

BROADWELL STW

UPGRADE

Archaeological Desk-Based Appraisal

Prepared by

NETWORK ARCHAEOLOGY LTD

For

BLACK & VEATCH

On behalf of

THAMES WATER UTILITIES LTD

Report Number: 14011

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NON-TECHNICAL SUMMARY

This archaeological appraisal relates to proposed modifications of an existing sewage treatment works (STW) at Broadwell, Moreton-in-Marsh, Gloucestershire.

The appraisal considered the known heritage resource within 2kms of the STW in order to assess archaeological potential.

There is evidence of medieval ridge and furrow over the west half of the STW. There is potential for below-ground archaeological remains to exist within the proposed development area, which is located in the east half of the STW. Specifically, there is a low to moderate potential for below-ground remains of the Bronze Age, and a moderate potential for remains of the Iron Age and Roman periods.

Such remains that might exist within the PDA are likely to be well-preserved and at a depth which would be affected by the development proposals.

Two options for managing this risk are proposed

1. archaeological evaluation; and
2. archaeological monitoring and recording during construction.

In terms of which option to apply to the expansion works at Broadwell STW, the assessed archaeological risk is border-line in terms of making the decision.

1 INTRODUCTION

1.1 Scope & Purpose of the Appraisal

This report presents the results of a rapid archaeological desk-based appraisal undertaken in advance of proposed expansion works within Broadwell Sewage Treatment Works (STW), Moreton-in-Marsh, Gloucestershire, GL56 0TU (Figure 1).

This appraisal has been commissioned by Black & Veatch for Thames Water Utilities Ltd in fulfilment of its best-practice policy.

The purpose of the appraisal is to identify the recorded heritage resource within both the proposed development area (PDA) and its immediate environs.

1.2 Proposed Upgrade Works

Thames Water Utilities Ltd proposes to expand operations at the STW by the construction of the following proposed facilities:

- New inlet works;
- A roughing filter (15m dia) with connecting pipe-work;
- Recirculation pumping station;
- Storm tank (10m dia) and storm return pumping station;
- Motor Control Centre (MCC);
- Standby generator and fuel tank;
- An area of hard-standing;

The existing STW occupies an area of c.0.94 ha. The PDA occupies an area of c.0.26ha and is located within the STW site boundary (c.1.5 ha).

1.3 Location and Description

The STW occupies low-lying land over Charmouth Mudstone on the valley floor. The Caudwell Brook follows the south east boundary of the STW and joins the River Evenlode approximately 600m to the north east.

1.4 Planning History

The majority of the proposed expansion works (including any temporary construction compound areas), fall under Thames Water Utilities' Permitted Development Rights. The new kiosk has been granted planning permission from the local planning authority, Gloucestershire County Council.

An EIA Screening Request submitted to Gloucestershire County Council determined that the expansion works did not require EIA (B&V January 2014).

1.5 Method of Appraisal

Data relating to designated assets, including scheduled monuments, conservation areas, listed buildings and registered parks and gardens, was collected from English Heritage and Gloucestershire County Council for a 2km buffer of the STW.

Data relating to undesignated sites was collected from the Gloucestershire Historic Environment Record and the National Monument Record (NMR).

2 HERITAGE RESOURCE

Medieval ridge and furrow remains are recorded over the west half of the STW. The heritage resource recorded outside the STW, in the surrounding landscape, includes sites of most periods and these are discussed from the earliest to present below.

Early prehistoric activity is represented by occasional stray finds, suggesting little more than transient exploitation of the surrounding landscape.

Later prehistoric activity is represented by a combination of settlement, funerary and stray finds. A Neolithic polished stone axe-head is recorded at Broadwell (HER 11862). The focus of later prehistoric settlement appears to be in and around Stow-on-the-Wold, where there is a scheduled hilltop site known as Stow Camp with evidence of occupation from the mid-late Bronze Age into the Iron Age. A little to the east and north east, English Heritage's National Mapping Programme project records crop-marks of two groups of rectilinear enclosures and field systems of likely Bronze Age, Iron Age or Roman date. One of these groups (HER40151) was the focus of recent evaluation which proved settlement commencing in the middle/late Bronze Age (CA 2013). In terms of prehistoric funerary activity, a Bronze Age barrow, known as Mul's Tumulus (HER 6289), is recorded c.2km to the east of the STW.

The Fosse Way Roman road runs roughly north to south through Stow-on-the-Wold and passes approximately 2km to the east of the STW. Its course is marked by the modern A429. The course of a secondary Roman road (Cynges to Ferdstraet - HER 9230), is marked approximately by the modern A436 where it runs north east to south west across Adlestrop parish c.1.3km to the south east of the STW, connecting with the Fosse Way to the immediate south of Stow-on-the-Wold.

In terms of local Roman occupation, this appears to be focussed towards Stow-on-the-Wold and the Fosse Way. The nearest villa site (SM 1003334) is recorded alongside the Fosse way at Broadwell and there is evidence of settlement continuing into the Roman period at the aforementioned evaluation site at Stow-on-the-Wold (CA 2013).

During the medieval period, the STW appears to have been located within a broad arable landscape of open fields belonging to Broadwell (to the west), Oddington (to the south) and Evenlode (to the north east). This is attested by ridge and furrow earthworks on old aerial photographs. The National Monument Record (NMR), however, describes these remains as being mostly now levelled. Recent evaluation at Green Barn Farm, Broadwell recorded medieval ridge and furrow, an undated trackway, a pit and possible posthole (HER 21214) (Wills 2013).

The post-medieval period brought agricultural growth and prosperity to the region due to the increasing importance of Stow-on-the-Wold as a market town. This economic growth is reflected by the number of listed buildings dating to this period within the conservation areas of Stow-on-the-Wold, Evenlode, Adlestrop, Upper and Lower Oddington, and Broadwell, the latter being located approximately 800m to the west of the STW.

Local prosperity is also reflected in several formal 19th century landscapes, including Adlestrop registered park and garden, and undesignated house and gardens at Oddington (HER 22379) and at Broadwell Hill (HER 27361).

Post-medieval industrial heritage is represented by the Oxford, Worcester and Wolverhampton Railway, subsequently part of the West Midland Railway and the GWR (HER 15488). This railway bypassed Stow-on-the-Wold and contributed to its economic decline towards the end of the 19th century.

3 **ARCHAEOLOGICAL POTENTIAL AND SURVIVAL IN THE STW**

The potential for earlier prehistoric remains is considered **low** on account of the transient exploitation which is recorded locally.

Later prehistoric and Roman activity is well attested in the region with the emphasis of *known* occupation being towards the limestone ridges occupied by present-day Stow-on-the-Wold and the Fosse Way. Crop-mark evidence from further afield, however, reveals numerous prehistoric and later sites scattered along the Thames Valley and its tributary river valleys, including the Evenlode. Clayey subsoil, such as the mudstone geology which underlies the STW, tends not to produce crop-marks. It is uncertain, therefore, whether the absence of known sites/crop-marks on the valley floor is an accurate reflection of human activity in these periods, or whether the valley floor was unattractive to settlement on account of being relatively wet or forested.

Given the apparent importance of water to Bronze Age people, and their behaviour of depositing high-value metalwork into watery contexts, the topographical setting of the STW alongside the Caudwell Brook and close to the River Evenlode means that the potential for remains of this period is considered **low to medium**.

There is increasing evidence of late Iron Age and Roman exploitation of valley floor resources. Land occupied by the STW may well have formed part of an Iron Age or Roman farmstead or fallen within the estate of a Roman villa, such as Broadwell. The potential for settlement or agricultural remains of these periods is considered **medium**.

During the medieval period, land occupied by the STW appears to have formed part of an arable landscape of open fields. As such, the potential for non-agricultural remains of this period is considered **low**. Such agricultural activity may have contributed to the truncation of earlier archaeology. It is noteworthy, however, that the eastern half of the STW, where the proposed expansion is due to take place, does not appear to have been in medieval

agricultural use. Below-ground archaeological remains, therefore, may be better preserved here.

The survival to the present-day of large tracts of ridge and furrow suggests that the primary land use in the region since the medieval period would have been for pasture. This is significant for several reasons. Firstly, it suggests that the potential for non-agricultural remains of the post-medieval and early modern periods is **low**. Secondly, it may have resulted in the survival of underlying archaeology to the present-day. And, thirdly, it explains the absence of crop-marks on the valley floor of the Evenlode, which require arable land for their formation.

4 CONCLUSIONS AND RECOMMENDATIONS

Whilst there are no known archaeological remains of significance within or immediately outside the STW, there is potential for below-ground archaeological remains to exist within the PDA. There is a low to moderate potential for below-ground remains of the Bronze Age, and a moderate potential for remains of the Iron Age and Roman periods.

This archaeological potential presents a risk to the construction phase of the planned expansion works at the STW.

Such remains that might exist within the PDA are likely to be well-preserved and at a depth which would be affected by the development proposals.

There are two options for managing this risk, as follows:

3. archaeological evaluation; and
4. archaeological monitoring and recording during construction.

In terms of which option to apply to the expansion works at Broadwell STW, the assessed archaeological risk is border-line in terms of making the decision.

An archaeological evaluation of the PDA would fully manage the archaeological risk. It would require access in advance of construction, the mobilisation of plant and personnel and site security, and would likely take up to one week. To take full advantage of this upfront 'investment', the evaluation phase would ideally be followed by a sufficient window of opportunity to deal with any archaeological remains that might be found and/or flexibility within the construction programme to accommodate concurrent archaeological/construction activities.

Alternatively, an archaeological watching brief could be engaged with a step-down approach with regards to the level and intensity of monitoring in the event of no finds or confirmation of made-ground. In the event of going straight to monitoring during construction, the bypassing of the evaluation phase would save on the cost of the archaeological evaluation itself and would remove the upfront work from the programme. In terms of

disadvantages, however, this approach would carry all the risk into construction.

Both options would require an archaeological *Written Scheme of Investigation* to be agreed with the County Archaeologist in advance of archaeological works commencing.

5 ACKNOWLEDGMENTS

Network Archaeology would like to thank the following for their contribution to the project:

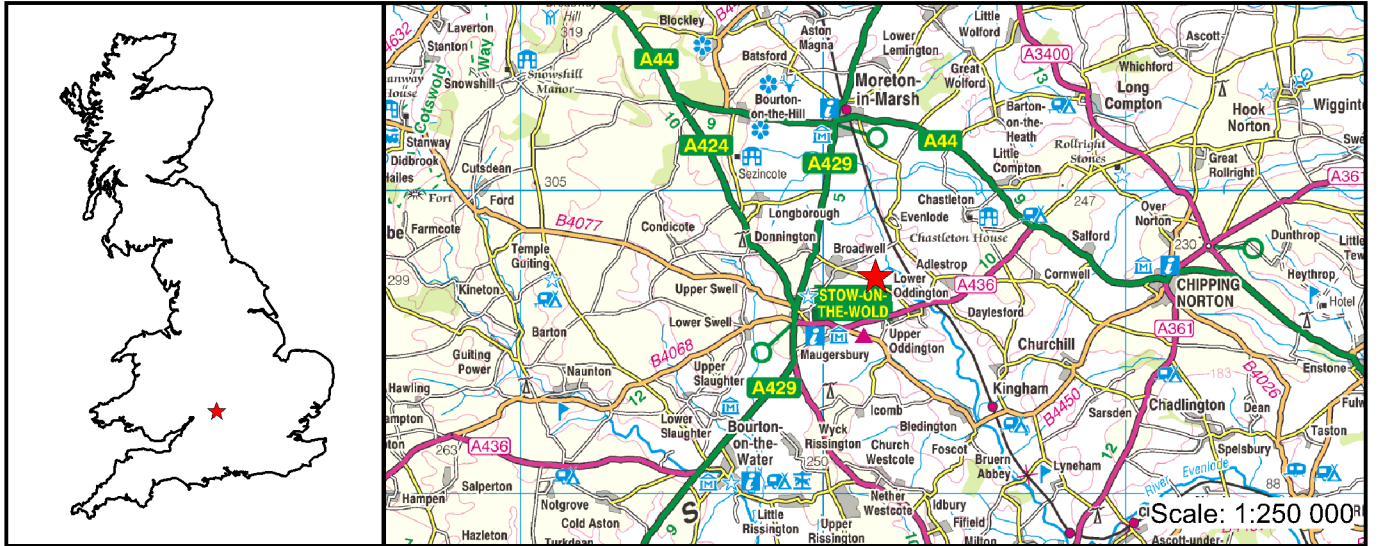
| Organisation | Name | Position | Contribution |
|--------------------------------|---------------|---|---|
| Black & Veatch | Anne Dugdale | Technical Director | Provision of background project information |
| English Heritage | Graham Deacon | Archive Services | Provision of NMR data |
| Gloucestershire County Council | Jan Wills | HER Officer | Provision of HER data |
| Network Archaeology Ltd | David Bonner | Company Director & Senior Project Manager | Project management, research and report writing |
| | Adam Holman | Project manager and IT/GIS Manager | GIS and figures |

6 REFERENCES

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★ Proposed development
 Sewage Treatment Works

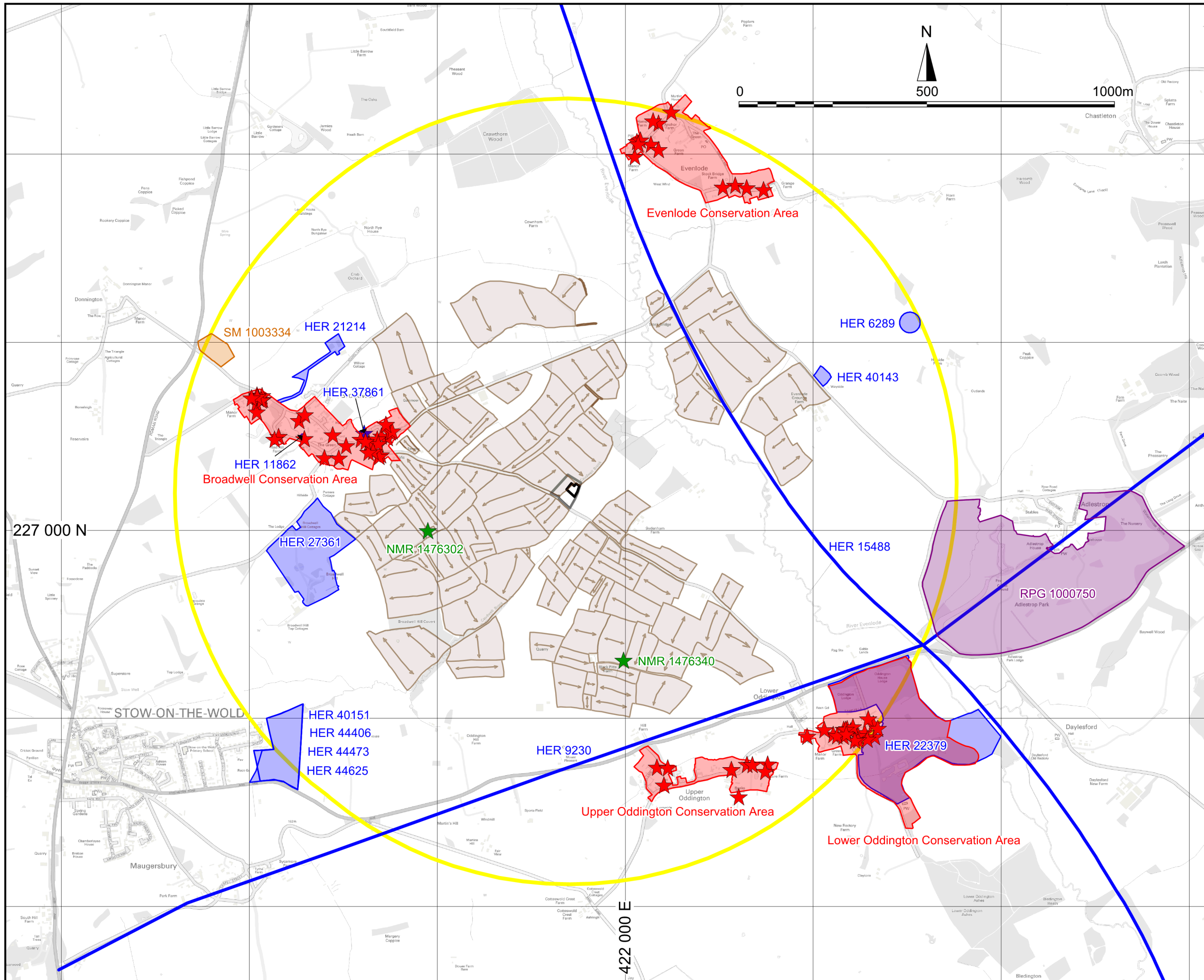
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Broadwell STW Upgrade

Figure 1
General location of site

Scale: 1:10 000



- Proposed development area
- Sewage Treatment Works
- Study area
- ★ Listed structure
- Conservation area
- Scheduled monument
- Registered Park or Garden
- HER site
- ★ NMR site
- NMP site

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Broadwell STW Upgrade
Figure 2
 Archaeological constraints

Scale: 1:20 000