

# Larkhill Waste Water Treatment Works and Bulford Pumping Station

Archaeological Watching Brief



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wessexarchaeology



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Portway House Old Sarum Park Salisbury Wiltshire SP4 6EB

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Project management by	Ruth Panes
Document compiled by	Tom Blencowe, Jamie McCarthy and Rachel Williams
Graphics by	Nancy Dixon

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#### Summary

Wessex Archaeology was commissioned by Ancala Water Services to conduct an archaeological watching brief on works at Larkhill Waste Water Treatment Works (centred on National Grid Reference 412850 143250) and associated rising main and works at Bulford Pumping Station (centred on National Grid Reference 417370 144060). The archaeological watching brief at Larkhill comprised the monitoring of groundworks undertaken for the construction of a new treatment works and intrusive works associated with the demolition and removal of structures belonging to the former sewage treatment works. The Larkhill watching brief also included monitoring of groundworks for a new rising water main between the new treatment works and The Packway via Fargo Road and Tombs Road. The rising main was primarily constructed via directional drilling, with the archaeological monitoring comprising the observation of excavations for the drill launch and receptor pits. In addition, the north-east and the south-west ends of the rising main each included excavation of a single machine dug utility trench. The archaeological watching brief at Bulford Pumping Station comprised monitoring the excavation for a new 120 m long storage pipe.

Within the boundary of the Larkhill treatment works, evidence for previous truncation presumed to be related to the construction of the former sewage works was observed. In the works associated with the new rising water main, five military training trenches and two modern postholes were recorded in the Tombs Road section of the works. The military trenches are less than 500 m south of the excavated complex of military training trenches near Larkhill, and are located between Larkhill Airfield and a World War I training camp.

A single wall was recorded at the Bulford Pumping Station works, historic mapping suggesting a building first stood in this location in the 1950's.

The watching brief was conducted in a number of stages, as required, between 5th October 2017 and 8th March 2019. A watching brief was also conducted on the removal of the spillway for the Larkhill sewage treatment works, located within the boundary of the Scheduled Monument of the Stonehenge Cursus (this work requiring Scheduled Monument Consent), the results of which have been set out in a separate report (Wessex Archaeology 2019).

#### Acknowledgements

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The fieldwork was directed by Darryl Freer, Jamie McCarthy, Dave Murdie, Michal Cepak, Steve Legg, Neil Fitzpatrick, Pete Capps and Tom Blencowe. This report was written by Tom Blencowe, Jamie McCarthy and Rachel Williams and edited by Phil Andrews and Ruth Panes. The report graphics were prepared by Kitty Foster and Nancy Dixon. The project was managed by Ruth Panes on behalf of Wessex Archaeology.



# LARKHILL WWTW AND BULFORD PUMPING STATION

# Archaeological Watching Brief Report

#### 1 INTRODUCTION

#### 1.1 Project background

- 1.1.1 Wessex Archaeology was commissioned by Ancala Water Services (Defence) Limited, on behalf of the Ministry of Defence, to undertake an archaeological watching brief during groundworks for a new waste water treatment works (WWTW) and rising main at Larkhill, a new concrete tank and storage pipe at Bulford Pumping Station, and demolition and removal of the former structures and associated features at Larkhill sewage treatment works (STW). The monitored works were centred on NGR 412850 143250 at Larkhill WWTW, Wiltshire and NGR 417370 144060 at Bulford Pumping Station, Bulford Droveway, Wiltshire (Fig. 1).
- 1.1.2 The scheme included archaeological monitoring of the following works:
  - Installation of a new below ground sewage pumping station and emergency storage tank at Larkhill WWTW;
  - Installation of 15 manholes and sewers totalling approximately 320 m in length within Larkhill WWTW;
  - A proposed rising main measuring approximately 2 km in length between Larkhill WWTW and the existing junction between Tombs Road and The Packway, Larkhill;
  - The construction of a below ground concrete tank at Bulford Pumping Station;
  - Installation of a new storage pipe measuring approximately 120 m in length to the north-west of Bulford Droveway to replace the existing sewer underneath Bulford Droveway;
  - Demolition and removal of existing structures and associated features at Larkhill STW and the reinstatement of areas to grassland.
- 1.1.3 The demolition and removal of the spillway work at Larkhill STW, which was undertaken in February and March 2018, was located within the boundary of the Scheduled Monument of The Cursus. This work, which required Scheduled Monument Consent (SMC), was conducted under a different written scheme of investigation and has been reported separately (Wessex Archaeology 2019).
- 1.1.4 Wiltshire Council were consulted on the development proposal, although the works are not associated with a planning application. However, they are covered by the Water Industry Act 1991, Part 1, Section 3, paragraph 2b which states that
  - (2) The requirements imposed by this subsection in relation to any such proposals as are mentioned in subsection (1) above are—

- (a)a requirement, so far as may be consistent—
- (i) with the purposes of any enactment relating to the functions of the undertaker; and
- (ii) in the case of the Secretary of State and the Director, with their duties under section 2 above,
- so to exercise any power conferred with respect to the proposals on the person subject to the requirement as to further the conservation and enhancement of natural beauty and the conservation of flora, fauna and geological or physiographical features of special interest [F2and, in the case of the exercise of such a power by a company holding an appointment as a relevant undertaker, as to further water conservation];
- (b)a requirement to have regard to the desirability of protecting and conserving buildings, sites and objects of archaeological, architectural or historic interest; and
- (c)a requirement to take into account any effect which the proposals would have on the beauty or amenity of any rural or urban area or on any such flora, fauna, features, buildings, sites or objects
- 1.1.5 The watching brief was undertaken in accordance with a written scheme of investigation (WSI) which detailed the aims, methodologies and standards to be employed (Wessex Archaeology 2017). The Assistant County Archaeologist for Wiltshire County Archaeological Service (WCAS) approved the WSI prior to fieldwork commencing. The watching brief was undertaken between 5th October 2017 and 6th February 2019.

#### **1.2** Scope of the report

1.2.1 The purpose of this report is to provide the results of the watching brief, to interpret the results within their local or regional context (or otherwise), and to assess their potential to address the aims outlined in the WSI, thereby making available information about the archaeological resource (a preservation by record).

#### 1.3 Location, topography and geology

- 1.3.1 Part of the scheme (at Larkhill) is located within the Stonehenge, Avebury and Associated Sites World Heritage Site (**Fig. 1**). The Cursus (National List ID 1009132), a Scheduled Monument, and one of the key components of the World Heritage Site, is located immediately to the south of Larkhill WWTW.
- 1.3.2 Larkhill WWTW is located approximately 1 km south of Larkhill Camp, which is one of the main military facilities contained within the Defence Training Estates (DTE) on Salisbury Plain, Wiltshire. The rising main extends north-east from the WWTW, following Fargo Road and then turning northwards along Tombs Road and terminating at its junction with The Packway (Fig. 1). Larkhill WWTW lies approximately 95 m above Ordnance Datum (aOD) and rises to an elevation of 134 m aOD at The Packway.
- 1.3.3 Bulford Pumping Station is located approximately 5 km north-east of Larkhill WWTW, on Bulford Droveway (**Fig. 1**). The proposed works include the installation of a new storage pipe running for 150 m along the north-western side of Bulford Droveway, starting from the existing pumping station. The pumping station lies at 78 m aOD, with the route of the storage pipe gently undulating but remaining predominantly flat.



1.3.4 The underlying geology is mapped as Cretaceous Chalk of the Newhaven formation with no overlying superficial deposits (British Geological Survey online viewer).

#### 2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

#### 2.1 Introduction

- 2.1.1 The archaeological background of the two sites has been extensively covered in multiple Desk-Based Assessments (DBA) and assessment reports conducted by Wessex Archaeology as part of the Army Basing Programme (ABP) works occurring at the military camps of Larkhill, Bulford, Perham Down and Tidworth. These reports include the Project Allenby Connaught (PAC) DBA reports for Larkhill Camp (Wessex Archaeology 2014a) and Bulford Camp (Wessex Archaeology 2014b) and a more recent assessment report on a utility cable between Strangways and Larkhill Camp (Wessex Archaeology 2016a). A detailed summary of this work is also included within the WSI for the current project (Wessex Archaeology 2017). A summary of the results of previous archaeological works undertaken within the locality of the areas concerned is provided below.
- 2.1.2 The archaeological and historical context for the site, particularly considering how parts of the site sit within the Stonehenge, Avebury and Associated Sites World Heritage Site, is extensive and covered in detail within the WSI (Wessex Archaeology 2017) and DBAs (Wessex Archaeology 2014a and b).

#### 2.2 Previous investigations related to the proposed development

- 2.2.1 In 2000 an archaeological evaluation was undertaken in the vicinity of the Larkhill WWTW. This comprised twelve machine excavated trenches, nine measuring 25 m by 1.6 m located to the north-east of the WWTW and three within the boundary of the WWTW, two of which measured 20 m by 1.6 m and one which was 10 m by 1.6 m. Four undated linear features were identified during the works; three in the north-eastern area and one within the WWTW. The three to the north-east were interpreted as military wheel ruts whilst the single linear within the sewage works appeared to be modern and related to the sewage works itself. No finds were recovered during the evaluation (Wessex Archaeology 2000).
- 2.2.2 In July 2007 an archaeological evaluation was undertaken on land at 50 Fargo Road. The works comprised a single 27.5 m by 1.6 m trench. A modern north-south aligned vehicle track and a series of deposits consisting of modern demolition material were revealed. No pre-modern features or residual artefacts were observed within the excavated material (Wessex Archaeology 2007).
- 2.2.3 Through September and October 2016 an archaeological watching brief was undertaken to monitor the excavation of an underground cable link between the Strangways MoD electricity substation on Fargo Road and Robert Barracks, Larkhill Camp. The watching brief revealed a large number of features dating to the first half of the 20th century relating to previous military activity in the area. Notable were the remains of the early Larkhill garrison church constructed during 1915, the former light military railway and several military practice trenches. The southernmost stretch of this cable link, where it runs along Fargo Road, aligns with the proposed line for the rising main. No archaeology was identified along this stretch (Wessex Archaeology 2016b).
- 2.2.4 Through 2016 and 2017 excavations for the proposed new development of the Larkhill Service Family Accommodation (SFA) took place on land north of the Packway and east of Larkhill Camp. These excavations revealed archaeological remains of local, regional and national significance dating from the Early Neolithic through to the modern period,



with many features indicative of prehistoric ritual and funerary activity, as well as settlement and agriculture. Most notable was the identification of part of an Early Neolithic causewayed enclosure, the existence of which was previously unknown. Evidence of Romano-British agriculture and possible medieval agriculture was also revealed. The majority of features recorded at Larkhill belonged to the early 20th century and represented the considerable effort that went into the training of British and Allied troops in preparation for deployment to the Western Front in World War I. This largely came in the form of a forgotten practice battlefield consisting of over 8 km of military trenches forming two opposing lines and at least 280 m of subterranean tunnels. The post-excavation analysis of this work is in progress (Wessex Archaeology forthcoming).

2.2.5 The recent demolition of the spillway at Larkhill WWTW was monitored in conjunction with the works detailed in this report. The works monitored included the removal of the above ground concrete pipes running across the Cursus monument, the laying and removal of temporary trackways in association with these works, and the removal of concrete posts. No archaeological features, deposits or artefacts were recorded during the course of these works (Wessex Archaeology 2019).

#### 3 AIMS AND OBJECTIVES

#### 3.1 Aims

- 3.1.1 The aims of the watching brief, as stated in the WSI (Wessex Archaeology 2017) and as defined in the CIfA *Standard and guidance for an archaeological watching brief* (CIfA 2014a), were:
  - To allow, within the resources available, the preservation by record of archaeological deposits, the presence and nature of which could not be established (or established with sufficient accuracy) in advance of the development or other works;
  - To provide an opportunity, if needed, for the watching archaeologist to signal to all interested parties, before the destruction of the material in question, that an archaeological find has been made for which the resources allocated to the watching brief itself are not sufficient to support treatment to a satisfactory and proper standard; and
  - To guide, not replace, any requirement for contingent excavation or preservation of possible deposits.

#### 3.2 Objectives

- 3.2.1 In order to achieve the above aims, the objectives of the watching brief, also defined in the WSI (Wessex Archaeology 2017), were:
  - To determine the presence or absence of archaeological features, deposits, structures, artefacts or ecofacts within the specified works area;
  - To record and establish, within the constraints of the works, the extent, character, date, condition and quality of any surviving archaeological remains (a preservation by record);
  - To place any identified archaeological remains within a wider historical and archaeological context in order to assess their significance; and



• To make available information about the archaeological resource on the site by preparing a report on the results of the watching brief.

#### 4 METHODS

#### 4.1 Introduction

4.1.1 All works were undertaken in accordance with the detailed methodology set out within the WSI (Wessex Archaeology 2017) and in general compliance with the standards outlined in CIfA guidance (CIfA 2014a). The methods employed are summarised below.

#### 4.2 Fieldwork methods

#### General

- 4.2.1 The watching brief comprised the monitoring of all intrusive groundworks associated with the proposed works along the entirety of the Scheme with the exception of directional drilling. The monitored works included the stripping of areas in and around the existing structures for access roads, the works compound and a new storage tank, the excavation of the rising main from Larkhill WWTW to Fargo Road, the monitoring of the 13 directional drilling pits, the excavation of the rising water main along a stretch of Fargo Road, and the excavation of a new pipe trench at Bulford Pumping Station (**Fig. 1**).
- 4.2.2 The watching archaeologist monitored all mechanical excavations within the specified areas. Where necessary, the surface of uncovered archaeological deposits was cleaned by hand.
- 4.2.3 Spoil derived from both machine stripping was visually scanned for the purposes of finds retrieval. Where found, artefacts were collected and bagged by context. No artefacts predating the modern period (19th century) were encountered. Artefacts dating from the 19th century to the present were noted and, where appropriate, recorded by photographs, but not retained.

#### Recording

- 4.2.4 All exposed archaeological deposits and features were recorded using Wessex Archaeology's pro forma recording system. A complete drawn record of excavated features and deposits was made including both plans and sections drawn to appropriate scales (generally 1:20 or 1:50 for plans and 1:10 for sections), and tied to the Ordnance Survey (OS) National Grid. The Ordnance Datum (OD: Newlyn) heights of all principal features were calculated, and levels added to plans and section drawings.
- 4.2.5 A Leica GNSS connected to Leica's SmartNet service surveyed the location of archaeological features. All survey data is recorded in OS National Grid coordinates and heights above OD (Newlyn), as defined by OSGM15 and OSTN15, with a three-dimensional accuracy of at least 50 mm.
- 4.2.6 A full photographic record was made using digital cameras equipped with an image sensor of not less than 10 megapixels. Digital images have been subject to managed quality control and curation processes, which has embedded appropriate metadata within the image and will ensure long term accessibility of the image set.

#### 4.3 Artefactual and environmental strategies

4.3.1 Appropriate strategies for the recovery, processing and assessment of artefacts and environmental samples were in line with those detailed in the WSI (Wessex Archaeology

5



June 2017). The treatment of artefacts and environmental remains was in general accordance with: *Guidance for the collection, documentation, conservation and research of archaeological materials* (CIfA 2014b) and *Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation* (English Heritage 2011).

#### 4.4 Monitoring

4.4.1 The Assistant County Archaeologist for WCAS monitored the watching brief on behalf of the Local Planning Authority (LPA). Any variations to the WSI, if required to better address the project aims, were agreed in advance with both the client and the Assistant County Archaeologist for WCAS.

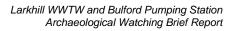
#### 5 ARCHAEOLOGICAL RESULTS

#### 5.1 Introduction

- 5.1.1 The following section will discuss the results of the watching briefs undertaken across the three areas, with each area discussed individually (**Figs 1–4**).
- 5.1.2 No archaeological remains were identified within the Larkhill WWTW or within the reception pits along Fargo Road. At Tombs Road five World War I or World War II military practice trenches were identified along with two modern postholes. A single modern wall footing was uncovered within the pipe trench at the Bulford Pumping Station.

#### 5.2 Larkhill WWTW Compound

- 5.2.1 Within the WWTW compound the overburden varied depending on the proximity to the extant structures. No archaeological remains were encountered during the works and no archaeologically significant artefactual material was identified in the excavated material.
- 5.2.2 Outside of the existing compound, in the areas stripped for spoil heaps, the works compound and a new tank (**Figs 1** and **2**), the overburden comprised turf covered topsoil sealing a thin subsoil which overlay weathered, broken chalk with periglacial striping (see **Cover**). In the compound, evidence of prior truncation and reinstatement was demonstrated by the turf covered topsoil overlying a thin mid brown subsoil which contained asbestos tiles, ceramic salt-glazed pipe fragments, plastic, cinders and glass. Beneath the subsoil there was a very sharp, level horizon with the chalk, which also appeared less weathered and fractured, suggesting previous truncation.
- 5.2.3 Within the existing compound up to 2 m of made ground was recorded and the chalk natural appeared to have been previously truncated. A layer of modern ballast overlay hardcore, followed by another layer of ballast. This sealed a layer of redeposited chalk and then a layer of redeposited topsoil before natural chalk was reached (**Plate 1**).
- 5.2.4 The typical sequence seen along the majority of the pipe trench extending north-east from the WWTW (**Fig. 1**) consisted of dark brown silty loam topsoil overlying a yellowish-brown silty clay loam layer comprising modern redeposited material, which in turn overlay the chalk natural. An existing trackway ran between the WWTW and an outer sewage substation to the north-east. Along this a stone ballast layer 0.25 m thick directly overlay the natural chalk; no trace of any topsoil or subsoil survived (**Plate 2**).





#### 5.3 Fargo Road

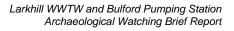
- 5.3.1 A total of 13 reception pits were excavated between the Larkhill WWTW and Tombs Road, eight of which were along Fargo Road. Of the remaining five, three were along the southern end of Tombs Road and two were within the field separating Fargo Road and the WWTW (**Fig 1**). The stratigraphic sequence varied slightly throughout these pits.
- 5.3.2 The reception pits within the field between the WWTW works and Fargo Road represent the least disturbed examples of the stratigraphic sequence, the overburden in these comprising 0.36 m of dark greyish-brown topsoil overlaying 0.10 m of mid greyish-brown clay loam subsoil, this sealing natural chalk.
- 5.3.3 The typical overburden within the reception pits along Fargo Road consisted of 0.30 m of dark greyish-brown topsoil overlaying 0.20 m of mid greyish-brown clay subsoil sealing the natural chalk. Where the pits were cut into the side of the road the sequence consisted of 0.1 m of tarmac overlaying 0.25 m of made ground, this directly overlying the chalk natural (**Plate 3**).
- 5.3.4 Within the road itself the stratigraphic sequence comprised 0.15 m of tarmac, 0.20 m of reinforced concrete, a 0.20 m thick bed of hardcore and 0.15 m of sand, the latter sealing the chalk natural (**Plate 4**).
- 5.3.5 No archaeological features or deposits of interest were encountered within any of the Fargo Road reception pits, and no archaeologically significant artefactual material was identified.

#### 5.4 Tombs Road

- 5.4.1 The Tombs Road trench (**Figs 1** and **3**) revealed 0.10 m of tarmac overlying 0.10 m of stone bedding and 0.25 m of hardcore. Subsoil survived sporadically along the trench, at most 0.04 m thick. Natural chalk geology was exposed at a depth of 0.40 m. The clean nature of the chalk, coupled with the lack of periglacial scarring, suggests that some level of truncation had occurred in areas where no subsoil survived.
- 5.4.2 Five military practice trenches (212, 215, 219, 222 and 225) were identified along the length of the Tombs Road trench (**Fig. 3**), all of likely World War I date but possibly later. All had a heavily rotted wooden base and were backfilled with chalk rubble (**Plate 5**). The military trenches were aligned east–west, all but 212 terminating within the pipe trench. All five were approximately 0.95 m wide and 0.45m deep with straight, vertical edges and a flat base. The northernmost two trenches, 222 and 225, were around 5 m apart; this was also the case for the southernmost two trenches, 215 and 219; the final trench, 212, lay between these two pairs, approximately 18 m from both.
- 5.4.3 Two postholes, 3.80 m apart, may have been contemporary with the military trenches or later. Posthole **208** was 0.60 m square, while posthole **209** was 0.90 m long and 0.50 m wide (**Fig. 3**); both were 0.50 m deep and contained the remains of *in situ* wooden posts and chalk rubble packing (**Plate 6**). These postholes were probably contemporary and may have held a pair of gate posts.

#### 5.5 Bulford Pumping Station

5.5.1 The stratigraphic sequence at Bulford Pumping Station (**Figs 1** and **4**) demonstrated varying degrees of modern disturbance.



- 5.5.2 A dark greyish brown topsoil, between 0.10 0.36 m thick, overlay the entire area. Where no modern disturbance had occurred (predominantly at the south-west end of the trench) the topsoil overlay a mid-brown silty clay subsoil up to 0.10 m thick which in turn sealed weathered chalk. Where the area had been previously disturbed the sequence included, variously, modern rubble, redeposited chalk, redeposited silty clay and a bedding layer of black sandy loam, the chalk natural in these areas appeared to have been previously truncated, with sharp horizons between the various made ground deposits and the chalk (**Plate 7**).
- 5.5.3 Near the midpoint of the pipe trench a north-east south-west aligned modern wall footing, **306**, was identified (**Fig. 4**). The footing comprised a concrete base and a single surviving course of red bricks set in mortar. This was covered with a deposit of redeposited chalk and soil, perhaps relating to the demolition of the structure (**Plate 8**). An additional 0.27 m thick layer of redeposited chalk was present in the vicinity of the footing, underlying the topsoil.
- 5.5.4 No other archaeological features were identified during the works at the Pumping Station.

#### 6 ARTEFACTUAL EVIDENCE

6.1.1 No archaeologically significant artefactual material was recovered during the works.

#### 7 ENVIRONMENTAL EVIDENCE

7.1.1 No archaeological deposits suitable for environmental sampling were encountered during the works.

#### 8 CONCLUSIONS

#### 8.1 Summary

- 8.1.1 The watching brief identified a small number of features, mainly relating to military activity. The five practice trenches along Tombs Road are located between Larkhill Airfield (SU14 SW525) to the east and a World War I military camp (MWI76212) to the west which included accommodation huts and associated buildings. Similar trenches have been identified approximately 650 m to the south-west, just north of Fargo Road. The Fargo Road military features (MWI73247) comprised a small group of practice trenches, slit trenches and land mine pits which are visible as earthworks and crop marks on aerial photographs. Approximately 500 m north-west, north of The Packway (MWI76608, SU14SW541 and MWI73457), an extensive network of World War I practice trenches and tunnels have recently been recorded, along with a smaller number of World War II practice trenches (Wessex Archaeology forthcoming).
- 8.1.2 At Larkhill WWTW, within the main compound, the area appears to have suffered extensive disturbance and truncation, probably from construction of the WWTW. In contrast, the field to the west of the main part of the WWTW did not appear to have been affected by the previous works.
- 8.1.3 The launch pits for the directional drilling were mainly excavated through the existing road surface. The chalk natural showed clear evidence of prior truncation, although as the practice trenches recorded in Tombs Road demonstrate, substantial features have the potential to survive in this area.



8.1.4 At Bulford Pumping Station the works generally went through areas which had been previously disturbed. The wall recorded may relate to a building visible on the 1958 1:25,000 OS map, where the land to the north of Bulford Droveway and south-west of Carter Barracks is designated as a camping ground. No evidence for this building can be seen on earlier versions of the OS maps.

#### 9 ARCHIVE STORAGE AND CURATION

#### 9.1 Museum

9.1.1 The archive resulting from the watching brief is currently held at the offices of Wessex Archaeology in Salisbury. The site falls within the collecting area of the Salisbury and South Wiltshire Museum. The Museum is not currently accepting archaeological archives. Every effort will be made to identify a suitable repository for the archive resulting from the fieldwork, and if this is not possible, WA will initiate discussions with the Local Planning Authority in an attempt to resolve the issue. If no suitable repository is identified, WA will continue to store the archive, but may institute a charge to the client for ongoing storage beyond a set period.

#### 9.2 **Preparation of the archive**

- 9.2.1 The archive will be deposited within one year of the completion of the project, with the agreement of the Client.
- 9.2.2 The archive, which includes paper records, graphics, artefacts, ecofacts and digital data, will be prepared following the standard conditions for the acceptance of excavated archaeological material by the Wiltshire Museum and in general following nationally recommended guidelines (SMA 1995; CIFA 2014c; Brown 2011; ADS 2013).

#### 9.3 Selection policy

- 9.3.1 Wessex Archaeology follows national guidelines on selection and retention (SMA 1993; Brown 2011, section 4). In accordance with these, and any specific guidance prepared by the museum, a process of selection and retention will be followed so that only those artefacts or ecofacts that are considered to have potential for future study will be retained. The selection policy will be agreed with the museum, and is fully documented in the project archive.
- 9.3.2 The discard of environmental remains and samples follows nationally recommended guidelines (SMA 1993 and 1995; EH 2011).

#### 9.4 Security copy

9.4.1 In line with current best practice (eg, Brown 2011), on completion of the project a security copy of the written records will be prepared, in the form of a digital PDF/A file. PDF/A is an ISO-standardised version of the Portable Document Format (PDF) designed for the digital preservation of electronic documents through omission of features ill-suited to long-term archiving.

#### 9.5 OASIS

9.5.1 An OASIS online record (http://oasis.ac.uk/pages/wiki/Main) has been initiated, with key fields and a .pdf version of the final report submitted. Subject to any contractual requirements on confidentiality, copies of the OASIS record will be integrated into the relevant local and national records and published through the Archaeology Data Service ArchSearch catalogue.

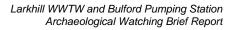
#### 10 COPYRIGHT

#### 10.1 Archive and report copyright

- 10.1.1 The full copyright of the written/illustrative/digital archive relating to the project will be retained by Wessex Archaeology under the *Copyright, Designs and Patents Act* 1988 with all rights reserved. The client will be licenced to use each report for the purposes that it was produced in relation to the project as described in the specification. The museum, however, will be granted an exclusive licence for the use of the archive for educational purposes, including academic research, providing that such use conforms to the *Copyright and Related Rights Regulations* 2003. In some instances, certain regional museums may require absolute transfer of copyright, rather than a licence; this should be dealt with on a case-by-case basis.
- 10.1.2 Information relating to the project will be deposited with the Historic Environment Record (HER) where it can be freely copied without reference to Wessex Archaeology for the purposes of archaeological research or development control within the planning process.

#### **10.2** Third party data copyright

10.2.1 This document and the project archive may contain material that is non-Wessex Archaeology copyright (eg, Ordnance Survey, British Geological Survey, Crown Copyright), or the intellectual property of third parties, which Wessex Archaeology are able to provide for limited reproduction under the terms of our own copyright licences, but for which copyright itself is non-transferable by Wessex Archaeology. Users remain bound by the conditions of the *Copyright, Designs and Patents Act* 1988 with regard to multiple copying and electronic dissemination of such material.





- ADS 2013 Caring for Digital Data in Archaeology: a guide to good practice. Archaeology Data Service and Digital Antiquity Guides to Good Practice
- British Geological Survey online viewer http://mapapps.bgs.ac.uk/geologyofbritain/home.html (accessed 10/04/2018)
- Brown, D H 2011 Archaeological Archives: a guide to best practice in creation, compilation, transfer and curation (revised edition). Archaeological Archives Forum
- ClfA 2014a Standard and Guidance for an Archaeological Watching Brief. Reading, Chartered Institute for Archaeologists
- CIFA 2014b Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials. Reading, Chartered Institute for Archaeologists
- ClfA 2014c Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives. Reading, Chartered Institute for Archaeologists
- English Heritage 2011 Environmental Archaeology: a guide to theory and practice of methods, from sampling and recovery to post-excavation. Swindon, Centre for Archaeology Guidelines
- SMA 1993 Selection, Retention and Dispersal of Archaeological Collections. Society of Museum Archaeologists
- SMA 1995 Towards an Accessible Archaeological Archive. Society of Museum Archaeologists
- Wessex Archaeology 2000 Royal School of Artillery Sewage Works, Larkhill, Wiltshire: Archaeological Evaluation Report. Unpublished report ref. 48711
- Wessex Archaeology 2007 50 Fargo Road, Larkhill, Wiltshire: Archaeological Evaluation Report. Unpublished report ref. 66250.03
- Wessex Archaeology 2014a Project Allenby/Connaught, Larkhill, Wiltshire: Archaeological Desk Based Assessment. Unpublished report ref. 101480.41
- Wessex Archaeology 2014b Project Allenby/Connaught, Bulford, Wiltshire: Archaeological Desk Based Assessment. Unpublished report ref. 101480.31
- Wessex Archaeology 2016a Project Allenby/Connaught Proposed Distribution Cable Connection Between Strangways MoD Electricity Substation and Larkhill Military Camp: Wiltshire Archaeological Desk Based Assessment. Unpublished report ref. 111421.01
- Wessex Archaeology 2016b Project Allenby/Connaught Proposed Distribution Cable Connection Between Strangways MoD Electricity Substation and Larkhill Military Camp: Wiltshire Archaeological Watching Brief Report. Unpublished report ref. 111423.03
- Wessex Archaeology 2017 Larkhill WWTW and Bulford Pumping Station, Wiltshire: Written Scheme of Investigation for an Archaeological Watching Brief. Unpublished report ref. T23080.01



Wessex Archaeology 2019 Larkhill Spillway Removal Works, Larkhill, Wiltshire. Archaeological Watching Brief Report. Unpublished client report 118490.04

Wessex Archaeology forthcoming Archaeological excavation report for the land adjacent to Stonehenge Golf Course (Larkhill SFA)



## APPENDICES

## Appendix 1:OASIS Form

#### OASIS ID: wessexar1-349935

Project details	
Project name	Larkhill WWTW and Bulford Pumping Station, Wiltshire
Short description of the project	Wessex Archaeology was commissioned by Ancala Water Services to conduct an archaeological watching brief on works at Larkhill Waste Water Treatment Works (centred on National Grid Reference 412850 143250) and associated rising main and works at Bulford Pumping Station (centred on National Grid Reference 417370 144060). Within the boundary of the Larkhill treatment works, evidence for previous truncation presumed to be related to the construction of the former sewage works was observed. In the works associated with the new rising water main, five military training trenches and two modern postholes were recorded in the Tombs Road section of the works. The military trenches are less than 500 m south of the excavated complex of military training trenches near Larkhill, and are located between Larkhill Airfield and a World War I training camp. A single wall was recorded at the Bulford Pumping Station works, historic mapping suggesting a building first stood in this location in the 1950's. The watching brief was conducted in a number of stages, as required, between 5th October 2017 and 8th March 2019. A watching brief was also conducted on the removal of the spillway for the Larkhill sewage treatment works, located within the boundary of the Scheduled Monument of the Stonehenge Cursus (this work requiring Scheduled Monument Consent), the results of which have been set out in a separate report (Wessex Archaeology 2019).
Project dates	Start: 05-10-2017 End: 08-05-2019
Previous/future work	No / No
Any associated project reference codes	118490 - Contracting Unit No.
Type of project	Recording project
Site status	World Heritage Site
Current Land use	Other 15 - Other
Monument type	MILITARY PRACTICE TRENCH Modern
Investigation type	"Watching Brief"
Project location	

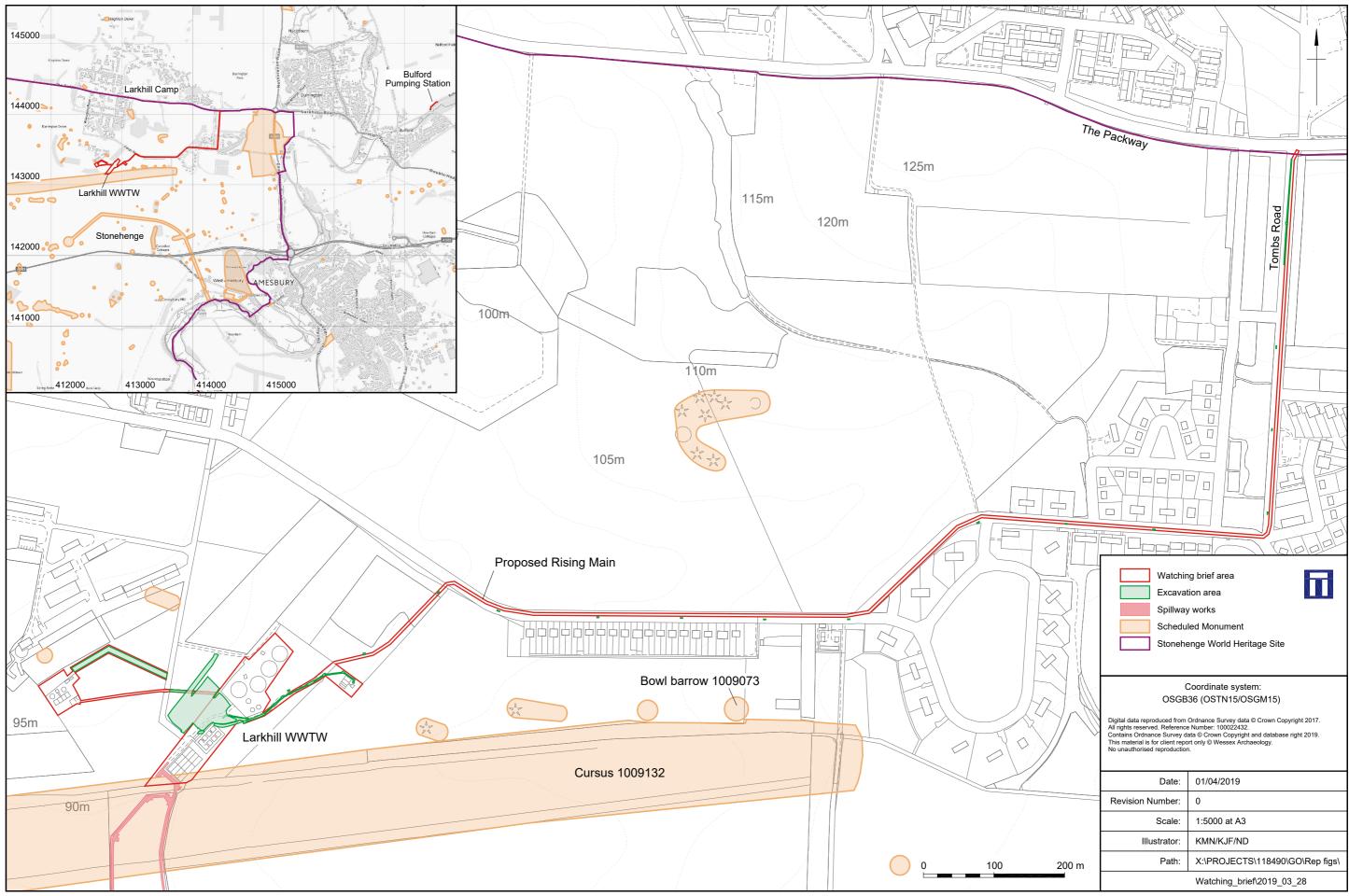
Country	England
Site location	WILTSHIRE SALISBURY DURRINGTON Larkhill WWTW and Bulford Pumping Station
Postcode	SP4 8LW
Study area	0 Square metres
Site coordinates	SU 412850 143250 50.926350157349 -1.412510841782 50 55 34 N 001 24 45 W Point
Site coordinates	SU 417370 144060 50.927046041408 -1.406069933655 50 55 37 N 001 24 21 W Point
Height OD / Depth	Min: 78m Max: 134m

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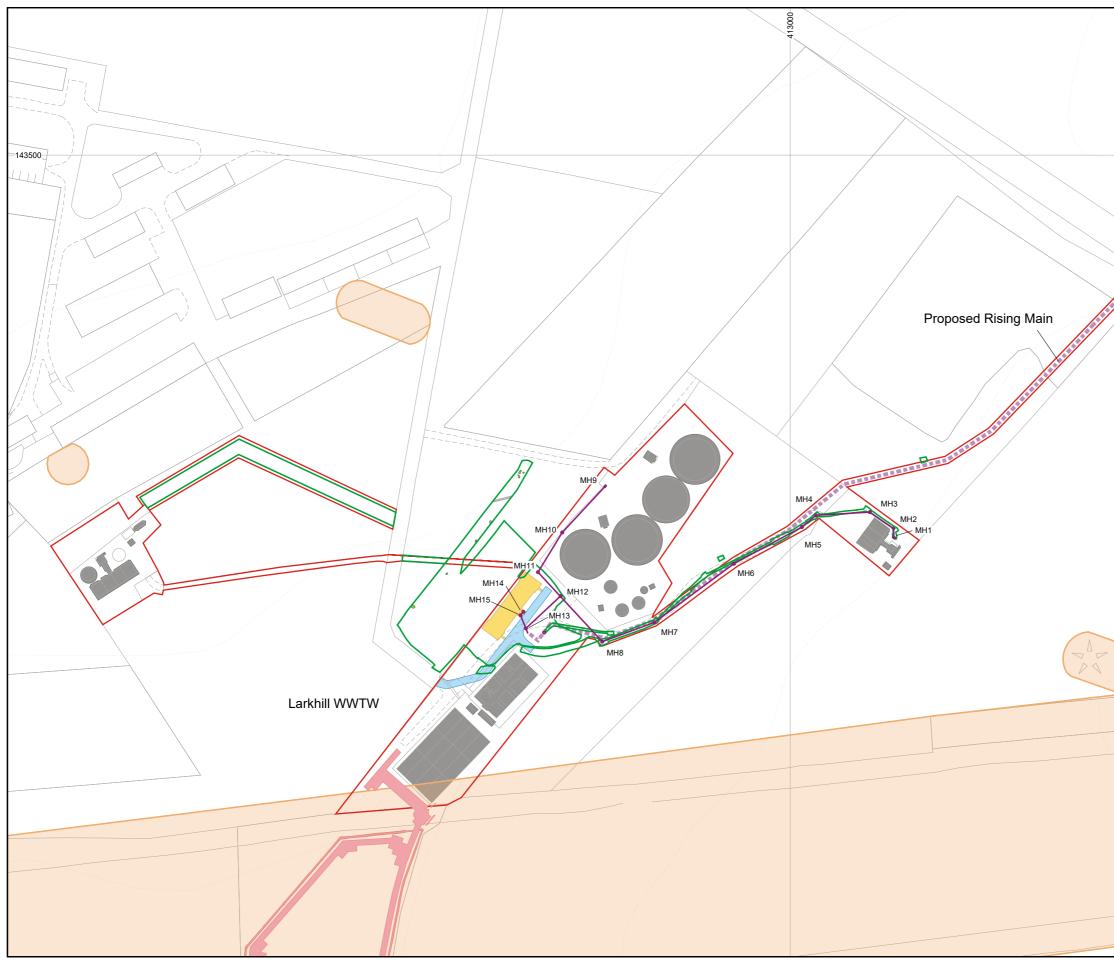
Project creators	
Name of Organisation	Wessex Archaeology
Project brief originator	Wiltshire Council Archaeology
Project design originator	Wessex Archaeology
Project director/manager	Ruth Panes
Project supervisor	Jamie McCarthy
Type of sponsor/funding body	Utility supplier
Name of sponsor/funding body	Ancala Water Services
Project archives	
Physical Archive Exists?	No
Digital Archive recipient	Salisbury and South Wiltshire Museum
Digital Archive ID	118490
Digital Contents	"none"
Digital Media available	"Images raster / digital photography","Survey","Text"
Paper Archive recipient	Salisbury and South Wiltshire Museum
Paper Archive ID	118490
Paper Contents	"none"
Paper Media available	"Context sheet","Diary","Notebook - Excavation',' Research',' General Notes","Plan","Report","Section","Survey "
Project bibliography 1	
Dubling (inc.)	Grey literature (unpublished document/manuscript)
Publication type Title	Larkhill WWTW and Bulford Pumping Station, Wiltshire: Archaeological watching Brief Report
Author(s)/Editor(s)	Wessex Archaeology
Other bibliographic details	118490.03
Date	2019
Issuer or publisher	Wessex Archaeology



Place of issue or<br/>publicationSALISBURYDescriptionA4 client reportURLwww.oasis.ac.uk

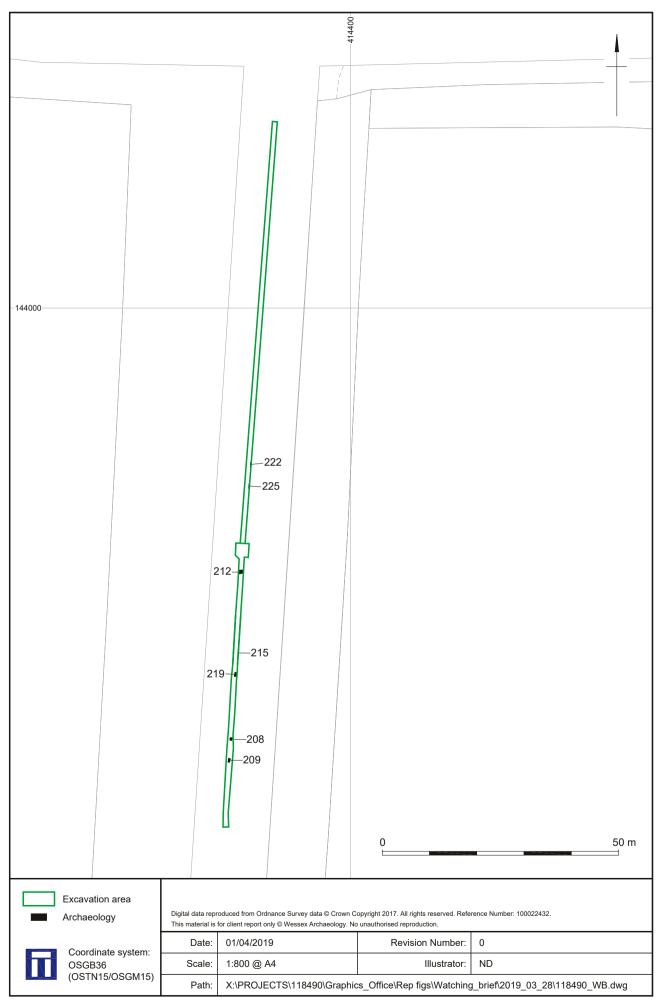


Scheme location Larkhill WWTW and rising main



Detail of areas monitored at Larkhill WWTW

	Existing st Proposed Rising mai Proposed	n area , , , , , , , , , , , , , , , , , , ,
	0	100 -
	0	100 m
		Coordinate system: 36 (OSTN15/OSGM15)
an An an	All rights reserved. Reference	ort only © Wessex Archaeology.
	Date:	01/04/2019
	Revision Number:	0
	Scale:	1:2000 at A3
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		Watching_brief\2019_03_28



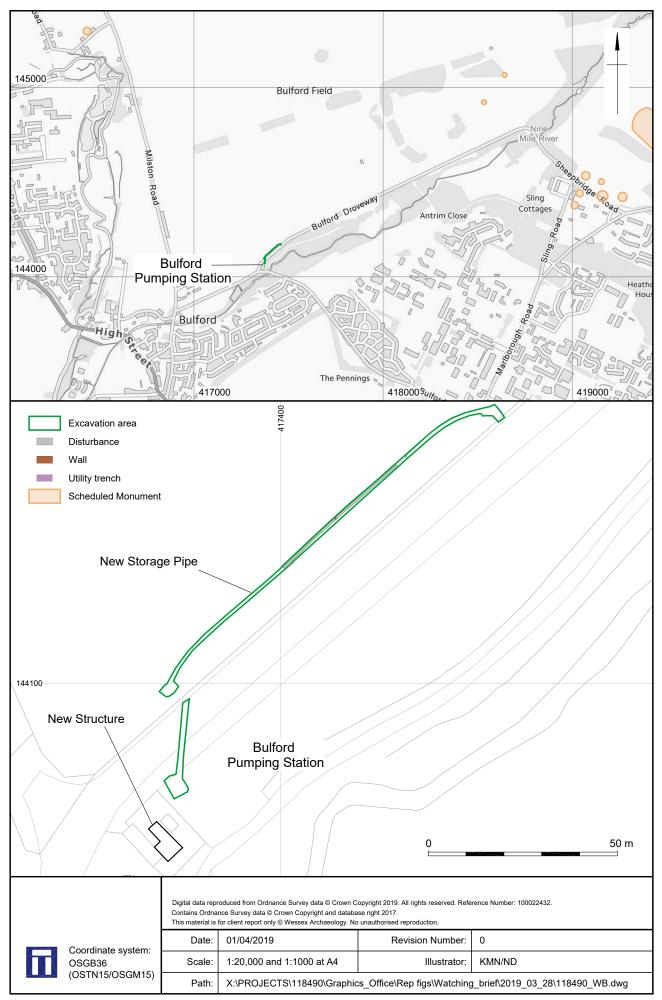




Plate 1: South-west facing section of the main Larkhill WWTW compound. Scale is 1  $\ensuremath{\mathsf{m}}$ 



Plate 2: Representative section in main Larkhill WWTW compound. Scale is 1 m

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Plate 3: East facing section of a launch pit in Fargo Road. Scale is 1 m



Plate 4: North facing section of a launch pit on the edge of Fargo Road. Scale is 1  $\ensuremath{\mathsf{m}}$ 

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Plate 5: West facing section of military practice trench 225. Scale is 1 m



Plate 6: Posthole 209, viewed from the north-north-west. Scale is 0.5 m

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Plate 7: Representative section of Bulford Pumping Station trench, viewed from the west. Scale is 1  $\mbox{m}$ 



Plate 8: Wall 306 viewed from the south-east. Scale is 1 m

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Wessex Archaeology Ltd registered office Portway House, Old Sarum Park, Salisbury, Wiltshire SP4 6EB Tel: 01722 326867 Fax: 01722 337562 info@wessexarch.co.uk www.wessexarch.co.uk



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