

**THE CO-OPERATIVE ESTATES FARM,
DOWN AMPNEY,
GLOUCESTERSHIRE**



**ARCHAEOLOGICAL
EVALUATION REPORT
CP. No: 10659/13
10/12/2013**



archaeology

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This report covers works as outlined in the brief for the above-named project as issued by the relevant authority, and as outlined in the agreed programme of works. Any deviation to the programme of works has been agreed by all parties. The works have been carried out according to the guidelines set out in the Institute for Archaeologists (IfA) Standards, Policy Statements and Codes of Conduct. The report has been prepared in keeping with the guidance set out by WA Archaeology Ltd on the preparation of reports.

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SUMMARY

Wardell Armstrong Archaeology were commissioned on behalf of their clients The Co-Operative Estates to conduct a scheme of trenching across fields adjacent to the remains of RAF Down Ampney. The archaeological evaluation was undertaken over four days between the 19th and 22nd of November 2013. The evaluation involved the excavation of four trenches (measuring 1 x 40m, 1 x 93m and 2 x 100m), totalling 599.4m² of excavation, comprising 11.98% of the development area, under the supervision of PLANIT UXB Limited, across two fields to the south of the existing Co-operative Estate Airfield Farm. The trenches were then subsequently cleaned by hand before any features were investigated and recorded.

The trenches to the south of the runway (Trenches 1, 2 and 3) contained several possible pits which upon excavation were found to be natural deposits of clay. The trenches also contained several patches of disturbance which were found to be areas of rooting and possible former hedgerows. At the southern end of Trench 3 a possible boundary ditch, running southeast-northwest towards the runway, was excavated and recorded but no finds were recovered during the process.

Trench 4 to the east of the runway contained several areas of disturbance and small patches of clay similar to the other trenches. Upon excavation of these features they were found to be rooting or the remains of animal burrows, there were no finds recovered during the excavation of these features.

The trenches were backfilled after the completion of excavation and recording of the four trenches on 22/11/2013.

As this archaeological evaluation was conducted as part of a condition in association with the development of 30,000 tonne Anaerobic Digester plant, no further work is deemed necessary. However, given the high archaeological potential of the area, it is recommended that any future work be subject to a programme of archaeological investigation.

ACKNOWLEDGEMENTS

Wardell Armstrong Archaeology would like to thank the Co-Operative Estates for commissioning the project, and for all assistance throughout the work. Wardell Armstrong Archaeology would also like to thank Charles Parry, County Archaeologist, Gloucestershire County Council for all his assistance throughout the project. Further thanks are extended to the staff at the County Record Office in Gloucester for their help during this project.

Wardell Armstrong Archaeology would also like to extend their thanks to the staff at Bison Plant Hire, and Martin Whelan of PLANIT UXB Limited, for their help during this project.

The archaeological evaluation was undertaken by Mike McElligott assisted by Helen Philips and Ed Johnson. The report was written by Mike McElligott and the drawings were produced by Adrian Bailey. The environmental report was written by Don O'Meara. The project was managed by Phil Evans, Project Manager for Wardell Armstrong Archaeology. The report was edited by Frank Giocco, Technical Director.

1 INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 In November 2013, Wardell Armstrong Archaeology were invited by the Co-Operative Estates, to undertake a archaeological evaluation at Airfield Farm, Down Ampney, Gloucestershire (NGR SU 1115 9697; Figure 1), prior to the development of a 30,000 tonne Anaerobic Digester plant. The proposed works lie within the immediate vicinity of a former RAF airfield. As a result, Charles Parry of Gloucestershire County Council requested a programme of archaeological investigation, prior to the development taking place. This is in line with government advice as set out in Section 12 of the National Planning Policy Framework (NPPF 2012).
- 1.1.2 The archaeological evaluation was undertaken following approved standards and guidance (IfA 2008), and was consistent with the specification provided by Wardell Armstrong Archaeology (Evans 2013) and generally accepted best practice.
- 1.1.3 This report outlines the evaluation works undertaken on-site, the subsequent programme of post-fieldwork analysis, and the results of this scheme of archaeological works.

2 METHODOLOGY

2.1 PROJECT DESIGN

2.1.1 A project design was submitted by Wardell Armstrong Archaeology in response to a request by the Co-Operative Estates, for an archaeological evaluation of the study area. Following acceptance of the project design by Charles Parry of Gloucestershire County Council, Wardell Armstrong Archaeology was commissioned by the client to undertake the work. The project design was adhered to in full, and the work was consistent with the relevant standards and procedures of the Institute for Archaeologists (IfA), and generally accepted best practice.

2.2 THE FIELD EVALUATION

2.2.1 The evaluation consisted of the excavation of 4 trenches covering 599.4 m² of the proposed 0.5 hectare development area. The purpose of the evaluation was to establish the nature and extent of below ground archaeological remains within the vicinity. All work was conducted according to the recommendations of the Institute for Archaeologists (2008).

2.2.2 In summary, the main objectives of the field evaluation were:

- to establish the presence/absence, nature, extent and state of preservation of archaeological remains and to record these where they were observed;
- to establish the character of those features in terms of cuts, soil matrices and interfaces;
- to recover artefactual material, especially that useful for dating purposes;
- to recover palaeoenvironmental material where it survives in order to understand site and landscape formation processes.

2.2.3 Turf and topsoil was removed by mechanical excavator under close archaeological supervision. The trial trenches were subsequently cleaned by hand and all features were investigated and recording according to the Wardell Armstrong Archaeology standard procedure as set out in the Excavation Manual (Giecco 2012).

2.2.4 All finds encountered were retained, including those from excavated topsoil, and were cleaned and packaged according to standard guidelines, and recorded under the supervision of Megan Stoakley, WAA Finds Officer.

2.2.5 The four evaluation trenches were backfilled following excavation and recording.

2.2.6 The fieldwork programme was followed by an assessment of the data as set out in the Management of Archaeological Projects (2nd Edition, 1991).

2.3 THE ARCHIVE

2.3.1 A full professional archive has been compiled in accordance with the specification, and in line with current UKIC (1990) and English Heritage Guidelines (1991) and according to the Archaeological Archives Forum recommendations (Brown 2011). The archive will be deposited within Gloucester city museum or Gloucestershire Archives, with copies of the report sent to the County Historic Environment Record at Gloucester, available upon request. The archive can be accessed under the unique project identifier WAA13, DAF-A, CP 10659.

2.3.2 Wardell Armstrong Archaeology and Gloucestershire County Council, support the **Online AccesS to the Index of Archaeological InvestigationS (OASIS)** project. This project aims to provide an on-line index and access to the extensive and expanding body of grey literature, created as a result of developer-funded archaeological work. As a result, details of the results of this project will be made available by Wardell Armstrong Archaeology, as a part of this national project.

3 BACKGROUND

3.1 LOCATION AND GEOLOGICAL CONTEXT

- 3.1.1 The Co-Operative Estates farm, Down Ampney lies within the site of a former RAF airfield (SMR 21116), located to the southeast of the village of Down Ampney in the Cotswold district in Gloucestershire. The Cotswold district lies within the catchment area of the River Thames that includes the river itself and several tributaries that include the Rivers Windrush and Leach. The site lies at a height of approximately 82m AOD. The area is shown in Figure 1.
- 3.1.2 The underlying geology is Oxford Clay Formation – Mudstone (BGS) with overlying soil that consists of freely draining lime rich loamy soils (Magic.defra.gov.co.uk).

3.2 HISTORICAL AND ARCHAEOLOGICAL CONTEXT

- 3.2.1 *Introduction:* this historical and archaeological background is compiled from records held in the Gloucestershire Sites and Monuments Record (SMR), for a 1km search radius centred on the present study site, and is intended only as a brief summary of historical developments relevant to the study area.
- 3.2.2 *Prehistoric:* located to the south-west of the study area is the site of a possible Neolithic causewayed enclosure, near Charnock Wood. This site was identified as a cropmark through aerial photography, and field work at this location has produced a few flints and possible Iron Age sherds (SMR No. 574).
- 3.2.3 To the west and north-west of the present study site, the locations of three possible Bronze Age round barrows have been identified through aerial photography. These circular features were recorded as measuring between 20m to 28m, and are all defined by one ditch (SMR No's 2412, 3245 and 26806). Two Bronze Age spearheads are recorded in the SMR database as having been found at Down Ampney in 1910, although it has been suggested that one of these may have been recovered at Driffield (SMR No. 3335).
- 3.2.4 *Iron Age and Roman:* a possible Iron Age settlement of penannular and oval features has been identified as cropmarks to the south-west of the study area, immediately north-east of Bean Copse. The site is enclosed by a rectangular enclosure 85m by 62m in size, with an in-turned entrance in the north-east corner. A trackway appears to run along the north-west side. Within the main enclosure there are at least five smaller rectilinear asymmetric enclosures. There are indications of features within some of

- these enclosures such as internal divisions, pits and possible hut circles (SMR No. 575).
- 3.2.5 To the south of the airfield, a settlement and road have been identified as cropmarks, covering an area of approximately four acres. The site includes traces of at least 12 enclosures partly surrounded by a ditch. The SMR entry suggests the site may be of possible prehistoric or Roman date, and may represent a farmstead (SMR No. 2414). A further settlement site has been identified to the north of the village of Down Ampney, represented by an enclosure and linear features showing as cropmarks on aerial photographs. Field work at this site produced a concentration of Iron Age and also Romano-British pottery (SMR No. 3055).
- 3.2.6 Recent archaeological work undertaken by Cotswold Archaeology in 2009 on land at the Down Ampney Estate, located to the south-east of the study area, revealed features and artefacts ranging from the Mesolithic to modern date, with the majority of dateable deposits identified to the Iron Age, Roman and post-medieval periods. The Iron Age and Roman features were in the form of pits and ditches (SMR No. 33699).
- 3.2.7 Located immediately to the north-east of the study site is the line of a probable Roman road which has been identified as cropmarks on aerial photography. It was visible as a discontinuous, single linear feature, defined by two ditches with a maximum length of 2025m (SMR No. 26775). Adjacent to this possible Roman road, a series of possible Roman extractive pits have been identified, with approximately 29 visible, varying in size between 4m and 10m. The pits are arranged in a linear pattern and were possibly excavated to obtain road building materials (SMR No. 26776).
- 3.2.8 *Medieval:* the SMR presently contains entries for four locations of possible medieval or later gravel pits, located to the north-east and north-west of the study area. These were identified as cropmarks through aerial photography (SMR No's 26733, 26734, 26774 and 26777).
- 3.2.9 A possible medieval or post-medieval enclosure has been identified as earthworks on aerial photographs, as a rectangular enclosure 50m by 30m, and defined by one ditch. A smaller enclosure was recorded adjoining the first, on its eastern side (SMR No. 26800).
- 3.2.10 Archaeological work recently undertaken in 2004 by Cotswold Archaeology at Broadway Farm, Down Ampney, in advance of a proposed residential development, has revealed evidence for part of a medieval field system in the form of shallow, linear features, two of which contained 12th-13th century pottery (SMR No. 28728).

- 3.2.11 *Post-medieval and Modern*: of particular relevance to the present study site, is the SMR record relating to the Down Ampney World War Two Airfield. Occupation at Down Ampney began on the 7th February 1944 when an advanced party from Broadwell arrived. The first squadron to arrive was No. 48 on the 24th February, and five days later 271 Squadron's main party moved in. No. 271 Squadron soon had 38 Dakotas and 19 of its allotted gliders and by mid-March operational training had begun. Down Ampney's squadrons faced four tasks: freight delivery, casualty evacuation from French airstrips, paratroop drops and glider towing (SMR No. 21116).
- 3.2.12 *Unknown*: of relevance to the present study area are two SMR sites located immediately to the south-west. Both of these sites were identified through aerial photography, and both are of unknown date. The first was identified as an incomplete, asymmetric polygonal enclosure, 65m by 52m, defined by one ditch with four sides visible (SMR No. 2415). The second site is suggested to be two possible extensive field boundaries, visible as single linear features, perpendicular to each other and defined by one ditch with maximum lengths of 460m and 680m (SMR No. 26759).

4 ARCHAEOLOGICAL EVALUATION RESULTS

4.1 INTRODUCTION

4.1.1 The evaluation was undertaken in a single phase and consisted of four trenches of which two, trenches 3 & 4 were 100m long and trenches 1 and 2 were 93m and 40m respectively. The evaluation lasted for four days, commencing on the 19th of November to the 22nd of November 2013 (Figure 2). The topsoil was stripped by a tracked 13 ton 360 using a toothless bucket. Trenches 1 – 3 were located in the south field and trench 4 was located in the east field.

4.2 RESULTS

4.2.1 *Trench 1:* Trench 1 was located in the south field, toward the centre of the site to the southeast of the runway and was aligned northwest-southeast. The trench was excavated to a maximum depth of 0.56m revealing a firm light brownish yellow-orange sandy gravel natural substrate (102) below c.0.18m of a firm mid orangey brown sandy clay subsoil (101) and c.0.27m of a loose dark brown sandy clay topsoil (100) (Plate 1) (Figures 2 & 3). The subsoil was visible only the northwest half of the trench, fading out near the centre. Three archaeological features were observed within the trench that consisted of three pits, [103], [107] and [105]. There was a lot of root disturbance throughout the trench with several tree boles and old hedgerows observed and all had similar sterile fill to the features excavated.



Plate 1: Shot of Trench 1, looking northeast

4.2.2 Pit [107] was located at the southeast end of the trench and extended beyond the limit of excavation (Figure 3). It was sub-oval shaped and measured 1.8m in length by 1.06m in width and was excavated to a depth of 0.21m. It had sharp steep sloping sides with a slightly rounded base (Plate 2). The single fill (108) was a firm mid orangey brown sandy clay. There were no inclusions or finds recovered, though a single charred cereal grains and a number of wild plant seeds were recovered from the environmental soil sample <4> (108).



Plate 2: Section shot of pit [107], looking south



Plate 3: Section shot of pit [103], looking north

- 4.2.3 Pit [103] was located towards the middle of the trench, 35m northwest of pit [107] (Figure 3). It was partially visible, with its northeastern side extending beyond the limit of excavation (Figure 3). It was irregular shaped and measured 1m in length by 0.9m in width and was excavated to a depth of 0.36m (Plate 3). It had sharp, steep sloping sides with a gradual rounded base. The single fill (104) was a firm brown-yellow sandy clay that contained frequent gravel. No finds were recovered.
- 4.2.4 Pit [105] was located at the northwest end of the trench, 2.34m southeast of the concrete runway (Figure 3). It was circular shaped and measured 0.25m in diameter and was excavated to a depth of 0.15m (Plate 4). It had sharp very steep sloping sides with a slightly rounded base. The single fill (106) was a soft black gravel that contained very frequent stone. No finds were recovered, though charred cereal grains were recovered from environmental sample <2> (106). The stones within the fill were the same as the stone hardcore that ran alongside the runway and probably was associated with its construction.



Plate 4: Section shot of pit [105], looking northwest

- 4.2.5 **Trench 2:** Trench 2 was located in the south field, toward the middle of site and was aligned roughly north-south (Figure 2). The trench was excavated to a maximum depth of 0.35m revealing a firm yellow / orange sandy gravel natural substrate (201) below c.0.3m of a loose dark brown / grey topsoil (200) (Plate 5). The trench was devoid of any archaeological or modern features. Patches of root disturbance were observed throughout the trench.



Plate 5: Shot of trench 2, looking north



Plate 6: Shot of trench 3, looking northwest

- 4.2.6 **Trench 3:** Trench 3 was located in the south field of site, in the southeast corner and was aligned northwest-southeast (Figures 2 & 4). The trench was excavated to a maximum depth of 0.7m revealing a firm yellow-orange sandy gravel natural substrate (301) below c.0.35m of a loose dark brown sandy clay topsoil (300) (Plate 6). A single archaeological feature was observed that consisted of a small boundary ditch [302]. There were also patches of root disturbance throughout the trench.
- 4.2.7 Ditch [302] was located in the southeast end to the trench and was aligned west northwest-east southeast (Figure 4). It was linear shaped and extended beyond the limit of excavation at both ends. It measured 1.8m in length by 1m in width and was excavated to a depth of 0.23m. It had gradual, shallow sloping sides with a rounded base that gave it a broad V-shaped profile (Plate 7). The single fill (303) was a firm darkish mid brown gravel/sandy silt that contained occasional small pieces of un-worked flint. No finds were recovered. The ditch appeared to possibly be a former boundary ditch of unknown date.



Plate 7: Section across of ditch [302], looking west-northwest

- 4.2.8 **Trench 4:** Trench 4 was located in the east field on the east side of the site and was aligned northwest-southeast (Figure 2). The trench was excavated to a maximum depth of 0.8m revealing a firm light yellow/orange sandy gravel natural substrate (402) below c.0.35m of a firm mid orange-brown silty clay subsoil (401) and c.0.4m of a loose dark brown silty topsoil (400) (Plate 8). The trench was devoid of any archaeological or modern features.

There were patches of root disturbance and animal burrowing throughout the trench.



Plate 8: Shot of trench 4, looking southeast

5 ENVIRONMENTAL ANALYSIS

5.1 ARCHAEOBOTANY INTRODUCTION

- 5.1.1 During the course of the archaeological evaluation four samples were taken which were processed to assess their archaeobotanical potential. The samples were taken to extract material that may aid the understanding of the depositional history of the site. This could include evidence of human activity that may have left preserved archaeological material during the prehistoric or historic periods. As well as anthropogenic evidence, the remains of wild plants may allow inferences to be made regarding the local environment.
- 5.1.2 The methodology employed required that the whole earth samples be broken down and split into their various different components: the flot, the residue, the clay-silt and the sand-silt. The sample was manually floated and sieved through a 'Siraf' style flotation tank. In this case the residue and the flot are retained while the sand-silt-clay components are filtered out. The sample was floated over a 0.5mm plastic mesh, into which the residue was collected, then air-dried and sorted by eye for any material that may aid our understanding of the deposit. Charcoal fragments if larger than 1cm x 1cm were retained for later analysis. The residue samples were also scanned with a hand magnet to retrieve forms of magnetic material. This was done to retrieve residues of metallurgical activity, in particular hammer scale, spheroid hammer scale, fuel-ash slag and vitrified material which might be indicative of other high temperature non-metallurgical processes (though in this particular case only naturally occurring magnetic minerals were recovered). Processing procedures and nomenclature follows the conventions set out by the English Heritage Centre for Archaeological Guidelines publication (2001) and the Historic Metallurgy Society (Bayley et. al 2008). An experienced environmental archaeologist examined all of the dried residues for artefactual material. All of the heavy residues were then re-flotted in order to maximize the retrieval of this material as it was felt eye-sorting alone would be time consuming and may not allow an accurate retrieval of the smaller, more delicate charred remains.
- 5.1.3 The washover (flot) was recovered in a 250-micron geological sieve, dried slowly and scanned at x40 magnification for charred and uncharred botanical remains. Identification of these was undertaken by comparison with reference material held in the Environmental Laboratory at Wardell-Armstrong Archaeology and by reference to relevant literature (Cappers et al. 2010) (Beijerinck 1947) (Jacomet 2006). Plant taxonomic nomenclature follows Stace (2010).
- 5.1.4 Favourable preservation conditions can lead to the retrieval of organic remains that may produce a valuable suite of information, in respect of the depositional

environment of the material, thus enabling assessment of anthropogenic activity, seasonality and climate and elements of the economy associated with the features from which the samples are removed. In this case it was apparent that the sandy, well drained nature of the soil would most likely favour the preservation of charred remains only.

- 5.1.5 Table 1 contains the details of the analysis on a sample by sample basis. For material from the residue the relative abundance is based on a scale from 1 (lowest) to 3 (highest), unless it is stated that total counts or weights were used to record the presence of such material. Cereals are counted in terms of the total number of individuals. The other plant remains have been recorded on a scale from A-E. This is calculated as; A=1, B=2-10, C=11-30, D=30-100, E=c.100+; the exception being unidentified seeds, where the numbers of unidentified species is given, rather than their relative abundance.

5.2 DISCUSSION OF THE RESULTS

- 5.2.1 The samples produced generally low numbers of plant remains, but with some diversity of species types represented. Samples <1> (304) and <3> (104) produced noticeable lower numbers of plant remains than the other samples. This included seeds of goosefoots, elder and nettle; all indicative of poor levels of organic preservation when they dominate an assemblage.
- 5.2.2 Sample <2> (106) produced a number of charred cereal grains. There were all moderately-heavily charred, but with two possible barley grains being present. Wild species included fool's parsley, birch seeds, goosefoots, thistles, dead nettle, elder, bittersweet and nettle. Taken as a whole they may represent generally well manured, open landscape as one would expect from an agricultural landscape. Sample <4> (108) produced much the same remains, though with only one indeterminate charred cereal grain. The differences between these samples may represent different levels of preservation across the site (all having the relatively common seeds of goosefoots, nettles and elder), or it may represent different types of human activity which incorporated different materials into these deposits as they were forming.
- 5.2.3 The heavy residues produced low amounts of magnetic material (less than 5 grams per sample) which contained only naturally occurring magnetically susceptible minerals.

5.3 ARCHAEOBOTANY CONCLUSIONS AND RECOMMENDATIONS

- 5.3.1 The samples from this site produced generally low numbers of charred plant remains which are of little interpretative value for archaeobotanical purposes. However, they may be of use for radiocarbon dating should the samples of

bone not be suitable for this procedure. No further work is recommended at this time.

Sample	1	2	3	4
Context	304	106	104	108
Type of Feature	Ditch	Pit	Pit	Pit
<i>Volume processed (litres)</i>	10	20	10	20
<i>Volume of retent(Kg)</i>	3.1	3.2	0.3	1.5
<i>Volume of flot (ml)</i>	>10	>20	>20	>10
<i>Samples suitable for radiocarbon dating</i>		Y		Y
<u>Residue contents (relative abundance)</u>				
Bone/teeth, burnt bone	1			
Charcoal	2	2		1
Stones/gravel	3	2	3	3
Shell	1	1		
<u>Flot matrix (relative abundance)</u>				
Charcoal	1	2	2	2
Molluscs	1	2		
Modern roots	3	2	2	2
<u>Charred plant remains (total counts)</u>				
<i>Hordeum</i> sp (Barley; grain)		?2;		
Triticum species (aestivo-compactum type)		?1;		
Indeterminate cereal; grain		?1;1		1;
<u>Other plant remains (relative abundance)</u>				
<i>Aethusa cynapium</i> (Fools Parsley)		A;		B;
<i>Betula</i> sp. (Birch)		A;	;B	A;
<i>Bromus species</i> (Broom)		;A*		
<i>Chenopodiaceae</i> (Goosefoots)	B;A	C;	B;B	B;B
<i>Cirsium</i> sp. (thistles)		A;B		
<i>Fallopia convolvulus</i> (Black bind-weed)				B;
<i>Lamium species</i> (Dead nettle)		B;B		A;
<i>Sambucus</i> sp. (elder)	B;A	B;	B;	B;
<i>Solanum dulcamara</i> (Bitter sweet)		A;		A;
<i>Urtica dioica</i> (Stinging-nettle)		B;B	A;	A;
Unid		1		1

Table 1: Archaeobotanical remains

6 CONCLUSIONS

6.1 CONCLUSIONS

- 6.1.1 During the archaeological field evaluation at The Co-Operative Estates farm, 4 trenches were excavated in two fields, covering 599.4m² of the proposed 0.5 hectare development area. The purpose of the evaluation was to establish the nature and extent of below ground archaeological remains within the vicinity. All trenches were excavated down to the top of the natural substrate.
- 6.1.2 Trenches 2 and 4 were devoid of any archaeological features or deposits. Three pits were observed within Trench 1 of which two were located in the southeast end but their function remains uncertain at this time. No finds were recovered from the three pits. The third pit at the northwest end was next to the concrete runway and may have been associated with it or its construction. Pieces of hardcore, the same as a layer that abutted the side of the runway, were found in the pit. In Trench 3, a single linear feature was observed. Although the exact function of the feature remains uncertain at this time, the best possible interpretation for the archaeology based on the available evidence is one of a former field boundary.
- 6.1.3 The results obtained during the present evaluation, and from previous archaeological investigations suggest that the study area has not been intensively used in the past other than for agricultural purposes.

7 BIBLIOGRAPHY

7.1 SECONDARY SOURCES

Bayley, J. Crossley, D. and Ponting, M. 2008. *Metals and Metalworking: A Research framework for archaeometallurgy*. The Historical Metallurgy Society Occasional Publication No. 6: London.

Beijerinck, W. 1947. *Zadenatlas der Nederlandsche Flora*. Wageningen (Facsimile Edition 1976. Amsterdam: Backhuys en Meesters).

Brown, D.H. (2011) *Archaeological Archives: A Guide to Best Practice in Creation, Compilation, Transfer and Curation*. Archaeological Archives Forum

Cappers, R.T.J. Bekker, R.M. and Jans, J.E.A. 2010. *Digitale Zaden Atlas van Nederlands*. Barkhuis Publishing and Groningen Library, Groningen.

Countryside Commission (1998) *Countryside Character Volume 8: South-west - The character of England's natural and man-made landscape*. Cheltenham

English Heritage (1991) *Management of Archaeological Projects (MAP2)*. London: English Heritage

English Heritage. 2001. *Archaeometallurgy*. Swindon: English Heritage.

English Heritage. 2011. *Environmental Archaeology*. Swindon: English Heritage. 2nd edition.

English Heritage (2006) *Management of Research Projects in the Historic Environment*. London: English Heritage

English Heritage (various) *NMR Complete Monument Report*. London: English Heritage

Evans, P. (2013) *Down Ampney, Gloucestershire: Written Scheme of Investigation for Archaeological Evaluation by Trial Trenching*, Unpublished Document, Wardell Armstrong Archaeology

IfA (2008) *Standards and Guidance for Archaeological Evaluations*. Reading: Institute for Archaeologists

Jacomet, S. 2006. *Identification of cereal remains from archaeological sites*. 2nd edition. IPAS, Basal University.

NPPF (2012) *National Planning Policy Framework: Archaeology and Planning*. Department for Communities and Local Government

Stace, C. 2010. *New Flora of the British Isles*. 3rd Edition, Cambridge: Cambridge University Press.

UKIC (1990) *Guidelines for the preparation of excavation archives for long-term storage*

APPENDIX 1: TRENCH DESCRIPTIONS

Trench 1**Width:** 1.80m **Length:** 93.00m**Maximum Depth:** 0.56m **Minimum Depth:** 0.27m**OS Co-ordinates:** 411145 196971
(Easting, Northing)

411201 196897

TOPSOIL: DARK BROWN LOOSE SILTY CLAY **Depth:** 0.27m**SUBSOIL:** MID ORANGEY BROWN FIRM SANDY CLAY **Depth:** 0.18m**NATURAL:** LIGHT YELLOW/ORANGE FIRM SANDY GRAVEL **Depth:** N/A
BROWN**Description of any features**

Three pits were observed within the trench, [107] was located at the southeast end and was filled by (108), [103] was near the middle and was filled by (104) and [105] was near the northwest end and was filled by (106).

Trench 2**Width:** 1.80m **Length:** 40.00m**Maximum Depth:** 0.35m **Minimum Depth:** 0.25m**OS Co-ordinates:** 411149 196935
(Easting, Northing)

411153 196895

TOPSOIL: DARK BROWN GREY LOOSE SILTY CLAY **Depth:** 0.30m**NATURAL:** LIGHT YELLOW/ORANGE FIRM SANDY GRAVEL **Depth:** N/A**Description of any features**

No Archaeological features present.

Trench 3**Width:** 1.80m **Length:** 100.00m**Maximum Depth:** 0.7m **Minimum Depth:** 0.35m**OS Co-ordinates:** 411204 196899
(Easting, Northing)

411264 196819

TOPSOIL: DARK BROWN LOOSE SILTY CLAY **Depth:** 0.35m
NATURAL: LIGHT YELLOW/ORANGE FIRM SANDY GRAVEL **Depth:** N/A

Description of any features

A single feature that consisted of a small boundary ditch [302] was observed in the southeast end of the trench and was filled by (303).

Trench 4

Width: 1.80m **Length:** 100.00m

Maximum Depth: 0.8m **Minimum Depth:** 0.45m

OS Co-ordinates: 411269 196950

(Easting, Northing)

411324 196867

TOPSOIL: DARK BROWN GREY LOOSE SILTY CLAY **Depth:** 0.3m
SUBSOIL: MID ORANGEY BROWN FIRM SANDY CLAY **Depth:** 0.35m
NATURAL: LIGHT YELLOW/ORANGE FIRM SANDY GRAVEL **Depth:** N/A

Description of any features

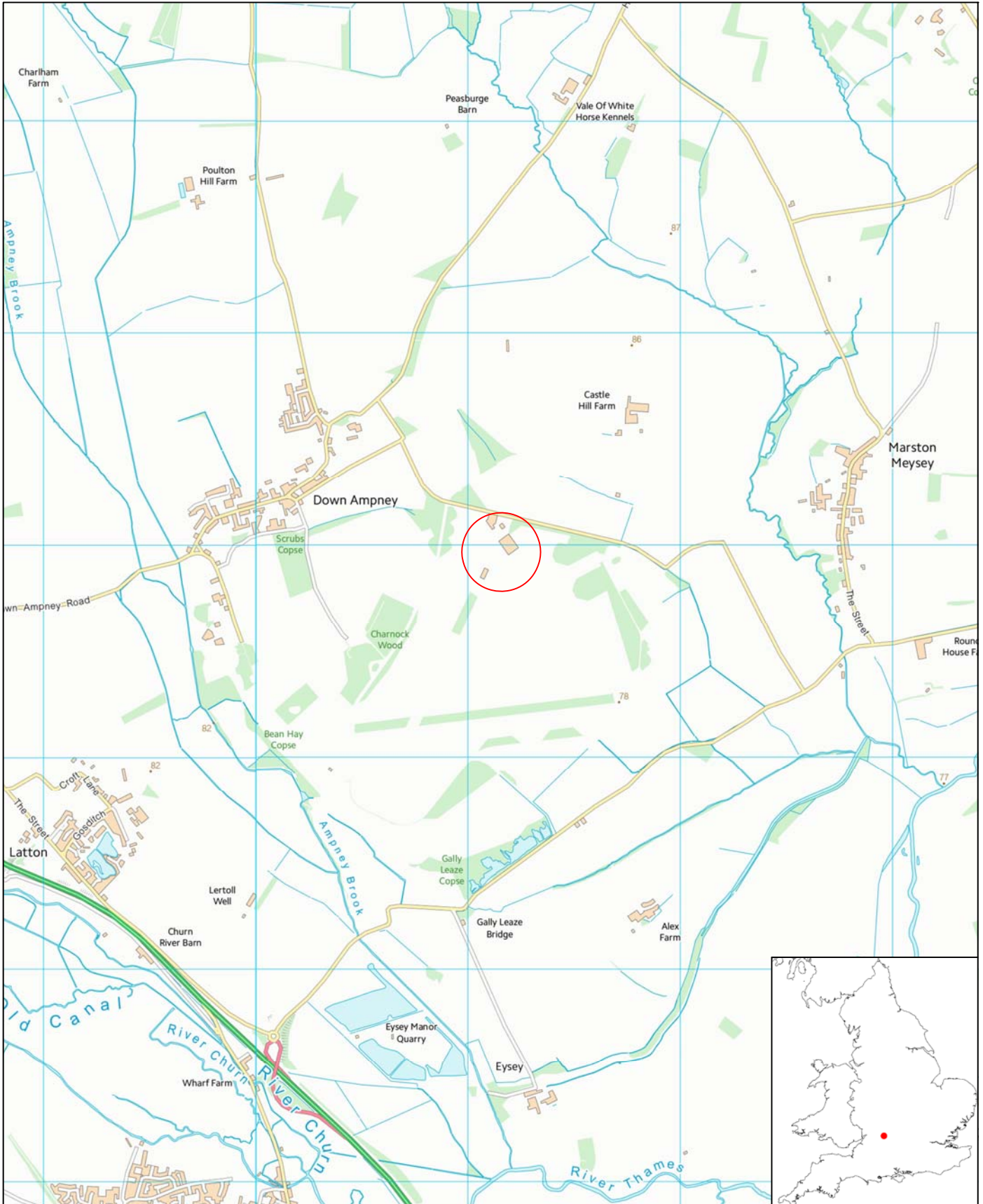
No Archaeological features present.

APPENDIX 2: CONTEXT TABLE

Context Number	Context Type	Description	Trench
100	Deposit	Topsoil = (200) & (300)	1
101	Deposit	Subsoil	1
102	Deposit	Natural = (201) & (301)	1
103	Cut	Cut of pit	1
104	Deposit	Fill of [103]	1
105	Cut	Cut of pit	1
106	Deposit	Fill of [105]	1
107	Cut	Cut of pit	1
108	Deposit	Fill of [107]	1
200	Deposit	Topsoil = (100) & (300)	2
201	Deposit	Natural = (102) & (301)	2
300	Deposit	Topsoil = (100) & (200)	3
301	Deposit	Natural = (102) & (201)	3
302	Cut	Cut of boundary ditch	3
303	Deposit	Fill of [302]	3
400	Deposit	Topsoil	4
401	Deposit	Subsoil	4
402	Deposit	Natural	4

Table 2: List of Contexts issued during Evaluation

APPENDIX 3: FIGURES






 <p>Wardell Armstrong Archaeology 2013</p>	<p>PROJECT: The Co-operative Estates Farm, Down Ampney, Gloucestershire</p> <p>SCALE: 1:25,000 at A4</p> <p>REPORT No: CP10659</p> <p>CLIENT: The Co-operative Estates</p> <p>DRAWN BY: AB</p> <p>DATE: November 2013</p> <p>FIGURE: 1</p>	<p>KEY:</p> <p> Site location</p>	 <p>Reproduced by permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office. © Crown copyright. All rights reserved. Licence number 100019512</p>
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Figure 1: Site location.







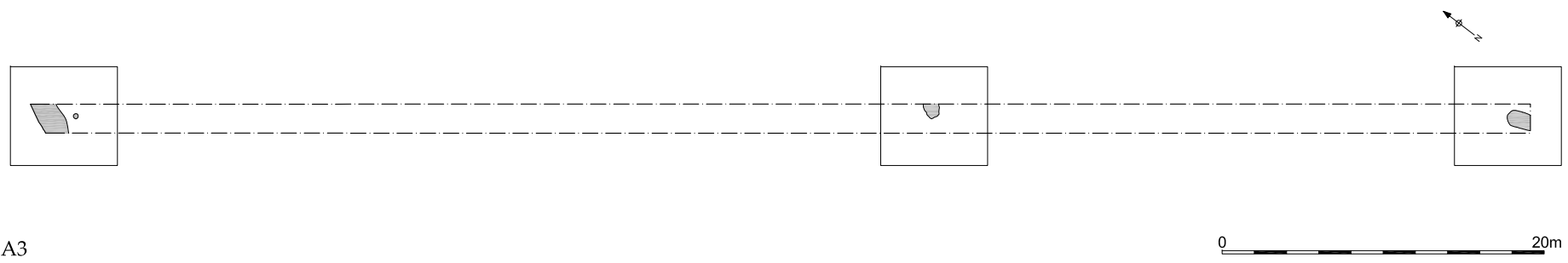
 <p>Wardell Armstrong Archaeology 2013</p>	<p>PROJECT: The Co-operative Estates Farm, Down Ampney, Gloucestershire</p> <p>SCALE: 1:2,000 at A4</p> <p>REPORT No: CP10659</p> <p>CLIENT: The Co-operative Estates</p> <p>DRAWN BY: AB</p> <p>DATE: November 2013</p> <p>FIGURE: 2</p>	<p>KEY:</p> <p> Site boundary</p> <p> Evaluation trenches</p>	 <p>Reproduced by permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office. © Crown copyright. All rights reserved. Licence number 100019512</p>
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Figure 2: Evaluation trench locations.



Wardell Armstrong
Archaeology
2013

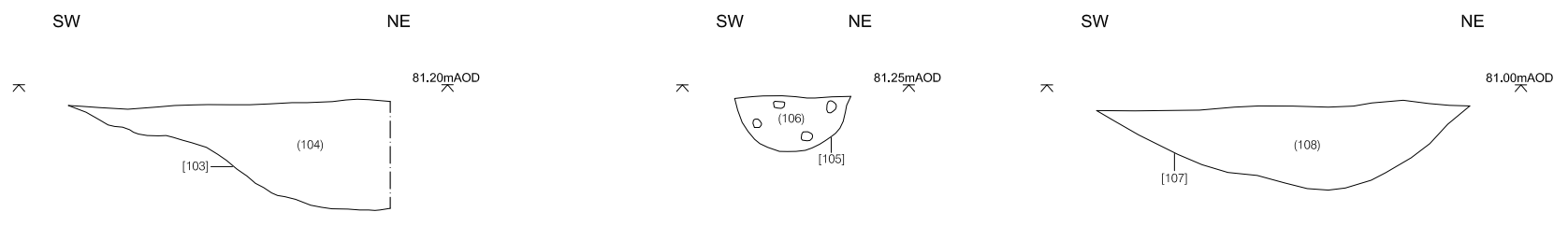
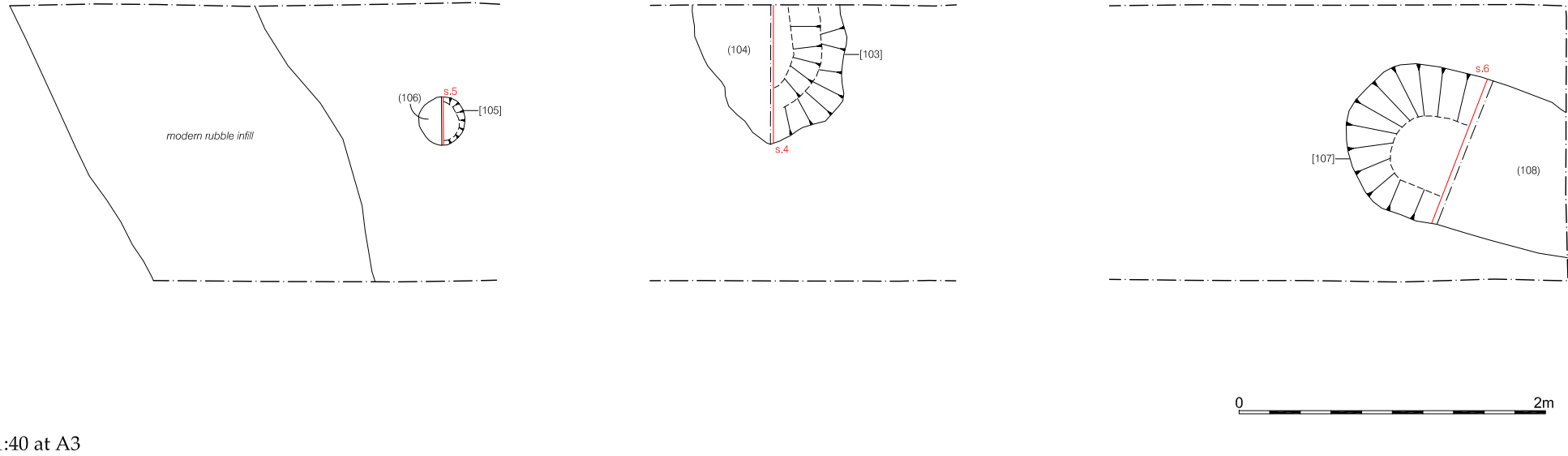
PROJECT:
The Co-operative Estates Farm,
Down Ampney, Gloucestershire

CLIENT:
The Co-operative Estates

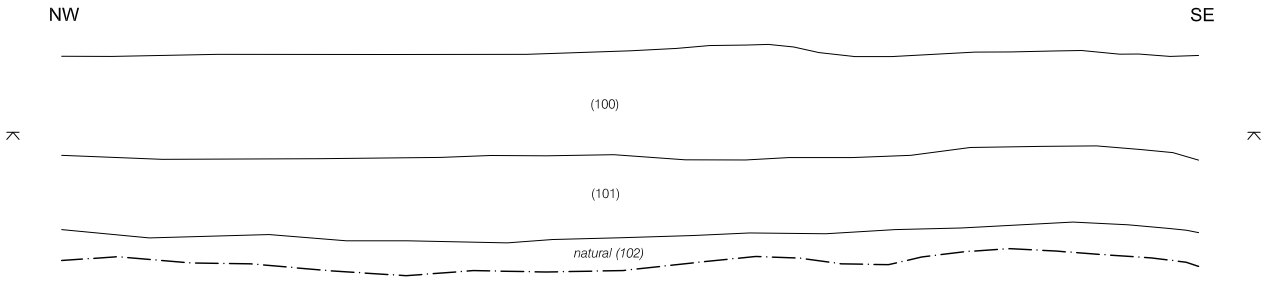
DRAWN BY: AB

DATE: November 2013

- KEY:
- (101) Context number
 - Height mAOD
 - Section location
 - Limit of excavation



Section 4. South-east facing section across possible pit [103].
Section 5. South-east facing section across pit [105].
Section 6. North facing section across ditch [107].



Section 8. South-west facing sample section.



1:20 at A3

REPORT No:
CP10659

FIGURE:
3

Figure 3: Trench 1; plan and sections.

1:400 at A3

0 20m

PROJECT:
The Co-operative Estates Farm,
Down Ampney, Gloucestershire

CLIENT:
The Co-operative Estates

DRAWN BY: AB

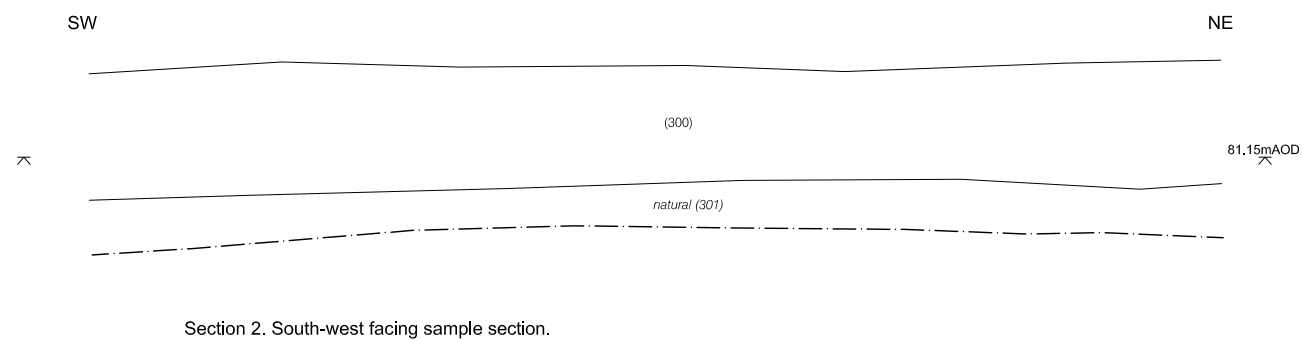
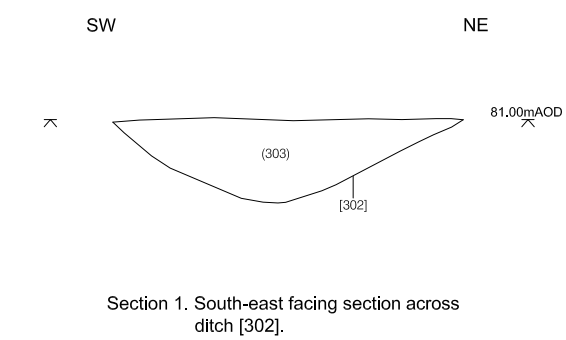
DATE: November 2013

KEY:

- (101) Context number
- Height mAOD
- Section location
- Limit of excavation

1:40 at A3

0 2m



1:20 at A3

0 1m

REPORT No:
CP10659

FIGURE:
4

Figure 4: Trench 3; plan and sections.