

Shapinsay Potable Water Scheme Car Ness Battery Orkney



Watching Brief Data Structure Report

April 2012



CAR NESS BATTERY

CAR NESS

KIRKWALL

ORKNEY

KW15 1UE

ARCHAEOLOGICAL WATCHING BRIEF: DATA STRUCTURE REPORT

PROJECT No: 317

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CLIENT: SCOTTISH WATER

This document has been prepared in accordance with ORCA standard operating Procedures and IFA standards	
Authorised for Distribution by: Nick Card	Date: 12/09/2012

EXECUTIVE SUMMARY

This report sets out the results of a watching brief undertaken by Orkney Research Centre for Archaeology (ORCA) at Car Ness (or Carness) Battery and Wellington Battery, Car Ness, Kirkwall, Orkney KW15 1UE (NMRS: HY41SE 51 and 52)

Following the recommendations of a Written Scheme of Investigation (ORCA, 2012) and in consultation with the Local Authority Planning Archaeologist, intrusive works within and near the Scheduled Ancient Monument Guardianship area was monitored between 28 February and June 2012.

The site lay within an area designated as a Scheduled Ancient Monument (SAM No. 3249) and is the location of two batteries, the Wellington and the Car Ness Battery.

During the monitoring of intrusive works only limited remains were seen of features likely to be associated with the World War II gun batteries. These features were severely truncated and eroded by post-WWII agricultural activity.

There were no other finds or features of archaeological significance.

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1 INTRODUCTION

This report was commissioned by Scottish Water and forms the Data Structure Report for an archaeological watching brief carried out within the Scheduled Ancient Monument area at Car Ness or (Carness) Battery (hereafter known as 'the site').

The information within this report is based specifications and plans supplied by Scottish Water and Stockton Ltd.

The works monitored were:

- the stripping of topsoil from an area measuring 50m by 50m for a drilling rig working platform,
- the stripping of topsoil from a corridor measuring c 110m by 5m to provide an access road from the existing road to the platform.
- the stripping of topsoil from a corridor to the southeast of the access road measuring c 130m by 1.10m.
- a 1.5m deep drilling fluid lagoon measuring 7m by 5m adjacent to the entry point of the drill,
- a 2m by 4m, 1m deep entry pit to contain returning drilling fluid and cuttings.
- and a 3m by 1m pipeline connection trench the northern end of the pipeline route.

A Written Scheme of Investigation was prepared (ORCA, 2012) in which the legislation framework and planning background were set out in detail.

The work was undertaken in order to conform to the requirements of Historic Scotland's Scheduled Monument Consent (SAM no. 3249).

This report has been prepared in accordance with the Standards and guidance specified by the Institute for Archaeologists (IfA 2001, 2008).

2 SITE LOCATION, TOPOGRAPHY AND GEOLOGY

The site lies within the area designated as a Scheduled Ancient Monument (SAM No 3249, Car Ness Battery) to the north of Kirkwall on the Car Ness peninsula (NGR: HY 4679 1446) and lies mostly on relatively flat ground, at c 5 m OD (see Figure 1). The ground slopes gently down towards the shoreline at the north limit of the peninsula.

The area affected is underlain by the Upper Stromness Flagstone Formation, laminated, carbonate rich siltstones, shale and thinly bedded sandstones (part of the Caithness flagstone group geological formation). In places, the bedrock on the Car Ness peninsula consists of finely laminated mudstone, and in places a thinly laminated siltstone and sandstone (Scottish Water Solutions, 2011).

3 ARCHAEOLOGICAL BACKGROUND

Orkney is home to several internationally important prehistoric sites such as those within *The Heart of Neolithic Orkney*, a designated UNESCO World Heritage Site and there is an abundance of evidence indicating the island's focus for Neolithic, Bronze and Iron Age and possibly Mesolithic activity. Although a chambered cairn (ORSMR no 1550) lies approximately 1.75 km to the east at the Head of Work and a cairn is depicted on Ordnance Survey maps on the island of Thieves Holm to the northwest, there is no recorded evidence for prehistoric activity in the immediate vicinity of the site itself.

The name Car Ness is first noted on the Joan Blaeu's Atlas of Scotland dated to 1654 as 'Cares Ness' and then again on the 1757 map '*Cartes de Principaux Ports des Isles Orcades*' as 'Carnesse'. The site appears to have been uncultivated or rough pasture land throughout this period. The 1st Edition Ordnance Survey map (surveyed 1882) shows track and field boundaries. The 2nd Edition Ordnance Survey (1902) map depicts the area to the west of the track as uncultivated scrubland.

During WWI Car Ness was the site of a coast battery with two 4-inch gun emplacements. The partial remains of one emplacement are still visible towards the east side amongst the WWII structures. This battery was installed to protect the defensive boom which ran from Car Ness to the island of Helliar Holm.

During WWII there were two new coast batteries built at the north end of the peninsula. The first of these to be brought into service was Wellington Battery located to the west of the north-south aligned access track. Wellington Battery was armed in 1940 with three 6-inch MK VII guns taken from the damaged *HMS Iron Duke* and manned by 535 Coast Regiment. It consisted of three gun emplacements

with magazines, shelters, observation post, engine room and searchlight emplacements. (NMRS: HY41SE 51 and 52).

Car Ness (or Carness) Battery was built on the east side of the track as support for Wellington Battery and as anti-motor torpedo boat defence covering the northeast approaches to the Bay of Kirkwall. The battery included two 12-pounder gun emplacements, an observation post, magazine, searchlight emplacements, store and crew shelter buildings, engine house and the remains of a WWI gun-emplacement.

Wellington Battery was placed in care and maintenance in 1943 and its guns were dismantled in 1945, while Carness Battery remained active until the end of the war in 1945. The emplacements of both batteries are now used as animal pens and storage, while the wooden huts of the accommodation camps are no longer standing but their locations are marked by several concrete bases.

The monitored works were located to the west of the access track, near the remaining concrete structures of Wellington Battery.

3.1 PREVIOUS WORK

Previous interventions in the area of the site include a bore hole and test pit that were sunk as part of geotechnical works for the Potable Water Scheme (Scottish Water Solutions, 2011). The results of these showed the topsoil to be very thin (maximum 0.4m thick), overlying weathered mudstone bedrock (c. 0.9m thick), which in turn overlies mudstone and siltstone bedrock.

A site visit was carried out on the 13th February 2012. During this visit it was noted that no remains of concrete bases or foundations were visible on the surface within the area of the proposed drill platform and access route.

4 FIELDWORK AIMS AND OBJECTIVES

Following the conditions stipulated in the Scheduled Monument Consent by Historic Scotland, and in consultation with the Local Authority Planning Archaeologist, a watching brief was undertaken on the site in order to record any deposits or features of archaeological significance. This was also set out in the Written Scheme of Investigation (ORCA, 2012). The most likely features to be encountered were those associated with the two World War II coast batteries, in particular the nearby Wellington Battery. This archaeological monitoring was intended to mitigate the impact of the proposed development on potential archaeological deposits present.

Whilst the intrusive nature of works carried out in both World Wars to install the gun batteries may have destroyed any earlier features, including prehistoric remains, there may well have been areas that had escaped such disturbance.

The works were to consist of setting up a horizontal directional drill (HDD) to be used to install a 180mm diameter HDPE conduit pipe from mainland Orkney to Shapinsay.

The HDD required a working platform, measuring 50m by 50m at the HDD entry point just west of the westernmost of the three gun emplacements of Wellington Battery. An access track from the existing road was to be stripped. Terram or other suitable semi-permanent membrane was to be placed and covered with stone chippings to create a firm and stable work area.

The limited nature of the proposed works and the watching brief upon them makes it unreasonable to establish any many specific archaeological research objectives. The archaeological brief is essentially limited to establishing where, if at all, archaeological deposits may survive (presence/absence), recording where necessary, and to ensuring that the proposed groundworks do not involve the destruction of any archaeological deposits of national significance. Nevertheless, in addition, a few research questions can be outlined:

- What was the nature and level of natural topography?
- What are the character, nature and depth of the earliest deposits identified?
- Is there any evidence for the remains of structures associated with the WWI and WWII coast batteries?
- What is the character and nature of the latest deposits identified?

5 FIELDWORK METHODOLOGY

All works were carried out in accordance with the Written Scheme of Investigation for the works (ORCA, 2012) and the ORCA Standard operating procedures as set out in the ORCA Fieldwork Manual (*in prep*), as follows.

All the groundworks were excavated by a 360° tracked excavator, fitted with a flat bladed bucket. Topsoil and turf layers were removed separately, before the excavation of reduced levels. All the groundworks were excavated down to the natural geology.

All ground-breaking was undertaken under constant archaeological supervision. Any archaeological features encountered were recorded using standard pro-forma sheets, whilst a running photographic record was also maintained.

6 FIELDWORK RESULTS

6.1 AREA 1

The first area to be excavated was the access track running north from the existing tarmac road, to Area 2, the 50m x 50m area to be cleared for the drilling rig installation (see Figure 1).

Work started with the removal of a 15m section of modern barbed-wire fencing. From this gap, the clearing of topsoil began running from southeast to northwest. From the 15m wide starting point, the excavation narrowed to 4.5m and continued for c. 90m at this width. The ground along this area of excavation was mostly level.

Along most of the excavated track, only turf and topsoil were encountered over stony clay till. The topsoil (**101**) was loose, reddish mid to dark brown silty, sandy clay with occasional small stones, with a maximum depth of 350mm. The clay till (**102**) was compact, very mottled and variable in colour with patches of mid-grey, light grey, orangey brown and orange, with occasional outcrops of clean, sandstone bedrock.

About halfway between the tarmac road and Area 2 was a raised track running roughly east-west across the excavated corridor, with a maximum height of c. 250mm above the general ground surface level. The ground here was very wet and had apparently been churned up by recent vehicle traffic between a gate by the tarmac road to the east and the concrete structure believed to be a WWII engine room to the west, now in use as storage for farm vehicles. When what little remained of the topsoil (**101**), maximum depth 100mm, along this track was removed, a stone surface (**103**) was revealed. The track formed by this stone had a width of up to 5m. This layer of stone comprised angular fragments of quarried stone up to c. 50 x 100 x 150 mm but mostly much smaller stones and 'dust'. The depth of this material was up to 120 mm and it overlaid a second layer of coarser rubble (**104**), which contained more frequent larger stones but with approximately the same maximum size as those in (**103**). The lower layer of stone had a depth of about 120mm and did not appear to lay in a cut but seemed to be laid directly on to the clay till, although may originally have been laid directly on to topsoil – the water-logged nature of the deposits here made it difficult to discern. Both layers (**103**) and (**104**) had the appearance of being relatively recent additions and were not recorded in detail. Once photographed, the stone was cleared from the area and the clay till surface revealed.

6.2 AREA 2

After Area 1 had been completely stripped of topsoil, work started to clear Area 2. This was an area c. 50 x 50 m at the north end of the newly created access track (Area 1). The area to be excavated lay just west of the remains of the gun emplacements of Wellington Battery. The ground sloped gradually down to the shore to the north.

Turf and topsoil (**201**) was cleared from the area. This soil was very similar in composition to the topsoil seen in Area 1, loose, reddish mid to dark brown silty, sandy clay with occasional small stones, but in some places reached a slightly greater depth, maximum 400mm. Outcrops of bedrock were more frequent, and in places were covered by no more than 80mm of topsoil. The clay till (**202**) was compact, very mottled and variable in colour with patches of mid-grey, light grey, orangey brown and orange, with occasional outcrops of clean, sandstone bedrock.

Just east of the junction of the south edge of Area 2 and the north end of Area 1 a north-south aligned cable (**203**) was encountered in a very shallow cut (**204**) into the till. The profile of the cut could not be seen clearly in the nearby north facing section. The cable had an overall diameter of c. 25mm and was truncated at its northern end, some 1.10m north of the trench edge. The cut (**204**) for the cable was just discernible continuing for another c. 2.0m but then vanished. The maximum depth of this cut was 410mm below ground level, with a width up to 320mm. The three-core cable was wrapped in various layers of insulation and sheathing and appeared to be of WWII date. The copper wires were thin and appeared most likely to be communication cables rather than power supply. The fill of this cut was a mix of redeposited clay and topsoil (**205**).

Three modern, narrow drains were seen cutting across the area and through the till. These were clearly very recent, machine-cut and filled with gravel 'chips', had a width of 50-75mm and a depth of at least 200mm. The southernmost of these cut through the north end of cut (**204**). There was no visible trace of (**204**) beyond this truncation.

6.3 AREA 3

The first part of the excavation of the trench for the water pipe running along the east side of the fence along the east side of the tarmac access road was monitored. The monitored trench excavation ran from just east of the road at a point roughly level with the south end of Area 1 on the west side of the road. The trench was to be excavated well below the surface of the clay till to allow the insertion of the new water pipe, but only the stripping of topsoil was monitored.

The excavation started c. 6m to the south of the track running east from the main road. It continued south, parallel to and between 1.8 and 2.2m from the fence along the main road's east side.

The trench was 1.00 - 1.10m wide and was monitored over a length of c. 130m. The first 30m excavated was relatively level and well-drained, and the topsoil (**301**) stripped was similar to that seen in Areas 1& 2 although a little darker. The topsoil was removed and revealed clay till (**302**), again, similar to the till seen elsewhere but with a more greyish colour in general, and showing more orange colouration to the

south. The depth of topsoil varied widely. In some places as little as 100mm, but in some areas as much as 350mm.

After the first 30m there was a very water-logged area, extending a further 20m, with shallower, stonier topsoil. Beyond this, the rest of the excavation revealed several areas of modern disturbance with patches of dumped modern material, including fragments of glazed earthenware pipe, white china, glass, ferrous metal and wire.

After topsoil was stripped from the southernmost end of the monitored area, near a modern gate at the northern end of a stone dyke, some superficial road surfacing was seen. Near the gate this comprised a shallow layer of beach stone. To the north of this, a thin spread of coal dust and/cinders up to extended for 8.0m from the north side of the gate, the east and west limits of which were not reached by the excavated area. In some places, tar appeared to have been laid but still only resulting in a very thin and rudimentary road surface.

Since it was not thought that any of these latter features related to WWII activity and were not within the Scheduled Ancient Monument guardianship area, they were not recorded in any detail beyond basic measurements.

6.4 PIPELINE CONNECTION TRENCH

A small connection trench was excavated to join the pipeline between Area 3 and Area 1 at the northern end of the route (c. HY 46687, 14392). The small trench measured 3m by 1m, to a maximum depth of 2m.

The stratigraphy over the small area was fairly consistent. A 130mm layer of topsoil (**400**) was initially stripped before excavating a thin 140mm layer of subsoil (**401**) that sealed 1.48m of natural glacial till and thick stony boulder clays (**402**).

Nothing of archaeological interest was recorded in this area.

7 DISCUSSION

7.1 ORIGINAL RESEARCH AIMS

- *What was the nature and level of natural topography?*

The depth of topsoil varied between 50 and 400 mm. The majority of the topsoil stripped showed a depth of 300-350mm, much of it well-cultivated, well-drained soil. Below this topsoil lay a generally level or only gently sloping natural clay till, very little of which had been disturbed to any significant extent within any of the areas seen during monitoring.

- *What are the character, nature and depth of the earliest deposits identified?*

The only features identified as WWII in date were the cable (**203**) and the cut (**204**) in which it lay. No earlier features were seen.

- *Is there any evidence for the remains of structures associated with the WWI and WWII coast batteries?*

Although the deposits seen at the far south end of Area 3 may represent some sort of access road running towards Car Ness Battery, it seems very unlikely, particularly when comparing its position with access tracks shown on versions of the WWII layout plan (Guy 1993, Dorman 1996). None of the tracks depicted on such plans show anything this far south of the batteries.

The apparently modern access track (**103**) running from the tarmac road to the front of the former engine room may in some part follow the line of an original WWII access track, but its alignment does not match that depicted on WWII plans, and its installation will most likely have erased any visible traces (*ibid*).

- *What is the character and nature of the latest deposits identified?*

The very recent field drains running across Area 2 were clearly inserted by an automated mechanical method which excavated and filled the narrow trench it created with gravel chips in one action. It seems unlikely that these drains are more than 30 years old. They are certainly not related to any WWII activity, since one of them truncates a WWII cable.

7.2 INTERPRETATIVE ISSUES

Although the extensive area exposed by topsoil stripping in Areas 1& 2 gave ample opportunity to discover the nature and most of the extent of the few features uncovered, the narrow trench excavated in Area 3 afforded a much more restrictive view. The modern disturbance and ephemeral surfacing seen towards the south end

of Area 3 was only seen for a very limited width. Although the features there were far from fully visible, their nature and date could be discerned to a sufficient level of certainty to decide that further excavation beyond the width of the trench was not required.

8 CONCLUSIONS AND RECOMMENDATIONS

The preliminary desk-based assessment of the area showed that there were no sites of prehistoric date within the immediate vicinity, and so the potential for previously undisturbed prehistoric structures was not high, particularly when the likely disturbance caused by wartime activities is considered.

The initial assessment suggested that it was likely that significant archaeological remains of WWII date might still exist below the topsoil. But there was little in the way of evidence below ground associated with any wartime structures. This was in stark contrast to the abundant WWII evidence above ground.

The archaeological monitoring carried out during the works in the form of a watching brief presence throughout all intrusive excavation was a sufficient level of mitigation and provided adequate protection for the Scheduled Ancient Monument guardianship area. The conditions in which the watching brief were carried out were satisfactory, and would have allowed the identification of any significant remains should they have been uncovered.

The results of the watching brief have shown that there was little preservation of wartime remains in the areas exposed, but there is still a significant potential for important archaeological features to be present on site. No further archaeological work or presence on site is deemed necessary unless further intrusive ground-breaking works are to be carried out.

Given the limited nature of the archaeological remains discovered and the lack of any significant finds a short report to Discovery and Excavation Scotland, as generated by the OASIS form, will suffice.

The final decision as to the requirement for further work on the site rests with the Local Authority's designated Planning Archaeologist and Historic Scotland's Inspectorate.

9 PUBLICATION AND ARCHIVING

Archive preparation and deposition will be undertaken with reference to the appropriate repository guidelines and standards, and, where necessary, the Museums and Galleries Commission (MGC) and the United Kingdom Institute for Conservation (UKIC) standards and guidelines. The project archive containing the original site records will be submitted to the RCAHMS or the Orkney SMR, as appropriate.

No materials were recovered from the investigation.

Findings have been submitted to the national record via the OASIS system (see Section 9), and a short report for Discovery and Excavation Scotland will be generated.

Information on the results of the report will be made public in digital form so as to be included in any further research into the archaeology, history and development of Orkney's wartime heritage.

10 ACKNOWLEDGEMENTS

The author would like to thank Scottish Water for commissioning the work. Thanks also to the landowner, H Ruth Sinclair of Carness Farm, for allowing access, and to the on-site personnel of contractors G. Leslie Ltd for their help and co-operation during the work.

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12 NMRS OASIS FORM

OASIS ID: orkneyre1-133078	
Project details	
Project name	Car Ness Battery
Short description of the project	This report sets out the results of a watching brief undertaken by Orkney Research Centre for Archaeology (ORCA) at Car Ness (or Carness) Battery and Wellington Battery, Car Ness, Kirkwall, Orkney KW15 1UE. Following the recommendations of a Written Scheme of Investigation (ORCA2012) and in consultation with the Local Authority Planning Archaeologist, intrusive works within and near the Scheduled Ancient Monument Guardianship area was monitored between 28 February and June 2012. The site lay within an area designated as a Scheduled Ancient Monument (SAM No 3249) and is the location of two batteries, the Wellington and the Car Ness Battery. During the monitoring of intrusive works only limited remains were seen of features likely to be associated with the World War II gun batteries. These features were severely truncated and eroded by post-WWII agricultural activity. There were no other finds or features of archaeological significance.
Project dates	Start: 28-02-2012 End: 07-06-2012
Previous/future work	Yes / No
Site Status	Scheduled Ancient Monument
Any associated project reference codes	3249 - SAM No
Any associated project reference codes	317 - Sitecode
Type of project	Recording project
Current Land use	Rough pasture
Monument type	BATTERY WW2 Post Medieval
Monument type	BATTERY WW1 Post Medieval
Significant Finds	NONE None
Significant Finds	NONE None
Investigation type	""Watching Brief""
Prompt	Scheduled Monument Consent
Project location	

Country	Scotland
Site location	ORKNEY ISLANDS KIRKWALL AND ST OLA Car Ness
Postcode	KW15 1UE
Site coordinates	HY 46687 14392 59 -2 59 00 49 N 002 55 42 W Point
Study area	3239.00 Square metres
Project creators	
Name of Organisation	Orkney Research Centre for Archaeology
Project design originator	Orkney Research Centre for Archaeology
Project director/manager	Nick Card
Project supervisor	Andy Hollinrake, Dave McNicol and Samuel Voke
Project archives	
Paper Contents	"none"
Paper Media available	"Photograph","Report"
Project bibliography 1	
Publication type	Grey literature (unpublished document/manuscript)
Title	Car Ness Battery
Author(s)/Editor(s)	Hollinrake, A. McNicol, D. Voke, S.
Date	2012
Issuer or publisher	ORCA
Place of issue or publication	Scotland
Description	A4 printed report (spiral bound)
Entered by	Sam Voke (archive.orca@orkney.uhi.ac.uk)
Entered on	14 June 2012

X:\Archaeology\ORCA\ORCA Projects\317 Shapinsay Phase 2\Report\Draft Reports\Non_PDF_figures\Figure_2_317 - Copy.dwg\ORCA FIG 1 A4* \$(GETPROP)??



	Area 1
	Area 2
	Area 3



Orkney College, East Road, Kirkwall, KW15 1LX

Figure.2. Area Locations

Project Name: Shapinsay phase 2		
Project No: 317.	Scale: 1:1000 @ A4	
08/12	SV	Rev. No. 1

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Plate 1: Area 2, showing track (103) after removal of topsoil, looking west.



Plate 2: General view showing south end of Area 3 after excavation, looking south.

13 APPENDIX 1 CONTEXT REGISTER

Context	Site Subdivision	Type	Description
101	Area 1	Deposit	Topsoil. Loose, reddish mid to dark brown silty, sandy clay with occasional small stones, with a maximum depth of 350mm.
102	Area 1	Deposit	Natural clay till. Compact, very mottled and variable in colour with patches of mid-grey, light grey, orangey brown and orange, with occasional outcrops of clean, sandstone bedrock.
103	Area 1	Deposit	Some angular fragments of quarried stone up to c. 50 x 100 x 150 mm but mostly much smaller stones and 'dust'. Depth up to 120 mm
104	Area 1	Deposit	Angular fragments of quarried stone up to c. 50 x 100 x 150 mm but mostly much smaller stones and 'dust'. Depth up to 120 mm
201	Area 2	Deposit	Topsoil. Loose, reddish mid to dark brown silty, sandy clay with occasional small stones, with a maximum depth of 400mm.
202	Area 2	Deposit	Natural clay till. Compact, very mottled and variable in colour with patches of mid-grey, light grey, orangey brown and orange, with occasional outcrops of clean, sandstone bedrock.
203	Area 2	Deposit	North-south aligned cable, diameter c. 25mm at depth of c. 360mm. Truncated at north end by modern drain. Appears to be of WWII origin. Within fill 205 .
204	Area 2	Cut	Cut for cable 203 . Profile of cut through topsoil not discernible in nearby section. Max width 320mm. Extends max 410mm below ground level and max 50mm into clay till 202 . Truncated at north end by modern drain. Appears to be of WWII origin.
205	Area 2	Fill	Mix of redeposited clay and topsoil
301	Area 3	Deposit	Topsoil. Loose, reddish mid to dark brown silty, sandy clay with occasional small stones, with a maximum depth of 350mm.
302	Area 3	Deposit	Natural clay till. Compact, very mottled and variable in colour with patches of dark grey, mid-grey, light grey, orangey brown and orange.
400	Connection Trench	Deposit	Topsoil. Loose, mid-brown silt with occasional small stones. 130mm deep.
401	Connection Trench	Deposit	Light brown clayey silt subsoil. Occasional small stones. 140mm deep.
402	Connection Trench	Deposit	Mottled orange brown glacial till, natural deposit.

14 APPENDIX 2 PHOTOGRAPHIC REGISTER

Frame	Site Subdivision	Description	Direction of shot
1	Area 1	Track 103/104	SW
2	Area 1	Track 103/104	SW
3	Area 1	Track 103/104	W
4	Area 1	General view during excavation, Area 1	NW
5	Area 1	General view during excavation, Area 1	NNW
6	Area 1	General view during excavation, Area 1	N
7	Area 2	South side of Area 2 showing cable 203	E
8	Area 2	Cable 203 and cut 204	E
9	Area 2	Close-up showing cable 203	E
10	Area 2	Close-up showing cable 203	E
11	Area 2	Modern drain across Area 2	E
12	Area 2	General view, work in progress, Area 2	NW
13	Area 2	General view, work in progress, Area 2	NW
14	Area 2	General view, work in progress, Area 2	SW
15	Area 2	General view, work in progress, Area 2	NW
16	Area 2	Modern drain across Area 2	E
17	Area 3	General view, north end Area 3	NE
18	Area 3	General view, north end Area 3	NE
19	Area 3	General view, north end Area 3	SW
20	Area 3	General view, south end Area 3	SW
21	Area 3	General view, south end Area 3	SW
22	Area 3	General view, south end Area 3	SW
23	Area 3	General view, north end Area 3	WSW
24	Area 3	General view, north end Area 3	WSW
25	Area 3	General view, north end Area 3	WSW
26	Area 3	General view, north end Area 3	WSW
27	Area 3	General view, north end Area 3	WSW
28	Area 3	General view, north end Area 3, Area 2 beyond	NW
29	Area 3	General view, north end Area 3, Area 2 beyond	NW
30	Area 3	General view, north end Area 3	W
31	Area 3	General view, south end Area 2	NW
1	Connection Trench (in Area 1)	Pipeline re-cutting of excavated area	E
2	Connection Trench	Pipeline re-cutting of excavated area	N
3	Connection Trench	Pipeline re-cutting of excavated area	E
4	Connection Trench	Excavated section of pipeline	E
5	Connection Trench	Excavated section of pipeline	E
6	Connection Trench	Deturfed section of pipeline	E

