Hunterston Converter and Substation, West Kilbride, North Ayrshire: Strip Map Sample

Data Structure Report

by Diane Gorman & Katie Sludden

issued 6th October 2014

on behalf of RSK Environment Ltd

RATHMELL ARCHAEOLOGY LTD

Quality Assurance

This report covers works which have been undertaken in keeping with the issued brief as modified by the agreed programme of works. The report has been prepared in keeping with the guidance of Rathmell Archaeology Limited on the preparation of reports. All works reported on within this document have been undertaken in keeping with the Institute for Archaeologists' Standards and Policy Statements and Code of Conduct.

Signed ..... Date …6th October 2014….

In keeping with the procedure of Rathmell Archaeology Limited this document and its findings have been reviewed and agreed by an appropriate colleague:

Checked …… Date …6th October 2014….

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Non-Technical Summary

1. This Data Structure Report presents the details of a programme of works known as a 'Strip, Map and Sample' exercise. The works were designed to evaluate the nature and extent of archaeological remains located within the development area of the Hunterston Converter Station and Substation, West Kilbride, North Ayrshire. Specifically, the works relate to the footprint of the Hunterston East Substation at the eastern side of the development. The works were carried out by Rathmell Archaeology Ltd on behalf of RSK Environment Ltd.

2. The works involved the archaeologically-led strip of the footprint of the Hunterston East Substation to remove the overburden (both topsoil and subsoil as needed) to expose archaeological features and material culture. By these means potential archaeology could be assessed, systematically investigated and recorded prior to release for development.

3. Potential archaeological remains, indicative of notable overall activity within the area, were identified during the course of the works, the details of which are discussed below. The Strip, Map and Sample exercise was part of a series of archaeological works, and the details of this Data Structure Report should be considered in conjunction with these, which are also discussed below. The results for the portion of the site subject to strip, map and sample known as Area B are presented in a separate Data Structure Report (Gorman *et al*.2014).

Introduction

4. This Data Structure Report has been prepared for RSK Environment Ltd on behalf of their clients in respect to the construction of the Hunterston Converter and Substation, West Kilbride, North Ayrshire. Specifically, this report describes the findings of the Strip, Map and Sample works for the footprint of the Hunterston East Substation development.

5. North Ayrshire Council required a programme of archaeological works to be undertaken as a requirement of the issued planning consent (N/11/00708/PPPM). The West of Scotland Archaeology Service (WoSAS), who advise North Ayrshire Council on archaeological matters, provided guidance on the structure of archaeological works required on site during construction works. RSK Environment Ltd have acted as the client's archaeological consultants, agreeing a proportionate response to meet the planning authority's concern.

6. Rathmell Archaeology Limited were appointed by RSK Environment Ltd on behalf of their clients to undertake the implementation of archaeological investigative works prior to the development of the site.

Historical and Archaeological Background

7. This site has been subject to an archaeological appraisal that informed the Environmental Report by AECOM (2011). We assume within this report the reader's familiarity with this preceding document which is the basis for understanding the known landuse history of the area. This preceding work identified eighteen sites within the study area around the site, representing archaeological activity from the Mesolithic through to the post-medieval period.

8. Archaeological sites within the proposed development boundary recorded in the Environmental Report include the formerly upstanding Goldenberry Farm (Site 18), former Whinstone quarries (Sites 19 & 20), a sub oval mound (Site 26) and a structure (Site 25) identified on historic mapping and a flint scatter (Site 10).

9. The site numbers refer to Figure 9.1 and Table 9-5 in AECOM 2011, with further details available in their Appendix E: Gazetteer.

Previous Archaeological Works

10. In July and August 2013 an intrusive archaeological evaluation was carried out across the site by Rathmell Archaeology Ltd. The evaluation consisted of 107 trenches which exposed an 8% sample of the initial phase of the development area. Full results of the

evaluation are presented in the Data Structure Report (Gordon 2013a). From the evaluation four feature groups were identified across the site, each forming the centre of an area of sensitivity (Areas A-D). Further works were recommended involving open area strips centred on the feature groups.

11. The open area excavation of Area A was carried out by Rathmell Archaeology Ltd in August 2013. An area measuring 520m^2 in size was excavated; full results of the open area strip are presented in the Data Structure Report (Gordon 2014). Following the open area strip of Area A, further works were undertaken to mitigate feature groups B, C and D, located within the footprint of the Hunterston East Substation. Works began first around B, which exposed an unusually high level of significant archaeological features. In response to this, the Archaeological Consultant (RSK) and WoSAS negotiated the Strip, Map and Sample exercise to test the surrounding landscape and give confidence to the treatment of the archaeological resource. The core objective of the exercise was to elucidate the extent of features within the landscape surrounding the identified groups (B and C), complementing the clearance of the core excavation areas of these features.

12. Due to the intensity of features exposed during the targeted strip at feature group B, the findings are detailed in a separate report (Gorman *et al*.2014). Feature group D is also discussed in a separate report, due to its location in the field to the north of the substation (Gorman & Sludden 2014). The targeted excavation which took place around feature group C is summarised in this Data Structure Report.

Project Works

13. The works took place between 14th January and 31st March 2014, and comprised the anticipated footprint of the Hunterston East Substation. The totality of the Strip, Map and Sample area was broken down into Areas One to Three, each of which - for the purposes of recording - were treated as separate sites (Figure 1a). These areas were further broken down into zones, for ease of consideration within this Data Structure Report (Figure 1b). The original area of feature group C was subsumed into the Area 2 works, and as such is not specifically referred to as group C for the remainder of this report. The works were carried out by two 3T tracked 360° mechanical excavators and a 13T tracked 360° mechanical excavator (all equipped with toothless ditching buckets). Limited employment of a D6 bulldozer was utilised to remove turf in areas located below power lines. An area measuring 11839m² was stripped in total.

14. The substation development site consisted of a small natural plateau within open grassed fields that generally sloped down to the north. The fields are surrounded by hedgerows and woodland, and crossed by hedges, fences and ditches. Two 400kV overhead transmission lines crossed the Strip, Map and Sample boundary. To the north, beyond a security fence lay the existing Hunsterston A and Hunterston B Nuclear Power Stations. The only known underground service in the area was a water pipe, which crossed the main area, orientated south-west to north-east. Prior to stripping, the water pipe was located by hand excavation and was found to lie at 0.3m to 0.6m depth.

15. The area subject to Strip, Map and Sample was identified by surveying in the proposed area of disturbance from the construction of the Hunterston East substation and access road. It comprised the extent of the small natural plateau within which significant archaeological deposits had been identified during the investigation of Areas B and C. All works were carried out in keeping with the Written Scheme of Investigation (RSK 2013) as well as in accordance with the West of Scotland Archaeology Service Standard Conditions, the Institute for Archaeologists' Standards and Policy Statements and Code of Conduct and Historic Scotland Policy Statement.

Methodology

16. The topsoil was removed to expose the intended archaeological or natural subsoil horizon. This was performed under the direction of suitably-qualified archaeologists, thus allowing the monitoring archaeologist an unobscured view of previously undisturbed horizons. Exposed archaeological features, sites, artefacts or structures were then mapped (to quantify the resource), with localised areas hand cleaned and defined

significant archaeological features excavated to an agreed sampling strategy.

17. The strip, map and sample areas were scanned for services using a Cable Avoidance Tool and then reduced by 75mm, then scanned again using the CAT. This process was repeated down to a maximum depth of 500mm, after which scanning was not required. Reduction continued after this until the upper surface of the sterile ground or a potentially significant archaeological layer was exposed.

18. The location of the Strip, Map and Sample area on the natural plateau, in conjunction with persistent heavy rain and the natural high level of the water table in the area, resulted in poor drainage. This led to heavy waterlogging across the entirety of the Strip, Map and Sample area, which obstructed efficient initial topsoil stripping and the associated movement of soil bunds. The heavily waterlogged nature of the site hindered archaeological identification, excavation and recording of features, due to a constant issue of flooding, which resulted in challenging and time-consuming management of the archaeological features.

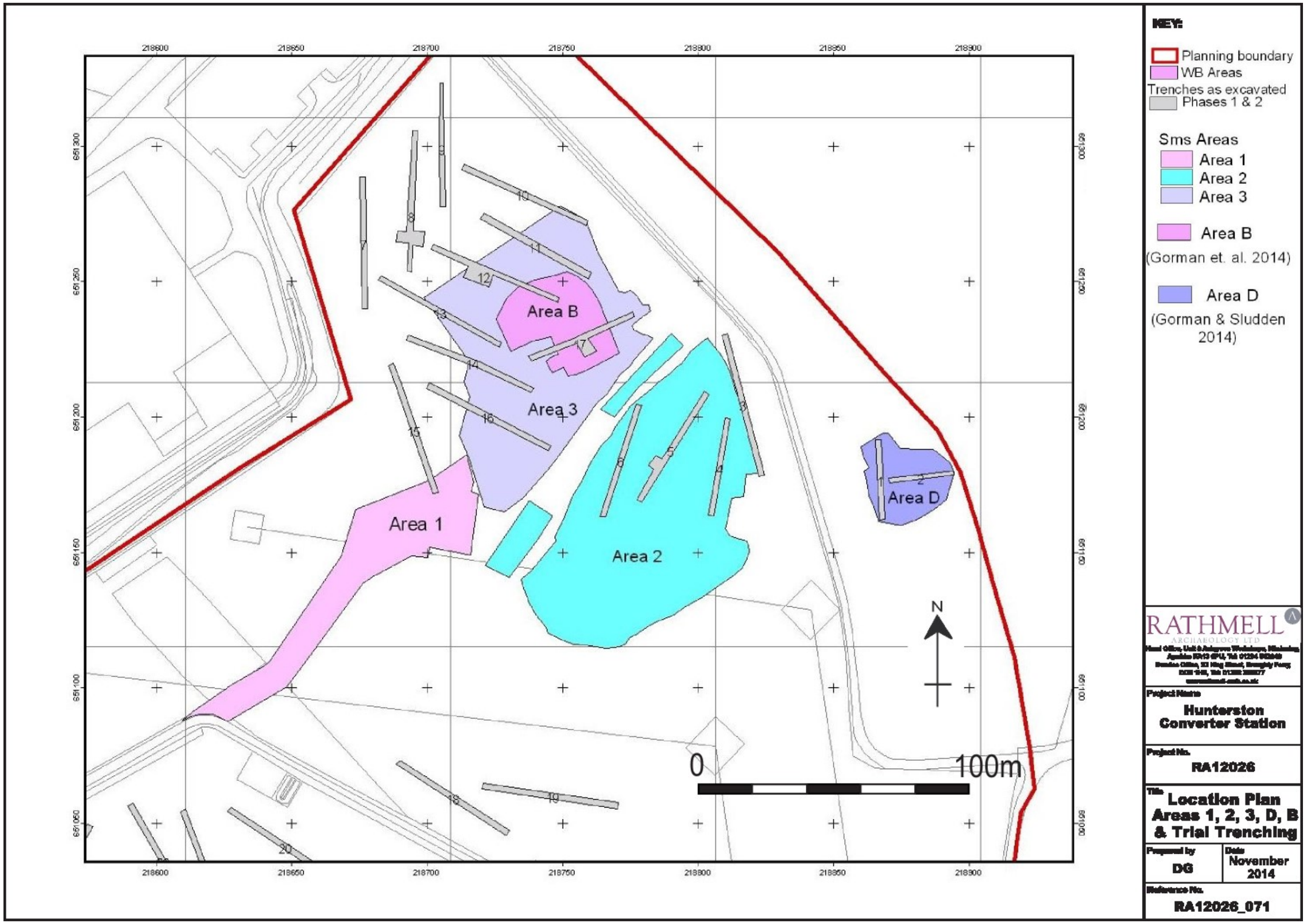


Figure 1a; Location Plan Areas 1, 2, 3, D, B & Trial Trenching

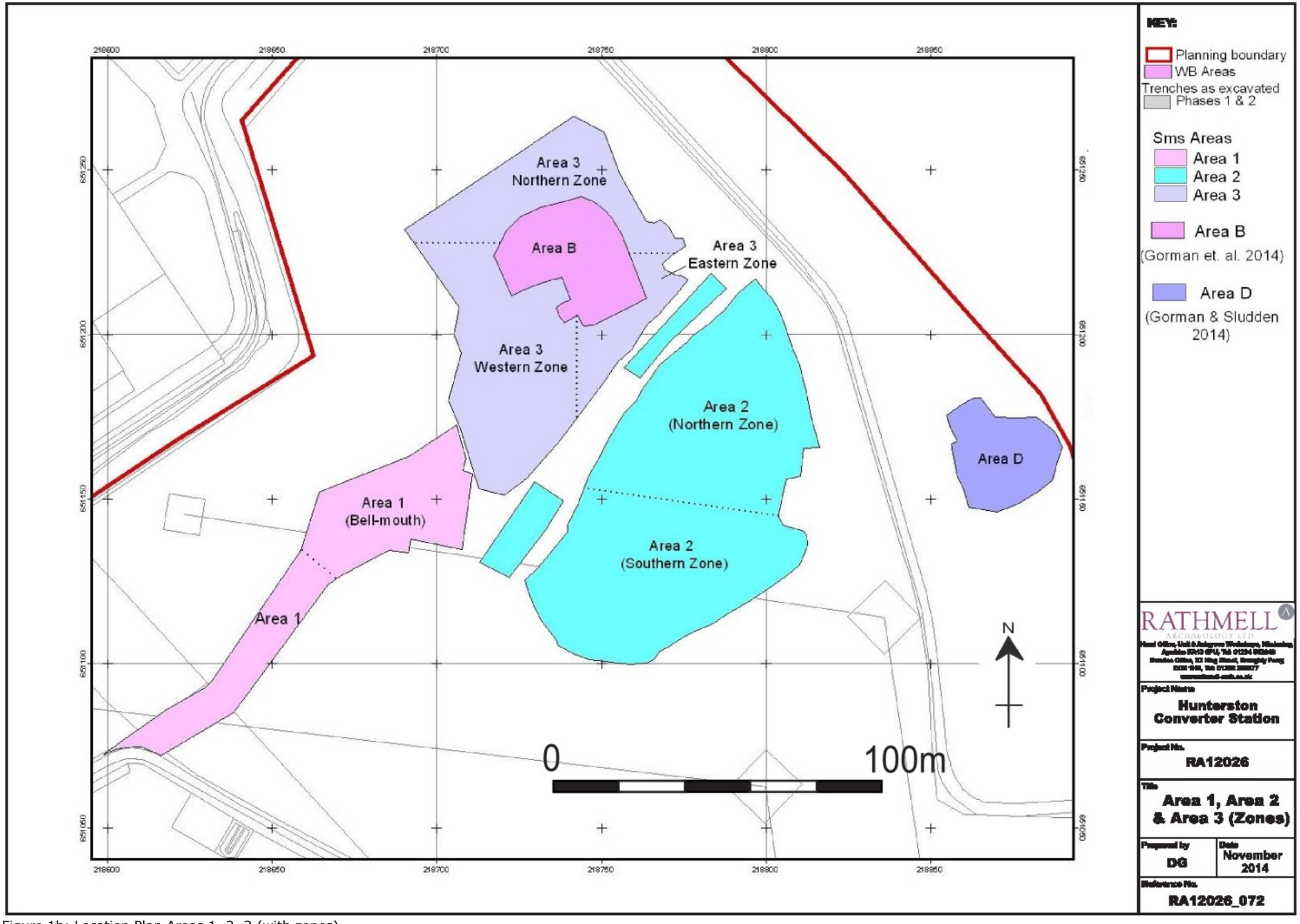


Figure 1b; Location Plan Areas 1, 2, 3 (with zones)

Mapping the exposed features

19. The resulting surface was inspected to delimit archaeological features or deposits. Identified features were marked with flags to indicate their location, and their immediate vicinity hand-cleaned to ensure that clusters of features were recognised and understood.

20. After the inspection the location and extent of the potential features revealed were surveyed using an EDM Leica TCR 307. Areas which did not have potential features for sampling were deemed sterile and used for plant movement and storing soil arisings. Once areas with potential features had been sampled and fully recorded they were also deemed sterile.

Conventions

21. The context is the basic archaeological unit of description used to describe the characteristics of structures, cuts or sediments. Structures (such as walls or building components and wholes) and cut features (described as such because they 'cut' into the underlying subsoil or sediment/deposit) are denoted by squared brackets (e.g. [040]). Sediments/deposits, are denoted by rounded brackets (e.g. (041)).

22. When discussing roughly circular features, our general approach considers features over 500mm in diameter to be pits, while those 500mm and under were investigated as post-holes. The difference in size is an indication of possible function; a post-hole is generally thought to be of smaller size as it need only be large enough to hold a post. It is also reasonable to assume a post-hole will have packing stones which were originally used to stabilise the post (the space between the packing stones being known as a 'post-pipe'). A pit refers to a void which may originally been used to extract sand & gravel, for defensive purposes or to dispose of general debris and detritus. Pits are generally considered to be larger than post-holes. Where clear evidence of function was present, such as packing stones or post-pipes, then such features will be described by inferred function regardless of size. Those features which look to have once housed posts, but with substantial dimensions larger than 500mm, will be referred to as post-hole pits. All depths described for discussed archaeological features assume a location in the base of the strip after removal of topsoil.

Findings – Area One

23. Works in this area took place from 14th January 2014 to 12th February 2014, and encompassed the south-western extent of the Strip, Map and Sample area. Area 1 branched off from Goldenberry Road, then headed north-eastwards via a long corridor (Figure 2). This opened out into a bell-mouth area, which eventually led to Area Three. The first 35m² area leading immediately from Goldenberry Road was not stripped by Rathmell Archaeology Ltd, but was mitigated via archaeological monitoring when stripped by a third party contractor, the details of which are outlined below.

24. The remainder of Area One was topsoil-stripped by Rathmell Archaeology Ltd and encompassed an area of 1840m². Two 400kV overhead transmission lines ran west to east across it, which necessitated the use of two 3T mechanical excavators. The entire area was covered by topsoil (10001) which varied in thickness from 350mm to 700mm deep dependent on location (thickness was greater at the south-west side of Area One where the ground rises.) Topsoil (10001) consisted of mid-grey/brown silty sand.

25. The character of the subsoil varied and was characterised by contexts (10003), (10009), and (10014). Stripping at the south-west end of the corridor in Area 1 exposed subsoil (10003) for approximately 100m² (8.5m south-west to north-east), and covering the width of the corridor (11m to 13.5m wide, widening at the north-east end). This deposit was soft, pink (mottled light grey/light yellow/light orange in places) silty sand with occasional manganese inclusions. To the north-east of this, the subsoil changed to (10009) which continued for 260m² (20m south-west to north-east and covering the width of the corridor). Subsoil (10009) was loose, pink (tinged grey) silty sand, with frequent small stone and manganese inclusions.

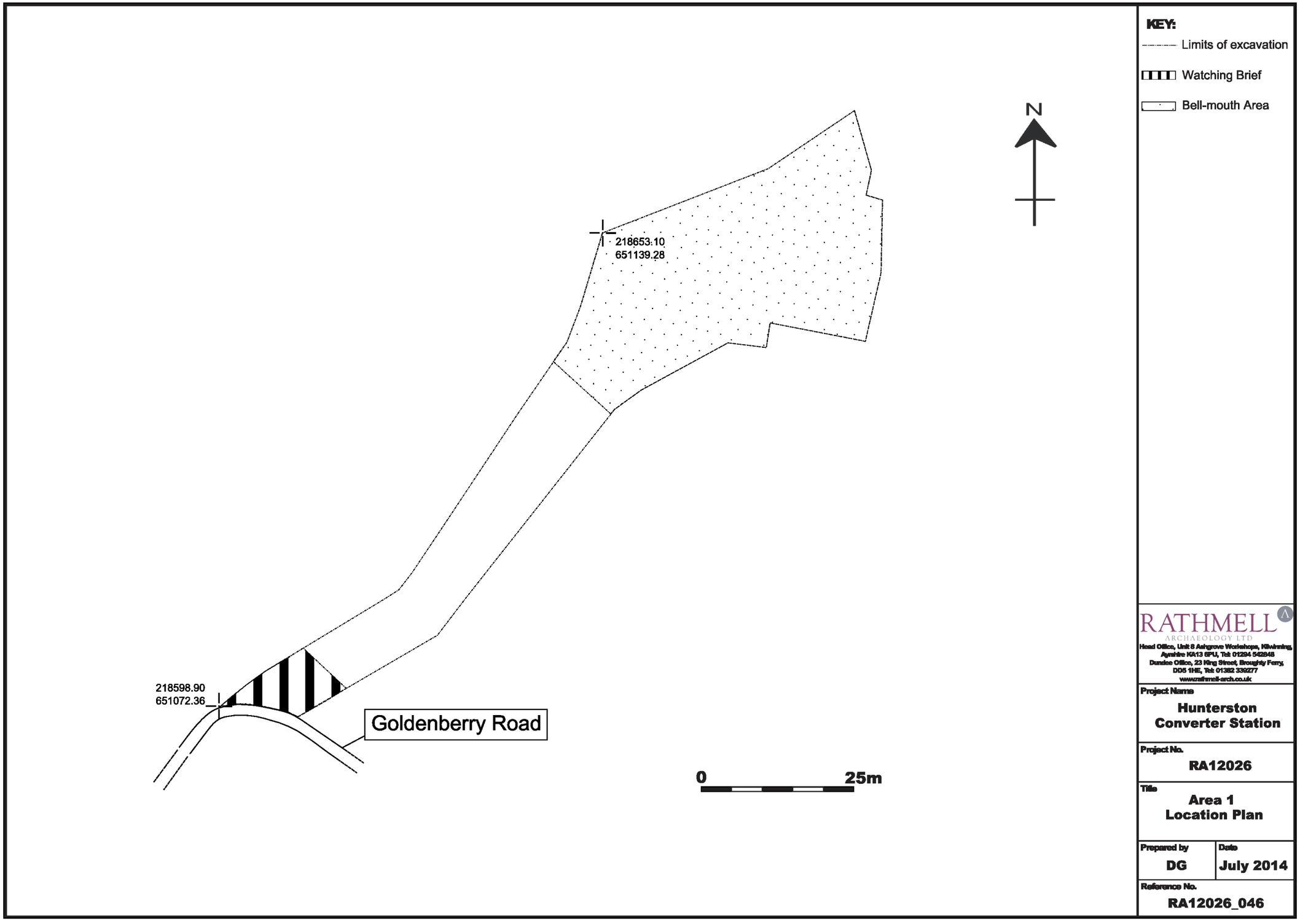


Figure 2; Area 1, Location Plan

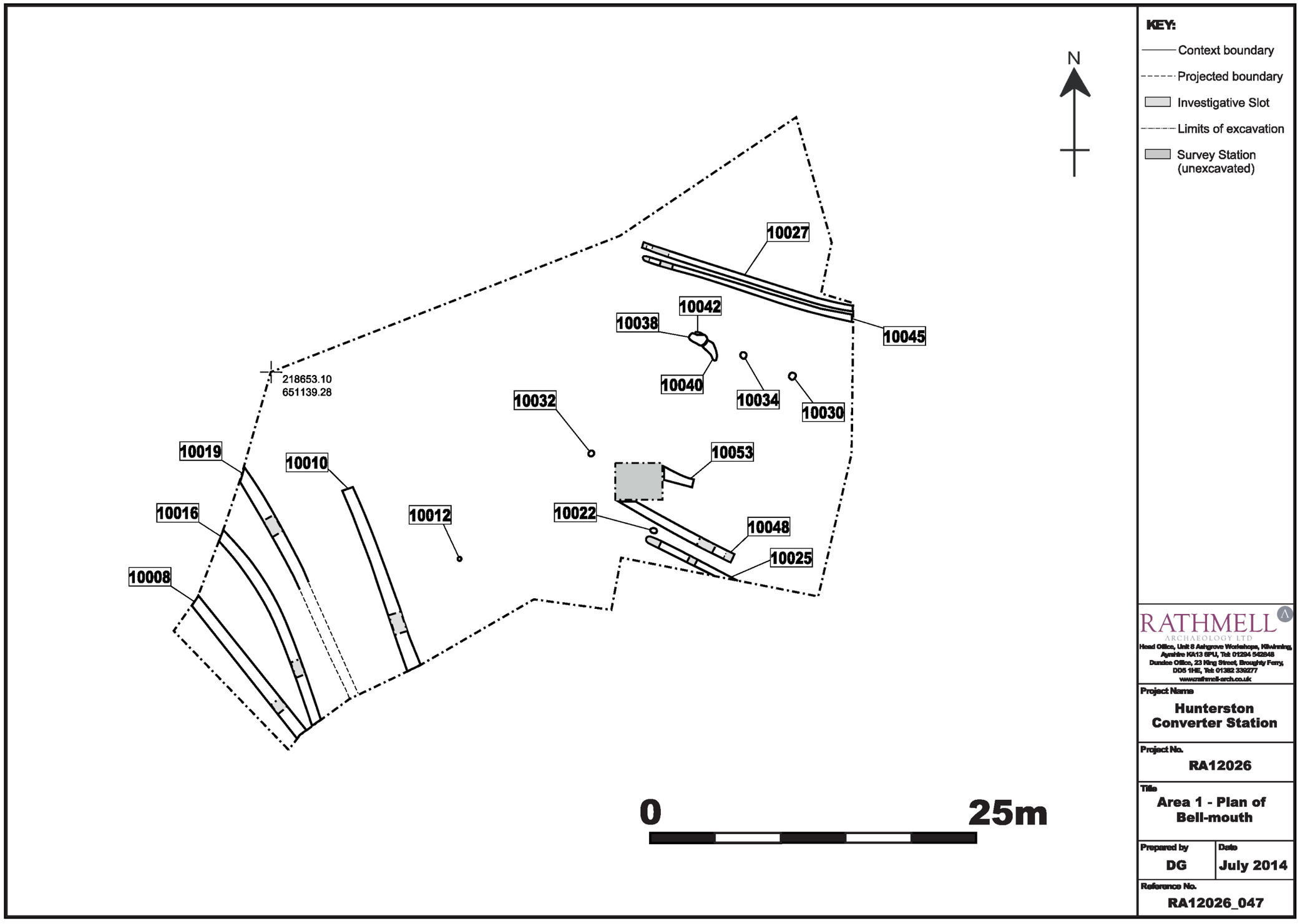


Figure 3; Area 1 Plan of bell-mouth, Area 1

26. As the corridor opened out into the bell-mouth, the character of the subsoil changed to deposit (10014), which was a loose, mid-red/brown (with a grey tinge) silt with frequent small stone inclusions. This covered an area of approximately 25m south-west to north-east by 27m north-west to south-east (675m²). After this, the remainder of the bell-mouth to the north-east was characterised by the reappearance of subsoil (10009), covering an area of approximately 1116m².

27. The Strip Map and Sample exercise in Area One revealed a number of potential features which were investigated, with the majority of features located at the entrance to and within the bell-mouth (Figure 3). A significant proportion of these features were identified as linear on plan and can be distinguished by orientation.

28. Feature [10004] was discovered and investigated at the south-western limit of Area One. The feature was square on plan and measured 1.2m by 0.23m over its visible extent, the south-east side obscured by limits of excavation. It was filled by deposit (10050), which was comprised a silty sand, largely white, but mottled black, orange and grey in places.

29. A trio of linear features, [10010], [10016] and [10019] were exposed at the bell-mouth entrance, running parallel to one another, orientated north-west to south-east, and cutting into subsoil (10014). Upon investigation these proved shallow in depth, ranging from 0.1m to 0.18m deep, with widths varying from 0.45m to 1m.

30. The north-easternmost of these features, [10010] was revealed for a length of 15m, the south-east end running beyond the limits of excavation. Features [10016] and [10019] to the south-west, measured 16m and 18m long respectively. Both ends of [10016] and [10019] were obscured by limits of excavation, so their full extent is unknown. Each feature was assigned a separate fill number, (10011), (10015) and (10020) respectively. Deposit (10011) was loose, light brown sandy silt with no visible inclusions. Deposits (10015) and (10020) were light brown sandy silt with frequent small stone inclusions.

31. A second group of linear features was exposed at the east side of the bell-mouth, comprising [10025], [10027], [10045], [10048] and [10053]. These were orientated WNW to ESE, running parallel to each other, and cut into subsoil (10009). Again, investigation showed these features to be shallow, ranging in depth from 0.02m to 0.08m, with the width varying from 0.23m to 0.53m.

32. Feature [10025] measured 5.5m long, [10027] and [10045] were 12m long and [10048] was 9m long. Feature [10053] appeared to be heavily truncated and was 0.6m long. The south-east ends of features [10025], [10027] and [10045] were obscured by the limits of excavation, so their full extent is unknown. Each feature was assigned a separate fill number, (10026), (10028), (10044), (10049) and (10052) respectively. Deposit (10026) was loose, light brown/yellow sandy silt with frequent small stone inclusions. Deposit (10028) was loose, light brown silty sand with frequent small stone inclusions. Deposits (10044) and (10052) were was friable light brown sandy silt with frequent small stone inclusions. Deposit (10049) was loose, light brown coarse sand with frequent small stone inclusions.

33. A rubble-lined drain [10008] was exposed at the entrance to the bell-mouth, running parallel with features [10010], [10016] and [10019]. Feature [10008] was 13.2m long by 0.77m wide. Investigation showed the drain was cut into subsoil (10009), and lined with (10006). Deposit (10006) was a drystone rubble deposit, consisting of rounded and angular unworked stones, with no visible evidence of mortar. The drain was sealed beneath context (10007), which comprised unworked medium to large red sandstone pieces to a depth of two courses, again with no evidence of mortar.

34. A number of possible features which were circular or oval on plan were also investigated. Of these, four measured 500mm or less in diameter, and are therefore classed as post-holes. The first of these was feature [10012], which measured 0.5m by 0.48m by 0.08m depth, and was located roughly in the central area of the bell-mouth. The fill of this feature was (10013), which was loose, light orange/brown sand with rare stone inclusions. Feature [10022] was located at the south-east side of the bell-mouth and measured 0.48m by 0.4m by 0.16m depth. The fill was (10023); firm, dark grey silty

sand, with frequent small stone inclusions. Feature [10032] was located in the central area of the bell-mouth, measuring 0.4m by 0.49m by 0.2m deep (Figure 4). It was filled by deposit (10033) which was firm, mid to dark brown/black sandy silt, with frequent small stone inclusions. Feature [10034] was located at the north-east side of the bell-mouth, the dimensions of which were 0.48m by 0.5m by 0.13m deep (Figure 4). It was filled by deposit (10035) which was loose, mid grey/brown, and composed of sand in a small stone gravel matrix.

35. A cluster of intercutting features were found at the north-east side of the bell-mouth, the size of which classifies them as pits rather than post-holes. These were [10038], [10040] and [10042]. Feature [10038] was oval on plan measuring 1m by 1.25m by 0.4m deep, and was filled by deposit (10039); firm, black, sandy silt in a small stone gravel matrix. This feature truncated [10040] on the south-east side, and feature [10042] to the north. Feature [10040] was sub-oval on plan, and measured 1.6m by 0.85m by 0.3m depth. This was filled by deposit (10041), which was firm, dark grey silty sand in a gravel matrix. One flint core was recovered from the top of this deposit, which had potentially been worked.

36. Feature [10042] was highly truncated by [10038], so its original size and shape were uncertain; on plan, only 0.5m length by 0.1m width remained. The feature measured 0.35m deep and was filled by deposit (10043); this was a firm, mid to light brown silty sand with occasional small stone inclusions.

37. Feature [10030] was also a pit and was found in the north-east area of the bell-mouth. This feature measured 0.55m by 0.52m by 0.25m deep and was filled by deposit (10031), which was a black sandy silt with frequent small stone inclusions.

Watching Brief

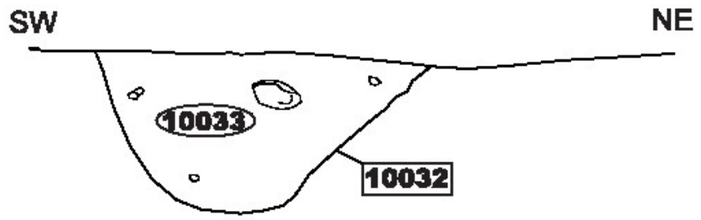
38. The initial 35m² area branching off from Goldenberry Road was excavated by a third party contractor (Hewlett) and monitored by Rathmell Archaeology Ltd (Figure 2). The area was excavated using a 360° mechanical excavator equipped with a 2m toothless ditching bucket. The depth of excavation varied from 0.4m to 0.6m.

39. The monitored area was reduced through less than 0.05m to 0.4m thickness of long grass and turf. Immediately below the turf was deposit (10054), which covered the majority of the stripped area. This was a loose, black silty clay, containing a variety of modern debris including red brick and glass. This was reduced (by the third party contractor) to a depth of 0.35m to 0.55m, dependent on location, but was not fully excavated due to the limits of excavation. An area of bedrock [10061] measuring 1m by 1m was exposed at the south-west corner of the stripped area, under 0.4m of turf. A cast iron pipe [10060] was exposed running north-west to south-east at the south-west side of the stripped area. This had been cut into the bedrock [10061]. This feature measured 0.5m in width and was visible for a distance of 4m, the north-west and south-east ends obscured by the limits of excavation.

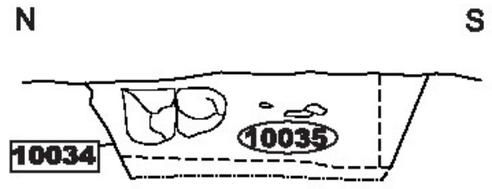
40. Two drystone walls [10055] and [10056] were cut into deposit (10054). Feature [10055] was located at the north-east side of the monitored excavation, and was filled by deposit (10057). This was a firm, mid-brown silty clay with frequent inclusions of fragmentary red bricks. Feature [10056] was located in the central area, filled by deposit (10058), a firm, mid brown silty clay with frequent small to medium stones and red brick fragments. Both features measured 0.5m wide and extended for a distance of 5m from north-west to south-east across the extent of the stripped area. Features [10055] and [10056] were monitored to a depth of 0.1m; limits of excavation prevented monitoring to full depth.

41. Natural subsoil (10059) was exposed at the north-eastern limit of the monitored area, covering 6m². Subsoil (10059) was loose, pink/orange/light brown silty clay, with no visible inclusions, and was found immediately below deposit (10054).

Southeast facing section of Post-hole [10032]



West facing section of Post-hole [10034]



KEY:
- Context boundary
- Projected boundary
- Limits of excavation
- Stones

RATHMELL ARCHAEOLOGY LTD

Project Name: Hunterston Converter Station

Project No.: RA12026

Title: Area 1 - Sections

Prepared by: CA

Date: July 2014

Reference No.: RA12026_014

Figure 4: Features [10032] & [10034] (Section Drawings, Area 1)

Figure 5a: General view of Area 1

Figure 5b: General view of Area 1

Area One: Finds Summary

42. The assemblage was dominated by modern ceramics of 19th or 20th century date, which included a base from a stoneware jar <10003>, four sherds of white glazed white earthenware from a bowl or plate <10054>, one sherd from a large jar or dish in a cream fabric with a cream-coloured glaze, as well as two heavy ceramic interlocking tiles which were originally laid as a protective cover for below-ground electricity cabling. There were also a number of finds of glass bottles and jars (e.g. <10006, <10007> and <10005>: these were all modern in date, with some clearly of late 20th century origin (e.g. a Bovril jar).

43. Three finds of flint were recovered. Two were unworked chunks of heavily-burnt flint which may have derived from liming the fields. The third was a small chunk of unburnt flint (<10001>) from deposit (10041) which appears to have been worked and is likely to have prehistoric origins. Three fragments of iron ore were also recovered as unstratified finds, though no evidence of actual iron-smelting was recovered in this area.

Findings - Area Two

44. Stripping of Area Two took place between the 10th January 2014 and 26th March 2014. This area encompassed the south and south-eastern part of the Strip, Map and Sample area (Figure 1).

45. Area 2 was the largest of the SMS areas, measuring a 5964m² area. The majority was stripped using one 13T tracked 360° mechanical excavator with a toothless 2m wide ditching bucket. However, the location of one 400kV overhead transmission line running west to east across the south corner of the area necessitated the use of two 3T mechanical excavators for topsoil removal in that particular area.

46. The entirety of Area Two was covered by topsoil (20001). This varied between 0.2m and 0.5m thickness and consisted of mid-brown silty sand. Removal of (20001) exposed subsoil (20002) below, a loose, mid orange/brown silty sand in a gravel matrix. For the purposes of this report only, Area 2 has been divided into the Northern Zone and the Southern Zone (Figures 1b, 6 and 7). This has been done for the sake of simplicity when describing areas of features. Stripping at the south-eastern limits of Area Two identified possible structural remains which will be discussed under the heading *Feature [20098]* below.

Northern Zone

47. Stripping of the northern extent of the Northern Zone revealed a series of linear features orientated north-west to south-east (Figure 6). These were assigned the following context numbers; [20065], [20125], [20126], [20127] and [20128]. The features varied in length from 4m to 11m by 0.65m by 0.75m in width. Investigation of feature [20065] exposed a depth of 0.15m. This feature was filled by deposit (20066), which was loose, mid brown silty sand with frequent small stone inclusions. No fill numbers were assigned to the unexcavated linear features.

48. A similar feature [20043] was found in the south-west corner of the Northern Zone; this measured 3.8m long by 0.75m wide. Investigation revealed this feature to be filled by deposit (20044), which was light brown sandy silt 0.09m thick.

49. A number of pits were also investigated and these were assigned the following context numbers; [20026], [20051], [20057], [20068], [20071] (Figure 8, 10), [20077] (Figure 8, 9), [20081] and [20089]. Excavation exposed features of variable size, the diameters ranging from 0.5m to 0.82m and the depths varying from 0.1m to 0.22m. The fills are listed as follows, respective of the above cut numbers; (20027), (20052), (20058), (20069), (20072), (20078), (20082) and (20094).

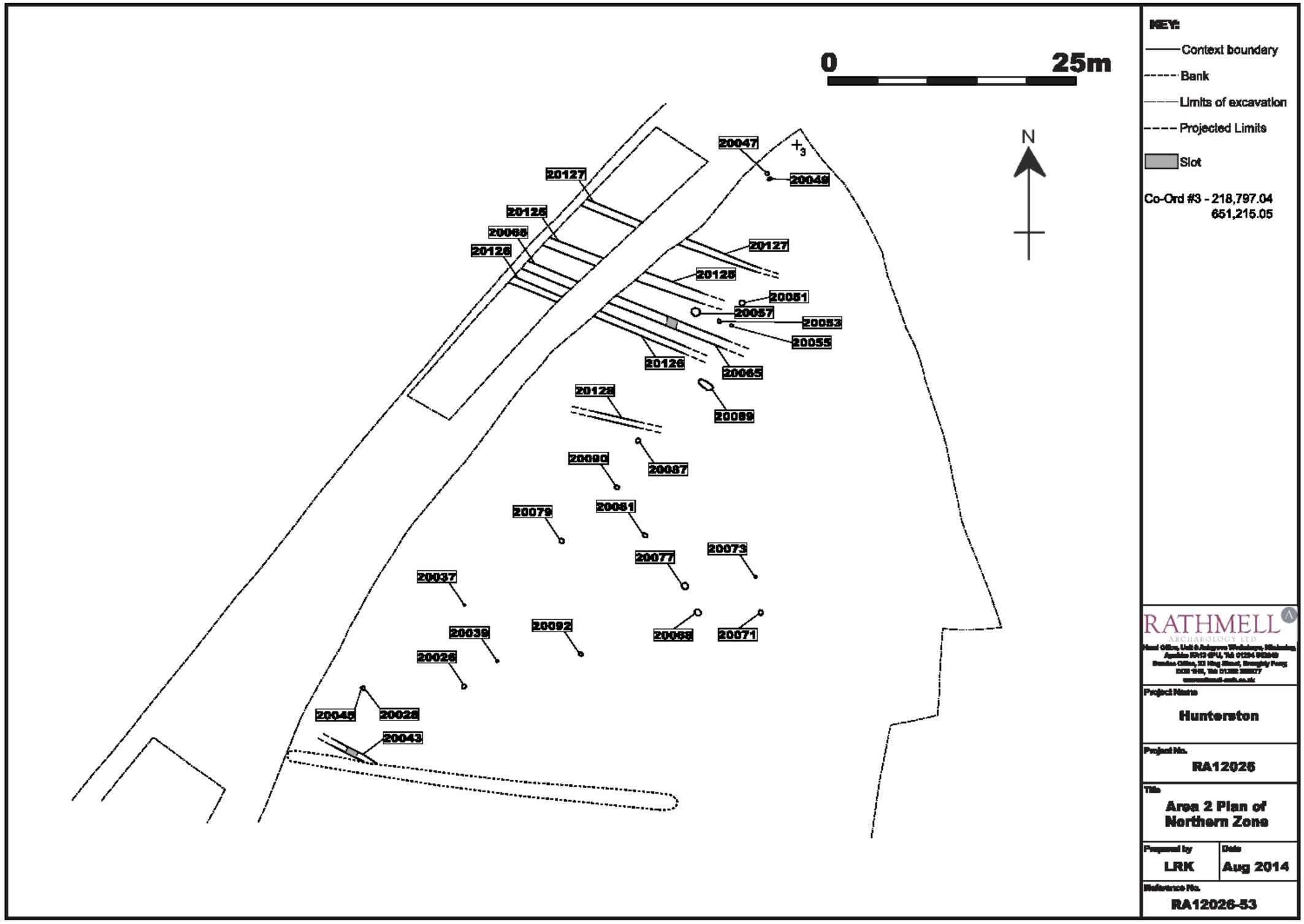


Figure 6; Plan of Northern Zone, Area 2

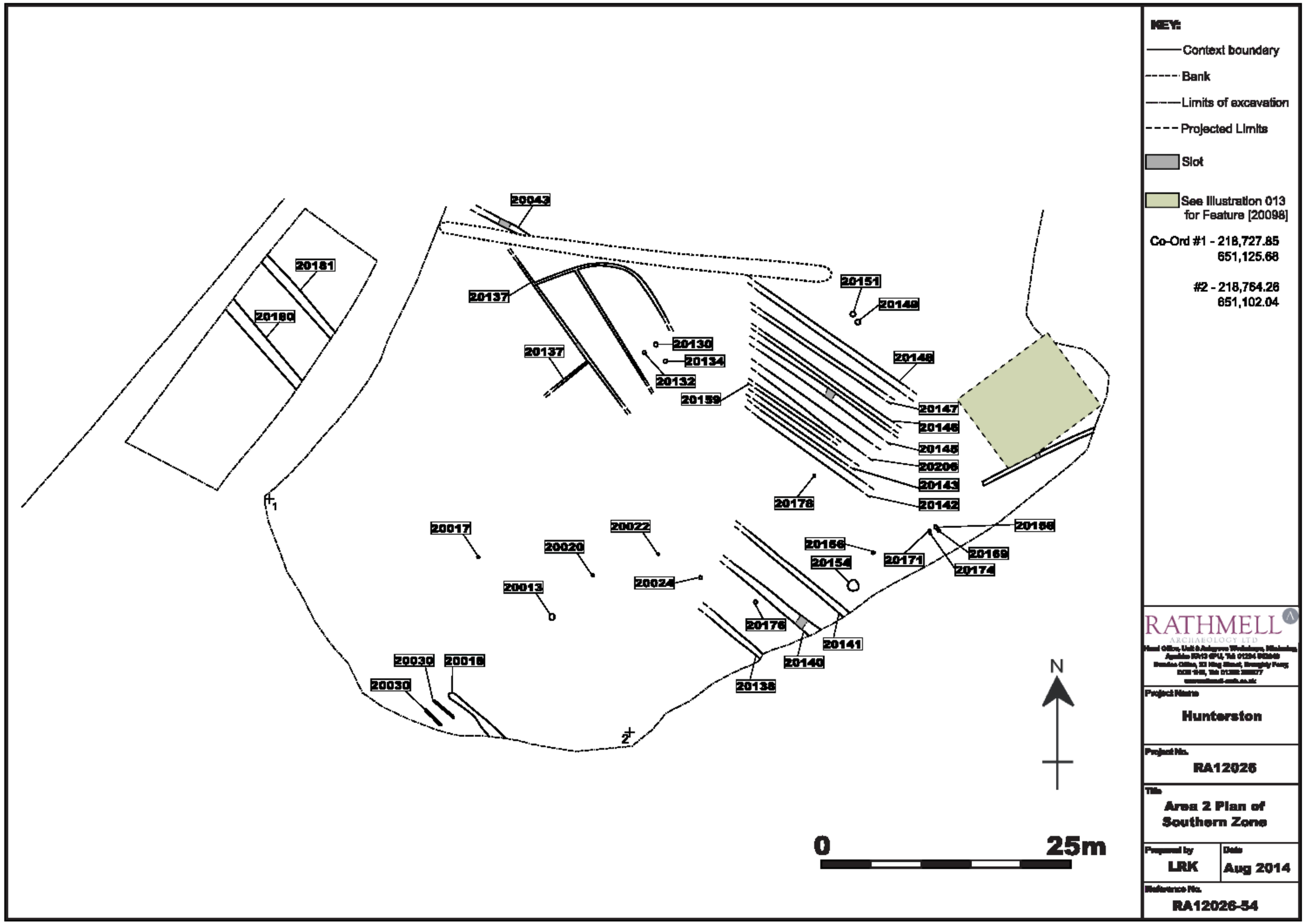


Figure 7; Plan of Southern Zone, Area 2

50. Deposit (20027) was a loose, light brown silty sand with occasional small stone inclusions. Deposit (20052) was a firm, light brown (tinged grey) sandy silt with frequent small stones, occasional medium stones and rare charcoal inclusions. Deposit (20058) was a firm, black (mottled dark grey) sandy silt with rare charcoal fragments and burnt bone flecks. Deposit (20069) was a firm, mid grey/mid brown sandy silt with frequent small stones and rare charcoal inclusions. Deposit (20072) was a friable, black (mottled dark grey) sandy silt with frequent small stones and rare large stone inclusions. Deposit (20082) was a firm, mid grey/mid brown sandy silt with frequent small stone inclusions. Deposit (20094) was a firm, mid grey clayey silt with occasional small stones and rare charcoal flecks.

51. Several datable artefacts were recovered from the pit fills; seven sherds of prehistoric pottery were recovered from pit [20057] while sherds of modern pottery were recovered from pits [20068] and [20089] (see Finds below for details).

52. An additional feature [20045] was encountered in the south-west corner of the Northern Zone of Area 2. Investigation revealed that this feature had been badly truncated by post-hole [20028], with only 0.07m width by 0.19m depth of [20045] remaining.

53. Post-hole [20028] was oval on plan, measuring 0.41m by 0.47m by 0.19m depth. This was filled by deposit (20029), which was firm, light grey/light brown sandy silt, containing frequent small stone inclusions.

54. The remainder of the features investigated in the Northern Zone were potential post-holes and were assigned the following context numbers; [20037], [20039], [20047], [20049], [20053], [20055], [20073] (Figure 10), [20079], [20087], [20090] and [20092]. Investigation of the post-holes showed diameters which varied between 0.2m and 0.49m, with depths ranging between 0.09m and 0.35m. The fills were assigned the following numbers, which are listed in an order which corresponds to the cut numbers listed above: (20038), (20040), (20048), (20050), (20054), (20056), (20074), (20080), (20088), (20091) and (20093).

55. Deposit (20038) consisted of a firm, mid grey/mid brown sandy silt, containing frequent small stones, occasional medium stones and rare charcoal flecks. Deposit (20040) consisted of friable, mid brown silty sand, containing occasional small to medium stone inclusions. Deposits (20048) and (20050) both consisted of a loose, black silty sand with occasional small stone inclusions and frequent charcoal flecks. Deposit (20054) consisted of firm, light grey/light brown silty sand, containing occasional charcoal flecks and rare burnt bone fragments. Deposit (20056) consisted of firm, light grey/light brown sandy silt, containing rare charcoal flecks. Deposit (20074) consisted of firm, dark brown (mottled black) sandy silt with frequent small stone inclusions. Deposit (20080) consisted of friable, mid grey sandy silt, containing rare small and large stone inclusions. Deposit (20088) was loose, mid grey/mid brown sandy silt, containing frequent small stones, occasional medium stones and rare charcoal flecks. Deposit (20091) was a friable, dark brown/dark grey sandy silt, with no visible inclusions. Deposit (20093) was friable, mid brown (tinged red and grey) sandy silt, with frequent small stone inclusions.

56. A number of the potential post-holes investigated on site appeared more likely to be the product of natural bioturbation, rather than having resulted from anthropic activity. The excavation of these features showed that they consistently measured less than 0.1m in depth, which in comparison to the other features in the vicinity, seemed shallow. However, the nature and volume of the features uncovered during the Strip, Map and Sample exercise means that these features cannot be completely discounted, and so they are listed as follows; [20031], [20033], [20035], [20041], [20061], [20063], [20075], [20083] and [20096].

Southern Zone

57. Stripping of the Southern Zone exposed a second series of linear features similar to those found in the Northern Zone (Figure 7) and which shared the same north-west to south-east orientation. This series of features was assigned the following numbers; [20018], [20030], [20138], [20140], [20141], [20142], [20143], [20145], [20146], [20147],

[20148], [20159] and [20206]. The features varied in length from 6m to 16.5m, and in width from 0.4m to 1.2m. Investigation of features [20018], [20140], [20145] established that the depth varied between 0.08m to 0.13m. These features were filled, respectively, by deposits (20019), (20139) and (20144). Deposit (20019) was a mid-brown silty clay, and deposits (20139) and (20144) were light to mid-brown silty sand. Two similar linear features were found at the western limit of the Southern Zone, [20180] and [20181]. These features measured 6m long by a variable width of between 0.7m and 0.8m.

58. Stripping of the Southern Zone also exposed a network of interconnecting linear features [20137], located in a north-west area of the Zone (Figure 7). Investigation revealed these to be a system of rubble field drains, covering an area of 220m². The individual features varied in length from 4.8m to 16m with a consistent depth of 0.1m. Little evidence for the presence of agricultural drainage was found elsewhere on site.

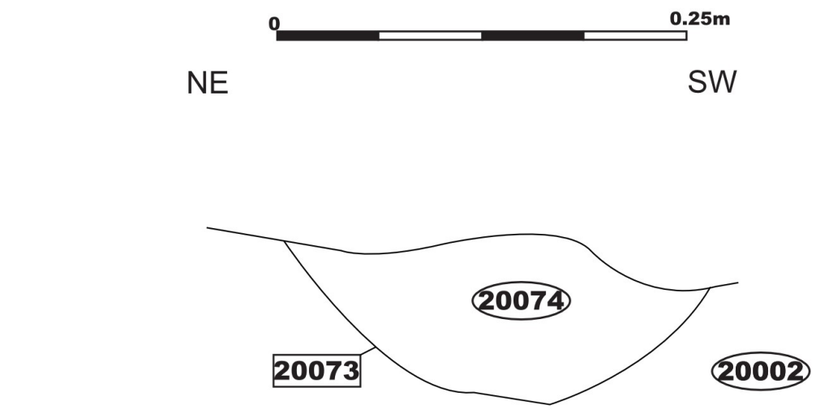
59. The investigation of three potential pits [20013], [20151] and [20154] showed they were of variable size, ranging in diameter from 0.5m to 1.4m, with depths of between 0.15m to 0.16m. The fills were as follows, numbered respectively; (20014), (20152) and (20153). Deposit (20014) was a loose, dark grey/dark brown sandy silt with frequent small stone inclusions. Deposit (20152) was a loose, black silty sand containing occasional small burnt stones. Deposit (20153) was a firm, mid-grey silty sand, containing rare charcoal flecks and occasional small stones.

60. The remaining features were post-holes, numbered as follows; [20017], [20020], [20022], [20024], [20132], [20134], [20156], [20158], [20169] and [20176]. Excavation revealed these features to be variable in size, with diameters ranging from 0.17m to 0.4m and depths from 0.1m to 0.21m. The fills were as follows, listed in an order consistent with the cut numbers given above; (20016), (20021), (20023), (20025), (20131), (20133), (20155), (20157), (20170) and (20177).

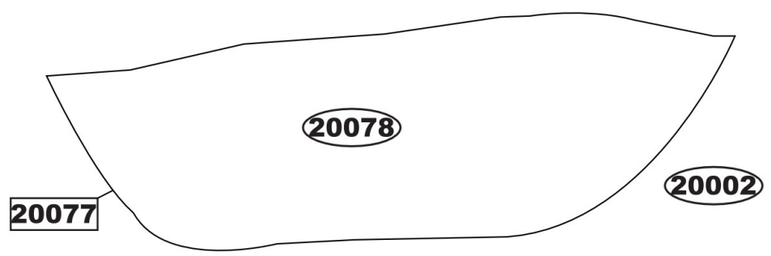
61. Deposit (20016) was a friable, mid-grey/mid-brown silty sand, containing occasional small stones and frequent rootlets. Deposit (20021) was loose, mid-grey/mid-brown silty clay with occasional small stone inclusions. Deposit (20023) was loose, mid-grey/mid-brown silty clay, with no visible inclusions. Deposit (20025) was loose, black (tinged dark grey) clayey silt, containing occasional rootlets and rare charcoal flecks. Deposits (20131) and (20133) were loose, light brown/light grey silty sand, with occasional small stone inclusions. Deposit (20155) was a firm, mid-grey silty sand, with frequent small stone inclusions and frequent charcoal flecks. Deposit (20157) was a firm, mid-grey/mid-brown silty sand with occasional small stone inclusions. Deposit (20170) was loose, light brown/light grey, with occasional flecks of charcoal and rare inclusions of degraded sandstone. Deposit (20177) was loose, dark brown/dark grey silty sand with occasional small stone inclusions.

62. As with the Northern Zone, a number of shallow features were investigated. These are presented here as potential features, rather than as likely bioturbation; this is due to the possibility that the shallow features in the Southern Zone were subject to heavy truncation by later activity (see Discussion for details). These were numbered as follows; [20130], [20149], [20171], [20174] and [20178]. The features varied in diameter from 0.11m to 0.45m, with the depth varying from 0.07m to 0.12m. The fills of the features were as follows, listed respectively; (20129), (20150), (20172), (20175) and (20179).

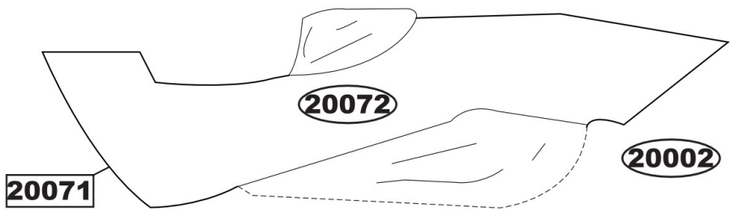
    Deposit (20129) was loose, light brown (tinged grey) silty sand with occasional small stone inclusions. Deposit (20150) was loose, black silty sand with occasional small stone inclusions. Deposit (20172) was loose, black, sandy silt containing frequent charcoal fragments. Deposit (20175) was loose, mid-grey/mid-brown silty sand containing occasional charcoal flecks and small stone inclusions. Deposit (20179) was loose, dark brown/dark grey silty sand with no visible inclusions.



Northeast facing section of posthole [20073]



Southwest facing section of pit [20077]



West facing section of pit [20071]

KEY:

- Context boundary
- Projected boundary
- Stones

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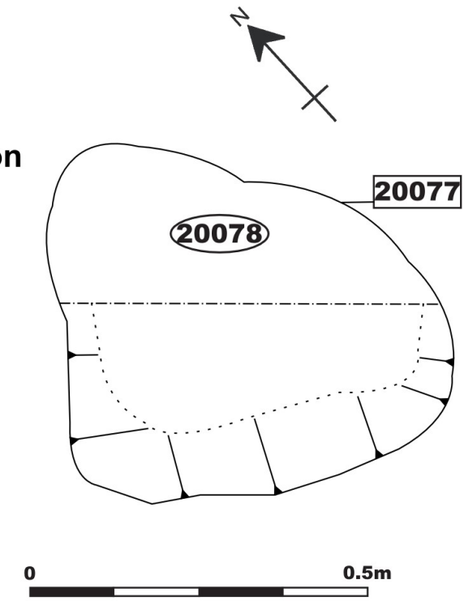
Project Name	Hunterston Converter Station
Project No.	RA12026
Title	Area 2 - Sections (1)
Prepared by	CA
Date	July 2014
Reference No.	RA12026_042

Figure 8: Features [20073], [20077] and [20071] (Section Drawings, Area 2)

Mid-excavation of pit [20077]



KEY:

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- Break of slope
- Limit of Excavation

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Project Name
Hunterston Converter Station

Project No.
RA12026

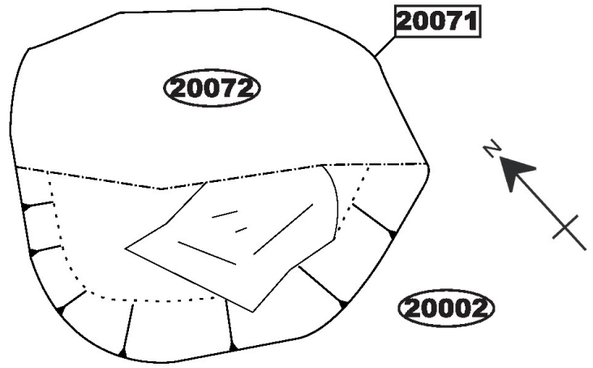
Title
Area 2 - Plans (1)

Prepared by	Date
CA	July 2014

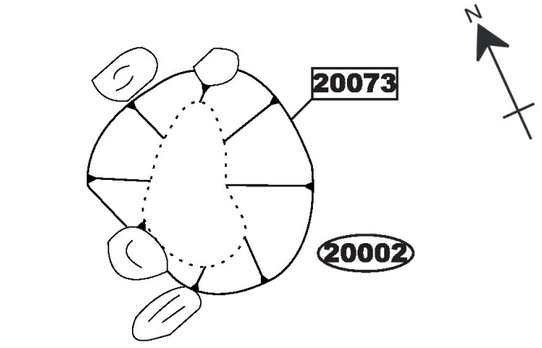
Reference No.
RA12026_044

Figure 9: Feature [20077] (Plan Drawing, Area 2)

Mid-excavation of pit [20071]



Post-excavation of posthole [20073]



0 0.5m

KEY:
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Project Name: Hunterston Converter Station

Project No.: RA12026

Title: Area 2 - Plans (2)

Prepared by: CA

Date: July 2014

Reference No.: RA12026_045

Figure 10: Features [20071] and [20073] (Plan Drawings, Area 2)

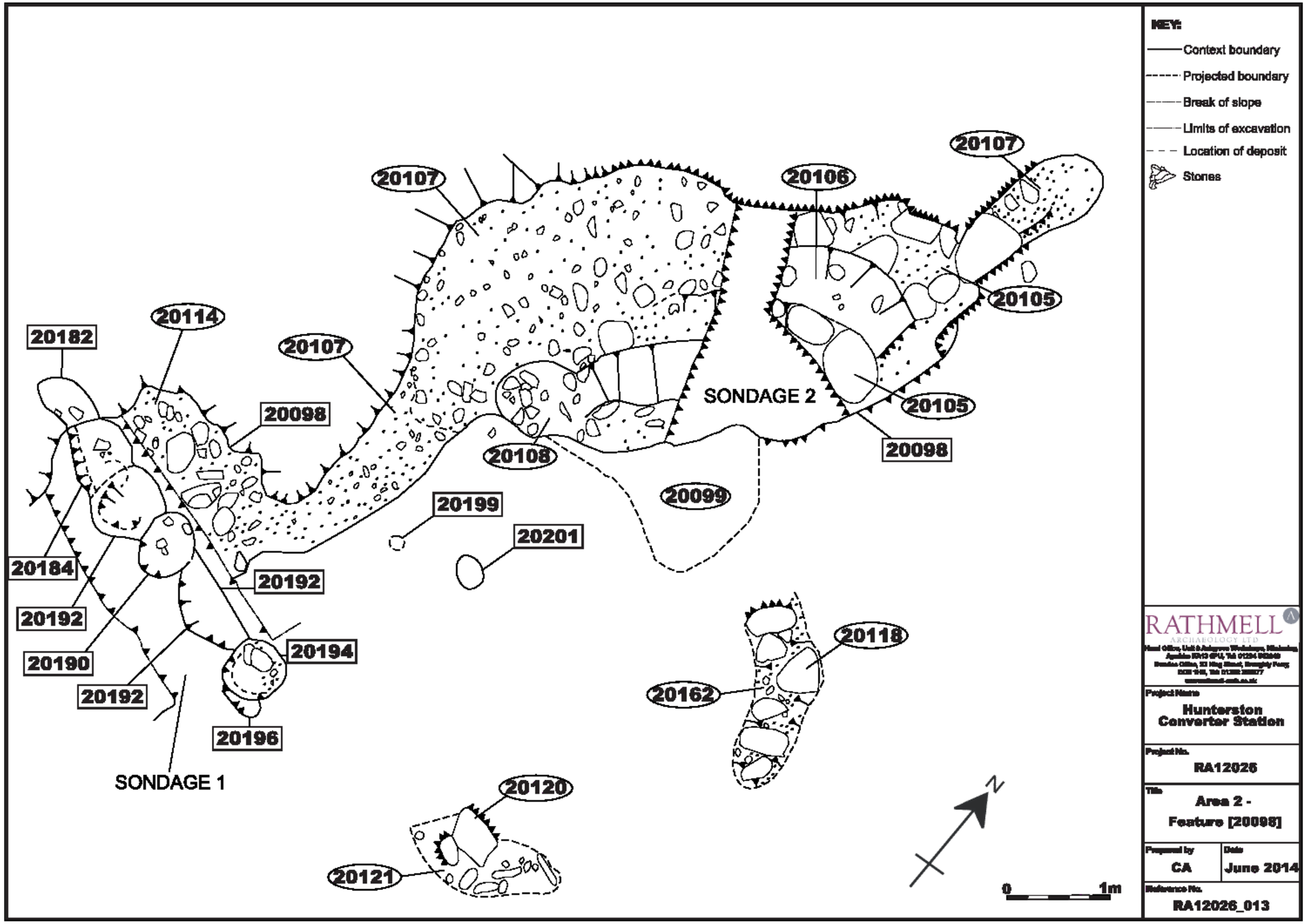


Figure 11: Post-excavation Plan, Feature [20098] (Area 2)

Southern Zone - Feature [20098]

63. Stripping in the Southern Zone also revealed upstanding remains (Figures 11, 12c and 12d). The feature number assigned for these remains in their entirety was [20098], with a number of associated context numbers assigned for descriptions of materials and surrounding features. Investigation of Feature [20098] and the surrounding features was hindered by heavy waterlogging in the area. Feature [20098] and its associated contexts covered an area of approximately 170m².

64. Feature [20098] and its associated contexts were overlain by deposit (20067). This was 0.1m thick and consisted of a compacted mid-grey silty sand, containing abundant blond sandstone fragments with small to medium stone inclusions. Removal of (20067) exposed deposit (20099) immediately below; the latter was a loose, black (mottled dark grey) silty sand with frequent blond sandstone fragments. Removal of (20099) exposed Feature [20098].

65. Generally, Feature [20098] consisted of stones, blond sandstone, and demolition deposits. A number of sandstone pieces (20105) had been positioned at the north end of the Feature [20098]. These varied in size from 0.56m to 0.76m long, by 0.45m to 0.48m wide and by 0.1m to 0.08m depth. One course of sandstone was apparent, forming the outer face of the northern end of Feature [20098]. Deposit (20105) (the sandstone pieces) sat within deposit (20109). This measured 0.08m thickness and consisted of loose, black (mottled dark grey) small to medium stones and blond sandstone fragments within a silty sand matrix. It is possible deposit (20109) was a crude bedding deposit, used to keep the base of the stonework in place, as no other bonding material was evident.

66. Deposit (20109), in turn, sat above deposit (20110) which was the lowest deposit directly associated with Feature [20098]. This ran under the majority of the feature. This deposit was loose, light grey/light brown silty sand, containing rare small stones and degraded blond sandstone fragments and measured 0.08m thickness. This deposit sat directly above natural subsoil (20002).

67. The deposit of sandstone (20105) continued around from the northern end of [20098] to form the north end of the eastern side of [20098] (Figure 12d). Halfway along the eastern side of [20098], (20105) stopped, and was replaced by large pieces of grey igneous rock (20108), ranging in size from 0.06m to 0.6m. It is possible that this once formed the eastern face of Feature [20098], but was now collapsed.

68. However, the majority of Feature [20098] was formed by deposit (20107). This appears to have been demolition material, comprising stones and blond sandstone fragments within a dark grey silty sand matrix. This deposit measured 0.1m thick, with stones varying in size from 0.06m to 0.6m in length. Deposit (20110) was found directly below (20107).

69. A deposit of material was also found located at the southern end of Feature [20098]; this looked to be connected to the main body of the remains. Circular on plan, this deposit was located at the south-western limit of deposit (20107). This circular area lay over the end of (20107), and consisted of deposits (20112), (20114), (20109) and (20110). The main body of this circular area consisted of deposit (20114), which was loose, mid grey/mid brown sandy clay, containing frequent small to medium stones and occasional blond sandstone fragments. This deposit measured 0.14m thickness.

70. Deposit (20112), which sat within this, consisted of red sandstone varying in size from 0.45m - 0.5m long by 0.36m - 0.44m wide by 0.05m - 0.08m thickness. This deposit appears to have represented a careful dump of material.

71. Investigation exposed deposit (20109) immediately below (20114), and below that was (20110).

72. Two possible post-holes [20199] and [20201] were exposed close to the eastern side of [20098], at the south side. The diameter of these features measured between 0.18m and 0.3m, and varied in depth from 0.05 to 0.08m; they were filled by deposits (20198) and

(20200) respectively. Deposit (20198) was soft, dark grey silty sand, containing frequent small stones and stone flecks; deposit (20200) was soft, mid-grey slightly silty sand, also containing occasional small stones and stone flecks.

73. Isolated deposits of the potential remains of further stonework were found at the eastern side of [20098]. A curvilinear arrangement of stonework formed by deposits (20115) and (20116) was exposed at the north-eastern side of [20098]. This curved from north-west to south-east and measured 1.7m long. Deposit (20115) consisted of unworked sandstone blocks and sat within deposit (20116), which measured 0.06m thick and consisted of loose, mid-grey sandy clay.

74. To the south of (20115) and (20116) another isolated area of stonework was exposed. This was curvilinear on plan, and was composed of deposits (20118) and (20162). This ran from north-west to south-east and measured 2.2m long. Deposit (20118), which comprised unworked red and blond sandstone and stone fragments, sat within deposit (20162) which measured 0.06m thick and consisted of small to medium stones in a loose, dark grey silty sand matrix.

75. To the south-west of this was a third isolated area of stonework, which formed a sub-linear shape on plan, and was composed of deposits (20120), (20121) and (20166). Deposit (20120) consisted of unworked red and blond sandstone fragments, varying in size from 0.25m to 0.32m long by 0.06m to 0.18m wide by 0.06m depth. This sat within deposit (20121), which was loose, mid grey silty sand measuring 0.02m thickness. Investigation revealed deposit (20166) below this; this was loose, mid grey silty sand containing occasional small stone inclusions and measured 0.01m thickness. These three deposits together are best described as a spread of material, measuring 0.94m north to south by 1.42m west to east.

76. Stripping in this area also exposed a rubble field drain [20102] to the south-east of [20098]. Orientated south-west to north-east, this truncated the spread of material formed by deposits (20120), (20121) and (20166). The rubble drain was 13m long (as visible) by 0.3m to 0.5m wide; it is likely the drain continued further to the north-east beyond the limits of excavation. Investigation of the drain revealed the depth to be 0.23m.

77. Two investigative sondages were excavated through Feature [20098]. The details of the excavated sondages are as follows;

Sondage One

78. The first sondage was located at the southern extent of [20098]. The sondage was orientated north-west to south-east and measured 0.94m wide by 1.1m long by 0.2m deep. Excavated through deposits (20112), (20114), (20109) and (20110), it exposed a number of archaeological features, which had been cut into natural subsoil (20002).

79. The sondage exposed a series of inter-cutting possible post-holes, which formed a linear shape on plan, aligned north-west to south-east. Post-hole [20182], located at the north-western end of the series, had been truncated by post-hole [20184], lying to the south-east.

80. The central area of the extent covered by this series of features was characterised by a possible construction cut [20192], which was sub-linear shaped on plan. The construction cut appeared to begin at the south-eastern limit of post-hole [20184], and had been truncated by [20184]. The construction cut was again truncated in the centre point by post-hole [20190]. The construction cut then continued south-east, until it was truncated again by post-hole [20194]. The construction cut measured 0.8m long by 0.26m wide by 0.05m depth. The south-eastern limit of the series of features was characterised by post-holes [20194] and [20196]. The construction cut was filled by deposit (20193), which was loose, light grey/light brown silty sand, containing occasional stone flecks and small stone inclusions.

81. Post-holes [20182], [20184], [20190], [20194] and [20190] (which made up the linear series) varied in diameter from 0.18m to 0.58m, and varied in depth from 0.08m to

0.19m. The post-holes were filled by the following deposits, listed respectively; (20183), (20185), (20191), (20197) and (20195).

82. Deposits (20183), (20191) and (20195) were loose, mid-grey/mid-brown silty sand, containing rare to occasional small to medium stone inclusions. Deposit (20185) was loose, dark grey (mottled light blue/grey) silty sand, with occasional stone flecks and small stone inclusions. Deposit (20197) was loose, mid-grey/mid-brown silty sand, with no visible inclusions.

Sondage Two

83. The second sondage was located at the northern extent of [20098]. The sondage was orientated north-west to south-east and measured 0.28m wide by 1m long by 0.1m depth. This was excavated through deposits (20105), (20107), (20108), (20109) and (20110), revealing no further archaeological features.

Area Two: Finds Summary

84. The finds assemblage from Area Two comprised a variety of artefacts which ranged in date from the later prehistoric to the modern periods. The dominant class of material was ceramic, with 12 sherds of modern ceramic of 19th /20th century date recovered, mainly from topsoil, in addition to 13 sherds of prehistoric ceramic. The latter was dominated by sherds characterised by a thick, grit-tempered fabric, with a flat base and a pronounced overhanging rim moulding: at least 10 of these may have come from a single vessel and have been broadly characterised as pre-Roman Iron Age in date.

85. Additional evidence of prehistoric activity came in the form of struck flint. Seven small pieces may represent the by-products of flint-knapping, with two larger chunks perhaps representing discarded cores left over from the manufacturing process. One of these larger pieces, <20008> is burnt, which may suggest it was a later intrusion brought to the site during the process of agricultural liming.

86. The majority of the finds were recovered within topsoil (001), with the majority of both the modern and the prehistoric pottery recovered from this context, as well as most of the lithics. A large chunk of slag <20024>, a possible hammerstone <20011> and two fragments of roofing slate <20018> were also recovered from the topsoil.

87. Some artefactual evidence could, however, be linked with the fills of specific features. Pit fill (20058) produced seven sherds of Iron Age ceramic, potentially from the same vessel, while pit fills (20069) and (20094) produced finds of modern ceramic, comprising one sherd of white glazed white earthenware and one sherd brown glazed red earthenware respectively.

88. The lithics could not, however, be linked with specific features. Most were recovered from topsoil (001), with one small fragment of debitage <20001> recovered from a feature (20007) later dismissed as an animal burrow, and another three similar waste fragments of struck flint <20002> associated with feature (20007), interpreted as a tree throw. No finds were associated with the stone-built feature [20098].

Figure 12a: General shot of Southern Zone, Area 2

Figure 12b: General shot of Northern Zone, Area 2

Figure 12c: General shot of Feature [20098], from WSW

Figure 12d: North end of Feature [20098] (from north-east)

Findings - Area Three

89. Works in this area took place between 18th February 2014 and 31st February 2014. Area 3 (Figure 1) was the most northern of the SMS areas comprising approximately 4000m². Area 3 was ascribed to all the features immediately encompassing Area B and for the purposes of this report have been separated into three zones: North, East and Western zones (Figure 1b).

Natural Sediment

90. The topsoil in Area Three comprised a mid-greyish brown silty sand (30001) and was homogenous across the area strip, varying from 0.35m to 0.6m in depth. This was consistent with the topsoil findings of Area One and Two.

Features

91. There appear to be three distinct zones of features within Area Three, consisting primarily of pits and post-holes (Figure 13, 14, 16). These zones were grouped as the North, West and Eastern sections of Area Three. The features which have been classed as post-holes due to their dimensions and appear to be holes formerly supporting timber uprights.

Northern Zone

92. The northern zone had a greater concentration of features in its eastern extent, with four post-holes to the west: [30033], [30039], [30041] and [30047] (Figure 13). The four western post-holes were isolated features, standing at least 6m apart from each other and not appearing to form any kind of structure. They varied from 0.17m - 0.38m wide by 0.18m - 0.4m long by 0.1m - 0.25m in depth. These were filled by the following deposits, listed respectively; (30034), (30040), (30042) and (30048). Deposit (30034) was a loose, dark brown sandy silt with frequent small stone inclusions. Deposit (30040) was firm, dark brown (mottled orange) silty sand with rare small stone inclusions. Deposit (30042) was firm, mixed mid-brown and grey sandy silt, with rare small stone inclusions. Deposit (30048) was firm, consisting of small stones within a grey silty sand matrix, with rare charcoal inclusions.

93. The eastern concentration of features within the Northern zone appeared to form a group running roughly on a north-west to south-east alignment over a distance of 20m. They numbered 14 post-holes comprising: [30054], [30058], [30060], [30061], [30062], [30072] (Figure 18), [30075], [30076], [30077], [30078], [30081] and [30084]. They varied in size between 0.2m - 0.36m diameter and 0.17m - 0.2m depth. These were filled by the following deposits, listed respectively; (30055), (30065), (30064), (30066), (30063), (30074), (30080), (30082) and (30085). The fills of [30075], [30077] and [30078] remained uncertain. Two further post-holes were found in this area, but had been cut through pre-existing pit [30057] (See Below).

94. Deposits (30055) and (30065) were friable, mid-brown silty sand containing rare to occasional small stones and rootlets. Deposits (30064), (30066), (30074), (30080), (30082) and (30085) consisted of friable mid-grey/mid-brown small to medium stones within a silt matrix. Deposit (30064) contained rare flecks of burnt bone. Deposit (30063) was friable, light to mid-brown (tinged orange) slightly silty sand, containing occasional small stones and rootlets.

95. Two pits were also found in the eastern section of the Northern Zone, numbered [30057] and [30079]. The first of these [30057] (Figure 15) measured 0.7m in length by 0.55m wide by 0.3m deep, and had been filled by deposit (30067). This deposit was friable, light brown slightly clayey sand containing frequent small stones and rootlets, measuring 0.25m thick. This pit had been cut by a further two possible post-holes, [30068] and [30070] (Figure 15). Post-hole [30068] measured 0.3m in diameter by 0.1m deep and was filled by deposit (30069), which consisted of friable, light to mid brown silty sand, containing rare small stones and occasional rootlets. Post-hole [30070] measured 0.28m diameter by 0.13m deep. This was filled by deposit (30071), which was a friable mid-brown (tinged orange) silty sand containing frequent small stones and rootlets.

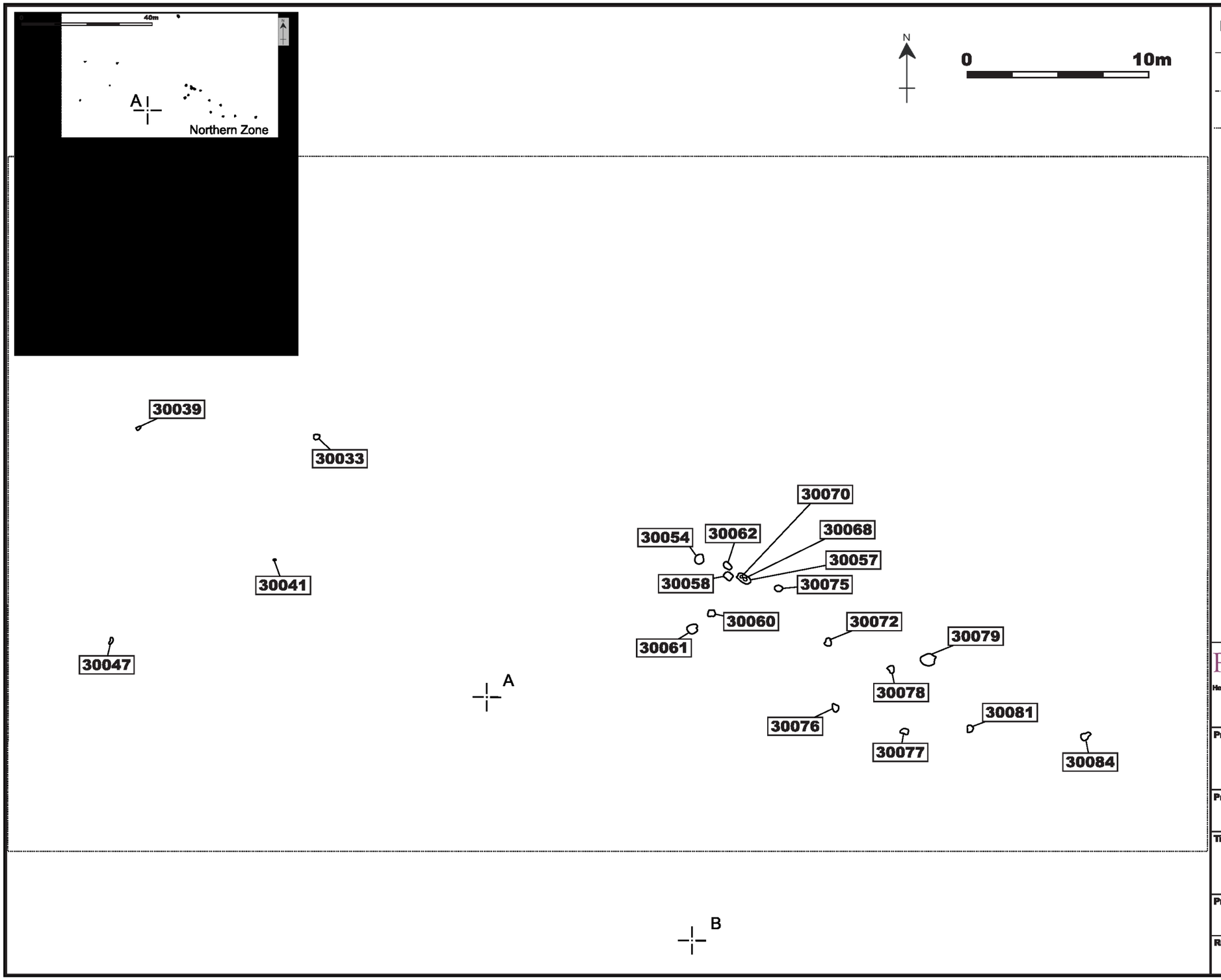


Figure 13: Plan of the Northern Zone (Area 3)

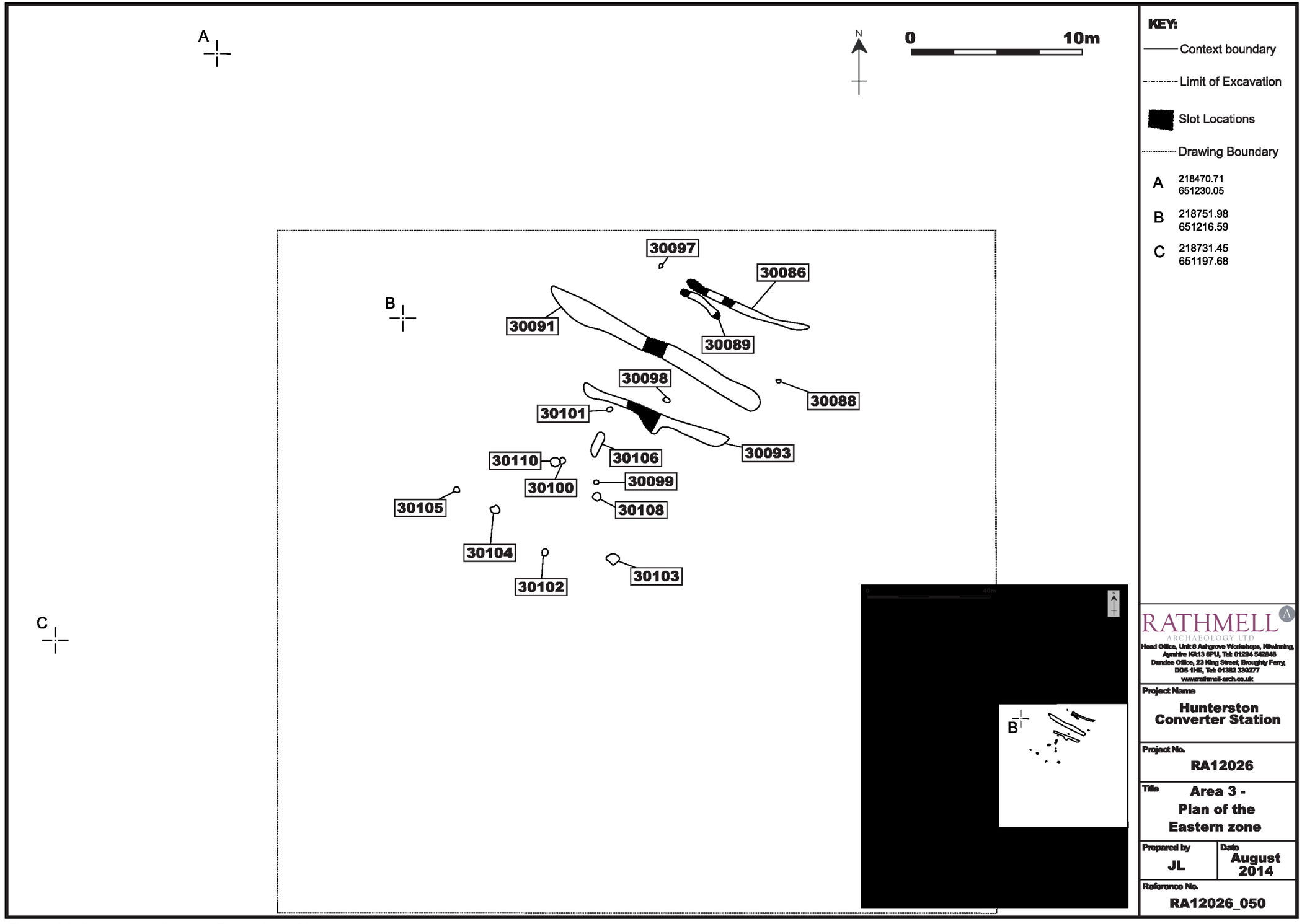
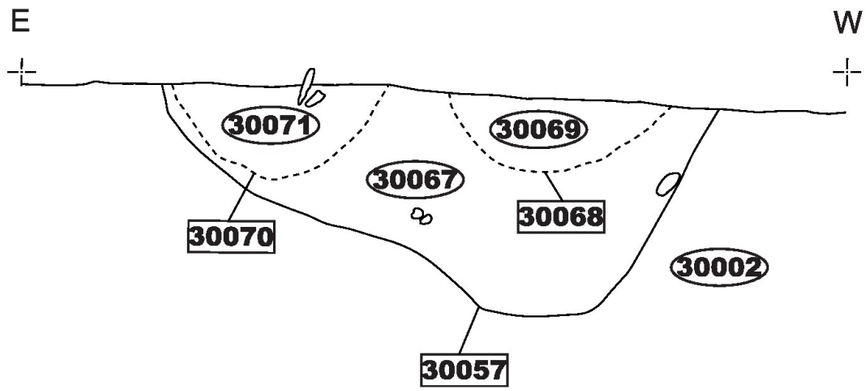


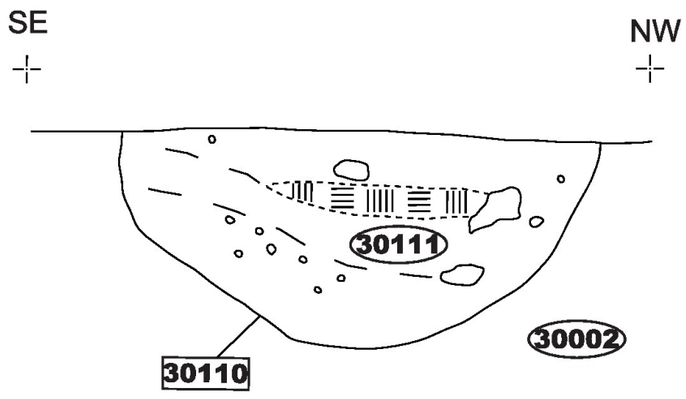
Figure 14: Plan of the Eastern Zone (Area 3)

South facing section of pit [30057], and postholes [30070] & [30068]



0 0.5m

Southeast facing section of pit [30110]



KEY:
- Context boundary
- Projected boundary
- Stones
- Charcoal

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Project Name: Hunterston Converter Station

Project No.: RA12026

Title: Area 3 - Features [30057] & [30110]

Prepared by: JL

Date: August 2014

Reference No.: RA12026_049

Figure 15: Features [30057], [30070], [30068] & [30110] (Sections, Area 3, Northern Zone & Eastern Zone)

96. The second pit [30079] measured 0.65m long by 0.5m wide by 0.2m depth, and was filled by deposit (30083). This consisted of mid-brown small stones within a silt matrix.

Eastern Zone

97. The eastern zone consisted of an area of 13 pits and post-holes, concentrated on the south-western side and four linear features at the northern side (Figure 14).

98. The linear features were orientated north-west to south-east, and were numbered as follows; [30086], [30089], [30091] and [30093]. These were filled by deposits (30087), (30090), (30092) and (30094), listed respective of the numbers above. Deposits (30087), (30090), (30092), and (30094) were all moderately compacted mid-brown/mid-grey small to medium stones within a silty matrix.

99. Feature [30091] measured 12m long by 0.8m wide; investigation exposed a depth of 0.08m. Investigation of feature [30093] targeted an area where the feature widened, suggesting the presence of an underlying feature. Further investigation revealed that this widening had been caused by bioturbation, which truncated a linear feature.

100. Feature [30089] was curvilinear on plan, and was located between features [30091] and [30086]. This followed the same orientation as the other linear features in the area, i.e. a north-west to south-east alignment. Feature [30089] measured 3m long by 0.35m wide by 0.03 - 0.04m deep. The terminals of this curvilinear feature were excavated, revealing an undulating base and very gently sloping sides. Adjacent to [30089] on the north side was feature [30086]; this measured 10m long by 0.2m to 0.3m wide by 0.1m depth.

101. Three potential post-holes were exposed between and to the north-west of the above features, numbered as follows: [30088], [30097] and [30098]. The diameter of these features varied from 0.18m to 0.25m, with a typical depth of 0.12m. The fill of feature [30088] is uncertain, as it appeared to have been truncated during prior soil stripping activities. The fills of features [30097] and [30098] were mid-brown/mid-grey sandy silt.

102. A further seven post-holes were found to the south-west of the linear features, numbered as follows; [30099], [30100], [30101], [30102], [30104], [30105] and [30108]. The post-holes varied in size from 0.2m to 0.5m in diameter and by 0.17m to 0.4m depth. Features [30099], [30100], [30101], [30102] and [30105] were filled by mid-grey small stones within a silt matrix. Feature [30104] was filled by deposit (30115), which was moderately compacted small stones within a dark brown silt matrix. Feature [30108] was filled by deposit (30109), which consisted of moderately compacted small stones within mid grey silt.

103. Two pits were also found in this area, numbered as [30103] and [30106]. Pit [30103] measured 0.3m diameter, while pit [30106] measured 1.6m long by 0.5m wide, with a maximum depth of 0.4m. Pit [30103] was filed by small stones within a dark grey silt matrix, while [30106] was filled by small stones within a dark brown silt matrix.

104. One feature which can be classified as a post-hole/pit, for the purposes of this report, was also found in this area. Feature [30110] (Figure 15) was circular on plan, and measured 0.6m diameter by 0.4m depth. This was filled by deposit (30111), which consisted of small to medium stones within a mid-brown/mid-grey silt, with occasional charcoal flecks.

Western Zone

105. The western zone comprised 68 features; these ranged from pits, post-holes and post-hole/pits, and were distributed from the north-east over an area extending 50m to the south-west (Figure 16).

106. There were 11 pits found in the Western Zone in total, the largest six of which were located in the north-east corner, concentrated within a few metres of one another. These were numbered as follows; [30130], [30131], [30143], [30230] (Figure 17), [30232] (Figure 17) and [30234] (Figure 17).

107. Pits [30130], [30131] and [30143] varied in size, ranging from 0.8m to 1.25m in length by 0.7m to 1.15m wide by 0.12m to 0.32m depth. They were filled by deposits (30141),

(30208), (30207), (30170) and (30171), numbered respectively of those above. Deposit (30141) consisted of loose, dark grey silt with frequent stones, some medium-sized, concentrated at the north-eastern end. Two microliths and a hammerstone were recovered from this deposit (See Finds Summary).

108. Pit [30131] was filled by two deposits, (30207) and (30208). Deposit (30208) was the lower fill, consisting of a moderately-compacted mid-brown silt, with rare small stone inclusions. This deposit measured 1.6m in length by 1m wide by 0.07m thick. The upper fill of this feature was deposit (30207); this was moderately compacted and consisted of small to medium stones within a dark grey silt matrix. This shared the same dimensions as (30208), but measured 0.1m to 0.15m thickness. Pit [30143] was also filled by two deposits, (30170) and (30171). Deposit (30171) was the primary fill and consisted of moderately compacted small to medium stones within a dark brown silt matrix. This deposit measured 0.81m in length by 0.79m in width by 0.02m thickness. The secondary fill of the pit was deposit (30170), which was moderately compacted small to medium stones within a black silt matrix. This shared the same dimensions as deposit (30171), but measured 0.09m thickness.

109. Pits [30230], [30232] and [30234] formed a series of intercutting features, covered by a spread of material (30223) and orientated north-west to south-east. The spread (30223) measured 2.66m long by 1.64m wide by 0.13m thickness, and consisted of friable, dark brown small to medium stones within a silt matrix. This material disturbed the upper extents of the three intercutting pits [30230], [30232] and [30234]. Allowing for this disturbance, the pits ranged in size from 0.67m to 0.85m diameter by 0.15m to 0.23m depth. These pits were filled by deposits (30231), (30233) and (30235), numbered respectively. These deposits all consisted of friable small to medium stones within a mid-brown silt matrix. The stratigraphic sequence showed pit [30230] was the first cut which in turn was cut by pit [30232] to the east. Pit [30232] had in turn been truncated by pit [30234], which appeared to be the last cut in the sequence.

110. The remainder of the pits in the western zone were numbered as follows; [30028], [30030], [30166], [30168] and [30176]. These were distributed across an area of approximately 40m length from north-east to south-west. They vary in size from 0.39m to 0.55m wide by 0.58m to 0.7m long by 0.09m to 0.19m depth. These were filled by deposits (30029), (30031), (30187), (30200), (30191) and (30175) respectively.

111. Deposit (30029) was loose, small to medium size stones within a dark grey/black silty sand matrix. Deposit (30031) was friable, very dark brown/black silty sand with frequent small to medium stone inclusions, some of which appear to have been packing stones. Deposit (30187) was firm, light grey/light brown silty sand with abundant small to medium stone inclusions. Feature [30168] was filled by two deposits, (30200) and (30191). Deposit (30200) was the primary fill, and was firm, mid-brown sandy silt containing abundant small to medium stone inclusions. Deposit (30191) was the secondary, and consisted of firm, very dark brown/black sandy silt with abundant small to medium stones and rare charcoal flecks. Deposit (30175) was loose, mid-grey/mid-brown silty sand and contained frequent small stones and stone flecks, occasional medium stones and rare charcoal fragments.

112. Stripping of the Western Zone also exposed 12 post-hole/pits. These were spread across an area approximately 50m in length, and were numbered as follows; [30011], [30023], [30025] (Figure 20), [30151], [30152], [30153], [30183] (Figure 19), [30206], [30212], [30227] (Figure 18), [30236] and [30242]. These post-hole/pits varied in size from 0.4m to 0.96m long by 0.3m to 0.8m wide by 0.09m to 0.22m depth. They were filled by deposits (30010), (30036), (30024) (30038), (30026), (30184), (30211), (30210), (30213), (30228), (30237) and (30243), numbered respectively of the above. Features [30152] and [30153] were filled by light to dark grey silt; no context numbers were assigned for the fill of these two features.

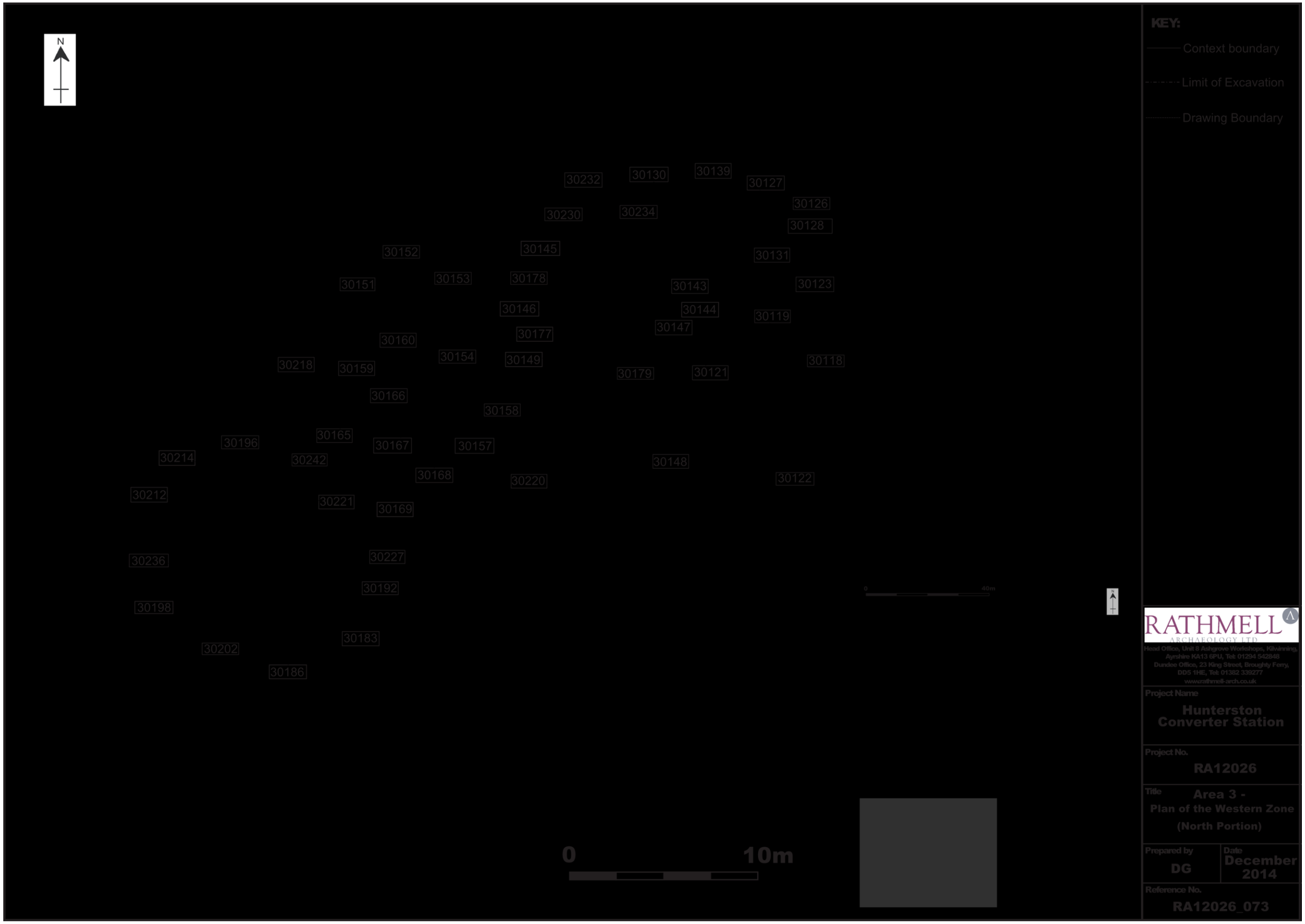


Figure 16a: Plan of the Area 3 Western Zone (North)

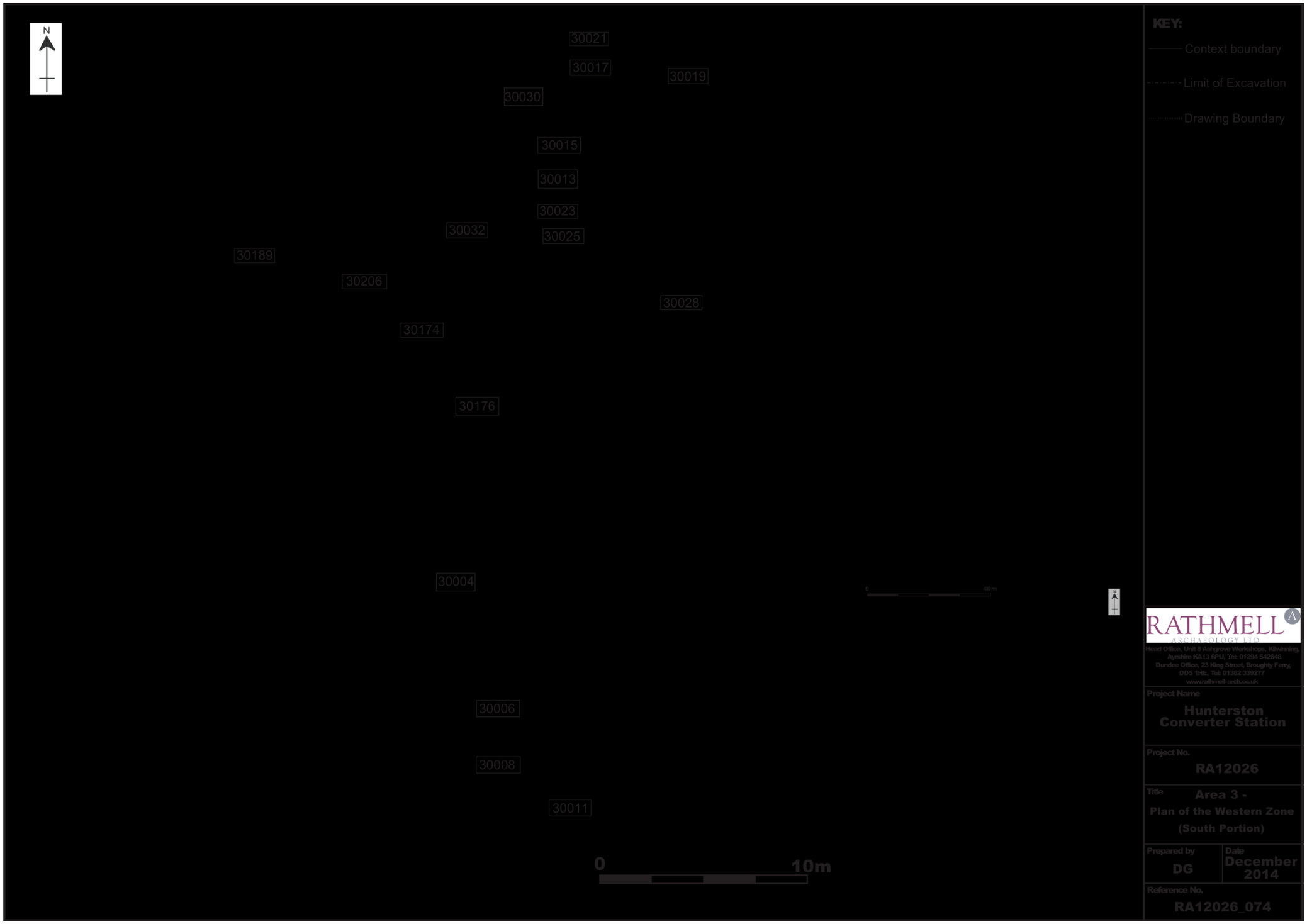
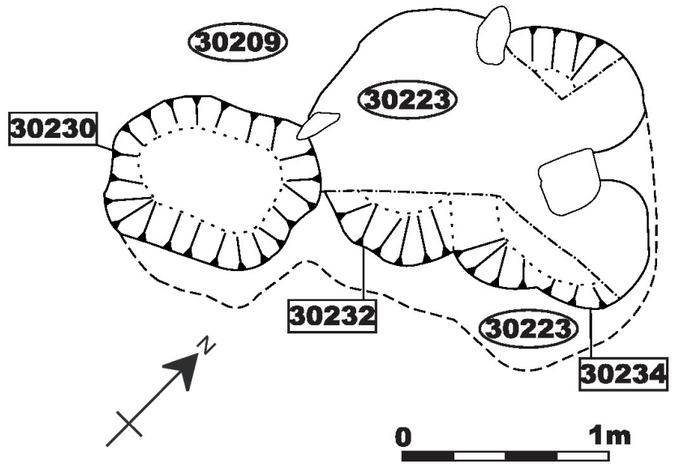
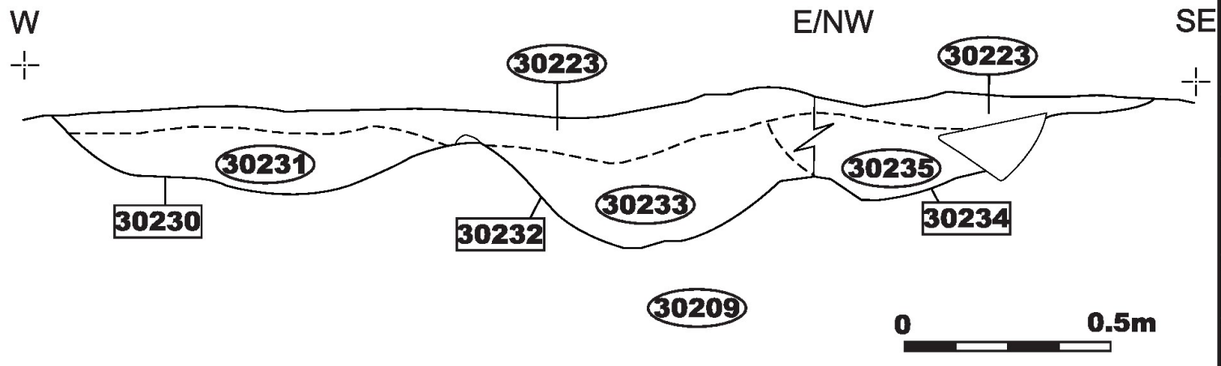


Figure 16b: Plan of the Area 3 Western Zone (South)



Post-excavation of intercutting pits [30230]

South and Southwest facing sections of intercutting pits [30230], [30232] and [30234]



KEY:
- Context boundary
- Projected boundary
- Break of slope
- Stones
- Limit of excavation

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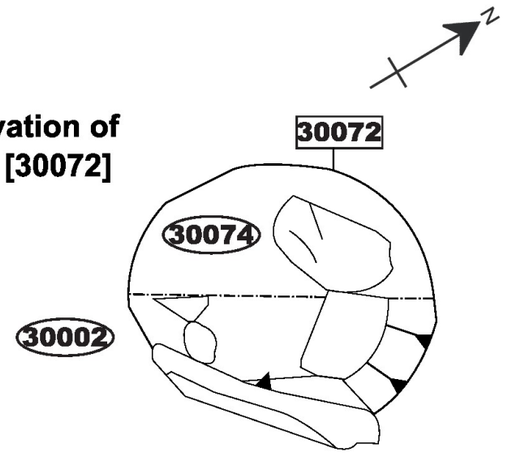
Project Name	Hunterston Converter Station
Project No.	RA12026
Title	Area 3 - Intercutting pits [30230], [30232] and [30234]
Prepared by: CA	Date: July 2014
Reference No.	RA12026_041

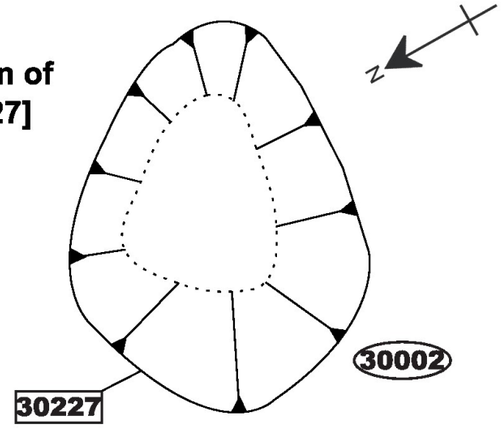
Figure 17: Plan and Section, Intercutting pits [30230], [30232], [30234] (Area 3, Western Zone)

General shot of the Southwest corner of the Western zone from the SSW

Mid-excavation of post-hole [30072]



Post-excavation of post-hole [30227]



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Project Name: **Hunterston Converter Station**

Project No.: **RA12026**

Title: **Area 3 - Plans of postholes [30227] and [30072]**

Prepared by: **JL** | Date: **July 2014**

Reference No.: **RA12026_040**

Figure 18: Post-excavation plans, Features [30072] & [30227] (Area 3, Northern Zone & Western Zone)

113. Deposit (30010) was a friable, mid-grey silty sand, containing frequent small stone inclusions. Deposit (30036) was the primary fill of feature [30023], and consisted of a number of medium-sized packing stones. Deposit (30024) was the secondary fill of [30023] and consisted of loose, mid-grey/mid-brown silty sand with frequent rootlets and small stone inclusions. This upper deposit of feature [30023] was truncated by later post-hole [30032] (Discussed Below). Deposit (30038) was the primary fill of feature [30025], and consisted of a number of small- to medium-sized packing stones. Deposit (30026) was the secondary fill of feature [30025] and was loose, mid-grey/mid-brown silty sand, containing occasional small stones and frequent rootlets. Feature [30151] had been filled by a light grey silt, to which no context number was assigned.

114. Feature [30183] (Figure 19) was filled by deposit (30184); this was friable, mid-brown (tinged orange) small stones within a silty sand matrix. Feature [30183] was truncated by post-hole [30192] (Discussed Below). Feature [30206] was filled by deposit (20211) at the sides and the base; this was loose dark grey silty clay. The centre of this feature was characterised by deposit (30210), which was firm, light grey silty clay, containing rare charcoal flecks. Deposit (30210) seemed to represent the remains of a possible post-pipe.

115. Deposit (30213) was a firm, mid-grey silty sand, containing occasional rootlets. Deposit (30228) was friable, mid- to dark brown sandy silt with occasional stone inclusions. Deposit (30237) was friable dark brown (tinged orange) small stones in a sandy silt matrix. Deposit (30243) was friable mid- to dark brown silty sand, with occasional small stone inclusions.

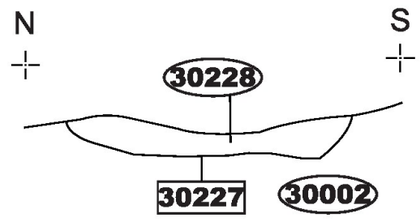
116. In total, 45 post-holes were found within the western zone (this number discounts the post-hole/pits discussed above). A concentration of 16 post-holes were exposed in the north-eastern corner of the area. These were numbered as follows; [30118], [30119], [30121], [30123], [30126], [30127], [30128], [30139], [30144], [30145], [30146], [30147], [30149], [30177], [30178] and [30179]. These post-holes demonstrated some variation in size between 0.3m - 0.41m in length by 0.16m - 0.38m in width by 0.09m - 0.26m in depth. These features were filled by the following deposits, listed respectively; (30134), (30133), (30132), (30135), (30136), (30137), (30138), (30140), (30190), (30182) and (30180).

117. The deposits which filled features [30144], [30145], [30146], [30147] and [30149] were not assigned context numbers. Feature [30144] was filled by mid- to dark brown silt; feature [30145] was filled by light to mid-brown silt; features [30146] and [30149] were filled by light grey silt and feature [30147] was filled by dark grey silt. Deposit (30134) was firm, dark brown silt with abundant small stone inclusions; deposits (30133), (30137) and (30138) were firm, mid- to dark brown small stones and stone flecks within a silt matrix. Deposit (30132) was firm, dark brown silt with occasional small stone inclusions. Deposits (30135) and (30136) were firm, dark brown small stones and rare large stones within a silt matrix. Deposit (30140) consisted of dark grey moderately compacted silt, with frequent small stone inclusions.

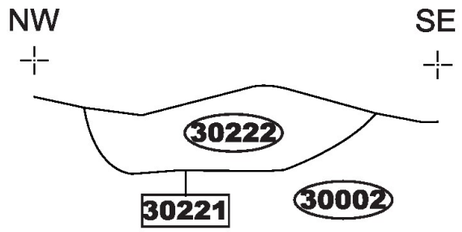
118. The western central portion yielded a further 19 post-holes, spread out over an area of approximately 20m by 20m. These were numbered as follows; [30017], [30019], [30021], [30122], [30148], [30154], [30157], [30158], [30159], [30160], [30165], [30167], [30169], [30192], [30196], [30214], [30218], [30220] and [30221] (Figure 19). The size of these post-holes varied in size from 0.21m to 0.4m in width by 0.22m to 0.5m in length by 0.07m to 0.24m in depth. These were filled by the following deposits, numbered respectively; (30018), (30020), (30022), (30124), (30181), (30204), (30194), (30205), (30193), (30197), (30215), (30219) and (30222).

119. The deposits which filled features [30148], [30159], [30160], [30165], [30169] and [30220] were not assigned context numbers. Feature [30148] was filled by light grey silt; features [30159] and [30165] were filled by mid-grey/mid brown silty sand; feature [30160] was filled by light grey/light brown silty sand; feature [30169] was filled by light to mid-grey/mid-brown silt and feature [30220] was filled by light to mid-brown silt.

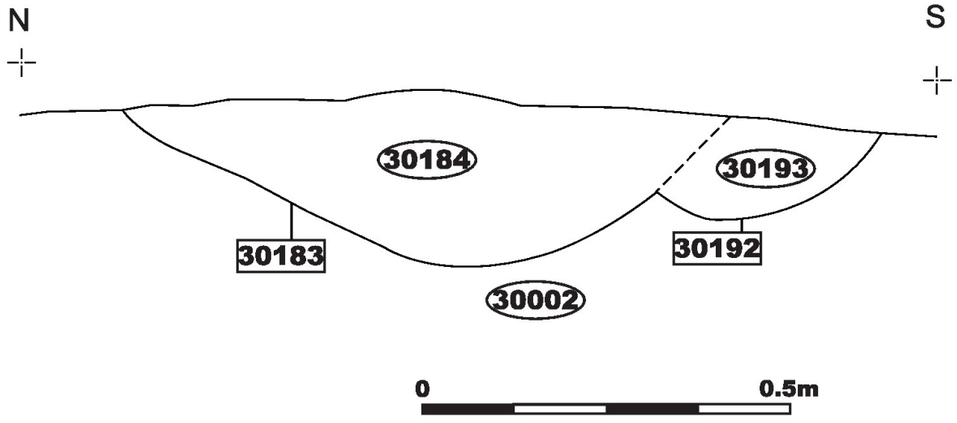
West facing section of posthole [30227]



Southwest facing section of posthole [30221]



West facing section of postholes [30183] & [30192]



KEY:

——— Context boundary

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Project Name: **Hunterston Converter Station**

Project No.: **RA12026**

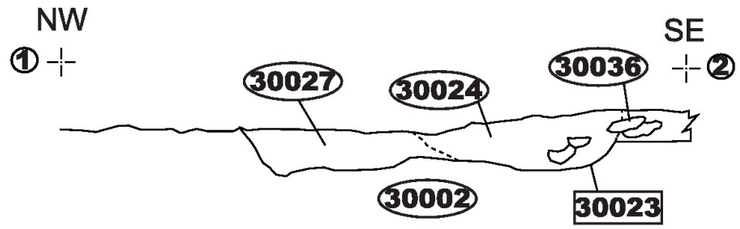
Title: **Area 3 - Sections through postholes [30227], 30221], [30183] and [30192]**

Prepared by: **JL**

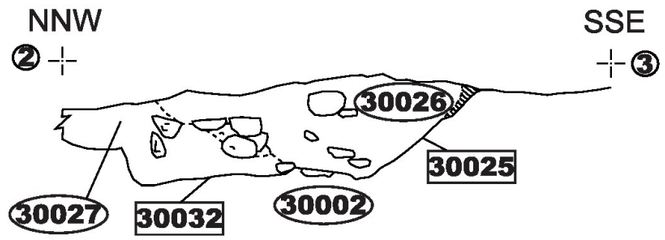
Date: **July 2014**

Reference No.: **RA12026_039**

Figure 19: Features [30227], [30221], [30183] & [30192] (Section Drawings, Area 3, Western Zone)

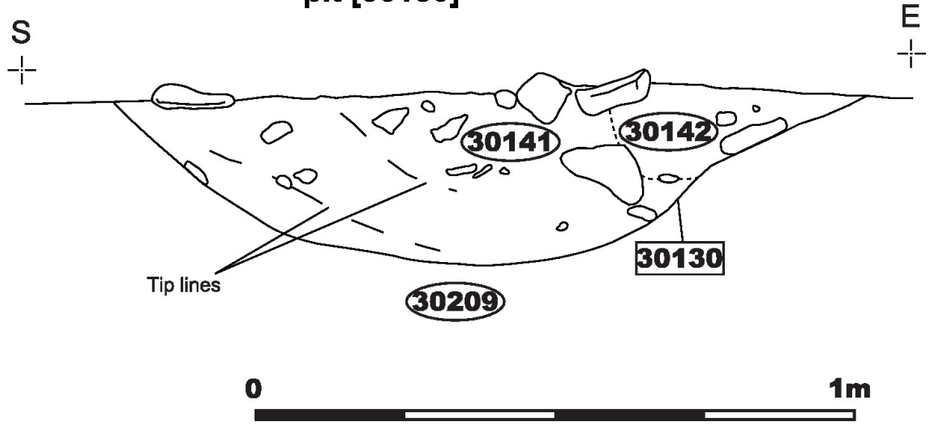


Southwest facing section of pits [30025], [30032] and [30023]



West-southwest facing section of pits [30025], [30032] and [30023]

Southeast facing section of pit [30130]



KEY:

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Project Name	Hunterston Converter Station
Project No.	RA12026
Title	Area 3 - Pits [30130], [30023] [30025] and [30032]
Prepared by	JL
Date	August 2014
Reference No.	RA12026_048

Figure 20: Features [30025], [30032], [30023] & [30130] (Section Drawings, Area 3, Western Zone)

120. Deposit (30018) was loose, light brown silty sand with rare small stone inclusions; deposit (30020) was loose, dark brown silty sand with rare small stone inclusions; deposit (30022) was friable, mid-brown silty sand with occasional small stone inclusions; deposit (30124) was firm, small stones within a dark brown silt matrix; deposit (30181) was firm, mid grey/mid-brown sandy silt with frequent small stone inclusions; deposits (30194) and (30204) were firm, light grey/light brown sandy silt with frequent small stone inclusions; deposit (30205) was firm, mid-grey/mid brown sandy silt with frequent small stone inclusions.

121. Feature [30192] was filled by deposit (30193); this was a friable, mid- to dark brown silty sand with frequent small stone inclusions. This feature was truncated by later feature [30183], one of the larger post-hole/pits. Deposit (30197) was friable mid- to dark brown sandy silt with frequent small to medium stone inclusions; deposit (30215) was friable, mid- to dark brown silty sand with frequent small stone inclusions; deposit (30219) was loose, black silt containing occasional charcoal flecks and deposit (30222) was friable mid-grey to mid-brown silt with frequent small stone inclusions.

122. The south-western area of the western zone contained 10 post-holes, numbered as follows: [30004], [30006], [30008], [30013], [30015], [30032], [30186], [30189], [30198], and [30202]. These varied in size from 0.2m to 0.34m in width by 0.2m to 0.44m in length by 0.07m to 0.25m in depth. These were filled by the following deposits, numbered respective of the above; (30012), (30003), (30005), (30009), (30014), (30016), (30037), (30027), (30186), (30201), (30188), (30199) and (30203).

123. Feature [30004] was filled by two deposits, (30012) and (30003). Deposit (30012) was the primary fill, and consisted of loose, small stones within a red/brown sand matrix. Deposit (30003) was loose, mid-grey/mid-brown silty sand containing frequent small stone inclusions and rootlets. Deposit (30005) was the same as deposit (30003). Feature [30008] was also filled by two deposits, (30009) and (30007). Deposit (30009) was the primary fill, and consisted of loose, small stones within a light red/light brown sand matrix. Deposit (30007) was the secondary fill of [30008], and was firm, mid-brown/mid grey silty sand.

124. Deposit (30014) was friable, light brown silty sand; deposit (30016) was loose, dark brown silty sand. Feature [30032] was filled by two deposits, (30037) and (30027). Deposit (30037) was the primary fill, and consisted of small to medium stones, and seemed to represent a packing stone deposit, for supporting an upright post-hole. Deposit (30027) was the secondary fill, and consisted of la oose, light grey/light brown silty sand, containing occasional small stones and frequent rootlets. Feature [30032] truncated post-hole/pit [30023] (Discussed Above). Deposit (30186) was firm, small stones within a light to mid brown silty sand matrix.

125. Feature [30189] was filled by two deposits, (30201) and (30188). Deposit (30188) was the primary fill of this feature, and consisted of firm, dark brown/black silty sand, with frequent charcoal fragments. This looked to represent the remains of a post-pipe, from *in situ* decay of an upright post. This was surrounded by the secondary fill of (30201), which was a soft, light brown/light grey slightly silty sand, containing frequent small stone inclusions. Deposit (30199) was friable, small stones within a black silty sand matrix and deposit (30203) was friable, mid grey silty with occasional fine rootlets.

Area 3: Finds Summary

126. The majority of the finds were recovered from topsoil, with few actually recovered from a secure context. Of these finds, two were lithics: these represented the waste products of flint knapping activities which took place in the prehistoric period. A fragment of iron-working slag was also recovered from the topsoil, along with a fragmentary iron object which may represent the fragmentary tine of a modern agricultural implement. This latter object appears to be the only potentially modern find recovered from this portion of the site, potentially as other clearly modern finds were not retained by the site staff.

Figure 21a: General shot of southern end of Area 3 Eastern Zone from the northwest.

Figure 21b: General shot over Area 3 Western Zone from the southwest.

127. A find interpreted in the field as a sherd of prehistoric ceramic recovered from the topsoil <30001> has been subsequently re-assessed as stone – it may in fact be a fragment of iron ore. Specialist input should also be sought for the five fragments of prehistoric ceramic recovered from (30124), the fill of posthole [30122], located in the Western Zone. These five fragments give the appearance of having been burned or heated, but their form and character is insufficiently convincing to be classed as 'ceramic': it is, however, possible that this material may represent daub, some kind of hearth lining or even potentially fragments of burnt clay soil.

128. Of much greater interest are the seven fragments of lithics, i.e. worked flint, which have been recovered from Area Three. As mentioned previously, two were recovered from topsoil (30001). The remainder were recovered from the fills of posthole and pit features. Of these, perhaps the most interesting were two fragmentary microliths recovered from the fill (30141) of pit [30130] along with a possible hammerstone <30011> (located in the Western Zone). Similar artefactual remains were recovered from deposit (30107), the fill of pit [30106], located in the Eastern Zone. This produced two small chunks of flint which may represent waste fragments or debitage.

129. Two postholes in the Northern zone also produced finds of lithics. Deposit (30085), the fill of posthole [30084], revealed a small chert scraper, while (30064), the fill of posthole [30060], produced a small chunk of flint, which showed signs of working and possibly represented the remains of a core.

Discussion

130. The interpretation of the findings of the Strip, Map and Sample works discussed above are presented below;

Area 1

131. Of the potential features investigated in this area, a number look to be anthropic in origin. The majority of what was revealed appears to be the product of agricultural activity and landscaping works.

132. The most likely interpretation of the linear features at the west and east sides of the bell-mouth are as the remains of plough furrows, relating to use of the area as arable land. The three groups of linear features present follow two different orientations in plan (Figure 3). This may be as a result of two different phases of arable agriculture, or an internal land division. Roy's Lowlands Map of 1752-55 indicates this area was given over to arable land during this period. Existing photographs show the area still in use as barley fields in the early 20th century. The furrows appear straight and narrow in form, suggestive of 'straight rig and grooving' which is attributed to the Improvement phase of arable agriculture in Scotland (18th century AD onwards) (Barber 2001). Due to a lack of datable artefacts, the date of these features cannot be clarified with more certainty, but it seems possible these represent plough furrows of a reasonably modern date (Barber 2001). In addition, we were informed by the Hunterston Estate Farm Manager (*pers. Comm Willie Easton*) that the area was in use as arable land until ploughing ceased in the 1950s.

133. The culvert [10008] which was exposed at the south-west side of the bell-mouth suggests a late 18th century date. The stone capping and general form of the culvert is prominent, and distinguishable from the common rubble and red ceramic field drains which are associated with 19th and 20th century improvement works in Scotland.

134. Post-holes [10022], [10032] and [10034] share similar dark fills, which could indicate that they are contemporary. It is possible features [10022] and [10032] are the remains of fencing present on 1857 to 1910 Ordnance Survey mapping (Figures 22a and 22b). The fill of post-hole [10012] shares more similarities with the fill of the plough furrows than with the other post-holes, which could potentially indicate [10012] and the furrows are of broadly the same date. Post-hole [10012] appears to be heavily truncated, when compared to the other post-holes. However, the feature does not seem to have been affected by ploughing in the area, and so the reason for the truncation remains

uncertain.

135. No exact date can be attributed to the cluster of intercutting pits located at the east side of the bell-mouth. However, the stratigraphy shows that [10038] was the latest of the pits, and was cut through pits [10040] and [10042]. No clear relationship could be established between pits [10040] and [10042] due to the presence of [10038]. The fill of pits [10038] and [10040] were similar, also showing similarities with the fill of pit [10030]. All three were filled by dark deposits of firm, dark grey/black silty sands and sandy silts in gravel matrices. It is possible the similarity in fills indicate these features are broadly contemporary, but with no datable artefacts, this remains speculative. One flint core was recovered from the fill of pit [10040], which showed evidence of flint-knapping. However, the location of the artefact, recovered from the very top of the deposit is insufficient to specifically date the pit, as it is possible this has been incorporated into the pit via bioturbation. The presence of worked flint does indicate flint-knapping in the broader area however, albeit not specifically connected with pit [10040].

136. Feature [10004] which was located in the south-west corner of Area 1 looks to be anthropic, but of relatively modern origin. Much of this feature is obscured on the south-east side by the limits of excavation, so the full extent of the feature was not investigated. While the straight edges would assume a modern feature, the topsoil (10001) which covers it does not seem disturbed. This indicates that either the area has been landscaped, which seems unlikely, or that the topsoil has been given time to adjust after the feature was dug. The fill of this feature (10005) seems suggestive of burnt material, so it is possible this feature is attributed to an early 20th century deposit of burnt material. Feature [10017] looks to be a modern bore-hole, rather than a post-hole. The edges of the cut continued to fall away without stabilising, and this combined with the coarse sandy fill seem indicative of the behaviour and form of a modern bore-hole, which continues for a great depth.

137. The remainder of the features look to be natural in origin. Two linear features investigated as plough furrows at the east side of the bell-mouth [10046] and [10050] look to be the result of modern water erosion rather than ploughing. A possible pit [10024], also located at the east side of the site, looks more likely to be a stone-throw or bioturbation from rooting. The cut of the feature is uneven and lacks proper form.

138. The features exposed during the Area one excavations cannot be dated with clarity, due to a lack of datable artefacts. It is possible the culvert represents the earliest activity in Area one, being broadly datable to the late 18th century. Pictorial evidence and personal communications (Easton 2014 *pers. comm*.) indicate the plough furrows are likely to date from as late as the 1950s, and a possible date for post-holes [10022], [10032] and [10034] of around 1910. Generally, activity in Area 1 seems to be broadly post-medieval in date, although with a lack of recovered datable artefactual evidence, it is possible features in this area are earlier than this. The lack of datable artefacts means the dates of the investigated features must remain inconclusive.

Area 1-Watching Brief

139. The watching brief area had previously been subject to extensive modern disturbance. Most of this area was characterised by deposit (10054) below the turf. The content of this deposit is modern in date, most likely 20th century. The iron pipe [10060] which was cut into the bedrock at the south-west side of the stripped area is further evidence of modern disturbance in the area.

140. The high level of bedrock [10061] found at the south-west corner of the monitored area (0.4m below the top of the turf) suggests deposit (10054) has been used as a levelling deposit to even the ground level prior to use of the area as a road.

141. The cuts for the dry stone walls which ran NNW to SSE seem likely to be the precursors of the dry-stone wall which now runs NNW to SSE at the north-east end of the watching brief area. The date of the walls is unclear, but deposit (10054) looks to have been filled in around the walls after their demolition.

142. No archaeological features were found cut into the small area of natural subsoil exposed

at the north-eastern corner of the watching brief area. The depth of excavation did not achieve the required depth to expose natural subsoil below (10054), so the potential for archaeological material in the watching brief area remains.

Area 2

143. As reflected in the Findings section above, the features in Area 2 will be discussed in terms of Northern Zone and Southern Zone, and Feature [20098], for the sake of coherent structure and simplicity.

Area 2 - Northern Zone

144. Linear features [20065], [20125], [20126], [20127] and [20128] found in the extreme north of the area reflect use of land for agricultural activity in the past. The linear features seem most likely to represent a series of plough furrows, caused when the plough has cut into the subsoil below the topsoil. This is indicated by the shallow nature of the features, and the layout forming a series of parallel lines, sharing a similar orientation. As with those plough furrows found in Area One, it is likely these are representative of later rig and furrow agricultural activities. However, no datable artefacts were recovered from the linear features, so this must remain speculative.

145. The series of furrows does not continue evenly across the Northern Zone; indeed there is only one further feature which mirrors these possible furrows in similarity, which was the isolated linear feature [20043] found in the south-west corner of the area. However, the orientation and location of feature [20043] seem to suggest they relate more to those plough furrows found in the Southern Zone. This suggests a large area of the Northern Zone has not been ploughed. It is possible this is a land division or boundary physically demarking the limits of land between neighbouring owners. It is also possible some kind of structure once stood in this area; thus when ploughing took place, this area was not ploughed. It is possible that the post-holes which were recorded in this vicinity represent a structure of some kind. However, no obvious structure is clear when the layout of post-holes is considered.

146. It is possible the post-holes investigated in this area represent the remains of agricultural boundary fencing. Post-holes [20028], [20037], [20039], [20047], [20049], [20053], [20055], [20073], [20079], [20087], [20090] and [20092] seem in the right position to accommodate such a fence-line.

147. It is possible that post-hole [20028] is a re-cut of an original feature, [20045]. However, given the extent of truncation of feature [20045], it is unclear as to whether this can be classified as a pit or a post-hole.

148. The date and origin of the majority of the pits investigated remains uncertain, due to a lack of datable artefacts recovered from the fills. However, seven sherds of prehistoric pottery were recovered from the fill of pit [20057], while modern pottery was recovered from pits [20068] and [20089]. Generally, this indicates a broad range of dates in the area, indicating the area has generally been the subject of activity for a long time. It is possible that modern pits [20068] and [20089] are associated with the construction of the post-holes for what could represent a boundary division, although there is no cartographic evidence of modern boundary divisions in this area.

Area 2 - Southern Zone

149. Linear features [20018], [20030], [20138], [20140], [20141], [20142], [20143], [20145], [20146], [20147], [20148], [20159] and [20206] exposed in the Southern Zone are similar to those in the northern zone and reflect the use of the land for past agricultural activity. It looks as though the small linear found at the south-west corner of the Northern Zone [20043], is actually part of the southern series of plough furrows. It appears to have once been a part of furrow [20148], now separated by modern truncation of the rubble drain complex [20137].

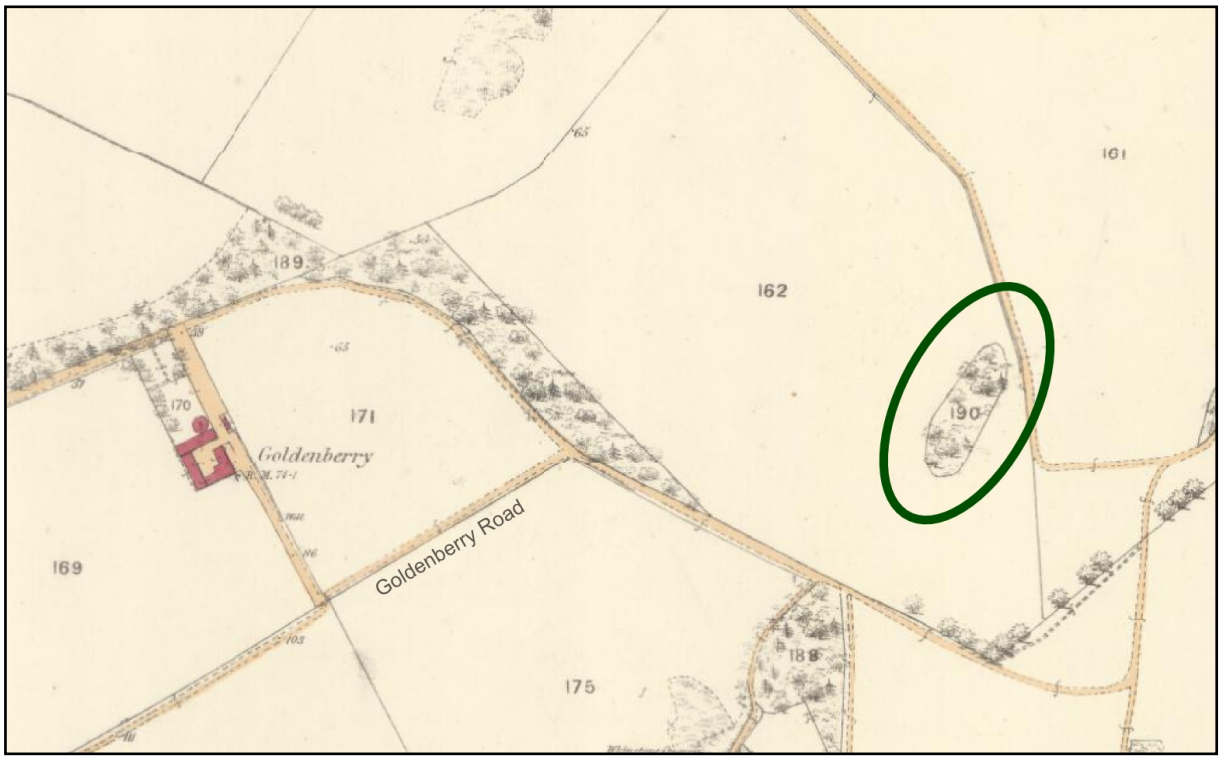

Figure 22a: Ordnance Survey Mapping (1857), showing long oval structure

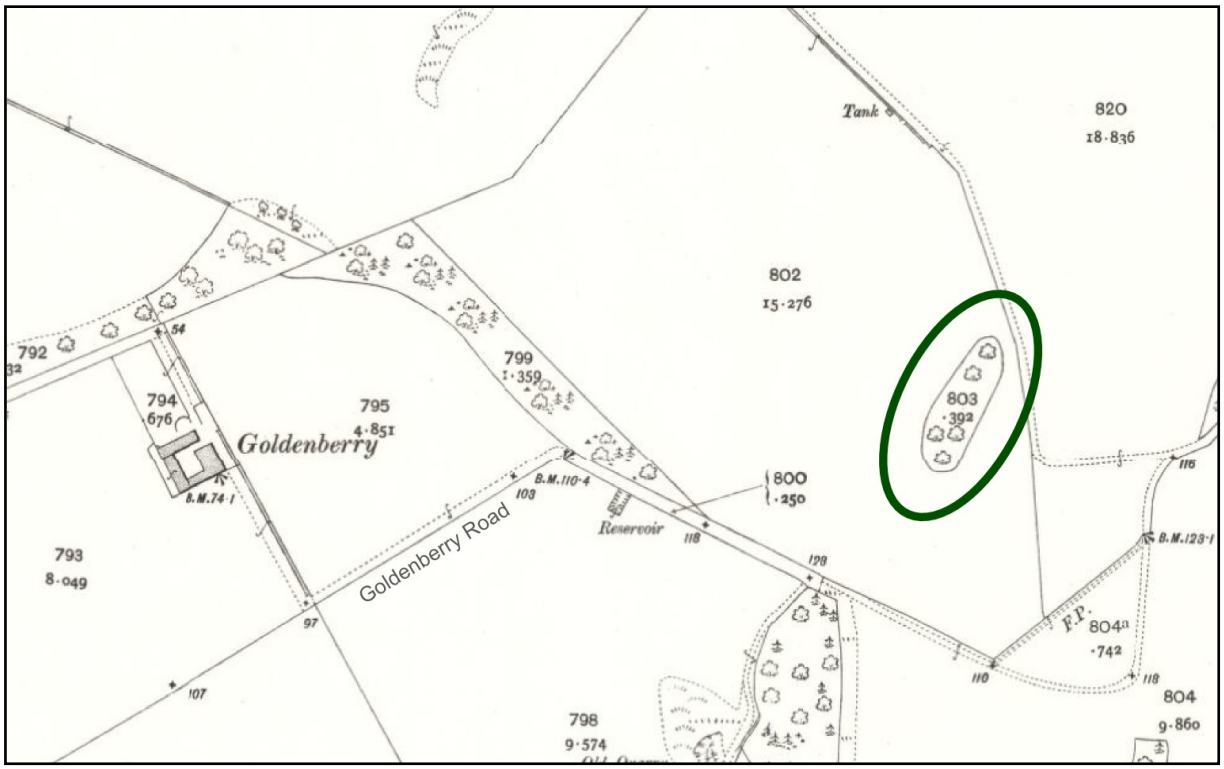

Figure 22b: Ordnance Survey Mapping (1910), showing long oval structure

150. The two small linear features at the west side of the Southern Zone, [20180] and [20181] are also the remains of plough furrows. These too share a similar orientation to the rest of the furrows on site, suggesting that the furrows in Area Two are broadly contemporaneous. As with Area One, it seems probable that these are representative of later rig and furrow agricultural activities. However, without datable artefactual evidence, this must remain speculative.

151. The rubble field drain network can be broadly dated to pre 1830, due to the style of construction. The localised presence of a network of rubble drains such as this is unusual; only one other rubble drain was found in the entirety of Area Two, which was the rubble drain found truncating deposits of Feature [20098]. The presence of rubble drains in an effort to drain the land is not unusual in itself, and generally series of drainage systems can be found running as a linear series across sites and fields. Drainage works such as these can be linked with 19th and 20th century agricultural improvements in Scotland. The localised draining of an area such as this suggest this was compensating for a particularly waterlogged area of land.

152. The date and function of pits [20012], [20151] and [20154] which were found in this area must remain purely speculative, as no datable artefactual evidence was recovered from their fill.

153. It is possible the post-holes found represent still further remains of agricultural boundary fencing. The remainder of the post-holes in this area [20017], [20020], [20022], [20024], [20156], [20158], [20169], [20173] and [20176] seem to form a line, running broadly west to east. There is no indication from cartographic evidence which suggests modern boundary division (Figures 22a and 22b), however it is still possible a fence-line once existed in the area.

154. The remainder of the investigated possible features in the Southern Zone, features [20130], [20149], and [20171], [20174] and [20178] could represent the remains of truncated post-holes. This is supported by their location amongst the plough furrows, possibly indicating modern truncation by the plough. The recovery of three sherds of prehistoric pottery from post-hole [20171], which was only 0.07m deep, would further suggest these features were once deeper than there are now. However, no obvious conclusion can be drawn from the layout of these possible post-holes on plan, and it may be that these features represent naturally occurring incidents of bioturbation.

Feature [20098]

155. Excavation of Feature [20098] in Area Two exposed stonework (20105), (20109) and (20112), which consisted of unworked blond sandstone and pieces of grey igneous rock. These were not the main element of the feature though, and appeared to have been brought in from elsewhere and re-used as rough facing material. The majority of Feature [20098] was composed of (20107), which appeared to be a deposit of re-used material from a demolished building. No evidence of stonework was found above deposit (20107), suggesting that the main body of Feature [20098] was composed of this demolition deposit.

156. No evidence for mortar bonding between the stonework was found during the excavation. While it can be argued that deposits (20109) and (20110) could have been utilised as a crude form of mortar-like material, this type of deposit was found only at the base of the stonework. This indicates the material has been used to stabilise the base of the stonework, rather than to bond the stonework together. No evidence for mortar was found on the upper surfaces of the stonework, which indicates that no higher courses of stonework existed.

157. The lack of modern material such as modern red brick, plastics or modern glass found within deposit (20107) indicates the feature structure is not modern. Furthermore, the lack of modern material recovered from deposits (20067) and (20099) (which covered the entirety of the feature), suggests that the feature did not fall out of use in very modern times either.

158. Ordnance Survey Mapping (1857) to (1910) shows a long oval structure in this area

(Figures 22a and 22b). This appears to be an enclosed area of partially landscaped woodland. It is possible Feature [20098] represents a low wall which once enclosed this area of woodland. Earlier mapping of the area shows no further evidence of a structure in the vicinity, suggesting this is the most likely candidate for structural remains in the area.

159. A further interpretation of these stones and deposits are that they in fact relate to material that has been dumped to stabilise the ground. Prior to excavation, this area was prevalent with rushes which are indicative of a consistently damp area. During excavation this area was by far the wettest area on site. The plantation evident on the Ordnance Survey mapping may have originally been planted in an attempt to manage the waterlogged ground in this area. Regardless, with its later removal this would have changed the hydrology of the area again back to a damp area. Such damp conditions would have made passage through this area quite treacherous, necessitating the need to dump stone material to stabilise the area. This may mean that Feature [20098] was constructed to accommodate easier access through the boggy ground, and represents a rough pathway.

160. While blond sandstone is not unknown in North Ayrshire the prevalent geology up and down the immediate coast around the Hunterston area is of red sandstone. This means that the blond sandstone that was present has been imported from out with the immediate area. It is unlikely that it was brought in for the purpose it came to be used for but is perhaps left over material from construction nearby.

161. An earlier phase of activity is possibly represented by the series of post-holes ([20182], [20184], [20190], [20194] and [20196]) found during excavation of Sondage One through [20098]. The location of the features below (20112), (20114) and (20109) suggests that they are related to an earlier phase of activity in the area. If this is the case, they may be contemporary with post-holes [20199] and [20201] which were found to the east of the main body of Feature [20098]. However, with no datable artefacts recovered from these features, this remains speculative.

Area 3

162. Given the number of features present within Area Three, a broad sequencing would be aided by further targeted post-excavation analysis forming a possible phasing of the features across the three zones of Area Three.

Area 3 - Northern Zone

163. Post-holes [30033], [30039] and [30041] appear to run along a similar orientation to those post-holes located to the south-east ([30054], [30058], [30060], [30061], [30062], [30068], [30070], [30072], [30075], [30076], [30077], [30078], [30081] and [30084]). This may signify a general north-west to south-east alignment throughout the Northern Zone.

164. The eastern concentration of features within the Northern Zone appear to run as a group, following a north-west to south-east alignment. Although there are no discernible patterns to indicate a structure, several of them do appear to be in alignment: [30081], [30078], [300072], [30075] & [30062] for example are located at 5m intervals of one another.

165. Post-holes [30081], [30078], [300072], [30075] & [30062] seem to follow a gradual slope of the ground in this area, sloping down from north-west to south-east. Two of these were deeper than the rest, post-holes [30078] and [30081], which were located near the base of the slope. It is possible these were cut deeper to support the rest of the posts in the alignment; it is also possible their location at base of the slope meant they were less subject to truncation by later ploughing.

166. Post-holes [30058] and [30062] and pit [30057], in addition to the two post-hole re-cuts [30068] and [30070] found cut through pit [30057], form a close grouping. This group of cut features may represent the remains of an upstanding timber structure that was rebuilt over more than one phase. Pit [30057] exhibited the sole evidence of a potential

re-cut feature within the northern zone of Area 3. It is possible the location of [30057] is significant, in relation to features [30033], [30039], [30041] and [30047], which were located 20m west of [30057], at the western extent of the northern zone of Area 3. It is possible this re-cut feature represents the position of two subsequent upright posts, possibly associated with [30033], [30039], [30041], [30047], as well as those features found in the south-east extent of the Northern Zone of Area 3. It is possible these features are associated with the post-holes found within the western and eastern zones of Area 3, as well as those features found during the open area strip of Area B during the Strip, Map and Sample exercise (Gorman *et.al*.2014). If so, it is tempting to view the features within the Northern Zone of Area 3 as a boundary or segment of an enclosure.

167. The 20m space which was found to exist between those features found at the western extent of the Northern Zone of Area 3 [30033], [30039], [30041] and [30047], and those features found at the south-east area of the Northern Zone of Area 3, if considered in the wider context of the features found within the western and eastern zones of Area 3, and those features found within Area B, could represent deliberate segmentation within a post-hole alignment, or entrance to the interior of a possible enclosure.

Area 3 - Eastern Zone

168. The eastern zone consists of an area of 13 pits and post-holes concentrated on its south-western side with four linear features concentrated on its north-eastern side. Interpretation of these features would be aided by further targeted post-excavation analysis forming a possible phasing of the features within this zone. It is possible, at this point, to make some useful observations in support of this targeted analysis which would aid in further interpretation of the eastern zone.

169. The four linear features which were found in this area again seem most likely to represent the remains of plough furrows. It is possible that the slightly curved linear feature [30089], represents a plough-turn. As with the furrows found in Areas One and Two, the evidence suggests that these are modern in origin, suggestive of rig and furrow, possibly as late as the 1950s. The lack of small finds recovered from the fill of the furrows means a date cannot be assigned to them.

170. The two larger furrows [30091] and [30093] extend to a depth of 0.1m, suggesting that any underlying post-holes here would not survive plough truncation. It is therefore possible that there were pre-existing post-holes in the area below these furrows, which have been removed by recent agricultural activities.

171. The concentration of possible earlier activity in the eastern zone lies in the south-western area, where there are no plough furrows evident. This concentration comprises a further seven post-holes: [30099], [30100], [30101], [30102], [30104], [30105] and [30108]; two pits: [30103] and [30106]; and one possible post-hole/pit: [30110].

172. Post-holes [30102], [30104] and [30105] appear to be aligned north-west to south-east. However, considering further the location of the post-holes as a whole within the eastern zone of Area 3, it could also be said they form an arc, curving from north-east to south-west. It is possible this relates to the presence of a potential structure within Area B, and therefore could indicate a surrounding boundary. However, the post-holes do not display consistency of size or distribution that would make this definitive.

173. Pit [30103] is located 5m south of both pit [30106] and post-hole/pit [30110]. There is little similarity between the dimensions of these features, which do not appear to relate to a structure; however these three features do share similar fills. The recovery of chunks of flint from the fill of pit [30103] could point to a date of prehistoric origin, suggesting that they might be waste pits from the production of stone implements. Further evidence from the Western zone suggests that they may be borrow pits for the construction of timber uprights, acting as natural receptacles for waste. If this is the case then they may signify a construction phase relating to the timber uprights that surround them.

Area 3 - Western Zone

174. The number of similar features presents an interpretative challenge, which would be aided by further targeted post-excavation works forming a possible phasing of the features within this zone. It is possible, at this point, to make some useful observations in support of this targeted analysis which would aid in further interpretation of the Western zone.

175. Looking at the distribution of pit features, the hub of activity was around pit [30130], which produced the most lithic artefacts from any single feature in Area 3, with subsidiary pits running south-wards from [30130]. Intercutting pits [30230], [30232] and [30234], along with pits [30131] and [30143], also indicate a concentration of activity at this location. However no artefactual evidence was recovered from these features; therefore ascriptions of function and date are difficult to discern. It must also be noted that these pits are located in close proximity to the potential structure within Area B and may relate to activity therein.

176. There is some indication that these pits may have been associated with the manufacturing of tools. Relying on lithic evidence alone, however, is not definitive. The movement of lithics in the soil, combined with clear disturbance evident at the upper extents of the intercutting pits, suggests that they may have been reciprocals from movement of artefacts within the topsoil from ploughing, or as the result of migrating artefacts via bioturbation within the topsoil. It is possible the pits indicate the borrowing of stone, gravel and sand from the subsoil, to aid in the construction of features elsewhere onsite. A possible subsequent use of the pits as repositories of midden material may then indicate an intuitive or deliberate reinstatement to ground level after a construction phase. If the pits do represent borrow-pits to aid nearby construction, then their distribution might, as seen here, follow that of the post-holes throughout the area.

177. It appears that the post-holes located in the north-east area of the Western Zone form a three sided rectangular border surrounding pits [30130], [30131], [30143] and the sequence of intercutting pits [30230], [30232] and [30234]. These post-holes include [30126], [30123], [30118], [30119], [30121], [30179], [30149], [30177] and [30146]. However, the spatial irregularity of these features possibly suggests a temporary or provisional structure, rather than a permanent one. Within this three-sided rectangle of post-holes, there is a further scattering of post-holes, [30139], [30127], [30128], [30144], [30147], [30178] and [30145]. The irregular distribution of this scattering of post-holes, some of these posts may represent different phases of occupation or usage. No artefactual material was recovered from any of these post-holes which would aid ascription of date or function.

178. Initial on-site observation of features to the east, south-east and south of post-hole/pit [30212] concluded the presence of a possible denuded roundhouse; therefore these features were fully excavated. These included post-hole/pits [30212], [30242], [30227], [30183], [30236] and post-holes [30186], [30214], [30196], [30221], [30192], [30202], [30198], which were all excavated as potentially associated with the roundhouse.

179. However, later analysis of the survey data indicates a rather ephemeral roundhouse if it is such. The layout of the features seems irregular, and could indicate phasing of a number of structures of boundaries, rather than the basis of a single structure. For example, post-hole [30192] is truncated by post-hole/pit [30183]. It seems more likely that these features represent multiple use, where some post-holes have formed a field boundary or alignment that has altered over time, congruous with the other cut features in the Northern and Eastern zones of Area 3.

Conclusion

180. The Strip, Map and Sample exercise took place between 14th January and 31st March 2014 on behalf of RSK Environment Ltd. Rathmell Archaeology were appointed by RSK Environment Ltd on behalf of their clients with respect to the construction of the Hunterston Converter and Substation, West Kilbride, North Ayrshire.

181. North Ayrshire Council required a programme of archaeological works to be undertaken as a requirement of the issued planning consent (N/11/00708/PPPM). The West of Scotland Archaeology Service (WoSAS) who advise North Ayrshire Council on archaeological matters provided guidance on the structure of archaeological works required on site during extraction works. The Strip, Map and Sample Exercise was designed to mitigate the impact on any archaeological remains located within the Hunterston East Substation development area.

Area One

182. The Strip, Map and Sample exercise in Area One exposed a number of potential archaeological features. Generally, these seem to relate to agricultural activities and landscaping relating to the use of the area as arable land and delineating land boundaries.

183. Artefact recovery from this area was limited, producing one piece of worked flint which could potentially have been incorporated into the feature via bioturbation. Without datable artefactual evidence, no specific date for the activities in the area can be obtained, but generally activity in the area seems to be post-medieval or modern in date.

Watching Brief

184. No significant features were exposed during the Watching Brief. However, given the modern deposit which characterised this area, the potential for archaeological remains at a greater depth remains in the majority of the area.

Area Two

185. Excavations in Area Two exposed a number of potential archaeological features. Generally, these seem to relate to a mix of activities. Evidence of agricultural activities and landscaping relating to the use of the area as arable land, delineating land boundaries and land use.

186. In addition, evidence of modern and prehistoric activity was confirmed from recovery of prehistoric and modern pottery sherds from both pits and post-holes in the area. The presence of possible truncated post-holes could also indicate an earlier phase of habitation, predating the agricultural use of the land.

187. Evidence from excavations in Area 2 indicates occupation and land use ranging in date from prehistoric to 20th century.

Area Three

188. The Strip, Map and Sample exercise in Area Three exposed a number of potential archaeological features. Generally, these seem to relate to several possible activities. Evidence is present of both modern agricultural activity (landscaping relating to the use of the area as arable land and delineating land boundaries) and possible prehistoric activity (from the recovery of prehistoric lithic artefacts from both pits and post-holes in the area). The presence of possible truncated post-holes could also indicate an earlier phase of activity, predating the agricultural use of the land.

189. Artefact recovery from this area was limited, producing several pieces of worked flint and a hammerstone which could potentially have been incorporated into the feature via bioturbation. Without datable artefactual evidence, no specific date for the activities in the area can be obtained.

190. It is recommended that a program of post excavation works takes place to help elucidate that findings from the Strip, Map and Sample Exercise. Such a programme of works would be subject to approval by the West of Scotland Archaeological Service and agreed between Rathmell, RSK, TEP and Siemens in advance.

Acknowledgements

191. The authors would like to thank the Siemens site staff for their help, guidance and understanding during the on-site archaeological works as well as Joe Somerville from RSK. The authors would also like to thank Kelbourne Construction, Hewlets and IEC for all their help while on site. With special thanks to the Hunterston Estate Farm Manager, Willie Easton. Also to all the site staff for all their work, especially during the atrocious conditions. Thanks are also specifically due to Douglas Gordon and Louise Turner for their help with the editing, and Leah Kyle and Jessica Lumb for their help with the illustrations for this report.

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Appendix 1: Appendices

Gorman D & Sludden K	*RA12026 Hunterston Converter and Substation, West Kilbride, North Ayrshire; Strip, Map and Sample, DSR Appendices.* Unpublished Appendix document by Rathmell Archaeology Ltd.

Cartographic

1752-55	Roy	Military Survey of Scotland
1855	Ordnance Survey	1st edition Ordnance Survey
1910	Ordnance Survey	2nd edition Ordnance Survey

Appendix 2: Discovery & Excavation in Scotland

LOCAL AUTHORITY:	North Ayrshire
PROJECT TITLE/SITE NAME:	Hunterston Converter and Substation
PROJECT CODE:	RA12026
PARISH:	West Kilbride
NAME OF CONTRIBUTOR:	Diane Gorman & Katie Sludden
NAME OF ORGANISATION:	Rathmell Archaeology Limited
TYPE(S) OF PROJECT:	Open Area Excavation
NMRS NO(S):	N/A
SITE/MONUMENT TYPE(S):	N/A
SIGNIFICANT FINDS:	None
NGR (2 letters, 8 or 10 figures)	NS 1876 5116
START DATE (this season)	14th January 2014
END DATE (this season)	31st March 2014
PREVIOUS WORK (incl. *DES* ref.)	This is part of a series of reports detailing archaeological works at Hunterston Converter & Substation. These reports are as follows; Gordon 2013a *Hunterston Converter & Substation, West Kilbride, North Ayrshire: Archaeological Mitigation Data Structure Report* unpublished commercial document by Rathmell Archaeology Ltd; Gordon 2013b *Hunterston Converter & Substation, West Kilbride, North Ayrshire: Archaeological Evaluation Data Structure Report: Addendum* unpublished commercial document by Rathmell Archaeology Ltd; Gordon 2014 *Hunterston Converter & Substation, West Kilbride, North Ayrshire: Archaeological Mitigation Area A Data Structure Report* unpublished commercial report by Rathmell Archaeology Ltd; Gordon & Turner 2014 *Hunterston Converter & Substation, West Kilbride, North Ayrshire: Archaeological Evaluation Data Structure Report: 2nd Addendum* unpublished commercial document by Rathmell Archaeology Ltd; Gorman 2014 *Hunterston Converter & Substation, West Kilbride, North Ayrshire: Archaeological Monitoring Data Structure Report* unpublished commercial report by Rathmell Archaeology Ltd; Gorman, Turner & Gordon 2014 *Hunterston Converter and Substation, West Kilbride, North Ayrshire: Area B Data Structure Report* unpublished commercial report by Rathmell Archaeology Ltd; Gorman & Sludden 2014 *Hunterston Converter & Substation, West Kilbride, North Ayrshire: Archaeological Mitigation Area D Data Structure Report* unpublished commercial report by Rathmell Archaeology Ltd.
MAIN (NARRATIVE) DESCRIPTION: (may include information from other fields)	A programme of archaeological investigative works was required by RSK Environment Ltd on behalf of their clients in respect to the construction of the Hunterston Converter and Substation, West Kilbride, North Ayrshire (N/11/00708/PPPM). The Strip, Map and Sample Exercise was designed to mitigate the impact on any archaeological remains located within the Hunterston East Substation development area. North Ayrshire Council required a programme of archaeological works to be undertaken as a requirement of the issued planning consent (N/11/00708/PPPM). The West of Scotland Archaeology Service (WoSAS) who advise North Ayrshire Council on archaeological matters provided guidance on the structure of archaeological works required on site during construction works.

	Area One The Strip, Map and Sample exercise in Area 1 exposed a number of potential archaeological features. Generally, these seem to relate to agricultural activities and landscaping, relating to the use of the area as arable land and delineating land boundaries. Artefact recovery from Area 1 was limited, producing one piece of worked flint, which could potentially have been incorporated into the feature via bioturbation. Without datable artefactual evidence, no specific date for the activities in the area can be obtained, but generally activity in the area seems to be post-medieval or modern in date. *Watching Brief* No significant features were exposed during the Watching Brief. However, given the modern deposit which characterised this area, the potential for archaeological remains at a greater depth remains in the majority of the area. *Area Two* Excavations in Area Two exposed a number of potential archaeological features. Generally, these seem to relate to a mix of activities. Evidence of agricultural activities and landscaping relating to the use of the area as arable land, delineating land boundaries and land function usage. In addition, evidence of both modern and prehistoric activity was confirmed from recovery of both prehistoric and modern pottery sherds from both pits and post-holes in the area. The presence of possible truncated post-holes could also indicate an earlier phase of habitation, predating the agricultural use of the land. Evidence from excavations in Area 2 indicates occupation and land use ranging in date from prehistoric to 20th century. *Area Three* The Strip, Map and Sample exercise in Area Three exposed a number of potential archaeological features. Generally, these seem to relate to several possible activities. Evidence of both modern agricultural activity: landscaping relating to the use of the area as arable land, delineating land boundaries as well as possible prehistoric activity from the recovery of possible prehistoric lithic artefacts from both pits and post-holes in the area. The presence of possible truncated post-holes could also indicate an earlier phase of activity, predating the agricultural use of the land. Artefact recovery from this area was limited, producing several pieces of worked flint and a hammerstone which could potentially have been incorporated into the feature via bioturbation. Without datable artefactual evidence, no specific date for the activities in the area can be obtained. It is recommended that a program of post excavation works takes place to help elucidate that findings from the Strip, Map and Sample Exercise. Such a programme of works would be subject to approval by the West of Scotland Archaeological Service.
PROPOSED FUTURE WORK:	Post excavation works.
CAPTION(S) FOR ILLUSTRS:	None
SPONSOR OR FUNDING BODY:	RSK Environment Ltd
ADDRESS OF MAIN CONTRIBUTOR:	Unit 8 Ashgrove Workshops, Kilwinning, Ayrshire KA13 6PU
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ARCHIVE LOCATION (intended/deposited)	Report to West of Scotland Archaeology Service and archive to RCAHMS Collections.

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