

Fonthill Bishop Water Main Replacement, Wiltshire:

Results of a Programme of Archaeological Mitigation

Wessex Water project number: B0702

NGRs: 386875 124900 to 390650 126400

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AC archaeology

FONTHILL BISHOP WATER MAIN REPLACEMENT, WILTSHIRE: RESULTS OF A PROGRAMME OF ARCHAEOLOGICAL MITIGATION

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Summary

Archaeological mitigation consisting of a watching brief and a 'strip, map and record' Intervention was undertaken during groundworks associated with the construction of a replacement water main on land to the north of Shaftesbury. This programme of work involved the construction of c.5km of a replacement water main and was carried out between June and August 2022.

A number of archaeological features were recorded during the 'strip, map and record' part of the investigation. These consisted of a bank and ditch and a possible pit feature. A number of isolated features was also noted, some of which may have a natural origin. A small quantity of modern glass and animal bone was recovered from the recorded ditch.

1. INTRODUCTION

- 1.1 This document sets out the results of a programme of archaeological mitigation during groundworks associated with the construction of a replacement water main on land between the north of Shaftesbury, Dorset and the south-east of Semley, in Wiltshire. The route of the pipeline is shown on Fig. 1.
- 1.2 The archaeological mitigation was undertaken by AC archaeology Ltd. between June and August 2022 and was commissioned by Wessex Water in consultation with the Wiltshire Council Assistant County Archaeologist (WCACA). Consultations confirmed that monitoring was required for the overall route. This involved a 'strip, map and record' (SMR) programme along one part of the route where geophysical survey had confirmed the potential for significant archaeological deposits to survive. The remaining parts of the route were subject to monitoring through an archaeological watching brief and the observation of open-cut trenching, where considered necessary. This approach to archaeological mitigation was based primarily on the results of a geophysical survey and details held in the Wiltshire Historic Environment Record (HER).

2. SITE LOCATION, LAND USE AND GEOLOGY

- 2.1 The south-west end of the route is located approximately 1.75km north of Shaftesbury, with the north-eastern end being 1.5km south-east of Semley (see Fig.1). The south-western part of the route is located at an elevation of over 245m OD and falls sharply to around 140m OD towards the centre of the route. The land then gradually falls and undulates to around 125m OD before rising to over 130m OD at the north-eastern end. A number of tributaries of the River Sem flow across the route in a northerly direction.

- 2.2** Apart from the pipeline route itself, there were also three temporary compound areas. One was located to the immediate south of the Littledown Reservoir, at the western end of the route. Two further compounds were placed along the route itself and were located to the east of Westwood Farm and to the south of Semley, near Calais Cottage.
- 2.3** The bedrock under the south-western end of the route is recorded as three bands of sandstone deposits of the Boyne Hollow Chert Member, the Shaftesbury Member and the Cann Sand Member, dating to the Cretaceous Period. The geology then transitions to Cretaceous mudstone of the Gault Formation toward the lower ground that alternates with Jurassic mudstone of the Kimmeridge Clay Formation for much of the route. The northern end of the route overlies Cretaceous sandstone of the Lower Greensand Group.
- 2.4** For most of the route there are no superficial deposits recorded, apart from localised areas where tributary areas of the River Sem contain alluvial deposits of clay, silt, sand and gravel. These date to the Quaternary Period.

3. ARCHAEOLOGICAL BACKGROUND

- 3.1** Although the information held by the Wiltshire HER indicates that the route of the pipeline was to be located in an area of potential archaeological interest, most information relates to 19th century farming activity, including evidence for demolished farm buildings. There is also evidence for medieval settlement in the area.
- 3.2** A settlement with medieval origins is recorded at Calais Cottages (see No. 7 on Fig.1), with undated earthworks recorded close to its northern side. Further evidence for medieval settlement is recorded to the north and south of Westwood Farm (No. 2). Hatts Farm is also thought to have medieval origins (No. 8).
- 3.3** Field boundaries and ditches of unknown date were identified through geophysical survey close to the south-west part of the pipeline route (No. 15 & 16). This fieldwork was undertaken in 2014.
- 3.4** Castle Rings, an Iron Age hill fort, is located approximately 500m to the south of the route (No. 17). This site is a designated scheduled monument.
- 3.5** Between October and December 2021, a gradiometer survey was undertaken along parts of the route. It was not possible to survey some areas due to waterlogged ground conditions and problems relating to site access (Lefort, 2022).

4. AIMS OF THE INVESTIGATION

- 4.1** The principal aims of the archaeological mitigation programme were to:
- To carry out, under constant archaeological direction the stripping of the SMR area, and the supervision of the topsoil / subsoil stripping of the remaining working widths and compound areas;
 - To record and excavate any archaeological features exposed by the groundworks;

- To contribute to research agendas, for example, the South West Archaeological Research Framework Research Strategy 2012-2017 (Somerset County Council 2012):
Theme A: Settlement Sites and Landscapes – urban, rural, prehistoric.

5. FIELD METHODOLOGY

- 5.1 The site investigation was undertaken in accordance with a Written Scheme of Investigation approved by the WCACA (Clark, 2022). Attendance by the archaeologist was comprehensive (i.e. present during all relevant ground disturbance). The investigation comprised a 'SMR' portion along a section of the pipeline at the south-west extent of the route and the monitoring of topsoil removal within the remaining easement width. The excavation of the pipe trench was also monitored, in areas where it was considered appropriate to conduct this additional stage of monitoring (see 5.2).
- 5.2 Where the initial strip was not sufficiently deep to fully expose the natural substrate (and observe potential archaeological deposits), the excavation of the subsequent pipe trench was also partially monitored. The pipe was laid in a trench with a depth of about 1.6m. In addition, direction drilling pits (launch / receptor) were initiated at a number of locations along the route of the pipeline.
- 5.3 Site observations were recorded using the standard AC archaeology *pro-forma* recording system, comprising written and graphic records in accordance with AC archaeology's General Site Recording Manual, Version 2. A comprehensive photographic record was also made and is included as a series of plates at the back of this report.
- 5.4 The archive has been prepared using the unique site code ACW1408.

6. RESULTS

- 6.1 The route covered an area approximately 5km in length, including a small element requiring directional drilling. A portion of the easement, to the immediate south-west, had been disturbed as a result of previous construction works (a compound) and the construction of a motor-cross track.

Watching Brief Areas - easement strip

- 6.2 An easement with a width of up to 15m was stripped of topsoil using a mechanical excavator with a toothless bucket (see Plate 1). The soil was subsequently stored in a bund to one side of the easement. The monitoring of turf and topsoil stripping for the majority of the route (and compounds) was limited to the depth of soil removal required by Wessex Water. Topsoil was removed to a depth not exceeding 300mm, revealing an underlying subsoil throughout much of the easement (see Plate 2). The natural bedrock was only intermittently observed during the strip. While no features of archaeological significance was recorded during this phase, a number of modern field boundaries and hedge banks were noted. Additionally, there was some evidence of agricultural activity including modern terracing.

6.3 The deposits encountered during this phase of the fieldwork are summarised in Table 1 below.

Context Number	Description	Depth (mm)	Interpretation
100	Mid grey-brown clayey silt	>300	Turf and topsoil
101	Mid yellow-brown silty clay	>300	Subsoil (transitory layer)
102	Varied; yellow-brown mudstone, silt/sand and flint/stone patches	-	Natural geology

Table 1: Deposits encountered during easement strip

Strip, Map and Record Area

6.4 Archaeological mitigation involved a programme of SMR in the south-western portion of the pipeline route (see Fig. 1). The SMR measured approximately 500m in length with a completed width of approximately 10m. Under the direction of the site archaeologist and using a toothless bucket, topsoil was removed to a depth of c. 0.3m and subsoil no greater than 0.3m. This was in order to obtain a full plan of the stripped area. The exposed natural geology comprised sands and silt, although this varied across the SMR and is likely the result of glacial action. The deposits encountered during this phase of the fieldwork are summarised in Table 2, with cut features described in more detail.

6.5 As noted in Section 6.1, there are some areas of ground disturbance associated with the construction of 'electric motorcycle ramps'. This had the potential to impact any potential archaeological deposits at this location.

Possible pit feature F203 (Plan Fig. 2.a, section Fig. 2.b)

6.6 An isolated, sub-circular, possible pit feature was recorded at the eastern extent of the SMR. It measured 0.76m x 0.67m, with a depth of 0.16m. It had moderately sloping sides and a concave base. It contained a single fill (204), comprising a mid-grey-brown sandy silt. No finds were recovered from this feature, and its function is unclear. However, it may have an arboreal or natural origin.

Stone bank 205 and linear ditch F206 (Plan Fig.2.c; profile Fig. 2.d, Plate 3)

6.7 Exposed adjacent to the remnant field boundary, this feature comprised an extent curvilinear bank or earthwork, aligned east to west. Visible for c. 13m, it had a height of c. 0.4m (see profile) and a maximum width of 2.2m. The bank material comprised sandy silts with coarse components, including compacted stone/limestone fragments (20-100mm in size). It is not clear if the source material itself originated from the truncated ditch (F206) to the immediate north. The base of the bank appeared to rest upon the natural substrate. Approximately 1.3m north of 205, feature F206 appeared to be an east to west aligned linear ditch with a width of 1.6m and a depth of 0.05m. Heavily truncated, probably as a result of historic ploughing, it was visible for 4.4m. This may have continued west and is likely to be associated with parallel bank 205 and ditch F208, located to the north-east. No dateable artefacts were recovered.

Ditch F208 (Plan Fig. 2.c; profile Fig. 2.e, section Fig. 2.f, Plate 4)

6.8 This feature appeared to form part of a curvilinear ditch, with a width of 4m and a depth of 0.65m. It was aligned north to south and located to the immediate west of a raised earthwork or bank. The ditch had a steep sloping profile, especially to the east, with an undulating base. It contained four fills (contexts 209 - 212), with contexts 211 and 212 potentially representing a later recut or modification. A prominent earthwork or bank was visible to the immediate east of the ditch, and although the relationship between this feature and the earthwork was not entirely clear, they are likely to be contemporaneous. The ditch is believed to be associated with F206 to the southwest and would have formed a curved or rectangular like enclosure, which continued to the north and west.

6.9 This ditch is not considered to be representative of a more extensive pattern of boundaries, drainage or enclosure features, as there are no deposits present elsewhere in the SMR area that could be associated with this ditch (aside from F206). Analysis of Ordnance Survey maps from the late nineteenth century suggest localised quarry pits next to Little Hill to the northwest and south.

Context Number	Description	Depth (mm)	Interpretation
200	Mid-grey-brown silty, sandy clay with occ. Stones	300	Turf and topsoil
201	Dark yellow-brown sandy silt with common stones/flint	>300	Subsoil
202	Varied; yellow-brown mudstone, silt/sand and flint/stone patches	-	Natural geology
203	Isolated sub-circular feature, with sloping sides and a concave base	160	Possible pit-like feature. May be naturally-derived, however
204	Mid grey-brown sandy silt.	160	Sole fill of pit-like feature. Sterile
205	Light yellow-brown sandy silt with common stones	400	Remnant gravel/stone bank associated with curvilinear ditch 206
206	Portion of E-W aligned ditch	50	Heavily truncated section of curvilinear ditch most likely related to 208 to the NE
207	Mid grey brown clayey silt	50	Sole fill of 206
208	Portion of N-S aligned ditch to immediate west of notable bank/earthwork	650	Linear ditch which curves to the west (as 206?) and is associated with bank/earthwork to its immediate east. Overall function not known
209	Dark yellow-brown silty sand with occ. limestone frags	600	Primary fill of 208
210	Dark yellow-brown silty sand with occ. limestone frag	400	Primary fill of 208 (same as 209)
211	Dark brown with yellow hue of sandy silty clay with common limestone frags	250	Secondary fill of 208
212	Mid brown with yellow hue of sandy silt with rare small stones	370	Upper fill of 208

Table 2: Deposits encountered during open-cut trenching

Pipe trench monitoring

- 6.10** Due to the limited depth of the initial topsoil strip a number of areas (Fig. 1; A – C) were monitored during the excavation of the pipe trench. This also included a road crossing. Generally, the pipe trench was up to 0.8m wide and at least 1.6m deep. No archaeological features or finds were recorded during this phase of the works.
- 6.11** To assist with directional drilling a number of launch and receptor pits were excavated to avoid any undue damage to hedgerows. At 'Little Hill' two drill pits were monitored on either side of a large hedge bank. The pits were 3.4m x 2m in plan and excavated to a depth of 1.3m. A standard sequence of topsoil and subsoil overlying natural geology was observed. No archaeological features were present.

7. FINDS ASSESSMENT

- 7.1** All finds recovered on site have been retained, cleaned and marked where appropriate. Finds were marked using the relevant AC archaeology site code, and museum accession code. Finds were then quantified according to material or species type within each context and all data entered into spreadsheet.
- 7.2** A limited assemblage of finds was recovered. The finds, from the upper two fills of linear ditch F208, comprised two pieces of cattle pelvis (109g) and a glass wine bottle (115g). All finds were of modern date and were therefore discarded.

8. CONCLUSIONS

- 8.1** The programme of archaeological mitigation has demonstrated that a limited number of archaeological features and deposits survive along the route of the scheme, with a concentration of deposits broadly to the southwest.
- 8.2** A small number of archaeological features were recorded during the strip, map and record portion of the investigation. Generally, these features are thought to be modern in origin and may denote agricultural activity or land division and do not provide any evidence for intensive activity, such as settlement, along the route of the scheme.

Consideration of Methodology

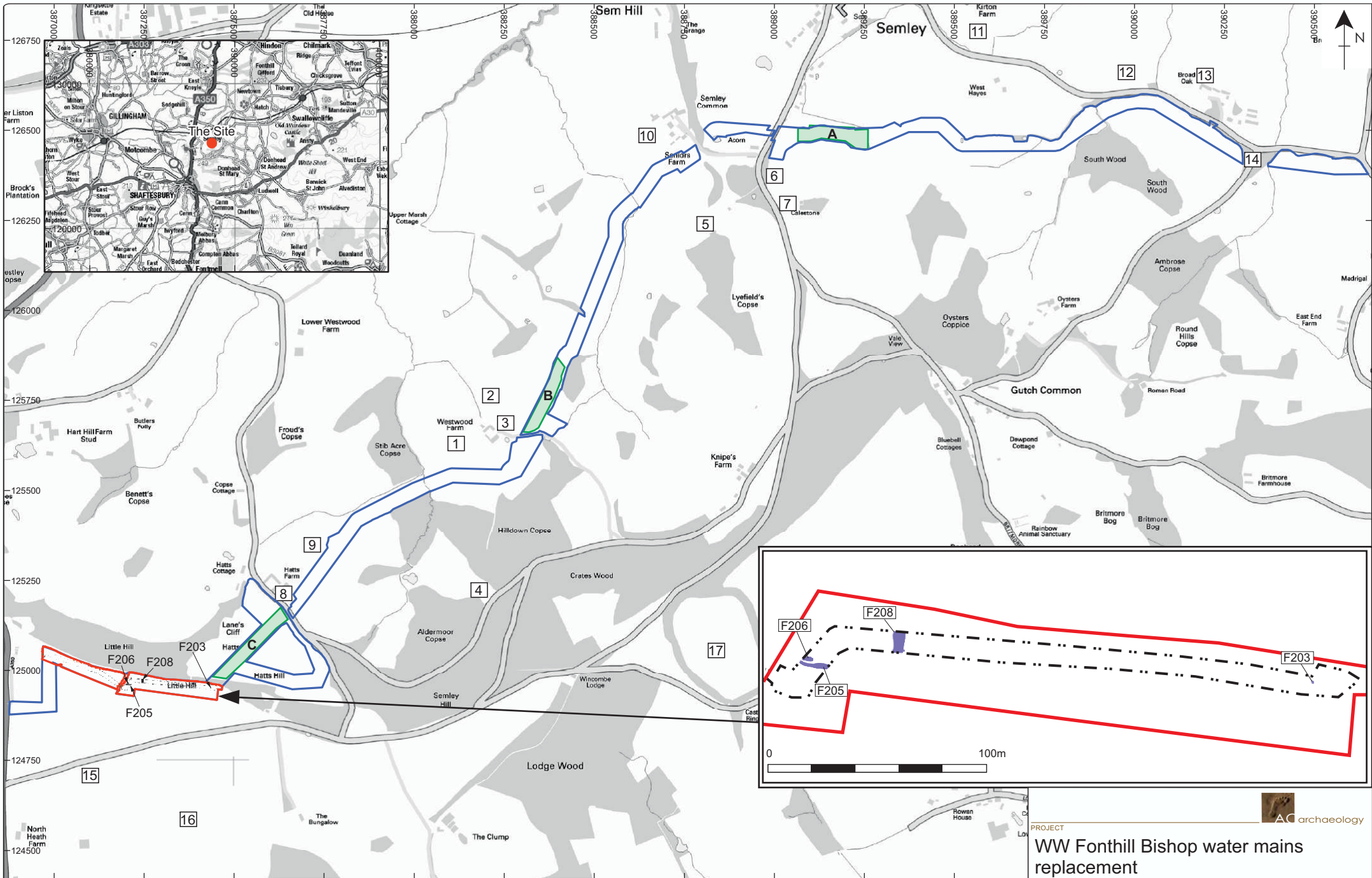
- 8.3** The archaeological mitigation consisting of a SMR, as well as watching briefs along other parts of the route was based primarily on the results of the geophysical survey.
- 8.4** The area containing the anomalies considered to have the most potential was subject to SMR and this investigation did confirm the presence of some archaeological deposits.
- 8.5** A watching brief was undertaken for the remaining parts of the route. The amount of topsoil stripped in most areas was, however, less than 300mm. Although sub-soils were exposed in most areas, the underlying natural – the level from where it would have been easier to identify any archaeological deposits - was only exposed along limited parts of the pipeline route. As a result, it could not be guaranteed that archaeological deposits were not impacted by the groundworks. As an example, heavy plant moving along the easement strip could have damaged archaeological deposits sealed under the remnants of the topsoil and sub-soil. Due to this uncertainty, it was agreed with the WCACA to monitor the excavation of the pipeline

trench in areas considered to have archaeological potential. Nothing of archaeological significance was found during this stage of work. Within the constraints of pipeline construction, where full topsoil / subsoil stripping would have been uneconomic, as well as introducing additional environmental issues associated with backfilling and restoring the land to agriculture, it is considered that the level of archaeological mitigation was appropriate given the overall archaeological potential for the area in general.

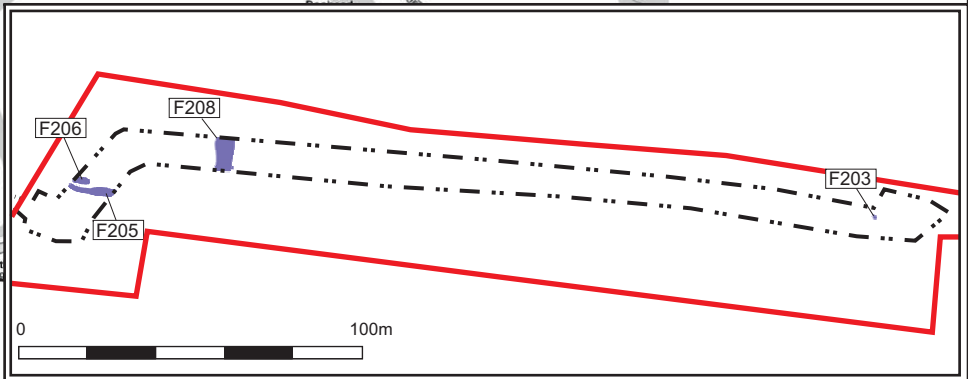
9. REFERENCES

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Clark, R. 2022, *Fonthill Bishop Water Main Replacement, Wiltshire: Written Scheme of Investigation for a Programme of Archaeological Mitigation*. AC archaeology Ltd. Document no. ACW1408/1/1



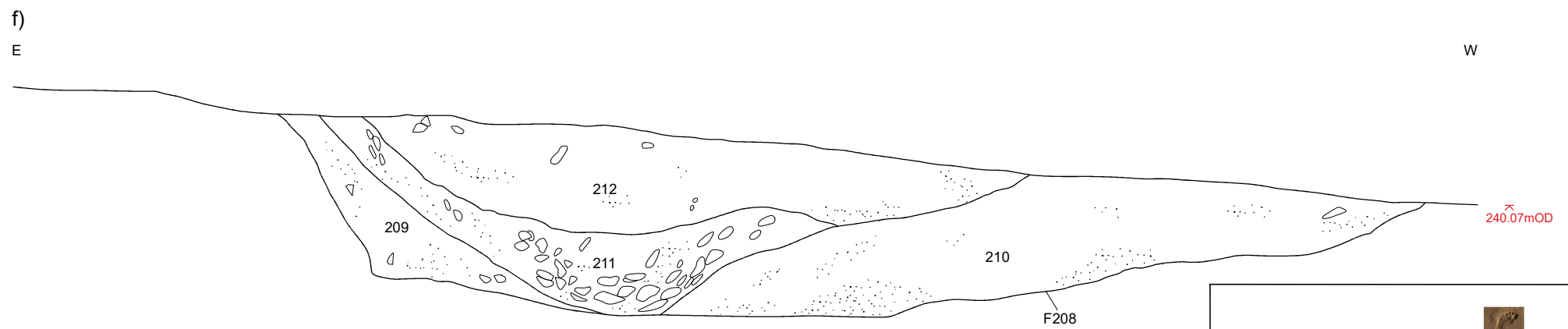
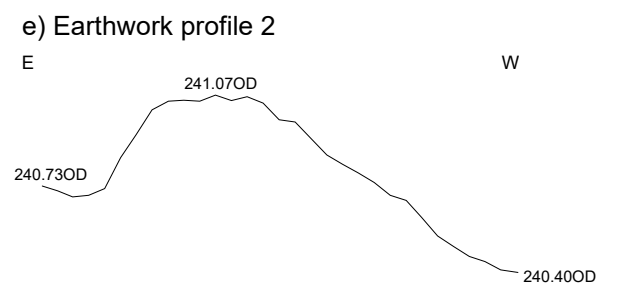
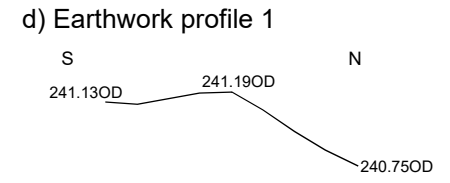
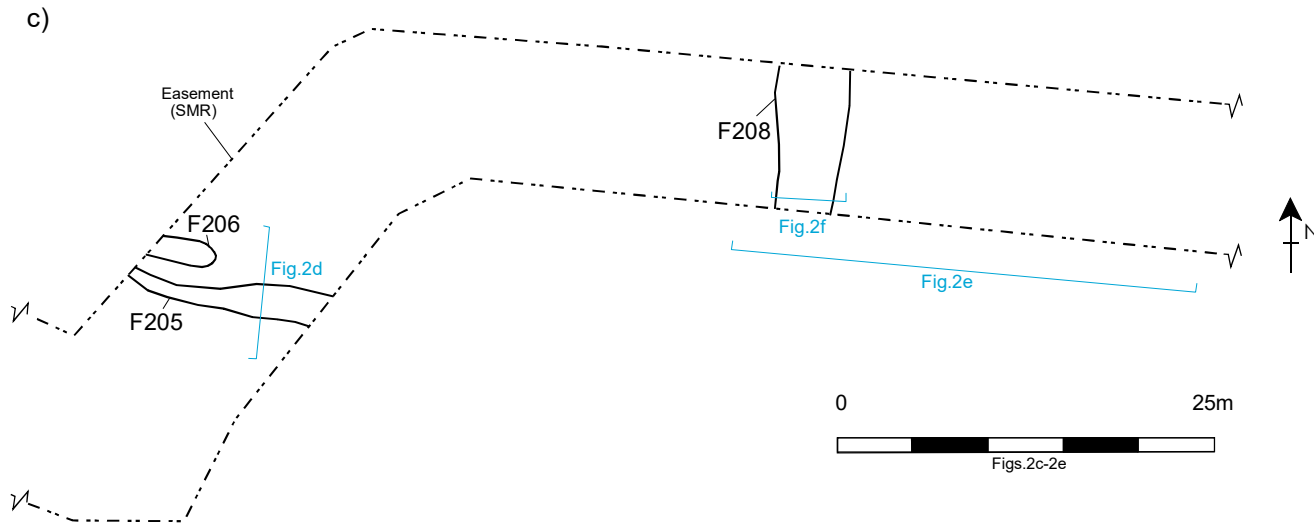
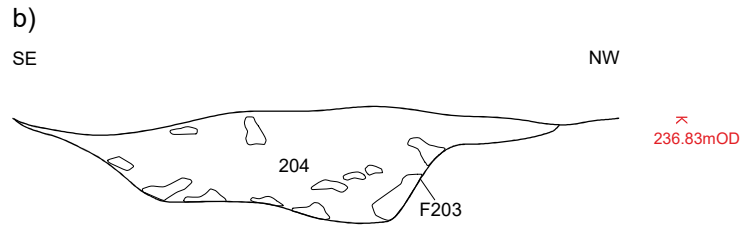
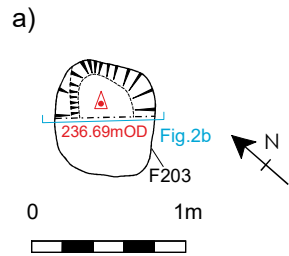
- Key:
- Route of pipeline
 - Extent of SMR
 - A-C Pipe trench monitored
 - 1 - 17 Heritage assets as recorded in the Wiltshire HER



PROJECT
WW Fonthill Bishop water mains replacement

Title
Fig. 1: Site location and extent of works programme





Key:

Stone

Gravel/small stones

0 1m
Sections 2b & 2f

PROJECT
WW Fonhill Bishop water mains replacement

TITLE
Fig. 2: Plan and section drawings



Plate 1: Working view of easement strip with earthworks in the background



Plate 2: Completed easement strip. View from the south-west



Plate 3: View of stone bank 205 and ditch F206. View from the south-west (scale 1m)



Plate 4: Oblique view of ditch F208. View from the north-west (scale 1m)

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