

Larkhill Spillway Removal Works, Larkhill, Wiltshire

Archaeological Watching Brief



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wessexarchaeology



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Portway House Old Sarum Park Salisbury Wiltshire SP4 6EB

www.wessexarch.co.uk

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Larkhill Spillway Removal Works, Larkhill, Wiltshire

Archaeological Watching Brief Report

Summary

Wessex Archaeology (WA) was commissioned by Ancala Water Services on behalf of the Ministry of Defence to undertake an archaeological watching brief during groundworks to monitor the removal of the Larkhill Spillway existing structures, chambers and pipework and reinstate the area to grassland. The Larkhill Spillway is situated within the Stonehenge World Heritage Site, on land owned by The National Trust and transects the Scheduled Monument of The Cursus and Stonehenge Down. The concrete pipes and chambers which formed the Spillway date to the 1920's and their removal meets one of the recommendations of the 2015 Stonehenge World Heritage Site Management Plan. The removal works included minimal groundworks to reinstate the spillway area to grassland.

The site is located to the south of the military Larkhill Camp and Larkhill Sewage Treatment Works, and is centred on National Grid Reference (NGR) 412750 143000. The spillway boundary comprises a sub rectangular area of land, orientated north-south, which crosses the eastern side of the central segment of the Stonehenge Cursus Scheduled Monument. The spillway structures were partly above existing ground level and found to be sitting on a layer of redeposited chalk above undisturbed topsoil. No features, deposits or artefacts of archaeological interest were observed during the works, despite the high potential for prehistoric Neolithic and Bronze Age remains in the vicinity.

Acknowledgements

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Larkhill Spillway Removal Works, Larkhill, Wiltshire

Archaeological Watching Brief Report

1 INTRODUCTION

1.1 Project background

- 1.1.1 Wessex Archaeology (WA) was commissioned by Ancala Water Services (hereafter 'the Client', on behalf of the Ministry of Defence, to undertake an archaeological watching brief during groundworks to monitor the demolition and removal of the structures, chambers and pipework which formed the Larkhill Spillway. The Spillway is situated within the Stonehenge World Heritage Site, on land owned by The National Trust known as Stonehenge Down and transected the Scheduled Monument of The Cursus (List no. 1009132).
- 1.1.2 The concrete pipes and chambers which form the Spillway date to the 1920's and their removal meets one of the recommendations of the 2015 Stonehenge and Avebury World Heritage Site Management Plan (Simmonds and Thomas 2015). The removal works included minimal groundworks to reinstate the spillway area to grassland. The spillway concrete pipes and chambers were largely above ground structures (**Plates 1, 5 and 6**).
- 1.1.3 The monitored works were located on land south of the military Larkhill Camp and Larkhill Sewage Treatment Works (hereafter the Site), and is centred on National Grid Reference (NGR) 412750 143000. The spillway boundary extends over a sub rectangular area approximately 750 m north-east of Stonehenge itself, and within the northern portion of the Site, in situated within the boundary of the Stonehenge Cursus Scheduled Monument (List no. 1009132; **Figure 1**).
- 1.1.4 The archaeological watching brief was undertaken in accordance with an approved written scheme of investigation (WSI) which set out the strategy and methodology by which WA implemented the programme of archaeological works (WA 2015a). The WSI was commissioned by White Young Green (WYG) on behalf of the Ministry of Defence and was approved by WYG, the Defence Infrastructure Organisation (DIO) Archaeologist and Clare King, the Assistant County Archaeologist for Wiltshire Council Archaeological Services (WCAS).
- 1.1.5 In format and content, the WSI conformed with current best practice and to the guidance outlined in *Management of Research Projects in the Historic Environment* (MoRPHE, HE 2015) and the Chartered Institute for Archaeologists' (CIfA) *Standard and guidance for archaeological watching brief* (CIfA 2014a).
- 1.1.6 A Method Statement for the Archaeological Supervision and Recording of Minor Groundworks - Removal of redundant spillway chambers and pipes from old sewage works over the Cursus. National Trust Estate, Stonehenge Landscape, was prepared by Richard Osgood, DIO Archaeologist for the proposed works (Osgood, 2015). The method statement was approved by The National Trust and prepared to support an application for Scheduled Monument Consent (SMC) for the proposed works.
- 1.1.7 Works within The Cursus require an Application for SMC under Section 2 of the Amended Ancient Monuments and Archaeological Act 1979. The SMC application was submitted by



DIO to Historic England, and Scheduled Monument Consent was granted on 20th August 2015 (Consent Ref. S00115776).

1.1.8 The archaeological watching brief was undertaken within accordance of the method statement and the conditions detailed within the SMC. The watching brief fieldwork was undertaken between the 28/01/2019 to 08/03/2019.

1.2 Scope of the report

1.2.1 The purpose of this report is to provide the results of the archaeological 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 The Site and the Spillway boundary is a *c*. 2.5 ha subrectangular area approximately 370 m long and between 50 and 75 m wide, orientated north-south, and at the north crossing the eastern side of the central segment of Stonehenge Cursus. It is approximately 750 m north of the A303, immediately south of Larkhill sewage treatment works, some 550 m east of an unnamed road and approximately 900 m east of an unnamed road (**Figure 1**).
- 1.3.2 The Site is located within a gently undulating landscape at between 90 and 95 m above Ordnance Datum (aOD), within fields on chalk down grassland, given over to grazing by sheep. The underlying geology of the Site is mapped predominantly as Cretaceous Chalk of the Seaford Chalk Formation; a sedimentary bedrock formed approximately 84 to 89 million years ago during the Cretaceous Period (British Geological Survey).
- 1.3.3 The Site and the Spillway is situated within the Stonehenge World Heritage Site, on land owned by The National Trust and managed by the MOD. Part of the Site is located within the Scheduled Monument of The Cursus. Located immediately to the north of The Cursus monument boundary is the southern boundary of the Salisbury Plain Training Area (SPTA) owned by the MOD.

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1 Introduction

2.1.1 The WSI (WA 2015a) considered the historical and archaeological background of the Site, with reference to a preceding archaeological Desk-Based Assessment (DBA), (WA 2014) prepared in association with the Army Basing Programme (ABP) and centred at Larkhill Camp, situated north of the Site. A summary of the background derived from these sources is presented below, along with results of recent archaeological investigations in proximity to the Site.

World Heritage Site

- 2.1.2 The Site lies within the boundaries of the WHS of Stonehenge, Avebury and associated sites. It is situated some 750 m north-east of Stonehenge itself. A Statement of Significance setting out the Outstanding Universal Value for Stonehenge, Avebury and Associated Sites was agreed by the UNESCO World Heritage Committee in July 2008:
- 2.1.3 The Stonehenge, Avebury and Associated Sites World Heritage Site is internationally important for its complexes of outstanding prehistoric monuments. It comprises two areas of chalkland in Southern Britain within which complexes of Neolithic and Bronze Age



ceremonial and funerary monuments and associated sites were built. Each area contains a focal stone circle and henge and many other major monuments.

- 2.1.4 At Stonehenge these include the Avenue, the Cursuses (authors` emphasis), Durrington Walls, Woodhenge and the densest concentration of burial mounds in Britain. At Avebury, they include Windmill Hill, the West Kennet Long Barrow, the Sanctuary, Silbury Hill, the West Kennet and Beckhampton Avenues, the West Kennet Palisaded Enclosures and important barrows.
- 2.1.5 Each of the Scheduled Monuments within the 2014 DBA study area are considered to be of national significance in their own right, predominantly due to their high evidential value. This value relates to their high potential to contain archaeological and palaeoenvironmental evidence which would provide information about the Neolithic and Bronze Age communities that constructed them. The monuments also represent one of the defining qualities of the Outstanding Universal Value (OUV) of the WHS.

Stonehenge Cursus

- 2.1.6 As noted above, the works covered a subrectangular area approximately 370 m long and between 50 and 75 m wide, orientated north-south and at the north crossing the eastern side of the central segment of Stonehenge Cursus (**Figure 1**). Cursus monuments are elongated rectilinear earthworks, the length of which is normally greater than 250 m (though shorter examples have been catalogued), with length more than ten times width. Known examples are thinly spread across most of central and eastern England with fewer in northern England, and indeed Scotland (e.g. Cleaven Dyke, Perthshire). Overall about 40 examples are known in England, of which this is one of the better known and better preserved (Pearson and Field 2011).
- 2.1.7 Dating to the early Neolithic period, the Stonehenge Cursus is one of the oldest extant monuments in the Stonehenge World Heritage Site (list entry no. 1009132). The monument is defined by a bank and ditch of varying levels of preservation which forms a rectangular enclosure approximately 100 m wide which extends nearly 3 km from Winterbourne Stoke Down (NGR 410955 142918) in the west to King Barrow Ridge (NGR 413720 1431986) to the east (Pearson and Field 2011).
- 2.1.8 Cursus monuments have been interpreted in various ways since their initial identification. The name itself is the Latin term for a race track and this is one of the functions suggested by Stukeley in the 18th century. More recently a ritual or ceremonial role has been suggested (Heritage Gateway).
- 2.1.9 The earliest published reference to the Cursus is in antiquarian William Stukeley's 1740 *Stonehenge, a Temple Restor'd to the British Druids*' (Stukeley 1740). This was followed nearly a century later with a detailed description by another antiquarian Sir Richard Colt, published in 1812 (Pearson and Field 2011).

2.2 Previous investigations related to the development

2.2.1 Non-invasive surveys have largely focused on the western part of the Cursus, these include; the first detailed large-scale plan published as part of Patricia Christie's report on her 1959 excavations (Christie 1963); the 2006 and 2007 magnetometer and earth resistance surveys undertaken by English Heritage as part of the Stonehenge Riverside project (Payne 2007); and an extensive field walking campaign undertaken in the early 1980s as part of the Stonehenge Environs Project.



- 2.2.2 From 2010 to 2014 the Stonehenge Hidden Landscapes Project conducted a geophysical survey mapping an area of approximately 12 sq km which included the Cursus. (Pearson and Field 2011).
- 2.2.3 Several archaeological excavations have taken place on the Cursus, the majority of which concentrated on the western end of the Cursus. These include Patricia Christie's excavations in 1959 assessing the level of preservation of the western end following agricultural improvements during WWII and, the most recent excavations in 2007 and 2008 directed by Mike Parker-Pearson as part of the Stonehenge Riverside Project (Parker-Pearson *et al* 2008).
- 2.2.4 Despite the number of both non-invasive and invasive surveys of the Cursus relatively little is understood about the function of the monument, though several have been postulated including, to link earlier monument and routes together, to create a symbolic river and to enclose a sacred place and/or to create an arena.
- 2.2.5 Very few of the surveys conducted on the Cursus have focused on the central area of the feature at Stonehenge Bottom, on which the Site is situated.
- 2.2.6 There is only one recorded excavation of the Cursus within the Site itself. This took place in 1915 and was in the form of a watching brief during the cutting of a pipe trench by the military to the now disused military sewage farm (Pearson and Field 2011). Thus far an entrance has not been positively identified but there is speculative potential for it to be located within this central segment. The valley at Stonehenge Bottom creates a natural north-south route and, should the valley have carried water at any point breaks would have been needed to allow drainage.
- 2.2.7 In 2015 an archaeological watching brief was carried out by Wessex Archaeology under SMC, which formed an earlier phase of the work outlined in this report. The work was designed to inform the development of a remediation strategy, for the removal of the Larkhill Spillway existing structures, chambers and pipework, and comprised of a total of 22 boreholes to ascertain the nature and extent of any possible soil contamination (WA 2015b). The watching brief concluded that a relatively thin deposit of made ground had been spread across the entire footprint of the investigation area, sealing the chalk bedrock and capped by topsoil. It was considered highly likely that the made ground is associated with the construction of the adjacent sewage works. No remains of archaeological significance were encountered during the watching brief and the concrete pipes remained *in situ* (WA 2015b).

Non- designated Heritage Assets

2.2.8 The Wiltshire and Swindon Historic Environmental Record (WSHER) contained no records of Palaeolithic or Mesolithic date within the DBA study area and in general there is little evidence for activity within the wider landscape prior to the Neolithic (Darvill *et al* 2005). Three large possible post-pits at the former Stonehenge car park have yielded radiocarbon dates for the Mesolithic period, though debate persists as to whether these date the features themselves. A very limited assemblage of Mesolithic worked flint has been collected from across the wider landscape which, taking sampling biases into account, suggests at least a background level of activity during this period. Slightly further afield, evidence for prolonged Mesolithic activity has been more recently recorded at Blick Mead, east of Vespasian's Camp (Jacques and Phillips 2014).





- 2.2.10 During the Early Bronze Age, Stonehenge, together with Avebury, would have been a major centre for the region and possibly for north-western Europe. Stonehenge continued to be a focal point and a component of a structured ceremonial landscape in which intervisibility with other monuments and spaces is likely to have been important.
- 2.2.11 Given the nature and density of prehistoric archaeology in the DBA study area, it is considered that further ceremonial and funerary monuments may once have existed in the area surrounding the study area. It is possible that any such examples may have gone unrecorded either because of a lack of above ground remains, levelling, or they were simply omitted from the first accurate cartographic surveys. It is possible that, although remains associated with such monuments may not be visible above ground, any buried archaeology associated with them may be of considerable significance, potentially equivalent to that of Scheduled Monuments and of value to research objectives concerned with the development of the WHS.

3 AIMS AND OBJECTIVES

3.1 Project Aim

3.1.1 With due regard to the ClfA *Standard and guidance for archaeological watching brief* (ClfA 2014a), the principle aim of the archaeological watching brief was to record the archaeological resource during groundwork using appropriate methods and practices, and in compliance with the *Code of Conduct* and other relevant by-laws of ClfA.

3.2 **Project Objectives**

- 3.2.1 In order to achieve the above aim, the objectives of the watching brief, also defined in the WSI (WA 2015a), 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 development or other potentially disruptive works; including:
 - To ensure their preservation by record to the highest possible standard;
 - To confirm the approximate date or date range of the remains, by means of artefactual or other evidence;
 - To determine or confirm the approximate extent of any remains;
 - To determine the condition and state of preservation of the remains; and
 - To determine the degree of complexity of the horizontal and/or vertical stratigraphy present.
 - 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

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• To prepare 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 (WA 2015a), approved method statement (Osgood 2015), conditions of the SMC 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 A temporary trackway was installed for the works to ensure minimal ground disturbance from plant and vehicles to The Cursus monument (Figure 1, Plates 1 and 6). The installation and the removal of the trackway was undertaken by specialist contractors and constantly monitored by an archaeologist. The vehicles and equipment employed by the contractors enabled all plant, vehicles and equipment to operate entirely on the installed track, with no requirement for vehicles or equipment to come into direct contact with the upper surface of The Cursus monument, including during installation and removal (Plate 9). The temporary trackway continued north-west and then north-east of The Cursus boundary to join the southern end of the existing hardstanding trackway from the Larkhill Sewage Works.
- 4.2.2 Removal of the Spillway pipes, structures, chambers was constantly monitored by an archaeologist, who observed and recorded the lifting of these structures via a mechanical grab to help ensure that intrusive groundworks were kept to minimum (**Plate 1**). Excavations were limited to the depth of the spillway structure, which varied across the spillway footprint due to the undulating ground surface and the requirement for the spillway pipework to maintain a gradually downward slope to enable drainage.
- 4.2.3 The archaeologist present on-site monitored all mechanical excavations within the spillway area and within the boundary of The Cursus monument.
- 4.2.4 Spoil derived from both machine stripping and hand-excavated archaeological deposits were visually scanned for the purposes of finds retrieval.
- 4.2.5 The archaeological monitoring ensured that equipment and machinery were not used or operated within the Scheduled area in a manner likely to result in potential damage to the Monument.

Recording

- 4.2.6 Prior to the removal of the Larkhill Spillway structures, a full photographic record was undertaken using digital SLR cameras equipped with an image sensor of not less than 10 megapixels. A subsequent photographic record was also undertaken during the following reinstatement work, where the footprint of the original concrete pipe base was backfilled with chalk to re-establish the spillway footprint back to grassland. 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.
- 4.2.7 A Leica GNSS connected to Leica's SmartNet service surveyed the location of the spillway existing pipework and chambers, prior to their removal. The location of the constructed



trackway, placed down so as not to disturb the ground surface and to minimise risk of damage to The Cursus, was also surveyed. All survey data was 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 30 mm.

4.2.8 The spillway pipes have been on Site since the 1920s and are themselves of minor historic interest, hence all pipes were photographed and measured prior to their removal.

4.3 Monitoring

4.3.1 The National Trust, Historic England and Wiltshire Council Archaeology Service (WCAS) were informed of the start of fieldwork and allowances made for monitoring visits as required. Following completion of fieldwork, a brief summary of the results of the fieldwork was provided to all parties, prior to preparation of the fieldwork report.

5 ARCHAEOLOGICAL RESULTS

5.1 Introduction

- 5.1.1 Removal of the spillway pipework and chambers revealed the structures, which were primarily situated above ground, were sitting on a layer of redeposited chalk made ground located above undisturbed, earlier topsoil (**Plates 2, 7 and 8**). No features, deposits or artefacts of archaeological interest were observed during the works.
- 5.1.2 The Spillway pipe sections measured 0.37 m in diameter, 1.98 m in length and rested on concrete settings measuring 0.65 m in width and 0.30 m in depth. At intervals the pipe sections are joined by square chambers measuring 1 m Square and 0.5 m in depth, with 53 chambers in total (**Plates 5 and 6**).
- 5.1.3 The pipes and chambers were situated on top of a poured concrete slab base, the top of which on average, was observed at the existing ground level, rendering the pipework above ground. The concrete slab base, measured 0.85 m wide and variably 0.18 m to 0.20 m in depth. Below the concrete slab was made ground, comprising a layer of redeposited chalk between 0.05 m and 0.3 m in depth.

5.2 Soil sequence and natural deposits

- 5.2.1 A relatively uniform stratigraphic sequence was encountered across the Site, comprising of topsoil of a mid brown silty clay loam, with occasional inclusions of small subangular flint. The natural soil sequence comprises topsoil straight on to underlying geology which is mapped as predominantly Cretaceous Chalk of the Seaford Chalk Formation.
- 5.2.2 The 1920's trench cut for the construction of the Spillway measures 0.85 m wide, and was cut through the 1920s topsoil but not cut into the underlying chalk natural beneath. The 1920s trench was then infilled with redeposited chalk of varying thickness (0.05 m to 0.3 m) which was used as a levelling and bedding material for a concrete slab base. (Plates 2 and 8). The redeposited chalk made ground thus sealed the 1920's topsoil, with the Spillway structure primarily built up above ground level, rather than buried below ground.

5.3 Results

5.3.1 No features, deposits or artefacts of archaeological interest were observed during the course of the watching brief.



- 5.3.2 The ground surface within the Site and the Spillway boundary is slightly undulating within a shallow valley that slopes gently southwards towards Stonehenge Bottom. The ground surface at the north end of the Site measures 89.5 m (aOD) and at the south end measures 85.2 m (aOD).
- 5.3.3 Much of the Spillway structures, chambers and pipework were built entirely above ground. The intrusive elements of the structure primarily being the concrete slab base and redeposited chalk bedding. Due to the slightly undulating nature of the ground surface, the concrete slab base was in places built entirely above ground, with only minimal topsoil removal required during the spillway construction for the placing of the redeposited chalk.
- 5.3.4 Where the trench for the spillway concrete pipe base crosses the south side of the Cursus on the eastern side, the bank is not visible as a feature on the surface, however the ditch, on the south side of the bank, is visible as a shallow hollow. At this point there is up to 0.15 m of redeposited chalk above original topsoil, over the top of the Cursus ditch, which was not disturbed by the spillway trench.
- 5.3.5 Where the spillway trench crosses the south side of the Cursus on the western side, the bank and ditch are visible as earthworks and the redeposited natural sealed the 1920's topsoil, indicating the construction trench for the spillway did not physically impact the monument at this point (**Plate 3**).
- 5.3.6 At the north end of the Cursus and on the eastern side of the spillway, in the area immediately south of the Larkhill Sewage Treatment Works settling tanks, a farm track traverses east-west over a concrete pipe base for the spillway. The concrete base was situated within the boundary of The Cursus monument (**Figure 1**), at approximately 2.5 m south of the Cursus bank and ditch. This concrete was broken by hand operated mechanical tools and removed under archaeological supervision. The redeposited chalk used as levelling and bedding material beneath the concrete slab was not removed (**Plate 4**). Following removal of the concrete, the area was infilled with redeposited natural chalk to create a level surface.
- 5.3.7 Following the removal of the spillway pipes and structures, the shallow 1920's construction trench was infilled with redeposited natural chalk to reinstate the area to natural grassland. This was undertaken with a mechanical excavator and dumper, operating on the temporary trackway under constant archaeological supervision.
- 5.3.8 At the north east corner of the Spillway boundary where the original pipework and chambers traversed the north side of The Cursus monument, coming from settling tanks immediately to the north, the removal of five concrete fenceposts measuring 0.40 m x 0.40 m square were archaeologically monitored (**Figure 1**). The posts once formed a section of the perimeter fence that enclosed the Sewage Treatment Works and were observed to be erected in postholes to a depth of 0.60 m, through turf and topsoil. No chalk or underlying material aside from topsoil was observed in any of the postholes during removal, and no archaeological remains observed.

6 CONCLUSIONS

6.1.1 The installation of the spillway pipes and chambers in the 1920's involved minimal ground disturbance to the existing ground surface. The archaeological watching brief confirming that the structures had been laid above redeposited chalk, which had been built up to construct the spillway. Undisturbed buried topsoil was observed at the base of the construction cut for the 1920's spillway trench, indicating that the 1920 trenching did not



truncate through the topsoil entirely when the spillway was constructed. The depth of the construction cut observed during the archaeological monitoring suggests that where the spillway trenching was situated in lower ground, intrusive excavations are likely to have been limited to deturfing of the area only.

6.1.2 No archaeological remains were observed during the watching brief, despite a high potential for prehistoric Neolithic and Bronze Age remains in the vicinity. Archaeological monitoring of the spillway removal works within the boundary of the Scheduled Monument of The Cursus indicated that construction of the spillway in the 1920's was not undertaken to a sufficient depth to truncate the monument.

7 ARCHIVE STORAGE AND CURATION

7.1 Museum

7.1.1 The archive resulting from the watching brief is currently held at the offices of Wessex Archaeology in Salisbury. The local museum is Salisbury and South Wiltshire Museum which is currently not accepting archives at present. Wessex Archaeology will therefore retain the archive until a time it can be deposited with the museum.

7.2 **Preparation of the archive**

- 7.2.1 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 Salisbury and South Wiltshire Museum, and in general following nationally recommended guidelines (SMA 1995; CIfA 2014c; Brown 2011; ADS 2013).
- 7.2.2 All archive elements are marked with the site code, and a full index will be prepared. The physical archive currently comprises the following:
 - 1 files/document cases of paper records and A4 graphics;

7.3 Selection policy

7.3.1 Wessex Archaeology follows national guidelines on selection and retention (SMA 1993; Brown 2011, section 4).

7.4 Security copy

7.4.1 In line with current best practice (e.g., 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.

7.5 OASIS

7.5.1 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.

8 COPYRIGHT

8.1 Archive and report copyright

- 8.1.1 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.
- 8.1.2 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.

8.2 Third party data copyright

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9 REFERENCES

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, http://www.bgs.ac.uk/, accessed 16/06/15

- Brown, D H 2011 Archaeological Archives: a guide to best practice in creation, compilation, transfer and curation (revised edition). Archaeological Archives Forum
- Christie, P M, 1963, The Stonehenge Cursus, Wilts Archaeol Natur Hist Mag 58, 370-82
- 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
- CIFA 2014c Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives. Reading, Chartered Institute for Archaeologists
- Darvill, T, Constant, V and Milner, E (eds.), 2005, Stonehenge World Heritage Site: An Archaeological Research Framework
- 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
- Heritage Gateway, http://www.heritagegateway.org.uk
- Jacques, D and Phillips, T, 2014, Mesolithic settlement near Stonehenge: excavations at Blick Mead, Vespasian's Camp, Amesbury, *Wilts Archaeol Natur Hist Mag* 107, 7-27
- Osgood, R, 2015, Method Statement for Archaeological Supervision and Recording of Minor Groundworks – Removal of redundant spillway chambers and pipes from old sewage works over the Cursus. National Trust Estate, Stonehenge Landscape.
- Payne, A, 2007, Stonehenge Riverside Project, West Amesbury and Greater Cursus, Wiltshire: Report on Geophysical Surveys, July 2006, Ancient Monuments Laboratory Report 41/2007 Portsmouth, English Heritage
- Parker-Pearson, M, Pollard, J, Richards, C, Thomas, J, Tilley, C and Welkham, K, 2008, *The Stonehenge Riverside Project 2007: Interim Report*
- Pearson, T and Field, D, 2011, Stonehenge World Heritage Site Landscape Project: Stonehenge Cursus, Amesbury, Wiltshire, Archaeological Survey Report, *Res Dept Rep Ser* 103-2011, English Heritage
- Simmonds, S and Thomas, B, 2015, Stonehenge and Avebury World Heritage Site Management Plan 2015
- SMA 1993 Selection, Retention and Dispersal of Archaeological Collections. Society of Museum Archaeologists



- SMA 1995 Towards an Accessible Archaeological Archive. Society of Museum Archaeologists
- Stukeley, W, 1740, Stonehenge: a Temple Restor'd to the British druids London: W Innys and R Manby
- Wessex Archaeology, 2014, Project Allenby/Connaught, Larkhill, Wiltshire: Archaeological Desk-Based Assessment, WA Report no. 101480.41
- Wessex Archaeology 2015a, Larkhill Spillway, Larkhill, Wiltshire, Written Scheme of Investigation for an Archaeological Watching Brief. Unpublished report ref. T20507.01
- Wessex Archaeology 2015b, Larkhill Spillway, Larkhill, Wiltshire, Archaeological Watching Brief Report. Unpublished report ref. 107946.01
- Wessex Archaeology 2017, Larkhill WWTW and Bulford Pumping Station, Wiltshire, Written Scheme of Investigation for an Archaeological Watching Brief. Unpublished report ref. T23080.1

10 APPENDIX 1: OASIS FORM

OASIS ID: wessexar1-347150

Project details	
Project name	Larkhill Spillway Removal Works: Archaeological Watching Brief. Larkhill, Wiltshire
Short description of the project	Wessex Archaeology (WA) was commissioned by Ancala Water Services on behalf of the Ministry of Defence to undertake an archaeological watching brief during groundworks to monitor the removal of the Larkhill Spillway existing structures, chambers and pipework and reinstate the area to grassland. The Larkhill Spillway is situated within the Stonehenge World Heritage Site, on land owned by The National Trust and transects the Scheduled Monument of The Cursus and Stonehenge Down. The concrete pipes and chambers which formed the Spillway date to the 1920's and their removal meets one of the recommendations of the 2015 Stonehenge World Heritage Site Management Plan. The removal works included minimal groundworks to reinstate the spillway area to grassland. No features, deposits or artefacts of archaeological interest were observed during the works, despite the high potential for prehistoric Neolithic and Bronze Age remains in the vicinity.
Project dates	Start: 28-01-2019 End: 08-03-2019
Previous/future work	Not known / Not known
Any associated project reference codes	118490 - Contracting Unit No.
Type of project	Recording project
Site status	Scheduled Monument (SM)
Current Land use	Other 15 - Other
Monument type	N/A None
Significant Finds	NONE None
Investigation type	""Watching Brief""
Prompt	Scheduled Monument Consent
Project location	
Country	England
Site location	WILTSHIRE SALISBURY AMESBURY Larkhill Spillway Removal Works: Archaeological Watching Brief. Larkhill, Wiltshire
Postcode	SP4 7DE
Study area	0 Hectares
Site coordinates	SU 12750 43040 51.185925284138 -1.817549734681 51 11 09 N 001 49 03 W Point
Project creators	
Name of Organisation	Wessex Archaeology
Project brief originator	Ancala Water Services

Project design originator	Wessex archaeology
Project director/manager	Ruth Panes
Project supervisor	Steven Froud
Project supervisor	Dave Murdie
Project supervisor	Matt Kendall
Project supervisor	Ben Cullen
Project supervisor	Darryl Freer
Project archives	
Physical Archive Exists?	No
Physical Archive ID	118490
Digital Archive recipient	TBC
Digital Archive ID	118490
Digital Contents	"Stratigraphic","Survey","other"
Digital Media available	"Images raster / digital photography","Images vector","Survey"
Paper Archive recipient	TBC
Paper Archive ID	118490
Paper Contents	"Stratigraphic"
Paper Media available	"Diary","Photograph","Report"
Project bibliography 1	
Publication type	Grey literature (unpublished document/manuscript)
Title	Larkhill Spillway Removal Works, Larkhill, Wiltshire Archaeological Watching Brief Report
Author(s)/Editor(s)	Froud, S.
Other bibliographic details	118490.2
Date	2019
Issuer or publisher	Wessex Archaeology
Place of issue or publication	Salisbury
Description	A4 Bound Unpublished client report with plates and figure.



Site location plan and spillway boundary



Plate 1: Pipe removal with the aid of a mechanical grab



Plate 2: North facing section of trench with redeposited chalk and underlying topsoil. Scale at 20 cm

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	Scale:	Not to scale	Illustrator:	RG
	Path:	X:\PROJECTS\118490\Graphics_Office\Rep figs\Watching_brief\2019_03_22\118940_WB_cursus_spill_plate.ai		



Plate 3: North facing section of trench with redeposited chalk and underlying topsoil. Scale at 20 cm



Plate 4: South east facing section of broken out concrete. Scale at 1 m

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Plate 5: West facing image of a spillway chamber with associated pad. Scale at 50 cm



Plate 6: A view to the south showing a section of the eastern Spillway pipe. Scale at 2 m

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Plate 7: View of the southern bank of The Cursus on the western side of the Spillway, looking west, 1m scale



Plate 8: Redeposited chalk and underlying topsoil, located at northern section of the Spillway works, view from the north. Scale at 50 cm

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Plate 9: Installation of the temporary trackway, view from the east-north-east

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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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