JACOBS

North Dell Replacement Sewage Pipe

Archaeological Watching Brief

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Project: North Dell
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Contents

1. Non-technical summary

1.1 General

1.1.1 Jacobs Engineering UK was commissioned by Scottish Water CID to undertake an archaeological watching brief during groundbreaking work during the replacement of a section of sewage pipe at North Dell on the Isle of Lewis (NGR: NB 49476 62962 – NB 49847 62426).

1.1.2 As part of the mitigation for the development of the site Mary Macleod, archaeological advisor to Comhairle nan Eilean Siar, recommended that the ground works be archaeologically monitored to ensure proper recording of any revealed and previously unrecorded buried archaeological remains.

2 Introduction

2.1 Background

2.1.1 Jacobs Engineering UK was commissioned by Scottish Water CID to carry out archaeological monitoring in the form of a watching brief during the replacement of a section of sewage pipe at North Dell on the Isle of Lewis. The section extends from the outflow pipe at (NGR: NB 49476 62962) and extends to (NGR: NB 49847 62426) where it ties in with the existing sewage pipeline (Figure 1).

2.1.2 The proximity of the development to the remains of the Scheduled Ancient Monument Dun Mara (NMRS: NB 46 SE 5, site **1,** Appendix A, Plate 5), indicates that the archaeological potential of this area is good. The remains of Dun Mara are located on a rocky promontory at Traigh Chumail. The structural remains of the Dun are in poor condition standing to a maximum of two courses high in sections. The Dun is oval in plan, measuring 28m by 22m, with traces of an outer defence ditch and two oval buildings within the interior.

2.1.3 The existing sewage outfall pipe at North Dell was constructed during the 1960's, and due to the ground disturbance from the insertion of the pipe and the steep gradient of the terrain, the ground within which the pipeline was sited subsequently slumped from its original position resulting in damage to the pipe joints.

2.1.4 Over the years several attempts have been made to prevent further subsidence such as the insertion of sheet metal piling with limited success. It has been concluded that the most effective solution would be to replace completely the affected section of pipe to the south east of the outflow pipe. The pipe will be replaced with a modern 28cm (diameter) plastic pipe which will be anchored in place to prevent further slippage.

3 Aims and Objectives

3.1 General

3.1.1 Jacobs Engineering UK conforms to the standards of professional conduct outlined in the Institute for Archaeologists Code of conduct and relevant Standards and Guidance documents. Jacobs Engineering UK is a Registered Organisation (RO) with the Institute for Archaeologists (IfA). This status ensures that there is regular monitoring and approval by external peers of our internal systems, standards and skills development.

3.1.2 An archaeological watching brief was carried out between the 1st and 12th of September 2008 in compliance with the requirements of Comhairle nan Eilean Siar Archaeology Unit and in accordance with SPP 23 (2008), and PAN 42 (1994a). All work was undertaken according to the Code of Conduct, Standards and Guidance of the Institute for Archaeologists (IfA).

3.2 Aims and Objectives

3.2.1 The aims and objectives of the watching brief were:

- To identify and record any features or objects of archaeological importance that could be damaged or destroyed by this development, while minimising any delays or disruption to the development project;
- to place them in the context of the archaeological background;
- to collect any information/recover any artefacts;
- to consider them within the context of the archaeological activity within the landscape and
- to prepare a report to an appropriate level

4 Methodology

4.1 General

4.1.1 The programme of works agreed with Comhairle nan Eilean Siar Archaeology Unit and Scottish Water, comprised the continual archaeological monitoring of the excavation of the trench for the replacement sewage pipe at North Dell. The replacement pipe commenced at the manhole for the fallout pipe (NGR: NB 49476 62962) located on the northern side of Traigh Chrois Sands Bay. The pipe ran approximately 1.5m on the northern side of the current position of the original pipe, extending for about 670m inland, to the point where the existing pipe is located above ground (NGR: NB 49847 62426) (Figure 1).

4.1.2 Due to the general subsidence in this area, steps have been taken to prevent the replacement pipe from shifting. Steel anchor pins were added at regular intervals along the pipe, particularly within the area that has been subject to the greatest slippage.

4.1.3 A track measuring 330m in length by 3m wide was monitored (NGR: NB 49476 62962 – NB 49691 62762). The works were undertaken over a ten day period; from the 1st to the 12th of September 2008.

4.1.4 All works were carried out using a 14 tonne, 360° tracked mechanical excavator fitted with a toothed trenching bucket. All excavation work was undertaken with constant archaeological supervision. No artefactual or ecofactual remains were identified or recovered.

5 Results

5.1 General

5.1.1 The work was undertaken over ten days and comprised initially of topsoil stripping to create a level track way for the excavator to work on. Once this was established the pipe trench was excavated to a maximum depth of 1.5m, depending on surface levels. No features of archaeological significance were identified during the monitoring process.

5.2 Pipe Trench

5.2.1 The pipeline trench commenced at the manhole adjacent to the outflow pipe (NGR: NB 49476 62962) on the northern side of Traigh Chrois Sands Bay, where the replacement pipe will tie in with the existing pipe work. From this point the pipeline ran parallel to the existing pipe at a distance of approximately 1.5m to the point where the existing pipe is located above ground (NGR: NB 49847 62426) (Figure 1).

5.2.2 The pipe trench was constantly monitored from the outflow pipe manhole (NGR: NB 49476 62962) to the first boundary fence at (NGB: NB 49691 62762) a distance of 330m (Appendix A, Plate 7).

5.2.3 Thereafter the terrain became significantly steeper due to the proximity of the pipe trench to the nearby burn (un-named) (Appendix A, Plate 6). In addition the area was littered with numerous drains and sections of subsidence were evident, presumably accelerated by the ground disturbance from the insertion of the original pipeline. It was therefore concluded that the requirement for continual archaeological monitoring was no longer necessary in consideration of the roughness of the terrain.

5.2.4 The stratigraphic sequence through which the pipe trench was excavated was uniform with the overlying turf (**001**) measuring from 0.10m – 0.15m in depth. The topsoil (**002**) was light brown in colour and comprised of predominantly sandy silt, with infrequent small to medium rounded beach pebbles. The topsoil varied greatly in depth extending from between 0.10 – 0.4m deep. Below the topsoil, the natural was composed of a light brown, fine grained sand with frequent small to medium rounded stones throughout and occasional larger stones. Occasionally within the natural there were buried lenses of peat over clay.

6 Conclusion

6.1 The pipe trench was constantly monitored from the outflow pipe manhole (NGR: NB 49476 62962) to the first boundary fence at (NGB: NB 49691 62762) a distance of 330m (Appendix A, Plate 7).

6.2 No significant archaeological features were identified during the course of archaeological monitoring works. Therefore, we recommend that no further archaeological works in the form of reporting are required. .

7 Bibliographic and cartographic References

Bibliographic References

MacDonald, D. 1791-99 The Old Statistical Account of Scotland, Vol 19: Barvas, County of Ross and Cromarty, 263-273.

MacCrae, W. 1834-45 The New Statistical Account of Scotland, Vol 14: Barvas, County of Ross and Cromarty, 141-150.

Scottish Office. 1994. *National Planning Policy Guideline 5, Archaeology and Planning*. Published by the Scottish Office Environmental Department.

Scottish Office. 1994a. *Planning Advice Note 42, Archaeology and Planning*. Published by the Scottish Office Environmental Department.

Cartographic References

County	Date	Sheet	Scale
Isle of Lewis	1853	Sheet 3	**1:10560**
Isle of Lewis	1898	Sheet 3	**1:10560**

Appendix A - Photographic Plates

Plate 1: General view of pipe trench from SE.

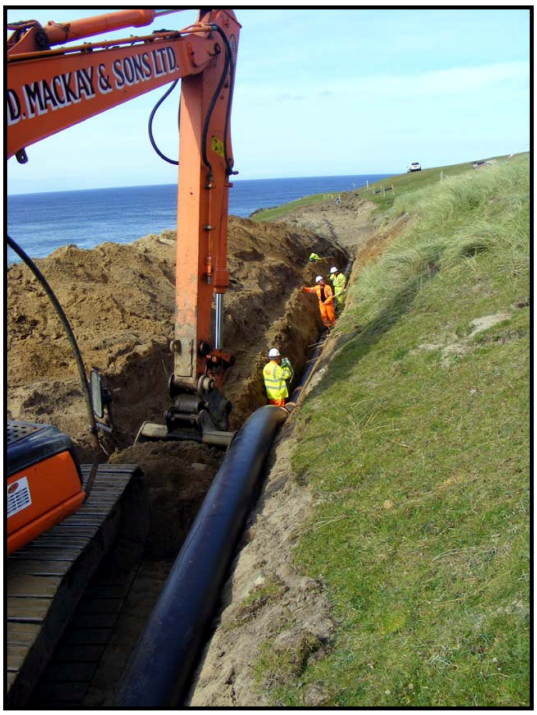

Plate 2: General view of pipe trench from SE.

Plate 3: General view of pipe trench from SE.

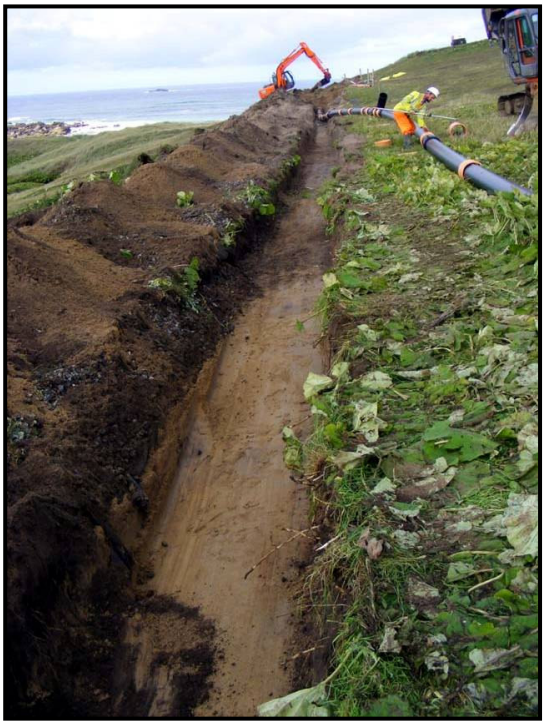

Plate 4: General view of pipe trench, from SE.

Plate 5: Remains of Dun Mara, from SE.

Plate 6: Extent of pipeline route, from SE.

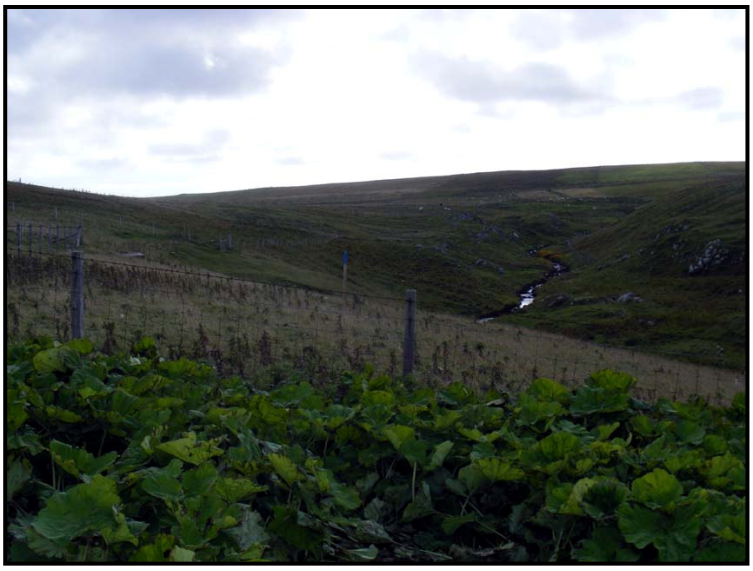

Plate 7: Extent of pipeline route, from NW.

Appendix B - Discovery and Excavation in Scotland

LOCAL AUTHORITY:	Comhairle nan Eilean Siar
PROJECT TITLE/SITE NAME:	North Dell Replacement Sewage Pipe
PARISH:	Barvas
NAME OF CONTRIBUTORS:	Claire Shaw
NAME OF ORGANISATION:	Jacobs Engineering UK
TYPE(S) OF PROJECT:	Archaeological Watching Brief
NMRS NO(S):	N/A
SITE/MONUMENT TYPE(S):	N/A
SIGNIFICANT FINDS:	None
NGR	NB 49465 62991 – 49617 62771
START DATE	September 2008
END DATE	January 2008
PREVIOUS WORK	Unknown
PROPOSED FUTURE WORK:	None
MAIN (NARRATIVE) DESCRIPTION:	A programme of archaeological monitoring was undertaken in respect of the replacement sewage pipeline at North Dell, Lewis (NGR: NB 49465 62991 – NB 49617 62771). The archaeological monitoring was carried out on the 1st – 12th of September 2008 in relation to the trench excavation. No significant archaeological features were identified during the course of archaeological monitoring works of the pipeline trench.
PROJECT CODE:	B057000
SPONSOR OR FUNDING BODY:	Scottish Water
ADDRESS OF MAIN CONTRIBUTOR:	Jacobs UK 95 Bothwell Street Glasgow G2 7HX
E MAIL:	Alastair.Rees@jacobs.co.uk
ARCHIVE LOCATION	Report to Comhairle nan Eilean Siar and archive to National Monuments Record of Scotland.