geophysical survey results

Figure 3

NAA
Heritage Consultants

0 50m
scale 1:1250 @ A3

N

Based on survey data supplied by: wildblood macdonald ref: 2587 (SK)12 survey date: February 2019

3nT
-2nT
Pallette:grey55.ptt

T19
T20
42
44
T22
56
T23
54
56
T24
35
T25
67
50
T26
T17
79
33
30
T18
38
21
17
24
T21
28

KEY
trench with features
unexcavated trench
feature within trench
furrow within trench
buried soil
post 2015 development
development area

Based on geophysical survey data supplied by: Phase Site Investigations ref: ARC_929_341_01 survey date: 01/2013

Hornsea Leisure Park, Hornsea, East Riding of Yorkshire: evaluation trench results overlain on of geophysical survey

Figure 4

NAA
Heritage Consultants

0 50m
scale 1:1250 @ A3

N

Based on survey data supplied by: wildblood macdonald ref: 2587 (SK)12 survey date: February 2019

3nT
-2nT
Pallette:grey55.ptt

Field B

T1
T2
T3
T4 70
T5 70
T6
T7 70
T8 75 73
T9
T10
T11
T12

KEY - Geophysics

- positive linear response greater / lesser (archaeology?)
- positive response (unknown origin)
- field boundary?
- trends
- ridge and furrow
- agriculture?
- land drain?
- bipolar response (modern)
- area of disturbance (geology?)
- edge of geophysical survey

KEY

- trench with features
- trench with no features
- feature within trench
- furrow within trench
- buried soil
- development area

Based on geophysical survey data
supplied by: Phase Site Investigations
ref: ARC_929_341_01 survey date: 01/2013

Hornsea Leisure Park, Hornsea, East Riding of Yorkshire: evaluation trench results overlain on geophysical survey interpretation

Figure 5

NAA
Heritage Consultants

0 50m
scale 1:1250 @ A3

N

Based on survey data supplied by: wildblood macdonald ref: 2587 (SK)12 survey date: February 2019

3nT
-2nT
Pallette:grey55.ptt

Field A
Field B

T13
T12
T15
68
T16
12
14
80
68
T14
T11
T10
T8
75 73
T7
T9

KEY - Geophysics
- positive linear response greater / lesser (archaeology?)
- positive response (unknown origin)
- field boundary?
- trends
- ridge and furrow
- agriculture?
- land drain?
- bipolar response (modern)
- area of disturbance (geology?)
- edge of geophysical survey

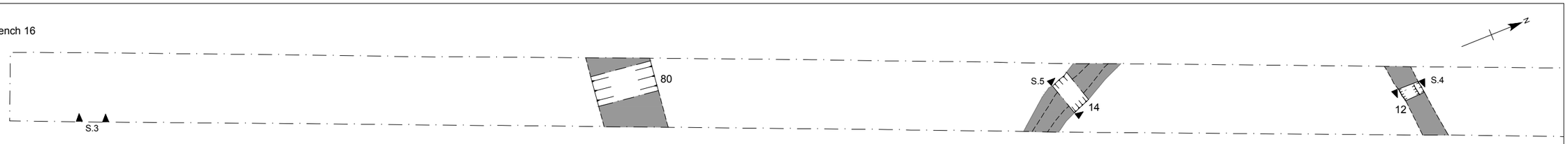
KEY
- trench with features
- trench with no features
- feature within trench
- furrow within trench
- buried soil
- organic soil
- development area

Based on geophysical survey data
supplied by: Phase Site Investigations
ref: ARC_929_341_01 survey date: 01/2013

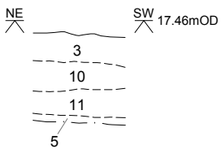
Hornsea Leisure Park, Hornsea, East Riding of Yorkshire: evaluation trench results overlain on geophysical survey interpretation

Figure 6

Trench 16



Section 3



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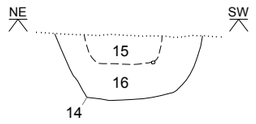

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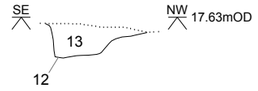

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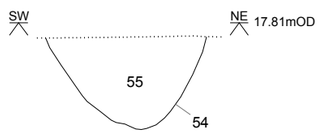
section scale 1:40 @ A4

Trench 23

Section 12



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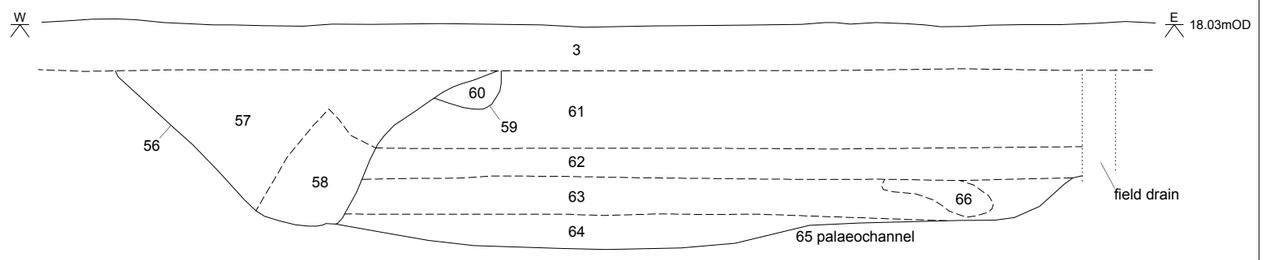

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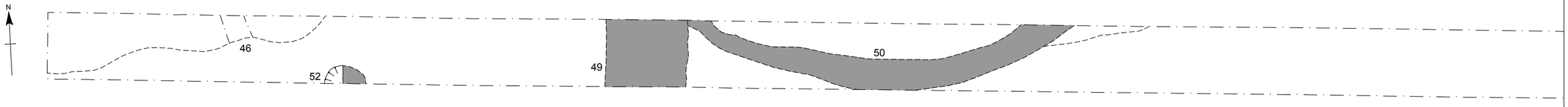
section scale 1:40 @ A4

Trench 25



0 5m

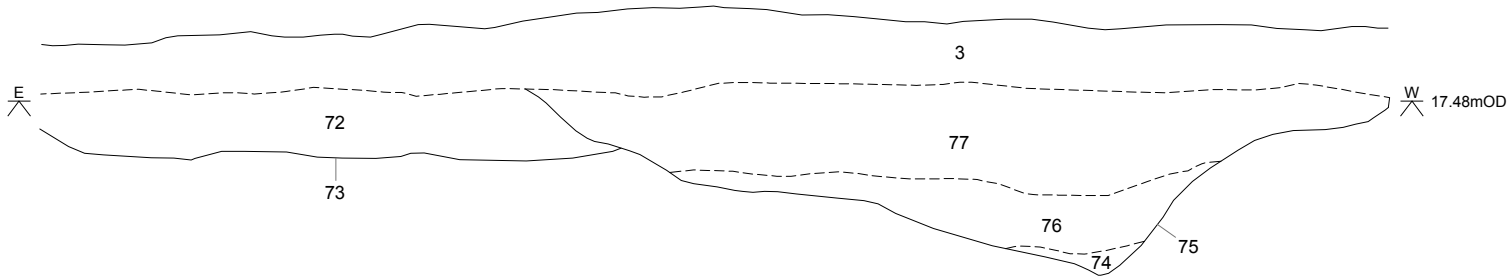
plan scale 1:125 @ A3

Hornsea Leisure Park, Hornsea, East Riding of Yorkshire: selected plans and sections

Figure 7

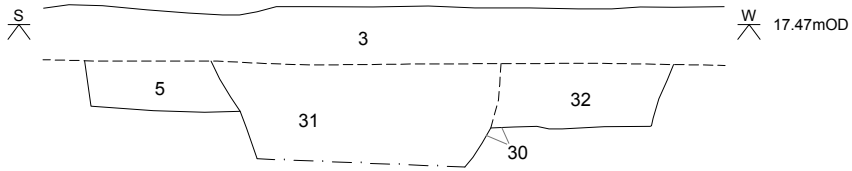
Trench 8

Section 13



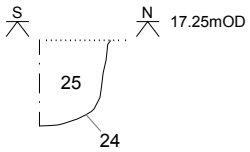
Trench 17

Section 9



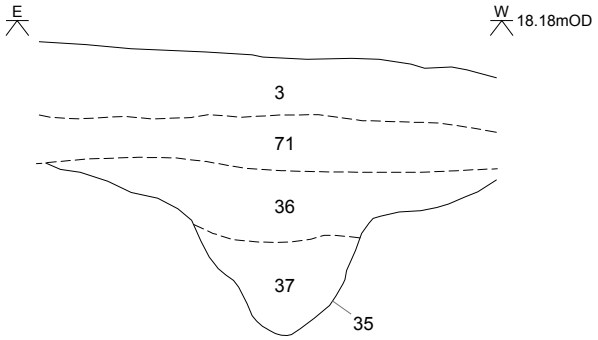
Trench 18

Section 7



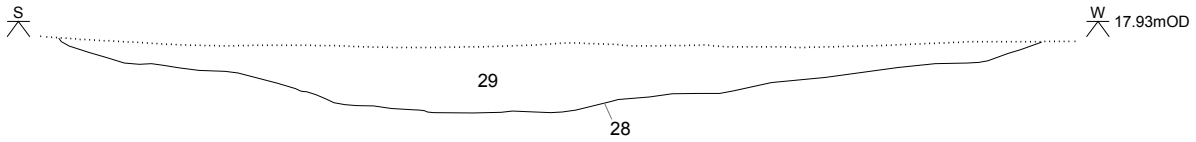
Trench 24

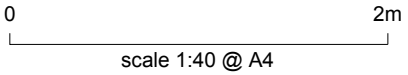
Section 11



Trench 21

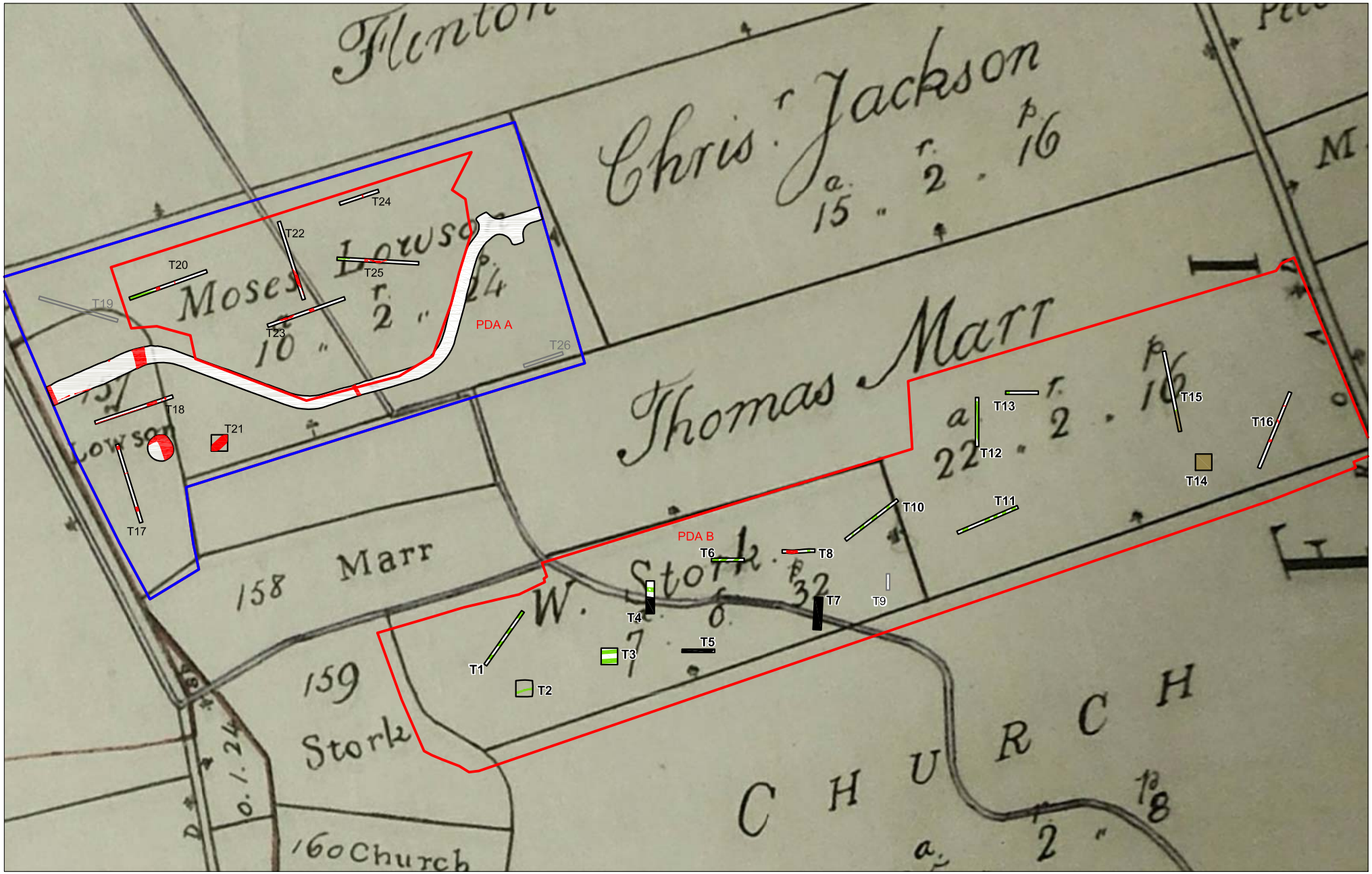
Section 9





Hornsea Leisure Park, Hornsea, East Riding of Yorkshire: sections

Figure 8



Hornsea Leisure Park, Hornsea, East Riding of Yorkshire: results of trial trenching overlain on enclosure map of 1809

Figure 9