Southbank Road, Kirkintilloch: Archaeological Watching Brief Data Structure Report

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Southbank Road, Kirkintilloch:

Archaeological Watching Brief

Data Structure Report

On Behalf of: CRPG Ltd.

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Glasgow G41 1EJ

National Grid Reference (NGR): NS 648 732

AOC Project No: 22218

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22218/220812/KP/OO

Contents

	Page
List of Illustrations	
List of Plates	2
List of Appendices	2
ABSTRACT	3
1 INTRODUCTION	4
2 OBJECTIVES	
3 METHODOLOGY	5
4 RESULTS	5
5 CONCLUSIONS	8
6 REFERENCES	8
APPENDIX 1: TEST-PIT DESCRIPTIONS	
APPENDIX 2: PHOTOGRAPHIC REGISTER	13
APPENDIX 3: DISCOVERY AND EXCAVATION IN SCOTLAND REPORT	

List of Illustrations

Figure 1: Site Location

Figure 2: Ordnance Survey Map 1864

Figure 3: Ordnance Survey Map 1898

Figure 4: Ordnance Survey Map 1912

Figure 5: Ordnance Survey Map 1945

Figure 6: Ordnance Survey Map 1958

Figure 7: Ordnance Survey Map 1964

Figure 8: Test-pit locations

List of Plates

Plate 1: Test-pit 3 showing wall and possible feature

Plate 2: Modern retaining wall and ash dumps in Test-pit 1

Plate 3: Brick feature in Test-pit 8

Plate 4: Modern deposits onto natural subsoil (Test-pit 10)

Plate 5: Sandstone wall under cobbles in Test-pit 12

List of Appendices

Appendix 1: Test-pit Descriptions Appendix 2: Photographic Register

Appendix 3: Discovery and Excavation in Scotland Report

ABSTRACT

This report represents the results of an archaeological watching brief undertaken by AOC Archaeology Group on behalf of CRPG Limited during site investigation works in preparation for a proposed recreational development on the site of a former late 19th century nickel works. The scope of the works was determined by East Dunbartonshire Council as advised by Rathmell Archaeology and was designed to safeguard the archaeological resource from any adverse impact during the initial SI works.

A total of 13 test-pits were excavated, reduced from 24 due to site conditions. From the SI pits in the western half of the site, some features possibly related to the nickel works were revealed. A large brick built drain and some sandstone walls survive under the later concrete surfaces. The eastern end of site appears to have been reduced significantly with modern made ground revealed to depths of 3.5 m.

No features relating to the pre nickel works occupation of the site were found.

1 INTRODUCTION

1.1 Background

1.1.1 AOC Archaeology Group were commissioned by CRPG Limited to undertake an archaeological watching brief during initial site investigation works associated with a proposed recreational development at a former nickel works on Southbank Road, Kirkintilloch. The watching brief was undertaken in order to satisfy the requirements of the local planning authority, East Dunbartonshire Council, as advised on archaeological matters by Rathmell Archaeology. The works were conducted according to the terms of the Mitigation for Site Investigation Works (AOC 2012) approved by Rathmell Archaeology, and in accordance with the principles set out in Scottish Planning Policy (Scottish Government 2010) and PAN 2/2011 Planning & Archaeology (Scottish Government 2011).

1.2 Site Location

1.2.1 The development site covers an area of approximately 1.5 ha and lies to the south of the Forth and Clyde Canal, south-west of the town centre of Kirkintilloch (centred NGR: NS 648 732; Figure 1). The site is currently a scrubby derelict land parcel with an abundance of mature trees and shrubs covering areas of concrete surfaces, and bounded by a bund of soil and rubble. The majority of the eastern half of the site is up to 1.5 lower than the western half and a modern retaining wall (see Figure 8) runs SE-NW through the development area. Extensive fly tipping has taken place on site.

1.3 Historical Background

- 1.3.1 Kirkintilloch gradually evolved into an industrial community over the course of the late 18th and 19th century. The Forth and Clyde Canal which runs immediately north of Southbank Road was central to this transformation. Construction of the Forth and Clyde Canal commenced in 1768 at the Forth and after delays reached the Clyde in 1790 (British Waterways website). A date stone on the aqueduct at Shirva suggests that construction at Twechar to the east of Kirkintilloch was, at the least, under construction by 1771. The Forth and Clyde Canal is a Scheduled Ancient Monument.
- 1.3.2 Earlier pre-Ordnance Survey mapping is schematic and does not show the application site in detail. Detailed mapping of the area commences with the 1st Edition Ordnance Survey map which was published in 1864 (Figure 2). This depicts the location of the proposed development site as open ground, set with fields, bordering the southern bank of the canal. Industrialisation is indicated by the Bellfield Printworks which stands to the north of the site on the opposite side of the canal.
- 1.3.3 A nickel works had been constructed on the application site by the time the 2nd Edition Ordnance Survey (1898) (Figure 3). The Ordnance Survey shows that the works were bisected by a railway siding which extended along what is now the south-east boundary of the proposed development. The works buildings occupied the entirety of the application site whilst the land to the south-east of the siding was used for tipping spoil.
- 1.3.4 Although the nickel works is not referenced by name, a nickel smelter was constructed at Kirkintilloch by the New Caledonia Mines Company in 1882 to process nickel ore from the French penal colony of New Caledonia in the southern Pacific (Watson 1894, 341). Two years later the Mines Company merged with a Parisian concern to form 'Le Nickel' who also operated plants in England, France and Germany to which partially refined ore smelted at Kirkintilloch was dispatched in a concentrated form (Watson 1894, 341).
- 1.3.5 Comparison between the 1898 and the 1912 Ordnance Survey (Figure 4), shows that the works buildings had been substantially rebuilt and expanded and the overall site extended southwards beyond the boundary of the present development proposal, suggesting that the company benefited considerably from the Edwardian arms race. The nickel works are shown unchanged on the 1918

Ordnance Survey (not illustrated) however the Kirkintilloch smelter was forced to close in 1919 (Clow 1992, 7) due to being too remote from the ore fields to be efficient, coupled with the availability of plentiful supplies of nickel from recycling newly redundant defence equipment leading to a collapse in the world nickel market.

- 1.3.7 Although the former nickel works are shown partially demolished and seemingly abandoned by the time of the 1945 Ordnance Survey (Figure 5), closer inspection of the map suggests that the site remained in use, although the nature of this occupation is unknown. Whilst the central part of the complex, the former smelter, had been demolished, a new square building appears to have been constructed in its place, and two round features, possible tanks, are also additions since the 1918 map. Both the canal front range and the large railway shed south-east of the former siding also survive although the tracks themselves had been lifted by this time. The large railway shed lies beyond the boundaries of the current application site.
- 1.3.8 Three more buildings are shown as having been added to the site by the time of the 1958 Ordnance Survey (Figure 6) which also shows deposits of spoil, presumably a residue of nickel smelting, southeast of the present development proposal. Further buildings had been constructed on the site by the time of the 1964 Ordnance Survey (Figure 7), which records the complex as 'works' although its use is not specified. The application site is shown unchanged on the 1990 Ordnance Survey although further buildings had been added to the south-west.

2 OBJECTIVES

- 2.1 The objectives of the archaeological watching brief were:
 - to safeguard the archaeological resource that may be disturbed by the site investigation works;
 - ii) to liaise with Rathmell Archaeology / East Dunbartonshire Council and the client in the event of significant archaeological features and /or small finds being unearthed as to the most appropriate response in safeguarding these features either by preservation in situ, if at all feasible, or by archaeological recording;
 - iii) to report on the findings of the watching brief.

3 METHODOLOGY

3.1 All excavations were undertaken by a JCB using a narrow toothed bucket under the constant supervision of an experienced field archaeologist. When archaeology was encountered the features were recorded by digital photography, and a written record produced. Cleaning was restricted due to depths of trenches and contaminates on site.

4 RESULTS

4.1 The proposed number of 24 test-pits (to be dug to a depth of 3.5 m) had to be reduced due to the presence of mature trees throughout the site and an abundance of brick and concrete demolition material overlying large areas. In total, 13 test-pits were excavated; four in the eastern (lower) half of the site and nine in the western (upper) half of the site (See Appendix 1 for test-pit descriptions).

4.2 Test pits 3 in the eastern half of the site revealed a possible brick feature at a depth of 0.6 m below the current ground surface and a substantial brick wall at a depth of 1.4 m below the current ground surface. The brick feature was only seen in the test-pit section, but it may have been curved indicating a feature of greater functional complexity that a simple linear wall. The remainder of the test-pits in this area revealed made ground of mainly dumped ash deposits to depths of at least 2.3 m. The bore holes in this area indicated natural soils were not found until 2.7 m deep.



Plate 1 - Test Pit 3 showing wall and possible feature



Plate 2 - Modern retaining wall and ash dumps in Test-pit 1

4.3 In the western half of the site several other built features were revealed. Three sandstone walls were revealed at depths of 0.5 m below the current ground surface in Test-pits 10, 12 and 13. Furthermore, a large brick structure with an arched brick roof was revealed in Test-pit 8 at a depth of 0.6 m. The structure was filled with water and was running N-S at the western end of the test-pit and was still seen to a depth of 2.5 m deep (water concealed the bottom of the test-pit). The other testpits revealed modern madeground and surfaces overlying natural subsoil at depths varying from 0.6 m to 2.1 m below the current ground surface.



Plate 3 - Brick feature in Test-pit 8



Plate 4 - Modern deposits onto natural subsoil (Test-pit 10)



Plate 5 - Sandstone wall under cobbles in Test-pit 12

5 **CONCLUSIONS**

5.1 Despite the limited scope of the test-pits excavated, it was possible to determine that features and structural elements of the nickel works do survive in the western half of the site. As for the eastern half it was not possible to fully interpret the wall(s) found in Test-pit 3 to indicate if they are structural elements of the nickel works or of modern re-use of the site. Given the marked difference in height between the eastern and western halves of the site and the presence of a modern retaining wall to stabilise the upper half (see Figure 8) it is possible that the eastern half of the development area has been completely truncated by later activities.

6 **REFERENCES**

AOC Archaeology 2012, Southbank Road, Kirkintilloch: Mitigation (archive assessment and watching brief) for Site Investigation Works, unpublished AOC Archaeology Report

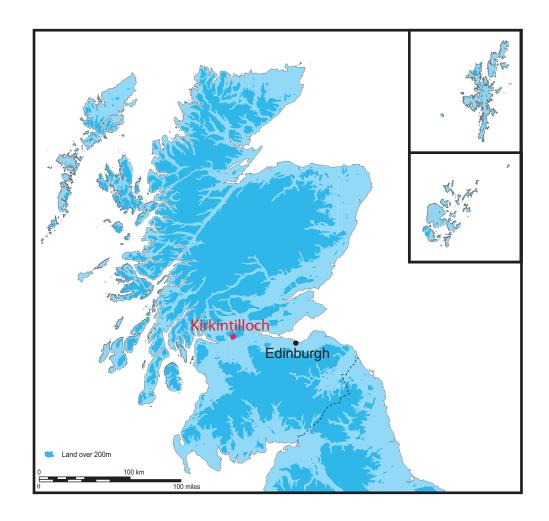
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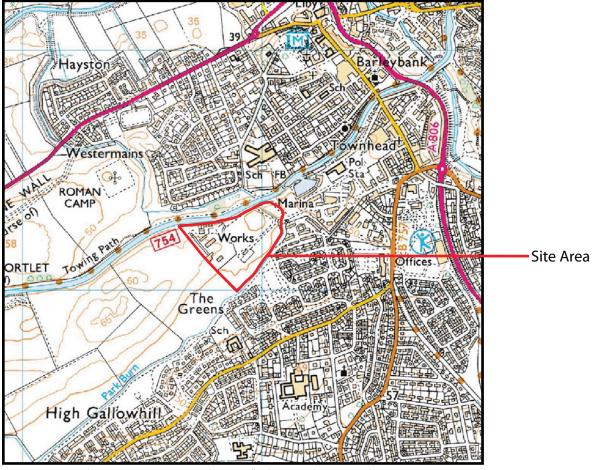
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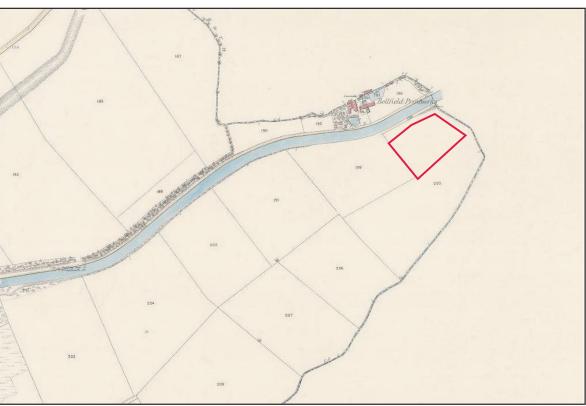




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Figure 1: Location of the site at Southbank Road



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Figure 2: Extract from the First Edition Ordnance Survey 25 inch to the mile of 1864 showing site location





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 $Figure \ 3: Extract \ from \ the \ 2nd \ Edition \ Ordnance \ Survey \ 25 \ inch \ to \ the \ mile \ of \ 1898 \ showing \ site \ location$



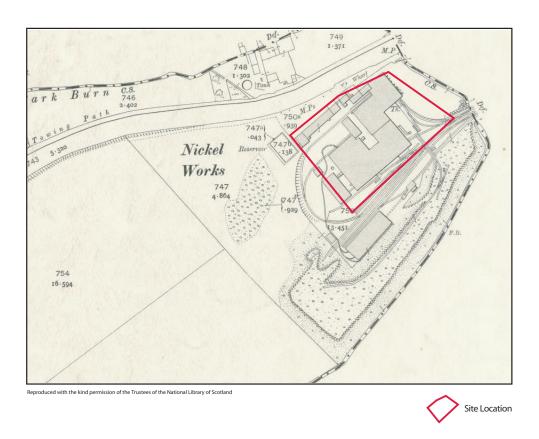


Figure 4: Extract from the 3rd Edition Ordnance Survey 25 inch to the mile of 1912 showing site location





Figure 5: Extract from the 1945 Edition Ordnance Survey 25 inch to the mile, surveyed 1938, showing site location





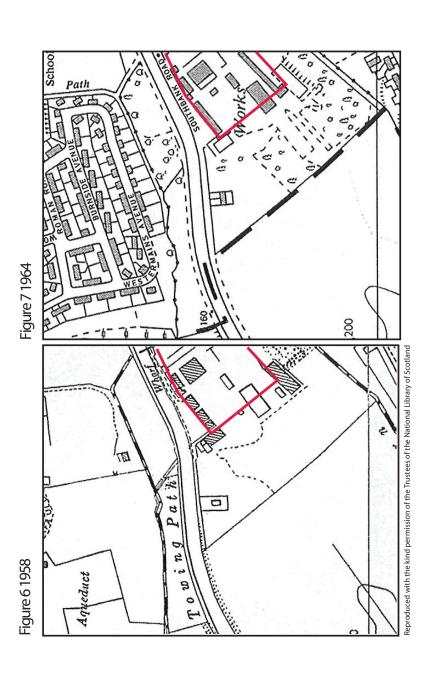
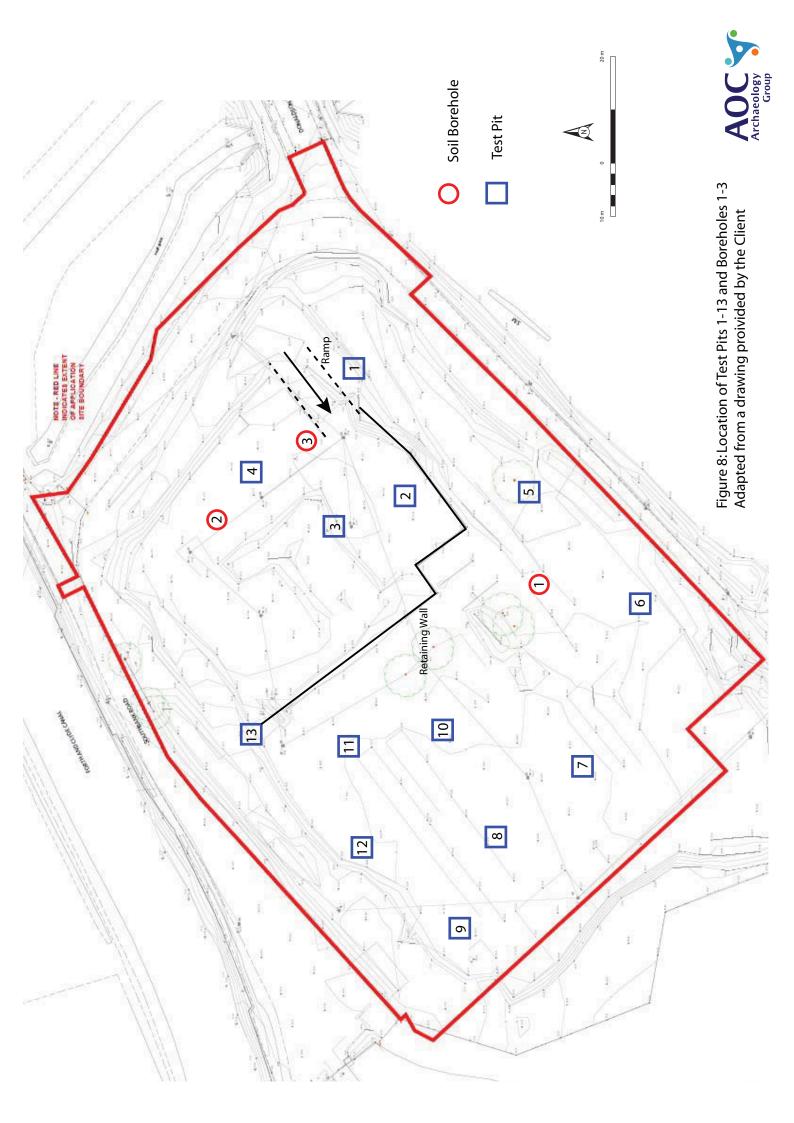


Figure s 6 & 7 Extracts from postwar Ordnance Survey mapping showing site location





Section 2: Appendices



APPENDIX 1: TEST-PIT DESCRIPTIONS

Test-pit 1

Dimensions 2.5 m by 0.8 m by 3.5 m

Orientation N-S

Deposits and Depths Very thin topsoil overlying a silty sand and hardcore to 0.35 m. General concrete and brick

rubble to depth of 1.0 m. Layers of green and black ash (furnace residue??) to 3.5 m.

Significant Features None

Other Features Modern brick retaining wall running E-W, revealed just under topsoil and hardcore at the

southern end. Wall continued to same depth as test-pit.

Subsoil Not reached

Finds None

Test-pit 2

Dimensions 2 m by 0.8 m by 3.5 m

Orientation NE-SW

Deposits and Depths Concrete slab 0.25 m thick sitting on earlier brick surface and levelling layer of concreted

rubble and mortar to a depth of 0.9 m. Then thin layer of mid brown clayey silt to 1.1 m

covering a layer of red blaes and rubble to 1.8 m. Black ash to 2.3 m

Significant Features None Other Features None

Subsoil Orange brown sand from 2.3 m to 3.0 m onto a yellowish brown sand to 3.5 m

Finds None

Test-pit 3

Dimensions 3 m by 0.8 m by 3.5 m

Orientation NE-SW

Deposits and Depths Concrete slab on Type 1 hardcore to 0.3 m overlying a second concrete layer with brick

inclusions to 0.6 m. Sandy rubble layer to 1.4 m then an orange sandy clay deposit to 1.9 m

covering a brick wall within the centre of the test-pit to depth of 3.3 m.

Significant Features Brick wall 4 courses wide and 1.4 m high sitting. A slightly curved brick wall/feature on the SE

side of the test-pit to depth of 1.4 m

Other Features None

Subsoil Fine yellowish brown sand from 3.3 m to 3.5 m.

Finds None

Test-pit 4

Dimensions 2 m by 0.8 m by 2.2 m

Orientation NNE-SSW

Deposits and Depths Very thin mossy topsoil overlying Type 2 hardcore to 0.3 m. Black ashy sand cut by modern

services to 1.1 m covering a loosely concreted material and concrete rubble to 2.2 m. Modern

concrete foundation in SSW of test-pit restricted bucket space to dig deeper.

Significant Features None Other Features None

Subsoil Not reached

Finds None

Test-pit 5

Dimensions 2.5 m by 0.8 m by 2.8 m

Orientation N-S

Deposits and Depths Thin, mossy topsoil covering hardcore to 0.4 m overlying concrete sitting on thin layer of sand

to 0.7 m. Sharp green ash and slag to 1.1 m then a sharp black ash to 2.8 m.

Significant Features None Other Features None

Subsoil Not reached Finds None

Test-pit 6

Dimensions 2.5 m by 0.8 m by 2.4 m

Orientation NE-SW

Deposits and Depths Thin, mossy topsoil covering hardcore to 0.2 m overlying concrete sitting on thin layer of sand

to 0.6 m. Sharp black ash to 2.4 m.

Significant Features None
Other Features None
Subsoil Not reached
Finds None

Test-pit 7

Dimensions 2.5 m by 0.8 m by 3.5 m

Orientation N-S

Deposits and Depths Thin, mossy topsoil covering hardcore to 0.5 m overlying concrete and brick layer to 0.7 m.

Significant Features None Other Features None

Subsoil Orange gravel in a sandy matrix from 0.7 m to 1.1 m sitting on yellowish brown sand to 1.9 m

and then reddish brown clayey sand to 3.5 m

Finds None

Test-pit 8

Dimensions 2.5 m by 0.8 m by 2.5 m

Orientation E-W

Deposits and Depths Thin, mossy topsoil covering hardcore to 0.5 m overlying red clayey sand with brick inclusions

overlying brick surface to 1 m.

Significant Features Large brick built drain feature with arched brick top running N-S and abutted by brick floor at

depth of 1 m. Feature (water filled) continued into natural clayey sand to 2.5 m.

Other Features None

Subsoil Reddish brown clayey sand with large angular stones from 1.2m to 2.5m.

Finds None

Test-pit 9

Dimensions 2.5 m by 0.8 m by 3.3 m

Orientation NW-SE

Deposits and Depths Concrete surface and brick rubble to 0.18 m overlying black ash and grey slag/ash in sandy

rubble to 0.5 m. Then layer of tar-like hard-standing to 0.6 m.

Significant Features None Other Features None

Subsoil Orange gravel in a sandy matrix from 0.6 m to 1.2 m sitting on a reddish brown clayey sand

with angular stone inclusions to 3.3 m

Finds None

Test-pit 10

Dimensions 2.5 m by 0.8 m by 3.3 m

Orientation NW-SE

Deposits and Depths Thin, mossy topsoil covering hardcore to 0.2 m overlying concrete and brick layer to 0.5 m.

Black ash layer in NW to 0.7 m

Significant Features Sandstone wall under concrete and brick at the NW end of test-pit.

Other Features None

Subsoil Orange gravel in a sandy matrix from 0.7m to 1.3 m sitting on a reddish brown clayey sand to

3.3 m

Finds None

Test-pit 11

Dimensions 2.5 m by 0.8 m by 3 m

Orientation NW-SE

Deposits and Depths Thin, mossy topsoil covering concrete to 0.4 m overlying brown clayey sand to 0.6 m. Grey

ash to 0.9 m sitting on concrete (not removed) at NW end. A re-deposited orange gravel to

1.8 m in SE end of test-pit overlying mid brown clayey silt to 2.1 m.

Significant Features None Other Features None

Subsoil Orange gravel stained dark grey from contaminates from 2.1 m to 3 m

Finds None

Test-pit 12

Dimensions 2.5 m by 0.8 m by 3.4 m

Orientation NE-SW

Deposits and Depths Concrete to depth of 0.2 m in SW end of test-pit sitting on grey ash and slag to 0.6 m. Re-

deposited gravel and sand to 1.1 m. Dark grey clayey sand (contaminated) to 1.5 m.

Significant Features Sandstone wall under cobbles running NE-SW (seen in section) - measured 1.5 m in length

with a foundation course and two other courses of cut stone with a sandy concreted mortar.

Other Features Cobbled surface to the NE end of test-pit overlying sandstone wall.

Subsoil Orange gravel in a sandy matrix discoloured by contamination from 1.5 m to 2.8 m sitting on

reddish brown clayey sand (contaminated) to 3.4m

Finds None

Test-pit 13

Dimensions 2.5 m by 0.8 m by 3.2 m

Orientation F-W

Deposits and Depths Tarmac and concrete sitting on a layer of hardcore to 0.5 m. Mixed madeground layer of re-

deposited natural and ash with ceramic pipes within to 1.4m.

Significant Features Sandstone wall running N-S at eastern end of test-pit (partly truncated by machine) at depths

slightly deeper than service cut.

Other Features

Subsoil Yellowish brown gravely sand from 1.4 m to 2.3 m then very compact orange gravel to 3.2 m

Finds None

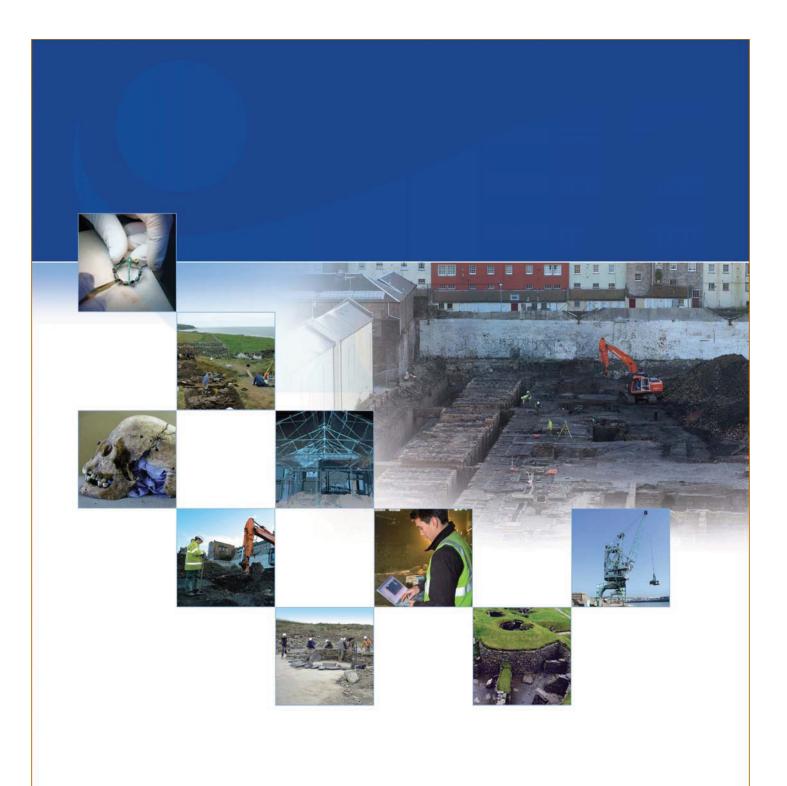
APPENDIX 2: PHOTOGRAPHIC REGISTER

Digital Photographs

Frame	Area	Description	From	Date
1-4		Shots of bund around site		14/8/12
5-18		General shots of trees, rubble and structures/floor surfaces within site boundary		14/8/12
19		Initial scrape for Bore hole 1	Е	14/8/12
20		Working shot creating access through bund	Е	14/8/12
21		Working shot Bore hole 1		14/8/12
22		Top of Bore hole 2		15/8/12
23		Test-pit 1 showing retaining wall with ash slumps		16/8/12
24		Working shot Test-pit 2		16/8/12
25		SE-facing section of Test-pit 2		16/8/12
26		NW-facing section of Test-pit 2		16/8/12
27		NW-facing section of Test-pit 3	NW	16/8/12
28		Curving brick wall/feature in Test-pit 3	W	16/8/12
29		Test-pit 3	SW	16/8/12
30		Mid way excavation of Test-pit 4 showing services		16/8/12
31		Test-pit 4		16/8/12
32		Test-pit 5		17/8/12
33		Test-pit 6		17/8/12
34		W-facing section of Test-pit 7		17/8/12
35		Top of drain in Test-pit 8	W	17/8/12
36		Test-pit 8	W	17/8/12
37		SW facing section of Test-pit 9	SW	17/8/12
38		NE facing section of Test-pit 10	NE	17/8/12
39		Test-pit 11	NW	20/8/12
40		NW facing section of Test-pit 12	NW	20/8/12
41		S-facing section of Test-pit 13		20/8/12

APPENDIX 3: DISCOVERY AND EXCAVATION IN SCOTLAND REPORT

LOCAL AUTHORITY:	East Dunbartonshire Council
PROJECT TITLE/SITE NAME:	Southbank Road, Kirkintilloch
PROJECT CODE:	22218
PARISH:	Kirkintilloch
NAME OF CONTRIBUTOR:	Kevin Paton
NAME OF ORGANISATION:	AOC Archaeology Group
TYPE(S) OF PROJECT:	Watching Brief
NMRS NO(S):	None
SITE/MONUMENT TYPE(S):	None
SIGNIFICANT FINDS:	None
NGR (2 letters, 6 figures)	NS 684 732
START DATE (this season)	14 th August 2012
END DATE (this season)	20 th August 2012
PREVIOUS WORK (inc DES)	None
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	An archaeological watching brief was undertaken during site investigation works in preparation for a proposed recreational development on the site of a former late 19 th century nickel works. A total of 13 test-pits were excavated, reduced from 24 due to site conditions. From the SI pits in the western half of the site, some features possibly related to the nickel works were revealed. A large brick built drain and some sandstone walls survive under the later concrete surfaces. The eastern end of site appears to have been reduced significantly with modern madeground revealed to depths of 3.5 m. No features relating to previous occupation, prior to the building of the nickel works, were found.
PROPOSED FUTURE WORK:	None
CAPTION(S) FOR ILLUSTRATIONS:	N/A
SPONSOR OR FUNDING BODY:	CRPG Limited
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ARCHIVE LOCATION	Archive to be deposited in NMRS





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