Tadpole Garden Village, Blunsdon St Andrew, Swindon, Wiltshire

Archaeological Excavation Report

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Tadpole Garden Village, Blunsdon St Andrew, Swindon, Wiltshire

Archaeological Excavation Report

Written by Alex Davies

With contributions from Leigh Allen, Martyn Allen, Edward Biddulph, Lisa Brown, Sharon Cook and Cynthia Poole, and illustrations by Charles Rousseaux and Caroline Souday

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Summary

Excavations in advance of urban development at Tadpole Garden Village, Blunsdon St Andrew, Swindon, investigated an area of 1.28 ha. Ditches forming part of an enclosure complex dated to the early/middle Iron Age were uncovered. The features are likely to have lain at the periphery of a settlement, although no evidence regarding the location of the presumed settlement was found, either during the excavation or the previous geophysical survey and trial trench evaluation.

The site is on the Oxford Clay, a topographic location where Iron Age activity is almost entirely unrecorded, positioned between the better-understood Corallian Ridge to the south and the gravel terraces of the River Thames to the north.

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The project was managed for Oxford Archaeology by Steve Lawrence. The fieldwork was directed by Mike Simms and Lee Sparks. Thanks are also extended to the teams of OA staff that cleaned and packaged the finds under the management of Leigh Allen, processed the environmental remains under the management of Rebecca Nicholson, and prepared the archive under the management of Nicola Scott.

1 INTRODUCTION

1.1 Scope of work

1.1.1 Oxford Archaeology (OA) was commissioned by Crest Nicholson to undertake a strip, map and record excavation ahead of housing development at Tadpole Garden Village, on the northern edge of Swindon.

1.1.2 The work was undertaken in accordance with Condition 8 of the planning consent (planning ref: S/11/1588). A written scheme of investigation (WSI) was produced by RPS and agreed with Melanie Pomeroy-Kellinger, County Archaeologist for Wiltshire County Council, outlining the scope, aims and methods of the investigation (RPS 2017). A project design was produced by Oxford Archaeology that detailed how the excavation would be undertaken (OA 2017).

1.2 Location, topography and geology

1.2.1 The site is located to the north of the current urban extent of Swindon and is centred on NGR SU 1177 9056 (Fig. 1). The excavation formed part of a larger development area that encompassed some 140ha, bounded by Tadpole Lane to the south and by the floodplain of the River Ray to the west. To the east is farmland used as permanent pasture whilst the land to the north is similarly pasture, along with a quarry and landfill site. The excavation area was situated within the northern part of the development area, to the south of the quarry, and comprised an area of 1.28ha.

1.2.2 The land within the excavation area falls away from a high point in the south-east corner of the field at 92m aOD to a low point of 83m aOD along the northern edge of the field as this descends towards the floodplain.

1.2.3 The underlying solid geology is recorded as mudstone of the Oxford Clay Formation. No superficial deposits are mapped (BGS nd.).

1.3 Archaeological and historical background

1.3.1 In contrast to the densely-settled gravel terraces to the north and the Corrallian Ridge to the south, prehistoric activity is relatively rarely recorded on the low-lying clay of the Upper Thames Valley (Lambrick 2009). The relative dearth of known activity on the clay may in part be due to biases in the evidence base – clay is not conducive to the appearance of cropmarks, which provide a major source of archaeological information on the gravels, while commercial archaeological excavation has been associated with quarrying of the gravels and urban expansion on the Corrallian limestone. The intervening clay has consequently been subject to fewer archaeological investigations.

1.3.2 Scattered Mesolithic, Neolithic and Bronze Age findspots are recorded in the HER, including finds of worked flint, pottery, animal bone and worked antler discovered during three archaeological evaluations in Blunsdon St Andrew (RPS 2011). These finds are largely confined to the limestone to the south and east of the site.

1.3.3 Excavations at Widhill Farm and Chapel Farm, 1km to the north of the site, found 175 sherds of Iron Age pottery. However, the vast majority of this was redeposited in

Roman features, and only a single ditch could be dated to the Iron Age (Ford *et al.* 2016).

1.3.4 Excavations 2km to the east of the site at Blunsdon Bypass discovered a small number of pits and possible postholes of middle Bronze Age and early/middle Iron Age date (Brett and McSloy 2011, 98-101).

1.3.5 A multi-phased settlement comprising significant enclosure features has been excavated at Groundwell West, 3km south-east of the site (Walker *et al.* 2001). The majority of this activity appears to date to the early Iron Age, with later phases belonging to the earlier middle Iron Age. An adjacent middle Iron Age banjo enclosure has also been excavated at Groundwell Farm (Gingell 1982).

1.3.6 The low-lying clay appears to have been first significantly exploited in the Roman period. The excavations at Widhill Farm and Chapel Farm uncovered a late Iron Age/early Roman phase comprising short gullies, pens and probable roundhouse ditches. This expanded in the middle Roman period into a larger, well-ordered settlement that included rectilinear enclosures, structures and corn-drying ovens (Ford *et al.* 2016).

1.3.7 At Blunsdon Bypass, a similar complex of rectilinear ditched enclosures was discovered dating from the mid-1st to 2nd century AD (Brett and McSloy 2011). This is adjacent to Ermin Street, followed by the present A419. The road passes 1.5km to the north-east of the site.

1.3.8 A villa is known at Kingshill Farm, 2km north of the site (Callender and Thomas 1952). Another important villa complex has been explored at Groundwell Ridge, 2.2km to the south-east (Brickstock *et al.* 2006). This has previously been suggested as being a sanctuary.

1.3.9 A Roman site was identified during geophysical survey 400m north-west of the site, adjacent to the River Ray. This included a series of enclosures aligned NE-SW/NW-SE (Archaeological Surveys 2009, 30). A ditched trackway extended southward from the settlement, running alongside the River Ray.

1.3.10 An early Anglo-Saxon settlement was also discovered at Widhill Farm, comprising three rectangular structures and a sunken-featured building, as well as pits and postholes (Ford *et al.* 2016, 18-22). Fifth-century activity has also been recorded at Groundwell Ridge (Brickstock *et al.* 2006).

1.3.11 The site appears to have remained agricultural land through the medieval period, and extensive ridge and furrow is evident within Tadpole Farm (RPS 2011, 11). Tadpole Farm itself appears to have originated in the post-medieval period, although the adjacent Grove Farm probably has medieval origins (RPS 2011, 11).

1.4 Previous investigations at the site

1.4.1 The excavation was preceded by two phases of geophysical survey (Archaeological Surveys 2009; 2011) and an evaluation comprising 400 trenches over some 140ha (Cotswold Archaeology 2011). A slightly curving, L-shaped linear feature was identified in the geophysical surveys, and was dated to the Iron Age by the evaluation.

1.4.2 The evaluation confirmed that much of the development area was otherwise devoid of features of archaeological interest.

2 RESULTS

2.1 Early-middle Iron Age

2.1.1 No finds or features were present that were earlier than the Iron Age, when a complex of at least three conjoined enclosures was established, delimited by a N-S aligned boundary ditch (Fig. 2; Plate 1).

2.1.2 The earliest iteration of the N-S boundary was represented by ditch 123 (Fig. 3, section 23), which was partly truncated by subsequent features and could have been either a single sinuous ditch or two ditches on slightly off-set alignments. The ditch was 53m long with a short return to the east at the southern end. This was the slightest ditch in the sequence of boundaries, measuring between 0.50-0.60m wide and 0.20-0.25m deep. The southern part of the ditch exhibited evidence for a recut. Two adjacent pits, 33 and 37, were contemporary with this phase of the boundary, since they were cut by the subsequent N-S ditch 121. Pit 33 was 1.80m wide and 0.42m deep and pit 37 measured 0.75m wide and 0.32m deep. Pit 37 was truncated by ditch 121, and both pits were cut by pit 35. Pit 35 was 1.16m wide and 0.16m deep, and contained Iron Age pottery and bone.

2.1.3 The main phase of the complex was defined by a N-S ditch that had been recut on at least two occasions (120, 121, 122; Fig. 3, sections 2, 7 and 27; Plate 2). The ditch extended for at least 90m but the northern end could not be located definitively as this area of the site was located at the bottom of a slope and was flooded throughout the duration of the excavation. However, the geophysical survey indicated that the ditch did not continue further the north. The southern end of the boundary curved to the east, beyond which it was truncated by furrows, although a sequence of three ditch terminals (53, 55, 57; Fig. 3 section 8) to the east of the disturbed area may represent the ends of the three phases of the boundary. The earliest phase of the ditch (122) was 2.00m wide and 0.65m deep, although it was evidently less substantial to the south, since the three interventions in the southern part of the site recorded it as measuring *c* 0.50-1.00m wide and 0.17-0.38m deep. The first recut (121) was substantially truncated by the subsequent recut (120) as well as by a furrow, but where it could be measured it was *c* 1.20-2.90m wide and 0.42-0.73m deep. The final phase of the ditch (120), was the largest, measuring 1.05-2.40m wide and 0.32-0.69m deep. Two small fragments of undiagnostic slag were recovered from fill 113.

2.1.4 Three ditches (5, 79, 97=105) branched off the N-S boundary and presumably defined rectilinear enclosures that adjoined its east side, although their eastern limits were not exposed within the excavation area. The three measured between 0.35-1.25m wide and 0.1-0.40m deep. They all contained small amounts of early/middle Iron Age pottery, and ditch 97=105 produced almost half of the total site animal bone assemblage by weight. The southern enclosure was D-shaped and measured 30 x 40m, defined to the north by ditch 97=105 which appeared to continue to the east as ditches 61 and 63. This enclosure may have been accessed via an eastern entrance defined by ditch terminals 53, 55 and 57. The middle enclosure was 30m across and was bounded to the north by ditch 5, a discontinuous feature that was represented by three segments, probably representing a single boundary that had been intermittently truncated. The northern enclosure was 20m wide and was defined by ditch 79. No

further boundaries were uncovered north of this ditch and it is uncertain whether this area had been similarly enclosed.

2.1.5 Ditches 30 and 27 (Fig. 3, section 6; Plate 3), which were located near the southern limit of the excavation area, were aligned NNE-SSW. Both contained a small quantity of Iron Age pottery and both were cut by Roman ditches.

2.1.6 Two small pits (18, 86) produced Iron Age pottery, as did tree-throw holes 59 and 88. Pit 18 cut ditch 123.

2.2 Late Iron Age and Roman period

2.2.1 A boundary represented by two ditches (125, 124) extended into the southern part of the site (Fig. 2 and Fig. 3, section 6; Plate 3). These were exposed for a distance of *c* 53m. Ditch 125 truncated Iron Age ditches 27, 30 and 53. It measured 0.68-*c* 1.50m wide and 0.14-0.39m deep and three small sherds of pottery dating to the late Iron Age/early Roman period were recovered from its fill. Ditch 124 cut ditch 125 and contained a sherd of middle to late Roman pottery. It was 1.20-2.24m wide and 0.12-0.56m deep.

2.3 Unphased features

2.3.1 L-shaped ditch 15=22 was situated in the eastern part of the excavation area, within the area enclosed by the Iron Age boundaries. It was 12m long and curved from a NNE-SSW alignment to a NE-SW alignment. Ditch 80 was aligned NNE-SSW, and extended a short distance into the south-eastern part of the site. Neither of the ditches yielded artefactual evidence.

2.3.2 Tree-throw holes 74 and 91 did not contain any datable material culture, although a small amount of animal bone was recovered from each.

3 DISCUSSION

3.1.1 The site is located on the Oxford Clay between the Corrallian Ridge to the south, and the gravel terraces of the River Thames to the north. Known Iron Age sites in the area are typically positioned on one or other of these two topographic locations, with very few sites recorded on the clay (Lambrick 2009). The nearest Iron Age settlements known in detail on both the Corrallian Ridge and the gravel terraces are either enclosed, or use ditches to segregate areas of the settlement (eg Groundwell West: Walker *et al.* 2001; Groundwell Farm: Gingell 1982; Latton Lands: Powell *et al.* 2009; Cleveland Farm: Powell *et al.* 2008; Horcott Pit: Lamdin-Whymark *et al.* 2009; Totterdown Lane: Pine and Preston 2004). The use of enclosure with ditches is more common in the extreme upper reaches of the Thames Valley compared to the gravels further to the east (Davies 2018, map 6.1). The large L-shaped ditch at Tadpole Garden Village can therefore be placed within the context of this local tradition of ditched enclosure.

3.1.2 Despite the general lack of formally defined field systems in the early-middle Iron Age in the region, a number of nearby settlements are associated with a main external linear ditch with perpendicular ditches branching off this, creating small enclosed field systems (eg Horcott Pit: Lamdin-Whymark *et al.* 2009; Watchfield: Birbeck 2001; Totterdown Lane: Pine and Preston 2004; Latton Lands: Powell *et al.* 2009). Superficially, the system at Tadpole Garden Village appears similar; however, at these nearby sites the enclosed fields are closely associated with an adjacent settlement, but no areas of occupation were apparent at Tadpole Garden Village. Prior to the excavation, the site was evaluated with 400 trenches over the entirety of the large development area (Cotswold Archaeology 2011), but the only feature of archaeological interest was the N-S boundary ditch that was targeted by the excavation, as well as an adjacent pit. Apart from this, Iron Age pottery was only recovered from two subsoil horizons in trenches that were not near to the ditch, and no other settlement remains were found. Nevertheless, it is likely by analogy with other contemporary sites that the enclosure complex was associated with a settlement, and the artefactual material presumably derives from domestic activity somewhere in the vicinity. The small size of the artefactual assemblage, however, suggests that such occupation was not close to the excavation area and that the features uncovered are likely to have lain at the periphery of the settlement. The condition of the finds supports this; the Iron Age pottery, for example, although present in just under half of the excavated contexts, was very fragmentary, with an average sherd weight of just 3.3g, and over 90% recorded as highly abraded. The paucity of charred plant remains and charcoal similarly suggests that the excavated features lay at some remove from areas with domestic hearths or ovens. It is possible that the absence of evidence for settlement from the evaluation may be explained by truncation of any settlement features by subsequent ploughing or that this lies beyond the limit of the development boundary.

3.1.3 The Iron Age ditch appears to have remained as a landscape feature into and beyond the Roman period. The northern end of the late Iron Age/Roman ditch to the south appears to have respected the southern limit of the Iron Age enclosures. This boundary was recut in the middle/late Roman period. The orientation of the Iron Age

complex and the Roman ditches was perpetuated by the alignment of medieval/post-medieval furrows, and the field and adjacent landscape is still structured on the same orientation. The Roman enclosures at Widhill Farm and Chapel Farm 1km to the north of the site were similarly noted to lie on the same orientation as the present fields (Ford *et al.* 2016), demonstrating that the landscape around the site retained much of the same structure throughout the historic period.

APPENDIX A FINDS REPORTS

A.1 Prehistoric pottery

By Lisa Brown

Introduction

A.1.1 The site produced a small collection of 138 sherds of prehistoric pottery weighing 466g. The condition of the pottery is generally very poor, with an average sherd weight of only 3.3g overall, and over 90% of sherds recorded as highly abraded. All of the pottery is likely to be Iron Age, but a paucity of diagnostic sherds precludes more precise dating within that broad time span. The fabric varieties and treatment of sherds suggests an early and/or middle Iron Age date for the material, but a handful of sherds of late Iron Age/early Roman date were also recovered from the ditch fills.

A.1.2 Iron Age activity has been recorded on the limestone ridge to the east of the site, and a pit containing late Bronze Age/early Iron Age pottery was reported at Blunsdon St Andrew (Brett and McSloy 2011). The substantial early and middle Iron Age multi-phased settlement enclosure at Groundwell West (Walker *et al.* 2001) and a middle Iron Age banjo enclosure at Groundwell Farm (Gingell 1982) give some context to the current assemblage.

Methodology

A.1.3 Fabrics were identified with the aid of a hand lens and binocular microscope at 20x and 10x magnification, and classified using an alpha-numeric dominant inclusion code, further subdivided on size and frequency of the inclusions, following the recommended guidelines of the Prehistoric Ceramics Research Group (PCRG 2010; 2016). The pottery was recorded in an Excel spreadsheet by context group. All sherds were counted and weighed. The following characteristics were entered in separate fields where possible: fabric, form, surface treatment, decoration, degree of abrasion and date. The precision of the dating was dependent on the condition of sherds and on diagnostic features. Degrees of abrasion are based on three broad categories: (3) high - surface survival minimum, breaks heavily eroded; (2) moderate - surface somewhat preserved but clearly worn; (1) fresh or slight wear.

The pottery in context

A.1.4 Most of the pottery was recovered from the fills of a single recut curving enclosure ditch complex. Sherds were generally recovered in groups of fewer than half a dozen sherds, and in a variety of fabrics from any single context. Pottery was present in the fills of ditches 79 (=69), 120 (=10, 41, 66, 78, 94, 112), 121 (=99, 114), 122 (=64), 124 (=24, 72), 123 (=50), 5, 27, 30, 97 and 107. Pits 86, 18, 33, and 35 produced a few sherds each, again in a range of fabrics. Two features described as tree-throw holes (59 and 88) contained a few fragments in fabrics QU2 and C3. The quantities and distribution of the pottery produced no discernible patterning in the occurrences of fabrics and forms through the ditch fills and across the pits, and so it was not possible to show changes in fabric preferences or in vessel styles over time.

Fabrics and forms

A.1.5 Nine fabrics within three ware groups were established. Despite the variety described below, the fabrics are all glauconitic or otherwise iron oxide-rich and most contain either fossil shell, fossiliferous limestone, or both in some quantity, from rare to abundant.

Predominantly calcareous inclusions

C1 Coarse quartz sand with black iron oxides and moderate scatter of limestone pieces 2mm and smaller (many leached)
C2 Fine glauconitic sand with rare-sparse finely crushed fossil limestone (may include oolites)
C3 Fine sand incorporating rare iron oxides, moderate-abundant weathered fossiliferous limestone and rare platey fossil shell, some calcite
C4 Fine slightly micaceous glauconitic sand with abundant finely crushed fossiliferous limestone

Predominantly quartz sand

QU1 Fine glauconitic sand with few additional inclusions, generally limestone, fossil shell and/or calcined flint
QU2 Medium grade glauconitic sand, rare inclusions of iron oxides, fossil shell, fossiliferous limestone
QU3 Medium grade glauconitic sand (coarser version of Q1), with rare inclusions of fossil shell and/or fossiliferous limestone.

Predominantly iron oxides

I1 Moderate grade sand with moderate – abundant red ferrous oxide pieces and rare small calcite and quartzite, and rare calcined flint inclusions
I2 Finer sand with common red powdery iron oxides

A.1.6 The ware groups and some of the individual fabrics correspond well with the sandy, shell-tempered limestone-tempered and mixed-tempers fabrics from Groundwell West described by Timby (2001, 19-21). Although there are no predominantly flint-tempered and grog-tempered wares at Tadpole Garden Village that correlate to Timby's groups FL and GR (2001, 21), odd inclusions of burnt flint occur in some sherds. The almost complete absence of diagnostic sherds from Tadpole Garden Village is notable, even considering the small size of the collection. Five basal sherds, some of them <10mm in size, represent two forms – a flat simple type (BS1) found in ditches 78 and 114, and a slightly kicked out base (BS2) present in pit 18 and ditches 86 and 99. A single small rim sherd from ditch 10 is flattened and is possibly the elongated rim of a small bowl, or may be some type of miniature thumb pot, but is too fragmentary to be certain.

A.1.7 There was no scope, therefore, to examine the range of vessels present at this site. Timby (2001) noted a similar dearth of rims, bases, and decorated sherds at Groundwell West, but that assemblage of over 3000 sherds includes a variety of early

and middle Iron Age bowls, jars, and straight-sided jars, some with finger-impressed decoration.

A.2 Late Iron Age and Roman pottery

By Edward Biddulph

A.2.1 Seven sherds of late Iron Age or Roman pottery, weighing 63g, were recovered (Table A.2.1). Body sherds in grog and shelly fabrics (four in total), collected from the subsoil (context 2) and ditch 50=123, date to the late Iron Age or early Roman period. A tiny fragment of South Gaulish samian ware from the upper fill (117) of an intervention through an Iron Age ditch dates to the mid/late 1st century, or possibly the early 2nd century AD, while a fragment belonging to a South Spanish amphora, probably a Dressel 20 olive oil container, from ditch 66, has a date range that extends to the mid-3rd century AD. A jar rim in North Wiltshire reduced ware, recovered from ditch 107, is broadly dated to the 2nd century onwards.

A.2.2 Overall, this group of pottery has a wide date range, though has something of a late Iron Age/early Roman emphasis, and is generally consistent with the results of the earlier evaluation at the site, from which two sherds of sand-tempered late Iron Age/early Roman pottery and one sherd of Savernake ware of 1st or 2nd century date were recovered (CA 2011, 9). The condition of the assemblage is poor, the group comprising small and abraded sherds that are likely to have been deposited incidentally though agricultural processes. Given its recovery from an earlier ditch, the samian ware (S20) is intrusive or represents the filling of a hollow in the top of the feature. Nevertheless, the group points to activity in the area and the development of the field system during the Roman period.

Table A.2.1: Summary of late Iron Age/Roman pottery. Fabric codes are taken from OA's standard recording guidelines (Booth 2016) and the National Roman Fabric Reference Collection (Tomber and Dore 1998)

Context	Cut	Count	Weight (g)	Description	Date
2	Subsoil	1	11	Body sherd in shelly fabric with sand and grog (E40)	Late Iron Age/ early Roman
49	50=123	3	4	Two body sherds in grog-and-sand-tempered fabric (E810); 1 amorphous oxidised fragment	Late Iron Age/ early Roman
67	66=120	1	20	South Spanish amphora fabric (A11; BAT AM 1) body sherd	AD 50-250
106	107=124	1	27	Rim from wide-mouthed jar with a hooked everted rim and a cordon on the neck, North Wiltshire reduced ware (R35), 0.11 EVE	AD 100-410
117	114=121	1	1	South Gaulish samian ware (S20; LGF SA) body sherd	AD 43-110
TOTAL		7	63		

A.3 Fired clay

By Cynthia Poole

A.3.1 A small quantity of fired clay was recovered amounting to 15 fragments weighing 47g, together with a single fragment (4g) of burnt blackened ferruginous sandstone from ditch 55. The majority of the fired clay was found in the fills of ditches (5, 15, 47, 50, 72 and 97) phased from early to middle Iron Age through to the mid-late Roman period. Fired clay was also found in three early to middle Iron Age pit fills (35, 37 and 86). None of the fired clay is intrinsically dateable and it must be assumed that it is broadly contemporary with other dateable artefacts.

A.3.2 The assemblage has been fully recorded on an Excel spreadsheet in accordance with guidelines set out by the Archaeological Ceramic Building Materials Group (ACBMG 2007), which whilst not specifically designed for fired clay provide appropriate guidance. The record includes quantification, fabric description, form, surface finish, dimensions and general comments. Fabrics were characterised on macroscopic features and with the aid of x20 hand lens.

A.3.3 The fired clay was made in a fine sandy micaceous clay sometimes containing diffuse iron oxide inclusions and was fired to various shades of red, orange and brown, frequently with a grey-black core. The only exception was a fragment made in sandy micaceous clay with round reddish ferruginous clay pellets, occasional quartzite grit up to 6mm and partly leached shell from ditch 97.

A.3.4 The form or function of the fired clay cannot be deduced from the fragments, which were either amorphous or retained a single flat, generally fairly rough, moulded surface. One piece had two surfaces joining at right angles. The fragments ranged in size from about 10-30mm and had a very low mean fragment weight of 3g. The only conclusion that might be drawn from the reduced cores is that they are likely to include some portable items, probably of oven/hearth furniture, the most likely at this period being triangular perforated bricks. Fired clay from the evaluation (CA 2011) was equally sparse (19 fragments weighing 59g) and it would seem equally anonymous in character from the lack of comment.

A.4 Slag

By Leigh Allen

A.4.1 Two fragments of undiagnostic slag weighing 13g were recovered from context 113, a fill of the latest recut of the main L-shaped ditch 120. Although indicative of iron working, these fragments cannot be used to distinguish between smiting and smelting.

APPENDIX B ENVIRONMENTAL REPORTS

B.1 Environmental samples

By *Sharon Cook*

Introduction

B.1.1 Four samples were taken. Sample 1 was from an isolated pit on the edge of the excavated area. The remaining samples are from the fills of a group of parallel and intercutting curvilinear ditches.

Method

B.1.2 The bulk samples were processed in their entirety using a modified Siraf-type water flotation machine to 250µm (flot) and 500µm mesh (residue). The residue fractions were sorted by eye and all bone and artefacts removed while the flot material was sorted using a low power (x10) binocular microscope to extract cereal grains and chaff, smaller seeds and other quantifiable remains. Identifications were carried out using standard morphological criteria for the cereals (Jacomet 2006) and with reference to the Digital Seed Atlas of the Netherlands (Cappers *et al.* 2006) for identification of wild plant remains, as well as comparison with modern reference material. Classification and nomenclature of plant material follows Stace (2010).

B.1.3 Quantification of remains is as follows; cereal grains and the seeds of wild plants were only quantified for items of which more than half was present, this means that all cereal and seed counts may be used to reach an MNI (minimum number of individual seeds). For legumes, chaff and nutshell fragments the count is for all observed fragments, which means these figures are not suitable for use in calculating MNI.

Results and discussion

B.1.4 Table B.1.1 lists the taxa identified from each sample.

B.1.5 Charred material appears to be scarce on this site with all flots small in size and with little material present.

B.1.6 Sample 1 provided the largest amount of material comprising a small number of charred grains in very poor condition, fragmented and with a clinkered appearance as a result of damage from burning. Two grains are possibly barley (*Hordeum* sp.), but the condition of both is poor and it is possible that they have been distorted during either the burning process or while buried. The glume base fragments are small and fragmentary and consequently indeterminate. The few seeds from wild plants are also in poor condition and show heat damage as cracking within the seeds; exteriors are largely absent.

B.1.7 The three ditch fills (samples 2-4) are almost totally lacking in charred material with the volume of the flots largely consisting of fine modern roots. It is likely that the majority of the charred material present is either windblown or the result of burned material being incorporated within midden type waste used as fertiliser. The single false oat-grass tuber (*Arrhenatherum elatius*) within sample 4 is a native grass which

is commonly found in both cultivated and uncultivated fields and pastures and can be used as livestock fodder. The presence of charred tubers is often an indicator of the burning of turves as fuel. However, as only a single tuber is present in this case there is insufficient data to reach a firm conclusion on its origin. The lack of settlement activity within the area is likely to be responsible for the paucity of remains.

Table B.1.1: The charred plant remains

Sample No		1	2	3	4
Context No		87	116	104	93
Feature		86	114	105	94
Group			121	97	120
Description		Single fill of pit	Middle fill of ditch	Single fill of ditch	Single fill of ditch
Date		E/MIA	E/MIA	E/MIA	E/MIA
Processed volume (L)		18	40	35	40
Flot Volume (ml)		3	1	2	2
Flot analysed		100%	100%	100%	100%
Charcoal					
	>4mm				
	2-4mm	**	*		
Cereal grain					
Triticum sp.	wheat	1#			
cf Hordeum sp.	cf. barley	2#			
Cerealia	indet cereal	6#	1#	1#	
Chaff					
Triticum sp.	glume base fragments	8#			
Fruit, Nutshell etc.					
Corylus avellana	hazelnut shell	1#			
Wild Species					
Asteraceae	daisy family	1#			
Juncus sp.	rushes	1#			
Other					
Indet.	seed/fruit	2#			
Arrhenatherum elatius	false oat-grass tuber				1
*1-4, **5-24, ***25-49, ****50-99, *****100+ #Denotes fragmented or otherwise damaged/missing external details					

B.2 Animal bone

By Martyn Allen

B.2.1 The animal bones were recorded following OA's standard guidelines and using its comparative reference collection to aid identification. A total of 173 hand-collected animal bone specimens were recovered from 30 contexts (Table B.2.1), plus eight specimens (8g) from two sieved samples. The assemblage almost exclusively dates to the Iron Age, though two features were Roman. The faunal remains were fairly evenly distributed across different contexts and there was no sign of large accumulations of material. Preservation was variable: some specimens were quite fragmentary with deteriorating surfaces. Some evidence of dog gnawing was observed, notably on a sheep tibia in ditch fill 98 and on a horse metatarsal in ditch fill 95. Carnivore activity is likely to have had a detrimental effect on the survival of some remains.

B.2.2 Only 48 hand-collected specimens were identified to species, of which cattle, sheep/goat, horse and red deer were present. Cattle remains were most numerous (27 specimens) though a sizable proportion of the 79 'large mammal' specimens, mostly long bone, rib and vertebrae fragments, also probably derived from cattle. A range of cattle elements were identified, including mandible fragments and loose teeth, upper and lower limb bones, pelvis fragments and foot elements. One dental specimen had all three permanent molars in a moderate stage of wear, and probably derived from an animal about 3–6 years old (cf. Jones and Sadler 2012). A neonatal metatarsal was recovered from ditch fill 23, which suggests the presence of a breeding herd nearby. Two cattle specimens, both from ditch fill 95, exhibited butchery marks: an astragalus had a fairly heavy chop mark on the lateral side and the distal end had been superficially chopped through, while a metatarsal had a heavy cut/light chop mark on the posterior surface of the shaft, possibly caused by skinning.

B.2.3 A total of 15 sheep specimens were identified, and there was no clear evidence for the presence of goats. As with cattle, a range of skeletal elements from most parts of the body were present. One dental specimen had its deciduous fourth premolar in a heavy wear and the underlying permanent premolar was pushing through. The first and second permanent molars were in a moderate stage of wear, though the third molar was absent. It is likely that the animal was a young adult, perhaps about 3–4 years old when it died (cf. Jones 2006). A neonatal sheep humerus was recovered from ditch fill 93, suggesting that sheep were probably reared near the site.

B.2.4 Horses were represented by five specimens, including six fragments from one pelvis (pit 37), plus a metatarsal and a first phalanx from ditch 97. The latter two possibly derive from the same animal. The phalanx exhibited a deep cut on the dorsal surface of the shaft suggesting that the horse had been skinned. Measurement of this bone indicated that it derived from a horse, as opposed to a mule or a donkey (Table B.2.2).

B.2.5 A single red deer tooth, a permanent upper first or second molar, was recovered from ditch fill 93, belonging to ditch 120.

B.2.6 The sieved samples were generally unproductive, mostly containing fragmented remains of cattle and sheep. Nonetheless, the only pig specimen in the assemblage, a small molar fragment, was recovered from ditch fill 93.

B.2.7 Overall, the small size of the assemblage is limited in what it can say about the pastoral economy of the site. The excavated features likely represent the periphery of an Iron Age settlement and the animal bones recovered will partly reflect local discard practices and provide some indication of livestock use. The presence of neonatal cattle and sheep bones likely reflects the presence of breeding herds/flocks nearby. Horses were also kept by the inhabitants. Horse and cattle skins appear to have been exploited, perhaps for a range of products. The relative absence of pig bones is surprising, though this may reflect the small assemblage and the limited area of excavation. The presence of a red deer tooth provides limited evidence for hunting.

Table B.2.1: Number of animal bone specimens by context (denotes Roman contexts; ** denotes unphased)*

context	Cut	cattle	sheep/ goat	horse	red deer	large mammal	medium mammal	Uniden.	total
4	5	1	1			11			13
7	6=123	1							1
11	10=120		2			3	4		9
14**	15							3	3
21**	22							2	2
23*	24=124	1							1
26	27	1				6		7	14
29	30	2				1	3		6
34	33					1			1
36	35					2			2
38	37			1		12			13
46*	47=124					1			1
49*	50=123						1		1
52	53	1		1		1			3
54	55					1			1
65	64=122	1	1			1			3
71	72=124						2		2
73	74		2						2
87	86		2					5	7
90	88					2			2
92**	91			1					1
93	94=120				1	3		1	5
95	97	9	3	2		8			22
96	97	3							3
98	99=121		2				1		3
104	105	4				7		5	16
113	112=120	1				18			19
115	114=121		1				1		2
116	114=121							1	1
117	114=121	2	1			1		10	14
Total		27	15	5	1	79	12	34	173

Table B.2.2: Measurements of horse 1st phalanx from ditch fill 95

Specimen	context	cut	taxa	element	measurement	data/mm
17	95	97	horse	phalanx 1	greatest length	83.6
17	95	97	horse	phalanx 1	proximal breadth	52.7
17	95	97	horse	phalanx 1	proximal depth	33.4
17	95	97	horse	phalanx 1	smallest width of diaphysis	32.5
17	95	97	horse	phalanx 1	distal breadth	42.6

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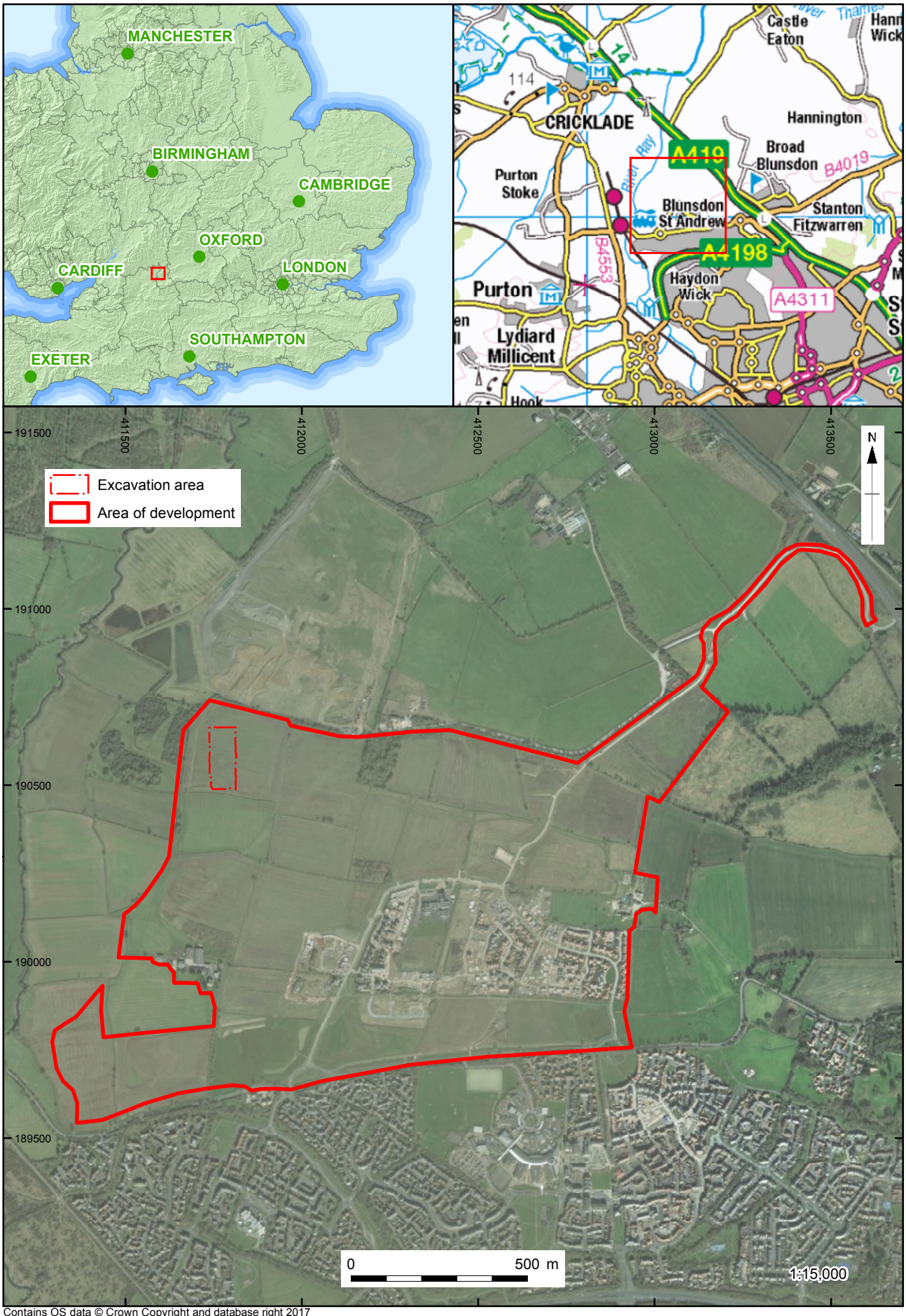
APPENDIX D SITE SUMMARY DETAILS

Site name:	Tadpole Garden Village, Blunsdon St Andrew, Swindon, Wiltshire
Site code:	BLT17
Grid Reference	SU 1177 9056
Type:	Strip, map and record excavation
Date and duration:	October-December 2017
Area of Site	1.28ha
Location of archive:	The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with Swindon Museum and Art Gallery in due course, under the following accession number: SWING:2017.92.
Summary of Results:	Excavations in advance of urban development at Tadpole Garden Village, Blunsdon St Andrew, Swindon, investigated an area of 1.28 ha. Ditches forming part of an enclosure complex dated to the early/middle Iron Age were uncovered. The features are likely to have lain at the periphery of a settlement, although no evidence regarding the location of the presumed settlement was found, either during the excavation or the previous geophysical survey and trial trench evaluation. The site is on the Oxford Clay, a topographic location where Iron Age activity is almost entirely unrecorded, positioned between the better-understood Corallian Ridge to the south and the gravel terraces of the River Thames to the north.



Contains OS data © Crown Copyright and database right 2017
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA,

Figure 1: Site location

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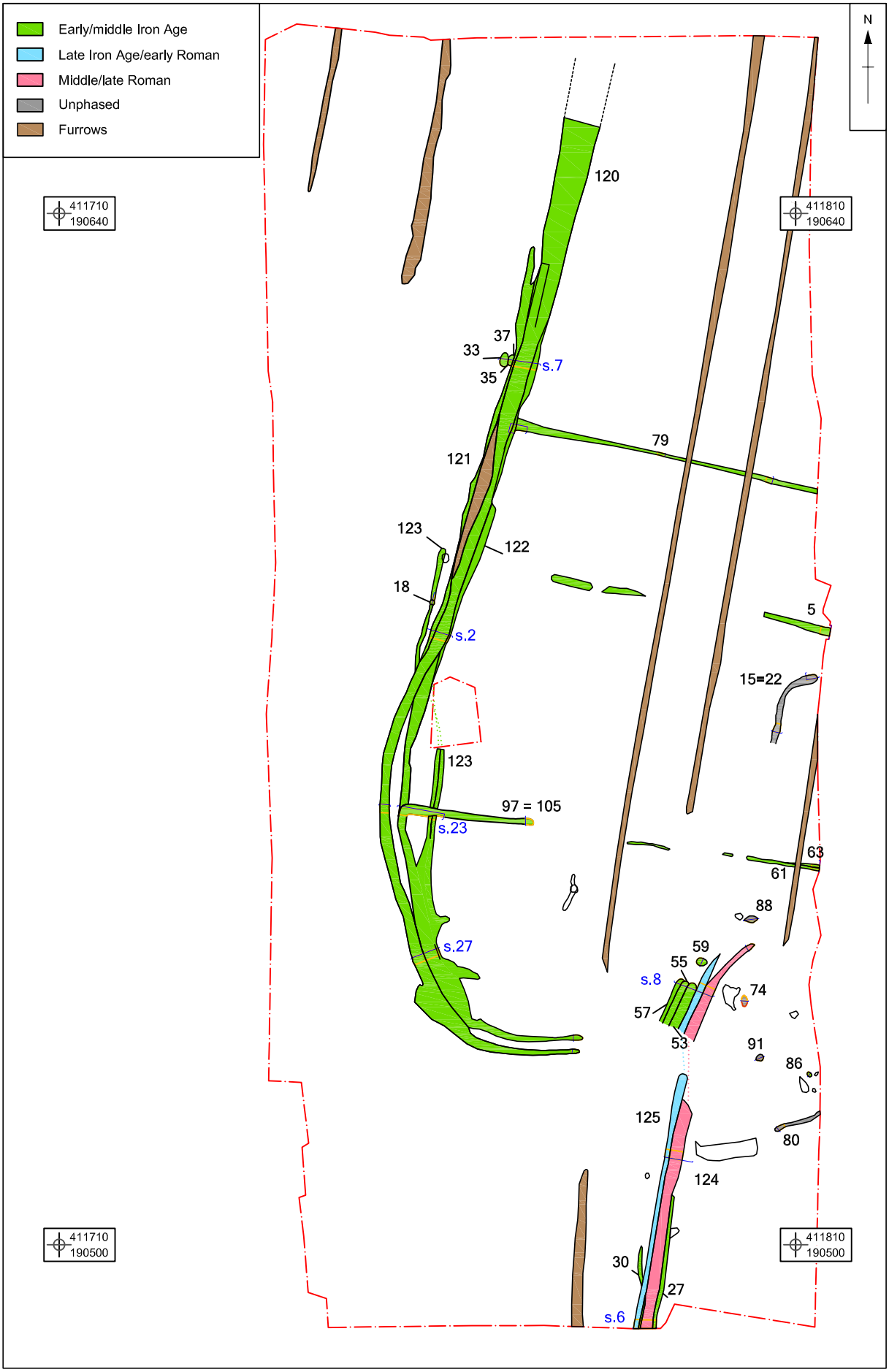

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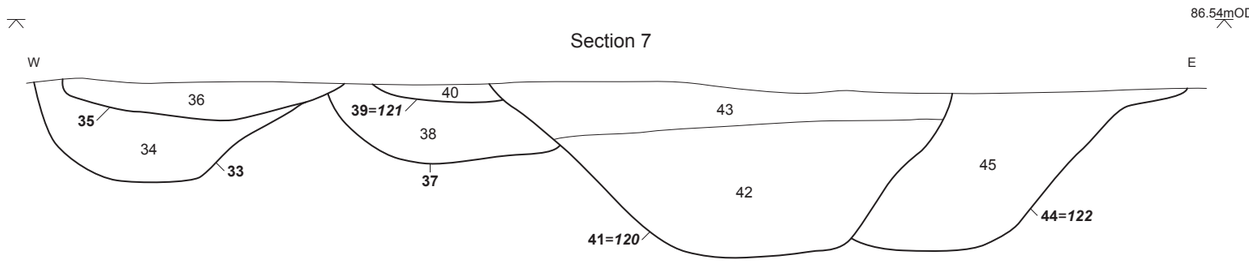
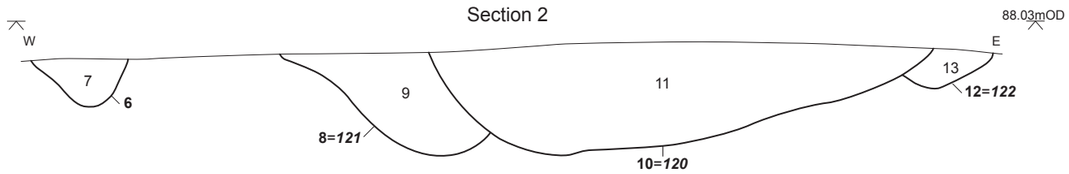
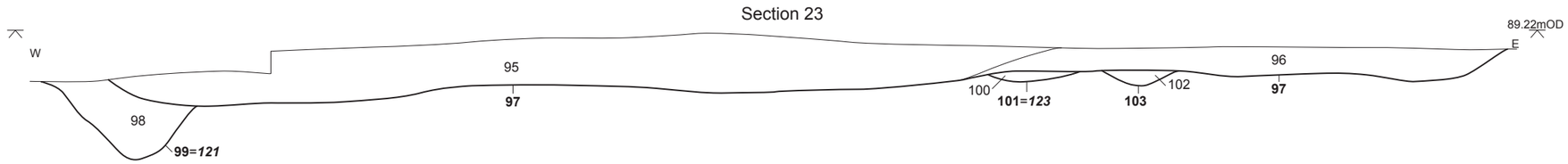
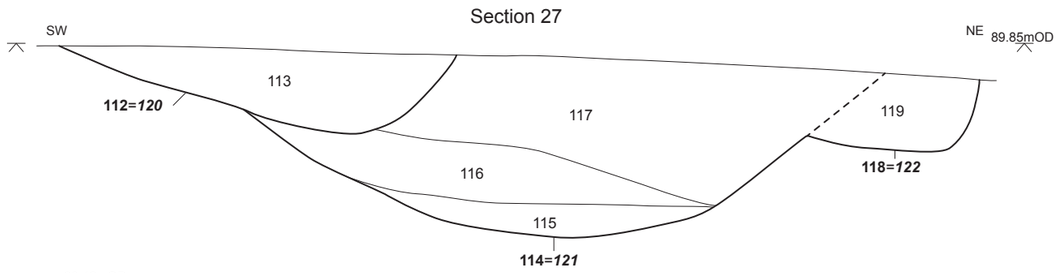
Scale at A4 1:750

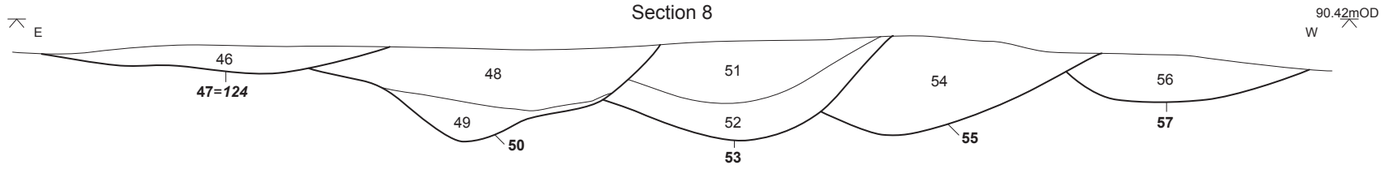
Figure 2: Plan of the excavation











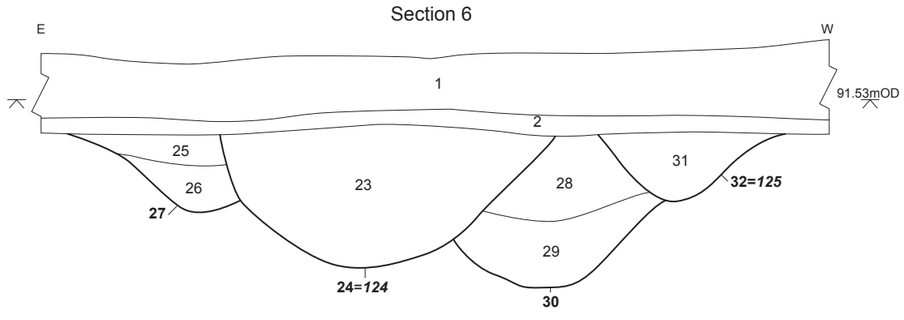


Figure 3: Sections of features

Plate 1: The N-S boundary ditch before excavation, looking north

Plate 2: Section 27, ditches 120, 121 and 122, looking north-west

Plate 3: Section 6, ditches 27, 124, 30 and 123, looking south

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