

Coylton Water Treatment Works Upgrade Pipeline, South Ayrshire: Archaeological Mitigation

Data Structure Report



by Claire Williamson
issued 31st March 2017
on behalf of Scottish Water

RATHMELL 
ARCHAEOLOGY LTD

Quality Assurance

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Signed Claire Williamson Date31st March 2017.....

In keeping with the procedure of Rathmell Archaeology Limited this document and its findings have been reviewed and agreed by an appropriate colleague:

Checked Thomas Rees Date31st March 2017.....

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Introduction

1. This Data Structure Report has been prepared for Scottish Water in support of the construction of a pipeline running from Coylton Water Treatment Works (NS 40021 20032) to the River Ayr at Tarholm Bridge (NS 39251 22105), approximately 1.5km to the north-northwest. The archaeological works were designed to mitigate the impact on the archaeological remains within their development area.
2. The works are being delivered under Permitted Development. Scottish Water, in recognising the archaeological potential within the development area, required archaeological attendance during the site works on a precautionary basis. The West of Scotland Archaeology Service, which advises South Ayrshire Council on archaeological matters, provided guidance on the structure of archaeological works appropriate on this site. Rathmell Archaeology Limited has been appointed by Scottish Water to undertake the development and implementation of archaeological mitigation works.
3. The Written Scheme of Investigation (Klemen 2017) provided the detail of the works (archaeological monitoring, exclusion, excavation, post-excavation analyses and publication) for the mitigation pertaining to groundbreaking within the development area and hence the direct physical impact on buried sediments.

Archaeological and Historical Background

4. A programme of assessment and survey (Rees 2016) was conducted to consider the potential impacts on the historic environment from a proposed pipeline from Coylton WWTW to Tarholm Bridge, South Ayrshire. This assessment identified four sites within the study area, three of which were seen as being at risk of direct impact from the works. These were the poorly located findspot of four cist burials **S2**, the Potterhill Toll House **S3** and the remnants of a historic hedgerow or shelterbelt **S4**. Cognisance of this report is recommended to understand the scope and character of the known historic environment along the pipeline.

Mitigation

5. The mitigation recommended within the assessment (Rees 2016) was that an archaeologist should be present during ground breaking work covering:
 - a. all works within the easement to the S of the B744 as far as the field boundary at NS 3942 2155 (marked as area for **S2** in Figure 1); and
 - b. all works within the easement in the SE quadrant of the crossroads at Craiglea/Hargold (NS 3931 2073) excluding existing road surfaces.
6. After consultation with the West of Scotland Archaeology Service, the mitigation response was expanded to incorporate a call-off service in support of the groundworks process for the balance of the work area.
7. The decision was made prior to start of works that the pipeline was to be drilled at the crossroads at Craiglea/Hargold, leaving only the works within the easement to the south of the B744 requiring monitoring works.

Project Works

8. The programme of works comprised the archaeological monitoring of groundbreaking works within the section of the pipeline route which sat to the south of the B744 (Figure 1). This comprised the northern end of the route itself and also the site of the compound located at its northern end.
9. The groundbreaking works consisted of topsoil stripping across the areas to reveal the underlying natural subsoil in order to clear the areas of any archaeological features prior to the development works taking place. The works were undertaken using a 360° tracked excavator with a smooth ditching bucket and took place on the 23rd and 24th March 2017.

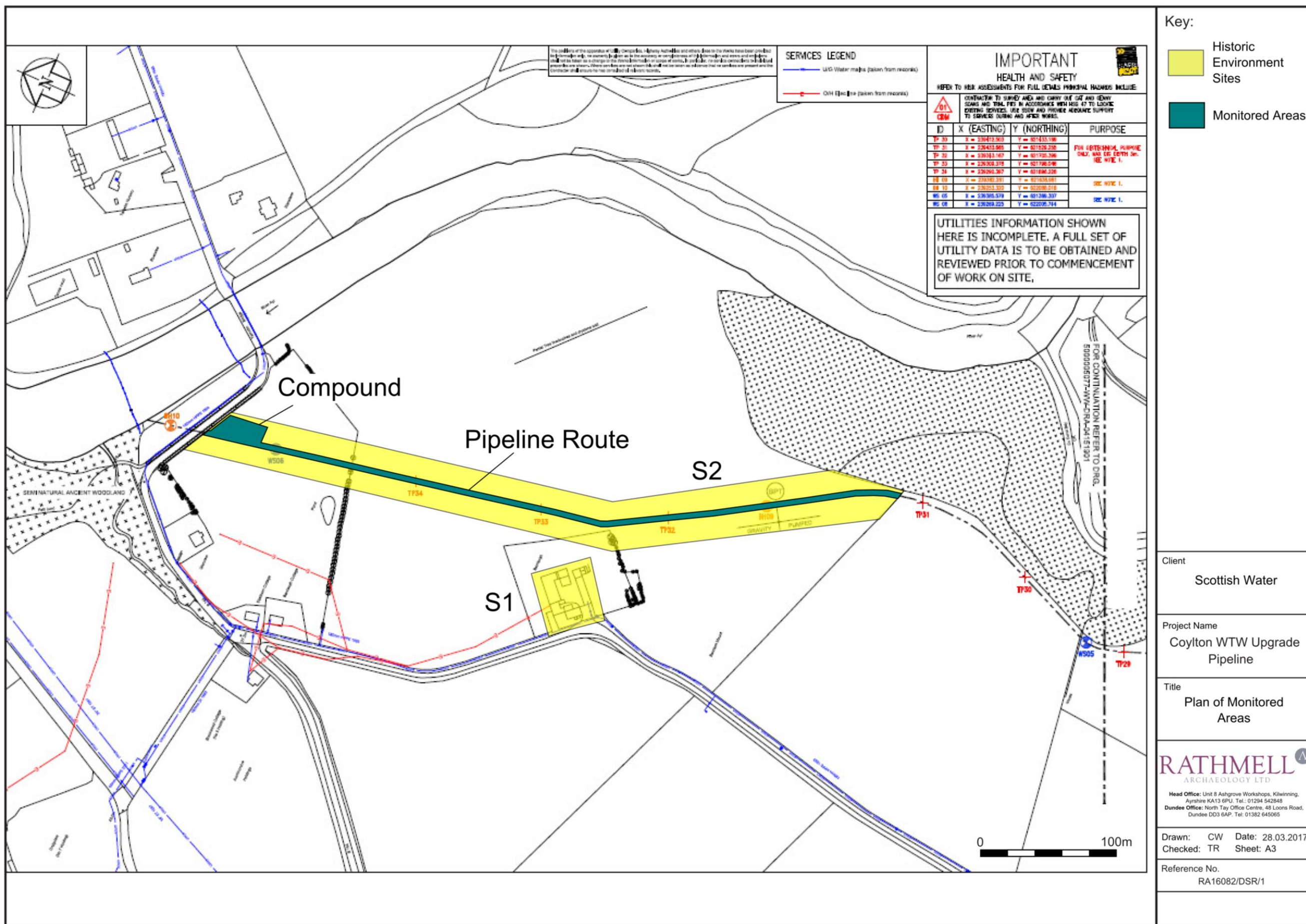


Figure 1: Plan showing location of monitored areas

10. In compliance with the Written Scheme of Investigation (Klemen 2017) any potential archaeological features were investigated and recorded. All works were conducted in accordance with the Chartered Institute for Archaeologists' Standards and Policy Statements and Code of Conduct and Historic Scotland Policy Statements.

Findings

Pipeline Route

11. The section of the pipeline route which required monitoring sat at its northern end where it crossed enclosed fields to the north and east of Barclaugh Farm (Figure 2a). The fields were enclosed by post-and-wire fencing which often accompanied fragmented hedgerows, and had been used for pasture in recent times.
12. The monitored section of the route started on the southern edge of the B744 and ran south for approximately 530m, stopping at a field boundary to the south of Barclaugh Farm (see Figure 1). The stripped area measured 4.2m wide (Figure 2b).
13. Prior to excavation, the entire area was covered by turf with underlying topsoil (001). (001) comprised a quite compact mid-brown silty clay with frequent rootlets and small stone inclusions, measuring 300-500mm deep. It also contained occasional sherds of white glazed white earthenware.
14. The works removed topsoil (001) to reveal the underlying natural subsoil. This was predominantly (002), a very compact light to mid-orange sand clay with occasional small stone inclusions (Figure 3a) which was present across the majority of the pipeline route. Along a small section of the route as it ran up-slope towards Barclaugh Farm, the subsoil changed to a quite compact mid-orange brown clayey sand and gravel (003) (Figure 3b), for a length of approximately 30m before changing back to (002).
15. The only archaeological features present along the monitored section of the pipeline route were field drains [004]. These linear shaped features ran northwest to southeast and measured 0.3m wide (Figure 4a). They had vertical sides and contained a topsoil fill overlying circular red tile drains. These were present in the section of the route as it passed close to Barclaugh Farm, starting on the slope just to the north and continuing across the upper terrace.
16. The only artefacts noted were those occasional 19th and 20th century finds spotted within the topsoil (001).

Compound

17. The compound area sat at the northern end of the monitored area, to the east of the pipeline route and just to the south of the B744 (see Figure 1). It measured roughly 29m north-south by 18.5m east-west, although narrowed to 10.5m at its southern end (beyond the section of pipeline which sat adjacent).
18. As with the pipeline route, the entire area of the compound was covered by topsoil (001) which measured 300mm deep in this area. The topsoil was removed to reveal natural subsoil (002) present across the entirety of the compound (Figure 4b).
19. No archaeological features were present within the compound area, and the only artefacts recorded were the occasional 19th and 20th century finds seen within topsoil (001).

Discussion

20. The only archaeological features to be revealed during the monitoring works were field drains [004] which mainly appeared in the area around Barclaugh Farm. Field drains are commonly associated with the Improvement Era, a period which saw vast changes to the layout of farms mainly throughout the 18th to 19th centuries to better their production and efficiency. This places the insertion of the drains to some point either throughout this period or after, with an aim to improve the drainage of the ground where the underlying



Figure 2a: Pre-excitation shot along route of pipeline from the north, with Barclaugh Farm visible at the top of the hill



Figure 2b: General view of the pipeline route to the east of Barclaugh Farm from the south



Figure 3a: Shot of pipeline route showing subsoil (002)



Figure 3b: Shot of pipeline route showing subsoil (003)



Figure 4a: Shot of field drain [004] from the southeast



Figure 4b: Shot of compound area from the northwest

subsoil was predominantly clay.

21. Barclaugh Farm was depicted on William Roy's *Military Survey of Scotland* in the mid-18th century. Roy's depiction of the surrounding agricultural settlements appears to be broadly consistent with the location of the modern farming settlements, including Barclaugh Farm. As the Improvement Era often reshaped the agricultural landscape, this suggests that the most significant aspects of the Improvement Era had already occurred in this area prior to Roy's mapping.
22. The earliest style of field drains adopted were either open or infilled with stone (i.e. rubble or French drains), although occasionally other materials such as bracken or straw could be used where stone was less readily available (Davis & Davis 2013, 5-6). Red tile drains were not introduced until the very end of the 18th century, becoming more common during the 19th century (*ibid.*, 9-18). As such, rather than forming a part of the initial changes introduced in the Improvement Era, the field drains [004] represent a later phase in the process of ongoing improvements made to the farm throughout its lifetime.
23. No structural evidence was uncovered which would suggest that the area crossed by the pipeline route had been used for anything other than agriculture associated with the nearby farmsteads.
24. No archaeological features which may have been associated with the findspot of the cist burials were uncovered either. However, the narrow scope of the works combined with the rather vague locational information for the cists, does not mean that evidence may not still be present elsewhere within the surrounding area.

Recommendations

25. No significant archaeological remains were located within the development area and the only features recorded during the monitoring related to agricultural use of the site.
26. On balance, given the lack of significant archaeological material recovered in the course of the monitoring works, we consider that the development works will not compromise any significant archaeological strata. Due to this, no further archaeological works are recommended as a direct consequence of these works.

Conclusion

27. Archaeological monitoring works were carried out in support of the construction of a pipeline running from Coylton Water Treatment Works (NS 40021 20032) to the River Ayr at Tarholm Bridge (NS 39251 22105), approximately 1.5km to the north-northwest. The archaeological works were designed to mitigate the impact on the archaeological remains within their development area.
28. The works did not identify the presence of any significant archaeological features within the development area. The only archaeological features recorded were the presence of field drains relating to the use of the land for agriculture from the 19th century through to recent times.

Acknowledgements

29. We are grateful to Scottish Water for allowing us the chance to carry out these works and also to the West of Scotland Archaeology Service who gave guidance. The author would also like to thank ESD, Robertson and BMU for all of their help while attending site. I would also like to thank Thomas Rees for his support and final editing of this report.

References

- Davis, E. & Davis, S.B. 2013 *Draining the Cumbrian Landscape, a revolution in underdraining with tiles*, Cumberland and Westmorland Antiquarian and Archaeological Society, Research Series No. XI
- Klemen, P. 2017 *Coylton Water Treatment Works Upgrade Pipeline, South Ayrshire: Archaeological Mitigation, Written Scheme of Investigation*, unpublished commercial report by Rathmell Archaeology Ltd
- Rees, T. 2016 *Coylton Water Treatment Works Upgrade Pipeline, South Ayrshire: Historic Environment Assessment*, unpublished commercial report by Rathmell Archaeology Ltd

Cartographic

Roy, W 1752-55 *Military Survey of Scotland (Lowlands)*

Appendix 1: Registers

Within this appendix are all registers pertaining to works on-site during the watching brief.

Context Register

Context	Area/ Trench	Type	Description	Interpretation
001		Deposit	Quite compact mid-brown silty clay with frequent rootlets and small stone inclusions. Contained occasional sherds of white glazed white earthenware. Extended across entirety of monitored areas, measuring 300-500mm deep.	Topsoil
002		Deposit	Very compact light to mid-orange sand clay with occasional small stone inclusions.	Natural subsoil
003		Deposit	Quite compact mid-orange brown clayey sand and gravel.	Natural subsoil
004		Deposit	Linear shaped features running NW-SE. Measured 0.3m wide, with vertical sides. Contained topsoil fill and red tile drains (100mm in diameter).	Field drains

Photographic Register

Image	Digital	Description	From	Date
01	354	Pre-excavation shot of route from north end	NNW	23/03/17
02	355	Pre-excavation shot of route from north end	N	23/03/17
03	356	Working shot	N	23/03/17
04	357	Post-excavation shot of north end of stripped area (showing subsoil (002))	N	23/03/17
05	358	Post-excavation shot of stripped area (showing subsoil (003))	S	23/03/17
06	359	Field drain [004]	SE	23/03/17
07	360	Sample east facing section of pipeline strip at S end (top of hill)	E	24/03/17
08	361	General shot of stripped pipe route – south end	S	24/03/17
09	362	General view of south end of stripped pipe route	NW	24/03/17
10	363	General view of stripped pipe route	S	24/03/17

Image	Digital	Description	From	Date
11	364	General view of stripped pipe route	S	24/03/17
12	365	General view of stripped pipe route	S	24/03/17
13	367	General view of stripped pipe route (from north end)	N	24/03/17
14	368	Working shot – stripping compound	N	24/03/17
15	370	Working shot – stripping compound	NW	24/03/17
16	371	Post-excavation shot of compound area	SW	24/03/17
17	372	Post-excavation shot of compound area	NW	24/03/17

Appendix 2: Discovery & Excavation in Scotland

LOCAL AUTHORITY:	South Ayrshire
PROJECT TITLE/SITE NAME:	Coylton WTW Upgrade Pipeline
PROJECT CODE:	RA16082
PARISH:	Coylton
NAME OF CONTRIBUTOR:	Claire Williamson
NAME OF ORGANISATION:	Rathmell Archaeology Limited
TYPE(S) OF PROJECT:	Watching brief
NMRS NO(S):	NS32SE 2; NS32SE 32
SITE/MONUMENT TYPE(S):	Cists(s) (Period Unassigned); Farmstead (Period Unassigned)
SIGNIFICANT FINDS:	None
NGR (2 letters, 8 or 10 figures)	NS 39263 22058 to NS 39408 21550
START DATE (this season)	23 rd March 2017
END DATE (this season)	24 th March 2017
PREVIOUS WORK (incl. <i>DES</i> ref.)	None
MAIN (NARRATIVE) DESCRIPTION: (may include information from other fields)	<p>Archaeological monitoring works were carried out in support of the construction of a pipeline running from Coylton Water Treatment Works (NS 40021 20032) to the River Ayr at Tarholm Bridge (NS 39251 22105), approximately 1.5km to the north-northwest. The archaeological works were designed to mitigate the impact on the archaeological remains within their development area.</p> <p>The works did not identify the presence of any significant archaeological features within the development area. The only archaeological features recorded were the presence of field drains relating to the use of the land for agriculture from the 19th century through to recent times.</p>
PROPOSED FUTURE WORK:	None
CAPTION(S) FOR ILLUSTRS:	None
SPONSOR OR FUNDING BODY:	Scottish Water
ADDRESS OF MAIN CONTRIBUTOR:	Unit 8 Ashgrove Workshops, Kilwinning, Ayrshire KA13 6PU
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ARCHIVE LOCATION (intended/deposited)	Report to West of Scotland Archaeology Service and archive to the National Record of the Historic Environment

Contact Details

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