Rivelin Water Treatment Works, Sheffield South Yorkshire

Archaeological Watching Brief

Summary

A watching brief was undertaken during borehole and test pit evaluation of land west of the Rivelin Water Treatment Works west of Sheffield, South Yorkshire. The excavations confirmed that the area, used as a compound and car park during previous development of the site, consists of made ground overlaying natural deposits. No archaeological deposits were identified.

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Report Information

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Address:	Livingstone House, Clarence Dock, Leeds, West Yorkshire. LS10 1LJ
Report Type:	Archaeological Watching Brief
Location:	Sheffield
County:	South Yorkshire
Grid Reference:	SK 2852 8684
Period(s) of activity represented:	Modern
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1 Introduction

Archaeological Services WYAS (ASWYAS) was commissioned by J.N. Bentley Ltd to undertake an archaeological watching brief during geological site investigations at the Rivelin Water Treatment Works. The investigations were programmed to determine the best location of a proposed new manganese filter building and associated infrastructure.

Site location and topography

Rivelin Water Treatment Works is located south west of Sheffield to the south of the A57 Rivelin Valley Road at NGR SK 2852 8684. A fall in height from around 80 m AOD in the northwest corner to 72 m AOD at the southeast corner is recorded (Mott MacDonald 2010) with the river Rivelin bounding its southern side and the A57 marking its northern boundary. Farm buildings lie to the east of the site with pasture to the west.

Soils, geology and land-use

The soils of the site are mapped as course loamy very acid upland soils over rock with a wet peaty surface horizon and thin iron pan (SSEW 1983). The underlying geology of the area is Namurian Millstone Grit (BGS 1974).

The majority of the site is covered by buildings and associated hard standing for the water treatment works. The area to the west of the site, which encompasses one of the suggested development locations, is currently rough pasture.

2 Archaeological and Historical Background

An archaeological desk-based assessment, undertaken by Mott MacDonald (2010), identified twelve sites of interest within 1 km of the water treatment works. These sites include: five Bronze Age barrows, find spots for prehistoric flints and Roman artefacts, listed 17th-century farmhouses and industrial sites located on the river Rivelin.

The two areas in consideration for the proposed manganese filter building are a former sludge bed located within the water treatment works, that has been heavily landscaped, and a field to the west of the site owned by Yorkshire Water that is known to have been the site compound for a previous expansion of the water treatment works in the mid 1990s.

3 Aims and Objectives

The aims of the investigation were to establish the potential for the survival of archaeological remains within the development area. If such remains were encountered the nature, depth, quality of survival, and date were to be established where possible. These aims are designed to inform the need for further archaeological mitigation on future works.

4 Methodology

An archaeologist was present during the excavation of borehole pits and geological test pits within the western proposed development location. Each excavation was monitored during excavation with the resultant sections and surfaces being inspected for the presences of archaeological levels or artefacts.

All exposed deposits were recorded in accordance with ASWYAS methodologies (ASWYAS 2006) and in accordance with recognised professional standards (Institute for Archaeologists 2008). The location of each excavation was recorded using a Garmin Geko 201 hand-held GPS.

5 Results

Two borehole pits and three test pits were observed during the investigations, none of which exposed any identifiable archaeological remains. The results are tabulated below.

Table 1. Borehole and test pit results

Pit Number	Dimensions (m)	Top Soil Depth (m)	Deposits below topsoil and depth	Natural	Total depth (m)
BH201	0.4 x 0.4	0.10	Made ground. Dark brown silty loam including concrete and brick fragments. 0.5m in depth	Mid orange sandy clay with gritstone cobbles	1.2
BH202	0.4 x 0.4	0.10	Made ground. Dark brown silty loam including concrete and brick fragments. 0.5m in depth	Mid orange sandy clay with gritstone cobbles	1.2
TP201	0.7 x 2.3	0.10	Made ground. Dark brown silty loam including concrete and brick fragments. 0.5m in depth	Mid orange sandy clay with gritstone cobbles and boulders	2.7
TP202	0.7 x 3.2	0.20	Made ground. Dark brown silty waterlogged, some concrete and brick fragments from the eastern end. Base not found. Influx of water at 1.2m	Mid orange sandy clay with gritstone cobbles and boulders	2.1
TP202A	0.7 x 2.9	0.36		Mid orange sandy clay with gritstone cobbles	1.7

The made ground deposit identified within the excavations is most likely the result of the building works in the 1990s. The lack of buried soil horizons below the made ground show that topsoil was striped from the area before the deposition of the made ground deposit. This absence of a soil horizon, however, makes it difficult to determine the depth of deposits removed during these operations.

6 Conclusions

The presence archaeological remains in the vicinity, as identified by the desk-based assessment (Mott MacDonald 2010), confirm that there has been human activity in the area since prehistoric times. With the exception of random finds of prehistoric flint, the most important surviving archaeology is Bronze Age funerary barrows located on high ground overlooking the valley. The quantity and quality of archaeology in the valley bottom remains largely unknown and untested. There is no significant evidence for Roman or medieval settlement and it is possible that the area remained mostly wooded until the first major clearance in the late 18th century.

Observation of the borehole and test pit excavations has confirmed that truncation of the site is severe in the area used as a site compound and car park during the 1990s development. Any archaeological evidence present in this area would have been destroyed at this time. There is therefore no evidence to contradict the conclusions of the desk-based assessment that archaeological potential in the valley is low, and in the area of the former compound it has now been established that there is virtually no potential. This, of course, does not imply that areas undisturbed by previous development and re-landscaping with intact soil horizons over subsoil and bedrock do not have the potential for the survival of archaeological evidence.

Appendix 1: Inventory of primary archive

File No	Description	Quantity
1	Watching brief daily monitoring form	2
1	Geological test pit record sheet	5
1	Photograph record sheet (Film nos 8868 and 8869)	2
1	Colour transparencies (Film no. 8868)	1
1	Black and white contact sheet (Film no. 8869)	1
1	Black and white negatives (Film no. 8869)	1
1	Digital photograph record sheet (Download no. 10D163)	1
1	Annotated site plan	1

Bibliography

ASWYAS, 2006, ‘Site Recording Manual’. Archaeological Services WYAS, unpublished.

BGS, 1974, Sheffield, England and Wales Sheet 100, Solid and Drift edition 1:50, 000. British Geological Survey

Institute for Archaeologists, 2008, 'Standard and guidance for an archaeological watching brief'

Mott MacDonald, 2010, Rivelin WTW, Investigation Contract, Investigation E3: Archaeological Desk Based Assessment

SSEW, 1983, Soils of Northern England, Sheet1, 1:250,000