















LAND ADJACENT TO PUMPHOUSE LANE REDDITCH, WORCESTERSHIRE

Evaluation and Topographical Survey

Hereford Archaeology Series: 954

for Taylor Wimpey UK/Barratt Strategic

R/12/0207/OUT

October 2012





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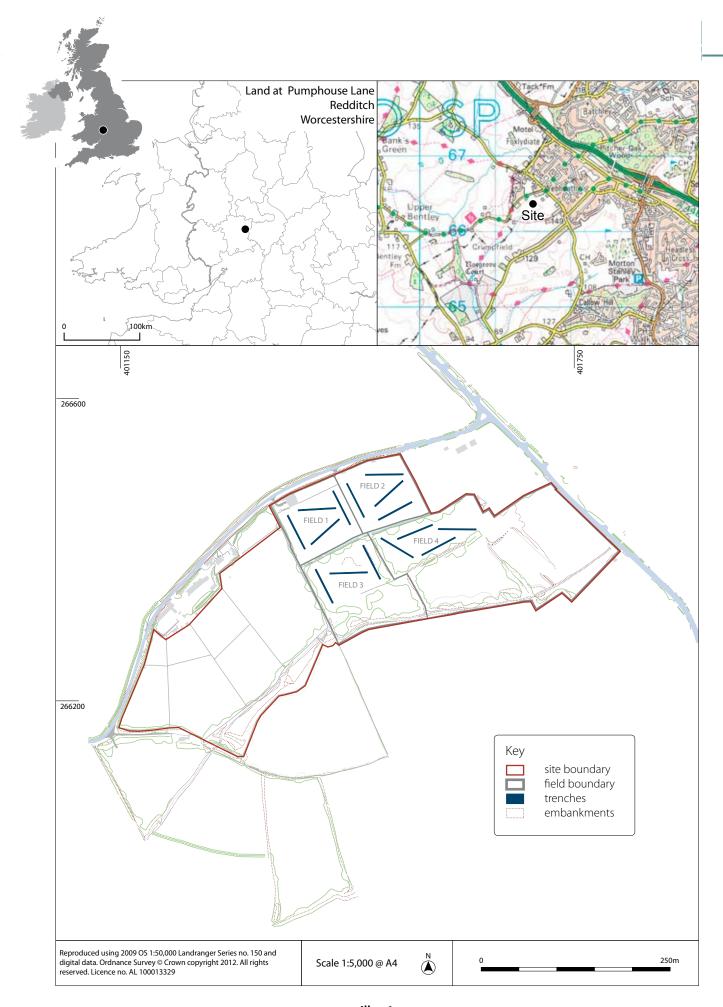


CONTENTS

1.	INTRO	ODUCTION	1
	1.1	Site description	1
	1.2	Background	1
2.	OD IE	ECTIVES	1
۷.	OBJE	CTIVES	1
3.	METH	HOD	2
	3.1	Earthwork survey	2
	3.2	Trial trenching	2
4.	RESU	JLTS	2
	4.1	Earthwork survey	2
		4.1.1 Ridge and furrow	2
		4.1.2 Possible building platforms	2
		4.1.3 Water management features	7
		4.1.4 Other features	8
	4.2	Trial trenching	8
5.	DISCU	USSION	9
	5.1	Significance of the remains	10
		5.1.1 Ridge and furrow	10
		5.1.2 Building platforms	10
		5.1.3 Previously unknown archaeological remains	10
6.	REFER	RENCES	11
7.	APPE	ENDICES	12
	Appe	endix 1 Gazetteer of earthworks	12
	Appe	endix 2 Site register	15
		Appendix 2.1 Trench register	15
		Appendix 2.2 Context register	15
		Appendix 2.3 Photographic register	16
		Appendix 2.4 Survey photographic register	17

LIST OF ILLUSTRATIONS

Illus 1	viii
Site location	VIII
Illus 2a Earthworks – eastern side of site	3
Illus 2b Earthworks – western side of site	5
Illus 3 F8,7 & 6 looking W	7
Illus 4 F1 looking S	7
Illus 5 F4 & 5 looking N	8
Illus 6 F26 looking SW	9
Illus 7 General view of Trench 13	10
Illus 8 View of Trench 4	10



Illus 1 *Site location*

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LAND ADJACENT TO PUMPHOUSE LANE REDDITCH, WORCESTERSHIRE

Evaluation and Topographical Survey

Headland Archaeology (UK) Ltd conducted an earthwork survey and trial trenching on land adjacent to Pumphouse Lane Redditch, Worcester. The topographic survey identified areas of ridge and furrow, water management and possible building platforms, while the trial trenching confirmed the presence of post-medieval agricultural activity in the investigated areas.

1. INTRODUCTION

Headland Archaeology (UK) Ltd was commissioned by Taylor Wimpey UK/Barratt Strategic to undertake a program of archaeological evaluation and topographic survey at land adjacent to Pumphouse Lane, Church Road, Webheath, Redditch. The work was conducted as part of the outline planning process (ref: R/12/0207/OUT) for the proposed development of a new housing estate.

A brief for the work was issued by Worcester County Council Historic Environment and Archaeological Service. A project design (Kimber 2012) was produced in response to the brief and agreed with the archaeological advisor to the planning authority.

1.1 Site description

The proposed development site is located at National Grid Ref SP 0167 6633 (site centre) on the western side of Redditch adjacent to the suburb of Webheath. It is currently occupied by pasture. The proposed development area is bounded by Pumphouse Lane to the north-west and a small tributary of the Swan Brook to the southeast.

Within the valley, the general topography varies from 140m AOD in the north-eastern corner to 120m in the south-western corner. The proposed site covers 11.6ha, although the main development impacts are limited to a smaller area of four fields covering $30,300 \, \text{m}^2$.

Mercia Mudstone overlain by glacial till (Diamicton Till) represents the underlying geology (British Geological Survey website; http://www.bgs.ac.uk).

1.2 Background

A desk-based assessment relating to the development was produced in connection with the planning application in 2012 by CSa Environmental (CSa 2012) and identified that the site contained widespread ridge-and-furrow earthworks and water management features reportedly connected with the cultivation of watercress.

As a precursor to the fieldwork, an HER search was undertaken around a 500m buffer of the development area in order to update the research undertaken for the desk-based assessment. The search identified records relating to relating to former ponds, 'ridge and furrow' cultivation, trackways and potential building platforms within the proposed development area (WSM 21775, 37535, 37536, 21772, 21773, 21770, 217777, 21771, 21766, 21767).

2. OBJECTIVES

The purpose of the evaluation was to provide sufficient evidence for confident prediction of the impact of the proposal by establishing the extent, nature, and importance of any heritage assets within the affected area.



Specific aims of the evaluation included:

- Recording the upstanding earthworks present across the development area.
- Establishing the location, extent, nature, and date of archaeological features or deposits that may be present within the areas of the proposed development.
- Establishing the integrity and state of preservation of archaeological features or deposits that may be present within the areas proposed to be disturbed during the development.
- Establish the date and nature of any medieval or post-medieval rural settlement on the site.

The project was undertaken in line with the Standards and Guidelines for Archaeological Projects in Worcestershire, issued by Worcestershire Historic Environment and Archaeology Service.

The resulting archive (finds and records) will be organised and deposited in Worcestershire Museum to facilitate access for future research and interpretation for public benefit.

3. METHOD

3.1 Earthwork survey

The survey was designed to conform to a Level 2 RCHME standard earthwork survey and comprises a two-dimensional plan of the site combined with a photographic and descriptive record of the earthworks.

The earthworks that were identified within the proposed development area were recorded using a Trimble RTK R6 GPS - accurate to within 10mm in plan and 40mm in elevation.

The data collected was then used to produce a site plan with descriptive text, identifying the character of earthworks represented within the proposed development area.

3.2 Trial trenching

Fifteen evaluation trenches measuring $50 \times 1.6 \text{m}$ were excavated in the four fields defined in the brief as the main area of impact. Trenches were placed to target both known earthworks and blank areas.

The evaluation trenches were excavated using a 360° tracked excavator equipped with a toothless ditching bucket. All trenches were excavated by machine, under direct archaeological supervision.

Machine excavation terminated at the top of the natural geology or the first significant archaeological horizon. Spoil was stored beside the trench; topsoil and subsoil were kept separate by putting topsoil on one side of the trench and subsoil on the other.

Excavation of archaeological deposits and features required to satisfy the objectives of the evaluation continued by hand. On completion of machine excavation, all faces of the trench that required examination or recording were cleaned using appropriate hand tools. The stratigraphic sequence was recorded in each of the trenches, even where no archaeological deposits were identified.

4. RESULTS

4.1 Earthwork survey

Within the proposed area of development three main types of earthworks were identified during the survey. They can be grouped basically into ridge and furrow; possible building platforms; and water management features.

The features identified during the topographic survey are located on Illus 2, the complete record of the identified earthworks can be found in Appendix 1.

4.1.1 Ridge and furrow

The earthwork survey has recorded considerable evidence of relatively straight ridge and furrow (F1-WSM21775, F9-WSM37535, F11-WSM21774, F13-WSM21772 & F19) within the proposed development area. The survival of the earthworks is better towards the north-eastern side of the site, but faint traces of straight furrows remain within the fields located towards the southwest (F20-WSM21770, F21, F22, F23, F24).

The general characteristics of the ridge and furrow within the proposed development was straight and flat with a furrow to furrow width of approximately 4.1m; the tops of the ridges were raised from the furrow bases by approximately 0.25m.

One area of ridge and furrow (F9-WSM37536) was enclosed by a wide but shallow ditch (F8). Several of the possible building platforms (F6, F7) also abutted this feature, suggesting that they and it are part of one related system.

The change in condition of the earthworks present within the development area appeared directly related to the different land usages represented within the study area. The vast proportion of the land towards the south-west of the site is currently being used as paddocks for horses and appears to have been rolled flat. The area containing the majority of the well preserved earthworks has remained as rougher pasture.

4.1.2 Possible building platforms

A series of flattened and rectangular earthworks (F6, F7), possibly building platforms, were located within the field adjacent to Church Road and within close proximity to the existing farm buildings. The larger feature was a single platform measuring 12.31m by 9.08m with a top level 139.5m; it was bounded on the southeast and southwest by a field boundary (F8).







Illus 3 F8,7 & 6 looking W



Illus 4F1 looking S

Associated with F7 and F8 were two smaller platforms (F6) both sharing similar dimensions (Platform 1, 4.7m by 6.3m, Platform 2 7.13m by 6.45m). The location of the platforms and associated field boundary would suggest a contemporary relationship with the ridge and furrow within area F2.

Towards the west of the existing farm building is the slight suggestion of another platform (F12) measuring approximately 10m by 3m. The area was only visible as a change in the vegetation.

In the western corner of Field 4 was a semicircular raised area (Illus 2a). It is not typical of a building platform and possibly

relates to the construction of the entrance into Field 3 and Field 2 and modern drainage ditch. No building platform was observed at the location of WSM37538.

4.1.3 Water management features

Water management features are also represented within the area bordering Church Road. A series of interconnecting ponds (F4) leads into a narrow channel (F5). This channel would originally have drained into the stream to the south. The ponds and channel are clearly later than the ridge and furrow, cutting through feature F8 and ridge and furrow F1 (WSM21775). They have suffered erosion and damage due to



the movement of vehicles across the site. A second stretch of gully near to the stream (F28) may be part of the same system as F5.

A large semi-circular depression in Field 3 (F16) could also represent the remains of a pond.

The original course of the stream (F17, Illus 2a) can also be seen along parts of the southern site boundary. The stream has been straightened in the recent past, possibly at the time the sewage works was constructed.

4.1.4 Other features

Downstream of the former sewage works a large bund or dam (F26-WSM21767) was constructed across the course of the stream. This appears to have once formed a large pond that may have been associated with the sewage works (F27-WSM21773).

4.2 Trial trenching

For ease of reference, the excavation results have been displayed in a tabular form (Appendix 2.2 and 2.3). In addition, a brief, generalised description of the features present in the excavated trenches is given below.

The general stratigraphic make up the site consisted of the present day turf line (a mid brown silty clay containing infrequent grit and pebble inclusions), overlying a topsoil/subsoil horizon. In the fields that had been used for paddocks (Fields 1 & 2) the topsoil was generally only 0.1m thick, and overall trench depth was around 0.4m. In the rougher pasture fields (Fields 3 & 4) the topsoil was generally 0.3m thick, and overall trench depth was 0.6m.

The trial trenches within Fields 1 and 2 indicated that the topsoil depth was greatly reduced, possible through improvement of the fields by rolling to create the paddocks, however careful machine excavation revealed the presence of slight traces of plough marks surviving below the topsoil. The identification of concentrated plough marks indicated that these fields once contained ridge and furrow earthworks.

Within Trench 1 and located to its south-east end was a spread of red brick (105) and a linear cut containing a dark topsoil fill (106), both features were considered to be of modern date.

The excavated trenches within Fields 3 and 4 differed to those in Field 1 and 2 as the fields had not been levelled and still contained visible earthworks in the form of ridge and furrow hence the general depth of the superficial deposits was considerably greater.



Illus 5 F4 & 5 looking N



Illus 6F26 looking SW

In Trench 10, a large circular feature [1009] measured 1m in diameter and 0.04m deep. It contained a blackened silty deposit [1010], possibly the remains of a fire. The material seemed recent in character, but no direct dating evidence was recovered.

Trench 11 was excavated across the location of a building platform recorded on the HER (WSM37538). No feature was observed on the surface, and there were no sub-surface remains indicating the presence of this feature.

Two features were recorded within trench thirteen. A circular feature [1306] measured 0.16 x 0.09m and was filled with clean yellow sharp sand [1307] – almost certainly a recent borehole (not illustrated). Adjacent to it was a shallow irregular cut feature (1304) measuring 0.45m x 0.15m and 0.09m deep. The fill [1305] of this feature contained flecks of charcoal and small stones. Given its location in an area of ridge and furrow this feature was probably formed as a result of ploughing or clearance.

During the excavation of the trenches, unstratified finds comprising blue and white ceramic pottery, glass fragments and small portions of broken clay pipe stems were observed, indicating that the ridge and furrow was of post medieval date.

5. DISCUSSION

Based on the topographic survey, the historic development of earthworks within the area appears to have occurred in four main phases:

Phase 1, the earliest, comprises the ridge and furrow (F1, F2 F9, F11, F13, F19, F20–24), the platforms (F7 & F6) located within the northeast area of the site, and the gully F8. The original meandering course of the stream (F17) at the southern site

boundary appears to have been a natural boundary to the field systems associated with the ridge and furrow.

Phase 2 comprises the interconnecting ponds and drainage channels (F4, F5), which can be seen to cut the earthworks of phase 1 F8. The ponds appear to have been divided by earthen dams, which have consequently been removed to allow vehicle access across them. A small amount of water remains within the bases of the pond but the feeder system seems to be nonfunctioning. The possible pond F16 is also tentatively placed in this phase.

Phase 3 comprises the removal of the evidence of previous earthworks towards the south-west and north-west area of the proposed development area. The levelling of these fields has left only faint traces indicating the nature of the previous historic landscape (F20, F22, F23 & F24).

Phase 4 comprises the construction of the bund/dam and pond system towards the south western corner of the site (F26 WSM 21767, 21766). This construction may have been associated with the former sewage works (F27, WSM21773) and therefore can be considered to be a modern feature. The later canalisation of the brook possibly represents the later phase associated with the construction of the sewage works.

Although the topographical survey of the development site was limited by the long grass towards the south-western area of the site it has identified a large portion of an historic agricultural landscape surviving within the site of the proposed development. The features present within this area mainly consist of ridge and furrow and possible building platforms of post-medieval date, with later water management features and ponds.





Illus 7General view of Trench 13



Illus 8View of Trench 4

5.1 Significance of the remains

5.1.1 Ridge and furrow

A commonly accepted method applied to the initial dating of ridge and furrow cultivation is to examine to the overall shape of the system, the older examples appearing to form lazy 'S' shaped curves within the field. This distinctive shape is thought to have been caused by the use of a non-reversible plough and the need to turn large team of oxen at the end of the ploughed strip. The improvement of ploughs and the change from large teams of oxen to heavy horses resulted in a change in form from 'S' shaped systems to a straighter arrangement. The general characteristic of the ridge and furrow recorded in the proposed development area is straight, implying a post-medieval date; this is also indicated by the date of the post-medieval artefacts seen within the topsoil. The areas of ridge and furrow and associated boundaries conform well to field layouts shown on the 1833 Tithe Map, suggesting that these remains relate to post-medieval enclosure and improvement of the area, rather than any preexisting medieval system.

The presence of these features within the local environment gives a visible indication that activities associated with historical methods of farming have occurred. The earthwork survey of this area will allow the distribution of land characteristics to be mapped and this can help to place the historic land use of the locality within its regional context. Generally, following recording of their dimensions, layout and alignment, there is little potential

for further work to produce significant information. The significance of the features is assessed as low.

5.1.2 Building platforms

Examining the historic map evidence collected in the desk-based assessment – and in particular the 1839 Tardebigge Tithe Map - it seems clear that platform F12 (to the west of the existing farm building adjacent to Field 4); and platforms F7 and F4 (associated with the ridge and furrow F9 and drainage channel F8) are within an enclosed area surrounding a small outfarm. Any buildings on these platforms are therefore most likely to have been agricultural structures related to the post-medieval farmstead.

The identified platforms appear to have been constructed by levelling out an uneven area. If structures had been erected on top of these platforms they could be expected to have been supported by crucks and/or timber framing, and would not necessarily have left any trace of their presence below the ground. It is likely that no further significant information remains to be recovered from these earthworks. Their significance is assessed as low.

5.1.3 Previously unknown archaeological remains

The excavation of the evaluation trenches had demonstrated that sub-surface activity related to the earthworks is generally limited to the traces of ridge and furrow cultivation of post-medieval date. It did not identify any activity predating the earthworks.

6. REFERENCES

- CSa Environmental Planning 2012 Webheath, Redditch, Archaeological Desk Based Assessment.
- English Heritage 2007 Understanding the Archaeology of Landscapes: A Guide to Good Recording Practice, English Heritage December 2007.
- Institute for Archaeologists 2008 Standard and guidance for archaeological field evaluation, IfA, revised, October 2008.
- Kimber, M 2012 Pumphouse Lane, Redditch, Worcestershire: Project Design for Archaeological Evaluation. Headland Archaeology (UK) Ltd.
- Watt, S 2011 *The Archaeology of the West Midlands, A Framework for Research,* Oxbow Books on behalf of The University of Birmingham.



7. APPENDICES

Appendix 1 Gazetteer of earthworks

Feature no.	Description	Average Dimensions
F1 WSM21775	A series of linear earthworks approximately 109m in length and 64m in width forming straight runs of ridge and furrow with an average width of 4.3m wide (furrow centre to furrow centre) with flattened tops with an average width of 2.1m.	109m in length with a width of 64m.
		furrow to furrow,
	Aligned NW-SE the lines of ridge and furrow start at 142.8m OD and run down the slope of the valley for approximately 109m to a level of 135.0m OD were it is truncated by modern works during the canalization of the tributary brook of the Swan.	approximately 4.3m and a flattened top of 2.1m wide
	The ridge and furrow predates the construction of the ponds, feature 4.	
F2 WSM21775	A series of earthworks approximately 15m in length and 67m in width forming straight runs of ridge and furrow with an average width of 3.8m wide (furrow centre to furrow centre) with flattened tops with an average width of	
	2m.	furrow to furrow,
	Aligned NW-SE the lines of ridge and furrow start at 133.9m OD and run up the slope of the valley for approximately 15m to a level of 135.5m OD were it is truncated by modern hosing along the SE boundary of the site, no evidence of the furrows was observed within the gardens of the adjacent housing development	approximately 3.8m and a flattened top of 2m wide
	Although separated by the brook the ridge and furrow generally appears to be on a slightly different NE-SW alignment to that of area 1, possible indicating that the brook was part of a dividing field boundary.	
F3	A series of linear earthworks approximately 65m in length and 40m in width forming straight runs of ridge and furrow with an average width between 4.1m wide at the SE edge to 3.m towards the SW (furrow centre to furrow	60m in length with an approximate width of 40m
	centre) with flattened tops matching the changing dimensions of the furrows across the field.	furrow to furrow,
	The change in dimensions could possible indicate that part of the field was originally associated with feature 1 and this area of ridge and furrow actually comprises of two separate field systems or that the diminishing dimensions of the ridge and furrow related to the gradual sloping of the field towards the SW edge.	approximately 4.1m to 3m
	The ridge and furrow predates the construction of the ponds (feature 4) as the ridge and furrow can be seen to run into the cut drainage channel (feature 5)	
F4	A series of three interconnected, originally rectangular ponds, possibly fed from a spring in the field to the NW of the site (outside the proposed development area). Earthen dams located on the SE edges once probably divided the ponds now removed; this would have allowed the ponds to contain water whilst allowing a steady flow of water from the feeder to cascade down the run of ponds. This system of interconnected ponds with running fresh water was used in medieval times to down the feeder to come the ponds (Fountains Abbey, North Yorkshire Per's Com, Author) yet the	top, base 139.8m. Pond 2, 14.m by 9.2m (erosion effected), 139.4m top, base
	dimensions and depth of these ponds would appear to be on the small size and therefore probably relates to the production of watercress, as identified in the DBA (CSa 2012) The ponds are later features in relation to the ridge and furrow within the field.	Pond 3, 8m by 10m, 138.7m top, base 138.4m.
	Connected to ponds is the remains of a channel , feature 5	
F5	A relatively large drainage channel connecting the ponds (feature 4), aligned NW-SE the channel runs down the slope of the field towards the Swan brook the connection with the brook is not obvious and has possibly been removed when the brook was canalised suggesting that this feature relates to the in-filled original course of the brook F17	67.75m by 4.3m top-1.3m base, running from 138.6m top, NW , 138.17m top base to 135.05m SE
F6	Two small low profile, semi sub rectangular platforms possible associated with feature 7, bounded to the SE by	Platform 1, 4.7m by 6.3m
	feature 8, and divided SW-NE by a small gully also connecting with feature 8. The platforms are possible related to the ridge and furrow within the field as they respect the overall alignment of the vicinity.	Platform 2 7.13m by 6.45m
F7	Large platform to the SW of feature 6 bounded on the SE and SW by field boundary/drainage channel, feature 7. the associated relationship and vicinity with feature 6 and 8 would suggest a contemporary relationship with the associated ridge and furrow (feature 2 & 3)	
F8	Possible drainage channel also forming internal field boundary, aligned NW-SE the channel slopes down the valley side and probably once connected with the course of the Swan Brook. The NW-SE alignment of the channel runs towards a raised bank forming a partial field boundary and continues along the NE edge of the boundary. The channel then takes a dog leg before connecting with the course of the present day brook, this may in fact be a modern addition to the channel The Channel is aligned with the platform 7 and is further connected to the platforms by a doglegged channel aligned NE-SW	Main NW-SE channel 38.2m by 4.5m, max depth 0.4m. interconnecting NE-SW gully y,20m by 3.5m

Feature no.	Description	Average Dimensions
F9 WSM 37535	A series of linear earthworks approximately 57m in length and 17m m in width forming straight runs of ridge and furrow with an average width of 4.15m wide (furrow centre to furrow centre) with flattened tops with an average width of 3m.	
		furrow to furrow,
	Aligned NW-SE the lines of ridge and furrow start at 137.7m OD and run down the slope of the valley for to a level of 132.6m OD	approximately 4.15m and a flattened top of 3m wide
F10 WSM21774	Single channel possible related to the remains of ridge and furrow, feature 9 but on a slightly different NW-SE alignment suggesting that, this feature is the remains of a field boundary/ drainage channel.	48.7m by 2.10m, aligned NW 135.9m to SE 131.3m
F11 WSM21774	Faint traces of ridge and furrow aligned NE-SW the evidence survives as slight depressions in the field. The change in direction of the ridge and furrow suggest that feature 10 may be a field boundary.	e Approximately 29m by 1.5m
F12	Possible building platform or flattened area associated with the existing farm buildings within the area. Only visible as a change in the vegetation.	Approximately 10m by 3m
F13 WSM21772	A series of earthworks approximately 120m in length and 45m in width forming predominately straight runs of ridge and furrow with a slight curve towards the NE direction of the run. The furrows an average width of 3.80m wide (furrow centre to furrow centre) with rounded tops with an average width of 2m. The ridge and furrow respects the contemporary field boundaries	120m in length with an approximate width of 45m
	Aligned NW-SE the lines of ridge and furrow start at 133.9 m OD and run up the slope of the valley for approximately 15m to a level of 135.5m OD were it is truncated by modern hosing along the SE boundary of the site, no evidence of the furrows was observed within the gardens of the adjacent housing development	
F14	Slightly raised semi circular feature located within the corner of the field, possible building platform, but pre-dates the ridge and furrow within the field and has the general appearance of a flattened modern entrance into the SW field although it may be spread from the construction of the deep drainage channel dividing this field from the field towards the NW field	
F15	Irregular raised platform aligned NW-SE with the present boundary of the field but set 10m in from the boundary	NW-SE 30m
F16	Semi circular dished depression within the field the feature is open towards the SW edge but has the appearance of once being a pond or flood pond.	20m by 17m , 129.7m top, base 129.7m
F17	Evidence for the original course of the Swan brook remains in the form of ox bowing depressing within the field and close to the existing course of the Brook. The width of the depression would suggest that the Brook could have been described as small river	Approximately 120m by 14m, 130m top 129m base.
F18	Faint traces of ridge and furrow aligned NW-SE	40m in length with an approximate width of 20m
		furrow to furrow,
		approximately 4.3m and a flattened tops of 2.4m wide
F19	Very Slight traces of ridge and furrow aligned NW-SE, visible within the SE entrance to the paddock. The paddock has possible been ploughed and then subsequently been rolled flat removing the majority of traces of ridge and	Approximately 20m by 11m furrow to furrow,
	furrow	approximately 5mand a flattened tops of 3m wide
F20 WSM21770	Although the field was obscured through the growth of winter grass feed very faint indications of depression aligned NW-SE indicated that ridge and furrow once existed within this field	Approximately 40m in length spread across the field.
F21	Very Slight traces of ridge and furrow aligned NW-SE, visible with in the northern corner of this large paddock.	Approximately 40m in length
	The paddock has possible been ploughed and then subsequently been rolled flat removing the majority of traces of ridge and furrow within this area	5
F22	Possible faint traces of ridge and furrow aligned NW-SE located within the field although this may be the remains of a in-filled field boundary	Approximately 15m and 10m in length
F23	Slight traces of the remains of ridge and furrow surviving NW-SE close to the SE entrance to this paddock	Approximately 13m and 10m in length
F24	Possible faint traces of ridge and furrow aligned NW-SE located within the field although this may be the remains of a in-filled field boundary	Approximately 12m and 16m in length



Feature no.	Description	Average Dimensions
F25	The features within this field were only visible when the sun cast shadows, which showed very faint evidence that Not Surveyed the field once contained ridge and furrow aligned E-W. although incredibly faint the alignment of the furrows represents a change to the normal pattern observed within the proposed development area	
F26 WSM21767	Very large earthen bund constructed NW-SE possibly forming a dam (WSM21767) and pond (WSM21766) associated with the former sewage works towards the NE or a mill towards the SW. the bund is breeched by the brook through a small straight-sided cutting that may have once house sluice gear. Towards the NE, the ground is very wet, boggy, and banked on both sides of the brook, suggesting that the pond would have extended for approximately 160m.	Approximately 40m in length with a spread of 12m, top level 120.5m base level 118m
F27	Small area of overgrown ground, bounded on the NW side by a low iron fence and the Swan brook to the SW, possibly the original area of the former sewage works	Not Surveyed
F28	Small bank and gully aligned NW-SE; this feature connects with the present canalised course of the Swan brook, possible later diversion of F5?	Aligned NW-SE 22m in length and approximately 4m wide

Appendix 2 Site register

Appendix 2.1 Trench register

Trench	no. Dimensions (m	n) Description
1	1.8 x 50 x 0.35	(NW 134.53m – SE130.82m OD base level), excavation revealed two modern feature located at the SW end, brick spread and pipe cut, un-excavated, No archaeological features of significance present-average depth 0.42m
2	1.8 × 50 × 0.30	(E134.7m –W 135.6m OD base level), excavation revealed two modern feature located at the SW end, brick spread and pipe cut, un-excavated, No archaeological features of significance present-average depth 0.42m
3	1.8 × 50 × 0.30	(NE $133.3m - SW 131.35m OD$ base level), excavation revealed presence of numerous plough marks aligned N-S approximate width $0.1m$.
4	1.8 x 50 x 0.35	(N 136.58m - SW 132.52m OD base level), excavation revealed presence of numerous plough marks aligned N-S approximate width 0.1m.
5	1.8 x 50 x 0.40	(N 136.7m – SW 133.6m OD base level), No archaeological features of significance present-average depth 0.4m
6	1.8 x 50 x 0.40	(W137.80m-E138.8mODbaselevel), excavationrevealedpresenceofmoledrains.Noarchaeologicalfeaturesofsignificancepresent
7	1.8 × 50 × 0.40	(SW 135.4m – NE 138.05m OD base level), excavation revealed presence of mole drains. No archaeological features of significance present
8	1.8 x 50 x 0.35	(W 133.90– NE 135.45m OD base level), excavation revealed presence of mole drains. No archaeological features of significance present
9	1.8 x 55 x 0.70	(N 128.40m – S 125.80m OD base level), No archaeological features of significance present
10	1.8 x 50 x 0.50	(E 127.9m – W 127.2m OD base level), the excavation revealed the presence of land drains aligned N-S at a depth of 127.6m and 127.2m. Cut from 1002, a circular dump of black material was observed, the feature was considered modern. Within the makeup of 1003 was observed a pebbly area aligned with a similar feature within TR11, possible a former river channel
11	1.8 × 50 × 0.55	(N 130.5m - S 128m OD base level), No archaeological features of significance present, however within the makeup of 1103 was observed a large pebbly area aligned with a similar feature within TR10, possible a former river channel
12	1.8 x 50 x 0.50	(SW 131.90m – NE 131.73m OD base level), during the excavation of the trench the furrows were observed and excavated. Blue and white transfer print pottery and clay pipe stems were identified, suggesting a late post medieval date for the ridge and furrow Circa 1700
13	1.8 x 50 x 0.60	(N 130.5m – S 128m OD base level), The excavation of this trench was aligned upon the flattened ridge, and surface finds included broken clay pipe stems and brick. No archaeological features of significance present. Located within the trench was the evidence of a test-borehole, with a yellow sharp sand fill.
14	1.8 x 50 x 0.60	(NE 136.7m – SW 132.5m OD base level), No archaeological features of significance present
15	1.8 x 40 x 0.50	(SE 139.3m – NW 137.7m OD base level), No archaeological features of significance present

Appendix 2.2 Context register

Context Description Average thickness (m)				
Fields 3–4; Trenches 9–15				
002	Light brown orange silty clay subsoil fields 3 & 4	0.3m		
003	Natural- brown orange clay	unexcavated		
101	Dark greyish brown silty clay topsoil fields 1 & 2	0.04-0.1m		
101	Light grey brown loam subsoil fields 1 & 2	0.05-0.08m		
102	Mid brown red silty clay subsoil. Fields 1 & 2	0.03/0.04m		
103	Light grey brown silt loam subsoil	0.14/0.19m		
104	Mid yellow grey silt loam-natural	unexcavated		
105	Red brick spread located within trench 1	0.8 x 1.6m		
106	Topsoil-filled cut containing red brick	0.4 x 1.6m		

Context Description Average thickness (m)				
Fields 3–4; Trenches 9–15				
1008	Cut of large circular pit. Fill (009)	1x0.9x0.04m		
1009	Fill of [008].	1x0.9x0.04		
1107	River channel deposit Tr.10 & 11. Geological	_		
1204	Cut of possible small pit Tr.12 post hole	0.15x0.45x0.09		
1205	Fill of [1204], charcoal flecks, no dating evidence	0.15x0.45x0.09		
1306	Cut of circular feature-modern borehole filled by (006)	0.09m		
1307	Fill of [005] Tr.13 Yellow sharp sand	0.2x0.16x0.09m		



Appendix 2.3 Photographic register

Photo no.	Colour Slide Film	B&W Film 700	Digital	Facing	Description
1			01		General site shot pre-ex.
2	-		02		General site shot pre-ex.
3	-		03		General site shot pre-ex.
4	-		04		General site shot pre-ex.
5	-		05		General site shot pre-ex.
6	-		06		General site shot pre-ex.
7	-		07		General site shot pre-ex.
8	_		08		General site shot pre-ex.
9	-		09		General site shot pre-ex.
10	-	01	10	W	Tr.15
11	-	02	11	N	S. facing section Tr.15 (001, 002, 003)
12	-	03	12	SW	Tr.14
13	-	04	13	NW	Tr.14 section
14	-	05	14	SW	Tr.13
15	-	06	15	NE	Tr.12
16	-	07	16	-	Poss. Feature [004] Tr.13
17	-	08	17	NNE	Poss. Feature [004] Tr.13- half section
18		09	18	-	Tr.13 [005] circular borehole; pre-ex
19	-	10	19	-	Tr.13 [005] circular borehole; post-ex
20	-	11	20	S	Tr.11
21	-	12	21	W	Tr.10
22	_	13	22	S	N. facing section Tr.10 with river channel deposit at base
23	-	14	23	S	N. facing section Tr.10
24	-	15	24	-	[009] Pre-ex photo Tr.10
25	=	16	25	-	[009] section photo
26	-	17	26	SSE	Tr.9
27	-		27		General shot pre-ex. Field 1
28	-		28		General shot pre-ex. Field 1
29	=		29		General shot pre-ex. Field 1
30	-		30		General shot pre-ex. Field 1
31	-	18	31	Е	W. facing section Tr.1
32	-	19	32	Ν	Tr.1
33	-	20	33	NW	Tr.1 Brick lined field drain 105
34	-	21	34	W	Modern feature 106

Photo no.	Colour Slide Film	B&W Film 700	Digital	Facing	Description
35	-	22	35	Е	Tr.3
36	_	23	36	N	Tr.3 Furrow marks. W. end of trench
37	_	24	37	N	Tr.3 Furrow marks. W. end of trench
38	_	25	38	N	Tr.4 E. facing section
39	-	26	39	N	Tr.4
40	_	27	40	NW	Tr.2
41	-	-	41	S	Tr.3 backfilled
42	_	-	42	NW	Tr.2 backfilled
43	_	-	43	S	Tr.1 backfilled
44	_	-	44	SW	Tr.4 backfilled
45	_	-	45	SW	Field 1 general shot
46	_	-	46	W	Field 1 general shot
47	_	-	47	S	Field 2-pre-ex
48	-	-	48	E	Field 2-pre-ex
49	-	28	49	W	E. facing section Tr.5 Field 2
50	-	29	50	W	Tr.5
51	-	30	51	Е	Tr.8
52	_	31	52	S	Tr.8 N. facing section
53	-	32	53	Е	Tr.7
54	_	-	54	NW	Tr.6
55	_	-	55	S	Tr.9 backfilled
56	_	-	56	E	Tr.10 backfilled
57	_	-	57	S	Tr.11 backfilled
58	-	-	58	SE	Tr12 backfilled
59	_	-	59	Е	Tr.13 backfilled
60	_	-	60	E	Tr.14 backfilled
61	_	-	61	SE	Tr.15 backfilled
62	_	-	62	SW	Field 4 general shot- backfilled trenches
63	_	-	63	SW	Field 3 general shot- backfilled trenches
64	-	-	64		Tr.5 backfilled
65	-	-	65		Tr.8 backfilled
66	-	-	66		Tr.7 backfilled
67	-	-	67		Tr.6 backfilled

Appendix 2.4 Survey photographic register

<u> </u>		,, , , , , , , , , , , , , , , , , , ,
Digital photo no.	Facing	Description
PLRW11-0	SW	General view of trenches over ridge and furrow
PLRW11-1	SW	View of Ridge and Furrow showing F1 and F8
PLRW11-2	Е	View of R&F, Showing F1, F8 and F4
PLRW11-3	Е	View of R&F, Showing F1, F8 and F4
PLRW11-4	Ν	View along Hollow way
PLRW11-5	Ν	View along Hollow way
PLRW11-6	-	-
PLRW11-7	Ν	View along Hollow way
PLRW11-8	Ν	View along Hollow way
PLRW11-9	Ν	View along Hollow way
PLRW11-10	Ν	View along Hollow way
PLRW11-11	Ν	General View
PLRW11-12	Ν	View of R&F, F23
PLRW11-13	Ν	View of R&F, F23
PLRW11-14	Ν	View of R&F, F23
PLRW11-15	NW	Cut in Bund/Dam, F26
PLRW11-16	-	-
PLRW11-17	NW	Bund/dam, F26
PLRW11-18	NW	Bund/dam, F26
PLRW11-19	SE	Bund/dam, F26
PLRW11-20	NW	Bund/dam, F26
PLRW11-21	NW	Bund/dam, F26
PLRW11-22	NW	Bund/dam, F26
PLRW11-23	NW	Bund/dam, F26
PLRW11-24	NW	Bund/dam, F26
PLRW11-25	NW	Bund/dam, F26
PLRW11-26	NE	Bund/dam ,F26 overgrown pond area
PLRW11-27	SW	Bund/dam ,F26 overgrown pond area
PLRW11-28	SW	Bund/dam ,F26 overgrown pond area
PLRW11-29	Е	View of R&F F1 and F4 (ponds)
PLRW11-30	SW	View of R&F F1 and F4 (ponds)
PLRW11-31	S	View of R&F F1
PLRW11-32	Е	View of F4 (ponds)
PLRW11-33	Е	View of F4 (ponds)
PLRW11-34	SW	View of R&F F1 and F3
PLRW11-35	SE	View of R&F, F1 and F2
PLRW11-36	N	View of Ponds F6 from channel F5
PLRW11-37	N	View of Ponds F6 from channel F5
PLRW11-38	N	View of Ponds F6 from channel F5

Digital photo no.	Facing	Description
PLRW11-39	SW	View of R&F F3
PLRW11-40	SW	View of R&F , F8
PLRW11-41	SE	View of channel F5
PLRW11-42	SE	View of channel F5
PLRW11-43	SW	View of channel F8
PLRW11-44	SW	View of channel F8, platforms F6 and F7
PLRW11-45	NW	View of F8 and F6, area F12 in distance.
PLRW11-46	-	-
PLRW11-47	-	-
PLRW11-48	SW	Pond and R&F, F18, F15
PLRW11-49	NE	R&F F23 and F24
PLRW11-50	N	View along F22
PLRW11-51	NW	View into area F25
PLRW11-51	NW	View of area F25
PLRW11-52	NE	View of area F22
PLRW11-53	NE	View of area F22
PLRW11-54	NW	View of area F24
PLRW11-55	NW	View of area F24
PLRW11-56	W	View of area F23
PLRW11-57	NW	View into areas F23 and F24
PLRW11-58	_	-
PLRW11-59	NW	View of R&F 24
PLRW11-60	NW	View of R&F 24
PLRW11-61	SW	View of R&F 24
PLRW11-62		-
PLRW11-63	SW	View of R&F 24 possible more R&F than recorded
PLRW11-64		_
PLRW11-65	S	View of F 22, possible boundary
PLRW11-66	NE	View of F 22, possible boundary
PLRW11-67	NE	View of F 22, possible boundary
PLRW11-68	N	View of F 22, possible boundary
PLRW11-69	N	View of F 22, possible boundary
PLRW11-70	S	View of F 22, possible boundary
PLRW11-71	S	View of F 22, possible boundary
PLRW11-72	-	-
PLRW11-73	-	-
PLRW11-74	NE	View towards F18
PLRW11-75	SE	View into area F18 no R&F
PLRW11-76	SE	View into area F18 no R&F



Digital photo no.	Facing	Description
PLRW11-77	-	-
PLRW11-78	W	View of F22, Possible boundary
PLRW11-79	W	View of F22, Possible boundary
PLRW11-80	-	-
PLRW11-81	W	View of R&F F24
PLRW11-82	-	-
PLRW11-83	W	View of R&F , F25
PLRW11-84	W	View of R&F , F25
PLRW11-85	W	View of R&F , F25
PLRW11-86	NW	View of R&F , F25
PLRW11-87	W	View of R&F , F25
PLRW11-88	W	View of R&F , F25 visible with shadow
PLRW11-89	W	View of R&F , F25
PLRW11-90	W	View of R&F , F25
PLRW11-91	S	View of Hollow way
PLRW11-92	N	View of Hollow way
PLRW11-93	N	View of Hollow way
PLRW11-94	S	View of Hollow way
PLRW11-95	S	View of Hollow way
PLRW11-96	SW	View of feature outside of study area
PLRW11-97	-	-
PLRW11-98	SW	View of R&F , F13
PLRW11-99	SW	View of R&F , F13
PLRW11-100	SW	View of R&F , F13
PLRW11-101	N	View of F12
PLRW11-102	SW	View of R&F , F13
PLRW11-103	SW	View of R&F , F13
PLRW11-104	SW	View of R&F , F13
PLRW11-105	SW	View of R&F , F13 and F14
PLRW11-106	SW	View of R&F , F13
PLRW11-107	-	-
PLRW11-108	_	-
PLRW11-109	-	-
DI DIA/11 111	6	V. (DOE 510

PLRW11-111 S View of R&F , F19



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