



**The Meadowhead and Stevenson Catchment -
Kilmarnock to Irvine storm relief sewer:
Archaeological Watching Brief on Areas 6.1, 6.2 & 6.3
Project 3635**

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Kilmarnock to Irvine storm relief sewer: Archaeological Watching Brief on
Areas 6.1, 6.2 and 6.3**

On behalf of: MBV joint venture

NGR: NS 4280 3796 to NS 3165 3944

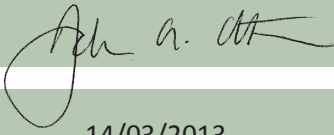
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*This document has been prepared in accordance
with GUARD Archaeology Limited standard operating procedures.*

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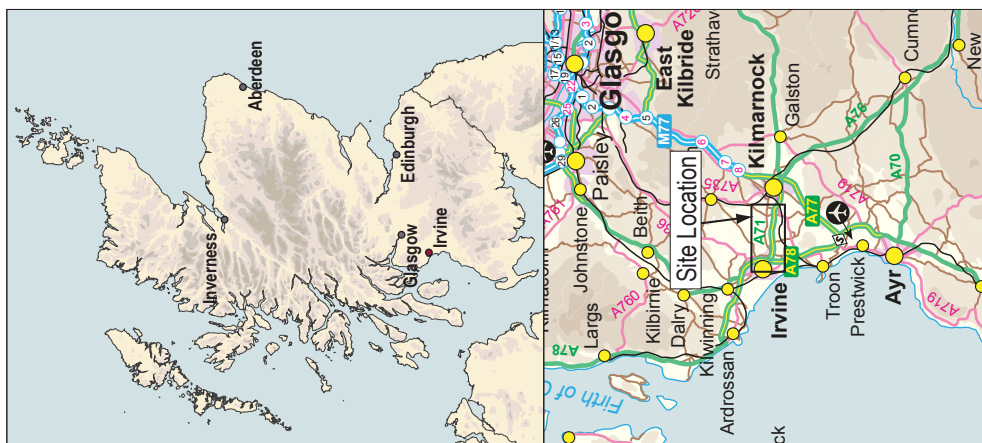
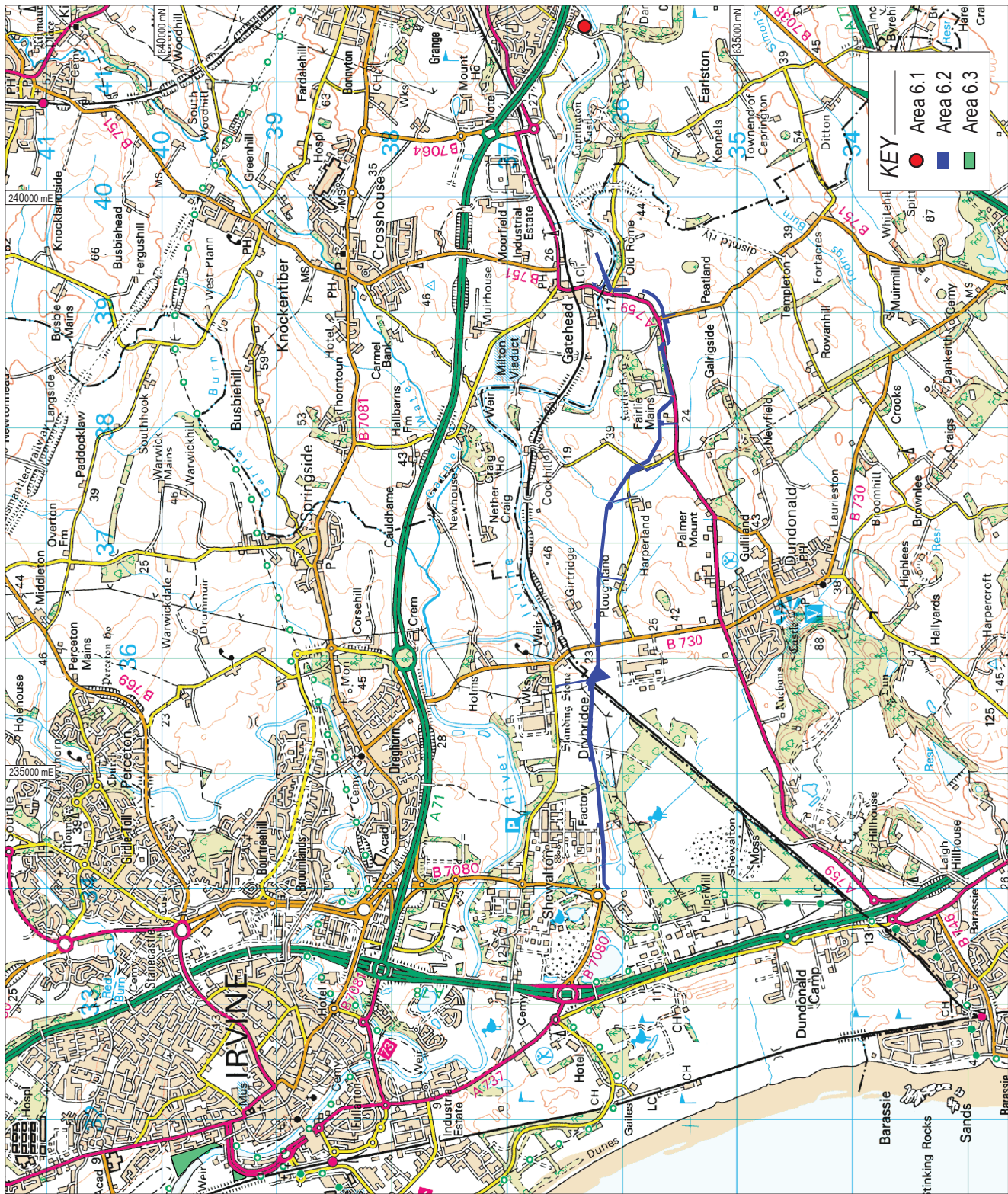
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Executive Summary

- 1.1 GUARD Archaeology Limited was commissioned by MBV Joint Venture to undertake an archaeological watching brief during the construction of a storm relief sewer between Irvine and Kilmarnock. The work was undertaken between 12th October 2010 and 4th May 2012, and revealed surviving rig & furrow cultivation marks along with several more recent features including; a cundy drain, five pits, two postholes, a possible field boundary and a possible wall foundation.
- 1.2 The OASIS record number for this work is guardarc1-144395.

Introduction

- 2.1 This report sets out the results of an archaeological watching brief undertaken by GUARD Archaeology, on behalf of MBV Joint Venture during the construction of a storm relief sewer between Irvine and Kilmarnock. During the course of the watching brief rig & furrow cultivation marks, a cundy drain, two post holes, a possible field boundary and a possible wall foundation were recorded and excavated. GUARD Archaeology undertook this programme of work between 12th October 2010 and 4th May 2012.

Site Location, Topography and Geology

- 3.1 The development location lies between Cheapside Street, Kilmarnock (NGR: NS 4280 3796) and Irvine Sports Club (NGR: NS 3165 3944) taking the route outlined in the Archaeological Written Scheme of Investigation of January 2009.
- 3.2 Three sections of the sewer pipeline were subject to the watching brief.
 - Area 6.1 commences in Cheapside Street, Kilmarnock and runs to the current water tank at Gatehead.
 - Area 6.2 runs from Gatehead water tank to the western side of Meadowhead Water Treatment Works.
 - Area 6.3 runs from Meadowhead Treatment Works to Irvine Sports Club, and includes works carried out on Irvine Moor.
- 3.3 The site is, for the most part, bounded by fields and the land has been used for arable and pastoral farming. However, some of the excavations were carried out in an urban environment in and around the town of Irvine.
- 3.4 For the majority of the pipeline route, the bedrock is Scottish Coal Measures. The superficial deposits vary, and include Raised Marine Deposits (Irvine), Raised Tidal Flat Deposits (Meadowhead) and Alluvium (Kilmarnock). (British Geological Survey website).

Archaeological Background

- 4.1 A comprehensive review of the archaeological resource undertaken by Halcrow Group Limited in 2010 identified 158 sites within 1 km of the pipeline route and provided mitigation for the protection of cultural heritage sites during the groundworks for this development (Halcrow Group Limited 2010).

Area 6.1

- 4.2 Within this area, Halcrow Group Limited identified one Garden and Designed Landscape, 28 Listed Buildings, one Conservation Area and one historic battle-site, as well as 46 archaeological

sites recorded on the Sites and Monuments Record. Four additional sites were noted on aerial photographs. The archaeological sites in the vicinity of the areas watched include Caprington Castle (NMRS NS43NW 21) and its Garden and Designed Landscape.

Area 6.2

- 4.3 The potential for archaeological remains to be uncovered in Area 6.2 was considered to be relatively high. Among the known remains within this work package are 18 Sites and Monuments Record entries, 3 Listed Buildings and previously unknown sites identified through walkover survey and inspection of aerial photographs. Known archaeological sites within or adjacent to the pipeline corridor include Old Rome Bridge (NMRS NSNS33NE 30), Drybridge rind ditch (NMRS NS33NE 43), Drybridge rig & furrow (NMRS 33NE 88) and Shewalton Colliery (NMRS NS33NW 55). Archaeological watching briefs were recommended for the pipeline corridor from Gatehead Tank to Drybridge and Drybridge to Meadowhead Water Treatment Works.

Area 6.3

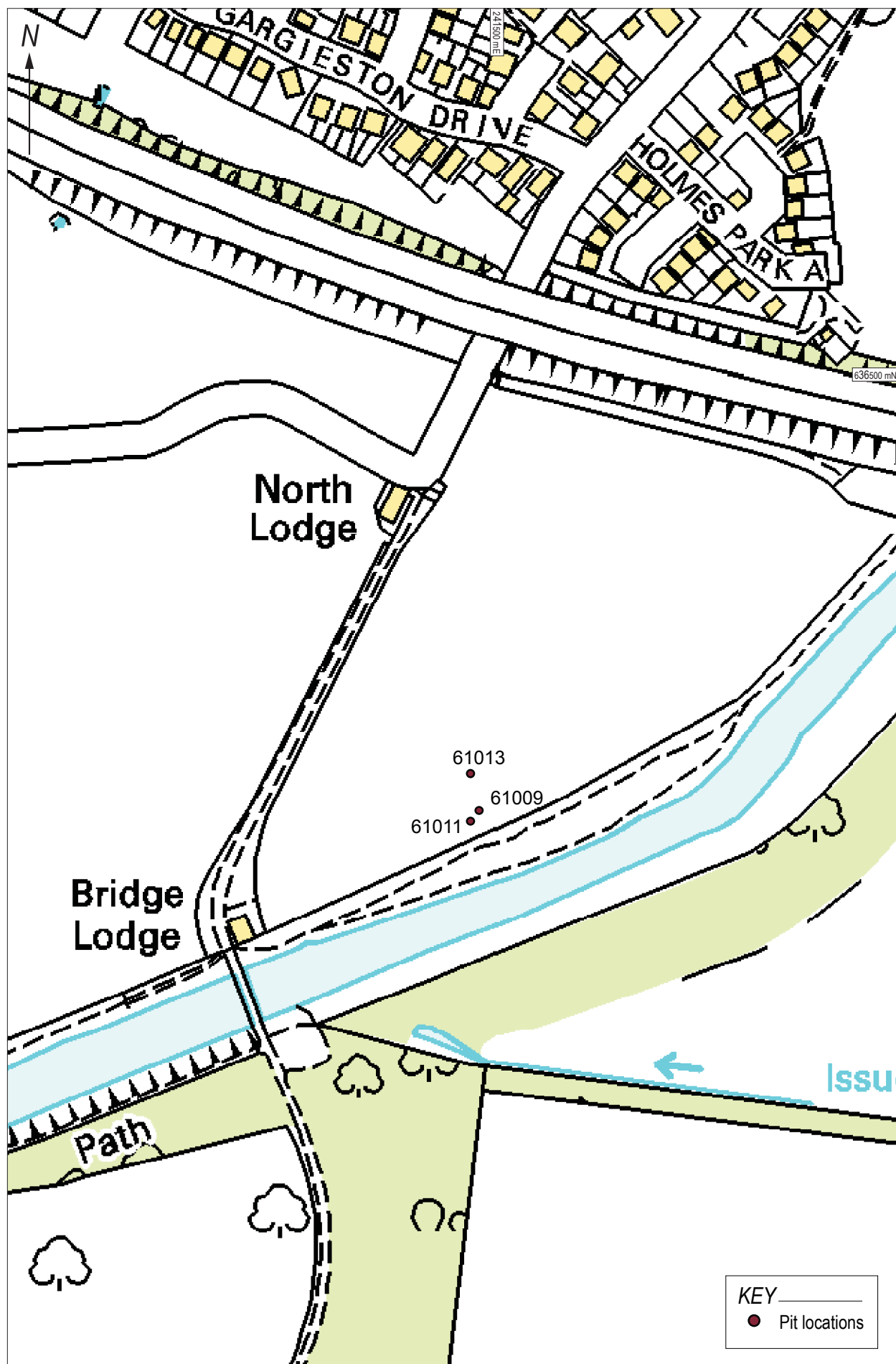
- 4.4 The location of a former friary on Fullarton Road, Irvine (NMRS NS33NW 7) and the areas adjacent to Kirk Vennel, the Old Parish Kirk (NMRS NS33NW 38) and the site of St Mary's Chapel in Irvine (NMRS NS33NW 23) were identified as being archaeologically sensitive. Halcrow Group Limited recommended that archaeological watching briefs be carried out in the vicinity of these historical sites.

Aims and Objectives

- 5.1 The general aim of the watching brief was to identify any archaeological features encountered and record them fully. The specific objectives were to:
- establish the presence or absence of any archaeological remains within the pipeline corridor;
 - determine the character, extent and significance of any archaeological deposits encountered, and to
 - fully excavate and salvage any information possible from any significant features encountered.

Methodology

- 6.1 The strategy employed during the watching brief consisted of the following:
- All ground disturbances were monitored by an archaeologist assisted, where necessary, by further archaeologists under the overall guidance of an archaeological project manager.
 - All plant was fitted with toothless ditching buckets for removal of any previously undisturbed topsoil or overburden layers to ensure the subsoil interface was not disturbed and any archaeological features could be clearly identified.
 - Topsoil and overburden were removed in spits to the first archaeological horizon or, where none was found, to the natural subsoil. Any archaeological features encountered were cleaned by hand to determine the date of the deposits, their character and extent. Such features were recorded by written description on pro forma recording sheets, by photograph and by measured drawing.
 - All significant archaeological features encountered were dealt with by the on-site archaeologist(s). Negative-cut features were 50% excavated in order to determine their significance, date and function. Any features deemed to be important discoveries, were fully excavated, and recorded via pro forma sheets, drawings and photographs.



- All archaeological finds were dealt with by the on-site archaeological team. The general practice was to bulk recover all artefacts by context which are recovered from the overburden or from 19th century or later layers or deposits. Any finds from securely stratified earlier occupation phases were three-dimensionally recorded prior to up-lifting.
- All excavated feature fills and horizons were sampled for palaeo-environmental evidence.
- A representative section was recorded for each section of trench denoting depth of overburden, any stratigraphy present and the nature of the soil. This information was logged in the day book together with a sketch drawn to scale and a photographic record of deposits.

6.2 Conditions for the watching brief were variable.

Results

Area 6.1

- 7.1 The watching brief was concentrated on the area between Holmes Road, Dundonald Road and Gatehead Tank, and included the compounds at both of these roads and the access road at Gatehead Tank.
- 7.2 At the western end of Holmes Road, in the field adjacent to the North lodge for Caprington Castle, three negative-cut pits were uncovered. Excavation of a shallow sub-circular pit 61009 (2.05m by 1.56m by 0.12m) revealed that the main fill, clay deposit 61008, which contained pieces of coal and charcoal, lined the edges of the pit, while interior silt deposit 61007 contained fragments of partially burnt bone. The presence of charcoal and burnt bone, taken in conjunction with the discolouration often associated with *in-situ* burning noted at the base of the pit, suggests that this may have been a fire pit. Circular pit 61010 (0.86m by 0.85m by 0.16m), which was filled with orange silt, contained no material which might suggest its function. Oval pit 61013 (1.11m by 0.83m by 0.2m) contained a compact fill of red clay mixed with orange silt (61012). No artefacts were recovered from the fill or evidence that might suggest its function.
- 7.3 Three test pits monitored in Nine-acre field on Holmes Road revealed no archaeological remains or deposits, and no evidence of the presence of sub-surface mine-shafts was found. Similarly, removal of topsoil from the access road at Gatehead Tank and the compounds at Dundonald Road and Holmes Road did not uncover any archaeological remains or deposits.

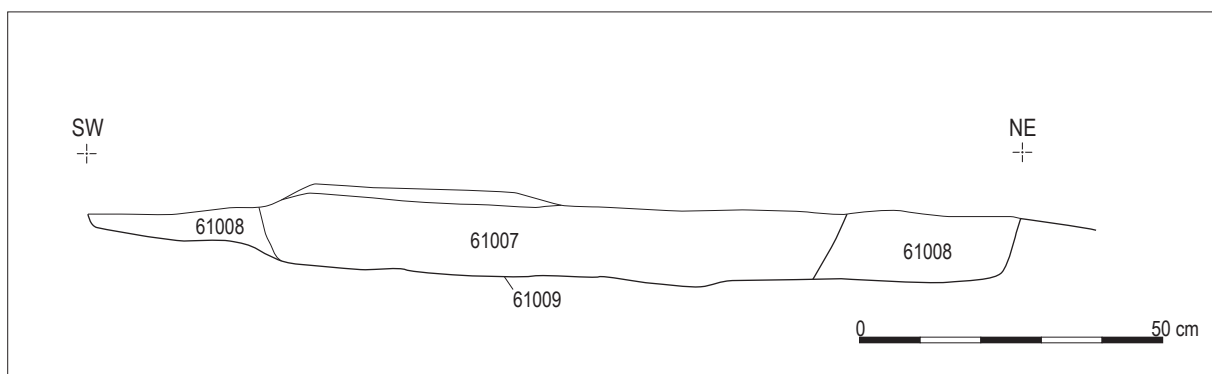


Figure 3: South facing section of pit 61009.

Area 6.2

- 7.4 The watching brief in Area 6.2 was carried out from Gatehead Tank to Meadowhead Water Treatment Works, and the following archaeological remains were found.
- 7.5 Linear features uncovered to the east of Harperland farm were, on excavation, found to be the remains of cultivation rigs. The five rigs (context 004) were orientated NW-SE, spaced about 5 m apart and had been reduced in height by ploughing.

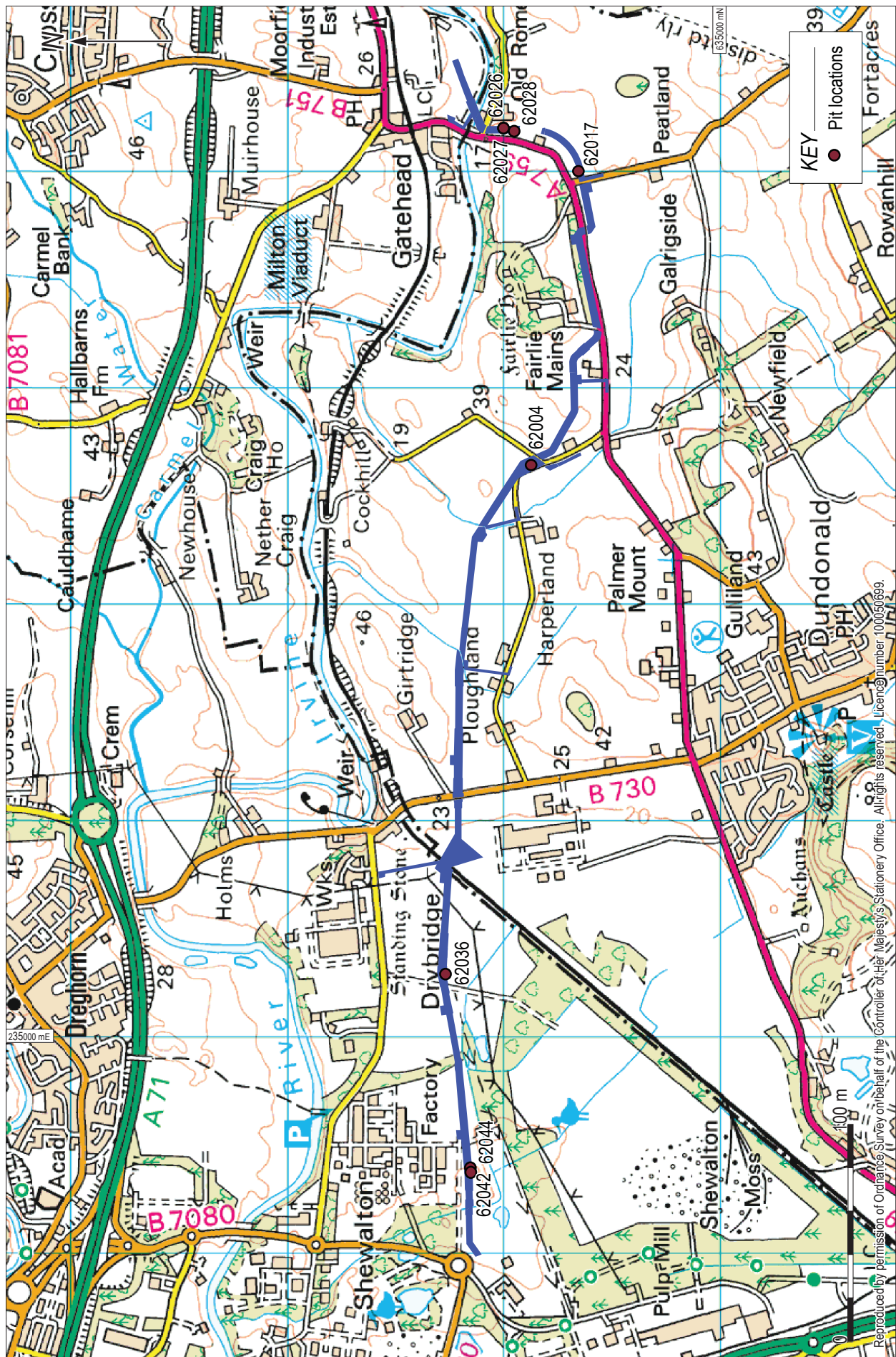


Figure 4:
Area 6.2 location.

- 7.6 Two robbed-out drystone walls and a cundy drain were revealed in the field to the south of Rose Cottage. The walls (context 017) were found to be in a poor state of preservation and, as they are not noted on the 1st Edition Ordnance Survey map, are believed to be of relatively modern date. The cundy drain (context 019) was 4 m long, 0.49 m wide and 0.16 m deep, had sandstone walls and had a sandstone capping. The drain lay below a spread of coal debris, which also comprised the drain fill. A second drain 020 lay at the northern end of the cundy drain, and was filled with the same coal debris.



Plate 1: Robbed-out walls 017 from SE.



Plate 2: Mid-excavation view of posthole 026.

- 7.7 Two possible postholes were uncovered in the field between Old Rome cottage and the River Irvine. Postholes 026 (0.45m in diameter and 0.21m deep) and 027 (0.42m in diameter and 0.14m deep) were filled with black silt 024, similar to the overlaying topsoil, that contained frequent pieces of coal along with 19th or 20th century ceramics. The lower fill of posthole 026 contained fragments of bricks and concrete 025. Also within this field was possible drainage ditch 028 that was over 9 m long and filled with coal-rich orange clay.
- 7.8 Between Drybridge and Meadowhead, a rectangular cut (context 036) measuring 4.3 m by 0.8 m may be the remains of a wall foundation, and degraded sandstone found within fill 035 may add weight to this interpretation.
- 7.9 An area of rig & furrow cultivation was noted in the fields between Dundonald Burn and Oldhall Roundabout. Two small circular pits visible in the topsoil were cut into the rig. Pit 042 (fill 043) was 0.56m in diameter and 0.11m deep, while pit 044 (fill 045) was 0.55m by 0.36m and 0.03m deep. Both pits were filled with black silt that contained frequent inclusions of coal and small pebbles.



Plate 3: Slot through cultivation rig 004.



Plate 4: South facing section of pit 042.

- 7.10 Other remains in this area are stone/rubble field drains 011, 031 and 037 ceramic field drains 003, 013, 023, 032 and 040.

Area 6.3

- 7.11 The sections of pipeline monitored in and around the town of Irvine were located at Irvine Moor, Low Green, West Road and Irvine Sports Club.
- 7.12 The watching brief at the compound on Irvine Moor did not uncover any archaeological remains, deposits or artefacts. Possible ploughmarks at the work compound were found to the modern, as the fill included plastics, modern bottle glass and modern ceramic. The sandy subsoil elsewhere on the moor included a significant amount of building debris, found to a depth of about 3 m, suggesting that this is made ground. No archaeological remains or deposits were found on this section.
- 7.13 Sandy subsoil 050 at the compound at Irvine Sports Club is also likely to be made ground as it too had inclusions of rubble and was additionally disturbed by tree roots. No archaeological remains or deposits were found on this section.
- 7.14 The watching brief on West Road found disturbed subsoil with patches of rubble that included masonry, roofing slates, brick and concrete. A piece of late Medieval pottery with a reduced grey core and green-glaze (Small Find 9) was recovered from this deposit.
- 7.15 The excavations at Low Green have been the subject of an earlier report (Arabaolaza 2012).

Discussion

Area 6.1

- 8.1 The 1st Edition Ordnance Survey map of 1860 records only wells and a road or track crossing the River Irvine in the vicinity of pits 61009, 61010 and 61013. No datable artefacts were retrieved from any of these pits, although datable botanical evidence may be recovered through analysis of their fills although the presence of coal may indicate that the deposits are relatively recent. No other archaeological remains were found in this area.

Area 6.2

- 8.2 The 1st Edition Ordnance Survey map of 1860 denotes an old coal pit to the south-west of Old Rome farm. The fills of postholes 026 and 027 found in this location were rich in coal fragments, suggesting that they may be related to the nearby coal pit, and the presence of concrete building material and 19th or 20th century ceramics within the fill indicates that these are of relatively modern date. The abundance of coal within the fill of ditch 028 also suggests an association with the coal pit, and indicates a relatively modern date for this feature.
- 8.3 Roy's mid-eighteenth century map depicts a system of enclosed fields and some un-named structures at Shewalton farmstead. It is possible that wall foundation 036, which was found in this locale, is the remains of one of these structures.
- 8.4 Pits 042 and 044 were found to be relatively modern as they had been cut into rig & furrow and were visible in the topsoil. They may have been related to agriculture, but their actual function is not known.
- 8.5 The rig & furrow cultivation method, remains of which were found at Harperland and to the east of Oldhall Roundabout, was used in the Medieval and post-Medieval periods. It involved digging channels (furrows) and piling spoil between the furrows to create raised strips (rigs) on which crops were grown. Roy's map depicts the fields to the east and north-east of Meadowhead Farm and those surrounding Harperlands as rig & furrow, indicating that the cultivation method was in use in the mid-eighteenth century. However, no datable evidence was recovered from either of these areas of rig & furrow.



Area 6.3

- 8.6 In this area, the made ground found at all of the locations is fairly typical of urban development, where debris from demolished buildings is itself built upon. Made ground at Irvine Sports Club, which lies within an ox-bow meander of the River Irvine, suggests that the ground level was deliberately raised, perhaps to prevent flooding. This may also be the case at Irvine Moor, where made ground was found to be about 3 m thick. Although Medieval pottery was found at West Road, no associated remains or deposits were uncovered.

Recommendations

- 9.1 The watching brief and investigations have demonstrated that no significant archaeologically sensitive deposits or features exist within the monitored areas. In consequence, it is recommended that no further archaeological fieldwork is required.
- 9.2 GUARD Archaeology would stress that these recommendations are intended for guidance only and the final decision regarding any further work or an archaeological post-excavation programme rest with the West of Scotland Archaeology Service and the planning authority.

Acknowledgements

- 10.1 GUARD Archaeology would like to thank MBV joint venture for their assistance. Technical support was from Aileen Maule and John Kiely. The illustrations were produced by Fiona Jackson and Gillian McSwan. The report was desk top published by Gillian McSwan. The project was directed in the field by Iraia Arabolaza, Fiona Jackson, Maureen Kilpatrick, Christine Rennie and Bob Will and was managed for GUARD Archaeology Limited by John Atkinson.

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Kilmarnock to Irvine storm relief sewer:
Archaeological Watching Brief on Areas 6.1, 6.2 & 6.3
Data Structure Report**

Section 2: Appendices



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Appendices

Appendix A: Bibliography

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Richmond, J 1791-99 'The Parish of Irvine' in *The Statistical Account of Scotland*. Vol. 7. <http://stat-acc-scot.edina.ac.uk> [Accessed 19 February 2013].

Wilson, J 1841 'The Parish of Irvine' in *The Statistical Account of Scotland*. Vol. 5. <http://stat-acc-scot.edina.ac.uk> [Accessed 19 February 2013].

Cartographic Sources

Roy, W 1747-55 *Military Survey of Scotland*

Ordnance Survey 1860 *Ayrshire Sheet XXII*. Six inch map

Ordnance Survey 1860 *Ayrshire Sheet XXIII*. Six inch map

Appendix B: List of Contexts

Context No.	Area	Description	Interpretation
001	6.2	Light brown clay/silt	Topsoil at Harperlands
002	6.2	Mottled red, white, pink silty clay	Subsoil at Harperlands
003	6.2	Orange ceramic field drain	Field drain
004	6.2	Linear bands of mid-grey clay silt	Remains of rig & furrow
005	6.2	Light to mid-grey clay	Natural deposit
006	6.3	Loose light brown silty sand	Topsoil at Irvine Moor
007	6.3	Loose orange/yellow/brown sand	Subsoil at Irvine Moor
008	6.2	Loose mid-brown silty sand	Topsoil
009	6.2	Loose red/brown sand	Subsoil
010	6.2	Compacted orange/brown silty clay	Subsoil
011	6.2	Stone field drains	Field drain
012	6.2	Deposit of cobbles in a brown silt matrix	Hard standing
013	6.2	Orange ceramic field drain	Field drain
014	6.2	Heavily compacted grey/brown silty clay	Subsoil
015	6.2	Mid-brown sandy silt	Topsoil
016	6.2	Mottled grey/orange/brown sandy clay	Subsoil
017	6.2	Robbed-out stone walls	Stone walls
018	6.2	Coarse orange/brown sand	Subsoil
019	6.2	Stone component of cundy drain	Cundy drain
020	6.2	Linear cut	Cut of drain
021	6.2	Linear cut	Cut of cundy drain
022	-	Number not used	-
023	6.2	Orange ceramic field drain	Field drain
024	6.2	Grey/black clay-silt with coal fragments	Fill of possible postholes 026 and 027

Context No.	Area	Description	Interpretation
025	6.2	Layer of stone and CBM	Fill of possible posthole 026
026	6.2	Circular cut	Cut of possible posthole
027	6.2	Circular cut	Cut of possible posthole
028	6.2	Brown coal-rich silt in an orange clay matrix	Possible drainage ditch
029	6.2	Mid-brown silty clay	Topsoil at Olympic Complex
030	6.2	Loose mottled brown/orange/grey sand	Subsoil at Olympic Complex
031	6.2	Rubble field drains at Olympic Complex	Rubble field drains
032	6.2	Orange ceramic field drain at Olympic Complex	Field drain
033	6.2	Black silt with angular pebbles	Subsoil at Glaxo Smith Klein
034	6.2	Mid-brown silt	Fill of cut 036
035	6.2	Orange silt with sand and gravel patches	Fill of cut 036
036	6.2	Possible wall foundation cut	Possible wall
037	6.2	Rubble field drains at Glaxo Smith Klein	Rubble field drains
038	6.2	Building debris within topsoil	Made ground at Glaxo Smith Klein
039	6.2	Orange/grey sandy silt	Subsoil at Glaxo Smith Klein
040	6.2	Orange ceramic field drain at Glaxo Smith Klein	Field drain
041	6.2	Mid-brown sand	Subsoil at Glaxo Smith Klein
042	6.2	Oval-shaped cut	Cut of small pit
043	6.2	Loose black silt with pebbles	Fill of pit 042
044	6.2	Oval-shaped cut	Cut of small pit
045	6.2	Loose black silt with pebbles	Fill of pit 044
046	6.3	Friable dark brown soil	Topsoil at Irvine Moor
047	6.3	Yellow/brown sand	Subsoil at Irvine Moor
048	6.1	Firm grey/brown silty clay	Topsoil at Holmes Road
049	6.1	Firm brown/orange silty clay	Subsoil at Holmes Road
050	6.3	White sand with rubble inclusions	Made ground at Irvine Sports Club
62001	6.2	Firm mid-grey silty clay	Topsoil
62002	6.2	Firm orange/brown silty sand	Subsoil
63001	6.3	Loose brown/black silt	Topsoil
63002	6.3	Dark brown silty clay with modern plastic	Made ground
63003	6.3	Stone structure (subject to separate report)	Stone structure
63004	6.3	Dark brown sandy silt	Topsoil at Irvine Moor compound
63005	6.3	Firm mix of brown sandy silt and Type 1	Made ground at Irvine Moor
63006	6.3	Loose fine-grained yellow sand	Subsoil at Irvine Moor compound
61007	6.1	Firm orange silt	Fill of pit 61009
61008	6.1	Dark grey clay with frequent coal/charcoal pieces	Fill of pit 61009
61009	6.1	Circular cut	Cut of possible fire pit
61010	6.1	Medium compaction orange silt	Fill of pit 61011
61011	6.1	Circular cut	Cut of pit
61012	6.1	Firm red clay and orange silt	Fill of pit 61013
61013	6.1	Oval-shaped cut	Cut of pit
61014	6.1	Medium compaction dark brown silt	Topsoil at Holmes Road West
61015	6.1	Orange/grey silty sand	Subsoil at Holmes Road West
62016	6.2	Mid-brown silty sand	Topsoil adjacent to A71
62017	6.2	Mottled brown/yellow/red sand	Subsoil adjacent to A71
62018	6.2	Light brown/orange sandy gravel	Subsoil adjacent to A71

Appendix C: List of Finds

Find No.	Area	Context No.	No. of Pieces	Material	Description
1	6.2	001	4	ceramic	modern rim and body sherds
2	6.2	001	1	ceramic	Medieval vessel handle
3	6.2	009	2	ceramic	Medieval sherds
4	6.2	009	1	lithic	flint core
5	6.3	006	3	lithic	cores

Find No.	Area	Context No.	No. of Pieces	Material	Description
6	6.2	008	1	ceramic	clay pipe stem
7	6.2	010	1	ceramic	clay pipe stem
8	6.1	048	1	ceramic	clay pipe stem

Appendix D: List of Samples

Sample No.	Area	Context No.	Size	Reason for Sampling				Application/Comments
				Pot	Bone	Lithics	Botanics	
1	6.1	61007	2xL		x			Fill of pit 61009
2	6.1	61008	2xL				X	Fill of pit 61009

Appendix E: List of Drawings

Drawing No.	Area	Sheet No.	Subject	Scale
1	6.3	1	Stone feature	1:20
2	6.2	1	Possible robbed-out walls 1-3	1:20
3	6.2	1	South facing section of stone wall 017	1:10
4	6.2	2	South-west facing section of cundy drain	1:10
5	6.2	2	South-west facing section of drain	1:10
6	6.2	2	Plan of drain and cundy drain	1:20
7	6.2	2	Pre-excavation plan of postholes 026 and 27	1:20
8	6.2	2	Mid-excavation plan of posthole 026	1:20
9	6.2	2	Post-excavation plan of posthole 026	1:20
10	6.2	2	South facing section of posthole 026	1:10
11	6.2	2	Post-excavation plan of posthole 027	1:20
12	6.2	2	South facing section of posthole 027	1:10
13	6.2	2	Plan of possible drainage ditch	1:20
14	6.2	2	Pre-excavation plan of possible wall foundation cut	1:20
15	6.2	2	Mid-excavation plan of possible wall foundation cut	1:20
16	6.2	2	Post-excavation plan of possible wall foundation cut	1:20
17	6.2	3	North facing section of possible wall foundation cut	1:10
18	6.1	3	South-east facing section of pit 61009	1:10
19	6.1	3	Post-excavation plan of pit 61009	1:20
20	6.1	3	South facing section of pit 61011	1:10
21	6.1	3	Post excavation plan of pit 61011	1:20
22	6.1	3	South-east facing section of pit 61013	1:10

Appendix F: List of Photographs

Digital

File 001

Frame	Area	Context No.	Subject	Taken from
1	6.2 Harperland	001	Pre-stripping of field	S
2	6.2 Harperland	001	Pre-stripping of field	SW
3	6.2 Harperland	001	Pre-stripping of field	SW
4	6.2 Harperland	001 002	Possible feature in north-east of compound	N
5	6.2 Harperland	001 002	Possible feature in north-east of compound	E
6	6.2 Harperland	001 002	Hand dug trench through possible feature	N
7	6.2 Harperland	001 002	Machine excavated slot through possible feature	SE
8	6.2 Harperland	002	Compound after topsoil strip	N
9	6.2 Harperland	002	Compound after topsoil strip	E
10	6.2 Harperland	001 002	North facing section at compound	N
11	6.2 Harperland	002 003	Depth of field drain	N
12	6.2 Harperland	002	Possible feature - not archaeological	E

Frame	Area	Context No.	Subject	Taken from
13	6.2 Harperland	002 004	South-east facing section of rig	SE
14	6.2 Harperland	002 004	Rigs 1 and 2	SE
15	6.2 Harperland	002 004	Rigs 1 and 2	SE
16	6.2 Harperland	002 004	Rigs 3 and 4	SE
17	6.2 Harperland	002 004	Rigs 3 and 4	SE
18	6.2 Harperland	002 004	Rigs 1 and 2	NW
19	6.2 Harperland	002 004	Section through rig 4	S
20	6.2 Harperland	002 004	Section through rig 4	S
21	6.2 Harperland	002	Road section of compound	E
22	6.2 Harperland	002	Road section of compound	W
23	6.2 Harperland	002	Stripped compound	E
24	6.2 Harperland	002	Stripped compound	SE
25	6.2 Harperland	002	Section through hand dug services pit	E
26	6.2 Harperland	002 004	Rigs 3 and 4	SE
27	6.2 Harperland	002 004	Rigs 5 and 6	SE
28	6.2 Harperland	002 004	Section through rig 3	SE
29	6.2 Harperland	002 004	Rigs 3 and 4	SE
30	6.2 Harperland	002	Stripped road	E
31	6.2 Harperland	002	Stripped road	W
32	6.2 Harperland	002	Compound area	NW
33	6.2 Harperland	001 002	Hand dug trench for services	W
34	6.2 Harperland	-	Area to be stripped	W
35	6.2 Harperland	002	Stripped area	W
36	6.2 Harperland	002	Stripped area	W
37	6.2 Harperland	-	Working shot	S
38	6.2 Harperland	-	Working shot	S
39	6.2 Harperland	002	Pre-excavation view to the south of road	N
40	6.2 Harperland	002	Topsoil strip to south of road	N
41	6.2 Harperland	002	Topsoil strip to south of road	S
42	6.2 Harperland	002	Post-excavation view of south of road	S
43	6.2 Harperland	002	Post-excavation view of south of road	N
44	6.2 Harperland	002	Depth of topsoil at south of road	S
45	6.2 Harperland	002	Post-excavation view of south of road	E
46	6.2 Harperland	002	Pre-stripping at north of burn	S
47	6.2 Harperland	002	Pre-stripping at north of burn	NW
48	6.2 Harperland	002	Pre-stripping at north of burn	NW
49	6.2 Harperland	002	Field drain at north of burn	NW
50	6.2 Harperland	002	Section through field drain	W
51	6.2 Harperland	002	Depth of deposits to north of burn	E
52	6.2 Harperland	002	Post-stripping at north of burn	E
53	6.2 Harperland	002	Stripped area under goal posts	NW
54	6.2 Harperland	002	Stripped area to north of goal posts	NW
55	6.2 Harperland	002	Stripped area to north of goal posts	NW
56	6.2 Harperland	001 002	General view from previously stripped area	NW
57	6.2 Harperland	001 002	General view of new strip	W
58	6.2 Harperland	001 002	General view of new strip	SE
59	6.2 Harperland	001 002	General view of new strip	E
60	6.2 Map 4	001 002	General view of new strip	SW
61	6.2 Map 4	001 002	General view of new strip	SW
62	6.2 Map 5	-	General view of sunrise	W
63	6.2 Map 5	-	View towards Harperland	W
64	6.2 Map 4	-	Newly stripped area	E
65	6.2 Map 3	-	Medieval ceramic	W
66	6.2 Map 3	-	Working shot	-
67	-	-	ID shot	SE

Frame	Area	Context No.	Subject	Taken from
68	6.3 Irvine Moor	-	General view of compound area	-
69	6.3 Irvine Moor	-	General view of compound area	NE
70	6.3 Irvine Moor	-	General view of compound area	NE
71	6.3 Irvine Moor	-	General view	E
72	6.3 Irvine Moor	-	General view	E
73	6.3 Irvine Moor	006 009	West facing section	W
74	6.3 Irvine Moor	-	Post-excavation view of compound	N
75	6.3 Irvine Moor	-	Post-excavation view of compound	W
76	-	-	ID shot	-
77	6.2	008 009	Stripping new compound to west of B730 road	W
78	6.2	008 009	Stripping new compound to west of B730 road	W
79	6.2	008 009	Stripping new compound to west of B730 road	SW
80	6.2	008 009	North-east facing section of rig	SW
81	6.2	002	Section through rigs to east of road	NE
82	6.2	002	Section through rigs to east of road	NE
83	6.2	002	General view of rigs	SW
84	6.2	002	General view of rigs	SW
85	6.2	002	Section through linear feature to east of road	SE
86	6.2	002	Section through linear feature to east of road	SE
87	6.2	002	Linear feature to east of road	SE
88	6.2	002	Linear feature to east of road	SE
89	6.2	002	Stripped area 100 m from B730 road	SW
90	6.2	002	Stripped area to immediate east of B730 road	SW
91	6.2	009	Stripped area to west of B730 road	E
92	6.3	-	ID shot	-
93	6.3	007	Haul road	SE
94	6.3	007	Haul road	N
95	6.3	006 007	Section showing topsoil depth	S
96	6.3	007	Haul road	NE
97	6.3	-	Stripped area west of Kilwinning Road	N
98	6.3	-	Stripped area west of Kilwinning Road	S
99	6.3	-	Working shot	S
100	6.3	-	Stripped area and general view	N
101	6.3	-	Working shot	N
102	6.3	-	Stripped area south of Burns statue	S
103	6.3	-	Hanging stone	W
104	6.3	-	Hanging stone	W
105	6.3	006	Post-excavation view of modern stone/rubble surface	E
106	6.3	006	Post-excavation view of modern stone/rubble surface	E
107	6.3	-	Tile and bricks from modern stone/rubble surface	-
108	6.3	-	Modern feature	-
109	6.2	-	ID shot	-
110	6.2	008 009	Area to west of B730 road	W
111	6.2	-	General view of area at A759	W
112	6.2	-	General view of area at A759	N
113	6.2	-	Stripped area south of Fairlie Mains	W
114	6.2	-	Stripped area south of Fairlie Mains	W

File 002

Frame	Area	Context No.	Subject	Taken from
1	6.3	002	Modern midden material	E
2	6.3	002	Modern midden material	E
3	6.3	003	Inset stone	W
4	6.3	003	Inset stone	W

Frame	Area	Context No.	Subject	Taken from
5	6.3	001	Topsoil	W
6	6.3	-	Pre-excavation view of Irvine Moor compound	SW
7	6.3	-	Pre-excavation view of Irvine Moor compound	NW
8	6.3	005	Post-excavation view of southern section of compound	N
9	6.3	006	Post-excavation view of northern section of compound	N

File 003

Frame	Area	Context No.	Subject	Taken from
1	6.2	011	Stone field drains	SSW
2	6.2	010	Silty subsoil	S
3	6.2	011	Stone field drains	SSW
4	6.2	012	Gravel deposit	S
5	6.2	013	Ceramic field drain	S

File 004

Frame	Area	Context No.	Subject	Taken from
1	-	-	ID shot	-
2	6.2	015 016	Working shot; south of A759 road	E
3	6.2	-	Pre-excavation view of area south of A759 road	E
4	6.2	-	Pre-excavation view of area south of A759 road	W
5	6.2	015 016	Topsoil depth south of A759 road	W
6	6.2	016	Spread of stone south of A759 road	SE
7	6.2	016	Slot through stone spread	NW
8	6.2	016	Spread of coal	NW
9	6.2	-	Spread of coal	NW
10	6.2	-	Degraded/robbed-out wall	SE
11	6.2	-	Degraded/robbed-out wall	SE
12	6.2	-	Degraded/robbed-out wall	SE
13	6.2	-	Coal spread	NW
14	6.2	-	Degraded/robbed-out wall	NW
15	6.2	-	Degraded/robbed-out wall	NW
16	6.2	-	Degraded/robbed-out wall	NW
17	6.2	-	Coal spread	NW
18	6.2	-	Coal spread	NW
19	6.2	-	Coal spread	NW
20	6.2	-	Depth of coal spread	NW
21	6.2	-	Depth of coal spread	NW
22	6.2	-	Depth of coal spread and walls	NW

File 005

Frame	Area	Context No.	Subject	Taken from
1	6.2 Old Rome	016 019-021	Cundy drain	SW
2	6.2 Old Rome	016 019-021	Cundy drain	SW
3	6.2 Old Rome	016 019-021	Cundy drain	NE
4	6.2 Old Rome	016 019-021	Detail of cundy drain	E
5	6.2 Old Rome	016 019-021	South-west facing section of cundy drain	SW
6	6.2 Old Rome	016 019-021	South-west facing section of cundy drain	SW
7	6.2 Old Rome	016 020	South-west facing section of drain	SW
8	6.2 Old Rome	016 020	South-west facing section of drain	SW
9	6.2 Old Rome	016	Working shot; Old Rome Cottage	E
10	6.2	023	Ceramic field drains	E
11	6.2	023	Ceramic field drains	S
12	6.2	-	Coal spread	S

Frame	Area	Context No.	Subject	Taken from
13	6.2	-	Coal spread	S
14	6.2	-	Coal spread	S
15	6.2 Map 13	-	Possible linear feature	S
16	6.2 Map 13	-	Exposed field drain	S
17	6.2 Map 13	024 026 027	Pre-excavation view of postholes	S
18	6.2 Map 13	024-027	Mid-excavation view of postholes	S
19	6.2 Map 13	024-027	Mid-excavation view of postholes	S
20	6.2 Map 13	025 026	Pre-excavation view of postholes	S
21	6.2 Map 13	027	Post-excavation view of posthole	S
22	6.2 Map 13	027	Post-excavation view of posthole	S
23	6.2 Map 13	026	Post-excavation view of posthole	S
24	6.2 Map 13	-	Charcoal and CBM in topsoil	S
25	6.2 Map 13	-	Working shot	S
26	6.2 Map 13	028	Pre-excavation view of linear feature	S
27	6.2 Map 13	028	Pre-excavation view of linear feature	S
28	6.2 Map 13	-	Coal spread	S
29	6.2 Map 13	-	Detail of coal spread	S
30	6.2 Map 13	028	Mid-excavation view of linear feature	S
31	6.2 Map 13	028	South facing section of linear feature	S
32	6.2 Map 13	028	Coal spread	S
33	6.2 Map 13	028	Coal spread	S
34	6.2 Map 13	028	Coal spread	S
35	6.2 Donkey field	-	Working shot: access road	S
36	6.2 Donkey field	-	Working shot; donkey field	S
37	6.2 Donkey field	-	Working shot; donkey field	S

File 006

Frame	Area	Context No.	Subject	Taken from
1	6.2	031	Rubble field drain	S
2	6.2	-	Working shot of area being stripped 26/5/11	S
3	6.2	-	Working shot of area being stripped 26/5/11	S
4	6.2	032	Ceramic field drain	S
5	6.2	-	Plough furrows	S
6	6.2	-	Detail of plough furrows	S
7	6.2	032	Detail of ceramic field drain	S
8	6.2	029	Topsoil	S
9	6.2	030	Mixed sand subsoil	S
10	6.2	-	Post excavation view; west of railway	S
11	6.2	-	Post excavation view; westernmost field Map 3	S
12	6.2	-	Post excavation view; east field Map 2	E
13	6.2	-	Working shot	S
14	6.2	034 035	Pre-excavation view of wall	E
15	6.2	-	Detail of wall	E
16	6.2	035	Pre-excavation view of degraded sandstone	E
17	6.2	035	Detail of degraded sandstone	E
18	6.2	035 036	North facing section of wall	N
19	6.2	036	Post-excavation view of wall	E
20	6.2	036	Post-excavation view of wall	E
21	6.2	-	Post-stripping view of area between goalposts	N
22	6.2	-	Post-stripping view of area between goalposts	E
23	6.2	-	Pre-excavation view of stoney area Map 3	E
24	6.2	-	Pre-excavation view of stoney area Map 3	S
25	6.2	-	Pre-excavation view of long field Map 2	E
26	6.2	-	Pre-excavation view of long field Map 2	E

Frame	Area	Context No.	Subject	Taken from
27	6.2	037	Rubble field drain	S
28	6.2	038	North facing section of rubble in topsoil	N
29	6.2	038	Plan view of rubble deposit	N
30	6.2	038	Plan view of rubble deposit	E
31	6.2	-	Floding at edge of marsh	S
32	6.2	-	Floding at edge of marsh	S
33	6.2	039	Silty subsoil in marsh	S
34	6.2	040	Ceramic field drain	S
35	6.2	-	Location shot showing Glaxo Smith Klein	S
36	6.2	041	Brown sand and gravel subsoil	S
37	6.2	-	View of sandstone/linear feature	N
38	6.2	-	View of sandstone/linear feature	-
39	6.2	-	View of sandstone/linear feature	-
40	6.2	-	View of sandstone/linear feature	-
41	6.2	-	View of sandstone/linear feature	-
42	6.2	-	View of sandstone/linear feature	-
43	6.2	-	View of sandstone/linear feature	-
44	6.2	-	Unwatched strip east of Old Rome Cottage	-
45	6.2	-	Unwatched strip east of Old Rome Cottage	-
46	6.2	-	Unwatched strip east of Old Rome Cottage	-
47	6.2	-	Unwatched strip east of Old Rome Cottage	-

File 007

Frame	Area	Context No.	Subject	Taken from
1	6.2	-	Possible drain or linear feature	N
2	6.2	-	Possible drain or linear feature	N
3	6.2	-	Yellow/grey silty clay spread	N
4	6.2	-	Yellow/grey silty clay spread	N
5	6.2	-	Slot through rubble drain	N
6	6.2	-	Slot through rubble drain	N
7	6.2	-	Yellow/grey subsoil deposit	N
8	6.2	-	Yellow/grey subsoil deposit	S
9	6.2	-	Location view: field to south of Glaxo Smith Klein	E
10	6.2	-	Broad agricultural rig	SE
11	6.2	-	Broad agricultural rig	NW
12	6.2	-	Slot through rig	SW
13	6.2	-	View of excavated area	NW
14	6.2	042 043	Pre-excavation view of pit	E
15	6.2	042 043	South facing section of pit	S
16	6.2	044 045	Pre-excavation view of pit	S
17	6.2	044 045	West facing section of pit	W
18	6.2	-	General view of dark organic area	S
19	6.2	-	General view	E
20	6.2	-	General view	SE
21	6.2	-	West end of strip	E
22	6.2	-	General view of pipe area	SW
23	6.2	-	General view of west strip	SW
24	6.2	-	Pipe area in south-west corner	NE
25	-	-	ID shot	-
26	6.3	-	Pre-excavation view of compound	S
27	6.3	-	Pre-stripping view of area north of footpath	E

File 008

Frame	Area	Context No.	Subject	Taken from
1	6.3	-	Pre-stripping view; east of river	S
2	6.3	-	Post-stripping view; east of river	N
3	6.3	-	Pre-stripping view; north of footpath	S
4	6.3	046	Topsoil	-
5	6.3	047	Subsoil	-
6	6.3	-	General view of stripped area	N
7	6.3	-	General view of stripped area	
8	6.3	-	South of West Road compound	N
9	6.3	-	South of West Road compound	S
10	6.3	-	Working shot	S
11	6.3	-	Post-excavation view of stripped area	N
12	6.3	-	Post-excavation view of stripped area	S
13	6.1	-	ID shot	-
14	6.1	048 049	View of area being stripped	W
15	6.1	048 049	Depth of soil	W
16	6.1	049 049 049	Post-stripping	N
17	6.1	-	Post-stripping on access road	S
18	6.1	-	Post-stripping on access road	S
19	6.3	-	ID shot	-
20	6.3	-	Stripped area, natural sand	S
21	6.3	-	Working shot	S
22	6.3	-	Stripped area	S
23	6.3	-	Stripped area	E
24	6.3	-	Depth of topsoil	E

File 009

Frame	Area	Context No.	Subject	Taken from
1	6.1 Holmes Road	-	Pre-excavation view of Nine-acre field	W
2	6.1 Holmes Road	-	Pre-excavation view of Nine-acre field	NW
3	6.1 Holmes Road	-	Pre-excavation view of Nine-acre field	NW
4	6.1 Holmes Road	-	ID shot	-
5	6.1 Holmes Road	048 049	Post-excavation view of trench in Area A	SE
6	6.1 Holmes Road	048 049	Post-excavation view of trench in Area A	SE
7	6.1 Holmes Road	048 049	Post-excavation view of trench in Area B	SW
8	6.1 Holmes Road	048 049	Post-excavation view of trench in Area B	SW
9	6.1 Holmes Road	048 049	Post-excavation view of trench in Area C	SW
10	6.1 Holmes Road	048 049	Post-excavation view of trench in Area C	SW
11	6.1 Holmes Road	048 049	Post-stripping in areas A and B	SW
12	6.1 Holmes Road	048 049	Section through subsoil in area B	E
13	6.1 Holmes Road	048 049	Post-stripping in area B	SW
14	6.1 Holmes Road	048 049	Post-stripping in area B	SW
15	6.1 Holmes Road	048 049	Stripping in area B	W
16	6.1 Holmes Road	048 049	Section through made ground onto subsoil	E
17	6.1 Holmes Road	048 049	Section through made ground onto subsoil	E

File 010

Frame	Area	Context No.	Subject	Taken from
1	6.1	048 049	Post-stripping	E
2	6.1	048 049	Post-stripping	E
3	6.1	048 049	Post-stripping	E
4	6.1	048 049	Working shot; stripping	W
5	6.1	048 049	Working shot; stripping	W

Frame	Area	Context No.	Subject	Taken from
6	6.1	-	Stripped access road and new stone surface	E
7	6.1	048 049	Stripped access road to tank	N
8	6.1	048 049	Area for tank	N
9	6.1	048 049	Area for tank	S
10	6.1	048 049	Working shot	N
11	6.1	048 049	Stripped	N
12	6.1	048 049	Dtripped	S
13	6.1	048 049	Working shot; stripping	S
14	6.1	048 049	Working shot; stripping	N
15	6.1	048 049	General working shot	S
16	6.1	048 049	General working shot	S
17	6.1	048 049	General working shot	S
18	6.1	048 049	General working shot	S

File 011

Frame	Area	Context No.	Subject	Taken from
1	6.2	-	Location shot	NE
2	6.2	-	Location shot	E
3	6.2	046	Topsoil	N
4	6.2	047	Subsoil	N
5	6.2	-	General working shot	NW
6	6.2	047	Subsoil	-
7	6.2	-	General working shot	NW
8	6.2	-	General working shot	E
9	6.2	-	General working shot	NW
10	6.2	-	General working shot	W
11	6.2	-	General working shot	W
12	6.2	-	General working shot	W
13	6.2	-	General working shot	NE
14	6.2	-	General working shot	NE
15	6.2	-	General working shot	N
16	6.2	-	General working shot	N
17	6.2	-	General working shot	ENE

File 012

Frame	Area	Context No.	Subject	Taken from
1	6.2	-	General working shot	E
2	6.2	-	ID shot	-
3	6.2	-	Location shot	E
4	6.2	-	Location shot	SE
5	6.2	001	Topsoil	-
6	6.2	002	Subsoil	-
7	6.2	-	General working shot	W
8	6.2	-	General working shot	W
9	6.2	-	General working shot	W
10	6.2	-	Post-excavation view of stripped area	W
11	6.2	-	Detail of modern track	S
12	6.2	-	Post-excavation view of stripped area	E
13	6.2	-	Post-excavation view of stripped area	W
14	6.2	-	Post-excavation view of stripped area	E
15	6.2	-	Post-excavation view of stripped area south of roundabout	NW
16	6.2	-	Post-excavation view of stripped area south of roundabout	NW

Frame	Area	Context No.	Subject	Taken from
17	6.2	-	Location and working shot	E
18	6.2	-	Post-excavation view of stripped area next to river	S
19	6.2	-	Post-excavation view of stripped area south of roundabout	W
20	6.2	-	Post-excavation view of stripped area south of roundabout	W

File 013

Frame	Area	Context No.	Subject	Taken from
1	6.1 Holmes Road	-	Working shot	-
2	6.1 Holmes Road	-	Working shot	-
3	6.1 Holmes Road	-	Working shot	-
4	6.1 Holmes Road	-	Working shot	-
5	6.1 Holmes Road	-	Working shot	-

File 014

Frame	Area	Context No.	Subject	Taken from
1	6.1 Holmes Road	-	Working shot	-
2	6.1 Holmes Road	-	Working shot; area to be stripped	-
3	6.1 Holmes Road	-	Working shot	-
4	6.1 Holmes Road	-	Working shot	-
5	6.1 Holmes Road	-	Working shot	-
6	6.1 Holmes Road	-	Working shot; area to be stripped and gas pipe	E
7	6.1 Holmes Road	61007-61009	Pre-excavation view of pit	SE
8	6.1 Holmes Road	61010-61011	Pre-excavation view of pit	SE
9	6.1 Holmes Road	-	Coal spread	E
10	6.1 Holmes Road	61012-61013	Pre-excavation view of pit	SE
11	6.1 Holmes Road	61007-61009	North-east facing section of pit	NE
12	6.1 Holmes Road	61009	Post-excavation view of pit	SW
13	6.1 Holmes Road	61010-61011	South facing section of pit	S
14	6.1 Holmes Road	61011	Post-excavation view of pit	S
15	6.1 Holmes Road	61012-61013	South-east facing section of pit	SE
16	6.1 Holmes Road	61013	Post-excavation view of pit	S

File 015

Frame	Area	Context No.	Subject	Taken from
1	6.1 Holmes Road	-	Working shot	N
2	6.1 Holmes Road	-	Working shot	N
3	6.1 Holmes Road	61014-61015	Topsoil and subsoil deposits	N
4	6.1 A71	-	Working shot showing proximity to A71	S
5	6.1 A71	61016	Topsoil	S
6	6.1 A71	61017	Subsoil	S
7	6.1 A71	-	Working shot	N
8	6.1 A71	61016-61017	Topsoil and subsoil deposits	S
9	6.1 A71	61018	Subsoil	S
10	6.1 A71	-	Working shot	S
11	6.1 A71	-	Possible ditch	S
12	6.1 A71	-	Possible ditch	S

Black and White

Frame	Area	Context No.	Subject	Taken from
1	6.2 Harperland	-	ID shot	-
2	6.2 Harperland	002 004	Rigs 1 and 2	SE

Frame	Area	Context No.	Subject	Taken from
3	6.2 Harperland	-	Rigs 1 and 2	SE
4	6.2 Harperland	-	Rigs 3 and 4	SE
5	6.2 Harperland	-	Rigs 3 and 4	SE
6	6.2 Harperland	-	Rigs 4 and 5	SE
7	6.2 Harperland	-	Rigs 4 and 5	SE
8	6.2 Harperland	-	South-east facing section through rig 3	SE
9	6.2 Harperland	-	South-east facing section through rig 3	SE
10	6.2 Harperland	-	Rigs 1 and 2	SE
11	6.2 Harperland	-	Post-stripping north of burn	SW
12	6.2 Harperland	-	East facing section of deposits north of burn	E

Appendix G: DES

LOCAL AUTHORITY:	North Ayrshire
PROJECT TITLE/SITE NAME:	The Meadowhead and Stevenson Catchment - Kilmarnock to Irvine storm relief sewer
PROJECT CODE:	3211
PARISH:	Irvine and Dundonald
NAME OF CONTRIBUTOR(S):	Christine Rennie
NAME OF ORGANISATION:	GUARD Archaeology Limited
TYPE(S) OF PROJECT:	Watching Brief
NMRS NO(S):	None
SITE/MONUMENT TYPE(S):	None
SIGNIFICANT FINDS:	None
NGR (2 letters, 6 figures)	NS 428 379 to NS 316 394
START DATE (this season)	12 th October 2010
END DATE (this season)	4 th May 2012
PREVIOUS WORK (incl. DES ref.)	Desk-based assessment of the pipe corridor
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	GUARD Archaeology Limited was commissioned by MBV Joint Venture to undertake an archaeological watching brief during the construction of a storm relief sewer between Irvine and Kilmarnock. The work was undertaken between 12 th October 2010 and 4 th May 2012, and revealed rig & furrow cultivation marks, a cundy drain, five pits, two postholes, a possible field boundary and two possible wall foundation cuts.
PROPOSED FUTURE WORK:	None
SPONSOR OR FUNDING BODY:	MBV joint venture
CAPTION(S) FOR ILLUSTRS:	None
ADDRESS OF MAIN CONTRIBUTOR:	GUARD Archaeology Limited, 52 Elderpark Workspace, 100 Elderpark Street, Glasgow, G51 3TR
EMAIL ADDRESS:	christine.rennie@guard-archaeology.co.uk
ARCHIVE LOCATION (intended/deposited)	The archive will be deposited with NMRS.

Appendix H: Project Design/WSI

GUARD 3211: Kilmarnock to Irvine Storm Relief Sewer - Watching Brief Method Statement

1.0 Introduction

This document sets out GUARD Archaeology Limited's watching brief methodology. The watching brief strategy includes monitoring of all machine dug trenches within the wayleave and hand excavation and recording of any archaeological features encountered.

On completion of all excavation works a report to data structures level and an accompanying post-excavation research design (PERD) and costing will be submitted for agreement with Morrison Construction, Black & Veatch and West of Scotland Archaeology Service (WoSAS). The PERD will also outline arrangements for final publication of the project should this prove necessary.

2.0 Aims and Objectives

The aims and objectives of the archaeological watching brief are as follows:

- establish the presence or absence of any archaeological remains during ground breaking works;
- determine the character, extent and significance of any archaeological deposits encountered;
- excavate and salvage any information possible from any significant features/sites encountered.

3.0 Methodology

The strategy to be employed during the watching brief will consist of the following:

- All ground disturbances will be monitored by an archaeologist assisted, where necessary, by further archaeologists under the overall guidance of an archaeological project manager.
- The number of archaeologists required during the works will be dependent on the number of areas being trenched simultaneously and the number of mechanical excavators being deployed.
- The overburden will be removed in spits to the first archaeological horizon or, where none is found, to the natural subsoil. Any archaeological features encountered will be cleaned by hand to determine the date of the deposits, their character and extent. Such features will be recorded by written description on *pro forma* recording sheets, by photograph and by measured drawing.
- Any significant archaeological features encountered will be dealt with by the on-site archaeologist(s). Should negative-cut features be encountered they will be 50% excavated in order to determine their significance, date and function. In the event that they are deemed to be important discoveries, they will be fully excavated. Recording will include *pro forma* sheets, drawings and photographs.
- Suitable down time, up to a maximum of two hours per significant feature, will be provided to the on-site archaeologists in order to fully recover any archaeological evidence encountered.
- In the event that particularly significant features or complex groups of features are encountered Morrison Construction, Black & Veatch and WoSAS will be alerted, so that a mitigation strategy can be agreed to deal with them.
- All archaeological finds will be dealt with by the on-site archaeological team. The general practice will be to bulk recover all artefacts by context which are recovered from the topsoil or from 19th century or later layers or deposits. Should finds be encountered that are securely stratified from earlier occupation phases they will be three-dimensionally recorded prior to up-lifting.
- All excavated feature fills and horizons will be sampled for palaeo-environmental evidence. This may also include micromorphological sampling in order to address key issues on soil development.

- A representative section will be recorded for each section of wayleave denoting depth of topsoil, any stratigraphy present and the nature of the soil. This information will be logged in the day book together with a sketch drawn to scale and a photographic record of deposits.
- On completion of the watching brief phase of work, a report suitable for submission to the Planning Authority and the National Monuments Record for Scotland (NMRS) will be produced. This report will be accompanied by the post-excavation research design and costing in order to bring the results forward for analysis and publication should this be required.

4.0 Products

The products of a programme of work can be:

- a preliminary data structure report, after completion of all fieldwork suitable for submission to the Planning Authority, the NMRS and the local Sites and Monuments Record.
- a brief summary of results of the fieldwork will be submitted to *Discovery and Excavation in Scotland*
- Post-excavation and publication of the results of the watching brief within an academic journal, should this be necessary.
- Preparation and disposal of the site archive and finds.

5.0 Archive Arrangements

Once all fieldwork is completed, all materials from the programme of work will be prepared to the appropriate archive standard. GUARD Archaeology Limited will undertake to deposit the resultant archive to the NMRS on completion of the report for publication.

All finds will be reported to the Treasure Trove Advisory Panel, and GUARD Archaeology Limited will undertake to ensure their safe deposition within the designated museum at the appropriate time.

6.0 Timetable

The initial phase of work is proposed to be conducted on work package 6 and will commence in October 2010.

7.0 Staffing

The initial phase of work will be directed by one of GUARD Archaeology Limited's experienced Field Officers. CVs for all individuals concerned can be made available on request.

8.0 Health and Safety and Insurance

8.1

All archaeological working practices will be subject to a risk assessment prior to commencement of the work where likely health and safety issues associated with the site can be highlighted.

8.2

GUARD Archaeology Limited adheres to all standard Health and Safety regulations governing fieldwork projects. GUARD Archaeology Limited also possess appropriate third party/public liability insurance cover, proof of which may be supplied upon request.

9.0 Monitoring Procedures

All work on the Kilmarnock to Irvine Storm Relief Sewer will be internally monitored by John Atkinson, GUARD Archaeology Limited's Managing Director.

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