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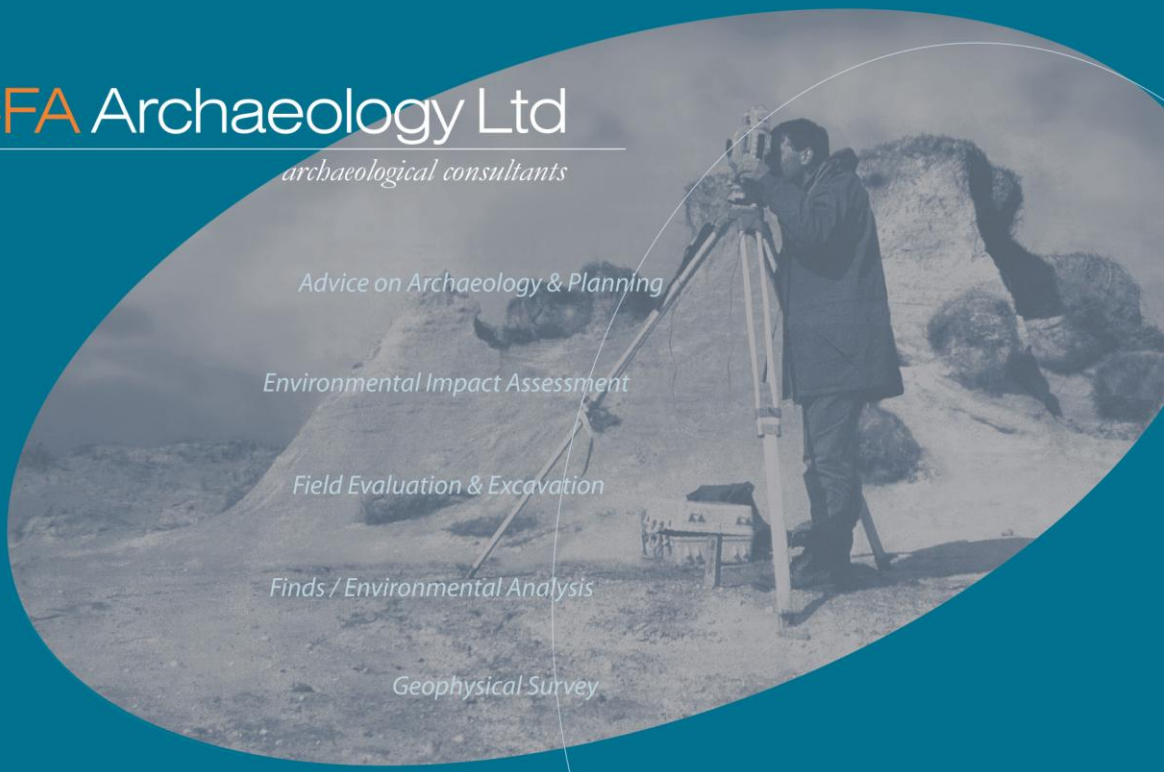

Advice on Archaeology & Planning

Environmental Impact Assessment

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Interpretation, Design & Display

Aberdeen Western Peripheral Route/Balmedie-Tipperty
Lot 1 – Balmedie to Tipperty
Invasive Archaeological Investigations

Mitigation Excavation
AWPR/B-T/BT/001

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Aberdeen Western Peripheral Route
Balmedie-Tipperty

Aberdeen Western Peripheral Route/Balmedie-Tipperty
Lot 1 – Balmedie to Tipperty
Invasive Archaeological Investigations

Mitigation Excavation
AWPR/B-T/BT/001

Report No. 3220

TRANSPORT SCOTLAND
ABERDEEN CITY COUNCIL
Aberdeenshire COUNCIL
HISTORIC SCOTLAND ALBA AOSMHOR

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NON-TECHNICAL SUMMARY

A programme of strip and map and mitigation excavation was carried out along the Balmedie to Tipperty section of the proposed Aberdeen Western Peripheral Route/Balmedie-Tipperty (AWPR/B-T).

The subject of this report is the topsoil stripping and hand-excavation of the features in Trench AWPR/B-T/BT/001 in Plot 209 at Keir Farm, Balmedie.

During the evaluation and the mitigation excavation eleven small pits were identified in this trench. It is not possible to say with certainty that all were archaeological in origin. However, based on the artefacts and plant macrofossil remains that were recovered, at least four of them appeared to be prehistoric in date. Ard-marks were also identified and were interpreted as the traces of prehistoric agriculture. These features, along with a background scatter of prehistoric lithics in the topsoil, indicate that the area was in fairly intensive use during the prehistoric period and that settlement remains could be present in the vicinity.

1. INTRODUCTION

1.1 General

This report presents the results of an archaeological excavation undertaken by CFA Archaeology Ltd (CFA) in April 2014. The work was undertaken in advance of the construction of the Balmedie to Tipperty section of the Aberdeen Western Peripheral Route (AWPR/B-T). The area investigated was within Plot 209 at Keir Farm, Balmedie (NGR: NJ 9576 1755) (Fig. 1). The CFA site code was ABBY and the CFA project number was 1723.

The employer for this project was Aberdeen City Council and overall responsibility for its delivery lies with the AWPR/B-T Managing Agent. Kirkdale Archaeology was the Archaeological Consultant on behalf of Grontmij Ltd for the Balmedie to Tipperty section, and CFA was the Contractor for the works; the curator was Historic Scotland.

1.2 Background

The Aberdeen Western Peripheral Route/Balmedie-Tipperty is being developed by Transport Scotland in partnership with The Employer, Aberdeen City Council. These two projects were individually identified as proposed transport interventions within the Modern Transport System and developed separately through the statutory process. In November 2010 the Scottish Government confirmed its intention to procure both projects under a single Non-profit Distributing contract. These two major improvements to the trunk-road network are close to each other and together will provide significant benefits to the north-east of Scotland by reducing journey times and cutting congestion within Aberdeen City.

The AWPR/B-T project comprises the construction and operation of two major improvements to the trunk road system and is of both national and regional importance. It is designed to support national, regional and local transport and economic development policy objectives and will comprise 34.6km of wholly new dual carriageway around the outskirts of Aberdeen along with an 11.5km Fastlink running from the A90 at Stonehaven and joining the peripheral route near to Maryculter. These major improvements comprise four sections consisting of the Northern Leg from North Kingswells to Blackdog, the Southern Leg from Charleston to North Kingswells, the Fastlink from Stonehaven to Cleanhill Junction, and the Balmedie to Tipperty improvements. Nine km of new dual carriageway will also be constructed during the Balmedie to Tipperty part of the project along with 3km of on-line improvements.

1.3 Archaeological Background

A cultural heritage assessment was prepared by Kirkdale Archaeology and formed Chapter 12 of an Environmental Statement (Grontmij & Natural Capital 2007). The assessment of the Balmedie-Tipperty section studied a 1km wide corridor either side of the proposed development to assess the effects construction would have on statutorily protected sites such as Listed Buildings and Scheduled Monuments. It also studied a 300m wide corridor either side of the proposed development for sites recorded in the National Monuments Record for Scotland (NMRS) and the local

council Sites and Monuments Record. The assessment identified a total of 90 sites of cultural heritage significance along or close to the proposed route of the development, junctions and link roads, the majority of which have non-statutory protection. Eight Listed Buildings were present and one Scheduled Monument.

A review of the background of the area demonstrated that it had undergone substantial prehistoric and historic development. The ES suggested that this indicated the possibility for further unidentified archaeology in the area. A brief summary of the history of the proposed development area is given below.

There was evidence of activity from some prehistoric periods within the study corridor and wider area. A Bronze Age burial at Keir and a Bronze Age barrow at Bairnie Hillock, as well as cropmarks of possible prehistoric date and isolated findspots of prehistoric artefacts, such as a dolerite axe and flint artefacts, were all within the study area. In the wider environs was the Monykebbuck Standing Stone, Hill of Fiddes Stone Circle, South Ythsie Stone Circle, Hill of Logie Settlement, and Pitlurg Long Barrow as well as Mesolithic flint working sites along the coast and a notable findspot of gold torcs. The New Statistical Account of 1834-45 stated that there had been a number of stone circles and prehistoric burial mounds upstanding in the parish of Belhelvie.

Orrock, later recorded as 'Overblairton' in the early 14th century, was part of the Thanage of Belhelvie. These lands were cited in a charter of 1388 when they were granted to John Fraser of Forglen. In 1616, the rights of John Wood of 'Fettercairn's' to 'Over Blairton' were confirmed by James VI. A charter of 1770 refers to a 'Manour Place'. The assessment concluded that many of the more substantial farms were likely to have their origins in this period, even if the present buildings were of a later date. An example of 17th century settlement is suggested by the documentary evidence of Edward Adamson and his sons Edward and William who were recorded in Kirkhill of Foveran in the mid-to late 17th century. It was considered that some of the major land boundaries that were still extant were likely to reflect these early land holdings.

The Roy map of 1747-55 showed the area largely comprising rig fields, indicating open field cultivation. In the later 18th century there was a period of agricultural improvement in the area and it is likely that the present pattern of field boundaries was formed then, possibly incorporating earlier property divisions.

In 2012 a magnetometer survey was conducted over all accessible and suitable ground within the proposed corridor of the scheme (Bartlett et al 2012). A number of anomalies interpreted as possible archaeological features, including putative enclosures, were recorded along the proposed route. The anomalies were closely associated with what were interpreted as relict cultivation features. Other responses, possibly related to earlier cultivation, were also noted as well as some linear anomalies. The survey was limited by boggy ground, narrow strips that were unsuitable for survey, verges and adjacent trunk road land parcels, heavy vegetation and woodland. These un-surveyed areas totalled 20% of the total coverage. Anomalies that were identified within the route corridor as being of archaeological potential were targeted for evaluation in sixty-two of the trial trenches.

A topographic survey of four sites (previously identified in the Cultural Heritage Chapter of the ES (Sites **42**, **51**, **57**, **72**)) was conducted in 2012 (Wessel 2012).

Previous archaeological work was undertaken by CFA in 2013 and consisted of a programme of trial trenching within Lot 1 of the Aberdeen Western Peripheral Route (Moore 2013).

Three sites of potential archaeological interest were revealed by the trial trenching. It was decided, in agreement with Kirkdale Archaeology and Jacobs, and with the approval of Historic Scotland, that the mitigation measures relating to the sites identified during and following trial trenching should take the form of a strip and record, with hand excavation of any features revealed subject to further agreement.

This report covers the programme of mitigation excavation for Trench BT/001, as agreed with the Consultant. The other sites are reported under separate cover (Suddaby 2014a & Suddaby 2014b).

2. METHODOLOGY

2.1 General

CFA Archaeology is a registered organisation (RO) with the Institute for Archaeologists (IfA). All work was undertaken in accordance with the Specification within Tender Document OJEU Reference Number 2012/S 235-387161 (2013) and with reference to, but not limited to, best practice as detailed in Schedule 1 of the same document, the preamble of the Specification: principally following published Historic Scotland standards and those set by the Institute for Archaeologists in their *'Standard and Guidance for Archaeological Field Evaluation'* (IfA 1994, revised 2008).

CFA Archaeology Ltd follows the Institute for Archaeologists' Code of Conduct, Standards and Guidance for Archaeological Fieldwork.

A terrestrial photographic condition survey was undertaken prior to and immediately after the investigation. All equipment and footwear was cleaned and disinfected prior to entry on to any areas of land. An Ecological Clerk of Works conducted walkover surveys prior to any work commencing and was consulted regularly to ensure that any ecological matters were dealt with promptly and correctly.

2.2 Surveying

The co-ordinates for the trench location were provided by the Consultant, as shown on Figs. 1 and 2. The location was accurately surveyed as excavated and tied in with the Ordnance Survey National Grid and Ordnance Datum using a GPS with a survey grade accuracy of ±10mm. Any alteration to the pre-agreed trench layout was carried out with the prior agreement of the Consultant.

Precision topographic mapping was achieved through the use of GNSS/GPS systems. The survey achieved real-time GNSS/GPS positioning accurate to 0.01m horizontal and 0.03m vertical, through the use of a Trimble R6 GNSS system with a TSC3 controller running Trimble Access surveying software. This equipment provides centimetre-accurate RTK corrections using the Trimble VRS Now RTK GNSS service.

Data collection and survey control were integrated with the overall plans for the invasive investigations.

Survey data was exported from Trimble Access on the TSC3 controller to dxf format, retaining individual point feature codes and associated attributes, and processed in AutoCAD 2013. Model space in CAD was in metres at 1:1 and standard CFA layers and feature codes were used.

2.3 Mechanical Excavation

All topsoil/subsoil was stripped from the agreed area by a tracked mechanical excavator equipped with a toothless ditching bucket. All groundbreaking operations were undertaken under the direct and continuous supervision and control of the

Contractor. Mechanical excavation ceased either at the first archaeological horizon or at the level of the natural geological deposits where it could be demonstrated that no archaeological horizon existed.

Immediately after the removal of the topsoil and any other overburden, the whole area stripped was inspected for archaeological features. All areas containing significant concentrations of features, particularly small non-linear features, or where the presence of such groups of features was suspected, were manually cleaned. The cleaning extended for 10m beyond any archaeological feature.

An overall plan of all visible features was prepared by instrument survey and, where appropriate, hand planning. The plan also showed any areas of visible damage or destruction of the archaeology caused by recent activity e.g. service trenches, quarry pits etc. The survey data and any hand-drawn plans were accurately tied in to the Ordnance Survey National Grid and Ordnance Datum.

Following the completion of the topsoil stripping, a composite drawing showing information from the instrument survey and the hand planning was prepared and submitted to the Consultant. Features shown on the drawing were annotated with a preliminary archaeological interpretation. The drawing was submitted to the Consultant along with detailed costings and programme for undertaking excavation of features present, and for undertaking a post-excavation assessment and preparation of a post-excavation assessment report. Following agreement with the Consultant, the mitigation excavations were then undertaken as described in Section 2.4.

Topsoil and subsoil were segregated into separate spoil heaps on either side of the trench. Spoil from the excavation of any archaeological features was stored on the subsoil side. All backfilling was undertaken following inspection by, and with the prior agreement of, the Consultant. The material was backfilled in reverse order of removal in a series of layers no more than 250mm thick, each layer compacted as appropriate by the mechanical excavator prior to placement of the next layer.

2.4 Hand Excavation and Recording

The excavation of features was agreed in advance with the Consultant. In this instance 100% of the isolated negative pit-like features that were present were excavated by half section, then fully excavated. The ard-marks were excavated for c.20% of their length. A number of features were initially interpreted as possible stake-holes but there was a level of uncertainty over this interpretation so 25% of these features were half sectioned. Further excavation of these features was to be agreed if they proved to be of archaeological significance.

All excavated contexts were fully recorded by detailed written context records giving details of location, composition, shape, dimensions, relationships, finds, samples, cross-references to other elements of the record and other relevant contexts. At least one plan and at least one section were drawn at an appropriate scale. Photographic records in digital form were taken of all trenches and archaeological features using a camera with a minimum resolution of ten megapixels. Feature locations were surveyed using a GPS with a survey survey-grade accuracy of ±10m (horizontal)/±30mm (vertical). All artefacts were recovered from site for specialist

examination and analysis. All soil from the excavation of archaeological features was metal detected.

2.5 On-site Palaeoenvironmental Sampling Strategy

Samples comprising at least 40 litres per context or 100% of smaller contexts were taken for the recovery of small plant remains, small bones and finds. The soil samples were processed during fieldwork to allow a continuous reassessment and refinement of sampling strategies.

2.6 Archiving

The project archive, comprising all CFA record sheets, plans and reports, will be deposited at the RCAHMS and will conform to current guidelines in MoRPHE (English Heritage 2006). The deposition of paper and digital archives with RCAHMS will comply with their current requirements (RCAHMS 1996a, 1996b) and with the Archaeological Archives Forum (Brown 2007) and ADS guidelines for digital archives (Richards and Robinson 2001).

All artefactual material is allocated through the Treasure Trove process. *Treasure Trove in Scotland: A Code of Practice* (Scottish Government 2008) will be followed for the notification of finds to the Treasure Trove Unit. The finds/ecofacts will be archived according to the Scottish Museums Council guidelines (Scottish Museums Council 2000). Copies of specialists' reports, finds, illustrations, and x-rays will be included with the deposition where appropriate. Packing lists (paper and digital), and site information recorded on Museum Transfer Forms will be included with each deposition. Signed receipts for deposition will be retained. A discard policy is not appropriate for material collected in Scotland.

A summary statement of the results of this survey will be submitted for publication in *Discovery and Excavation in Scotland* once all archaeological works are completed (Appendix 6). An *OASIS Scotland* entry will be completed.

3. ARCHAEOLOGICAL RESULTS

3.1 General

Trench BT/001 measured c. 40m north-south by c. 20m east-west (Figs. 2 & 4) and had an area of 807m². It was located in a shallow hollow to the west of Keir Farm and to the south-east of Hare Cairn (Fig. 3). At the time of the works the field contained pasture grass.

The topsoil (**001**) within the trench was generally 0.3m deep. An agricultural subsoil (**002**) was present across the majority of the trench with only the southern end being free of this deposit. The natural subsoil (**003**) was in general a stiff, almost stone-free clay-silt which merged into sandy clay with some frequent stones in the southern part of the trench.

Parallel linear furrows cut the agricultural subsoil (**002**) and these were cut by a modern ceramic field drain network. The subsoil (**002**) was removed and a number of features cut in to the natural substrate were sealed beneath it.

The strip and map identified seventy-one potential individual features (Figs. 2 & 10). These were initially interpreted as: fifteen possible pits (**358, 444, 456, 458, 460, 462, 464, 466, 468, 470, 472, 474, 476, 478, 482**), plus the two pits identified during the evaluation (numbered here as **484, 486**); and fifty-six possible stake-holes (**350, 354, 356, 360, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380, 382, 384, 386, 388, 390, 392, 394, 396, 398, 400, 402, 404, 406, 408, 410, 412, 414, 416, 418, 420, 422, 424, 426, 428, 430, 432, 434, 436, 438, 440, 442, 446, 448, 450, 452, 454, 500, 502, 504, 506, 510, 512**). An area scored by ard-marks (**480, 518**) was identified and other features included three agricultural furrows (**488, 490** & **492**) and field drains (**494**).

Due the identification of small pits of probable prehistoric date from the evaluation phase it was agreed with the Consultant that all of the potential pits would be fully excavated, twenty-five percent of the possible stake holes would be investigated, and a minimum length of 20m of the ard-marks would be excavated.

3.2. Features

Pits

Fifteen possible pits were excavated (**358, 444, 456, 458, 460, 462, 464, 466, 468, 470, 472, 474, 476, 478** & **482**). Of those excavated, nine appeared to be shallow pits of archaeological interest.

Pit **358** (Figs. 2 & 5) measured 0.35m in length, 0.15m in width and 0.1m in depth. It contained a single sterile fill (**359**).

Pit **444** (Figs. 2, 5 & 6) measured 0.65m in length, 0.6m in width and 0.7m in depth. It contained a single sterile fill (**445**).

Pit **456** (Figs. 2 & 5) measured 0.55m in length, 0.45m in width and 0.15m in depth. It contained a single sterile fill (**457**).

Pit **460** (Figs. 2, 5 & 7) measured 0.4m in length, 0.4m in width and 0.1m in depth. It contained a single fill (**461**) containing a sherd of prehistoric pottery.

Pit **462** (Figs. 2, 5 & 8) measured 0.4m in length, 0.35m in width and 0.05m in depth. It contained a single sterile fill (**463**).

Pit **464** (Figs. 2, 5 & 9) measured 0.25m in length, 0.25m in width and 0.05m in depth. It contained a single sterile fill (**465**).

Pit **466** (Figs. 2, 5 & 9) measured 0.25m in length, 0.25m in width and 0.1m in depth. It contained a single sterile fill (**467**).

Pit **468** (Figs. 2 & 5) measured 0.8m in length, 0.8m in width and 0.15m in depth. It contained a single sterile fill (**469**).

Pit **474** (Figs. 2 & 5) measured 1.2m in length, 0.9m in width and 0.5m in depth. It contained three fills (**478**, **508** & **509**).

Small abraded fragments of hazelnut shell were recovered from two of the pits (**460** & **464**). Low concentrations of wood charcoal were recovered from Pits **444**, **456**, **460**, **462**, **466**, **464** and **474**. The charcoal was generally much abraded, fragmentary and too small to allow species identification.

Ard-marks (Figs. 10-13)

These features were located in the north-eastern quadrant of the trench, covering an area measuring around 20m by 10m. They were slightly sinuous, with marks merging and diverging with others. They were cut into natural and were filled with grey or brown clay-silt. They were clearly cut by later agricultural features such as the furrows and field drainage. Two alignments were recorded, one north-west/south-east (**480**) and a second north-east/south-west (**518**). Three slots (Slots 5, 6 & 7) were excavated across these which identified that the north-west/south-east aligned ard-marks (**480**) cut the north-east/south-west aligned marks (**518**).

In Slot 5 (Figs. 10 & 14) twelve ard-marks were sectioned. Ard-marks on both alignments were sectioned. They were largely U-shaped in profile and measured between 0.04m and 0.07m wide by between 0.015m and 0.03m deep.

In Slot 6 (Fig. 10) eight ard-marks were sectioned. Ard-marks on both alignments were sectioned. They were largely U-shaped in profile and generally measured between 0.04m and 0.10m wide by between 0.025m and 0.07m deep. However, one of the north-east/south-west aligned marks was wider at 0.175m wide.

In Slot 7 (Figs. 10 & 15) four ard-marks were sectioned. Ard-marks on both alignments were sectioned. Profiles varied between U-shaped and V-shaped. They measured between 0.05m and 0.08m wide by between 0.035m and 0.06m deep.

Agricultural Furrows (Fig. 2)

Three furrows (**488, 490, 492**) with a wavelength of 9m and aligned broadly north-south were identified, although they were not excavated as their function was clear.

Natural Features (Fig 2)

Upon excavation, two pit-like features (**472** & **478**) turned out to be natural features. The upper surfaces of granite boulders had started to degrade, giving the impression of a fill of a pit on the surface.

Upon excavation, two pit-like features (**470** & **476**) were proven not to be real features.

The fill of feature **482** was loose and similar to topsoil. This was interpreted as a stone-hole where the stone had been recently removed, probably as a result of ploughing.

Upon excavation, one pit-like feature (**458**) was proven to be caused by root action or burrowing.

Fifty-six small features of stake-hole size (**350, 354, 356, 360, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380, 382, 384, 386, 388, 390, 392, 394, 396, 398, 400, 402, 404, 406, 408, 410, 412, 414, 416, 418, 420, 422, 424, 426, 428, 430, 432, 434, 436, 438, 440, 442, 446, 448, 450, 452, 454, 500, 502, 504, 506, 510** & **512**) were recorded. Three clusters were present, all in the centre of the trench. No patterns were apparent within the clusters. Almost all were circular or near-circular in plan and contained mottled red-brown or mottled grey-brown clay-silt fills. It was agreed that 25% of these features would be excavated in the first instance to ascertain whether they were archaeological in origin.

Four box sections were excavated to investigate these features. Box sections were chosen to reveal the profile of the features as this is generally accepted as one of the few ways to clearly differentiate between roots, small animal burrows and stake-holes.

In Slot 1 six features were investigated (**366, 368, 370, 372, 496** & **498**). Features **372** and **496** had a V-shaped profile and were respectively: 0.05m wide by 0.1m deep; and 0.05m wide by 0.08m deep. Features **366**, **368**, **370** and **498** had a U-shaped profile and measured respectively: 0.04m wide by 0.13m deep; 0.05m wide by 0.08m deep; 0.03m wide by 0.03m deep and 0.03m wide by 0.05m deep. Features **368, 370, 372, 496** and **498** all appeared to be vertical but feature **366** was slightly curved back on itself.

In Slot 2 (Fig. 16) five features were investigated (**384, 386, 388, 394** & **396**). Features **384**, **389, 394** and **396** had U-shaped profiles and measured respectively: 0.05m wide by 0.03m deep; 0.05m wide by 0.05m deep; 0.05m wide by 0.03m deep and 0.10m wide by 0.05m deep. Feature **386** had a U-shaped profile and measured 0.05m wide by 0.14m deep and was not vertical, rather it was at an angle to the vertical plane. Many of these features had deep worm tubes containing fine rootlets descending from their bases.

In Slot 3 (Figs 17 & 18) five features were investigated (**376, 378, 380, 504** & **506**). Features **380**, **504** and **506** were V-shaped in profile with rounded bases and measured respectively: 0.05m wide by 0.05m deep; 0.08m wide by 0.08m deep; and 0.06m wide by 0.08m deep. Features **376** and **378** were U-shaped in profile and measured respectively: 0.06m wide by 0.06m deep; and 0.06m wide by 0.12m deep. Feature **378** was not vertical rather it was at an angle to the vertical plane.

In Slot 4, one feature (**424**) was investigated. This proved to be only 0.01m deep and had a flat base.

The possible stake-holes had no discernible pattern and were shown by excavation to be variable in profile and depth. Some were not vertical and some clearly bent back on themselves. Most did not have a sharp V-shaped profile that would be expected from a sharpened stake that had been driven in to the ground. On the basis of the excavation that was carried out it was agreed that these were not stake-holes but were likely to be the product of burrowing or root action.

4. THE FINDS

Table 1 summarises the finds quantities by find type that were collected during the fieldwork and bulk sample processing. The individual finds are quantified by context number in Appendix 5.

Find type	No.	Weight (g)
Lithic	12	35
Pottery	5	87
Slag	2	1

Table 1 Summary of finds

The majority of finds from BT/001 are prehistoric in date and are discussed in individual reports below. The only other finds are two very small fragments of a slag-like material recovered from the sample taken of context **445**: this material is likely to be natural magnetic residue. Similar material was identified during the evaluation and no further work is recommended on this material.

4.1 Prehistoric Pottery by Melanie Johnson

A single large, thick sherd of extensively abraded handmade pottery (Fig. 19), most probably a base sherd, was recovered from context **461,** the fill of pit **460**. The sherd weighs 87g and is 20mm thick. The fabric is a heavily gritted, dense fabric with a dark grey core and interior and a brown exterior. The sherd is prehistoric in date although its exact period is unknown; it is most likely to belong to the second millennium BC or into the first millennium BC.

Four fragments of prehistoric pottery were recovered from the processed sample residues from context **461** and context **483**. These are too small to be identified further.

4.2 Lithics by Ann Clarke

Twelve lithics (Fig. 20) were recovered from the topsoil. The assemblage is composed of two distinctive groups of flints. There is a group of bipolar struck chunky cortical flakes of dark grey/brown flint some with edge damage from use on parts of the edges. There is also a flaked pebble of similar material from which flakes have been detached from around circumference.

The other group comprises a collection of inner flakes of toffee coloured/yellow flint some of which have small amounts of edge retouch. These inner flakes are not diagnostic of a particular prehistoric period but are likely to be earlier than the group of cortical flakes.

Catalogue

Three secondary flakes of brown and grey flint with more than two thirds cortex on the dorsal face. The narrow inner edges bear edge damage from use at proximal or distal ends.
ML 45mm; ML 27mm; MTh 8mm

ML 31mm; MW 19mm; MTh 7mm
ML 27mm; MW 25mm; MTh 7mm

Three irregular secondary flakes of dark grey flint. Hard hammer. Bipolar struck.
ML 23mm; MW 26mm; MTh 8mm
ML 23mm; MW 12mm; MTh 7mm

Four inner flakes of toffee-coloured flint. One fragment with truncated steep edge retouch. One broad flake with irregular abrupt edge retouch on distal end.
ML 28mm; MW 19mm; MTh 4mm
Broken L 17mm; MW 18mm; MTh 9mm
ML 12mm; MW 11mm; MTh 3mm
ML 22mm; MW 9mm; MTh 4mm

One secondary flake fragment of calcined flint.
ML 17mm; Broken W 17mm; MTh 5mm

One inner flake fragment of quartz.
Broken L 12mm; MW 15mm; MTh 4mm

4.5 Storage and Curation Policy

All processing, recording, storage and samples has been carried out in accordance with the Institute for Archaeologist's *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials* (2001, revised 2008).

Stable finds have been washed and dried and metal finds have been air-dried. All artefacts have been packaged as appropriate for long-term storage in accordance with the requirements of the recipient museum and the contract. Finds will be stored at CFA's secure storage facility until such time as the archive is ready to be deposited.

No finds have been identified as requiring conservation or special storage conditions.

The project archive, comprising all CFA identification sheets will be appended in the main archive and deposited with RCAHMS upon instruction from the Consultant following completion of fieldwork and any relevant post-excavation analyses. Finds will be subject to the Scots law of Treasure Trove and Bona Vacantia, and will be reported to the Crown Agent for disposal.

5 ARCHAEOBOTANICAL REPORT by Mhairi Hastie and Mike Cressey

5.1 Methodology

Each sample was processed through a Siraf style flotation tank, washed over a 250µm mesh and re-floated. The floating organic material (flot) was collected in a 250µm sieve and the material remaining in the tank (retent) was washed through a nest of sieves of 10mm, 5mm, 2mm, 1mm and 250µm size. Both flot (organic) and retent (inorganic) fractions were then air-dried under controlled conditions. A 10 litre sub-sample of each bulk soil sample was processed and assessed unless the sample was less than 10 litres in total, in which case the whole sample was processed (see Table 2 for details).

The retents were sorted by eye for small finds and any non-buoyant archaeobotanical remains, and scanned with a magnet to pick up ferrous debris, and any archaeologically significant material was removed and bagged.

The flots were scanned using a binocular microscope (x10 - x200 magnification) and the presence of any charred plant remains recorded.

Identifications of archaeobotanical material were carried out with reference to seed atlases and in-house reference collection. The results are summarised in Tables 3 and 4.

Sample number	Context number	Context description	Sample vol. (litres)	Vol. of sample processed (litres)
1	465	Fill of pit 464	2	2
2	467	Fill of pit 466	2	2
3	445	Fill of stone-hole 444	20	10
4	457	Fill of pit 456	20	10
5	483	Fill of pit 482	2	2
6	508	Upper fill of pit 474	20	10
7	509	Basal fill of pit 474	10	10
8	463	Fill of pit 462	4	4
9	461	Fill of pit 460	10	10
10	359	Fill of stake-hole (natural feature)	2	2
11	519	Fill of ard-mark 518	1	1
12	481	Fill of ard-mark 480	1	1
13	519	Fill of ard-mark 518	10	10
14	481	Fill of ard-mark 480	2	2

Table 2 - Sample details

5.2 Results

The amount of archaeologically significant material recovered from the samples was low. The results are summarised in Tables 3 and 4.

Hazelnut shell: Small abraded fragments of hazelnut shell were recovered from two of the samples, contexts **461** and **465**, both fills of pits.

Wood charcoal: Low concentrations of wood charcoal were recovered from all of the samples. The charcoal was generally much abraded and fragmentary (primarily

<2mm in diameter) and too small to allow species identification. Only two samples, contexts **461**, (fill of pit **460**) and **519**, (fill of ard-marks **518**), contain sufficiently large enough fragments of charcoal for AMS dating.

Sample number	Context number	Context description	Nutshell	Wood charcoal	
				Quantity	AMS
1	465	Fill of pit 464	+ (x2)	+ (sf)	
2	467	Fill of pit 466		+ (sf)	
3	445	Fill of stone-hole 444		+ (sf)	
4	457	Fill of pit 456		++ (sf)	
5	483	Fill of pit 482		+ (sf)	
6	508	Upper fill of pit 474		+ (sf)	
7	509	Basal fill of pit 474		+ (sf)	
8	463	Fill of pit 462		++ (sf)	
9	461	Fill of pit 460	++ (x11)	++ (sf)	
10	359	Fill of stake-hole (natural feature)		+ (sf)	
11	519	Fill of ard-mark 518		+ (sf)	
12	481	Fill of ard-mark 480		+ (sf)	
13	519	Fill of ard-mark 518		+ (sf)	
14	481	Fill of ard-mark 480		+ (sf)	

Table 3 - Composition of retents

Sample number	Context number	Context description	Flot vol. (ml)	Wood charcoal		Coal/ Cinders	Comments
				Quantity	AMS		
1	465	Fill of pit 464	10	+ (vsf)			Primarily modern root debris
2	467	Fill of pit 466	20	sterile			All modern root debris
3	445	Fill of stone-hole 444	30	+ (vsf)		+ (vsf)	Primarily modern root debris
4	457	Fill of pit 456	30	++ (sf)		+ (vsf)	Primarily modern root debris
5	483	Fill of pit 482	10	+ (sf)			Primarily modern root debris
6	508	Upper fill of pit 474	30	+ (vsf)			Primarily modern root debris
7	509	Basal fill of pit 474	20	sterile			All modern root debris
8	463	Fill of pit 462	20	+ (vsf)			Primarily modern root debris
9	461	Fill of pit 460	20	++	*		Primarily modern root debris
10	359	Fill of stake-hole (natural feature)	10	+ (sf)			Primarily modern root debris
11	519	Fill of ard-mark 518	<10	+ (sf)			
12	481	Fill of ard-mark 480	<10	+ (sf)			
13	519	Fill of ard-mark 518	30	++	*		Primarily modern root debris
14	481	Fill of ard-mark 480	<10	+ (sf)			

Table 4 - Composition of flots

Key: + = rare, ++ occasional, +++ = common and ++++ = abundant
* = samples containing large enough fragments of charcoal for AMS dating
sf = small fragments (<5mm dia.)
vsf = very small fragments (<2mm dia.)

5.3 Statement of potential

The carbonised plant remains are in poor condition, the fragmentary and abraded nature suggesting that they have undergone much movement prior to burial. The low amount of material recovered does not allow for detailed discussion. The charcoal assemblage is too small to infer species exploitation and the composition of the local woodland. Only two samples, contexts **461**, (fill of pit **460**) and **519**, (fill of ard-marks **518**), contain sufficiently large enough fragments of charcoal for AMS dating.

Sufficient material for AMS dating was also recovered during the evaluation phase from the fill (**209/04**) of pit **209/03** (Moore 2013). However, this material was also fragmentary and abraded suggesting that it had undergone much movement prior to burial (Moore. 2013).

5.4 Storage and Curation Policy

All processing, recording, storage and samples has been carried out in accordance with the Institute for Archaeologist's *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials* (2001, revised 2008), with *Environmental Archaeology: a guide to the theory and practice of methods, from sampling and recovery to post-excavation* (English Heritage 2011) and with reference to the Association for Environmental Archaeology's Working Paper No. 2, *Environmental Archaeology and Archaeological Evaluation* (1995).

The carbonised plant remains (charcoal) recovered from the samples have been packaged as appropriate for long-term storage in accordance with the requirements of the recipient museum and the contract. The assemblages will be stored at CFA's secure storage facility until such time as the archive is ready to be deposited.

6. ASSESMENT OF ARCHAEOLOGICAL FINDINGS

Two pits (recorded herein as **484** & **486**) were identified in Trench BT92 during the evaluation phase (recorded then as **209/03** & **209/05** (Moore 2013)). These were interpreted as being prehistoric in date.

Apart from Pit **474**, the pits recorded during this excavation were broadly similar to those discovered during the evaluation. They were, in general, shallow and, apart from one (**474**), contained a single fill. The positive identification of all the pits as archaeologically significant features is not certain as dateable finds were only recovered from two pits (**484** from the evaluation and **460** from the mitigation excavation). Furthermore, only Pit **484** contained more than one find suggesting that at least these finds were not residual. The charcoal and charred nut shell recovered from the soil samples from the pits were all fragmentary so could be residual and is not necessarily indicative of an archaeologically significant origin for the feature. However, charred nut shell is often found in pits of prehistoric date so this may indicate that an archaeologically significant origin for pits **460** and **464** is likely. So whilst it is possible that some of the pits may not be archaeologically significant (**358**, **444**, **456**, **462**, **466**, **468**), some (**460**, **464**, **484** & **486**) may be, and are most likely prehistoric in date.

The criss-cross linear features are interpreted as ard-marks: the traces of probable prehistoric ploughing using a simple ard plough. These indicate that this area had been farmed during the prehistoric period. Based on the currently available information it is not possible to identify if the pits and the ard-marks are contemporary.

The pits did not form any discernible pattern so do not appear to be structural in nature. It is possible that the pits are part of a general scatter of small-scale prehistoric activity in this area and that these, together with the ard-marks, are associated with an as yet undiscovered nearby settlement.

The flints found in the topsoil are further indication of prehistoric activity in this area. This is also attested to by the presence of the nearby Hare Cairn, which is a prehistoric burial cairn.

Three cultivation furrows were also identified. Their wavelength is suggestive of Broad Rig which can date as late as the 17th to 18th century.

The overall results of this excavation and the other associated excavations along the route (Suddaby 2014a & b) indicate that the landscape through which the Balmedie to Tipperty portion of the AWPR route will pass was utilised in the prehistoric period and that it was intensively improved and farmed from the post-medieval period onwards. Improvement features include extensive drainage works and stone clearance features. Pre-recent farming traces such as rig-and-furrow cultivation are widespread across the route.

7. CONCLUSION

A programme of archaeological works was carried out in advance of the construction of the Balmedie-Tipperty section (Lot 1) of the Aberdeen Western Peripheral Route/Balmedie-Tipperty. The programme of works consisted of the strip, map and excavation of features within Trench AWPR/B-T/BT/001 at Keir Farm, Balmedie, following on from a trial trenching evaluation (Moore 2013).

Between the evaluation phase and the mitigation excavation eleven small pits were identified. It is not possible to say with certainty that all were archaeologically significant. However, based on the artefacts and plant macrofossil remains that were recovered, at least four of them (**460**, **464**, **484** & **486**) appear to be prehistoric in date. Ard-marks were also identified and were interpreted as the traces of prehistoric agricultural activity. These features along with a background scatter of prehistoric lithics in the topsoil indicate that the area was in use during the prehistoric period and that settlement remains could be present in the vicinity. However, these remains were localised to this immediate area and it is entirely possible that they represent the sole remaining traces of the prehistoric use of the landscape in this locale.

Whilst charcoal of sufficient size for AMS dating was recovered its condition suggests that it had undergone much movement prior to burial. Therefore the material cannot be securely attributed to the date of the digging or backfilling of the features. It is therefore recommended that this material is not submitted for AMS dating.

The project archive, comprising all CFA record sheets, maps and reports, will be deposited with the National Monuments Record of Scotland (NMRS) and copies of reports will be lodged with the Aberdeenshire Council Sites and Monuments Record.

A summary statement will be submitted for publication in *Discovery and Excavation in Scotland* (See Appendix 6) and will be reported through *OASIS Scotland*.

8. REFERENCES

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APPENDIX 1: Context Register

Note: Apart from topsoil, agricultural subsoil and natural, context numbers start at 350 as they were numbered consecutively throughout the project which covered another two excavations (Suddaby 2014a & Suddaby 2014b).

Context	Fill of	Description
001		Topsoil
002		Agricultural Subsoil
003		Natural Subsoil
350		Possible stake-hole (natural feature)
351	350	Mid brown clay-silt
352		Possible stake-hole (natural feature)
353	352	Mid brown clay-silt
354		Possible stake-hole (natural feature)
355	354	Mid brown clay-silt
356		Possible stake-hole (natural feature)
357	356	Mid brown clay-silt
358		Cut for small pit.
359	358	Mid brown clay-silt
360		Possible stake-hole (natural feature)
361	360	Soft red-brown clay silt
362		Possible stake-hole (natural feature)
363	362	Soft red-brown clay silt
364		Possible stake-hole (natural feature)
365	364	Soft red-brown clay silt
366		Possible stake-hole (natural feature)
367	366	Soft red-brown clay silt
368		Possible stake-hole (natural feature)
369	368	Soft red-brown clay silt
370		Possible stake-hole (natural feature)
371	370	Soft red-brown clay silt
372		Possible stake-hole (natural feature)
373	372	Soft red-brown clay silt
374		Possible stake-hole (natural feature)
375	374	Soft red-brown clay silt
376		Possible stake-hole (natural feature)
377	376	Soft red-brown clay silt
378		Possible stake-hole (natural feature)
379	378	Soft red-brown clay silt
380		Possible stake-hole (natural feature)
381	380	Soft red-brown clay silt
382		Possible stake-hole (natural feature)
383	382	Soft red-brown clay silt
384		Possible stake-hole (natural feature)
385	384	Soft red-brown clay silt
386		Possible stake-hole (natural feature)
387	386	Soft red-brown clay silt
388		Possible stake-hole (natural feature)
389	388	Soft red-brown clay silt
390		Possible stake-hole (natural feature)
391	390	Soft red-brown clay silt
392		Possible stake-hole (natural feature)
393	392	Soft red-brown clay silt
394		Possible stake-hole (natural feature)
395	394	Soft red-brown clay silt
396		Possible stake-hole (natural feature)

Context	Fill of	Description
397	396	Soft red-brown clay silt
398		Possible stake-hole (natural feature)
399	398	Soft red-brown clay silt
400		Possible stake-hole (natural feature)
401	400	Soft red-brown clay silt
402		Possible stake-hole (natural feature)
403	402	Soft red-brown clay silt
404		Possible stake-hole (natural feature)
405	404	Soft red-brown clay silt
406		Possible stake-hole (natural feature)
407	406	Soft red-brown clay silt
408		Possible stake-hole (natural feature)
409	408	Soft red-brown clay silt
410		Possible stake-hole (natural feature)
411	410	Soft red-brown clay silt
412		Possible stake-hole (natural feature)
413	412	Soft red-brown clay silt
414		Possible stake-hole (natural feature)
415	414	Soft red-brown clay silt
416		Possible stake-hole (natural feature)
417	416	Soft red-brown clay silt
418		Possible stake-hole (natural feature)
419	418	Soft red-brown clay silt
420		Possible stake-hole (natural feature)
421	420	Soft red-brown clay silt
422		Possible stake-hole (natural feature)
423	422	Soft red-brown clay silt
424		Possible stake-hole (natural feature)
425	424	Soft red-brown clay silt
426		Possible stake-hole (natural feature)
427	426	Soft red-brown clay silt
428		Possible stake-hole (natural feature)
429	428	Soft red-brown clay silt
430		Possible stake-hole (natural feature)
431	430	Soft red-brown clay silt
432		Possible stake-hole (natural feature)
433	432	Soft red-brown clay silt
434		Possible stake-hole (natural feature)
435	434	Soft red-brown clay silt
436		Possible stake-hole (natural feature)
437	436	Soft red-brown clay silt
438		Possible stake-hole (natural feature)
439	438	Soft red-brown clay silt
440		Possible stake-hole (natural feature)
441	440	Soft red-brown clay silt
442		Possible stake-hole (natural feature)
443	442	Soft red-brown clay silt
444		Cut for post-hole.
445	444	Mid brown clay silt fill of 444
446		Possible stake-hole (natural feature)
447	446	Soft red-brown clay silt
448		Possible stake-hole (natural feature)
449	448	Soft red-brown clay silt
450		Possible stake-hole (natural feature)
451	450	Soft red-brown clay silt
452		Possible stake-hole (natural feature)
453	452	Soft red-brown clay silt

Context	Fill of	Description
454		Possible stake-hole (natural feature)
445	454	Soft red-brown clay silt
456		Cut for pit.
457	456	Mid brown clay silt fill of 456
458		Natural Feature
459	458	Red-brown clay silt
460		Cut for small pit.
461	460	Dark brown clay silt
462		Cut for small pit.
463	462	Light brown clay silt
464		Cut for small pit.
465	464	Red brown clay silt
466		Cut for small pit.
467	466	Red brown clay silt
468		Cut for pit.
469	468	Red brown clay silt
470		Natural feature
471	470	fill of 470
472		Stone-hole
473	472	Broken stone fill of 470
474		Cut for pit
475	474	Mid red-brown clay silt
476		Natural feature
477	476	Dark red-brown clay silt
478		Stone-hole
479	478	Broken stone fill of 478
480		Ard-marks aligned NW-SE
481	480	Light grey-brown clay silt
482		Stone-hole
483	482	Dark brown clay silt
484		Cut for Pit **209/03** identified in evaluation trench
485		Not used
486		Cut for Pit **209/06** identified in evaluation trench
487		Not used
488		Cut for furrow
489	488	Mid brown clay-silt with small stones
490		Cut of furrow
491	490	Mid brown clay-silt with small stones
492		Cut for furrow
493	492	Mid brown clay-silt with small stones
494		Field drain cut
495	494	Mixed topsoil/subsoil fill
496		Possible stake-hole (natural feature)
497	496	Soft red-brown clay silt
498		Possible stake-hole (natural feature)
499	498	Soft red-brown clay silt
500		Possible stake-hole (natural feature)
501	500	Soft red-brown clay silt
502		Possible stake-hole (natural feature)
503	502	Soft red-brown clay silt
504		Possible stake-hole (natural feature)
505	504	Light cream-brown clay silt fill of 504
506		Possible stake-hole (natural feature)
507	506	Soft red-brown clay silt
508	474	Dark orange silty clay secondary fill of 474
509	474	Mid brown silty clay basal fill of 474
510		Possible stake-hole (natural feature)

Context	Fill of	Description
511	510	Soft red-brown clay silt
512		Possible stake-hole (natural feature)
513	512	Soft red-brown clay silt
514		Animal burrow
515	514	Fill of burrow 514
516		Animal burrow
517	516	Fill of burrow 516
518		Ard-marks NE-SW
519	518	Fill of ard-marks 518

APPENDIX 2: Photograph Register

Note: Numbers start at 358 as photos were numbered consecutively throughout the project which covered another two excavations (Suddaby 2014a & Suddaby 2014b).

Shot	Description	From	Conditions
358-361	BT/001, general views pre-excavation	SE	Sunny
362	BT/001, soil profile, S facing section	S	Bright
363-366	BT/001, ard-marks 480 and 518	Various	Sunny
367	BT/001, trench excavated	S	Bright
368-369	BT/001, trench excavated	SE	Bright
370-372	BT/001, trench excavated	N	Bright
373-374	BT/001, Slot 2 box section including possible stake holes (natural features) 386, 388, 394, 396	N	Bright
375-378	BT/001, Slot 1 box section including possible stake holes (natural features) 366, 368, 370, 372	N	Bright
379-380	BT/001, possible stake hole (natural feature) 372 section	NNE	Overcast
381-382	BT/001, possible stake holes (natural features) 370 and 496	N	Overcast
383	BT/001, possible stake hole (natural feature) 366 section	W	Overcast
384-385	BT/001, possible stake hole (natural feature) 368 section	SE	Overcast
386	BT/001, voided burrow in box section	E	Overcast
387-388	BT/001, possible stake hole (natural feature) 496 section	NNE	Overcast
	BT/001, possible stake hole (natural feature) 386 section	N	Overcast
	BT/001, possible stake holes (natural features) 394 and 500 s	N	Overcast
	BT/001, possible stake holes (natural features) 396 and 502	E	Overcast
395	BT/001, possible stake hole (natural feature) 384 pre-ex	E	Overcast
396-397	BT/001, Slot 3 box section including possible stake holes (natural features) 376, 378, 380, 504, 506 pre-excavation	E	Overcast
398	BT/001, possible stake holes (natural features) 376, 378, 380 sections	E	Bright
399	BT/001, Slot 3 general view	E	Bright
400	BT/001, possible stake holes(natural features) 376, 378, 380 section	E	Bright
401	BT/001, possible stake holes (natural features) 504, 506 sections	NW	Bright
402	BT/001, Slot 2 general view	N	Bright
403	BT/001, possible stake holes (natural features) 386, 388 sections	N	Bright
404	BT/001, possible stake hole (natural feature) 394 section	N	Bright
405	BT/001, burrow curving below natural	E	Bright
406	BT/001, possible stake hole (natural feature) 396 section	E	Bright
407	BT/001, possible stake hole (natural feature) 384 section	S	Bright

Shot	Description	From	Conditions
408	BT/001, Slot 3 possible stake holes (natural features) 504, 506 plan view	NW	Bright
409	BT/001, Slot 3 possible stake holes (natural features) 376, 378, 380 section	E	Bright
410	BT/001, Slot 4 possible stake hole (natural feature) 424 pre-excavation	S	Bright
411	BT/001, possible stake hole (natural feature) 424 section	S	Bright
412	BT/001, general view of Slot 1	N	Bright
413	BT/001, pit 464 pre-excavation	W	Bright
414	BT/001, pit 444 pre-excavation	NE	Bright
415-416	BT/001, pit 466 pre-excavation	W	Bright
417	BT/001, pits 464, 466 sections	W	Hazy sun
418	BT/001, pit 466 section	W	Hazy sun
419	BT/001, pit 464 section	W	Hazy sun
420-421	BT/001, pit 444 section	N	Hazy sun
422	BT/001, pit 444 post-excavation	NE	Hazy sun
423	BT/001, pit 456 pre-excavation	SSW	Hazy sun
424-427	BT/001, ard-marks 480 and 518 cleaned	N	Hazy sun
428-430	BT/001, ard-marks 480 and 518 cleaned	S	Hazy sun
431	BT/001, ard-marks 480 and 518 cleaned. South end	W	Hazy sun
432	BT/001, ard-marks 480 and 518 around possible stake hole 420 cleaned	W	Hazy sun
433	BT/001, ard-marks 480 and 518 cleaned. North end	W	Hazy sun
434-435	BT/001, ard-marks 480 and 518 cleaned. North-east corner	N	Hazy sun
436	BT/001,Stone-hole 474 pre-excavation	SSW	Hazy sun
437	BT/001, pit 466 post-excavation	W	Hazy sun
438	BT/001, pit 464 post-excavation	W	Hazy sun
439	BT/001, pit 456 section	SSW	Bright
440	BT/001, pit 482 pre-excavation	S	Overcast
441-442	BT/001, pit 456 post-excavation	SSW	Overcast
443-444	BT/001, Pit 474 section	SSW	Overcast
445-447	BT/001, Stone-hole 482 plan view	S	Overcast
448	BT/001, Stone-hole 482 section	S	Overcast
449	BT/001, Natural feature 476 pre-excavation	SW	Sunny
450-451	BT/001, pit 462	NNE	Sunny
452	BT/001, Stone-hole 482 post-excavation	S	Sunny
453	BT/001, Pit 474 post-excavation	S	Sunny
454	BT/001, Stone-hole 472 pre-excavation	N	Sunny
455	BT/001, Stone-hole 478 pre-excavation	N	Sunny
456	BT/001, Stone-hole 478 pre-excavation	W	Sunny
457-458	BT/001, pit 460 pre-excavation	NNE	Sunny
459-460	BT/001, Stone-hole 478 post-excavation	N	Sunny
461-462	BT/001, Stone-hole 472 post-excavation	N	Sunny
463-464	BT/001, pit 462 section	NNE	Sunny
465	BT/001, Natural feature 470 pre-excavation	N	Sunny
466-467			
468	BT/001, Natural feature 470 post-excavation	N	Sunny
469	BT/001, pit 468 pre-excavation	W	Sunny
470	BT/001, pit 460 post-excavation	N	Sunny
471	BT/001, pit 462 post-excavation	N	Sunny
472	BT/001, pit 468 section	N	Sun/Shade
473	BT/001, Natural feature 458 pre-excavation	NE	Bright
474	BT/001, pit 358 pre-excavation	N	Bright
475	BT/001, pit 358 section	S	Bright
476	BT/001, pit 358 post-excavation	S	Overcast
477-480	General views of the location of BT/001	NW	Bright
481	Hare Cairn	SE	Bright

Shot	Description	From	Conditions
482	General view of BT/001	WNW	Bright
483-484	BT/001, slot 5 ard-marks 480, 518	SW	Hazy sun
485-486	BT/001, slot 6 ard-marks 480, 518	SW	Hazy sun
487	BT/001, slot 6 ard-marks 480, 518	NE	Hazy sun
488-489	BT/001, ard-marks 480 cutting across 518.	SW	Hazy sun
490-491	BT/001, ard-marks 480 cutting across 518.	NE	Hazy sun
492-493	BT/001, slot 5 cleaned after ard mark fills removed	SW	Overcast
494	BT/001, slot 5 cleaned after ard mark fills removed	NE	Overcast
495-496	BT/001, slot 7 cleaned after ard mark fills removed	E	Overcast
497-498	BT/001, slot 5 cleaned after ard mark fills removed	W	Overcast
499-504	BT/001, south facing trench section showing furrow 488 cutting subsoil 002	S	Overcast
505	BT/001, north facing trench section showing topsoil 001 over natural 003	N	Overcast
506-508	BT/001west facing trench section showing field drain cutting subsoil 002	W	Overcast

APPENDIX 3: Drawing Register

Note: Numbers start at 83 as drawings were numbered consecutively throughout the project which covered another two excavations (Suddaby 2014a & Suddaby 2014b).

Drawing No.	Sheet No.	Description/Contexts	Section/Plan	Scale
83	15	Slot 3 plan N-R	Plan	1:10
84	15	Slot 3 Sections N-O, O-Q	Section	1:10
85	15	Slot 4 plan S-U	Plan	1:10
86	15	Slot 4 Sections U-V feature 424	Section	1:10
87	15	Plan of Slot 1 showing possible stake-holes (natural features)	Plan	1:10
88	15	Sections A-F of Slot 1 showing possible stake-holes(natural features)	Section	1:10
89	16	Plan of features 386, 388, 394, 396, 384	Plan	1:20
90	16	Plan of features 386, 388, 394, 396, 384	Plan	1:10
91	16	Section of features 386, 388, 394, 396, 384	Section	1:20
92	18	Plan of 444 showing fully excavated pit	Plan	1:10
93	18	N facing section of pit 444	Section	1:10
94	17	West facing section of pit 464	Section	1:10
95	17	Plan of pit 464	Plan	1:10
96	17	W facing section of pit 466	Section	1:10
97	17	Plan of 466	Plan	1:10
98	17	Plan of pit 464	Plan	1:10
99	17	Post ex plan of 466	Plan	1:10
100	17	S facing section of 456	Section	1:10
101	17	Plan of 456	Plan	1:10
102	17	Post ex plan of 456	Plan	1:10
103	17	S facing section of 582	Section	1:10
104	17	Plan of pit 482	Plan	1:10
110	19	Plan of ard-marks 480	Plan	1:40
111	18	SW facing section of 474	Section	1:10
112	18	Post ex plan of pit 474	Plan	1:20
113	17	NE facing section of 462, 510, 512	Section	1:10
114	17	Plan of 462, 510, 512	Plan	1:10
115	20	S facing section of 460, 514, 516	Section	1:10
116	20	Post-ex plan of 462, 510, 510	Plan	1:10

Drawing No.	Sheet No.	Description/Contexts	Section/Plan	Scale
117	20	Plan of 460, 514, 516	Plan	1:10
118	20	Post ex plan of feature 460	Plan	1:10
119	18	N facing section of pit 468	Section	1:10
120	18	Post ex plan of 468	Plan	1:10
121	20	S facing section of 358	Section	1:10
122	20	Post-ex plan of 358	Plan	1:10
123	21	Sections of A,B,C,D, slot 6 ard-marks 480, 581	Section	1:5
124	22	Slot 7, sections of ard-marks 480, 581	Section	1:5
125	23	Slot 5, sections of ard-marks 480, 581	Section	1:10
126	23	Slot 5 plan of ard-marks 480, 581	Plan	1:20

APPENDIX 4: Sample Register

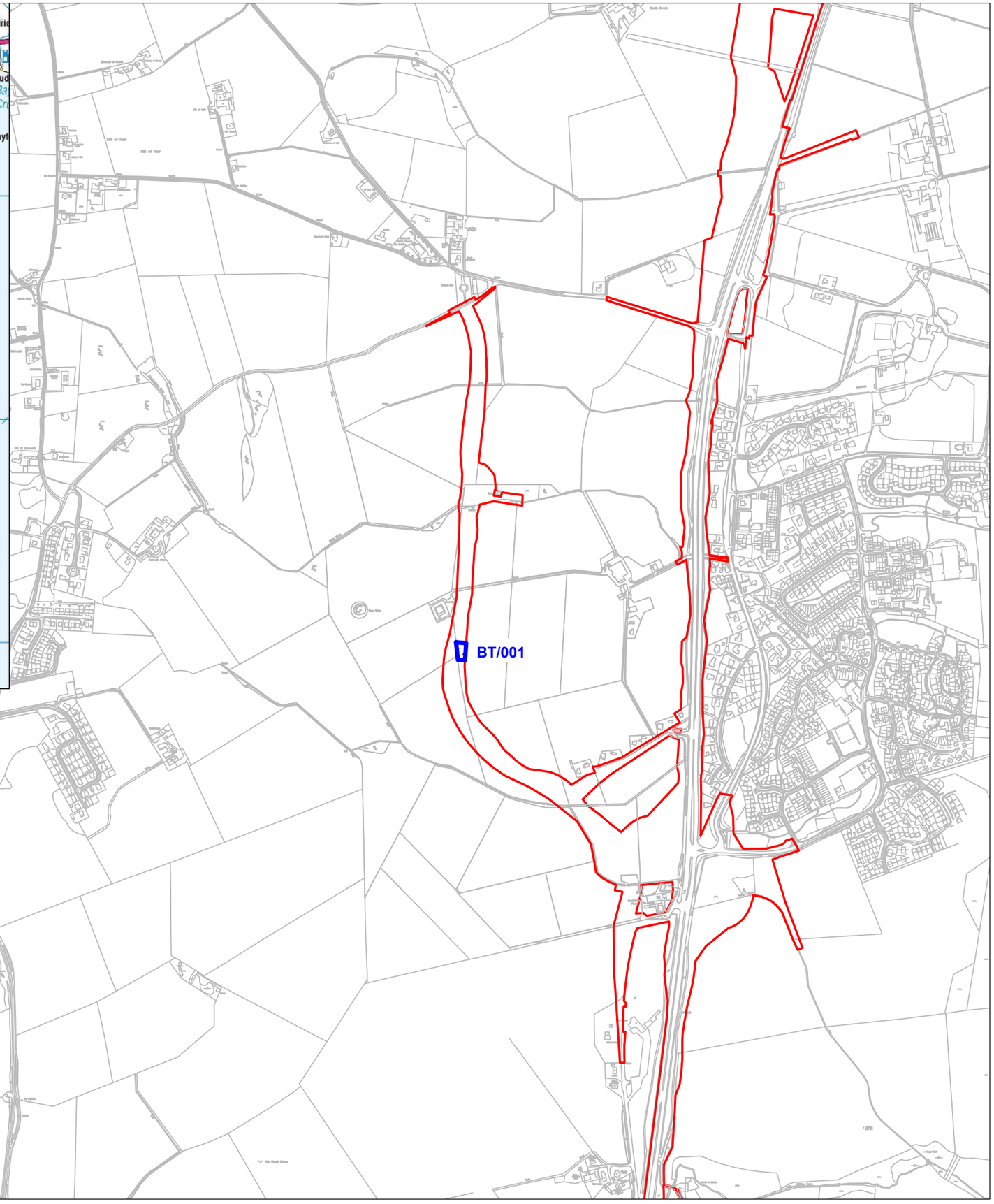
Sample No.	Context	Feature	Sample type	Sample volume (L)
1	465	Fill of pit (464)	Bulk sample of fill	2L
2	467	Fill of pit (466)	Bulk sample of fill	2L
3	445	Fill of stone-hole (444)	Bulk sample of fill	20L
4	457	Fill of pit (456)	Bulk sample of fill	20L
5	483	Fill of pit (482)	Bulk sample of fill	2L
6	508	Upper fill of pit (474)	Bulk sample of fill	20L
7	509	Basal fill of pit (474)	Bulk sample of fill	10L
8	463	Fill of pit (462)	Bulk sample of fill	4L
9	461	Fill of pit (460)	Bulk sample of fill	10L
10	359	Fill of stake-hole (natural feature)	Bulk sample of fill	2L
11	519	Fill of ard-mark (518)	Bulk sample of fill	1L
12	481	Fill of ard-mark (480)	Bulk sample of fill	1L
13	519	Fill of ard-mark (518)	Bulk sample of fill	10L
14	481	Fill of ard-mark (480)	Bulk sample of fill	2L

APPENDIX 5: Finds Quantification

Context	Find type	No.	Wt (g)	Notes	Spot date
001	Lithic	12	35	Topsoil	Prehistoric
461	Pottery	1	87	Fill of Pit 460	Prehistoric

APPENDIX 6: Discovery & Excavation in Scotland Entry

LOCAL AUTHORITY:	Aberdeenshire
PROJECT TITLE/SITE NAME:	Aberdeen Western Peripheral Route/Balmedie-Tipperty. Lot 1 – Balmedie to Tipperty. Invasive Archaeological Investigations
PROJECT CODE:	ABBY
PARISH:	Belhelvie, Foveran
NAME OF CONTRIBUTOR:	Ian Suddaby
NAME OF ORGANISATION:	CFA Archaeology Ltd
TYPE(S) OF PROJECT:	Strip and map, and mitigation excavation
NMRS NO(S):	
SITE/MONUMENT TYPE(S):	
SIGNIFICANT FINDS:	
NGR (2 letters, 10 figures)	NJ 95760 17550
START DATE (this season)	April 2014
END DATE (this season)	June 2014
PREVIOUS WORK (incl. *DES* ref.)	
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	Following evaluation the area was identified for further work. A programme of strip and map followed by mitigation excavation was undertaken. Between the evaluation and the mitigation excavation eleven small pits were identified. It is not possible to say with certainty that all were archaeological in origin. However, based on the artefacts and plant macrofossil remains that were recovered at least four of them appeared to be prehistoric in date. Ard-marks on two separate criss-crossing alignments were also identified and were interpreted as the traces of prehistoric agriculture. These features along with a background scatter of prehistoric lithics in the topsoil indicate that the area was in fairly intensive use during the prehistoric period and that settlement remains could be present in the vicinity but off the line of the proposed development.
PROPOSED FUTURE WORK:	
CAPTION(S) FOR ILLUSTRS:	
SPONSOR OR FUNDING BODY:	Aberdeen City Council
ADDRESS OF MAIN CONTRIBUTOR:	The Old Engine House, Eskmills Park, Musselburgh, EH21 7PQ
EMAIL ADDRESS:	cfa@cfa-archaeology.co.uk
ARCHIVE LOCATION (intended/deposited)	Royal Commission on the Ancient and Historical Monuments of Scotland Aberdeenshire Council Sites & Monuments Record



Key:

LMA

Trench

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Fig. No:	Report No:
1	3220

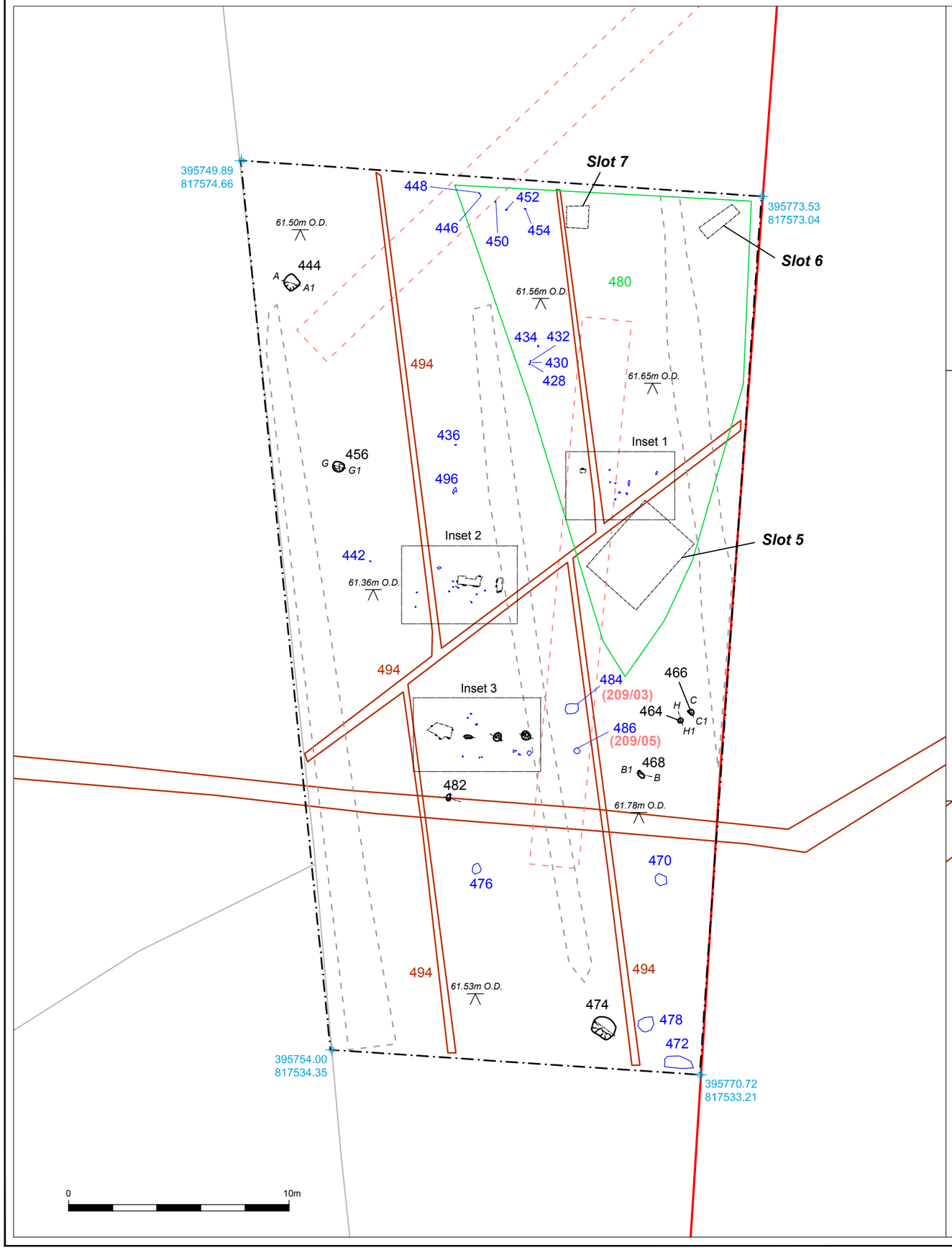
Title:
Location of Trench BT/001

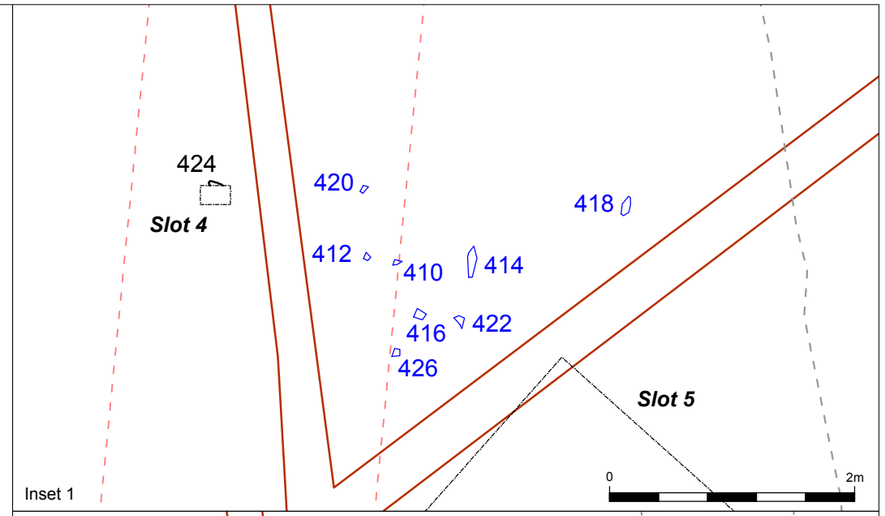
Project:
Aberdeen Western Peripheral Route/Balmedie-Tipperty, Lot 1 - Balmedie-Tipperty, Archaeological Mitigation, Excavation Trench BT/001

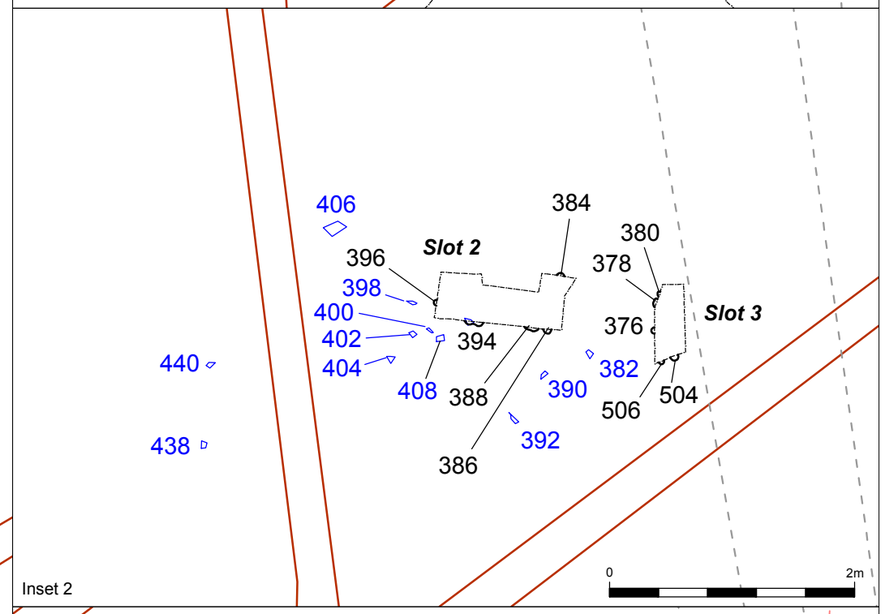
Client:
Aberdeen City Council

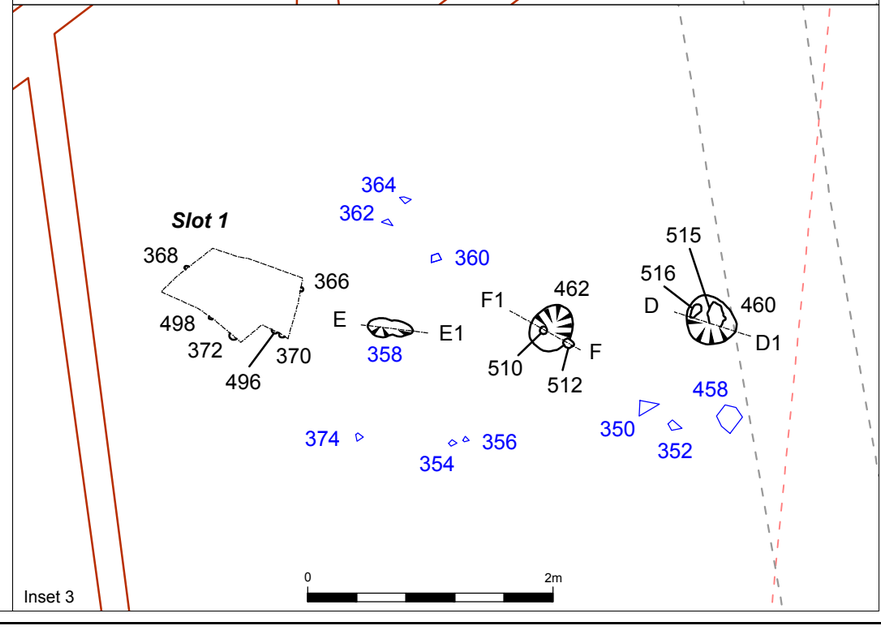
Scale at A3:
1:10,000

Drawn by:	Checked:	Date:
TB	BG	24/11/14









Key:

- LMA
- Excavation Area
- Rig and Furrow
- Evaluation Trench
- Field Drains
- Excavated Features
- (000/00) Features from Evaluation
- Extent of Ard marks

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Fig. No:	Report No:
2	3220

Title:
Site Plan of Trench BT/001

Project:
Aberdeen Western Peripheral Route/Balmedie-Tipperty, Lot 1 - Balmedie-Tipperty, Archaeological Mitigation, Excavation Trench BT/001

Client:
Aberdeen City Council

Scale at A3:
Site Plan 1:200
Insets 1:50

Drawn by:	Checked:	Date:
TB	BG	24/11/14

Fig. 3 - General view of Trench BT/001 from the south-east with the Hare Cairn top left

Fig. 4 - General view of Trench BT/001 from the north

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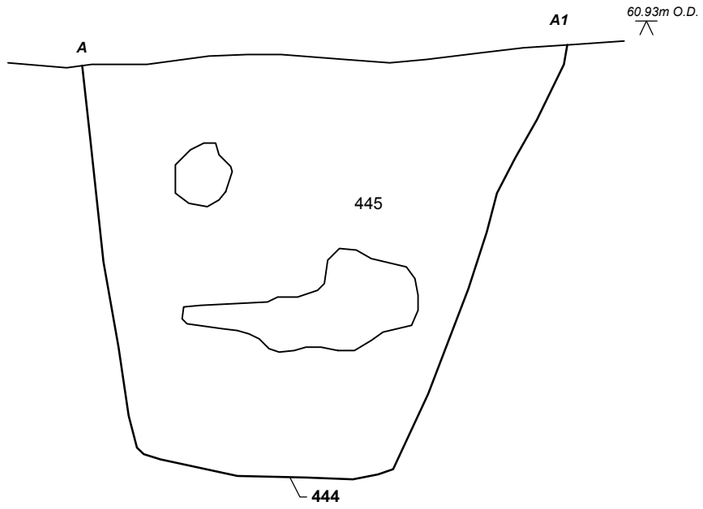
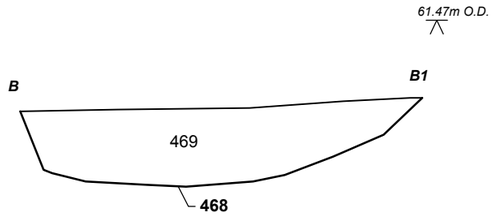
Title:	Fig.	Report:	Drawn:	CKD:	Date:
Site Photographs	3-4	3220	TB	BG	24/11/14

Client: Aberdeen City Council

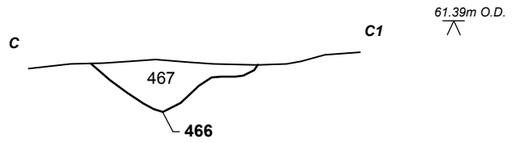
Project: Aberdeen Western Peripheral Route/Balmedie-Tipperty, Lot 1 - Balmedie-Tipperty, Archaeological Mitigation, Excavation Trench BT/001



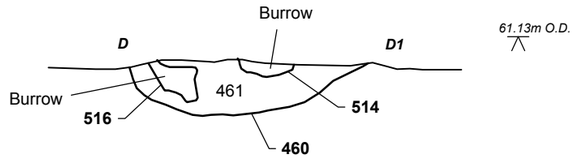
North facing section of Pit **444**



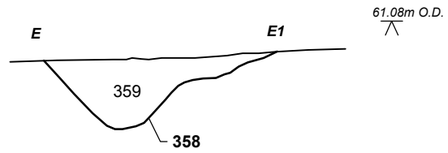
North facing section of Pit **468**



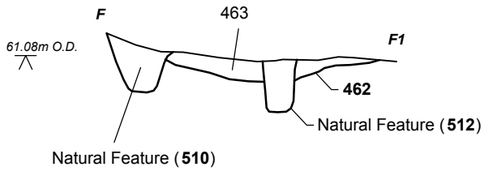
West facing section of Pit **466**



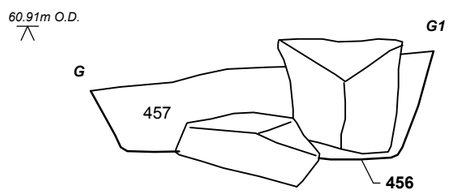
South facing section of Pit **460**



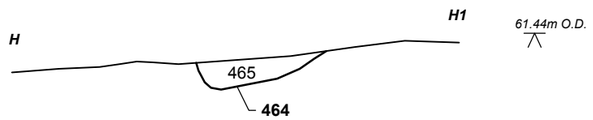
South facing section of Pit **358**



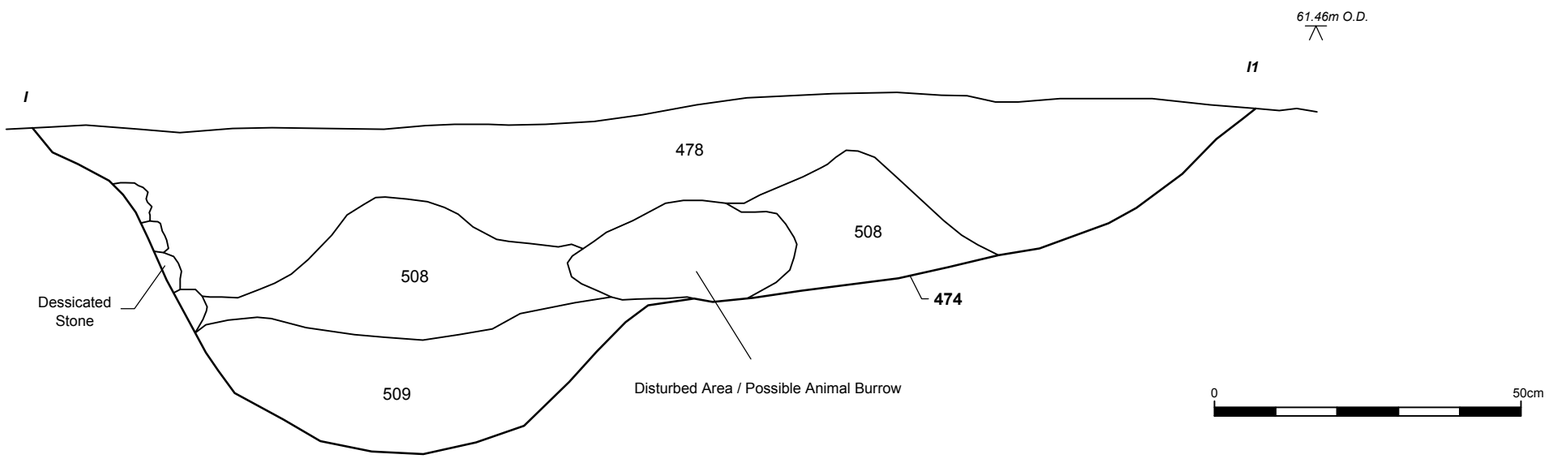
North-east facing section of Pit **462**



South facing section of Pit **456**



West facing section of Pit **464**



South-west facing section of Pit **474**

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Fig. No:	Report No:
5	3320

Title:
Sections of pits

Project:
Aberdeen Western Peripheral Route/Balmedie-Tipperty, Lot 1 - Balmedie-Tipperty, Archaeological Mitigation, Excavation Trench BT/001

Client:
Aberdeen City Council

Scale at A3:
1:10

Drawn by:	Checked:	Date:
TB	BG	24/11/2014

Fig. 6 - Pit **444,** north facing section A-A1

Fig. 7 - Pit **460** pre-excavation

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Title: Site Photographs	Fig. 6-7	Report: 3220	Drawn: LW	CKD: MJ	Date: 24/11/14
	Client: Aberdeen City Council				
Project: Aberdeen Western Peripheral Route/Balmedie-Tipperty, Lot 1 - Balmedie-Tipperty, Archaeological Mitigation, Excavation Trench BT/001					

Fig. 8 - Pit **462,** north-east facing section F-F1

Fig. 9 - Pit **464**, west facing section H-H1 (foreground) and **466**, west facing section C-C1 (background)

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Title: Site Photographs	Fig. 8-9	Report: 3220	Drawn: TB	CKD: BG	Date: 24/11/14
	Client: Aberdeen City Council				
Project: Aberdeen Western Peripheral Route/Balmedie-Tipperty, Lot 1 - Balmedie-Tipperty, Archaeological Mitigation, Excavation Trench BT/001					

Slot 7

Slot 6

J

J1

Slot 5

0 5m

Slot 5 South-west facing section

61.22m O.D.

519 518 519 518 519 518 519 518 519 518 519 518 518 519 480 481 481 480 518 519 518 519 518

0 50cm

Key:

- LMA
- Excavation Area
- Rig and Furrow
- Field Drains
- Excavated Features
- Unexcavated Features
- Ard marks 518
- Ard marks 480

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Fig. No:	Report No:
10	3220

Title:
Plan of ard-marks and south-west facing section of Slot 5 through ard-marks

Project:
Aberdeen Western Peripheral Route/Balmedie-Tipperty, Lot 1 - Balmedie-Tipperty, Archaeological Mitigation, Excavation Trench BT/001

Client:
Aberdeen City Council

Scale at A3:
Plan 1:100
Section 1:10

Drawn by:	Checked:	Date:
TB	BG	24/11/14

Fig. 11 - General view of ard-marks pre-excavation, from the north

Fig. 12 - General view of ard-marks pre-excavation, from the south

Fig. 13 - General view of ard-marks pre-excavation, from the north

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Title:	Fig.	Report:	Drawn:	CKD:	Date:
Ard-mark photographs pre-excavation	11-13	3220	TB	BG	24/11/14

Client: Aberdeen City Council

Project: Aberdeen Western Peripheral Route/Balmedie-Tipperty, Lot 1 - Balmedie-Tipperty, Archaeological Mitigation, Excavation Trench BT/001

Fig. 14 - Ard-marks in Slot 5, post-excavation

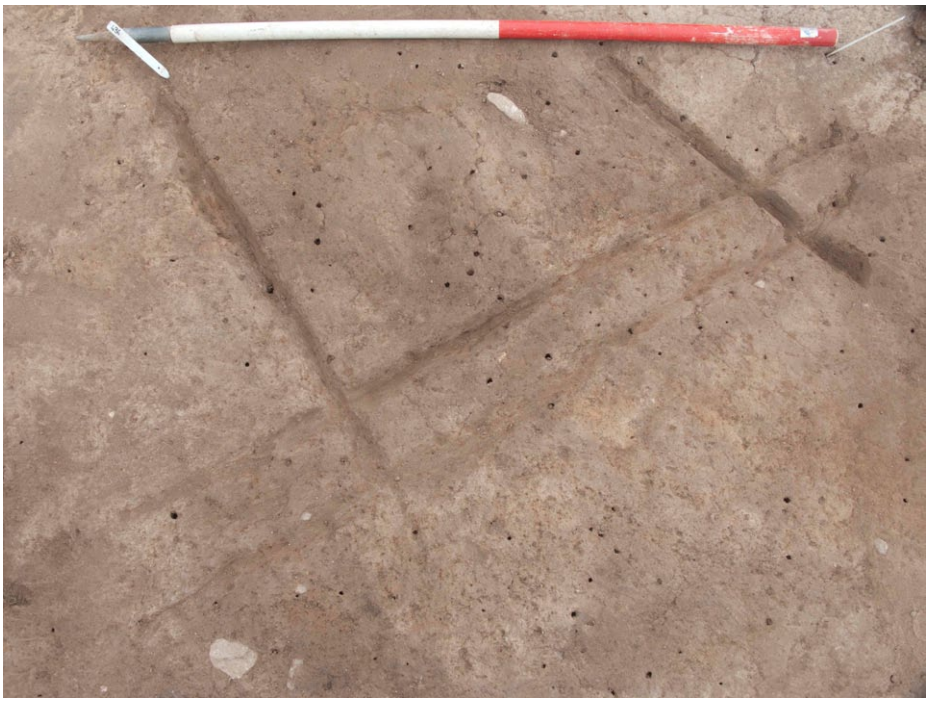

Fig. 15 - Ard-marks in Slot 7, post-excavation

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Title:	Fig.	Report:	Drawn:	CKD:	Date:
Ard-mark photographs	14-15	3220	TB	BG	24/11/14

Client: Aberdeen City Council

Project: Aberdeen Western Peripheral Route/Balmedie-Tipperty, Lot 1 - Balmedie-Tipperty, Archaeological Mitigation, Excavation Trench BT/001

Fig. 16 - General view of features **384**, **386**, **388**, **394**, **396** in Slot 2

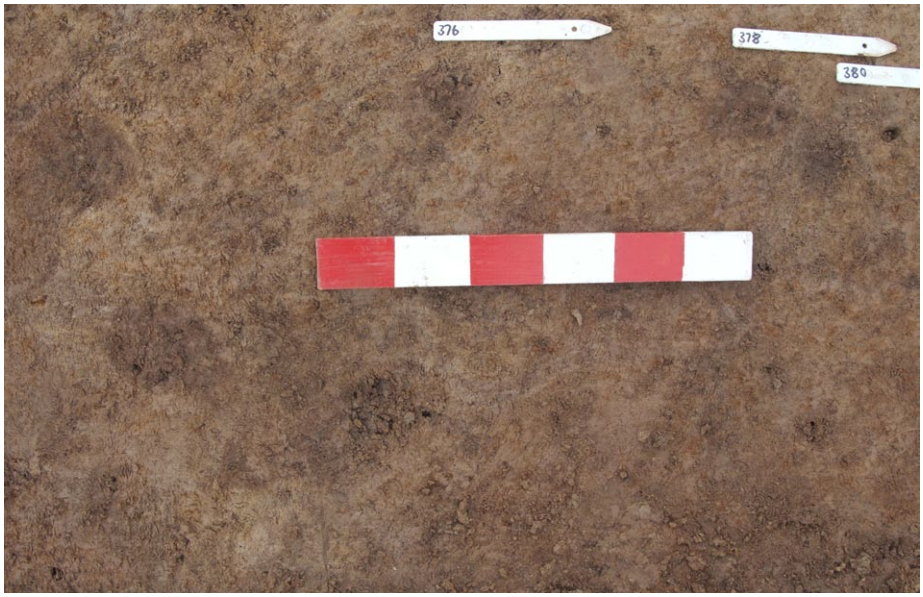

Fig. 17 - Features **376**, **378**, **380** pre-excavation

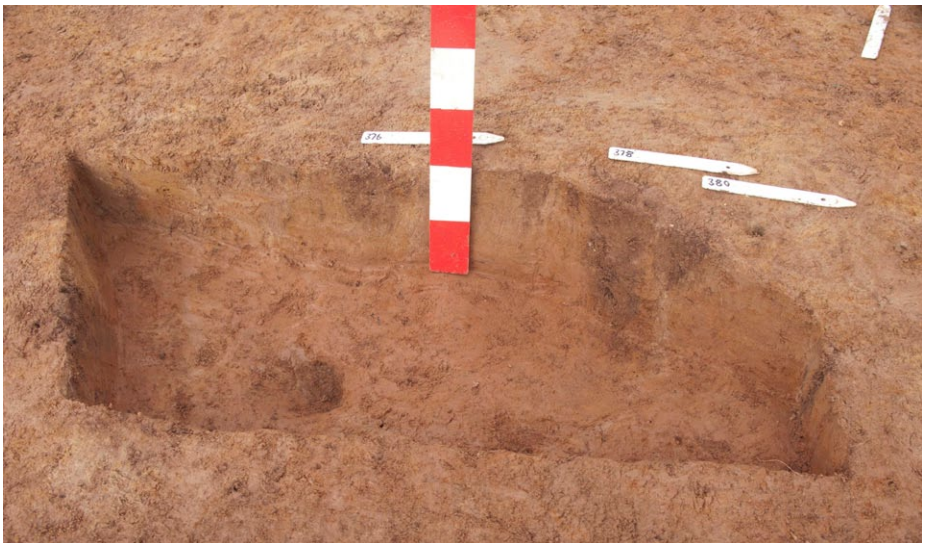

Fig. 18 - Features **376**, **378**, **380** in Slot 3

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Title:	Fig.	Report:	Drawn:	CKD:	Date:
Potential stake-hole photographs	16-18	3220	TB	BG	24/11/14

Client: Aberdeen City Council

Project: Aberdeen Western Peripheral Route/Balmedie-Tipperty, Lot 1 - Balmedie-Tipperty, Archaeological Mitigation, Excavation Trench BT/001

Fig. 19 - Pottery from fill of pit **460**

Fig. 20 - Flint assemblage (photo supplied by Ann Clarke)

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Title:	Fig. 19-20	Report: 3220	Drawn: SW	CKD: BG	Date: 24/11/14
	Client: Aberdeen City Council				
Project: Aberdeen Western Peripheral Route/Balmedie-Tipperty, Lot 1 - Balmedie-Tipperty, Archaeological Mitigation, Excavation Trench BT/001					