

**ARCHAEOLOGICAL MONITORING
OF NEW WATER SUPPLY TO
PLACE BARTON HOUSE, BUCKLAND ABBEY,
DEVON**

**Prepared for
The National Trust**

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Fig. 1 Location of the site.

Fig. 2 Location of trenches and pits for new water pipe.

Summary

In October and November 2010 Exeter Archaeology undertook an archaeological watching brief for the National Trust during the renewal of a water supply to Place Barton House, Buckland Abbey (SX 48856680). Approximately 70m of trenches and eight pits were excavated. No archaeological features or deposits were exposed by the excavations.

1. INTRODUCTION

This report presents the results of archaeological monitoring undertaken by Exeter Archaeology (EA) between 19th October and 3rd November 2010 during the renewal of the water supply to Place Barton House, part of the National Trust property of Buckland Abbey. Place Barton, a former mid 19th-century farmhouse, is located at SX 48856680, to the east of the main abbey complex.

It is thought that the existing water supply was installed by Plymouth City Council in the 1970s. The pipe was known to run from a meter connection at SX48926674 along a north/south metalled track and then beside the main east/west tarmac path from the visitor car park to the Abbey. It then crossed a small orchard to a connection behind the garage building to the south of Place Barton House. The route lay wholly within the Scheduled Monument of Buckland Abbey (Scheduled Monument National Number 24846).

The water supply had failed and needed to be replaced as a matter of urgency. Scheduled Monument Consent for the work was granted by English Heritage under an emergency class consent with the condition that an appropriate programme of archaeological monitoring and recording should be put in place by the National Trust (NT). It was proposed that the new water pipe should as far as possible follow the existing route to avoid excavating in previously undisturbed ground.

2. THE SITE

Buckland Abbey was founded as a Cistercian monastery in 1278. After the Dissolution it was sold to Sir Richard Grenville, and his son Richard converted the abbey church into a house, demolishing the cloisters and many of the domestic buildings. The house was purchased by Sir Francis Drake in 1581, and remained with the Drake family and their descendants until 1946. In 1948 the property was given to the National Trust.¹

The site of the observations is located to the east of the surviving medieval abbey buildings. A circular Iron Age enclosure and an overlying medieval longhouse or workshop lie to the east of the site. These were found in excavations undertaken in 1987-8, in advance of the construction of new visitor access to the Abbey.² The enclosure was cut by a new east/west path from the car park to the Abbey, but surviving earthworks from the enclosure are present in the paddock to the north of the path.

¹ The National Trust, 1991.

² Gaskell-Brown 1995.

An east/west roadway that extended from a former entrance to the Abbey grounds from the Buckland Monachorum road, through the site of the Iron Age enclosure and then south of Place Barton and the buildings of the Abbey farm, was also identified in 1987/8.³ The pipeline crosses the route of the roadway. Three trenches were excavated across the roadway south of Place Barton House, showing that it consisted of two parallel metalled tracks, both around 6m wide. Pottery and other finds dating from the 16th or 17th to the 20th century were recovered, but it was suggested that the trackway might be medieval in origin.⁴ It became obsolete with the building of a new lodge and access road in 1805.

The site lies at between 85m and 95m AOD and slopes gradually down to the west and more steeply down to the north at the west end. The underlying geology consists of Upper Devonian slates.⁵

It is known that extensive landscaping involving the raising of ground levels was carried out on parts of the site in 1988 during construction of the new east/west path from the visitor car park to the Abbey. This is known to have affected the north side of the path to the west of the cross track and the small orchard in particular. The orchard was planted at this time on the dumped material, and the hedge banks were established along its south and east sides.⁶

3. AIMS

The aim of the archaeological work was to monitor the excavations for the new pipe and to record observations on the below ground deposits and any features of archaeological or architectural interest that might be exposed.

4. METHOD

The work was carried out in accordance with a brief prepared by the National Trust Archaeologist for Devon & Cornwall.⁷ A plan of the conjectural route of the existing pipeline was provided by N. Kingdom, NT Building Surveyor.

A trace wire and a cable avoidance tool (CAT) were used to establish the line of the existing water pipe. A series of pits was excavated to locate and expose the existing pipe. A section of pipe was removed, and the trace wire inserted into the pipe and along it. The CAT was then used to detect the wire and mark the line of the pipe. Over most of the route, a trench was then excavated along the same line to expose the existing pipe and receive the new one, using a tracked mini-digger fitted with a 0.40m wide toothed bucket. In order to avoid having to cut out and reinstate the tarmac, a pneumatic mole was used to lay the pipe in the orchard, and below the path from the car park to the Abbey.

³ *Ibid.* 60, Fig. 3.

⁴ Gaskell-Brown 1995, 60, Fig. 3.

⁵ Geological Survey of Great Britain, 1977.

⁶ S. Whitfield *pers. comm.*

⁷ Blaylock 2010.

All new excavation was monitored by the site archaeologist, and information was recorded on EA watching brief record sheets. A photographic record was made in black-and-white and colour (digital) formats.

5. RESULTS

5.1 North/south track

Work commenced at the southern end of the route. Pit 1 was excavated in the grass verge on the south side of the east/west vehicle access track, close to the meter connection and stopcock.

The pit was 2.1m long and 0.50-0.60m wide, and was excavated to a maximum depth of 1.35m. The pipe was located in the north-western end at a depth of 0.65m. Within the pit the following sequence of deposits was exposed: (1) turf and topsoil (0-0.20m); (2) pale grey clay and slate (0.20-0.90m); (3) compact slate with pale grey clay (0.90-1.35m). Layers (2) and (3) were interpreted as weathered subsoil and undisturbed natural subsoil respectively.

From pit 1 the line of the water pipe was plotted along the edge of the north/south track to a point just short of the junction. Pit 2 was excavated here, exposing the pipe and enabling the line to be traced across the junction with the main east/west path and then west along the grass verge.

A trench 0.50-0.55m wide was excavated along the east edge of the track between pits 1 & 2 to expose the existing pipe. For most of its length the pipe lay at a depth of 0.50-0.55m, but at the south end the depth increased to 1-1.10m, presumably to take it safely under the east/west track. Two distinct sequences were exposed in the trench, which were interpreted as the inside and outside of the existing pipe trench. Inside the line of the trench the sequence was: (1) stone metalling (0-0.15); (2) yellow-brown clay with slate = trench backfill (0.15-0.55m); (3) natural subsoil consisting of yellow clay and slate (0.55+m). Outside the line of the trench the sequence comprised: (1) stone metalling (0-0.25m); (2) stiff yellowish-brown clay with occasional small pieces of slate and charcoal flecks = former cultivation soil (0.25-0.35m); (3) natural subsoil consisting of compact blue and grey clay and slate (0.35+m). No deposits or features of archaeological significance were exposed, and no finds were recovered.

Using the ducting for the existing pipe, it proved possible to lay the new pipe below the east/west track from the south end of the trench to pit 1, and from pit 1 to the water meter without any further excavation.

Discussion

Original ground levels appeared to be relatively unaltered in this area of the site, with undisturbed subsoil occurring at a depth of 0.35-0.55m. Some reduction in ground level may have been carried out during the construction of the north/south metalled track, presumably as part of the 1988 work.

5.2 East/west path

Pits 3 and 4 were excavated in the grass verge along the north side of the east/west path to expose the pipe and then establish the line using the trace wire. The pipe lay at a depth of 1.5 m in pit 3 and 1.10m in pit 4. Pit 5 was excavated at the east end of the pipeline as a receiving pit for the pneumatic mole. The mole was then used to lay the new pipe between pits 2 and 5 at a depth of 0.40m below the track junction. A trench for the new pipe was then excavated between pits 3 and 5. The trench was 0.75m deep at the east end, increasing to 1.10m at the west end. The pipe was not exposed at these depths.

Natural subsoil, consisting of clean pale yellow or blue-grey clay and slate, was exposed in pit 3 at a depth of 1.25m, and in pit 4 at a depth of 1.15m. The following sequence was recorded in the south-west face of pit 3: (1) turf and topsoil (0-0.15m); (2) soily yellow-brown clay with small pieces of slate (0.15-0.37m); (3) yellow/orange clay with grey flecks and frequent pieces of slate <0.15m (0.37-0.72m); (4) soily darker grey-brown clay with frequent slate <0.10m (0.72-0.92m); (5) firmer pale yellow-brown clay with slate <0.10m (0.92-1.24m); (6) firm pale yellow clay and slate = natural subsoil (1.24+m).

Within the trench, the sequence was as follows: (1) turf and topsoil (0-0.15m); (2) soily yellow-brown clay with bricks, moulded concrete, and 19th/20th-century glass. (0.15-0.40/0.55m); (3) pale yellow-brown clay with grey flecks, frequent slate and late C19th/20th china. Layers (2) and (3) in both sequences were deposits of material dumped during the 1988 construction work. Layers (4) to (5) in pit 3 were either more dumped deposits or layers of backfill in the trench for the original water pipe, although no cut for a trench could be identified in the pit sections.

No archaeological features were exposed in the pits or the trench.

Discussion

Original ground levels in this area have been raised by 0.75m or more as part of the 1988 work. This is reflected by the depth of the existing water pipe, which would originally have been laid at a depth of around 0.50m; it was subsequently overlain by the dumped material.

5.3 The orchard

A trench 0.30-0.40m wide and 0.30-0.60m deep had been excavated beside the garage by NT staff to expose the existing pipe and connection. No archaeological features were exposed and no undisturbed subsoil. Turf and topsoil 0.10m deep overlay yellow-brown silty clay with slate and granite rubble, brick, C19th/C20th glass and china. This material was either pipe trench backfill or levelling material from the construction of the garage.

Pit 6 was excavated at the south end of the trench to locate the existing pipe. The pit was cut into the base of the slope, which descended steeply from the south side of the orchard. The pipe lay at a depth of 0.80m in the south edge of the pit, and was overlain by 0.10m of turf and topsoil and 0.70m of soily yellow-brown clay with frequent pieces of slate <0.15m. It was clear that this was dumped material from the

1988 work, and the contractor was therefore allowed to use the pneumatic mole to lay the new pipe within this deposit through the orchard.

Pits 7 and 8 were excavated as receiving pits. Pit 7 was excavated to a maximum depth of 0.50m. Within the pit 0.10m of turf and topsoil overlay 0.15m of yellow-brown silty clay and frequent slate, over yellow-grey clay and slate 0.25m+ deep. Both deposits were consistent with the dumped material observed elsewhere.

Pit 8 was excavated to a maximum depth of 0.70m, exposing the following sequence: (1) turf and topsoil (0-0.10m); (2) yellow-brown silty clay with grey flecks plus slate (0.10-0.35m); (3) paler soily grey-brown clay with frequent pieces of blue-grey slate. Layer (3) contained C20th brick and a piece C20th sewer pipe. Both layers corresponded closely with those observed in the east/west trench.

Discussion

The observations confirmed that spoil from the 1988 work had been dumped over the area of the present orchard, creating the steep slope down to the rear of the garage. In pits 6-8 the ground level had been raised by more than 0.70m. No archaeological features or natural subsoil were exposed.

6. CONCLUSIONS

No features or deposits of archaeological significance were exposed. Areas where ground levels had been changed during the 1988 works for new visitor access were identified. They are relatively unaltered around the north/south track, where natural subsoil occurs at a depth of 0.35-0.55m. However, along the north side of the east/west path, previous ground levels had been built up by the dumping of spoil from the excavations C20th century. Natural subsoil was exposed at a depth of 1.15–1.25m below ground level, the depth increasing to the west.

Dumping of spoil over the orchard had raised existing ground levels by more than 0.70m. The spoil contained late C19th/C20th artefacts. Natural subsoil was not exposed in this area.

No evidence was found of the former trackway of possible medieval date identified in 1987/8. Map evidence shows that, to the west of the track junction, the present east/west path follows the line of the earlier trackway. Excavations and landscaping for the path may have removed or buried the feature.

7. SITE ARCHIVE

The site records, consisting of watching brief record sheets, location plans, photographs and photographic indexes, are currently being held by Exeter Archaeology (under Project No. 7370) pending deposition with the National Trust at Killerton. All finds were discarded since they were of late post-medieval or modern date, and were from modern deposits.

ACKNOWLEDGEMENTS

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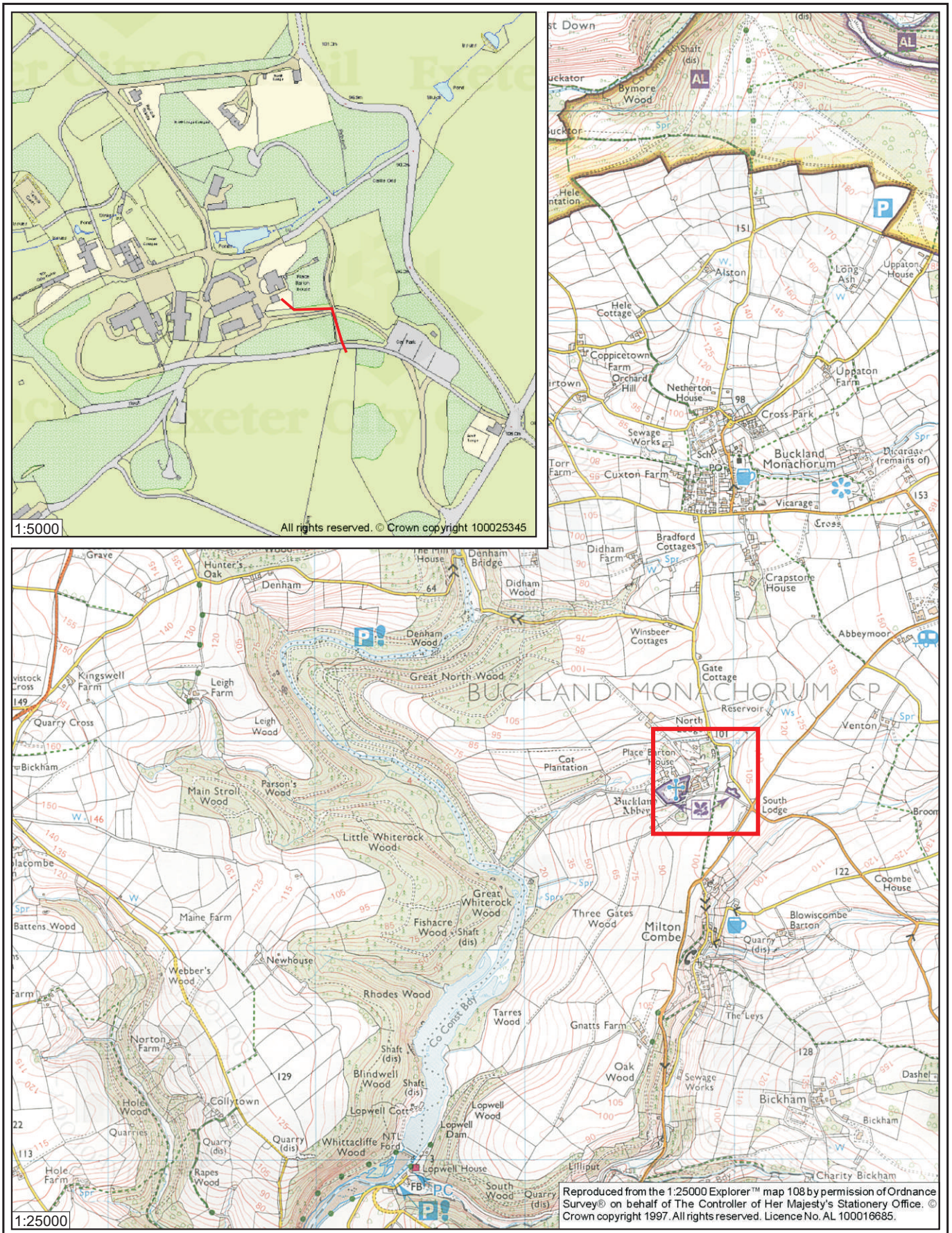


Fig. 1 Location of site.

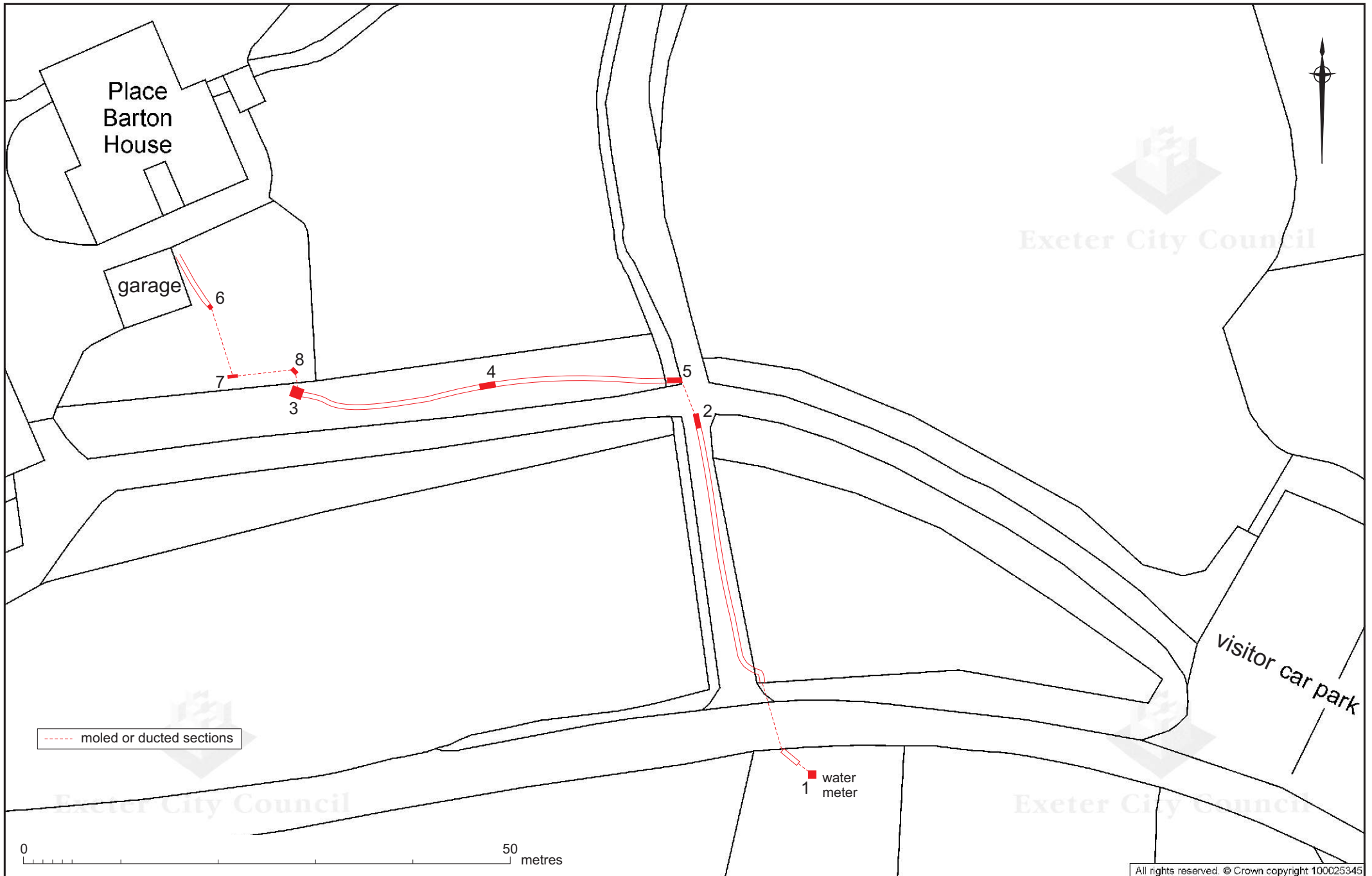


Fig. 2 Location of trenches and pits for new water pipe.