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ST MODWEN DEVELOPMENTS LTD

GATEWAY 12, PHASES 1-6, WATERWELLS BUSINESS PARK, DAVY WAY, QUEDGELEY GLOUCESTERSHIRE

ARCHAEOLOGICAL STRIP, MAP & SAMPLE REPORT

FEBRUARY 2018

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ARCHAEOLOGICAL STRIP, MAP & SAMPLE REPORT

GATEWAY 12, PHASES 1-6, WATERWELLS BUSINESS PARK, DAVY WAY QUEDGELEY GLOUCESTERSHIRE

FEBRUARY 2018

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DESK BASED ASSESSMENTS
ARCHAEOLOGICAL EVALUATION
ARCHAEOLOGICAL EXCAVATION
GEOPHYSICAL SURVEY
TOPOGRAPHIC AND LANDSCAPE SURVEY
HISTORIC BUILDING RECORDING
EIA AND HERITAGE CONSULTANCY

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DRAWINGS	TITLE	SCALE
BM11459-001	Site Location	1:25,000
BM11459-002	Location Plan	1:2,500

EXECUTIVE SUMMARY

Wardell Armstrong Limited was commissioned by St Modwen Developments Ltd to conduct archaeological investigations on land at Gateway 12, Waterwells Business Park, Davy Way, Quedgeley, Gloucestershire.

This archaeological Strip, Map and Sample Excavation was undertaken in intermittent phases from January 2015 to December 2017. The investigations were required to examine the archaeological resource present on Site and the potential impact the re-development may have. Planning permission was granted for the construction of multiple commercial units with associated parking, landscaping and drainage.

This scheme of work has demonstrated that there are no features of archaeological significance within the development Site boundary. The features exposed across all phases of work were agricultural features, attesting to improvements in agricultural practices and agricultural land management and modern intrusions comprising field drainage and an obsolete electrical cable.

1 INTRODUCTION

1.1 Circumstances of the Project

1.1.1 St Modwen Developments Ltd (hereafter referred to as 'the client') commissioned Wardell Armstrong LLP (WA) to undertake a scheme of archaeological investigations on land at Gateway 12, Waterwells Business Park, Gloucestershire (hereafter referred to as 'the Site'). The archaeological Strip, Map & Sample Excavations (SMS) were required to inform upon the potential archaeological resource and the impact upon it from the redevelopment of the Site.

1.1.2 The proposed development includes the construction of several industrial units with associated parking, landscaping, and drainage; for which full planning permission has been granted by the Local Planning Authority, Gloucestershire County Council (GCC) (Planning Reference: Unit 1 – 17/1976/FUL; Unit 2 – 13/2498/FUL; Unit 3 – 15/1479/FUL; and Units 4, 5 & 6 – 15/2288/FUL).

1.1.3 WA prepared the approach for the project in consultation with Charles Parry, Archaeologist for GCC, consulting on behalf of Stroud District Council. Four (4) Written Scheme of Investigations (WSIs) were produced to cover the phased works for Unit 1 (WA 2017a), Unit 2 (WAA 2014a), Unit 3 (WAA 2014b) and Units 4-6 (WAA 2016). The WSIs provide a specific methodology and framework on how the works were to be undertaken and the research questions asked in the first instance, these were approved by Charles Parry prior to the main development which is in accordance with paragraph 141 of the National Planning Policy Framework (NPPF) (DCLG, 2012).

1.1.4 An archaeological SMS Excavation is defined as 'a programme of controlled, intrusive fieldwork with defined research objectives which examines, records and interprets archaeological deposits, features and structures and, as appropriate, retrieves artefacts, ecofacts and other remains within a specified area. The records made and objects gathered during the fieldwork are studied and the results of that study published in detail appropriate to the project design' (CIFA 2014a).

1.1.5 The excavation adhered to the methodologies specified in the approved WSIs (see paragraph 1.1.3). This report seeks to document the results of the archaeological mitigation and clarify the status and location of the archive. In addition, the archaeological SMS Excavations conformed to the guidelines and standards laid down in the following documents:

- *Standard and Guidance for an Archaeological Excavation,* Chartered Institute for Archaeologists: Reading (CIFA 2014a);
- *Code of Approved Conduct for the Regulation of Arrangements in Field Archaeology,* Chartered Institute for Archaeologists: Reading (CIFA 2014b);
- *Standards and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials,* Chartered Institute for Archaeologists: Reading (CIFA 2014c);
- *Management of Archaeological Research Projects in the Historic Environment (Morphe),* Historic England: London (HE 2015);
- *WA Archaeology Technical Manual 1: Fieldwork Recording; Wardell Armstrong (West Midlands),* Wardell Armstrong: Birmingham (WA 2017b);

2 METHODOLOGY

2.1 The Strip, Map & Sample

2.1.1 The aim of the mechanical strip was to excavate to the top of the first potentially significant archaeological horizon or the natural substrate, whichever was encountered first. The depths of excavation were determined by a suitably experienced archaeologist who monitored and controlled all works.

2.1.2 The excavation area was predefined by the limits of the proposed developments. The archaeological investigations were conducted generally from north to south removing the overburden in spits. The total area stripped measured 6.9 ha in extent and was broadly L-shaped in plan.

2.1.3 A toothless ditching bucket fitted to a 360^{o} tracked mechanical excavator was used to maximise the chance for identification of any archaeological remains. Muck-away from the excavation was undertaken by a single 20 tonne dumper. Once filled the dumpers removed spoil to specific bund locations with monitored routes to ensure excessive rutting did not take place.

2.1.4 Once exposed all plan and section surfaces were cleaned by hand and inspected for potential archaeological features or archaeologically significant deposits. Any potential features or archaeological deposits exposed were then excavated by hand to retrieve artefactual and ecofactual material, as to determine their character, significance and date.

2.1.5 Each deposit and/or feature was assigned a unique four-digit identifier (context number) and recorded on standard WA recording sheets. Drawings of sections and contexts in plan were made at an appropriate scale and located with a Differential GPS. Digital photography also played an integral role in the recording of this Site, with shots taken of individual deposits and features and general working shots taken to show the overall progress of the works.

2.1.6 The general aims of these investigations were to:

- determine the presence or absence of unknown buried archaeological remains within the proposed development area;
- determine the character, date, extent and distribution of any unknown archaeological deposits and their potential significance;

- determine the levels of disturbance to any archaeological deposits from plough damage or from any other agricultural/industrial practices or later building activities;
- investigate and record all deposits and features of archaeological interest within the areas to be disturbed by the current development;
- determine the likely impact on archaeological deposits from the proposed development; and to
- disseminate the results of the fieldwork through an appropriate level of reporting.

2.1.7 The specific aim of the archaeological SMS Excavation was to investigate, date, characterise and ascertain any potential archaeological remains associated with Iron Age and Romano-British agricultural activity that was identified near the vicinity of the Site during the previous archaeological Evaluation.

2.1.8 All finds encountered were retained on Site and returned to the office where they were identified, quantified and dated to period. A *terminus post quem* was then produced for each stratified context and the dates used to help determine the broad phasing for the Site. On completion of the fieldwork, the finds were cleaned and packaged according to standard guidelines (CIFA 2014c). Please note, the following categories of materials will be discarded after a period of 6 months following the submission of this report, unless there is a specific request to retain them (and subject to the collection policy of the relevant depository):

- where unstratified;
- modern pottery;
- material that has been assessed as having no obvious grounds for retention.

2.2 The Archive

2.2.1 WA made provisional arrangements for the deposition of the archive with the Gloucestershire Museums Group.

2.2.2 WA obtained a provisional accession number for the archive from the recipient museum (except where the museum prefers to issue an accession number following completion of fieldwork) and conformed to the Gloucestershire Archaeological Archive Standards as set by Gloucestershire Museum Group (Paul, S. 2017) regarding deposition of the archive.

2.2.3 WA issued internal Site Codes for each phase of archaeological investigations which were used on all documents, artefacts and any other items associated with the project. The internal Site Codes for each phase are: PHASE 1: **GAT-A**, PHASE 2-3: **QUE-A**, Phase 4-6: **QUE-2**.

2.2.4 The archive will include all project records and cultural material produced by the SMS Excavation and will be prepared in accordance with *Guidelines for the Preparation of Excavation Archives for Long Term Storage* (Brown 2011), A *Standard Guide to Best Practice for Archaeological Archiving in Europe* (Perrin et al 2014).

2.2.5 This project has been registered with the **O**nline **A**cces**S** to the **I**ndex of archaeological investigation**S** (**OASIS**) under reference **Wardella2-300516** and a digital copy of the archaeological report will be made available upon its completion.

3 BACKGROUND

3.1 Location and Geological Context

3.1.1 The Site is located to south east of Gloucester, due west of the A38 between Quedgeley to the east and the M5 to the west. The Site is situated on land which rises towards the Cotswolds and the Birdlip Ridge. The immediate environs of the Site are currently bounded to the north and east by light industrial units and housing, to the south by brownfield land, and to the west by Davy Way.

3.1.2 At commencement the Site comprised relatively flat improved grassland situated at approximately 30m AOD (Above Ordnance Datum) rising to 40m AOD towards the eastern edge of site.

3.1.3 The area of investigation is approximately 6.9 hectares in size and forms an L-shape with the shorter boundary orientated north-south (BM11459-01).

3.1.4 The underlying solid geology is mapped as undifferentiated Blue Lias Formation and Charmouth Mudstone Formation which consists of calcareous mudstones interbedded with argillaceous limestone, with sandstone at the base. These sedimentary rocks were deposited in shallow-marine environments during the Jurassic and Triassic Periods between approximately 210 and 183 million years ago (BGS 2017). No superficial deposits were recorded by the British Geological Survey, however previous invasive archaeological works characterise the superficial deposit as Lower Lias clays of varying colours (from yellow and orange to blue and almost black) (Oxford Archaeology 2005).

3.2 Archaeological and Historical Background

3.2.1 An archaeological Desk-Based Assessment (DBA) (Wessex 2001) was produced detailing the archaeological and historical background of the Site and the immediate vicinity. It is not intended to repeat the same information here and what follows is a brief overview of that document, for more information please refer to the original report.

3.2.2 The DBA identified that there were no scheduled monuments, designated heritage assets or Listed Buildings within the Site boundary. The area of investigation lies within a rich archaeological landscape with 29 HER records and events being seen within a 500m radius of the Site.

3.2.3 **Early Prehistoric**

3.2.4 As of yet, there is no recorded evidence of early Prehistoric activity within the bounds of the development area or wider study area.

3.2.5 **Late Prehistoric/Iron Age**

3.2.6 Evidence of Iron Age settlement was identified in the immediate vicinity of the Site during an archaeological Evaluation via trial trenching conducted by Oxford Archaeology in 2005. Assets included an enclosure, ditches and an undated inhumation. Whilst no dating evidence was present, the manner of burial and location was characteristic of the Iron Age (Oxford Archaeology 2005).

3.2.7 **Romano-British**

3.2.8 Evidence of Romano-British activity within the study area consists of a scatter of material, possibly associated with a settlement (**WA1**), and a cemetery (**WA3**) and a find described only as a "burnt piece" (**WA4**) identified during the 19th century. A linear enclosure and cropmarks (**WA2**) and (**W23**) are also thought to date to the Romano-British Period but may be of later provenance. Trial Trenching by Oxford Archaeology in 2005 indicated that the use of the Iron Age structures outlined above continued into the Romano-British period. Within the wider study area, a solitary burial (**WA5**), a further settlement (**WA6**) and a further collection of material (**WA7**) have been recorded.

3.2.9 **Early Medieval/Medieval**

3.2.10 There are no current records of Early Medieval activity within the bounds of the development area. The nearest settlement listed in the Domesday Book is Tuffley and Lower Tuffley 1.6 km north of Quedgeley which indicates that settlement patterns in this period were clustered towards Gloucester.

3.2.11 The etymology of Quedgeley indicates the possible origin of the settlement within this period, with the Old English derivation of the word meaning "Cweod's wood/clearing" or "dirt wood/clearing" (Smith 1964, 187-8).

3.2.12 In contrast, much of the archaeological data from the Site comes from the Medieval period. The current route of the A38, Haresfield Road (**WA9**) and Haresfield Lane to the southwest of the Site (**WA10**) all date from this period. Construction works for the M5 recorded earthworks and a Holloway possibly associated with a Medieval

farmstead (**WA11**). Several natural features, including the woodland which lies to the east of the development area is evidence by coppicing and a ditched boundary dating to this period (**WA14**). The brook (**WA24**) which runs to the south of the development area, formed the boundary of Colethrop Manor which may have had Medieval origins (Erlington 1927). Three areas of ridge and furrow are also associated with Colethrop Farm (**WA20-22**), two further areas (**WA12**) and (**WA13**) were identified during walkover survey by Wessex Archaeology in 2001; which is also thought to be associated with a linear enclosure and bank (**WA15**).

3.3 Post-Medieval

3.3.1 Within the boundary of the Site a single Post-Medieval asset is recorded. Whilst the existing structure of Colethrop Farm dates to the 19th century, the foundations are thought have been laid earlier (**WA25).** In the wider study area, the land between the A38 and A419 is thought to have been a meeting place of the Whitstone Hundred (**WA16**). Further to the south is a scatter of debris, thought to be associated with a demolished house (**WA17**) and a former Tollgate (**WA18**).

3.3.2 Two assets are also associated with railway infrastructure; this includes the Birmingham to Bristol line (**WA19**) and a now disused branch of the Midland Railway (**WA29**) both built in the mid-19th century.

3.3.3 Early cartographic evidence of the Site exists on the Ordnance Survey 1st Edition 6" map which records the development area as a large open agricultural field bisected by a footpath with a few trees primarily to the east (OS 1898). The land use of the development area remains unchanged by the early 20th century except for the removal of the trees to clear the field and the introduction of a pump to the southeast (OS 1946).

4 ARCHAEOLOGICAL STRIP, MAP & SAMPLE RESULTS

4.1 Introduction

4.1.1 The archaeological SMS Excavation was undertaken on an intermittent phased approach from 26/01/2015 to 11/12/2017 across the proposed development area (BM11459-2). The SMS areas were excavated as specified in the Methodology (Section 2).

4.2 Results (See Appendix 1)

4.2.1 Results are detailed below by each phase of works, deposit numbers are given in **(parenthesis)** and cut numbers are given in **[square brackets]**.

4.3 PHASE 1

4.3.1 This phase of the archaeological SMS was undertaken between 4/12/2017 and 11/12/2017 consisting of a square-shaped area approximately 15,372 m^2 excavated across the western extent of the proposed development area (BM11459-2).

4.3.2 The natural substrate comprising soft, mixed greyish/brownish-yellow clay **(1002)** was present at a depth of 0.38m below current ground level at the northern end of the Site, rising to a depth of 0.30m at the southern end of the Site.

4.3.3 Modern disturbances cut through the natural substrate **(1002)** which were investigated and recorded. The modern disturbances comprised a disused electric cable and a series of land drains. The electric cable was capped by bricks and was orientated north to south along the eastern boundary of Site (Plate 1). The brick capping is extant along its northern extent with only degraded fragments visible along the south. The land drains are concentrated in the northern extent of the Site where the underlying clays are less free-draining (Plate 2). These land drains run east to west and feed in to another land drain running south.

4.3.4 Sealing the modern intrusions was the subsoil **(1001)** comprising a firm, light brownish-yellow clay with frequent rooting and sparse flecks of charcoal. This was underlying the topsoil deposit **(1000)** that comprised soft dark brown silty clay with frequent rooting and flecks of charcoal.

4.3.5 No features of archaeological significance were identified during this phase of works. One (1) sherd of Green-glazed Medieval pottery was recovered from the subsoil

(1001), however its presence can be described as not in-situ and is therefore undiagnostic.

4.4 PHASE 2-3

4.4.1 This phase of the archaeological SMS Excavation was undertaken in two parts. The first between 26/01/2015 and 03/02/2015 consisting of a square-shaped area approximately 10,976 m^2 excavated within the centre of the proposed development area adjacent to PHASE 1 and PHASE 3. The second between 15/06/2015 and 19/06/2015 consisting of a square-shaped area approximately 4,160 m^2 excavated within the centre the proposed development area adjacent to PHASE 2 and PHASE 4 (BM11459-2).

4.4.2 The natural substrate on both phases was identified as a hard, yellow-brown clay with occasional stones **(3001)** and was present at a depth of 0.27 m below current ground level. Cutting in to this were three linear features all aligned north to south **[3002]**, **[3006]**, **[3008]**, and a modern footpath.

4.4.3 A footpath depicted on historic mapping was identified running through PHASE 2 on a north-northeast to south-southwest alignment measuring 2.00 m wide and its length was present throughout the area (BM11459-2).

4.4.4 Cuts **[3002]** and **[3008]** were of a similar form with vertical sides and flat bases and measuring 2.64 – 2.68 m long, 0.60 – 0.62 m wide and 0.48 – 0.55 m deep. These were both filled with a firm blueish brown clay **(3003)** / **(3009)** to a depth of 0.41 m and 0.48 m respectively (Plate 3). A secondary fill **(3004)** was recorded in cut **[3002]** that comprised frim, orange clay measuring 0.14 m deep, but this fill is part of the general natural backfill deposit **(3003)**. The form of both cuts and their respective fills indicate that these features are former investigative geotechnical pits.

4.4.5 Feature **[3006]** was a linear feature with sloping sides and a rounded base that measured 30 m+ in length, 0.75 m wide and 0.10 m deep running north to south. **[3006]** contained a singular fill comprising firm, greyish brown clay **(3007)** (Plate 4). Due to the shallow form of the cut, its orientation and organic backfill, this feature is most likely a furrow part of several furrows running on the same alignment (BM11459-2).

4.4.6 A deposit **(3005)** measuring 0.76 m long and 0.16 m wide was identified overlying the natural substrata **(3001)**. It comprised loosely compacted black / orange charcoal and

burnt twig with frequent stones (Plate 5). This area of burning was covered by a dump of stone and shale which included modern pottery that was not retained, it was concluded that this was likely a bonfire that had been burnt and then covered in stones to douse the fire.

4.4.7 Overlying all other features was the topsoil deposit **(3000)** that comprised hard, dark brown silty clay with occasional pebbles measuring 0.27 m thick.

4.4.8 Finds recovered from secure contexts during these phases include one (1) sherd of Post-Medieval pottery and one (1) fragment of glass from the backfill deposit **(3003)**, and two (2) ceramic building material fragments and eight (8) sherds of Post-Medieval pottery from the burnt deposit **(3005)**.

4.4.9 Several finds were also recovered from unstratified contexts comprising one (1) fragment of ceramic building material, one (1) sherd of Prehistoric pottery, one (1) clay pipe stem and four (4) glass fragments.

4.5 PHASE 4-6

4.5.1 These phases were undertaken in two parts. The first was between the 05/12/2016 and 15/12/2016 and comprised the excavation of a rectangular shaped area that measured 8,200 m^2 across the eastern third of the investigation area. The second was between the 26/01/2017 and 31/01/2017 and comprised the monitoring of the topsoil and subsoil strip on a Site area of 8,500 m^2 situated to the immediate south of the first works.

4.5.2 The natural substrate **(4007)** consisted of a light greyish orange firm clay with pockets of silt and truncated by a series of north to south aligned furrows **[4003]** averaging 0.76 m in width and spaced 3.27 m apart. These were filled by a blue-grey silty clay **(4002)** that averaged 0.19 m in depth (Plate 6). Furrows **[4003]** were interpreted as a continuation along the same north to south alignment as those through PHASE 3.

4.5.3 The furrows **[4003]** were truncated by patches of plough-scarring **[4005]** that were orientated on the same north to south alignment and were frequent across the whole Site with the largest measuring 0.21 m in width (Plate 7). The ploughscars were filled with **(4004)** that comprised a mixture of subsoil and the natural substrate and was a minimum of 30 mm in thickness.

4.5.4 The identification of a furrow in the south was tested and confirmed to be a part of the sequence of furrows associated with **[3006]** due to its similar shallow depth and

alignment, but no dating material was found. The furrow identified across PHASE 4-6 did not continue further to the north but extended beyond the limit of excavation to the south.

4.5.5 The above deposits and features were sealed across the Site by up to 0.28 m thick of highly mixed subsoil **(4001)** which petered out to the south and east where in places none was present. A large spread of modern disturbance **(4006)** was present in the southeast corner of the area of investigation becoming thinner to the west and north (Plate 8). It comprised frequent modern plastics, pipe, concrete, CBM and tarmacadam fragments that were noted but not retained. Much of this material had been pushed into the underlying natural substrate and it was clear that it was associated with the modern housing development to the immediate south.

4.5.6 Multiple modern field drains were present across the investigation areas and were identified by the light blueish tinge to the backfilled material. Two of these features were investigated in PHASE 3 to provide a characterisation as well as dates and this was furthered by the excavation of a further three in PHASE 4-6.

4.5.7 The topsoil **(4000)** remained consistent across this phase of the development and comprised firm dark grey brown clayey silt of moderate compaction and high organic content surviving to an average depth of 0.15 m. The soil contained very small rounded and sub-rounded stones and modern debris (plastic, metal, thin fence posts) that was noted but not retained.

4.5.8 Finds recovery from this phase comprised one (1) sherd of Post-Medieval pottery from the topsoil **(4000)** and one (1) sherd of Post-Medieval pottery, one (1) clay pipe stem, one (1) sherd of Post-Medieval glass, one (1) fragment of Post-Medieval ceramic building material, and one (1) Post-Medieval iron fragment from the subsoil **(4001)**. No finds were recovered from any features.

4.6 Palaeoenvironmental Sampling

4.6.1 All features were inspected for their palaeoenvironmental potential, however on this instance no deposits were determined to be suitable for sampling.

5 FINDS ASSESSMENT

5.1 Archaeological Finds:

5.1.1 The only dateable find recovered from the entirety of PHASE 1 was one (1) sherd of Green-glazed Medieval pottery present within the subsoil **(1001)**. Other finds include one (1) fragment of clear modern glass and five (5) fragments of degraded CBM found in the eastern side of the area which relate to the laying of the defunct brick-capped electric cable.

5.1.2 From PHASE 2-3 and PHASE 4-6, a total of fifty-three (53) artefacts weighing 1,196 g were recovered from five deposits; three deposits during the strip of PHASE 3 and two contexts during the excavation of PHASE 4-6.

5.1.3 All finds were dealt with according to the recommendations made by Watkinson & Neal (1998) and the Chartered Institute for Archaeologists (CIFA) Standard & Guidance for the collection, documentation, conservation and research of archaeological materials (2014b). All artefacts have been boxed according to material type and conforming to the deposition guidelines recommended by Brown (2011) and Perrin *et al* (2014) and Gloucester City Museum.

5.1.4 The material archive has been assessed for its local, regional and national potential and further work has been recommended on the potential for the material archive to contribute to the relevant research frameworks.

5.1.5 The finds assessment was compiled by Megan Stoakley and Sue Thompson.

5.1.6 Quantification of bulk finds by context is visible in Table 1.

Table 1: Quantification of Bulk Finds by Context					
Context	**Material**	**Quantity**	**Weight (g)**	**Date**	**Comments**
4000	Pottery	14	24	Post Med	Refined whiteware, transferprint
4001	Pottery	6	90	Post Med	Transfer print, creamware, red earthenware
4001	Glass	3	109	Post Med	Bottle glass
4001	Clay pipe	1	2	Post Med	Stem
4001	CBM	8	253	Post Med	Rooftile, misc
4001	Iron	2	32	Post Med-modern	Split pins
3005	CBM	2	66	Post Med	Tile fragments
U/S	CBM	1	2	Post Med	Undiagnostic fragment
3003	Ceramic	1	1	Post Med	19th-20th C RWE
3005	Ceramic	8	60	Post Med	SS, CRE – Buckley type
U/S	Ceramic	1	5	Prehistory	Body sherd – Flint tempered
U/S	Clay pipe	1	2	Post Med	Undecorated stem fragment
3003	Glass	1	3	Post Med	Undiagnostic fragment
U/S	Glass	4	547	Post Med	18th – 19th Century
Total		**53**	**1,196**		

5.2 Prehistoric Ceramics

5.2.1 One (1) fragment of potentially Prehistoric pottery, weighing 5 g, was recovered from an unstratified context (Table 1). The artefact is in moderate condition and displays evidence of post-depositional damage and abrasion adding to the interpretation that it was not recovered in-situ.

5.2.2 The fragment comprises a dark brown to black flint and sand tempered body sherd with no visible decoration. The flint temper comprises poorly sorted, coarse frequent flint which protrudes out on the interior surface (Mepham 2000, 4). The sand temper appears to be fairly well sorted.

5.2.3 It is suggested that this sherd dates to Middle to Late Bronze Age, potentially a sherd of Deverel-Rimbury type pottery. Its retrieval is of little significance as it is highly abraded with little diagnostic value due to its recovery from an unstratified context. Therefore, it is not of High significance with regards to defining the stratigraphy / phasing of the Site.

5.3 Post-Medieval Ceramics

5.3.1 Twenty-three (23) sherds of Post-Medieval ceramics, weighing 85 g, were recovered from four deposits; two from PHASE 3 and two from PHASE 4-6. The pottery was in

moderate to good condition and included refined whiteware and transfer printed wares dating to the 19th century. These represented the remains of household crockery, with plates, saucers, teacup and a teapot.

5.3.2 Nine (9) Buckley-type red earthenware fragments were recovered from two contexts. Eight of these, weighing 60 g, came from **(3005)** and represented at least two jug vessels of 18th- 19th century, whist a single abraded rim sherd with traces of internal lead glaze was recovered from **(4001)** and in believed to have been part of a wide mouth jar or pancheon, again of 18th – 19th century.

5.3.3 Overall the assemblage was in moderate to good condition and displayed little evidence of post-depositional damage, which can be indicative of small-scale domestic dumping.

5.3.4 No further analysis is warranted.

5.4 **Glass**

5.4.1 Eight fragments of glass weighing a total of 641 g (Table 1) were recovered during the two phases of archaeological strip, map and sample across PHASE 2-3 and PHASE 4-6. The sherds were of moderate condition with all fragments showing some evidence of post-depositional abrasion.

5.4.2 Three of these fragments were of green glass, most likely associated with beer bottles, one such fragment found unstratified in PHASE 3 was embossed with "…TERS" and is believed to be 19th century in date. A further three fragments appeared to represent a single wine bottle of probable 18th century origin.

5.4.3 A single undiagnostic bottle fragment of blue glass was recovered from deposit **(3003)** which is believed to be of later Post-Medieval date, with the remaining clear glass fragment which is probably from a mineral water bottle (Licence 2015). They are 19th century in date.

5.4.4 No further analysis is necessary on the glass.

5.5 **CBM**

5.5.1 A total of nine fragments of ceramic building material (CBM) were recovered from three deposits (Table 1) weighing a total of 321 g during the intrusive works across PHASE 2-3 and PHASE 4-6. The sherds were of moderate to good condition with some post-depositional abrasion noted primarily along the sherd edges.

5.5.2 One floor tile and three roof tiles were identified whilst the rest remained unidentifiable miscellaneous fragments, all of which were demonstrated to be of late Post-medieval date.

5.5.3 No further analysis is necessary.

5.6 **Clay Pipe**

5.6.1 Two fragments of clay tobacco pipe were recovered, first a 2 g fragment from deposit **(4001)** which survived in a moderate condition with some post-depositional abrasion visible. The second, again 2 g in weight was unstratified and came from the area of PHASE 3, this fragment was in good condition.

5.6.2 Neither stem fragment have any maker's marks or decoration but it is possible to gain a rough idea of the date of clay pipes based on the size of the central bore hole (Table 2).

Table 2: Binford's Pipestem Chronology (Kipfer 2008, 8)

Stem-Hole Ø (in/XX)	Conversion (mm) 1 inch = 25.4mm 1/64 (inch) = 0.4mm	Dates
9/64	9 x 0.4mm = 3.6	1590 – 1620
8/64	8 x 0.4mm = 3.2	1620 – 1650
7/64	7 x 0.4mm = 2.8	1650 – 1680
6/64	6 x 0.4mm = 2.4	1680 – 1720
5/64	5 x 0.4mm = 2	1720 – 1750
4/64	4 x 0.4mm = 1.6	1750 - 1800

5.6.3 Both stem fragment boreholes measured c.2 mm which gives a rough date of early to mid-18th century.

5.6.4 No further analysis is required.

5.7 **Iron**

5.7.1 Two iron artefacts weighing 32 g were recovered from (**101**), (Table 1).

5.7.2 The objects are both split pins and are in poor condition with corrosion and some delamination.

5.7.3 The pins are Post-medieval to modern in date and likely to be agricultural.

5.7.4 No further analysis is necessary.

5.8 **Conclusions**

5.8.1 Barring the single sherd of abraded pot dating to the Prehistoric period, the finds

assemblage is primarily Post-Medieval, and largely 19th century in date.

5.8.2 Given the sparsity of even residual finds it is unlikely that activity occurred within the immediate vicinity of the Site

5.9 Statement of Potential

5.9.1 As most of the finds were Post-Medieval and recovered only from topsoil and subsoil deposits, the assemblage is of limited archaeological interest.

5.9.2 It is recommended that the Post-Medieval finds are not retained with the archive and the sherd of Prehistoric pottery is retained.

6 SYNTHYSIS

6.1.1 The archaeological SMS Excavation across the entire development did not identify any features of potential archaeological significance. The soils are generally pelostagnogley soils, which suffer from standing water and are difficult to cultivate.

6.1.2 The identified features were characterised and dated to the Post-Medieval and modern periods and represent efforts in agricultural improvement with land drainage that further supports the unsuitability of the area prior to this period.

6.1.3 Overall, despite the potential of this Site, no evidence was revealed for activity of archaeological significance and the landscape appears to be one of dispersed foci of activity, such as the Romano-British farmstead recorded to the immediate east of the development area, surrounded by field systems.

8 BIBLIOGRAPHY

Brown, D.H. (2011) *Archaeological Archives: A Guide to Best Practice in Creation, Compilation, Transfer and Curation*, Archaeological Archives Forum

CIFA. (2014a) *Standard and Guidance for an Archaeological Excavation*, Chartered Institute for Archaeologists: Reading

CIFA. (2014b) *Code of Approved Conduct for the Regulation of Arrangements in Field Archaeology,* Chartered Institute for Archaeologists: Reading

CIFA. (2014c) *Standard and Guidance for the collection, documentation, conservation and research of archaeological materials,* Chartered Institute of Field Archaeologists: Reading

DCLG, (2012) National Planning Policy Framework (NPPF), London, Department for Communities and Local Government

HE. (2015) *Management of Archaeological Research Projects in the Historic Environment, (Morphe),* Historic England: London

Licence, T. (2015) *What the Victorians Threw Away*, Oxford, Oxbow Books

Mepham, L (2000), *Guide to Pottery,* WA unpublished document (2nd draft)

Ordnance Survey (1884) *6-inch 1st Ed. Gloucestershire*. XXXIII.SW

Ordnance Survey (1946) *6-inch* 5th *Ed. Gloucestershire*. XXXIII.SW

Oxford Archaeology (2005*) Hunts Grove, Quedgeley, Gloucestershire: Archaeological Evaluation*. Oxford Archaeology: Unpublished Report

Paul, S. ed. (2017) *Gloucestershire Archaeological Archive Standards*, Gloucester, South West Museum Development Programme

Perrin, K *et al.* (2014) *A Standard and Guidance to Best Practice for Archaeological Archiving in Europe*, EAC Guidelines **1**, Europae Archaeologia Consilium: Namur

Smith, A. H. (1964) *The Place Names of Gloucestershire*, Cambridge, Cambridge University Press

WA (2017a) Written Scheme of Investigation for an Archaeological Strip, Map and Sample, Unit 1 Gateway 12 Waterwells Business Park Davy Way Quedgeley Gloucestershire, Wardell Armstrong Archaeology: unpublished document.

WA (2017b) Wardell Armstrong: Excavation Manual, Wardell Armstrong: Unpublished internal document, Dated July 2017 Cambridge.

WAA (2014a) *Written Scheme of Investigation for Mitigation of Land at Gateway 12 (Unit 2), Waterwells Business Park, Hardwicke, Gloucestershire,* Wardell Armstrong Archaeology: unpublished document.

WAA (2014b) *Written Scheme of Investigation for Mitigation of Land at Gateway 12 (Unit 3), Waterwells Business Park, Hardwicke, Gloucestershire,* Wardell Armstrong Archaeology: unpublished document.

WAA (2016) *Written Scheme of Investigation for Mitigation of Land at Gateway 12, Phases 4-6, Waterwells Business Park, Hardwicke, Gloucestershire,* Wardell Armstrong Archaeology: unpublished document.

Wessex Archaeology (2001) *Hunts Grove, Stroud District, Gloucestershire. Archaeological Desk Based Assessment and Walkover Survey*. Wessex Archaeology: Unpublished Report.

APPENDIX 1

CONTEXT DESCRIPTIONS

Context Number	Context Type	Description	Height/Depth	Discussion
(1000)	Deposit	Soft dark brown silty clay with frequent rooting and flecks of charcoal	0-0.3 m	Topsoil deposit across site
(1001)	Deposit	Firm, light brownish-yellow clay with frequent rooting and sparse flecks of charcoal	0.3-0.38 m	Subsoil deposit across site
(1002)	Deposit	Soft, mixed greyish/brownish-yellow clay	0.38 m	Natural substrata deposit across site
(3000)	Deposit	Hard, dark brown silty clay with occasional pebbles	0-0.27 m	Topsoil deposit across site
(3001)	Deposit	Hard, yellow-brown clay with occasional stone	0.27 m	Natural substrata deposit across site
[3002]	Cut	Linear cut with vertical sides and a flat base aligned N-S (2.64 m x 0.60 m)	0.55 m	Geotechnical test pit
(3003)	Fill	Firm, blueish brown clay	0.41 m	Primary fill of pit [3002], backfill
(3004)	Fill	Firm, orange clay	0.14 m	Secondary fill of pit [3002], backfill
(3005)	Deposit	Loose, black/orange charcoal and burnt twig with frequent stones (0.76 m x 0.16 m)	-	Remains of small open-fire
[3006]	Cut	Linear cut with sloping sides and a rounded base aligned N-S (30 m+ x 0.75 m)	0.10 m	Furrow
(3007)	Fill	Frim, greyish brown clay	0.10 m	Single fill of furrow [3006], backfill
[3008]	Cut	Linear, square cut with sharp top of slope and vertical sides aligned N-S (2.83 m x 0.62 m)	0.48 m+	Geotechnical test pit
(3009)	Fill	Frim, blueish / light brown clay	0.48 m+	Single fill of pit [3008], backfill
(4000)	Deposit	Firm, dark grey brown, clayey silt with chalk flecks inclusions.	0-0.16 m	Topsoil Deposit across site.
(4001)	Deposit	Firm mid greyish brown silty with small palm to fist size stones, angular and sub-angular.	0.16-0.44 m	Subsoil deposit across site.
(4002)	Fill	Firm blueish grey silty clay with occasional light greenish orange clay inclusions.	> 0.19 m	Fill of furrow [4003], natural infill due to colluvial, alluvial and fluid deposition.
[4003]	Cut	Series of linear cuts, orientated N-S and respecting current land	> 0.19 m	Furrows, averaging 0.76 m in width with distance

Context Number	Context Type	Description	Height/Depth	Discussion
		divisions. Sharp top break of slope on to steep to moderate sides.		between furrows averaging 3.27 m (edge to edge).
(4004)	Fill	Firm mid reddish orange sandy clay with very occasional rooting.	> 0.03 m	Fill of plough scar [4005]. A mix of lower depth geology and overburden mixed together by ploughing.
[4005]	Cut	Series of linear cuts, orientated N-S and respecting modern boundaries	> 0.03 m	Plough scars, largest scar measures 0.21 m in width. Patches of scaring are frequent across the site.
(4006)	Deposit	Mixed topsoil and natural substrate with frequent modern ceramic building material, concrete, plastic, pipes, etc.	0-0.34 m	Modern disturbance associated with new housing development to the south. Replaces (4000) / (4001) and pressed into the natural substrate (4007).
(4007)	Deposit	Firm light greyish orange silty clay.	0.44 m	Natural substrate across site.

PLATES

Plate 1; PHASE 1 - detail of electric cable, facing east with no scale

Plate 2; PHASE 1 - general shot of northern end of Site, facing northwest with no scale

Plate 3; PHASE 2-3 – south facing section of [3002], facing north with 1 m scale

Plate 4; PHASE 2-3 – south facing section of [3006], facing north with 1 m scale

Plate 5; PHASE 2-3 – remains of fire (3005), facing south-southwest with 1 m scale

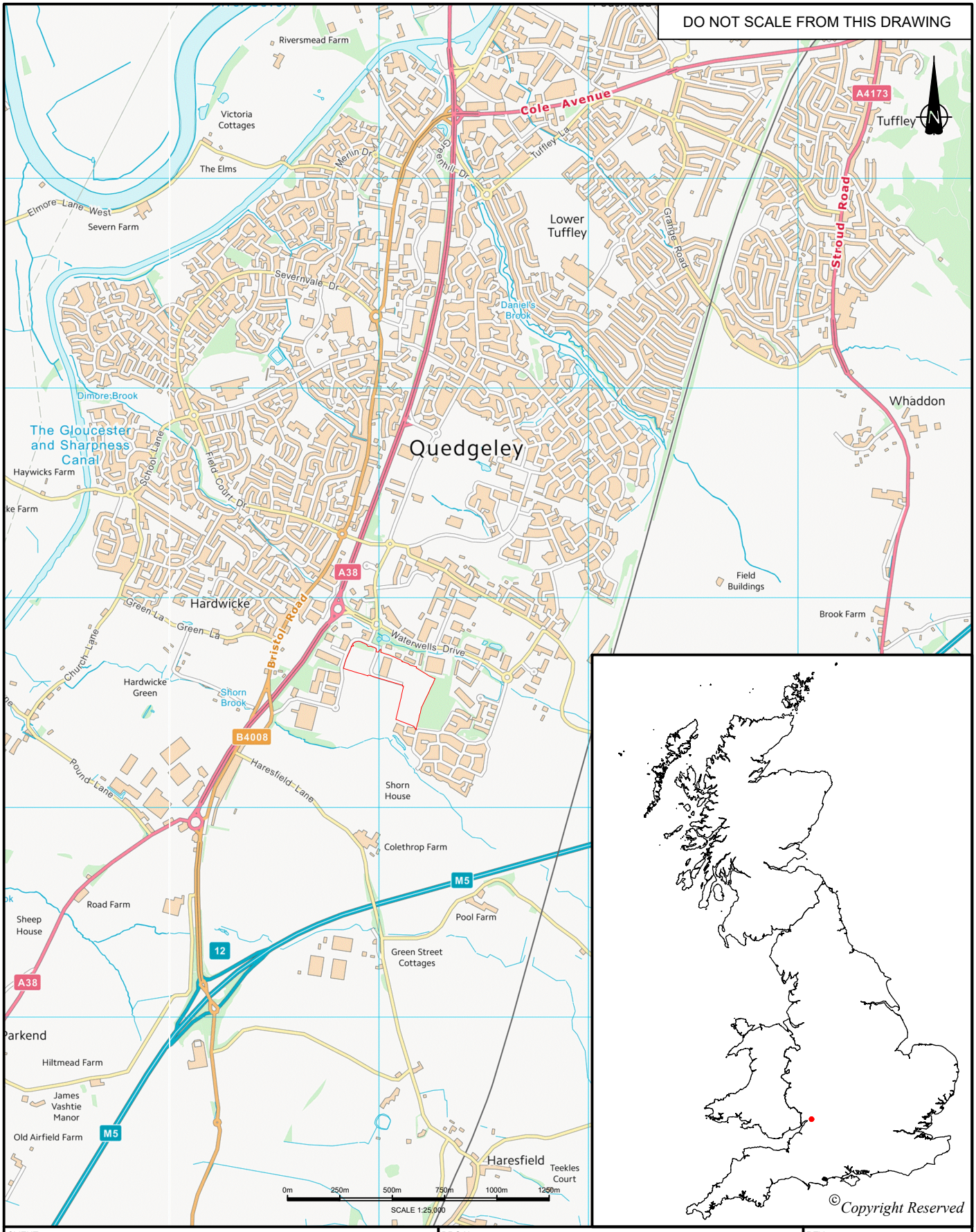
Plate 6; PHASE 4-6 – pre-excavation of furrow [4003], looking north with 1 m scale

Plate 7; PHASE 4-6 - shot showing ploughscars [4005] & furrows [4003], looking north with 1 m scale

Plate 8; PHASE 4-6 – detail shot of modern demolition layer (4006), looking south with 1 m scale

DRAWINGS

DO NOT SCALE FROM THIS DRAWING



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PROJECT: GATEWAY 12, PHASES 1-6, WATERWELLS BUSINESS PARK, DAVY WAY, QUEDGELEY, GLOUCESTERSHIRE	DRAWN BY: TJ	CHECKED BY: CA	APPROVED BY: CA
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