

Devenport Leat, Manadon Development, Plymouth



Archaeological Watching brief



Oxford Archaeology

8th November 2001

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Stones Underhill Associates

Issue N^o: 1

OA Job N^o: 1060

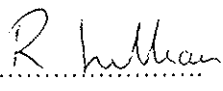
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Devonport Leat, Manadon Development, Plymouth, Devon

ARCHAEOLOGICAL WATCHING BRIEF REPORT

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SUMMARY

In October 2001, Oxford Archaeology (OA) carried out an archaeological watching brief at the site of the Devonport Leat at the Manadon, Plymouth (NGR SX 478 588). OA was commissioned by Stones Underhill, on the advice of the City Archaeologist, to monitor a new drainage trench cut through the line of this late-18th century water channel.

The channel was stone-lined on its north edge; a layer of stone in the base of the ditch cut probably represents the collapse of the south side's stone lining, as there was no comparable arrangement there. The Leat had filled up with thick deposits of clay, until its abandonment in the late 1870s. A decorative line of kerbstones was laid on the south edge of the Leat after it had gone out of use.

1 INTRODUCTION

1.1 Location and scope of work

1.1.1 In October 2001, Oxford Archaeology (OA) carried out an archaeological watching brief at the site of the Devonport Leat at the Manadon, Plymouth (NGR SX 478 588). OA (formerly Oxford Archaeological Unit - OAU) was commissioned by Stones Underhill to monitor excavations for a new drainage trench that was to cut across the line of the historic Leat, on the advice of the Plymouth's City Archaeologist.

1.1.2 No formal project brief was set, though discussions took place in advance of the works between the developer and the City's Archaeologist. OA prepared a Written Scheme of Investigation (WSI) detailing how it would undertake the monitoring of the excavations.

1.2 Geology and topography

1.2.1 The site (Fig. 1) is centred on Ordnance Survey (OS) National Grid Reference SX 478 588 and covers a total area of approximately 43 ha.

1.2.2 The site of the Leat is to the south of the Manadon site, immediately north of St. Peter's Road. The underlying geology is clay.

1.3 Archaeological and historical background

1.3.1 A Desk-Based Assessment (OAU 1997) identified the location of the late 18th-century Devenport Leat. Figure 2, reproduced from the DBA, shows the line of the Leat (No. 13). Its location was further confirmed by recent work on the site where a fallen tree had exposed a section of vertical stonework forming part of the structure.

1.3.2 The Leat was built between 1793 and 1797 by the Company of Proprietors of the Plymouth Dock Waterworks. Water from the West Dart, the Cowsic and the Black Brook fed the channel that extended to the town and dockyard at Devonport. The

channel was the mains supply of water to the dockyard until it was abandoned in 1878.

- 1.3.3 OA has also undertaken two field evaluations at the Manadon development (see OAU 2000, 2001).

1.4 Acknowledgements

- 1.4.1 OA sends its thanks to David Northover of Stones Underhill, who was helpful at all stages of the project. OA's Andy Symmonds undertook the site work.

2 PROJECT AIMS AND METHODOLOGY

2.1 Aims

- 2.1.1 To make a detailed plan and photographic record of the site of the Leat to be affected by the excavations (Fig. 3).
- 2.1.2 To monitor and ensure that the cutting through of the stone walls of the Leat was undertaken with due care by the contractors.
- 2.1.3 To retain a sample of the masonry removed in the course of the work for further analysis, and to retrieve finds from the Leat fills removed in the course of the work and to make a full written, drawn and photographic record of the excavated trench.
- 2.1.4 To make available the results of the archaeological investigation.

2.2 Methodology

- 2.2.1 An archaeologist from OA was in attendance prior to the cutting of the drainage trench while the excavation of the drainage trench was undertaken by the site contractors.
- 2.2.2 All excavation and recording was undertaken in accordance with OA standard fieldwork practise (OA, 1992) All archaeological features were planned at a scale of 1:50 and where excavated their sections drawn at scales of 1:20.
- 2.2.3 All excavated features were photographed using colour slide and black-and-white print film. A general photographic record of the work was made Recording followed procedures detailed in the *OA Fieldwork Manual* (ed. D Wilkinson, 1992).

3 RESULTS

3.1 Description of deposits

- 3.1.1 The new drainage trench was 1.5 m wide and 1.8 m deep and extended across the line of the Leat (Figs 4 and 5). At the base of the excavated trench was a layer of light

blue-grey natural clay (1011) that was at least 0.8 m thick. The clay was iron-stained and included fragments of shale.

- 3.1.2 The clay was overlain by a 0.8 m thick layer of brown clay silt (1010) that followed the southward slope of the land here - the deposit represents natural hill-wash (colluvium) over the natural clay.
- 3.1.3 The colluvial layer was cut by the east-west aligned Leat channel (1009). In section this feature was a maximum 2.9 m wide with near vertical sides to a depth of 1.3 m and a flat base. The upper edges of the Leat flared slightly outwards.
- 3.1.4 At the base of the channel was a layer of loosely arranged sandstone blocks (1008) measuring 0.5 m x 0.3 m by 0.08 m, that lay to a depth of 0.2 m. The stone layer was 0.7 m wide and extended fully across the trench following the central line of the Leat.
- 3.1.5 A 0.75 m thick fill of light-blue silty clay (1007) filled the base of the channel and overlay the stones. At the north edge of the Leat the upper surface of layer 1007 appeared to support the lower of a number of rough courses of stones (1006) lining the north edge of the Leat (see Figs 4 and 5). The stones were roughly hewn and set on edge, with larger blocks present towards the top of the channel. No comparable courses were visible on the south edge of the Leat to the same depth.
- 3.1.6 A compact deposit of brownish-blue clay (1005) incorporating a lens of iron staining abutted the stones (1006). The clay was 0.6 m thick and extended fully across the upper part of the Leat Channel. On the south edge of the channel a linear arrangement of sandstone blocks (1004) overlay the clay (1005). The stones were pitched, and appeared to have been set into the clay as a deliberate action, presumably acting as a kerb feature.
- 3.1.7 A reddish-brown clay silt layer (1003) with shale inclusions that was 0.35 m thick overlay the north edge of the Leat. This layer just overlay the stones edging the north side of the Leat, but extended no further southwards.
- 3.1.8 On the south side of the Leat a stratigraphically comparable layer (1002) of similar material had accumulated, just overlying the stones (1004) there. A 0.1 m thick layer of humic clay silt (1001) overlay layers 1002 and 1003, in turn sealed by the present-day topsoil and vegetation (1000).

3.2 Finds

- 3.2.1 A sample of the stone of the north side of the Leat lining was retained. The stone is a sandstone block that has been roughly cut, or hewn, with straight edges. No tooling marks were evident on the piece. The stone is representative of the type of stones used in the edging of the Leat.

3.3 Palaeo-environmental remains

3.3.1 No deposits of palaeo-environmental interest were noted from the excavations.

4 DISCUSSION AND CONCLUSIONS

- 4.1.1 The investigation cut a narrow trench through what is certainly a long linear feature, so the observations here may not be representative of the whole length of the Leat channel.
- 4.1.2 No dating evidence was recovered from the colluvial layer (1010), so it is unclear when the layer was formed.
- 4.1.3 The roughly coursed stones on the north side of the Leat ditch suggest a stone lining of the ditch here, but there was no comparable stone arrangement on the south side of the Leat to the same depth, other than a crude kerb arrangement of stones (1004) that had been laid after the Leat ditch had filled up. The apparently linear layer of stones at the base of the channel may have been deliberately placed there, but on balance it seems likely that they represent the collapse of the stone lining from the south side of the Leat, and arguably part of the north side's stone arrangement.
- 4.1.4 No dating evidence was recovered from the clay fills of the Leat, which represent the silting process. Documentary sources indicate that the channel was abandoned by the late 1870s, so the kerb on the south edge of the Leat was probably built after then as a decorative feature, to mirror the extant stones on the north edge. The upper deposits over the Leat fills date to the late 20th century.

APPENDICES

APPENDIX 1 ARCHAEOLOGICAL CONTEXT INVENTORY

<i>Context</i>	<i>Type</i>	<i>Depth</i>	<i>Width</i>	<i>Height</i>	<i>Comments</i>	<i> Finds</i>
1000	Layer	0.15 m	-	-	Modern topsoil	-
1001	Layer	0.1 m	2.05 m	-	Modern humic layer	-
1002	Layer	0.3 m	1.75 m	-	Soil layer	-
1003	Layer	0.35 m	-	-	Soil layer	-
1004	Layer	0.3 m	0.4 m	0.4 m	Stone arrangement along south edge of Leat	-
1005	Fill	0.6 m	-	-	Upper fill of the Leat 1009	-
1006	Structure	-	-	0.8 m	Stone lining on north side of the Leat	-
1007	Fill	0.75 m	1.9 m	-	Clay fill of Leat	-
1008	Stone fill	0.2 m	0.7 m	-	Layer of stones along base of Leat - collapse of lining? Or aid to drainage	-
1009	Cut	1.3 m	2.9 m max	-	Cut of Leat ditch	-
1010	Layer	0.8 m	-	-	Colluvial clay over natural	-
1011	Layer	0.8 m+	-	-	Natural clay and shale	-

APPENDIX 2 BIBLIOGRAPHY AND REFERENCES

OAU 1992, *Oxford Archaeological Unit Field Manual*, (First edition, August 1992, Wilkinson D, ed.)

OAU 1997 *Proposed Housing Development, Manadon, Plymouth. Desk-Based Archaeological Assessment*. Unpublished client report

OAU 2000 *Proposed Housing Development, Manadon, Plymouth*. Archaeological Evaluation report. Unpublished client report

OAU 2001 *Proposed Housing Development, Manadon, Plymouth*. Archaeological Evaluation report. Unpublished client report. (May 2001)

APPENDIX 3 SUMMARY OF SITE DETAILS

Site name: Devonport Leat, Manadon, Plymouth

Site code: AR.1998.23

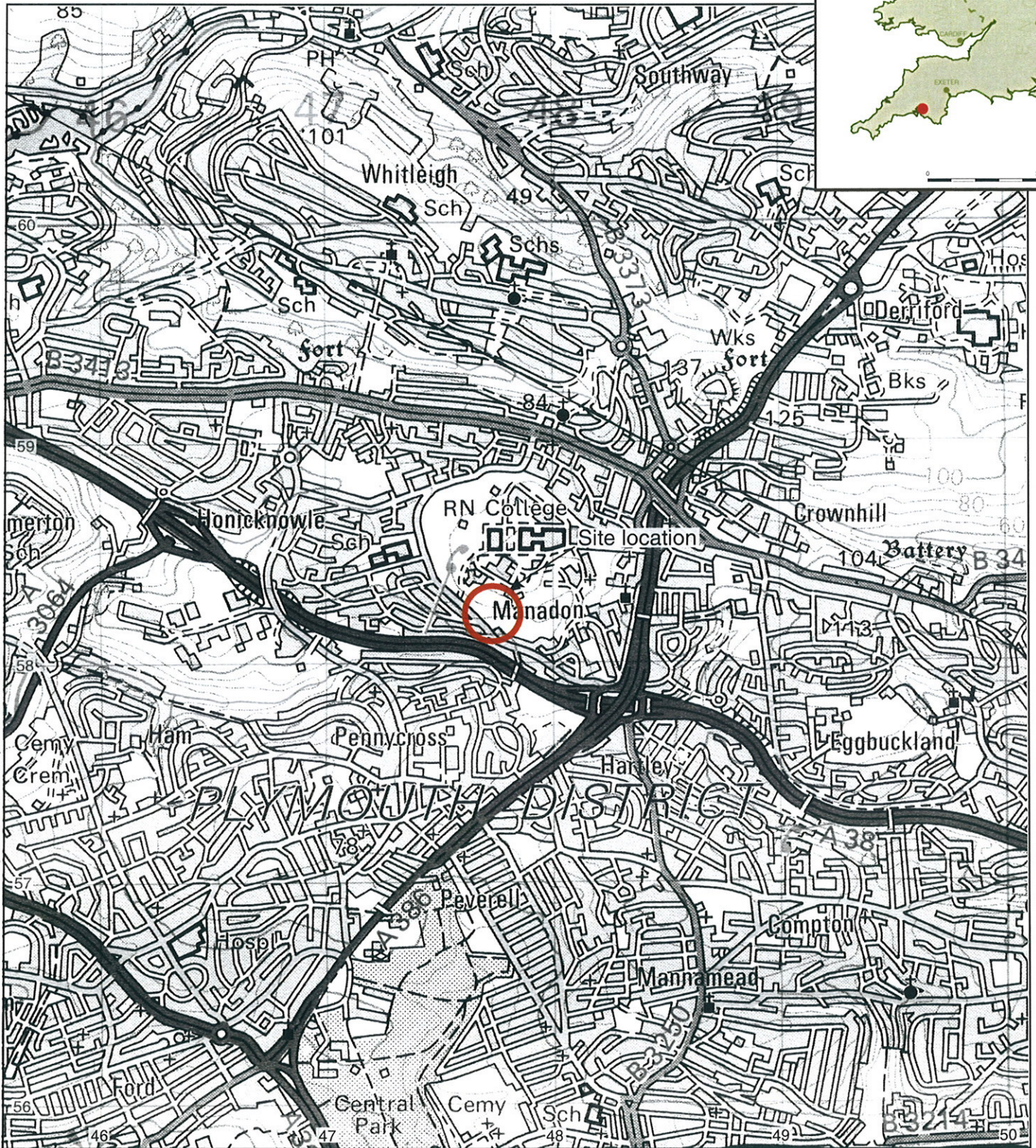
Grid reference: SX 478 588

Type of watching brief: monitoring contractor's trench excavations

Date and duration of project: October 24th-26th, 2001

Summary of results:

Location of archive: The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with the appropriate museum in due course.



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Scale 1:25000

Figure 1: Site location

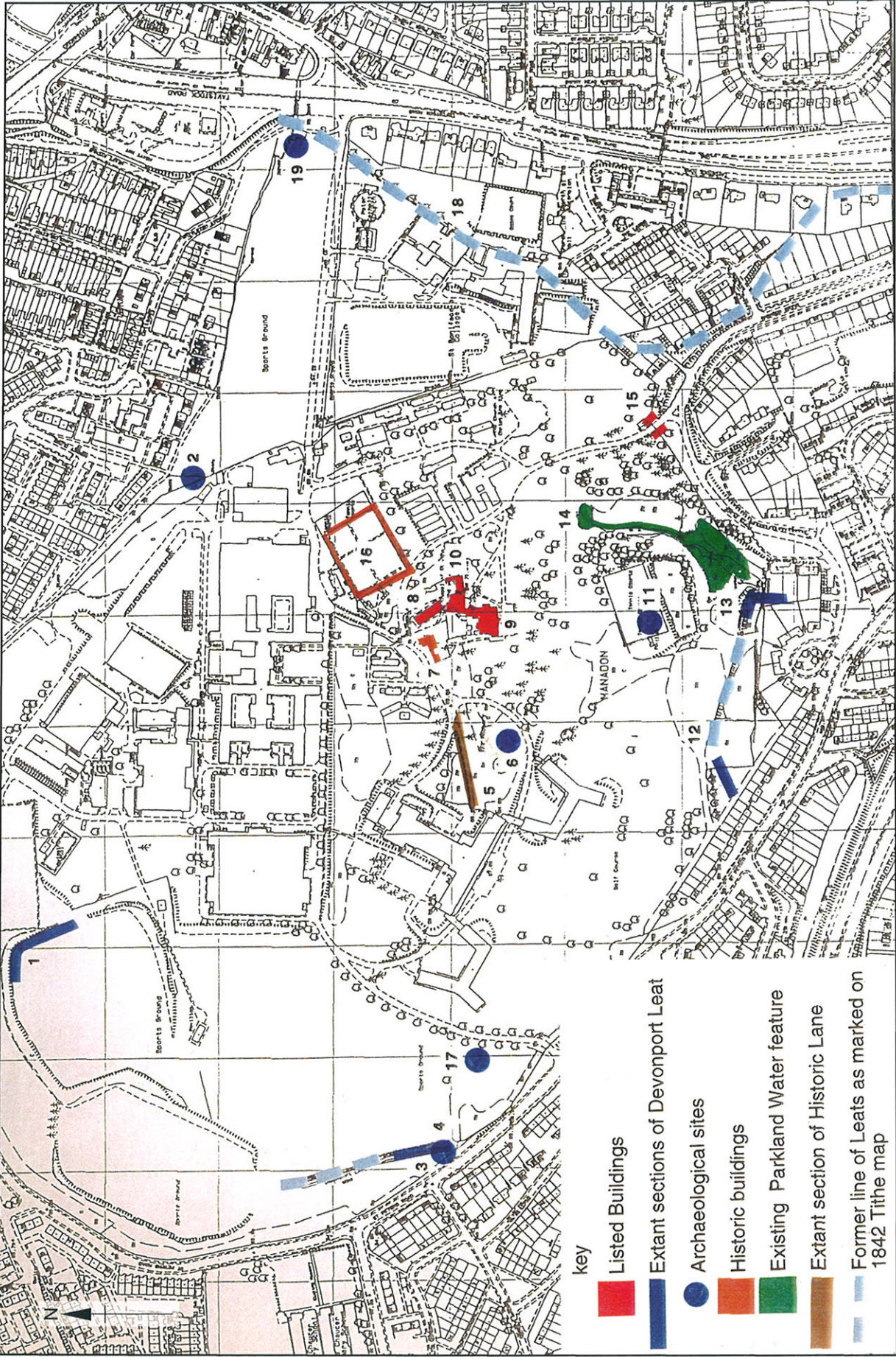


Figure 2: Study Area

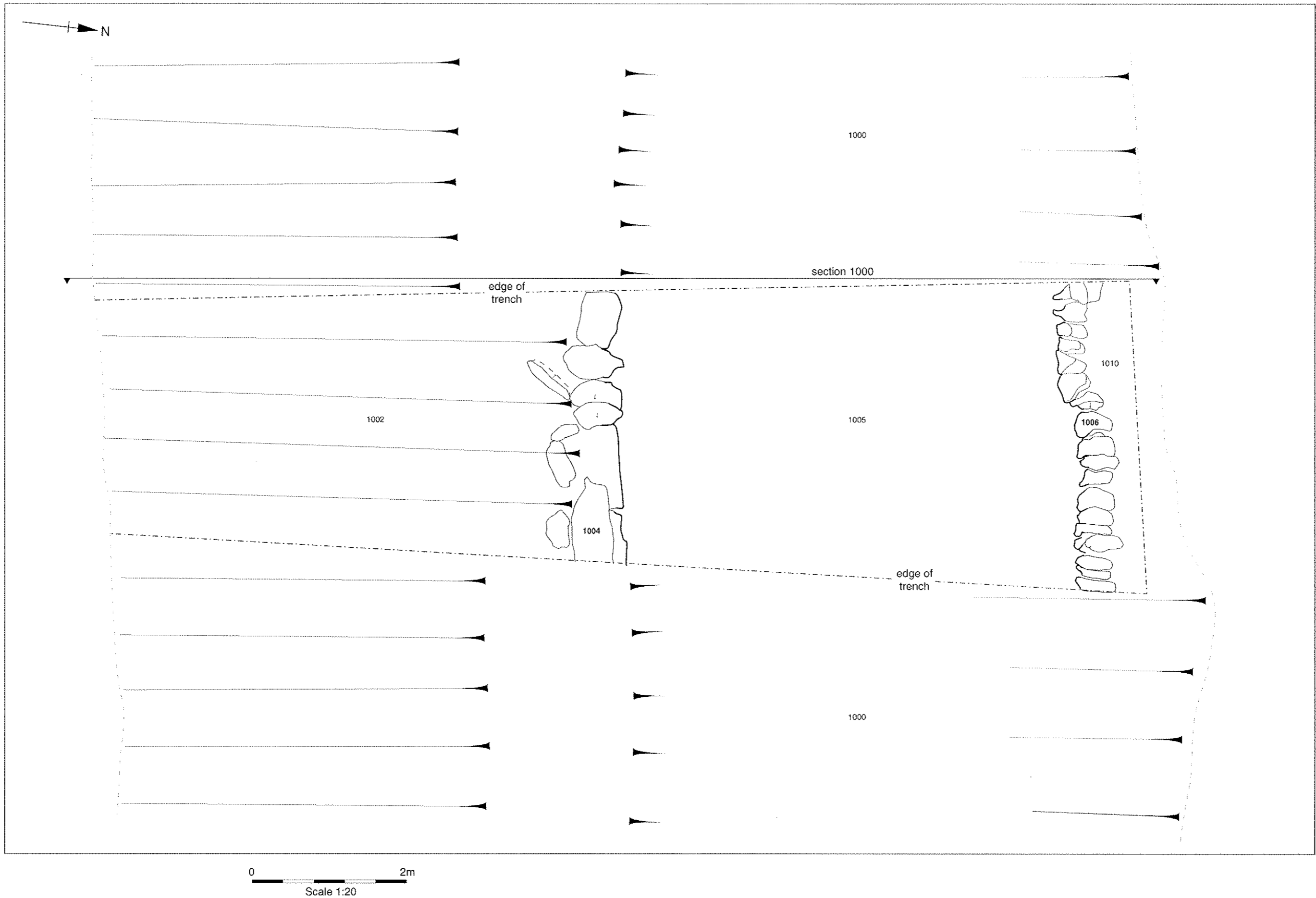


Figure 4 : Plan of Excavation through the Leat

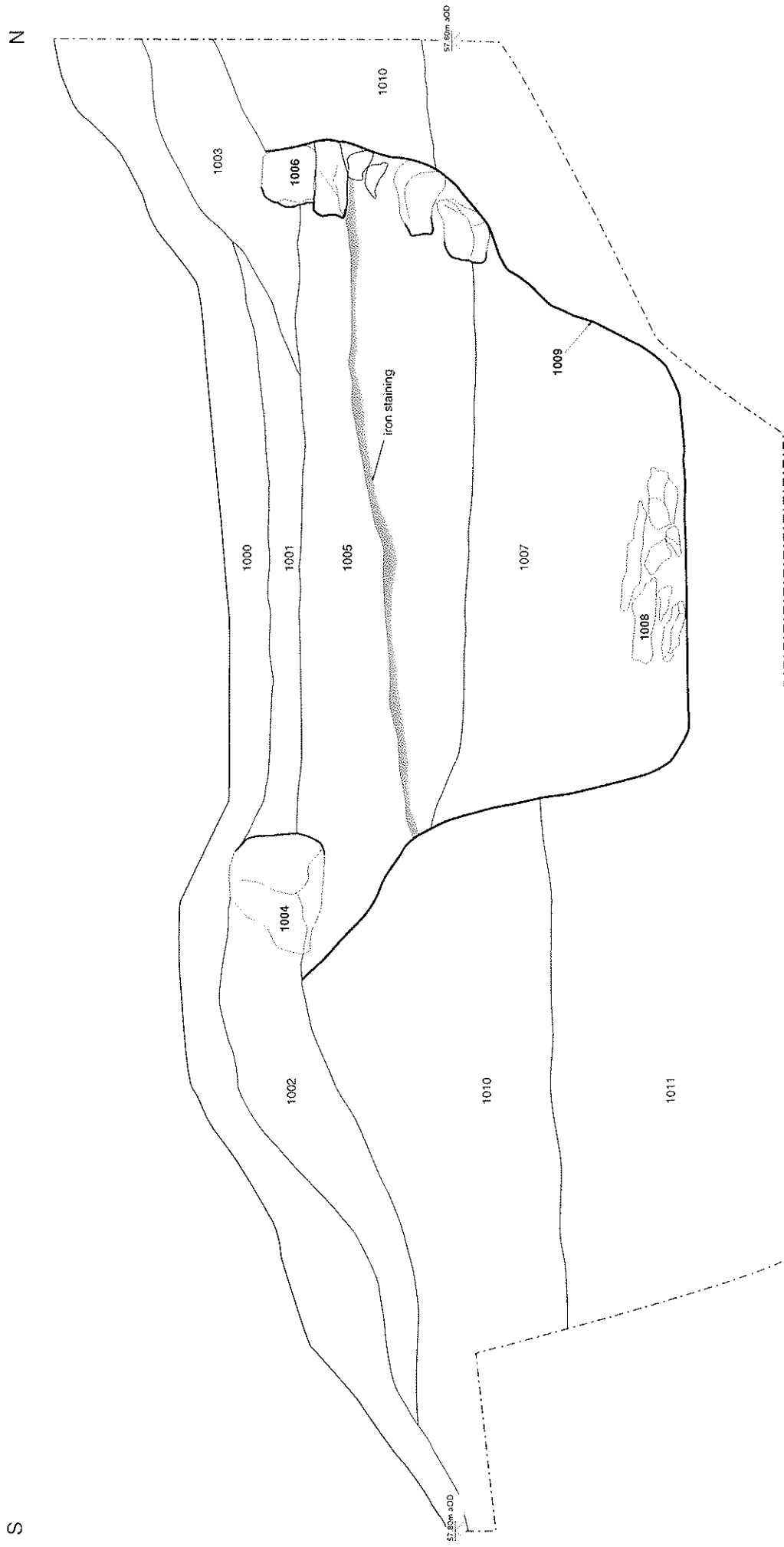
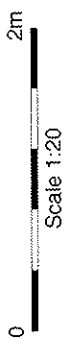


Figure 5: Section of Excavation through the Leat





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