





**Seafield Waste Depot,
City of Edinburgh
Archaeological Evaluation & Watching Brief
Data Structure Report**



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	Originator	Illustration by	Reviewed by	Approved by
ORIGINAL	NAME Ross Cameron	NAME Ross Cameron	NAME Alastair Rees	NAME Alastair Rees
DAE 05/04/16	SIGNATURE 	SIGNATURE 	SIGNATURE 	SIGNATURE 
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Executive Summary

ARCHAS Cultural Heritage Ltd were contracted by Robertson Group to undertake a programme of archaeological mitigation in advance of a proposed development of the existing Seafield Waste Refuse Site at Fillyside Road on the eastern side of Edinburgh. The client proposes to significantly redevelop the existing Waste Refuse Site, providing welfare, storage and parking facilities.

The archaeological works followed the placement of a planning condition upon the proposed development by City of Edinburgh Council Archaeology Service (CECAS). The condition required that 5% of the proposed development area be systematically assessed for archaeological remains through a programme of archaeological evaluation trenches. This phase of works was to take place in advance of development and specifically target 19th century drainage and irrigation ditches.

Due to an increasing number of constraints apparent on site, with the agreement of the client, ARCHAS and CECAS, a watching brief was maintained during preliminary works to locate services and remove the concrete capping across the site.

Following the watching brief, the archaeological evaluation involved the mechanical excavation of 6 evaluation trenches across the footprint of the proposed development.

Excavation of the trenches revealed the site to contain substantial deposits of levelling and made ground, in places over 2.50m deep, confirming this pattern across the proposed development area. While undisturbed natural subsoil was revealed in two of the trenches, this was at a depth well below that required by the development. Although early drainage features were targeted, no significant archaeological features or deposits were recorded.

A record of the work has been deposited with the Online Access to the Index of Archaeological Investigations (OASIS) website hosted by the Archaeological Data Service (OASIS ID archascu1-258730) and with Discovery and Excavation in Scotland (DES), the annual publication of fieldwork by Archaeology Scotland.

1 Introduction

1.1 General

- 1.1.1 ARCHAS Cultural Heritage Ltd was commissioned by Mr Brian Ingham of Robertson Group to undertake archaeological mitigation in advance of the proposed redevelopment of the existing Seafield Waste Refuse Site at Fillyside Road on the eastern side of Edinburgh (centred NGR: NT 29086 75389). The client proposes to significantly redevelop the existing Waste Refuse Site, providing welfare, storage and parking facilities.
- 1.1.2 Following the production of a Historic Impact Statement to accompany the planning application, the site was identified by the City of Edinburgh Council Archaeology Service (hereafter CECAS) as being located in an area of archaeological potential. CECAS provide the archaeological service to the City of Edinburgh Council and through Planning Condition 1 of Planning Application 16/00702/FUL, recommended that a programme of archaeological mitigation be carried out prior to development. The condition states:
- 'No development shall take place on the site until the applicant has secured the implementation of a programme of archaeological work (excavation, reporting and analysis, publication and public engagement) in accordance with a written scheme of investigation which has been submitted by the applicant and approved by the Planning Authority.'*¹
- 1.1.3 The CECAS response accepted the findings of the Heritage Impact Statement that the site had been largely agricultural land until the post-war period when it developed its current usage. However, the location of the site adjacent to an important and historic route into Edinburgh was identified, as well as the potential for significant paleo-environmental evidence surviving across site.²
- 1.1.4 In order to meet the requirements of the Planning Condition, CECAS expect a phased programme of works to be completed. The first phase of this involved the completion of a pre-development archaeological evaluation covering 5% of the proposed development area.³
- 1.1.5 In line with the requirements of the planning condition, ARCHAS Cultural Heritage Ltd (hereafter ARCHAS) completed a Written Scheme of Investigation outlining the proposed methodology in July 2016. This was submitted to, and approved by CECAS on July 22nd 2016.
- 1.1.6 Issues regarding the phasing and timetabling of the work, the nature of the site and other Health and Safety concerns meant that ARCHAS undertook an archaeological watching brief on some site works prior to completing the evaluation. This change in methodology was enacted following full discussions between ARCHAS, CECAS and the client.
- 1.1.7 The site works were completed by Alastair Rees, Ross Cameron and Joe Doran over five days from Tuesday 26th July to Thursday 4th August 2016. Weather conditions throughout were variable, but on the whole dry and bright.
- 1.1.8 ARCHAS Cultural Heritage Ltd. conforms to the standards of professional conduct outlined in the Chartered Institute for Archaeologists (CIfA) Code of conduct, and relevant Standards and Guidance documents.

¹ City of Edinburgh Council, 16/00702/FUL Decision Notice – 31/03/16

² City of Edinburgh Council, 16/00702/FUL Report of handling, page 6

³ *Ibid*

1.2 Site Location and Setting

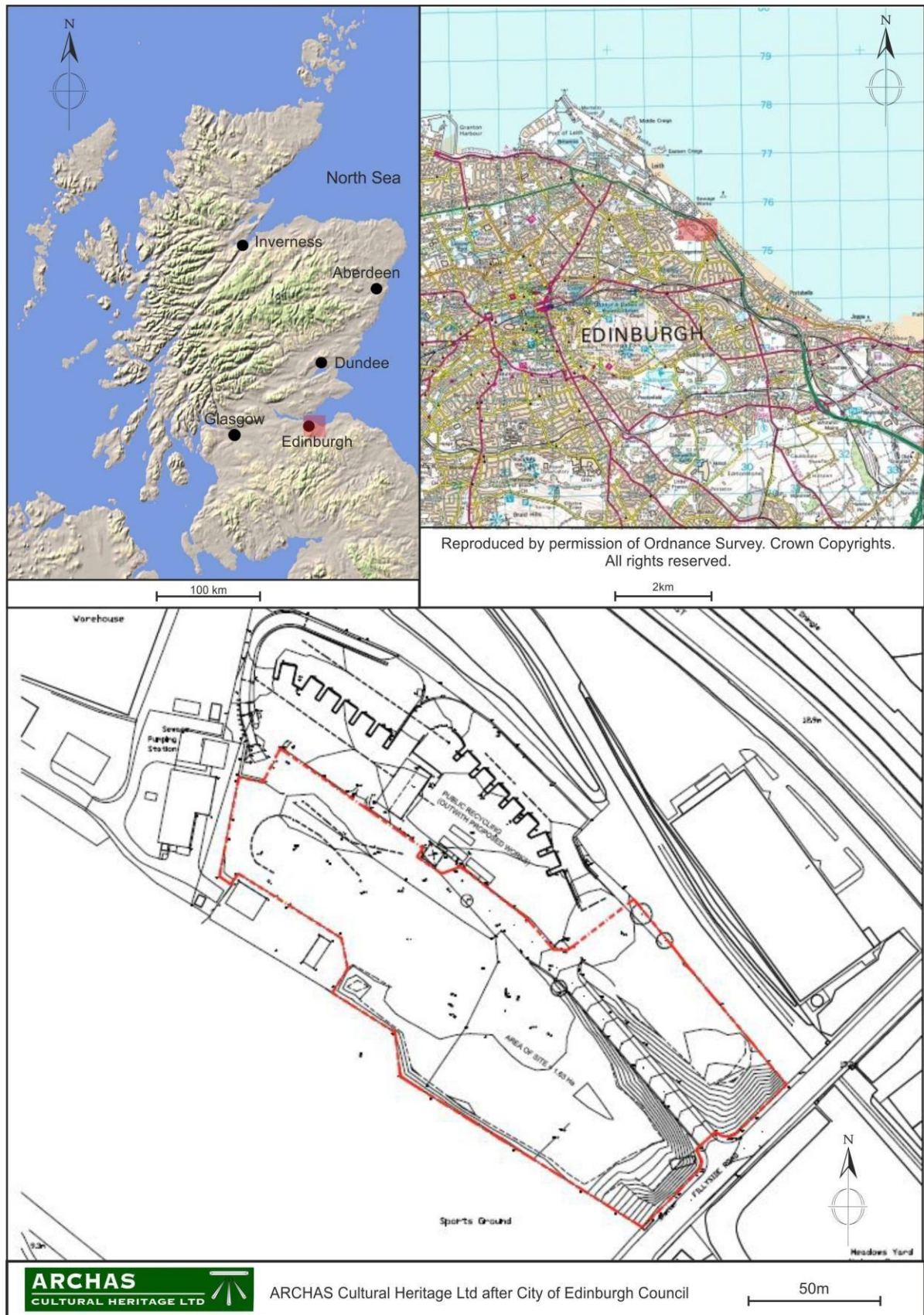


Figure 1: Site location with the area requiring archaeological investigation marked red

General

- 1.2.1 The proposed development is located in the Seafield area in the east of the City of Edinburgh. The proposed development area is centred on NGR: NT 29086 75389, and measures around 16,300m².

Study Area

- 1.2.2 In plan the site is an irregular plot of land aligned north west to south east (Figure 1). Much of it is currently vacant, but has previously been used as a waste and recycling centre and as such comprises a mix of concrete, tarmac, hardcore and grassed areas (*Plate 1*). The waste recycling centre remains in use across a portion of the overall site, with part of the proposed development area to the north east of the access road, as well as the access road itself, remaining in use by the general public.
- 1.2.3 The short south eastern side of the site is anchored on Fillyside Road, where the main access to the site is maintained. The longer north eastern side and the short north western side are both bordered by existing industrial units, while the longer south western side of the plot is bordered by open ground and football pitches.



Plate 1: Looking East across the southern edge of the site (Photograph 016)

Geology

- 1.2.4 The drift geology of the proposed development site comprises undifferentiated shoreface and beach deposits - sand and gravel. These superficial deposits formed up to two million years ago in the Quaternary Period and are characteristic of a local environment previously dominated by shorelines.
- 1.2.5 The underlying bedrock geology comprises Sedimentary Rock Cycles, Gullane Formation of the Strathclyde Group Type. These were formed 335-352 million years ago in the Carboniferous Period and are characteristic of a local environment previously dominated by swamps, estuaries and deltas.⁴

⁴ www.bgs.ac.uk – 18/07/16

2 Brief Archaeological & Historical Background

2.1 General

- 2.1.1 Readily accessible historical and archaeological records were consulted in order to gain an understanding of the relevant history of the development area. These resources included the National Monuments Record of Scotland, the Map Library as held by the National Library of Scotland and the Statistical Accounts of Scotland. Consultation of these resources for the wider area allows the archaeological team to better appreciate the likelihood of the archaeological deposits likely to exist in the area.
- 2.1.2 For a more detailed assessment of the area's history a Heritage Impact Assessment was completed at the preliminary phase of the project.⁵

2.2 Brief Historical Summary

Prehistoric

- 2.2.1 Evidence for prehistoric activity in the vicinity of the proposed development is provided by a Neolithic polished flint axehead recovered from Craigentiny House in the 1920s (NMRS No: NT 27 NE 122).

Roman

- 2.2.2 There is no direct evidence of Roman settlement in the vicinity of the development area although the adjacent historic Leith to Musselburgh coastal route is thought to be on the line of an earlier Roman Road.

Medieval

- 2.2.3 The proposed development area lies in the vicinity of medieval occupation and the village of Restalrig.

Post-Medieval

- 2.2.4 The map evidence shows the site to have been largely undeveloped from the 18th century. The earliest depiction of the site that can be termed accurate is William Roy's Military Survey of c.1750. This map shows the main Leith to Musselburgh route, with a fork running to the south west through the area of the proposed development. The land around the road is all worked agricultural land.
- 2.2.5 This south west running road is also shown on Robert Kirkwood's more accurate 'A Map of the Environs of Edinburgh' from 1817, running to a cluster of buildings around a courtyard called Fillyside Bank. The development area is depicted as bog.
- 2.2.6 Various primary accounts from the 19th century record the use of the Fillyside area for the grazing of animals, while estate maps and plans reveal a site extensively irrigated and known as 'Fillyside Meadow'.
- 2.2.7 The railway developed to the north of the site from the mid 19th century. The road through the development area remains extant until post 1933 with the first development on the site is revealed in the Ordnance Survey maps of 1949.

⁵ Wardell Armstrong LLP 2015, Land at Seafeld Depot, Leith, Edinburgh: Heritage Impact Assessment

2.3 Conclusions

- 2.3.1 Although no features have been previously recorded within the limits of the site boundary, this alone ensures the proposed development site has good potential for previously unrecorded archaeological remains, particularly of prehistoric date. The proposed development lies adjacent to an historic route along the coast from Leith to Musselburgh and is bisected by a roadway recorded from at least c.1750,
- 2.3.2 Indications are that the site was waterlogged to a degree pre-improvement and as such may retain paleo-environmental evidence as well as evidence for 19th century drainage networks.

3 Methodology

3.1 The Development

3.1.1 The development proposal involves the redevelopment of the existing waste refuse site at Seafield, with:

- the erection of welfare and office accommodation;
- new covered vehicle building;
- protective canopies to refuse vehicle parking bays;
- vehicle wash bays;
- renewal of vehicle parking and hard standing;
- provision of pedestrian walkways;
- delineation of staff parking bays; and
- renewal of perimeter fencing.

3.2 Constraints and issues

Timetabling

- 3.2.1 ARCHAS Cultural Heritage Ltd were commissioned to undertake the 5% evaluation of the proposed development site on 19/07/16, completing the WSI immediately thereafter and programming works to start on site on 26/07/16. The evaluation was to be completed in advance of proposed development, with the results of the evaluation being used to guide the proposals.
- 3.2.2 Upon arrival on site to complete the evaluation, ARCHAS found the main contractor was already in place, with small scale site works already underway to locate services. In addition larger scale site works were planned for the remainder of the week, with mechanical excavators arriving to begin removing the concrete cap which covered much of the site.
- 3.2.3 This obviously presented issues with regards to timetabling as the evaluation was supposed to be completed in advance of any site works commencing.

Access

- 3.2.4 The planning condition as imposed by CECAS and the accompanying comments had requested that 5% of the development area be investigated for archaeological deposits. While it was acknowledged that a section of the waste treatment works would remain in use for the duration of the works, it was not acknowledged that access to this would be through the proposed development area, meaning that the road areas could not be investigated as initially anticipated.
- 3.2.5 In addition, the area to the north west of the access road remained in use by the recycling centre, housing relict recycling bins and an area for the public to recycle their household waste and glass etc. This area was within the boundaries of the new site and subject to proposed archaeological evaluation.
- 3.2.6 Discussions with the City of Edinburgh Council staff on site highlighted the difficulty in working in these areas and highlighted their lack of advanced warning about the proposed archaeological works.
- 3.2.7 A further access issue was raised by the need for the City of Edinburgh Council to retain vehicular access to a fire training section of the site in the south western corner of the

proposed development are. This was to remain accessible at all times. This need to provide clear vehicle access to this area further reduced the space available for archaeological evaluation trenches and provided real health and safety issues with unauthorised access to the evaluation area.

Services

- 3.2.8 The service plan provided by the client revealed an intense concentration of services across the site, particularly in the main area still available for development following the reductions caused by the access issues (Section 3.2.3 – 3.2.6 above). This made plotting trenches in any number extremely difficult.

Health and Safety Concerns

- 3.2.9 With the severe restrictions over where trenches could now be placed, it was hoped to put as many as feasible along the edges of the site, where access and services would not provide such an issue.
- 3.2.10 However, these areas were seen to contain significant quantities of used needles and drug paraphernalia as well as areas of Giant Hogweed, presenting clear Health and Safety issues to staff.

3.3 A new methodology

- 3.3.1 With the number of unexpected issues and constraints, it became apparent that a 5% evaluation as proposed in the WSI would not be possible. With the access issues, and restrictions on where it was possible to dig, it was clear that it would not be possible to achieve the 840m² proposed in the WSI and requested by CECAS.
- 3.3.2 While it was made clear to the client that development work should not continue on site without the evaluation taking place in advance, their programme provided an opportunity to amend the methodology and continue with minimal disruption.
- 3.3.3 It was proposed that work to locate the services could continue, while the removal of the concrete pad from across much of the site would facilitate the excavation of the evaluation trenches.
- 3.3.4 Discussions were held with CECAS where it was agreed that these site works could proceed under watching brief conditions, with the evaluation scheduled to take place following the removal of the concrete pad and locating of services.

3.4 Watching Brief

- 3.4.1 The purpose of an archaeological watching brief is to record the archaeological resource during development. The archaeological watching brief involved monitoring the mechanical removal of the concrete and tarmac hardstanding as well as the hand excavation of trial pits to identify service locations.
- 3.4.2 All ground-breaking works were undertaken by the contractor using a mechanical excavator fitted, where possible, with a toothless ditching bucket. Due to the heavy nature of the work a toothed bucket was predominantly used. This mechanical excavation work was monitored by a qualified ARCHAS Ltd archaeologist under watching brief conditions until undisturbed natural subsoil became apparent or the depth of the development impact was reached. Across the site, the excavation went no deeper than 0.70m as per the developer's plans.

3.4.2 If archaeologically significant remains were identified during the watching brief, the archaeologist was available to take over formal investigation of these feature(s). The client and contractor were made aware of the necessity of archaeological investigation and the potential for down time as a result of this.

3.4.3 Any archaeological remains encountered would be recorded and investigated/sampled as per recording standards which comply with those outlined by the Chartered Institute for Archaeologists (CIfA) and are acceptable to CECAS.

3.5 Field Evaluation

General

3.5.1 The purpose of evaluation is to gain information about the archaeological potential of a site. In addition, CECAS had specific research goals which required the investigation of early drainage ditches identified during the Heritage Impact Assessment. The results of archaeological evaluation are used to decide whether further archaeological mitigation is required. In practice, this requires a number of trenches to be opened placed strategically across the site in order to gain good spatial coverage for assessing the potential of archaeological survival.

3.5.2 The results of this phase of works and subsequent recommendations by ARCHAS allow CECAS to make an informed decision as to whether the site should be investigated further or the planning condition discharged. ARCHAS provide recommendations as to whether any further archaeological mitigation is required, but the decision for any future work rests with CECAS and ultimately City of Edinburgh Council.

3.5.3 An archaeological evaluation investigates only a certain percentage of the development area through a series of carefully placed trenches. For the proposed development CECAS stipulated the evaluation was to cover a minimum of 5% of the proposed development area. This amounts to 840m².

Site Works

3.5.4 In practice, the evaluation involved mechanical stripping of the upper deposits within each trench using a toothless ditching bucket where possible. In light of the site's current usage, and make up, a toothed bucket was required during parts of the excavation.

3.5.5 Excavation proceeded until the natural subsoil, archaeological horizon or limit of the development was reached across the trench. This was monitored at all times by a suitably qualified archaeologist. Trenches were backfilled with compressed deposits removed during excavation.

3.5.6 Should archaeological remains be revealed during the mechanical excavation, reduction of the ground level would be taken over by the archaeological team and all material and features encountered recorded and investigated/sampled as appropriate and as per ARCHAS and Chartered Institute for Archaeologists (CIfA) recording standards.

Made Ground – Test Pits

3.5.7 As discussed above (Section 3.2), the issues arising on the site meant that it was not possible to achieve the coverage requested by CECAS and the trench plan outlined in the WSI.

3.5.8 It was anticipated that large areas of the site would contain deposits of made ground, but the depth of these was not foreseen. In many areas this made ground was much deeper than the proposed development depth and any features beneath would remain unaffected. In the

eastern part of the site, to the north east of the access road, excavation showed the made ground to be >2.50m, making safe excavation of trial trenches impossible.

3.5.9 In this area, a number of small scale, geographically separated test pits were opened to confirm the continuation and nature of the made ground.

4 Results

4.1 General

4.1.1 A total of six evaluation trenches were opened across the footprint of the proposed development, essentially confined to the eastern end of the site. Due to the density of services across the site, all areas subject to evaluation were scanned by a Cable Avoidance Tool (CAT) prior to work commencing.

4.1.2 The watching brief monitored the removal of the concrete and hardstanding across much of the main part of the site, south of the access road.

4.2 The Watching Brief

4.2.1 A watching brief was maintained during all ground breaking works from Thursday 28th July to Monday 1st August 2016.

4.2.2 The surfaces removed were shown to be multiple phases of tarmac and concrete (Plate 2), much of the latter very thick and reinforced with steel. In places this was edged by modern bricks, delineating the edge of the concrete surface and indicating the former presence of insubstantial brick structures.



Plate 2: Removal of the concrete capping under watching brief conditions (Photograph 025)

4.2.3 The excavations were limited in scope and were stipulated to be no deeper than 0.70m. In many places this was much less, averaging around 0.30m of deposit removal.

4.2.4 A NW-SE aligned slab of concrete in the centre of the site proved to be very thick (>0.20m), much of it underlying the uppermost tarmac surface.

4.2.5 The nature of the excavations meant that no earlier archaeological features or deposits were recorded during the watching brief. Furthermore, the volume of rubble removed created further issues regarding space in which to place evaluation trenches (Plate 3).



Plate 3: Looking SE across site following removal of the tarmac and concrete (Photograph 034)

4.3 The Evaluation

General

- 4.3.1 The evaluation took place over two days from Tuesday 26th July to Thursday 4th August 2016. The six trenches excavated were necessarily small in number and scale. A plan of the trenches excavated can be seen in Figure 2.

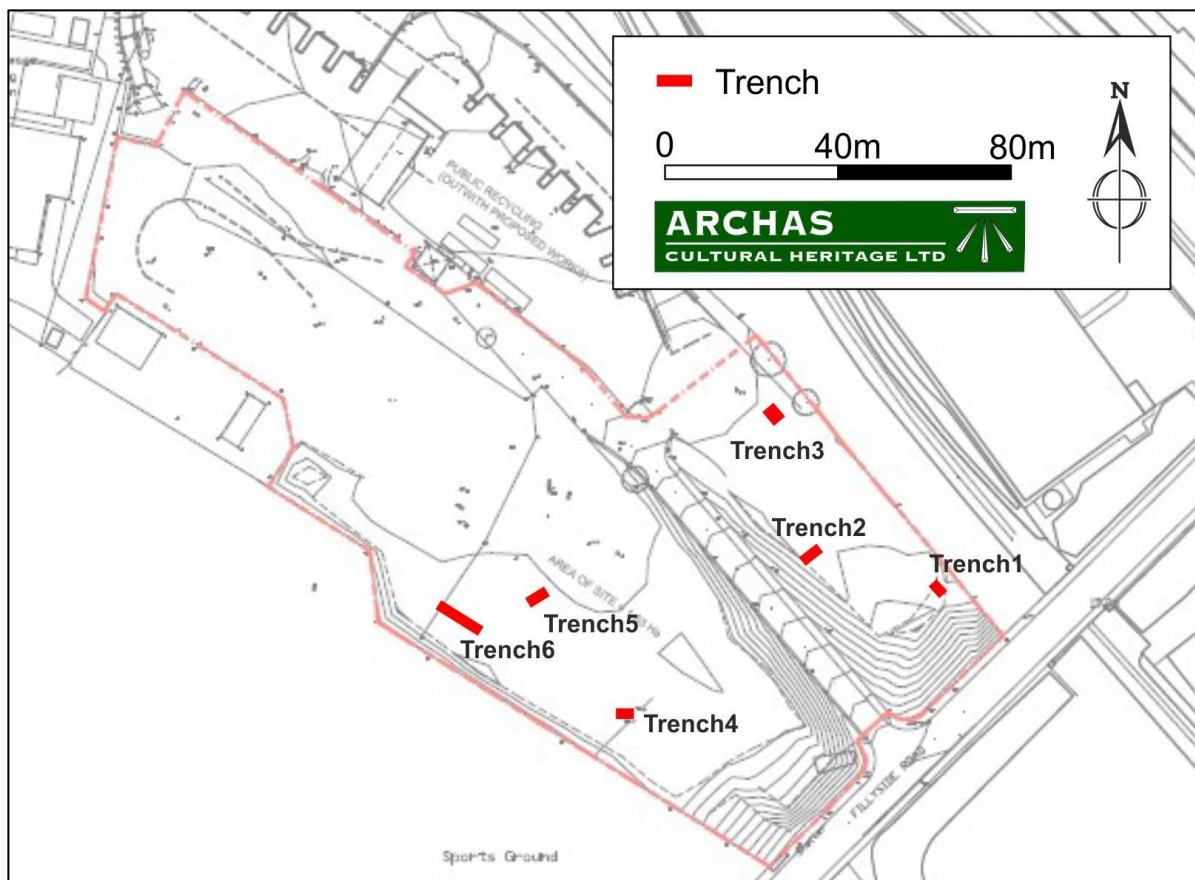


Figure 2: Plan of Trenches excavated during the evaluation phase

- 4.3.2 A description of deposits and features identified in each trench is provided below. All context numbers for layers are recorded as **bold** within curved parentheses (xxx). In each case the

initial letter applied to a context define the trench in which it was located. For example (101) would be the first deposit recorded in Trench 1.

Trench 1

- 4.3.3 Trench 1 was excavated in the eastern part of the site, to the north of the access road (Plate 4). This area had been occupied by relict recycling bins and Council detritus and was still in use upon the archaeological team arriving on site. However, it was cleared to a degree sufficient to allow excavation to proceed. Excavation began with the intention of opening a large trench aligned NW-SE along the north eastern perimeter of the proposed development area.



Plate 4: Pre-excitation view of the eastern part of the Site where trenches 1, 2 and 3 were sited.
(Photograph 001)

- 4.3.4 Even prior to excavation commencing, the City of Edinburgh Council team on site explained that they expected a minimum of 5m of made ground in parts of this area. This was created as a result of the council's recent policy of depositing road planings and detritus from roadworks in this area to level the surface.
- 4.3.5 Excavation of Trench 1 very quickly indicated that the anecdotal evidence was likely to be accurate (Plate 5). Trench 1 revealed >2.50m of made ground (Plate 6). The upper 0.50m of the trench was around 2.50m wide, to allow stepping of the trench as this became deeper, but it very quickly became clear that even if archaeological deposits or the natural subsoil was realised, it would not be possible to enter the trench to record these. As the deposit became deeper, it became apparent that Trench 1 would essentially act as a trial pit, demonstrating the makeup and depth of deposits in this area.



Plate 5: Working shot – opening Trench 1 (Photograph 003)



Plate 6: Post-excavation view showing the depth and make-up of Trench 1 (Photograph 006)

- 4.3.6 The deposits in Trench 1 were clearly banded and multi event, but were recorded as one context (**101**), as it is clear all are modern in date and involve the levelling of this general area.

Trench 2

- 4.3.7 It had originally been intended to excavate two long, NW -SE aligned parallel trenches in the eastern part of the site, but the results of Trench 1 made this impossible. Trench 2 was placed on the SW perimeter of this area, along the line of the access road. It was anticipated that deposits here would mirror those in Trench 1. This was quickly shown to be the case and Trench 1 measured only 4m long.
- 4.3.8 The upper deposit (**201**) comprised the same banded deposits of road and tar planings seen in Trench 1 as (**101**).
- 4.3.9 Due to the modern detritus within this deposit, the discovery of a cache of stoneware and glass bottles (**204**) at a depth of c.0.40m was unexpected (Plate 7). Investigation of these showed them to be mainly dateable to the first half of the 20th century, with no examples intact which were of any note (Plate 8). None of these bottles were retained and modern detritus was recovered stratigraphically below this deposit.



Plate 7: Working shot showing the cache of bottles (204) in Trench 2 (Photograph 008)

4.3.10 A change in the deposits in Trench 2 was notable at a depth of 1.90m. (201) gave way to reveal (202), a moderately compact dark grey silty sand. It was unclear if this was more made ground, perhaps from an earlier levelling event, or discoloured subsoil.

4.3.11 What appears to be the natural subsoil was revealed at a depth of 2.10m and shown to be a mottled mid brown yellow sand (203) (Plate 9).



Plate 8: Bottles recovered from (204) (Photograph 045)



Plate 9: Post-excavation view of Trench 2 showing natural (203) (Photograph 010)

Trench 3

4.3.12 Trench 3 was excavated at the northern corner of the area available for evaluation in the eastern end of the site north of the access road. Following the excavation of Trenches 1 and 2, it was clear this area had significant deposits of made ground and Trench 3 was excavated to determine whether this continued across the whole area.

4.3.13 Measuring 3m², Trench 3 displayed the same deposits of made ground visible in Trenches 1 and 2, but was much more abundant in modern building detritus, including branded signage, chain link fencing and pipes all discovered at the limit of excavation (Plate 10).



Plate 10: Modern detritus within Trench 3 (Photograph 012)

Trench 4

- 4.3.14 Trench 4 was excavated from west to east in the south western part of the site and measured 3m long. The upper deposits comprised turf and topsoil (**401**), a dark brown gritty loam 0.10m deep.
- 4.3.15 Below (**401**), (**402**) proved to comprise made ground not dissimilar to the deposits recorded in Trenches 1-3 to the north. Very firmly compact, (**402**) consisted of mottled dark grey clinker, road planings and brick fragments and was excavated to a depth of 1.20m.
- 4.3.16 Work was halted at this point due to damage caused to a service pipe at a depth of 1.30m. Excavation had already proceeded deeper than the proposed limit of excavation associated with the development.

Trench 5

- 4.3.17 Trench 5 was specifically plotted to investigate a sluice marked on an irrigation channel on the second edition OS map of 1896. This had been one of the research aims of the project as outlined by CECAS and it was hoped the excavations here would provide environmental evidence relating to the history of the site.
- 4.3.18 The location of the sluice on the early OS map was plotted against the modern site layout and shown to lie in close proximity to a NW-SE aligned water pipe crossing the site. A such, excavation here was limited to a trench measuring 4m by 1.80m, although this was place directly over the location of the sluice and the irrigation channel as shown on the OS maps.
- 4.3.19 Unlike all the previous trenches opened across the site, excavation of trench 5 failed to reveal any made ground. Once the 0.70m upper deposits of concrete (**501**) had been removed, these were shown to directly overlie a soft to moderately compact light yellow brown slightly mottled sand (**502**) (Plate 11). Due to the slightly mottled nature of this deposit and the lack of made ground here, excavation continued through (**502**) to assess the depth and nature of this deposit. 0.60m of (**502**) was removed, essentially showing this to be undisturbed natural subsoil.



Plate 11: Post-excitation view of Trench 5, excavated through natural (502) to assess nature of this (Photograph 038)



Plate 12: Post-excitation view of Trench 6 showing made ground (602) (Photograph 042)

4.3.20 There was no indication of either the sluice or the irrigation channel in Trench 5. Proximity of services meant that it was not possible to extend the trench to south east as would have been hoped to confirm the absence of the sluice.

Trench 6

4.3.21 Trench 6 was opened along the south west perimeter of the proposed development area and measured 10.40m in length.

4.3.22 The turf and topsoil (**601**) measured 0.15m and was the same as (**401**). Despite the relative proximity to Trench 5, Trench 6 once again displayed large deposits of made ground (**602**). Here this deposit was a mix of dark grey and black clinker, bricks and rubble (Plate 12). In addition to (**601**), a further 1.15m of (**602**) was removed. This showed little indication of change and excavation was halted at a depth of 1.30m as this was 0.15m below the proposed development limit of excavation.

5 Summary and Discussion

5.1 General

5.1.1 The archaeological evaluation at Seafield was planned to cover 5% of the proposed development area while targeting the 19th century drainage network recorded in the Heritage Impact Assessment.

5.2 Timetabling and Access

5.2.1 Due to a combination of factors, the proposed 5% evaluation planned in the WSI was not achieved. The timetabling of the project was an issue and should have been planned well in advance of development. In addition, the City of Edinburgh Council staff working at the Waste Recycling Centre were unaware the work was taking place and areas covered by the proposed development boundary remained in use for the duration of the archaeological work. The area available for development was further limited by Health and Safety concerns presented by the presence of used drug paraphernalia and Giant Hogweed in parts of the site.

5.3 Services

5.3.1 The extent of services across the site was known in advance of the evaluation, and while this presented its own issues, this was not felt to be an insurmountable issue if the access and Health and Safety concerns outlined above had not been present.

5.4 Watching Brief

5.1.4 The compromise reached between City of Edinburgh Council, CECAS, ARCHAS and Robertson Group saw a relaxation in the target of 5% evaluation and a watching brief maintained on part of the works to clear large areas of concrete hardstanding. This monitoring revealed the extent and depth of the hardstanding across site and failed to reveal any significant archaeological features.

5.5 Evaluation

5.5.1 Six evaluation trenches were opened, accounting for 52.02m² of the proposed development area. These trenches showed deep deposits of made ground extending below the limit of excavation proposed by the new development.

5.5.2 Natural subsoil was revealed in two trenches, Trench 2 and Trench 5, but only in Trench 5 was this subsoil at a sufficient height to be impacted by development. Here, in an area close to known water pipes, Trench 5 was opened in order to assess the survival of a 19th century sluice and irrigation channel. No evidence for this was noted.

6 Summary and Discussion

6.1 General

- 6.1.1 The archaeological watching brief and evaluation was unable to satisfy the full remit of the archaeological planning condition as outlined by CECAS. There were various factors which contributed to this outcome and CECAS were kept well abreast of developments as the project proceeded. CECAS agreed to the change in methodology via email on 26th July 2016, and attended site to discuss the issues on 4th August 2016.
- 6.1.2 The archaeological work undertaken at the Seafield Waste depot failed to reveal any archaeological artefacts or deposits which will be impacted by the proposed development.
- 6.1.3 ARCHAS Cultural Heritage do not recommend any further archaeological mitigation on site with regards to the current development and believe the archaeological condition can be discharged.
- 6.1.4 Whilst ARCHAS can provide recommendations as to any future work on site, the final decision for any further archaeological mitigation rests with City of Edinburgh Council through City of Edinburgh Council Archaeology Service.

Acknowledgements

ARCHAS Cultural Heritage Ltd would like to thank Robert Gamble of Robertson Construction Ltd for undertaking us to complete the project. Robert and Bobby Craig (also of Robertson Construction) deserve our gratitude for their time and consideration as the project unfolded.

Particular thanks are due to Alison McGowan, the Robertson Construction Ltd Site Manager, who expertly guided and assisted the ARCHAS team through what became a very challenging situation.

Thanks are also due to Brian Sinclair of Sinclair Plant Hire. Brian accommodated the changes to the timetabling of the job with his usual accommodating good humour.

We must also note the assistance provided by City of Edinburgh Council Archaeology Officer John Lawson in planning and completing the project. John's flexible approach to the project and the difficulties it faced made an acceptable outcome achievable.

Bibliography

Documentary References

City of Edinburgh Council, 16/00702/FUL Decision Notice – 31/03/16

City of Edinburgh Council, 16/00702/FUL Report of handling

Wardell Armstrong LLP 2015, Land at Seafield Depot, Leith, Edinburgh: Heritage Impact Assessment

Electronic References

www.bgs.ac.uk

www.nls.uk

www.pastmap.org.uk

Appendix A Context Register

Context No.	Trench	Type	Description	Dimension	Comments	Date	Initial
101	1	Deposit	Very mixed and mottled, banded tar and road surface planings with occasional rubble and concrete fragments	D: >2.50m	Made ground. Anecdotal evidence that this area was significantly built up in recent years with detritus from road workings.	26/07/16	JD
201	2	Deposit	Very mixed and mottled, banded tar and road surface planings with occasional rubble and concrete fragments	c.1.90m	Made ground. Same as (101). Anecdotal evidence that this area was significantly built up in recent years with detritus from road workings.	26/07/16	JD
202	2	Deposit	Moderately compact dark grey silty sand.	D: >0.20m	Made ground. Discoloured buried soil.	26/07/16	JD
203	2	Deposit	Moderately to softly compact light to mid brown yellow sand.	-	Natural subsoil.	26/07/16	JD
204	2	Deposit	Localised deposit of stoneware and glass bottles.	D:c.0.30m	Only visible in NE part of trench. Located within made ground containing modern detritus. Bottles vary from late 19th to mid 20th century.	26/07/16	RC
301	3	Deposit	Firmly compact black brown tar planings and hardcore.	D: 1.20m	Made ground. Same as (101). Anecdotal evidence that this area was significantly built up in recent years with detritus from road workings.	26/07/16	RC
302	3	Deposit	Moderately compact mid to dark grey brown silty sand abundant in modern 20th century building detritus.	D: >1.30m	Made ground. Essentially the same as (302), but a different phasing of dumping.	26/07/16	RC
401	4	Deposit	Moderately compact dark brown gritty loam.	D: 0.10m	Turf and topsoil.	04/07/16	JD
402	4	Deposit	Firmly compacted mottled, dark grey clinker and tar planings with frequent brick fragment inclusions.	D: 1.20m	Made ground.	04/07/16	JD
501	5	Deposit	Relatively loosely compact brick and rubble deposit as bedding under a firm concrete cap.	D: 0.70m	Made ground.	04/07/16	JD
502	5	Deposit	Moderately compact light yellow brown mottled sand.	D: >0.70m	Natural subsoil.	04/07/16	JD
601	6	Deposit	Moderately compact dark brown gritty loam.	D: 0.15m	Turf and topsoil. Same as (401).	04/07/16	JD

<i>Context No.</i>	<i>Trench</i>	<i>Type</i>	<i>Description</i>	<i>Dimension</i>	<i>Comments</i>	<i>Date</i>	<i>Initial</i>
602	6	Deposit	Firmly compact mottled dark grey and black brown rubble and clinker. Clinker found in NW corner of trench, bricks and rubble in centre and SE.	D: >1.15m	Made ground.	04/07/16	JD

Appendix B Trench Register

<i>Trench No.</i>	<i>Length (m)</i>	<i>Width (m)</i>	<i>Area (m²)</i>	<i>Depth</i>	<i>Orientation</i>
1	2.50	1.80	4.50	2.50	NW-SE
2	4	1.80	7.20	2.10	NE-SW
3	3	3	9	2.50	NW-SE
4	3	1.80	5.40	1.30	W-E
5	4	1.80	7.20	2.10	SW-NE
6	10.40	1.80	18.72	1.30	NW-SE

Appendix C Photographic register

<i>Image No.</i>	<i>Taken from</i>	<i>Trench</i>	<i>Contexts No.</i>	<i>Description</i>	<i>Date</i>	<i>Initial</i>
001	SE	-	-	Pre-excavation view of the NE part of the site	26/07/16	JD
002	NW	-	-	Pre-excavation view of the NE part of the site	26/07/16	JD
003	NW	1	(101)	Working shot - Opening Trench 1	26/07/16	JD
004	NW	1	(101)	Post-excavation view of Trench 1 at LOE	26/07/16	JD
005	W	1	(101)	Post-excavation view of Trench 1 at LOE	26/07/16	JD
006	SE	1	(101)	Post-excavation view of Trench 1 at LOE	26/07/16	JD
007	NE	2	(204)	Working shot - Bottle dump (204) in Trench 2	26/07/16	JD
008	NE	2	(204)	Working shot - Bottle dump (204) in Trench 2	26/07/16	JD
009	NE	2	(203)	Post-excavation view of Trench 2	26/07/16	JD
010	N	2	(203)	Post-excavation view of Trench 2	26/07/16	JD
011	SE	3	(302)	Post-excavation view of Trench 3	26/07/16	JD
012	E	3	(302)	Post-excavation view of Trench 3	26/07/16	JD
013	E	-	-	Pre-excavation view of SE end of site	26/07/16	RC
014	NW	-	-	Pre-excavation view of SW part of site	26/07/16	RC
015	NNW	-	-	Pre-excavation view of SW part of site	26/07/16	RC
016	NE	-	-	Pre-excavation view of SE end of site	26/07/16	RC
017	NW	-	-	Pre-excavation view of NW end of site	26/07/16	RC
018	E	-	-	Pre-excavation view of SE end of site	26/07/16	RC
019	NE	-	-	Pre-excavation view of S area of site	26/07/16	RC
020	SE	-	-	Working shot - Watching Brief	28/07/16	JD
021	NW	-	-	Pre-excavation view of site - centre and N area	28/07/16	JD
022	NW	-	-	Modern brick wall around concrete slab	28/07/16	JD
023	SE	-	-	Working shot - SE part of site following concrete strip	28/07/16	JD
024	W	-	-	Working shot - stripping concrete	28/07/16	JD
025	SE	-	-	Working shot - stripping concrete	28/07/16	JD
026	SE	-	-	Working shot - stripping concrete	29/07/16	JD
027	E	-	-	Working shot - stripping concrete	29/07/16	JD
028	SW	-	-	Working shot - stripping concrete	29/07/16	JD
029	W	-	-	Working shot - stripping concrete	29/07/16	JD
030	NW	-	-	Working shot - stripping concrete	01/08/16	JD
031	N	-	-	Working shot - stripping tarmac	01/08/16	JD
032	NW	-	-	Working shot - stripping tarmac	01/08/16	JD
033	NE	-	-	Working shot - concrete revealed under tarmac	01/08/16	JD
034	SE	-	-	SE part of the site following Watching Brief	01/08/16	JD
035	NW	-	-	Pre-excavation view of NW part of site	01/08/16	JD
036	SE	4	-	Post-excavation view of trench 4 (following hitting water main)	04/08/16	JD
037	SW	5	(501)	Working shot - Trench 5	04/08/16	JD
038	NE	5	(502)	Post-excavation view of Trench 5	04/08/16	AR
039	NE	5	(502)	Post-excavation view of Trench 5	04/08/16	AR
040	E	5	(502)	Post-excavation view of Trench 5	04/08/16	AR
041	NE	6	(601), (602)	SW facing section of Trench 6	04/08/16	JD
042	SE	6	(602)	Post-excavation view of Trench 6	04/08/16	JD
043	SE	6	(602)	Post-excavation view of Trench 6	04/08/16	JD
044	SE	6	-	Working shot - Backfilling Trench 6	04/08/16	JD
045	-	2	-	Bottles recovered from (204) – discarded	04/08/16	RC

Appendix D Discovery & Excavation Scotland Entry

LOCAL AUTHORITY:	City of Edinburgh Council
PROJECT TITLE/SITE NAME	Seafield Waste Depot
PROJECT CODE	245
PARISH	Edinburgh
NAME OF CONTRIBUTOR:	Ross Cameron
NAME OF ORGANISATION:	ARCHAS Cultural Heritage Ltd
TYPE(S) OF PROJECT:	Archaeological Watching Brief and Evaluation
NMRS NO(S):	NT27NE 1715
SITE/MONUMENT TYPE(S):	Refuse Centre
SIGNIFICANT FINDS:	None
NGR (2 letters, 8 or 10 figures)	NT 29086 75389
START DATE (this season)	26/07/16
END DATE (this season)	04/08/16
PREVIOUS WORK (incl. DES ref.)	None
MAIN(NARRATIVE) DESCRIPTION: (May include information from other fields)	<p>ARCHAS Cultural Heritage Ltd were contracted to undertake a programme of archaeological mitigation in advance of a proposed development of the existing Seafield Waste Refuse Site at Fillyside Road on the eastern side of Edinburgh. The client proposes to significantly redevelop the existing Waste Refuse Site, providing welfare, storage and parking facilities.</p> <p>The archaeological works followed the placement of a planning condition upon the proposed development by CECA S. The condition required that 5% of the proposed development area be systematically assessed for archaeological remains through a programme of archaeological evaluation. This phase of works was to take place in advance of development and specifically target 19th century drainage and irrigation ditches.</p> <p>Due to an increasing number of constraints on site, with the agreement of the client, ARCHAS and CECA S, a watching brief was maintained during preliminary works to locate services and remove concrete capping across site.</p> <p>Following the watching brief, the archaeological evaluation involved the mechanical excavation of 6 evaluation trenches. Excavation of the trenches revealed the site to contain substantial deposits of levelling and made ground, in places over 2.50m deep, confirming this pattern across the proposed development area. While undisturbed natural subsoil was revealed in two of the trenches, this was at a depth well below that required by the development. Although early drainage features were targeted, no significant archaeological features or deposits were recorded.</p>
PROPOSED FUTURE WORK:	n/a
CAPTION(S) FOR ILLUSTRS:	n/a
SPONSOR OR FUNDING BODY:	Robertson Group
ADDRESS OF MAIN CONTRIBUTOR:	ARCHAS Cultural Heritage LTD Suite B2 Law s Close 339-343 High Street Kirkcaldy KY11 1JN
EMAIL ADDRESS:	ross.cameron@archas.co.uk
ARCHIVE LOCATION	NMRS and City of Edinburgh Council SMR (intended)