REPORT ON AN ARCHAEOLOGICAL WATCHING BRIEF AT NESS FARM AND TULLOS HILL LANDFILL SITE, NIGG, ABERDEEN

NGR NJ 9559 0355

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SUMMARY

Between May and November 2009, representatives of Aberdeen City Council Archaeological Unit undertook a programme of archaeological monitoring of groundworks associated with Phase I developments relating to the closure of the landfill site at Ness Farm and Tullos Hill, Coast Road, Nigg, Aberdeen (NGR NJ 9559 0355). The area is rich in archaeological remains, the earliest, of prehistoric origin, are among the most important prehistoric archaeological features in Aberdeen, with other periods represented by features relating to post medieval agricultural improvements, and Second World War structural remains (Cameron 2008; Appendix 1). The archaeologically sensitive nature of the site, combined with the need to close the landfill sites sensitively and safely, necessitated the archaeological monitoring of several stages of the development works. All archaeological monitoring was undertaken in accordance with the archaeological strategy; only Doonies Farm attenuation pond was covered by a planning application. All work was approved by the Keeper of Archaeology at Aberdeen City Council (Appendix 1), and in accordance with best practice and professional standards condoned by the Institute for Field Archaeology (IFA 2002).

The watching brief monitored the excavation of channels for drainage, clearance for fencing, excavations for surface attenuation ponds and gas venting trenches and the installation of new trackways, recording any features uncovered during the groundworks and, where possible, such as with the gas venting trenches, consulting with the developers to avoid known archaeological features.

The watching brief monitoring encountered a total of 57 features, some correlating to previously known sites, and some representing new archaeological discoveries (2 of probable modern origin; 3 of probable landfill origin (1960s or 70s); 36 of which dated to the mid 20th century; 15 of post medieval origin; and 1 unknown and probably natural feature). In addition, a total of 15 finds were recovered during the groundworks. This has provided a rare opportunity to investigate the landscape in which some of the most interesting Bronze Age sites in Aberdeen survive, and has provided information on a range of different activities enacted on the hill across several eras.

This watching brief has formed the final stage of archaeological works required on site in relation to Phase I of the present development. Parts of Phase II of the landfill closure scheme will require further archaeological supervision, upon advice from the Keeper of Archaeology, Aberdeen City Council.

ACKNOWLEDGEMENTS

Aberdeen City Council Archaeological Unit would like to thank Peter Lawrence, Aberdeen City Council for commissioning the project. In addition, further thanks are extended to the Keeper of Archaeology at Aberdeen City Council for all advice relating to the project, and to all the Fairhurst and Les Taylor Group on-site staff for all their help and information.

The archaeological watching brief was undertaken by Ali Cameron, Dave Harding and Cat Peters. The research was undertaken by Ali Cameron and Dave Harding. The report and the accompanying illustrations were prepared by Cat Peters, and the project was managed by Alison Cameron, Aberdeen City Council Archaeological Unit.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

1.1.1 Aberdeen City Council has decided to close the landfill site at Ness Farm and Tullos Hill, requiring a programme of groundworks to ensure a safe closure. The development site (Ness Farm and Tullos Hill Landfill site), centred on NGR NJ 9559 0355, has been subjected to various previous archaeological works (Cameron 2008), as the area is rich in archaeological remains, housing some of the most important prehistoric sites in Aberdeen. As a result, an archaeological strategy was required for the works, stating that all excavation works undertaken in areas not affected by modern landfill should be monitored by an archaeologist, (Cameron 2008; Appendix 1). This scheme was initiated by the Keeper of Archaeology at Aberdeen City Council. The scheme of works is in-line with government advice as set out in SPP23 and SHEP. All stages of the archaeological work were undertaken following approved statutory guidelines (IFA 2002).

1.1.2 This report comprises the results of the archaeological monitoring of the relevant groundworks associated with the development, as outlined in the archaeological strategy report.

1.1.3 A full professional archive has been compiled in accordance with best practice and professional standards, and with current UKIC guidelines (1990). The archive will be deposited at Aberdeen City Council in the first instance, and a copy of the report given to Aberdeen City Council Sites and Monuments Record, where viewing will be available on request. The project is also registered with the **O**nline **A**cces**S** to the **I**ndex of archaeological investigation**S** (**OASIS**).

2. BACKGROUND

2.1 LOCATION AND TOPOGRAPHY

2.1.1 The site is centred upon National Grid Reference NJ 9559 0355, at Ness Farm and Tullos Hill Landfill site, Nigg, to the south-east of the centre of the city of Aberdeen. The site lies in an area of rough high ground near the coast, ranging from between approximately 40 and 80m AOD. The whole of the landfill site encloses an area of approximately 1km², not all of which has been covered by landfill, and not all covered by landfill at the same period (Figure 1). The land consisted of tracts of rough heather and gorse upland, interspersed with areas of more dense tree coverage and moor-like grasslands. Trackways and roads existed for public access and vehicular access for council and associated workforce access.

2.2 GENERAL HISTORICAL BACKGROUND

2.2.1 A large number of known archaeological features have been identified in the environs of the landfill site, outlined in the archaeological strategy (Cameron 2008; Appendix 1). These include important prehistoric sites, in the form of at least four large stone cairns forming the remains of an important Bronze Age cairn cemetery, all of which are Scheduled Ancient Monuments with designated protected exclusion zones. Prehistoric hut circles and associated field systems are also known, particularly in the northern part of the site.

2.2.2 Post-medieval land improvement features are also known from the area, including consumption dykes, part of one recently scheduled with a cairn, and field clearance cairns, all relating to intensified farming in the region (Figure 2). Early Ordnance Survey Mapping also reveals further evidence for pre-existing features on-site with farm buildings and other buildings of unknown origin depicted in various locations across the hillside. The 20th century is also represented archaeologically, with concrete hut bases once forming part of an Ack-Ack Battery, later converted into a Prisoner of War Camp with associated features, look-out posts and other defensive World War II related structures (Figure 3).

3. RESULTS

3.1 THE ARCHAEOLOGICAL MONITORING

3.1.1 The watching brief was carried out between Monday 18th May and Thursday 5th November 2009. It monitored the excavation of various stages of the groundworks on site, in accordance with the archaeological strategy based upon the initial site closure plans for the site (Cameron 2008; Appendix 1) and in accordance with more groundwork specific methodologies provided by the Keeper of Archaeology as appropriate (Stones 2009; Appendix 1), as well as the monitoring of any further groundworks undertaken outside the areas of known landfill that had the potential to impact upon features of archaeological interest. The results of the monitoring are outlined below. All archaeological features and finds located during the works are summarised in Appendix 2 and Appendix 3 respectively.

3.2 WATCHING BRIEF RESULTS

3.2.1 ***Stripping of topsoil for leachate protection drainage systems****:* this stage of the groundworks occurred in the far south-eastern boundary of the Ness Farm area of the landfill site (Figure 4). The First Edition Ordnance Survey Mapping of 1867 (Figure 2) shows field boundaries in this area, and quarries are also known to have existed in the north-western part of the area due to be affected (seen on Second Edition Ordnance Survey Mapping of 1903). Traces of these known features may still survive sub-surface.

3.2.2 The excavations in this area involved a topsoil strip of a gully, 4m in width leading from the existing manhole, southwards, then westwards then northwards, in order for new leachate protection measures to be installed (Plate 1). The maximum depth reached was 1.0m in the north-western part of the gully, the majority reaching depths of no more than 0.6m. The topsoil consisted of a loose mid to dark brown soil which overlay an orange sandy natural, with clay deposits in places, and some large boulder inclusions of up to 2m in diameter.

Plate 1: General view of topsoil strip, south-eastern area, facing north-east

3.2.3 A number of features were encountered during the topsoil strip for the drainage gully, including modern plastic orange drainpipes and associated gravel backfill which ran the inner length of the excavated area, with an offshoot that ran centrally north to south along the initial north-south aligned section of the drainage gully. Of greater antiquity were four features (Features 1-4; Appendix 2), the locations of which are illustrated in Figure 2. These consisted of 2 probable sets of cultivation marks (Features 1 and 2). The first set (Feature 1; Plate 2) was roughly on a north-east to south-west alignment, each mark being 0.05m in width, the eastern two being 0.37m apart with the western one 0.74m beyond. The two eastern marks covered a distance of 1.2m, whereas the western one was 2m in length. A pottery sherd, white ceramic, was retrieved from the easternmost mark (Find 1).

Plate 2: View of Feature 1 to left, and modern drain to right, facing south-west

3.2.4 The second set, on the brow of a slope, was on a north-west to south-east alignment, located within the northern half of the stripped drainage gully area

(Feature 2; Plate 3). It consisted of 2 marks, 0.37m apart, of 0.05m width and 1.2m length. A small pottery fragment was observed within the southernmost mark, again of white ceramic, but with blue patterning. The cultivation mark locations are indicated on Figure 2.

Plate 3: Feature 2, facing north-west

3.2.5 These cultivation mark features, were, on First Edition Ordnance Survey Mapping (Figure 2), in areas within rough wasteland, just to the north of the fields, which were presumably associated with Doonies Farm. This suggests that cultivation of these more marginal lands became necessary to expand the amount of food produced from the lands, and therefore probably date to the post medieval period of population growth and agricultural reform. Furthermore, each set of cultivation marks produced a small sherd of pottery (Appendix 2), of post-medieval origin. The other features were probable field drains (Features 3 and 4). Feature 3 was a linear feature, 0.2m in width which continued for a length of 3m across the width of the trench (Plate 4). Feature 4 consisted of a roughly east-west aligned linear feature with curves at each end, tracking across the width of the leachate drainage gully (Plate 5). It ran for a distance of 17m and was 0.8m in width. These last features are likely to date to the same period as Features 1 and 2, when agricultural improvements were made to the land to advance fertilisation and crop potential output. This has provided archaeological evidence, in support of cartographic sources, that the fringes of the landfill site were once cultivated by local farmsteads.

Plate 4: Feature 3 facing north-west

Plate 5: Feature 4, facing north-west

3.2.6 The stripping of topsoil for leachate protection drainage systems was extended from the western extent of the 4m width area, to the north-east, adjacent to the boundary and outside the landfill area, towards Crab's Cairn. This extension was a maximum of 0.8m wide and 1.0m deep. This revealed a dark brown topsoil which varied between 0.1m depth at the south, and 0.8m at the north. This overlay a loose orange sandy natural, with up to 30% large boulder and stone fragment (up to 1.6m diameter) inclusions (Plate 6). No archaeological features were revealed within this extension, which did not impact on the Crab's Cairn Scheduled Monument exclusion zone, of which it stopped 20m to the south.

Plate 6: General view of topsoil strip extension, facing north

3.2.7 ***Stripping of area along southern boundary between Crab's Cairn and Baron's Cairn:*** the southern boundary of the site, between Crab's Cairn and Baron's cairn, avoiding works within the scheduled monument's exclusion zones, was stripped of undergrowth to provide a level platform of an area 4m in width for stock-proof fencing to line the boundary (Figure 4; Plate 7). First Edition Ordnance Survey Mapping of 1867 (Figure 2) indicates a boundary along this line, demarcating the agricultural fields to the south from the more scrubby hinterland to the north. The map shows that this boundary did not extend into the easternmost part at Crab's Cairn.

Plate 7: General view of strip, facing west

3.2.8 One possible feature (Feature 30) was cut through during these operations. This was a mound, 3m in diameter and surviving to a maximum height of 0.6m

at its centre (Plate 8). This appeared to be a natural feature and as such was of little archaeological interest.

Plate 8: Section through Feature 30, facing north

3.2.9 Two further features, Feature 33 (Plate 9) and Feature 34 (shown in Figure 5) appeared to be related, the latter representing the upcast for ditch Feature 33. The ditch (Feature 33) was 1m in width and was observed during two different operations on the site, across a distance of at least 180m. It could originate from agricultural improvements, providing drainage from Tullos Hill to provide water to the adjacent farmland to the south.

Plate 9: Feature 33, facing south

3.2.10 The removal of the gorse also revealed more of the boundary wall, or dry stone dyke observed across the southern boundary of the site (Feature 5). Clearly, parts had been robbed or obscured where adjoining developments had utilised the boundary area for spoil dumping. In some places the wall formed a fine 5 or 6 coarse high rubble built boundary (Plate 10). Unfortunately the erection of the stock-proof fencing, some 1m to the north of the boundary,

has made the wall more vulnerable to robbing, and some workers from an adjoining development were observed removing stone from the wall. Several general photographs were taken of the wall, once the fence was erected, to record the structure as-was. Figure 6 shows a detailed section of the wall.

Plate 10: Central portion of Feature 5, facing south

3.2.11 ***Gas monitoring drill holes:*** drilling activities were monitored in the vicinity of the central part of the northern boundary to the south of the Refuse Disposal Plant (Figure 7). A total of three drill points were augered in this area, 0.3m in diameter to a depth of 17m. Cylindrical metal segments were drilled into the ground with a drill hammer, reducing the matter to a ground-up, loose, mid-brown soil (Plate 11). As the cylindrical metal segments were left in place, to aid future monitoring, no assessment of archaeological potential was possible. Other drilling operations across the site occurred in areas of known landfill, and thus did not require archaeological supervision.

Plate 11: General view of eastern gas monitoring drill hole, facing north-east

3.2.12 ***Fenceline clearance, and fence post hole excavation- Ness Farm landfill eastern boundary:*** the eastern boundary of the Ness Farm landfill area, adjacent to the East Coast Mainline Railway, was cleared first, in anticipation of the erection of new palisade boundary fencing, ultimately to accommodate

the Ness Farm landfill area (Figure 8). This began, to the north, at the existing bridge over the railway, southwards, and required an initial removal of undergrowth and levelling of an area 3m in width. Any existing wire and post fencing was removed during these operations. The area extended along the eastern boundary southwards to the road, where it took a 90 degree turn to the west and covered the area to the north of the existing attenuation pond or reservoir, and finished where it met the main entrance access track. Parts of this area were scraped clean with a toothless bladed ditching bucket, where a maximum of 0.05m of grass and topsoil was removed (Plate 12). No archaeology was encountered during these operations.

Plate 12: General view showing excavated fence post holes within area of fenceline clearance, facing north-east

3.2.13 Following the fenceline clearance, teams of sub-contracting fencers were drafted in to erect the palisade fencing along the eastern boundary of the Ness Farm landfill area. This required the excavation of fence post holes 2.8m apart, across the entirety of the cleared area. The majority of these were excavated by auger, attached to a mini digger, in which case the fence post holes were 0.25m in diameter, and excavated to a maximum depth of 0.8m (Plate 13). Where stones or other hard material made auguring impossible, the fence post holes were excavated by a toothless bladed ditching bucket, sometimes by a JCB, where the holes were 2.0m by 1.0m to a depth of 0.8m, or by mini digger, where the holes were 1.4m by 0.4m to a depth of 0.8m. A total of 339 fence post holes were monitored within the eastern boundary. In places, the topsoil extended to a depth of at least 0.8m, particularly in the northern areas where it was a dark brown loose soil with plastic and rubbish inclusions. The majority of the fence post holes revealed a topsoil depth of c. 0.18m to 0.30m, overlaying an orange loose sandy natural, though this became more claylike in the southern area. No features of archaeological interest were encountered during the fenceline operations at the eastern boundary of Ness Farm landfill area.

Plate 13: Example of a fence post hole excavated by augur, facing east

3.2.14 ***Fenceline clearance, and fence post hole excavation- Ness Farm landfill western boundary:*** fenceline clearance was also undertaken across the western boundary of the Ness Farm landfill area, where it adjoined the Conservation area (Figure 9). This required the initial removal of gorse and undergrowth along the fenceline, followed by a scraping and levelling by toothless bladed ditching bucket, of an area 5m in width to provide a working area for the fencers. These works began in the southern area, to the north-west of Crab's Cairn, beginning at the track, and continued on an approximate south-east to north-west alignment for approximately 200m, where it turned northwards and extended for a further 120m before turning north-east for 120m then headed on a rounded north-westerly alignment for the final 200m. It finished at the south-west to north-east aligned trackway.

3.2.15 A similar programme of fence post hole excavation ensued, 2.8m apart, across the entirety of the cleared area (Plate 14). A total of 202 fence post holes were excavated, preference given to auguring, 0.35m in width and 0.8m in depth, although excavation by mini digger with a toothless bladed ditching bucket was sometimes necessary, making the fence post holes 1.4m by 0.4m to a depth of 0.8m (Plate 15). The dark brown loose topsoil varied from 0.05m in depth to 0.25m, relating to the natural undulations of the ground. This overlay a soft pinkish orange sandy natural.

Plate 14: General view showing excavated fence post holes by auguring within area of fenceline clearance, facing north-west

Plate 15: General view showing excavated post holes by bucket on mini-digger, facing north

3.2.16 A survey of the hill was carried out in 2004 by CFA Archaeology . The survey revealed a concentration of known archaeological features in the eastern part of the Conservation area, of which the fenceline skirted just to the east (Figure 9). A small spread of stones, between 20 and 30 in total, ranging from between 0.2m and 0.6m in diameter, covering an area of 4.8m north to south, and 4.4m east to west was encountered in the northern north-west to south-east aligned stretch (Feature 11; Figure 9; Plate 16). This was in the line of fencing, which could not be altered, so was removed under archaeological supervision. The eastern side was removed first, revealing blue plastic and tin cans, suggesting

this was a modern dump of stones, perhaps deposited when the adjacent road was constructed.

Plate 16: Feature 11, prior to removal, facing north-west

3.2.17 ***Fenceline clearance, and fence post hole excavation- central northern boundary:*** some fenceline clearance for a less ground intrusive wire mesh fence occurred across the central northern boundary of the site to the north and west of the north gas venting trench (Figure 10). This required the clearance of a 2m wide tract across an overall distance of approximately 270m. Due to the number of trees in the area, this was undertaken by a smaller 8 ton excavator, making less of a long-term impact on the area. The clearance remained as close as possible to the existing fence and boundary wall (Feature 51), in order to retain as much of the natural environment as possible within the site, for future enjoyment by the public. This meant that the archaeological features, known from the CFA survey of 2004, were all avoided by the works. Final plans are for a motorcycle inhibitor to be installed across the pedestrian access in this area.

3.2.18 Following the fenceline clearance, fencers were drafted in to erect the fencing along the central northern boundary of the site. This required the excavation of fence post holes 2.8m apart, across the entirety of the cleared area. These were excavated by a toothless bladed ditching bucket, by mini digger, where the holes were 1.0m by 0.4m to a depth of 0.8m. A total of 96 fence post holes were monitored within this area. In places, the topsoil extended to a depth of at least 0.8m, particularly in the eastern areas where it was a dark brown loose loam. The majority of the fence post holes revealed a topsoil depth of c. 0.1m to 0.30m, overlaying a mid-orange loose sand natural. No features of archaeological interest were encountered.

3.2.19 ***Provision of new pedestrian access along Ness Farm/ Conservation Area boundary:*** an initial walkover survey was undertaken of the area due to be affected by the Ness Farm/ Conservation area boundary public access route,

to assess the location and preservation of known features in the area, and to log any as-yet undiscovered new features to aid the locating of the new access. Six new flints were encountered in this area, three of which were small (less than 0.05m in diameter) and of red stone (Finds 5, 6 and 10), two of which were pale brown in colour (Finds 7 and 8) and one of which was grey (Find 11).

3.2.20 The provision for the new pedestrian access track was monitored on 28th September 2009 and involved the clearance of gorse and topsoil across the length of the new track, a width of 2m and a distance of approximately 450m. Figure 11 shows the location of this track. No archaeological finds or features were encountered along this route, which followed where possible, an existing informal trackway, meaning that archaeological features in the area were not unnecessarily disturbed (Plate 17).

Plate 17: Route of new access track, following pre-existing informal trackway, facing east

3.2.21 ***Excavation of test pits:*** a series of test pits were monitored at different stages across the area of the site. Those excavated in the southern area of the Ness Farm landfill are summarised in the table below and their locations are illustrated in Figure 12. No archaeological features were encountered within any of them, although immediately to the east of Test Pit 10 a glass bottle was found (Find 3). This was 0.16m in height and 0.08m in diameter and inscribed 'William Coutts, Champion, Trade Mark Registered, Aberdeen'. A figure holding a spear was also depicted.

Test Pit No.	Location	Purpose	Dimensions	Results
1	Within Ness Farm landfill	To evaluate present depth of topsoil covering Ness Farm landfill area	2m by 2m; depth 0.5m	0.4m loose dark brown topsoil above landfill
2	Within Ness Farm landfill	To evaluate present depth of topsoil covering Ness Farm landfill area	2m by 2m; depth 0.9m	0.75m loose dark brown topsoil above landfill
3	Within Ness Farm landfill	To evaluate present depth of topsoil covering Ness Farm landfill area	2m by 2m; depth 0.3m	0.2m loose dark brown topsoil above landfill
4	Within Ness Farm landfill	To evaluate present depth of topsoil covering Ness Farm landfill area	2m by 2m; depth 0.3m	0.2m loose dark brown topsoil above landfill
5	SE boundary, in Doonies field	To produce a soil sample to assess usage of material	2m by 2m; depth 0.4m	0.3m loose dark brown topsoil above landfill (see Plate 18)
6	Within Ness Farm landfill	To evaluate present depth of topsoil covering Ness Farm landfill area	1m by 1m; depth 0.4m	0.4m loose dark brown topsoil above landfill
7	SE boundary, in Doonies field	To produce a soil sample to assess usage of material	2m by 2m; depth 0.6m	0.25m loose dark brown topsoil above a red silty clay with up to 10% stone inclusions
8	SE boundary, in Doonies field	To locate edge of landfill	2.5m by 1.5m; depth 2.0m	0.4m loose dark brown topsoil above orange sand natural
9	SE boundary, in Doonies field	To locate edge of landfill	1.5m by 26m; depth 3.5m	0.4m loose dark brown topsoil above orange sand natural
10	SE boundary, in Doonies field	To locate edge of landfill	1.5m by 18m; depth 3m	0.4m loose dark brown topsoil above orange sand natural (see Plate 19). Find 3 was located just to the east.
11	SE boundary, in Doonies field	To locate edge of landfill	1.5m by 10m; depth 2.5m	0.4m loose dark brown topsoil above orange sand natural
12	SE boundary, in Doonies field	To locate edge of landfill	1.5m by 10m; depth 2.5m	0.4m loose dark brown topsoil above orange sand natural

Plate 18: Test Pit 5 upon excavation, facing north

Plate 19: Test Pit 10 under excavation, facing south-east

3.2.22 An additional series of test pits were monitored across the northern area of the Ness Farm landfill. These are summarised in the table below and their locations are illustrated in Figure 12. No archaeological features were encountered within any of them, with all of them revealing modern landfill waste.

Test Pit No.	Location	Purpose	Dimensions	Results
1	N boundary, Ness Farm landfill	To locate edge of landfill	1m by 1m; depth 1m	0.15m loose dark brown topsoil above mixed mid orange-brown loam with landfill
2	N boundary, Ness Farm landfill	To locate edge of landfill	2m by 2m; depth 0.65m	0.25m loose dark brown topsoil above mixed mid orange-brown loam with landfill
3	N boundary, Ness Farm landfill	To locate edge of landfill	1m by 1m; depth 0.4m	0.15m loose dark brown topsoil above mixed mid orange-brown loam with landfill
4	N boundary, Ness Farm landfill	To locate edge of landfill	1m by 1m; depth 0.4m	0.05m loose dark brown topsoil above mixed mid orange-brown loam with landfill
5	N boundary, Ness Farm landfill	To locate edge of landfill	1m by 1m; depth 1.15m	0.15m loose dark brown topsoil above mixed mid orange-brown loam with landfill
6	N boundary, Ness Farm landfill	To locate edge of landfill	1m by 1m; depth 1m	0.15m loose dark brown topsoil above mixed mid orange-brown loam with landfill
7	N boundary, Ness Farm landfill	To locate edge of landfill	1m by 1m; depth 0.5m	0.15m loose dark brown topsoil above mixed mid orange-brown loam with landfill
8	N boundary, Ness Farm landfill	To locate edge of landfill	1m by 1m; depth 0.4m	0.15m loose dark brown topsoil above mixed mid orange-brown loam- lintel within landfill deposit
9	N boundary, Ness Farm landfill	To locate edge of landfill	1m by 1m; depth 0.4m	0.15m loose dark brown topsoil above mixed mid orange-brown loam with landfill
10	N boundary, Ness Farm landfill	To locate edge of landfill	1m by 1m; depth 0.4m	0.15m loose dark brown topsoil above mixed mid orange-brown loam with landfill
11	N boundary, Ness Farm landfill	To locate edge of landfill	2m by 2m; depth 1.2m	0.05m loose dark brown topsoil above mixed mid orange-brown loam with landfill
12	N boundary, Ness Farm landfill	To locate edge of landfill	2m by 2m; depth 1m	0.05m loose dark brown topsoil above mixed mid orange-brown loam with landfill
13	N boundary, Ness Farm landfill	To locate edge of landfill	2m by 2m; depth 2m	0.05m loose dark brown topsoil above mixed mid orange-brown loam with landfill which included building material

Test Pit No.	Location	Purpose	Dimensions	Results
14	N boundary, Ness Farm landfill	To locate edge of landfill	2m by 2m; depth 1.3m	0.05m loose dark brown topsoil above mixed mid orange-brown loam with landfill
15	N boundary, Ness Farm landfill	To locate edge of landfill	2m by 2m; depth 1.2m	0.05m loose dark brown topsoil above mixed mid orange-brown loam with landfill

3.2.23 ***Clearance for north gas venting trench:*** this occurred just to the south, and east of the fenceline clearance along the northern central boundary of the site (Figure 13). It began with an initial tree clearance by toothed ditching bucket, followed by a more systematic clearance of the area due to be excavated for the north gas venting trench. A concrete block, 3m by 3m and 3m in height/ depth was located by the north-eastern boundary of the location of the north gas venting trench, with wire protruding (Feature 12; Plate 20). This suggests the presence of a structure that once stood in the vicinity, and indicates a mid 20th century date. It could also represent a waste deposit, dumped on the site at some point since the mid-20th century.

Plate 20: Feature 12, facing north-west

3.2.24 A more extensive vegetation and soil strip clearance was required prior to the excavation of the north gas venting trench. This comprised the scraping of a 'v' shaped area 6m in width across a total distance of 170m by a toothless ditching bucket. Both the south-west and north arms revealed a very stony black loam topsoil ranging from between 0.1m and 0.2m in depth. Landfill was encountered where the arms met, at the south of the north arm, and the east of the south-west arm (Figure 13). A hollow trackway (Feature 50; Plate 21), was observed running along the west of the dry stone dyke boundary, for a distance of around 18m. It was roughly 2m in width. The dry stone dyke

boundary continued across the northern site boundary perimeter, and was observed during the northern central boundary fenceline clearance too, surviving for a total distance of at least 100m (Feature 51; Plate 22). This was on average, 0.4m in width, and comparable to the dry stone dyke boundaries observed in different parts of the site (e.g. Features 5, 22 and 57).

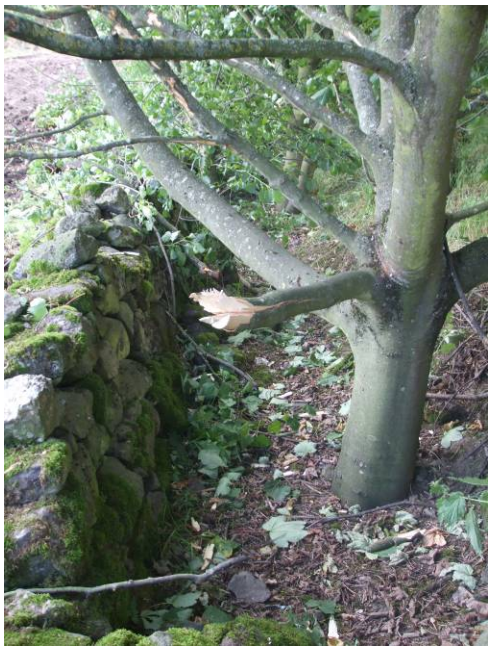

Plate 21: Feature 50, with Feature 51 on the left, facing south-east

Plate 22: Feature 51, facing south-west

3.2.25 ***Excavation of north gas venting trench:*** the excavation for the north gas venting trench occurred within the clearance area. It was excavated to a width of 1m and a maximum depth of 3.5m, with some of the excavated material being redeposited within the trench for piling to go through with ease for the gas monitoring posts, thus allowing continued future monitoring of gas emissions on site. This trench formed a 'v' shape, with the north and south-

west arms running adjacent to the site's boundary wall (Feature 51). A rich mid-dark brown loose loam topsoil was encountered, ranging between 0.45m deep (at the northern extent) and 0.25m deep (at the southern extent), overlay a mid-orange loose sand with occasional (less than 15%) boulder inclusions (varying between 0.1 and 0.7m diameter). The eastern part of the south-west arm was brought closer to the boundary wall (2m to the south of it), in order to avoid the landfill encountered during the clearance of the area, giving the 'v' a kink (Figure 13). Where the kink was (25m west of the eastern extent), a red brick-built structure was observed in the north-facing section of the north gas venting trench (Feature 52; Plate 23).It consisted of bricks laid in stretcher bond formation, 10 courses high (0.8m) and 0.65m wide, the topmost course visible was 0.15m below the ground surface. A ceramic pipe was observed either side (east and west), protruding from the brick built structure, which measured 0.22m in diameter. This suggested that the feature represented an access chamber relating to a drainage or waste system. This might further suggest the survival of related buildings which the services served, in the vicinity. Aerial Photographs of the site in 1947 show some buildings nearby (Figure 3), to the south of the north gas venting trench area.

Plate 23 Feature 52, facing south

3.2.26 ***Excavation of fence post holes for new palisade fencing at north gas venting trench:*** following the excavation of the north gas venting trench, and installation of gas monitoring posts, teams of sub-contracting fencers were drafted in to erect a palisade fence to surround the north gas venting trench. This required the excavation of fence post holes 2.8m apart. These were excavated by toothless bladed ditching bucket, sometimes by a JCB, where the holes were 2.0m by 1.0m to a depth of 0.8m, or by mini digger, where the holes were 1m by 0.4m to a depth of 0.8m. A total of 138 fence post holes were monitored in this area. The majority revealed a topsoil consisting of a loose dark brown silty loam varying in depth from between 0.05m and over 0.8m, overlaying a loose mid-orange sand. Some plastic and other rubbish was encountered in the topsoil in places. A dense concentration of structural debris (Feature 56; Plate 24) was encountered in fence post holes excavated at the eastern end of the south-west arm of the north gas venting trench, consisting of bricks, metal, concrete (some with imprints of corrugated iron

embedded), timber, ceramic drain and lead pipe fragments. This was observed in a sequence of seven fence post holes (Figure 13).

Plate 24: Feature 56, facing south-west

3.2.27 The structural debris, Feature 56, may relate to a pre-existing structure in the vicinity, perhaps partially damaged by landfill related operations in the area. It could be that some archaeological evidence for such structures, seen in Aerial Photographs of the site in 1947 (Figure 3), could survive *in-situ*, sub-surface in the vicinity.

3.2.28 ***Clearance for south gas venting trench:*** the clearance for the southern gas venting trench required the removal of shrubs and trees and undergrowth of an area 7.0m in width across the extent of the area due to be directly impacted by the excavations, a total distance of 770m (Figure 14). The area, adjacent to and abutting the southern boundary, was then scraped by a toothless, bladed ditching bucket attached to the excavator. Several features were revealed by these works, which occurred in a particularly archaeologically sensitive area, specifically in relation to the presence of the Ack-Ack Battery within the central part of this area, which was later converted into a Prisoner of War Camp, revealed by Ordnance Survey map regression, aerial photographic evidence and personal memory sources. The location of these features is shown in Figure 15. The location of the features in relation to aerial photographic evidence is shown in Figure 17.

3.2.29 Initially, the clearance revealed the north-west face of Feature 22, a dry stone dyke known from Ordnance Survey mapping to exist in the area. It was revealed across the 770m distance of the clearance, though less well preserved in some areas than others (Plate 25). The average width of the wall was 0.4m. It survives as a good example of boundary dry stone dykes, and is comparable to Features 5, 51 and 57.

Plate 25: Western part of Feature 22 facing south-west

3.2.30 Of additional interest, was the appearance of a blocked thoroughfare (Feature 35) in the dry stone dyke (Feature 22) within the north-eastern part of the clearance area (Figure 15). This was discernible by a row of large stones, akin to quoin stones in appearance, 1.2m apart, and separated by a jumble of smaller stones within (Plate 26). This suggests that there was once an access routeway through the wall at this point, although the poor state of preservation of the wall in this area makes it difficult to ascertain whether the thoroughfare was an original feature, contemporary with the wall's erection, or a later alteration. Clearly there was a need at some period for access to be prevented at this point, perhaps when the area was used as a tip in the 1970s.

Plate 26: Feature 35 facing south-east

3.2.31 A consumption dyke, known from the Aberdeen Sites and Monuments Record to exist in the vicinity, was observed towards the western part of the clearance area (Feature 23). This was much tumbled and has not survived well (Plate 27). Parts are obscured by undergrowth, but it appears to consist of just one or two courses of large boulders, running along the boundary of the development site. It has remained unaffected by the development.

Plate 27: Feature 23 facing north-east

3.2.32 Further features which related to 20th century usage of the site, were revealed by the clearance for the south gas venting trench; the archaeological remains survived to a good level of preservation. The easternmost of these features was a rectangular concrete platform, a floor and foundation for a hut-base (Feature 6) on a north-east to south-west alignment, measuring 11.2m in length and 5.1m in width (Plate 28). A U-shaped trough-like feature ran the length of the feature on the southern edge. Four circular indentations were observed within the eastern half of the feature as well as two bolts (Figure 16). This feature has been exposed for some time.

Plate 28: Feature 6 facing west

3.3.33 A similar feature was located some 50m to the south-west of Feature 6, this one with an L-shaped extension on the north-eastern edge (Feature 29; Plate 29). The rectangular part measured 10.95m in length and 4.8m in width. As the landfill was exposed just to the north-west of the feature, it was left revealed, rather than exposed to any depth, so any drain feature seen at Feature 6 would remain sub-surface if surviving. This feature is the base and foundation for a wooden or Nissen-style hut, and the L-shaped extension may relate to an entrance porchway.

Plate 29: Feature 29 facing south-west

3.2.34 A further rectangular concrete platform or hut-base was located 200m to the south-west of Feature 29. This was on an east-west alignment measuring 11.3m in length and 5m in width (Feature 7). It was exposed at its western extreme to reveal a depth of 0.9m and the probable method of construction. The hut bases seem to have been constructed from 10 roughly square blocks of pre-cast concrete arranged in two rows of 5, with a pebble based smoothed

concrete surface 0.1m thick adhering to the top of the blocks, to create a floor (Plate 30). The ground must then have been built up on the southern side, so that the abutting drain slotted into place, as a separately constructed feature which did not seem to have the 0.9m depth of the rest of the structure (Plate 31). This structure had been exposed for some time, although not, until now, subjected to archaeological recording.

Plate 30: Feature 7 facing south-east

Plate 31: Detail of south-west corner of Feature 7 facing east

3.2.35 Two parallel rows of stones leading from the eastern edge of Feature 7 for a distance of 9m, 1m apart (Feature 10), suggest that the doorway to Feature 7 was at the eastern end, and that this feature represents the edges of a pathway (Plate 32). This is further enhanced by similar parallel rows of stones (Feature 9) which Feature 10 joins, and which leads to a further concrete platform (Feature 8). Feature 10 was more disturbed but the rows making up Feature 9 are better preserved. The stones forming each row were 1.3m apart and ran across a distance of approximately 62m. It is not clear whether these paths would once have continued to the other features (although aerial photography suggests they might, Figure 17), or whether they only linked the

westernmost features, but more modern tipping of the site has impacted less on this area, than on the area further east.

Plate 32: Junction of Features 9 (left) and 10 (right), facing south-west

3.2.36 The westernmost end of Feature 9 ends at a further concrete platform feature (Feature 8) which had large tumbled bricks within the pathway, as if once forming a step into the hut whilst it was in use. One of these bricks was retained as a sample (Find 4). The rectangular platform measured 11.2m in length and 5m in width and was aligned on a south-west to north-east orientation (Plate 33). A U-shaped drain type feature was located on the southern side, though undergrowth obscured much of it. Bolts survived on the lip on the northern side, indicating how the walls would have been attached (Plate 34).

Plate 33: Feature 8 facing south-west

Plate 34: Bolt on northern edge of Feature 8, facing north-east

3.2.37 A further feature relating to mid 20th century use of the area was located 45m to the north-east of Feature 9 in the form of a levelled rectangular tarmac area measuring 5.4m in length and 2.5m in width (Feature 13; Plate 35). It is likely that this relates to known roads linking the hut bases for the Ack-Ack Battery, later converted into a Prisoner of War Camp (Figure 17).

Plate 35: Feature 13 facing north-east

3.2.38 Two further less tangible features located in this area are Features 31 and 32, seen as two single rows of stones. Feature 31 consists of 14 stones on a north-east to south-west alignment, parallel to, and to the north of, Feature 9 (Plate 36), running for a length of 11m. A feature in this location can be seen on aerial photography of the area taken in 1947. It could represent an

alignment of a path, or perhaps a garden edging feature. Similarly, Feature 32 consists of a short row of larger stones covering a distance of 2.5m on a north-west to south-east alignment (Plate 37), beginning at Feature 9, and stopping at Feature 23.

Plate 36: Feature 31 facing south-west

Plate 37: Feature 32 facing west

3.2.39 The last feature encountered during the clearance of the south gas venting trench area was the remains of a 2m high wire mesh fence with iron posts (Feature 26; Plate 38). Stays and fixings relating to this fenceline were visible between the rows of stones forming Feature 9, suggesting that the fence post-dates the Ack-Ack Battery and Prisoner of War camp phase of the site, and may have formed the perimeter fence for the tip, perhaps dating to the 1970s.

Plate 38: Feature 26, facing south

3.2.40 ***Excavation of south gas venting trench:*** the excavation for the south gas venting trench occurred in an area just to the south of the clearance area roughly along the line of an existing access route (Figure 14) in order to avoid as many known archaeological features already recovered as possible, whilst remaining outside the area directly impacted by landfill. The trench, 1m in width, was due to be excavated to a depth of 1m, with piling driven into the base, but problems in the western 50m of the tract, meant that a revision was necessary. A depth of 3.5m was excavated, with 2.5m being redeposited within the excavation, to be piled through to the required depth. Two machines were involved in the process, one for the initial excavation, and one for the subsequent piling.

3.2.41 Figure 14 outlines where the gas venting trench was excavated, with Figure 15 locating the individual feature locations encountered in the south gas venting trench area. Due to the nature of this depth of excavation, any features that were revealed within the south gas venting trench were photographed and their locations were recorded. It was unsafe and time constraints did not allow for cleaning or detailed sketching of any kind. Several brick drain traps were observed within the trench (Features 19, 20, 21 and 38; Plate 39). These were red brick-built boxes with concrete bases and concrete covers, located at a depth of approximately 1.5m below the present ground surface. It is likely that these related to drainage for the Ack-Ack Battery and Prisoner of War camp. As the gas venting trench was only 1m wide, it is further likely that other surviving examples exist within the area, undisturbed by the present development.

Plate 39: Feature 20 facing south-west

3.2.42 In addition, two lead pipes were observed within the trench (Features 24 and 25; Plate 40). These were corroded pipes made from lead, located at a depth of approximately 1.5m below the present ground surface. Feature 24 was 0.06m in diameter and ran on a north-south alignment, whereas Feature 25 was 0.04m in diameter and ran north-west to south-east. It is likely that these relate to the water supply for the Ack-Ack Battery and Prisoner of War camp. As the gas venting trench was only 1m wide, it is probable that other surviving examples exist within the area, undisturbed by the present development.

Plate 40: Feature 25 facing south

3.2.43 Further evidence for service supply and utilities in the area of the Ack-Ack Battery and Prisoner of War Camp were observed in the form of ceramic pipes, located within the south gas venting trench (Features 36, 41 and 49; Plate 41). These were located at a depth of approximately 1.2m below the present ground surface and were approximately 0.2m diameter. Features 36 and 49 were on a north- south alignment. Feature 41 was orientated north-east to south-west and was connected to brick drain traps Feature 21 and Feature 22, indicating that these orange ceramic pipes were part of the drainage system for the Ack-Ack Battery and Prisoner of War camp. Again, it is likely that other surviving similar features will survive in the vicinity.

Plate 41: Feature 41 facing south

3.2.44 The excavation of the south gas venting trench also encountered surviving structural remains, relating to the Ack-Ack Battery and Prisoner of War Camp, including a further section of tarmac surface located just 1.2m to the north of Feature 13 (Figure 15), and thus probably an extension of the same tarmac road. In addition, several concrete surfaces were observed within the 1m wide gas venting trench. The first, and westernmost (Feature 14; Plate 42) consisted of the south-eastern edge, and eastern corner of a hut base feature, as well as the entire southern edge across a distance of 21.5, and was comparable to those revealed by the clearance. It was located approximately 1.1m below the present ground surface. During the demolition of the feature revealed in the trench, a metal rectangular object 0.23m by 0.04m and 0.01m thick with a central slot and an inscription above the slot reading 'J& R HOWE LTD' was deposited with on the spoil heap (Find 9). Although the 1m width strip encountered during the groundworks was destroyed by the works, the rest of the hut base must survive sub-surface. Research suggests that this may have been the southernmost part of the southern double hut base feature, thought to have been the medical centre (Figure 17). A further concrete surface, 11m in length and 1m wide (Feature 15) located 10m to the north-east of Feature 14 was destroyed by the trench excavations. No edges, corners or other features were observed, but it seems to relate to a shorter hut base known from the area (Figure 17).

Plate 42: Feature 14, facing south-west

3.2.45 In addition, a triangular segment of concrete was excavated by the operations for the south gas venting trench, measuring approximately 1m by 1.6m on the right-angled edges (Plate 43), with a depth of 0.35m. This corroborates with aerial photographic evidence and Ordnance Survey mapping, as the corner of a further concrete hut base relating to the Ack-Ack Battery and Prisoner of War Camp (Figure 17). The remainder of the hut base must survive *in-situ*. A further concrete surface was exposed at a depth of 2.75m below the present ground level (Feature 17), compared to the 1.1m depth of the other features. It was 4.75m in length. No feature is known from this location on Ordnance Survey mapping of the area, but a white rectangle appears on aerial photography at this point (Figure 17).

Plate 43: Feature 16 facing north-east

3.2.46 Two further concrete surfaces were revealed by the gas venting trench excavations. The easternmost was a concrete surface, 11.2m in length with a thin narrow black coating of 0.002m thickness on the surface at the north-easternmost end (Feature 18; Plate 44). The location of this feature corresponds with a hut base known from aerial photography and Ordnance Survey Mapping of 1964 (Figure 17). Just 2m to the south-west was a further concrete surface which was 1.4m in length (Feature 28; Plate 45). It could be that this was once part of a porchway or extension to hut base Feature 18, as research indicates that one existed (Figure 15).

Plate 44: Feature 18 facing north-east, with Feature 28 behind

Plate 45: Feature 28 facing north-east, with Feature 18 in foreground

3.2.47 ***Excavation of fence post holes for new palisade fencing at south gas venting trench:*** following the excavation of the south gas venting trench, and installation of gas monitoring posts, teams of sub-contracting fencers were drafted in to erect a palisade fence to surround the south gas venting trench (Figure 14). This required the excavation of fence post holes 2.8m apart. These were excavated by toothless bladed ditching bucket, sometimes by a JCB, where the holes were 2.0m by 1.0m to a depth of 0.8m, or by mini digger, where the holes were 1m by 0.4m to a depth of 0.8m. A total of 594 fence post holes were monitored in this area. The majority revealed a topsoil consisting of a loose dark brown silty loam varying in depth from between 0.2m and over 0.8m, overlying a loose mid-orange sand. Some plastic and other rubbish was encountered in the topsoil in places. Several features were encountered in the fence post holes excavated in this area, although the nature of the groundworks made recording and interpretation more difficult. In two fence post holes, approximately 35m to the north-east of Feature 7 (Figure 15), concrete surfaces were revealed (Features 42 and 43) at a depth of 0.8m below the present ground surface. This corresponds directly with the location of a hut base, known from aerial photography and Ordnance Survey mapping to have existed, and implies that the rest of the hut base survives *in-situ*

*(*Figure 17*)*. Further features were located within the northern fenceline for the gas venting trench, in the form of tarmac (Feature 44) surviving 0.15m below the present ground surface and a nearby surface of bricks seen in a series of four consecutive fence post holes (Feature 45, 46, 47 and 48). These probably relate to an area of path, track or hard standing within the Ack-Ack Battery or Prisoner of War camp.

3.2.48 Only 0.7m to the immediate north of the north-eastern corner of Feature 18 was a concrete surface revealed at a depth of 0.65m in the western half of a fence post hole along the northern fenceline of the south gas venting trench (Feature 53; Plate 46). This is likely to represent the eastern edge of the hut base feature of which Feature 18 was a part (Figure 15). 14m to the north-east of Feature 53, was a further feature (Feature 54; Plate 47) which consisted of five concrete rectangular blocks, each measuring 0.4m by 0.12m and 0.08m in height. This could represent the demolition rubble of a nearby structure or wall, which, due to its proximity to other features, may relate to the Ack-Ack Battery or Prisoner of War Camp, disturbed by more recent landfill-related activity. Or it could represent the dumping of material in this area in a period after the Prisoner of War camp was in use.

Plate 46: Feature 53, facing south

Plate 47: Feature 54, excavated from fence post hole

3.2.49 The last feature encountered by the fenceline excavations for the south gas venting trench occurred in the form of a tarmac surface, at times marked with yellow paint, located 4.6m to the north of the north-eastern corner of Feature 6, and 11m to the north-east of Feature 54 (Feature 55; Plate 48). It was observed in 6 consecutive fence post holes, at the westernmost of which it lay 0.35m below the present ground surface, and at the easternmost, 0.1m at a depth of 0.1m. The presence of yellow paint, and the alignment of the feature with a track depicted on modern Ordnance Survey mapping, suggests that this was an area of hard standing or trackway relating to landfill usage of the site, and may even have been a recent public access route across the site.

Plate 48: Feature 55, revealed in six consecutive fence post holes, facing south-west

3.2.50 ***Soil strip for eastern attenuation pond:*** this stage of the groundworks occurred in the far south-eastern boundary of the Ness Farm area of the landfill site, in the rectangular field to the north of Doonies Farm, adjacent to the coast road, and to the west of the leachate drainage channel excavations (Figure 18). The initial topsoil strip was undertaken under archaeological supervision. This involved the removal of an average depth of 0.4m mid-brown loose loam across the entirety of the field. The topsoil overlay a mid-orange sandy clay. Several features were encountered during these operations. The first was a north-south aligned feature, 0.3m wide and 35m west of the eastern boundary, consisting of a dark brown material interspersed between large stones (Feature 58; Plate 49). A further feature running parallel to Feature 58, and with the same measurements and construction, only 22m further east was also observed (Feature 59; Plate 50). These are likely to have been field drains, constructed at the same time, as part of the agricultural improvements of the 19th century.

Plate 49: Feature 58 facing south

Plate 50: Feature 59 facing north

3.2.51 A further feature, 10m west of the eastern field boundary, was a north-east to south-west aligned linear feature, 0.5m in width of pinkish orange clay with stones interspersed (Feature 60; Plate 51). This is of a different make-up, and on a different alignment to Features 58 and 59, and therefore may represent a field drain of a later period.

Plate 51: Feature 60 facing north-east

3.2.52 Stripping of an area 4m in width to the south of the boundary wall (Feature 57) of the above field revealed the eastern part of the south-west face of Feature 57 (Plate 52), a dry stone dyke boundary noted from First Edition Ordnance Survey mapping (Figure 3). This has been much altered over the years, being truncated at its western end, and having a gap in it at its eastern edge (Plate 53) for a gateway to link this field into the adjoining one to the north. Just to the west of this gap, a trough feature with a north-east to south-west aligned promontory truncated wall was recorded, showing more recent adaptations to Feature 57 to aid changing agricultural practices and needs. Some graffiti in this area, in cement similar to that holding the trough, is dated 31st January 1984 (Plate 54).

Plate 52: South-west face of Feature 57

Plate 53: Trough and wall features in Feature 57, facing north-east

Plate 54: Graffiti by trough feature relating to Feature 57

3.2.53 ***Kissing gates and fencelines at Cairns:*** this stage of the groundworks occurred at the known cairn sites along the southern boundary of the site (Figure 19). The kissing gates at each cairn required the excavation of two holes measuring 1m by 0.5m to a depth of 0.8m, excavated by JCB with bladed ditching bucket (seen in preparation in Plate 55). Each encountered a loose mid-brown topsoil of a depth of between 0.18m and 0.32m above a firm orange sand and clay deposit with occasional stone inclusions. At the newly-scheduled cairn (Fig 19), landfill was encountered within the kissing gate post holes. The scheduled areas (20m radius for Crab's Cairn; 30m radius for Baron's Cairn; 30m for Cat Cairn and 15m radius for the new cairn) were not infringed upon by these works. Trenches and post-holes for the kissing gates were monitored by an archaeologist but there was no excavation for the stockproof fencing posts as they were driven in.

Plate 55: Preparation of kissing gate at Baron's Cairn, facing south

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 CONCLUSIONS

4.1.1 The watching brief monitoring encountered a total of 57 features, some correlating to previously known sites, and some representing new archaeological discoveries (2 of probable modern origin; 3 of probable landfill origin (1960s or 70s); 36 of which dated to the mid 20th century; 15 of post medieval origin; and 1 unknown and probably natural feature). In addition, a total of 15 finds were recovered during the groundworks. This has provided a rare opportunity to investigate the landscape in which some of the most interesting Bronze Age sites in Aberdeen survive, and has provided information on a range of different activities enacted on the hill across several eras.

4.1.2 ***Prehistoric Period:*** the area which has undergone archaeological monitoring was already known to have surviving evidence of prehistoric landuse in the form of the cairns situated along the site boundary. These were left undisturbed by the landfill closure works, although they were provided with new fencing and kissing gates. Flint finds (Finds 5, 6, 7, 8, 10 and 11) recovered from the site during the archaeological monitoring may be further evidence for prehistoric utilisation of the area. Although they are not of high quality, their presence may suggest that tool manufacture may have occurred in the vicinity, information not known before the works began.

4.1.3 ***Post-Medieval Period:*** a number of features relating to the post medieval period were also encountered, varying from known dry stone dykes to sub-surface field drains and ploughmarks, showing agricultural land-use of this outlying area during the age of agricultural improvement. The ploughmarks encountered in the south-eastern part of the site during the leachate protection works are of particular interest in that they may be evidence for the utilisation of less fertile land at a time of population growth, as they lay outside the known areas of fields from Ordnance Survey Mapping.

4.1.4 ***Modern Period:*** the majority of features encountered during the watching brief related to the modern period, or more specifically, the mid-20th century. 30 of the 36 modern features were associated with the known site of a World War II Ack Ack Battery, later converted into a Prisoner of War Camp. This documented site is known from personal memory accounts, ordnance survey mapping and aerial photography, as well as excavations on the adjacent site (Peterseat excavation, Aberdeen City Council 2001). The closure works provided a rare opportunity to record this area thoroughly, with known features surviving well with small features such as intact bolts and internal drain features *in-situ*, alongside some new hut bases, which were hitherto unrecorded. In addition, evidence of related drainage and service features were shown to survive sub-surface. Where excavations were deep (up to 3m below present ground surface), features relating to the Battery and Camp were still encountered, showing that the site was on a slope, and that despite more recent landfill operations, it seems a strategic destruction and removal of the camp never occurred.

4.2 RECOMMENDATIONS

4.2.1 This watching brief has formed the final stage of archaeological works required on site in relation to Phase I of the present development. Parts of Phase II of the landfill closure scheme will require further archaeological supervision, upon advice from the Keeper of Archaeology, Aberdeen City Council.

5. REFERENCES

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