

Drake's Leat, Plymouth City Airport Link Road, Plymouth

NGR SX 499 604

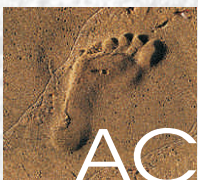
Results of a targeted archaeological investigation

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On behalf of South West Highways

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AC archaeology

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CONTENTS

	Summary	
1.	Introduction	1
2.	Archaeological and historical background	1
3.	Aims	2
4.	Methodology	2
5.	Results	2
6.	Discussion	3
7.	OASIS entry and archive	3
8.	Sources consulted	3

List of figures

Figure 1: Location of site and observations.

Figure 2: Section across leat and plan of bridge spanning the leat.

List of plates

Plate 1: Drake's Leat. View from the south.

Plate 2: North elevation of bridge (secondary phase). View from north.

Plate 3: South elevation of bridge. View from the south.

Plate 4: Primary metalled surface to left. View from the east.

Plate 5: General view of bridge. View from the east.

Plate 6: General view of bridge (to left) and leat. View from northeast.

Summary

Archaeological recording was carried out on land adjacent to Tavistock Road, Plymouth during groundworks associated with the construction of a new link road forming part of the Plymouth City Airport Enhancement scheme. Works comprised the targeted excavation of a section of Drake's Leat and a photographic record of a stone bridge over the leat. The work was carried out by AC Archaeology and was commissioned by South West Highways Ltd.

Results of the excavation revealed a single phase of construction for the leat whilst the present bridge is the product of two phases of construction. No deposits or features predating the leat were observed.

1. INTRODUCTION (Figure 1)

1.1 This document presents the results of a targeted archaeological trench excavation during groundworks associated with the construction of a new link road at Plymouth City Airport, adjacent to Tavistock Road, Plymouth (Figure 1).

1.2 The recording was carried out by AC archaeology in September 2011 and was commissioned by South West Highways Ltd. The work comprised targeted excavation of a section of Drake's Leat where it was to be impacted on by the construction of the link road, and the photographic recording of a nearby small stone bridge over the leat.

1.3 The site is located adjacent to A386 Tavistock Road to the west of Plymouth City Airport (SX 499 604). It lies at around 138m OD and the underlying solid geology comprises shales and slates of the Upper Devonian Period.

2. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1 The Plymouth Leat was constructed between 1589-91 under an act obtained in 1585 by the Mayor and Corporation of Plymouth, in order to bring water from the River Meavy (at a point now under Burrator Reservoir) over a distance of 17 miles to the city. The leat was also known as Drake's Leat, Sir Francis Drake having made a major contribution to its construction. Initially, most of the leat was an open channel, a simple ditch between six and eight feet (1.8-2.4m) wide and up to two feet (0.6m) deep.

Over time its sides were lined with stone or slate, and parts capped to prevent pollution. Much remedial work on the city's water supply was carried out in the 19th century and the leat was abandoned to the south of Crownhill as a primary source of supply following the construction of a series of reservoirs and pipes, including that at Knackersnowle (Crownhill) in 1852. The section of the leat between Roborough and Crownhill (i.e. including where it passes through the present site) went out of use in 1885 when it was replaced with 23" diameter cast-iron pipes (Hawkins 1987, 28).

Prior to realignment of the A386 in 2004 the Plymouth Leat could be traced through the area from Southway Drive southwards to the rear of the Roborough Avenue properties. It varied in size, being up to 2m wide by 1m deep, and stone-lined, with a hedgebank forming its western face, the latter partially revetted by stone. Two bridges across the leat were also noted.

2.2 A previous archaeological investigation as part of the enhancement of the airport site comprised a 12 trench evaluation (Hughes 2009). In the southwest part of the site two parallel ditches, as well as a single ditch, were present, which are likely to relate

to agricultural field division and drainage predating the establishment of the airport. It was not possible at that stage to gain access to excavate a trench across the leat.

- 2.3** In 2001-2004 Exeter Archaeology undertook assessment, evaluation and recording in advance and during the realignment of the A386 west of the airport, as well as construction of a park and ride site and new road within the north corner of the airport (Passmore 2005). Stretches of the leat were excavated recorded to the north and south of the present site. There the leat was stone lined, which dated to the mid 19th-century. Some evidence for an earlier leat channel was uncovered, but this feature was heavily disturbed by roots. A partial record of the bridge was also made. This appeared to predate the re-lining of the leat. The north side of the bridge was noted to have been partially rebuilt.

3. AIMS

- 3.1** The aim of the work was to record a profile across the leat itself prior to development works commencing, as well as to provide an archival photographic record of the stone bridge spanning the leat.

4. METHODOLOGY

- 4.1** The investigation was undertaken in accordance with a method statement prepared by AC archaeology (Valentin 2011), and recording undertaken in line with AC archaeology's *General Site Recording Manual, Version 1*. The work comprised the machine excavation of a T-shaped trench encompassing a 4.5m long stretch along, and a 6.2m long east-west aligned trench across, the leat.

- 4.2** The record of the stone bridge comprised detailed and general photographs, supplemented by a written description. The recording considered the following:
- Site layout and organisation;
 - Function;
 - Materials and method of construction;
 - Fenestration;
 - Original and subsequent fixtures and fittings;
 - Evidence for use and status; and
 - Date/period of initial build and subsequent alterations.

5. Results (Figures 1-2; Plates 1-6)

5.1 The leat (Figure 2a; Plate 1)

The trench was excavated to a maximum depth of 0.70m exposing 0.26m+ of natural subsoil (103) overlain by 0.34m of subsoil/ploughsoil (102). The leat had been constructed in a trench (F105) that measured 3.40m wide by 0.55m deep and had been cut through 103 into the natural. Within the construction cut was a single deposit consisting of dark brown humic material (104). Along the eastern side of the leat, set within 104, there were a series of un-coursed and un-bonded, but well-built pitched slate stones (107) standing to a height of 0.55m. In the base of the leat the lower part of the stones 107 were covered by a humic deposit (106). On the western side of the leat a single course of unbounded roughly square granite blocks (100) each measuring between 0.30-0.35m had been set into the top of 106.

5.2 The bridge (Figure 2b; Plates 2-6)

The bridge measures 7m long (east-west) with a maximum width of 4m, and it is clear that its present form was constructed in two phases. The primary southern elevation of the bridge is constructed using a red brick arch overlain with a 0.28m wide parapet wall of irregularly coursed slates. Further red bricks are visible in the arch below the track surface. Only the east and west terminal ends of the parapet survive to any substantial height (0.65m) while the central section has been demolished to a height of 0.20m. The primary road surface on the bridge is formed by the truncated remains of a metalled surface made up of predominately small (and occasionally larger) rounded stones. This surface was approximately 2.30m wide.

During a secondary phase of construction the bridge was widened by 1.40m to its present dimensions. The form of this northern extension is different to that within the southern side. The lower part of the parapet wall is supported on a series of horizontal cast-iron beams, as well as slates and demolition derived material, placed across the leat. The wall above is constructed of slates and red brick and survives to a maximum height of 0.80m.

6. DISCUSSION

- 6.1 The excavation uncovered no evidence for the original line of Drake's Leat. The exposed fabric dates to the mid-19th century. Both these observations are consistent with the results of the nearby 2005 investigations. Recording of the bridge in 2005 had identified two phases of construction, and the present investigations have demonstrated that, at an unknown date but probably in the later 19th century, the bridge was widened and extended to the north. No other features were observed.

7. OASIS ENTRY AND ARCHIVE

An entry to the OASIS (Online AccesS to the Index of Archaeological investigationS) database has been completed, and has the identifying code 112406.

The paper and digital archive and finds are currently held at the offices of AC archaeology Ltd, in Unit 4 Halthaies Workshops, Bradninch, Nr Exeter, Devon, EX5 4LQ, and will be deposited at the Plymouth City Museum and Art Gallery under the relevant accession number .

8. SOURCES CONSULTED

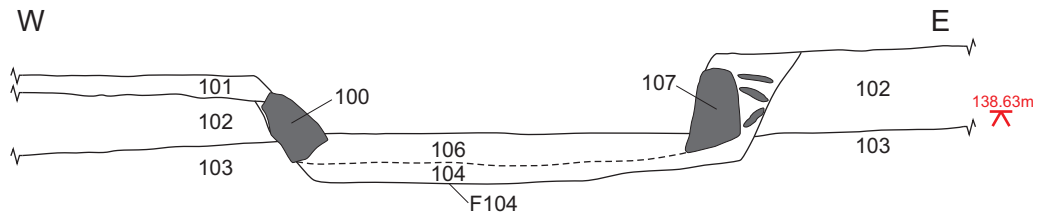
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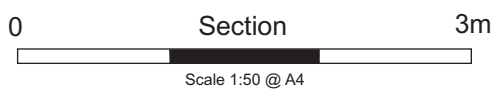
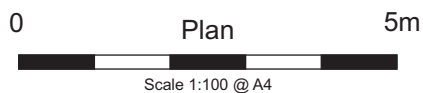
Passmore, A.J., 2005, *Archaeological Recording on the A386 Northern Corridor Public Transport Scheme, Plymouth 2001-2004*, Exeter Archaeology unpublished report.

Valentin, J., 2011, *Drake's Leat, Plymouth City Airport Link Road (SX 499 604) Method Statement for Targeted Archaeological Recording*, AC archaeology document ACD375/1/0.

a) Section across Drake's Leat



b) Plan of bridge



PROJECT

Plymouth Airport

TITLE

Fig.2: Section across leat and plan of bridge spanning the leat





Plate 1: Drake's Leat.
View from the south. 2x1m scales



Plate 2: North elevation of bridge (secondary phase). View from north. Scale 1m



Plate 3: South elevation of bridge. View from the south. Scale 1m



Plate 4: Primary metallised surface to left. View from the east. Scale 1m



Plate 5. General view of bridge. View from the east. Scale 1m



Plate 6. General view of bridge (to left) and leat. View from northeast

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