

Archaeological Excavation at 2 Trinity Close, Felmersham, Bedfordshire



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Status: Version 3
Date: 15th May 2018
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Project reference: P5203
Report reference: 2536
Oasis id fieldsec1-307922
Museum accession reference BEDFM 2017.105.

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With contributions by Jane Evans and Elizabeth Pearson

Illustrations by Carolyn Hunt

Summary

An archaeological excavation was undertaken at 2 Trinity Close, Felmersham, Bedfordshire (NGR 499141 27725) Bedford Borough Council have granted planning permission (17/02076/FUL) to Mr Martin Blizard for the construction of a one and two storey rear/side extension to No 2 Trinity Close, Felmersham, Bedford, Bedfordshire, MK43 7HW. Excavations in the 1980's in the adjacent property revealed inhumations thought to date from the medieval period. Permission was granted subject to conditions including a programme of archaeological works.

During this excavation three undated but potentially Saxon skeletons were present, cut by a right angled foundation trench. A large field boundary ditch was also present. These were sealed by a post occupation deposit and a series of rubble limestone surfaces that may possibly be contemporary with a large stone filled pit, identified as an aisle post for a substantially sized building. A stone built oven, likely a bread oven, was recorded to the west of these surfaces.

All pottery found from this site was dated to the 12th-14th century, apart from a single residual Roman sherd and a single Saxon sherd.

The results of the excavation have the potential to cast light on the early development of the village in the Saxon and early medieval period.

Report

1 Background

1.1 Reasons for the project

An archaeological excavation was undertaken at 2 Trinity Close, Felmersham, Bedfordshire (NGR 499141 27725). Bedford Borough Council have granted planning permission (17/02076/FUL) to Mr Martin Blizard for the construction of a one and two storey rear/side extension to No 2 Trinity Close, Felmersham, Bedford, Bedfordshire, MK43 7HW. Permission was granted subject to conditions including a programme of archaeological works.

Advice included with the condition stated that the archaeological work will involve the detailed archaeological monitoring and recording of all groundworks associated with the development including any preparative groundworks.

On consideration of the proximity of the human remains and the potential for survival and consequent disruption to the construction, the client requested that, instead of a watching brief, an archaeological excavation of the proposed footings and an area of proposed landscaping be carried out. This approach was approved by Geoff Saunders, Archaeological Officer for Bedford Borough Council.

A Written Scheme of Investigation was prepared by Worcestershire Archaeology (WA 2017) and approved by Geoff Saunders, Archaeological Officer of Bedford Borough Council.

2 Aims

The project also conforms to the *Standard and guidance: Archaeological excavation* (ClfA 2014a); Aims

The aims of the excavation were to observe and record archaeological deposits, and to determine their extent, state of preservation, date and type, as far as reasonably possible within the constraints of the Client's groundworks.

In particular the aim of the excavation was to establish whether further inhumations or related features are present in the garden of No 2 Trinity Close and, if so, to better determine their date and form of the burials and the reason for the occurrence of burials in this part of the village, more than 100m from the Church.

3 Methods

3.1 Personnel

The project was led by Timothy Cornah (BA (hons.), MSc; who joined Worcestershire Archaeology in 2006 and has been practicing archaeology since 2004, assisted by Jessica Wheeler (BA (hons)). The project manager responsible for the quality of the project was Tom Rogers (BA (hons.); MSc; MClfA). Illustrations were prepared by Carolyn Hunt (BSc (hons.); PG Cert; MClfA). Elizabeth Pearson (MSc; ACIfA) contributed the environmental report, Jane Evans (BA, MA, MClfA) contributed the finds report.

3.2 Documentary research

Prior to fieldwork commencing a search was made of the Historic Environment Record (HER). The Victoria County History of Bedfordshire was also consulted as well as secondary sources.

3.3 Fieldwork strategy

Fieldwork was undertaken between 11th December 2017 and 2nd February 2018. The Worcestershire Archaeology project number is P5203.

The excavation area, amounting to just over 20m² in area, was excavated over the site. The location of the area is indicated in Figure 2.

Deposits considered not to be significant were removed under archaeological supervision using a 360° tracked excavator, employing a toothless bucket. Subsequent excavation was undertaken by hand. Clean surfaces were inspected and selected deposits were excavated to retrieve artefactual material and environmental samples, as well as to determine their nature. Deposits were recorded according to standard Worcestershire Archaeology practice (WA 2012). On completion of excavation, the trench remained open in advance of subsequent building works.

3.4 Structural analysis

All fieldwork records were checked and cross-referenced. Analysis was effected through a combination of structural, artefactual and ecofactual evidence, allied to the information derived from other sources.

3.5 Artefact methodology, by C Jane Evans

The finds work reported here conforms with the following guidance: for findswork by ClfA (2014), for pottery analysis by PCRG/SGRP/MPRG (2016), for archive creation by AAF (2011), and for museum deposition by SMA (1993).

3.5.1 Recovery policy

The artefact recovery policy conformed to standard Worcestershire Archaeology practice (WA 2012; appendix 2).

3.5.2 Method of analysis

All hand-retrieved finds were examined. They were identified, quantified and dated to period. A *terminus post quem* date was produced for each stratified context. The date was used for determining the broad date of phases defined for the site. All information was recorded on a Microsoft Access database.

Small quantities of additional artefacts, mainly pottery, fired clay and slag/fuel ash slag, were recovered from environmental samples. These were scanned but did change the dating of the assemblage and are not included in the quantifications presented below. However, some came from contexts which otherwise did not produce finds, or finds of that type, so are listed here: medieval pottery (3 sherds, 16g), fired clay and an iron nail from oven fill 109; fired clay and fuel ash slag from oven fill 129; medieval pottery (5 sherds, 7g) and a fragment of tap slag (21g) from surface 120; and fuel ash slag and fired clay from the post pad filling of pit 130 (fill 131).

The pottery was recorded with reference to the Bedfordshire County Archaeology Service type-series (Baker and Hassall 1977). Sherds were recorded by fabric class (e.g. B shell-tempered, C sand tempered), having been examined under x20 magnification to assess the range of variations within the fabrics.

3.5.3 Discard policy

Artefacts from topsoil and subsoil and unstratified contexts will normally be noted but not retained, unless they are of intrinsic interest (eg worked flint or flint debitage, pottery sherds of note, and other potential 'registered artefacts'). All artefacts will be collected from stratified excavated contexts, except for large assemblages of post-medieval or modern material, unless there is some special reason to retain, such as local production or local scarcity. Such material may be noted and not retained, or, if appropriate, a representative sample may be collected and retained. Discard of

finds from post-medieval and earlier deposits will only be instituted with reference to museum collection policy and/or with agreement of the local museum.

See the environmental section for other discard where appropriate.

3.6 Environmental archaeology methodology, by Elizabeth Pearson

3.6.1 Project parameters

The environmental project conforms to relevant sections of the *Standard and guidance: Archaeological excavation* (ClfA 2014); and *Environmental Archaeology: a guide to the theory and practice of methods, from sampling and recovery to post-excavation* (English Heritage 2011).

3.6.2 Methods

Sampling policy

Samples were taken according to standard Worcestershire Archaeology practice (2012). A total of eleven samples (each of up to 40 litres) were taken from the site (Env Table 1).

Processing and analysis

The samples were processed by flotation using a Siraf tank. The flots were collected on a 300µm sieve and the residue retained on a 1mm mesh. This allows for the recovery of items such as small animal bones, molluscs and seeds.

The residues were scanned by eye and the abundance of each category of environmental remains estimated. A magnet was also used to test for the presence of hammerscale. The flots were scanned using a low power MEIJI stereo light microscope and plant remains identified using modern reference collections maintained by Worcestershire Archaeology, and a seed identification manual (Cappers *et al* 2012). Nomenclature for the plant remains follows the New Flora of the British Isles, 3rd edition (Stace 2010).

Animal bone was quantified by fragment count and weight (Env Table 2), whilst comments were made on key elements of the assemblage. Species were identified with the aid of modern bone reference collections housed at the Historic Environment and Archaeology Service and identification guides (Schmid 1972 and Hillson 1992).

3.6.3 Discard policy

Remaining sample material and scanned residues will be discarded after a period of 3 months following submission of this report unless there is a specific request to retain them.

3.6.4 Statement of confidence in the methods and results

The methods adopted allow a high degree of confidence that the aims of the project have been achieved

4 The application site

4.1 Topography, geology and archaeological context

Trinity Close is on the eastern side of Felmersham, a small village which is still contained within its Medieval boundaries (MBD16896). Prior to the Norman Conquest the lands in Felmersham were held by six freedmen and Alli, a thane of King Edward (Shrimpton 2003). It is later mentioned in the Domesday Book as follows;

'Land of the Countess Judith...

In Willey Hundred

In Felmersham Gildert holds 3 ½ hides from the Countess

Land for 3 ploughs. In lordship 1 plough;

2 villagers with 1 plough, another possible. 4 smallholders

1 mill at 10s; meadow for 1 plough

Value £3; when acquired 100s; as much before 1066

Alli, a thane of King Edward's, held this land'

Following this division into dual ownership, the Victoria County History records that both manors came into the possession of the deMeppershall family in 1205, with their tenants the Laundres and the Peyncourts. Possession through various tenants is recorded until 1428, after which only one manor is referred to, saying that *'John Harvey died seized of Felmersham Manor'* in 1474 (VCH, 1913), suggesting that the two had been combined (Shrimpton, 2003). Felmersham Manor was then retained by the Harveys until 1588. It is entirely possible that these were the same Harveys who were referred to in the 17th century field name which correlated with the site location: variously spelt Harveys Yard/ Harvisse Yard/ Herveys Yard (CRO 130 FEL/5 1625). Trinity College also appeared to own a manor here, however no mention of it has been found before 1550.

During the reign of King Henry II, Felmersham Church was granted to the monks of Lenton Priory. The location of the early church is not known however the present-day church was constructed between 1220-40. (Shrimpton 2003)

In 1980, human remains were found in the back garden of adjacent No 1 Trinity Close by the residents (MBD2688). Two articulated skeletons, plus remains of two or three other individuals were recorded. A pottery rimsherd and copper alloy clothing fastener found with one of the skeletons were thought to indicate a date in the 14th century. The burials were oriented east-west in the Christian custom, but were found at some distance from the present churchyard. It is thought likely that at some date the churchyard was insufficient, possibly due to an epidemic, especially as burials from Pavenham and Radwell also took place at Felmersham.

A record of 43 sherds of coarse greyware pottery, of late Iron Age or Roman date were found at Felmersham Church 100m north of the close (MBD1345).

Two Anglo Saxon burials were uncovered during an archaeological evaluation of 'The Plough' former pub (EBD247) 160m north east of Trinity Close. However, no further burials were revealed during a further evaluation on an adjacent site for an extension to the Churchyard (EBD177).

A human skull and longbones were found by the riverbank at Felmersham (EBB968). These were collected and removed by the police, without being seen by an archaeologist, as the farmer was cultivating the field. The findspot was visited, but nothing of archaeological interest was seen, except for two parts of a large red deer antler.

An archaeological evaluation of 22 trenches took place along the route of an Anglian Water main replacement scheme between Felmersham and Carlton (EBB1011). The evaluation uncovered limited archaeological remains at the Felmersham end of the pipeline, with only a single trench

revealing any archaeological features. This trench (Trench 20) contained three ditches – two containing Romano-British pottery fragments and one 14th century.

4.2 Current land-use

Prior to the excavation the site was a raised back garden area of a residential house

5 Results

5.1 Structural analysis

The trenches and features recorded are shown in Fig 1-6. The results of the structural analysis are presented in Appendix 1.

5.2 Phase 1: Natural deposits

The bedrock geology is formed of Rutland Formation Mudstone with overlying superficial deposits of Stock Goldington Member sand and gravels.

5.3 Phase 2: Roman

A single residual sherd of Roman pottery was recovered from post occupation layer (102).

5.4 Phase 3: Burials

Three skeletons were excavated at the eastern end of the site. All were supine adults, aligned roughly east-west with heads at west, and had all been cut by foundation trench (148). Two of the individuals sk(143) and sk(144) appeared to be within the same grave cut [142], and sk(144) had been further cut by an aisle post [130] which had disturbed and then been butted against the top of the skull. The third, sk(155) was further to the northeast and had also been disturbed by a pair of undated stakeholes, [157] and [159], that were situated at the upper chest and knees. It may have been sealed by layers (151) and (152) although this may have represented a mix backfill of the grave itself.

5.5 Phase 4: Pre-Aisle post and ditch

A foundation trench, (148), was present at the eastern edge of site, aligned northwest- southeast and then abruptly turning in a right angle to the southwest. The precise change in alignment makes it seem likely that this feature was a foundation trench rather than a ditch. Only the upper fill was observed as this remained unexcavated since it lay beneath the impact of the development works. Surface cleaning produced 12th-14th century pottery but there is a strong possibility that this was intrusive. It was later sealed by (123/141), which appeared to be a 'tamped earth' layer comprised of mixed naturals and some occupation debris such as burnt clays and charcoals. It is not known if this is related or if it represents interior or exterior floor surfacing that has migrated after the destruction of the structure.

A northwest- southeast aligned ditch, (118/140), was observed cutting across the site before being obscured by the modern patio surfacing. It was cut by the oven (110), the aisle post [130], and a posthole (135) in its south-eastern edge from the construction of overlying surface (120). It was 1.7m wide and 0.76m in depth and contained four fills. Sherds of 12-14th century pottery were recovered from two (115+113) of these, with one sherd of early/mid Saxon pottery found in (115/138). It seems likely that this was residual, as this was the only sherd of Saxon pottery found on site.

5.6 Phase 5: Aisle post

A stone filled pit [130], measuring 1.52m wide and 0.36m in depth was observed below surfaces (120) and (122). It had a single fill comprising of large flat limestone and sandstone slabs bedded up against the edge of the cut but then forming more of a dump in the centre of the pit; 12th-14th century pottery sherds were recovered from within. The size of the pit and quantity and alignment

of stone suggests this could be an aisle post for a large building, the base of which has been disturbed during demolition or possible robbing.

A band of heat affected clays (132) measuring 0.6m by 0.9m was present to the south of the stone filled pit [130], and overlay some of its southern extent. To its northwest a similar deposit (125), was also observed. It is possible that these deposits were equivalent and had been truncated.

5.7 Phase 6: Surfaces and Oven

A loose rubble surface (122) 2m from the eastern edge of excavation extended approximately 2.5m to the west. It comprised of small c. 8-15cm angular limestone fragments in a silty clay matrix which contained charcoal and heat affected clay fragments. Further to its west and slightly overlying it, was a more substantial surface (120) made of larger limestone flags laid broadly flat. This extended west towards the oven (110), becoming more dispersed and disturbed. Both of these surfaces contained sherds of 12-14th century pottery. On the north-western corner of (120) a 0.6-0.7m diameter ring of angular limestone slabs (121) had been laid into the surface, above which a large blocking stone (112) had been laid. This is likely to have been a setting for a postpad [135], contemporary with the surrounding surface.

At the western edge of site was the cut and structure of a medieval oven (110). It was circular and constructed with up to six courses of rubble limestone showing heat-affected colouring. It was truncated on its north side by a modern well cut [107]. In its base was a burnt clay deposit, related to the firing of the oven. This was largely concentrated towards the rear of the oven, away from the flue, suggesting that the fire was consistently lit at the back of the structure. A later addition of limestone slabs (127) were laid over this deposit, with the appearance of having been pushed in from the flue, suggesting a modification of the oven after its construction and a period of use. Two charcoal layers, interior (109) and exterior (128), show the oven during its next phase of use; these are then sealed by a redeposited yellow clay layer (103) over the flue rake-out channel, and then by a larger and more dispersed charcoal rake-out layer (124). The final stage of the oven was represented by a mixed demolition layer (108) containing frequent heat affected limestone fragments and 12-14th century medieval pottery. A low stone structure [104] was butted up against the southwestern edge of the oven, extending 0.5m south east and beyond the edge of the excavation. It was constructed of the same limestone rubble as the oven, and was considered broadly contemporary, but did not show any evidence of heat affection.

5.8 Phase 7: Post occupation and Historic Soil Horizons

All archaeology was sealed by a silty post occupation deposit (102) with a historic topsoil above (101) both of which potentially showed signs of agricultural ploughing activities.

5.9 Phase 8: Modern deposits

Modern features across the site comprise of made ground deposits and re-levelling relating to 1960's landscaping [126], and a modern well [107]. A 0.3m deep layer of modern imported topsoil sealed the entire site.

5.10 Phase 9: Undated deposits

A north to south aligned shallow gully or beam slot extended from the centre of the southern baulk for 1.06m. This was undated through finds or association with other features. Layers (150), (151) and (152) present at the westernmost extent of site and cut by foundation trench [148] were unexcavated, although (151) and (152) may represent a mixed backfill of grave [154]. Stakeholes (157) and (159) cutting the skeleton (155) also remained unexcavated and undated.

6 Artefactual analysis, by C Jane Evans

The finds are summarised in Tables 1 and 2. The pottery assemblage comprised 84 sherds weighing 1320g; mainly medieval in date but including individual sherds of Roman and early-mid Saxon pottery. Other artefacts included slag, fired clay and stone. Finds were recovered from 15

stratified contexts, mainly associated with the medieval oven (110), the ditch (118/140), layers and surfaces (Table 2). Using pottery as an index of artefact condition, this was generally good; the majority of sherds displayed moderate to low levels of abrasion, and the average sherd size was generally above average.

period	material class	material subtype	object specific type	count	weight(g)
Roman	ceramic	earthenware	pot	1	16
early Saxon	ceramic	earthenware	pot	1	3
medieval	ceramic	earthenware	pot	81	1271
undated	bone	animal bone	fragment	48	1035.7
undated	ceramic	fired clay	fragment	6	61
undated	metal	slag(Fe)	smelting slag(tap)	7	930
undated	organic	paper	fragment	1	0.13
undated	organic	shell	fragment	1	1
undated	stone		tile?	3	66

Table 1: Quantification of the assemblage by period

Feature type	Fill of (context)	period	material class	material subtype	object specific type	count	weight (g)
Ditch	118/140	early Saxon	ceramic	earthenware	pot	1	3
		medieval	ceramic	earthenware	pot	16	417
		undated	bone	animal bone	fragment	26	868
		undated	metal	slag(Fe)	smelting slag(tap)	5	906
Foundation trench	148	medieval	ceramic	earthenware	pot	4	47
		undated	bone	animal bone	fragment	1	9
Layer	(102)	medieval	ceramic	earthenware	pot	29	379
		Roman	ceramic	earthenware	pot	1	16
		undated	bone	animal bone	fragment	7	102

		undated	metal	slag(Fe)	smelting slag(tap)	2	24
Oven	110	medieval	ceramic	earthenware	pot	14	260
		undated	bone	animal bone	fragment	10	26.5
		undated	stone		tile?	1	44
		medieval	ceramic	earthenware	pot	1	30
Pit	130	medieval	ceramic	earthenware	pot	1	2
		undated	bone	animal bone	fragment	1	0.2
Postpad	135	medieval	ceramic	earthenware	pot	1	25
Surface	(120, 122)	medieval	ceramic	earthenware	pot	16	141
Surface	(120, 122)	undated	bone	animal bone	fragment	2	11
		undated	ceramic	fired clay	fragment	6	61
		undated	organic	shell	fragment	1	1
		undated	stone		tile?	2	22
unstrat		undated	bone	animal bone	fragment	1	19

Table 2: Quantification of the assemblage by feature type and period

6.1.1 Pottery

All sherds were grouped and quantified by fabric class (Table 3).

period	fabric class	Fabric common name	count	% count	weight(g)	% weight	average weight(g)
early Saxon	A	Saxon ware (sand)	1	1	3	0%	3
medieval	B	Calcareous wares	72	72	1053	80%	15
	C	Mineral tempered (sandy)	10	10	248	19%	25
Roman	-	Roman reduced	1	1	16	1%	16
total			84	84	1320	100%	16

Table 3: Quantification of the pottery by fabric class

A residual sherd of Roman pottery was included amongst the pottery from layer 102. This was the only evidence for any Roman activity in the vicinity. The bead rim, in a reduced sandy ware, was from a narrow-mouthed jar, probably dating to the 2nd or 3rd centuries. A single, fragmentary

sherd of probable early-mid Saxon pottery was recovered from ditch 118/140 (fill138); an upright rim from a jar, in a sandy fabric fired black throughout.

The remainder of the assemblage dated to the medieval period, and included a number of diagnostic forms indicative of a broadly 12th-14th century date. This assemblage was dominated by the shell-tempered wares (Table 3, Fabric class B) typical of the area and produced, for example, at Harrold (Hall 1971). A range of fabrics is probably included within this class; one sherd for example had more abundant oolitic limestone inclusions. None, however, had the well-pounded and evenly mixed shell temper characteristic of late Saxon/early Medieval St Neots ware. Diagnostic forms included cooking pots, jars, bowls and jugs, described in more detail below. The Class C wares, all sand tempered, also included a range of fabrics. A splayed base from a jug with specks of green glaze on the underside is likely to be a Brill/Boarstall product, so dating to the 13th century. The other fabrics were less distinctive but included sagging bases from jars/cook pots, one with fumed surfaces and a thick internal layer of limescale reflecting use, and the other oxidised (both from layer 102).

The diagnostic, shell-tempered forms were associated with various features. A fill of the oven (108) produced rims from four vessels, including an everted rim from a bowl/jar with finger impressed decoration, and another in-turned rim from a bowl/jar. Material thought to have been swept out from the oven included another rim from a necked bowl/jar, with an everted lid seat rim which also had thumb-impressed decoration at the tip (fill 128). Another fill thought to have been swept from the oven (110, fill 124) included a cooking pot rim (cf Baker and Hassall 1977, fig 106.165), which joined a sherd in a rubble surface incorporating charcoal and fired clay (fill 122), so perhaps also derived from the oven. The ditch (118/140) produced two strap handles from jugs. One, from the base of a handle, had heavy thumb marks where the handle was attached to the body, and a crudely formed deep groove down the centre (fill 115). The other was also crudely finished, with two deep incised lines running down its length, and a distorted edge where it had been knocked before firing (fill 138). The latter was associated with a cooking pot or jar (cf Baker and Hassall 1977, fig 188.286). Other forms included a collared rim from a jug (cf Baker and Hassall 1977, fig 111.317) from a post-hole (135, fill 133) and an everted rim from a bowl, from layer 102.

6.1.2 Other artefacts

A small quantity of iron slag was associated with medieval pottery in ditch 118/140 (fills 137 and 138) and layer 102 (Table 2). All fragments were dense and heavy, and had flow marks on the upper surface, characteristic of tap slag derived from the smelting process. Small amounts of fired clay were also recorded, from stone and rubble surfaces in the proximity of the oven (120 and 122). A fragment of burnt stone from the oven sweep out (fill 124) might be from a tile associated with the oven structure

6.1.3 Site dating

context	material class	material subtype	object specific type	count	weight(g)	period	start date	end date	tpq
102	ceramic	earthenware	pot	29	379	medieval	12th	14th	12th-14th
				1	16	Roman	2nd	3rd	
108	ceramic	earthenware	pot	8	212	medieval	12th	14th	12th-14th
113	ceramic	earthenware	pot	4	103	medieval	13th	14th	13th-14th
115	ceramic	earthenware	pot	1	28	medieval	12th	14th	12th-14th
120	ceramic	earthenware	pot	7	74	medieval	12th	14th	12th-14th

		fired clay	fragment	3	9	undated			
122	ceramic	earthenware	pot	9	67	medieval	12th	14th	12th-14th
		fired clay	fragment	3	52	undated			
124	ceramic	earthenware	pot	6	48	medieval	12th	14th	12th-14th
128	ceramic	earthenware	pot	1	30	medieval	13th	14th	13th-14th
131	ceramic	earthenware	pot	1	2	medieval	12th	14th	12th-14th
133	ceramic	earthenware	pot	1	25	medieval	12th	14th	12th-14th
136	ceramic	earthenware	pot	3	16	medieval	12th	14th	12th-14th
138	ceramic	earthenware	pot	1	3	early/ mid Saxon	5th	9th	12th-14th
			pot	8	270	medieval	12th	14th	
149	ceramic	earthenware	pot	4	47	medieval	12th	14th	12th-14th

Table 4 Summary of context dating based on artefacts grouped in phase order

6.2 Recommendations

6.3 Further analysis and reporting

No further analysis is required on this assemblage.

6.4 Discard and retention

The pottery should be retained. Discard of other finds could be discussed with the receiving museum

7 Environmental analysis, by Elizabeth Pearson

Hand-collected animal bone

A small assemblage of animal bone was hand-collected during excavation, totalling 48 fragments (1.04 kg; Env Table 2). The bone was relatively well preserved, consisting of mostly butchered cattle-sized bones, with a single pig upper mandible (115), and occasional sheep/goat bones, some of which were juvenile. Bird bone was also noted in several contexts. As the assemblage was small, no further work was carried out, but the remains will be retained in archive.

Plant macrofossil remains

The results are summarised in Env Tables 3 and 4.

Uncharred remains, consisting of mainly root fragments are assumed to be modern and intrusive as they are unlikely to have survived in the soils on site for long without charring or waterlogging.

Saxon/early medieval graves (143, 144 and 155)

Only occasional charred cereal grains were recorded from the fills of graves [142] and [154], which included grains of free-threshing wheat (*Triticum* sp free-threshing) and barley (*Hordeum vulgare*) and a single unidentified cereal grain culm node (straw fragment). These may have been introduced in topsoil filling the grain, but equally could be intrusive from an overlying foundation trench for a possible 12th to 14th century building, and associated layers.

Medieval oven (contexts 109, 124, 128 and 129)

Moderate to abundant quantities of charred cereal crop waste, dominant in cereal grain, were recorded from the fills of oven [110]. These include fills from the base of the oven (109 and 129) and sweepings 124 and 128). The composition was similar in all oven contexts. These showed that the crops in use were club wheat (*Triticum aestivo-compactum*) and other free-threshing wheat (*Triticum* sp free-threshing), barley (*Hordeum vulgare*) and rye (*Secale cereale*), and that the associated weeds growing with the crops were those commonly found in other medieval cereal crop waste assemblages, such as melilot/medick (*Melilotus/Medicago*), vetch/lentil/pea (*Vicia/Lens/Pisum* sp), stinking mayweed (*Anthemis cotula*), scentless mayweed (*Tripleurospermum inodorum*) and less common, corn gromwell (*Lithospermum arvense*). The weed assemblage suggests cultivation on both clay-rich soils (stinking mayweed), whilst (corn gromwell) suggests cultivation on light, calcareous soils which overlie bands of Blisworth Limestone Formation to the south of Felmersham (British Geological survey 2018).

The possibility has been raised that the structure may have been used as a bread oven as it is stone-built and appears to be internal. However, it is difficult to distinguish between this function and its use as a corn dryer on the basis of the charred plant remains, as cereal crop waste (consisting of grain, chaff and weed seeds) may have been used as fuel in both cases. This could have become mixed with either clean grain used as a bed on which to sit loaves of bread in the main oven chamber, or grain which was accidentally burnt in the oven during the parching process prior to crop processing.

One fragment of hazelnut shell may have been introduced with other fuel, such as wood, for the oven.

Medieval surface and pit (120 and 131)

Similar charred cereal crop waste was found in lower concentrations in surface layer (120) and fill (131) of pit [130].

7.1 Discussion

The abundance of charred cereal crop waste in oven contexts suggests that cereals were being used in bulk, and that arable agriculture was an important component in the surrounding landscape. Similar results have been found on sites in the vicinity, for example at Yeldon, approximately 5 miles to the north (Deighton 2003) and at Upper Dean (Summers 2016), both in Bedfordshire.

The presence of bird bone in some contexts may be consistent with more diverse faunal remains which tend to be associated with ecclesiastical settlements.

8 Synthesis

A single residual sherd of Roman pottery was recovered from post occupation layer (102) suggesting that there was Roman activity in the broad vicinity.

Stratigraphically the earliest features present were the three adult graves, which as yet remain undated. They were aligned east-west, with heads at the west, without grave goods,

suggesting Christian burial practices. Their tight grouping and similar level suggest a possible cemetery, despite their considerable distance from the early 13th century church of St Mary the Virgin. An earlier church is recorded in the Lenton cartulary (Shrimpton 2003), however its location is not given, and it appears to have gone out of use by the time of construction of the new church. Osteological analysis (Appendix 2) of the remains has determined that the three burials were all female- sk(1430 and sk(144) were old age burials and sk(155) was determined to be of young-middle age. All three were at or above the average stature for populations in the late Saxon/ early medieval period, possibly indicating good health. All three exhibited joint disease in the lower spine, relating to either age or physical strain, and the teeth found from sk(143) and sk(144) did not indicate any damage associated with malnutrition or childhood illness. It may be possible to infer that these individuals were of a high status or privileged lifestyle, indicated by their above average stature, and by the lack of osteological evidence for malnutrition or childhood disease which would be more commonly associated with the lower classes.

The burials were cut by an angular foundation trench [148] 1.7m wide and 0.76m deep which formed a right angle. As this lay below the formation level of the development this was not excavated. It is thought that 12-14th century pottery recovered from the top of the fill was intrusive. The fact that the foundation trench did not respect the burials implies that by the time the building was being constructed the location of the burials had passed from living memory, and enough time had passed that this possible cemetery had been completely forgotten, or disregarded. It can be assumed that the cemetery surrounding the Church of St Mary the Virgin went into use after it was constructed so there is a potential that these may represent late Saxon, possibly pre-conquest burial practices. It was not unusual for late Saxon and early medieval villages to be in a state of flux, with substantial re-planning of house, manor and church sites. (Beresford & Hurst 1971). At Potterne (Davey 1964) a new church was built in the 12th century some distance from the Saxon church, which remained an open space in this case. The site location, Harveys Yard, is a distinctly open space combined with Marriotts Close to the west, so this may support the theory that this area was once a burial ground with the as yet unlocated earlier church nearby.

The skeletons excavated at the adjacent property in the 1980's were found with inclusions of a sherd of pottery of a type produced between the Saxon period and 14th century and a bronze belt attachment dated 14th century. The proximity of these burials may suggest some degree of contemporaneity, as it is unlikely that the location of the cemetery would change more than once in such a short time period apart from in the instances of plague or other epidemics, which does not appear to be the case here. It is possible that through agricultural activities and 1960's landscaping practices that these finds were intrusive, and that these burials can be considered pre 14th century.

The right angled ditch cut [148] would appear to be a foundation trench for the earliest form of occupation on this site. It was unexcavated so it was not possible to see if it represented a large beam slot or some other form of foundation, and the extent of its footprint remains unknown, but based on the size of the footing trench it must have been for a substantial, likely timber building. It is possible that beam slot [147] may be related to this phase of occupation and represented an internal wall division. Pottery retrieved from the upper fill was 12th to 14th century in date though it was likely to be intrusive.

The Northwest to Southeast orientated ditch appears aligned towards the medieval core of the village and produced rare 12-14th century pottery in a series of silty infills alternating with redeposited natural. The single Saxon sherd found within seems likely to have been residual, though possibly derived from a nearby Saxon occupation site. The function of this ditch was

not clear although it was perhaps a field boundary from the surrounding agricultural and pastoral plots, where occasional refuse deposition occurred; possibly those aligned around the medieval tithe barn to the northwest of the site.

A large post pad [130] represents the next stage of activity on this site. This is likely to have been constructed for a substantial aisle post and is unlikely to be related to the foundation trench [148] being too close to be of any structural benefit. The development from timber to stone buildings was not contemporary across the country but the trend has been seen to be more apparent during the thirteenth century (Beresford & Hurst 1971), and in Bedfordshire in particular there was considerable secular building activity in the 13th and 14th centuries. Aisled buildings were considered rare in Bedfordshire, however four examples have been recorded within 20 miles of the site: Bromham Hall; Fenlake barn, Bedford; The Old House, Ickwell Green; and 9 Tile House Street, Hitchin, Hertfordshire (Bailey 1994).

This development from a timber to a larger stone structure may indicate continued and developing occupation of the site, becoming larger and more significant. This would in turn imply that the economy of the owner and area in general, had developed, and could indicate manorial or monastic connections. The substantial nature of the post-pad would imply that a sizeable building formerly stood on this site. It is known that one of the two manors in Felmersham was no longer referred to by 1474, and it is possible that the recorded structures relate to this manor, given the proximity to the historic core of the village and the lack of later development within the surrounding area of Harvey's Yard and Marriott's Close fields

Two stone surfaces were present within the excavation area, the earlier (122) being a rubble limestone construction, which was superseded by a more solid 'flagged' surface (120) of much larger flat laid limestone slabs, into which postpad [135] had been inserted with a limestone surround. This would suggest further stages of development of the existing structure. The aisle post [130] may still have been in use at with the surfaces, as it is not stratigraphically clear if they are contemporaneous. The later insertion of a more substantial 'flagged' surface with an accompanying postpad would suggest that the building had gone through further structural development, or perhaps expansion from this area, where a central timber framing was more suitable, and the larger more supportive aisle posts were either moved or removed. This may be a reflection of the development of roof construction, as in the 14th century aisled halls were often replaced in the more important buildings (Wood 1965). There is also potential that this area became more of an ancillary building and was no longer part of the central core of occupation, such as becoming a bakery with the addition of the bread oven (110).

The oven appears to have been internal. It does not appear to have been built with the flue towards the prevailing wind. The environmental remains recovered from the interior of the oven, although containing grains, do not appear concentrated enough to imply a corn drying oven although it is possible it was also used for this purpose. Like many interior bread ovens the example from Felmersham is stone built, rather than clay. Although it is large for a domestic oven, it is possible that it served a large group of people in the village. A similar feature is described at the Old Fire Station, Evesham (Lovett, forthcoming). The theory that the existing structure may have been redeveloped from its original use is supported in part by the fact that interior bread ovens are usually found built along pre-existing walls, often in corners of buildings- such as those seen at West Cotton, Raunds (Chapman 2010). Here, structure 104 was found butting up to the southwest of oven. It was made of similar materials and may have represented a repair after the oven was inserted into the side of the pre-existing building. Truncation by the modern well, as well as 1960's landscaping had removed any traces of it on the opposing side of the oven, as well as any other possible walling to the northeast.

Overall the excavation has given a unique insight into early medieval and medieval Felmersham in an area which is unlikely to be subject to large scale archaeological investigations. Although the possible manorial connection may be tenuous, there does seem to be continued occupation and development of a series of buildings here, following the trend of changing from wooden structures to stone. The human remains will remain undated, however there is a strong possibility that they may relate to an earlier church or associated cemetery that predated the construction of the Church of St Mary the Virgin in 1220.

8.1 Research frameworks

Saxon occupation evidence has been recorded at Felmersham (Jope 1951) and this corresponds with the frequent finding of Saxon settlements in river valleys. It is only infrequently that Saxon cemeteries and their associated settlement sites have been found together, so Felmersham may offer a rare example of this occurrence. Just like at Elstow (Baker 1969) and St Pauls Square, Bedford (BCAS unpublished) burials were identified but not the accompanying church

Many villages in Bedfordshire are thought to have shrunk, shifted or been deserted during the period of economic decline and agricultural recession in the 14th century, which corresponds with the latest pottery dating of the buildings seen at Felmersham (Oake et al 2009)

9 Publication summary

Worcestershire Archaeology has a professional obligation to publish the results of archaeological projects within a reasonable period of time. To this end, Worcestershire Archaeology intends to use this summary as the basis for publication through local or regional journals. The client is requested to consider the content of this section as being acceptable for such publication.

An archaeological excavation was undertaken at 2 Trinity Close, Felmersham, Bedfordshire (NGR 499141 27725) Bedford Borough Council have granted planning permission (17/02076/FUL) to Mr Martin Blizzard for the construction of a one and two storey rear/side extension to No 2 Trinity Close, Felmersham, Bedford, Bedfordshire, MK43 7HW. Excavations in the 1980's in the adjacent property revealed inhumations thought to date from the medieval period. Permission was granted subject to conditions including a programme of archaeological works.

During this excavation three undated but potentially Saxon skeletons were present, cut by a right angled foundation trench. A large field boundary ditch was also present. These were sealed by a post occupation deposit and a series of rubble limestone surfaces that may possibly be contemporary with a large stone filled pit, identified as an aisle post for a substantially sized building. A stone built oven, likely a bread oven, was recorded to the west of these surfaces.

All pottery found from this site was dated to the 12th-14th century, apart from a single residual Roman sherd and a single Saxon sherd.

The results of the excavation have the potential to cast light on the early development of the village in the Saxon and early medieval period.

10 Acknowledgements

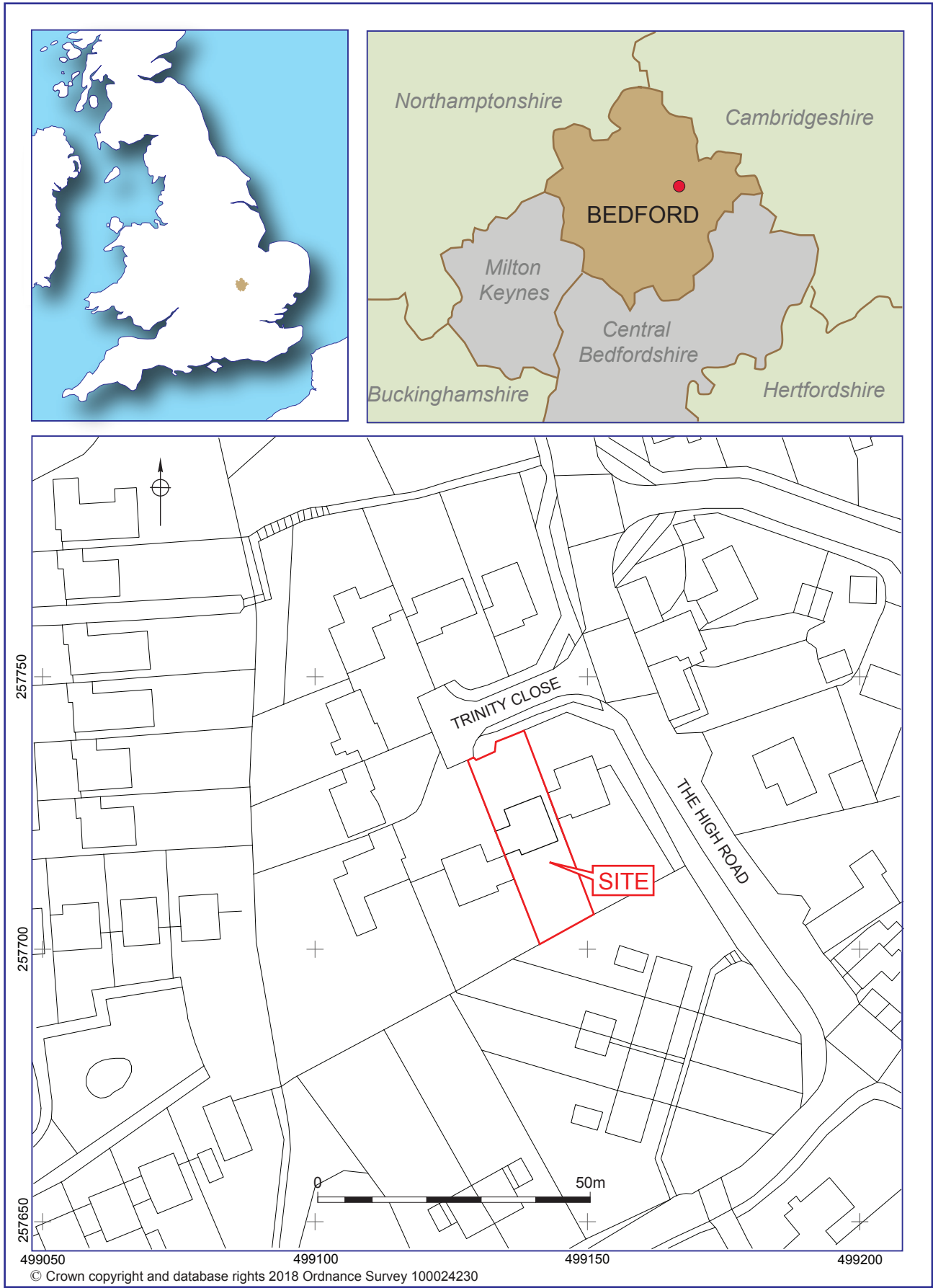
Worcestershire Archaeology would like to thank the following for their kind assistance in the successful conclusion of this project, the owners Mr and Mrs Blizzard, their agent Mr Stevenson, Geoff Saunders of Bedford Borough Council and Kenneth Shrimpton for his valuable information and the copies of his books on the history of the village.

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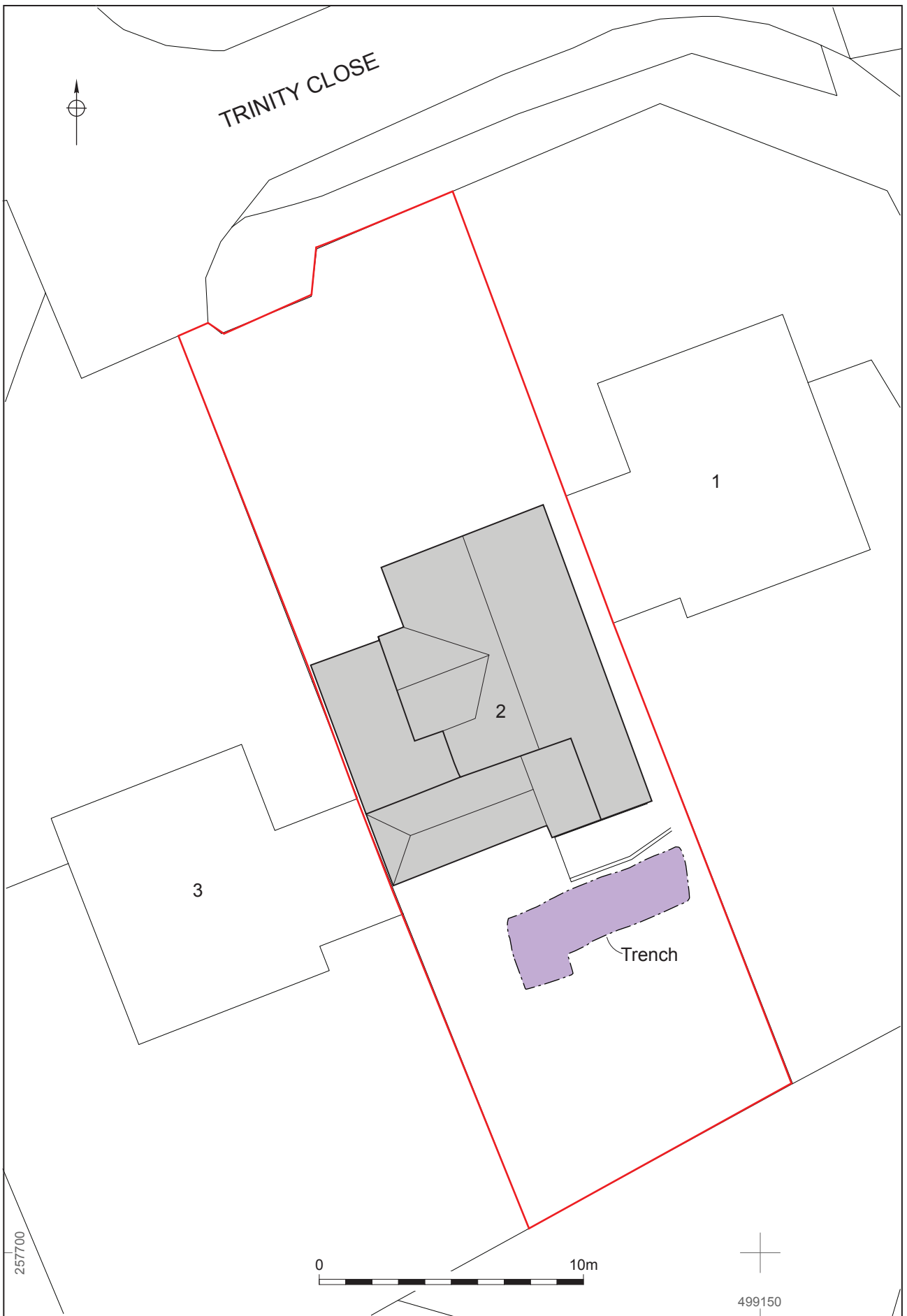
Figures



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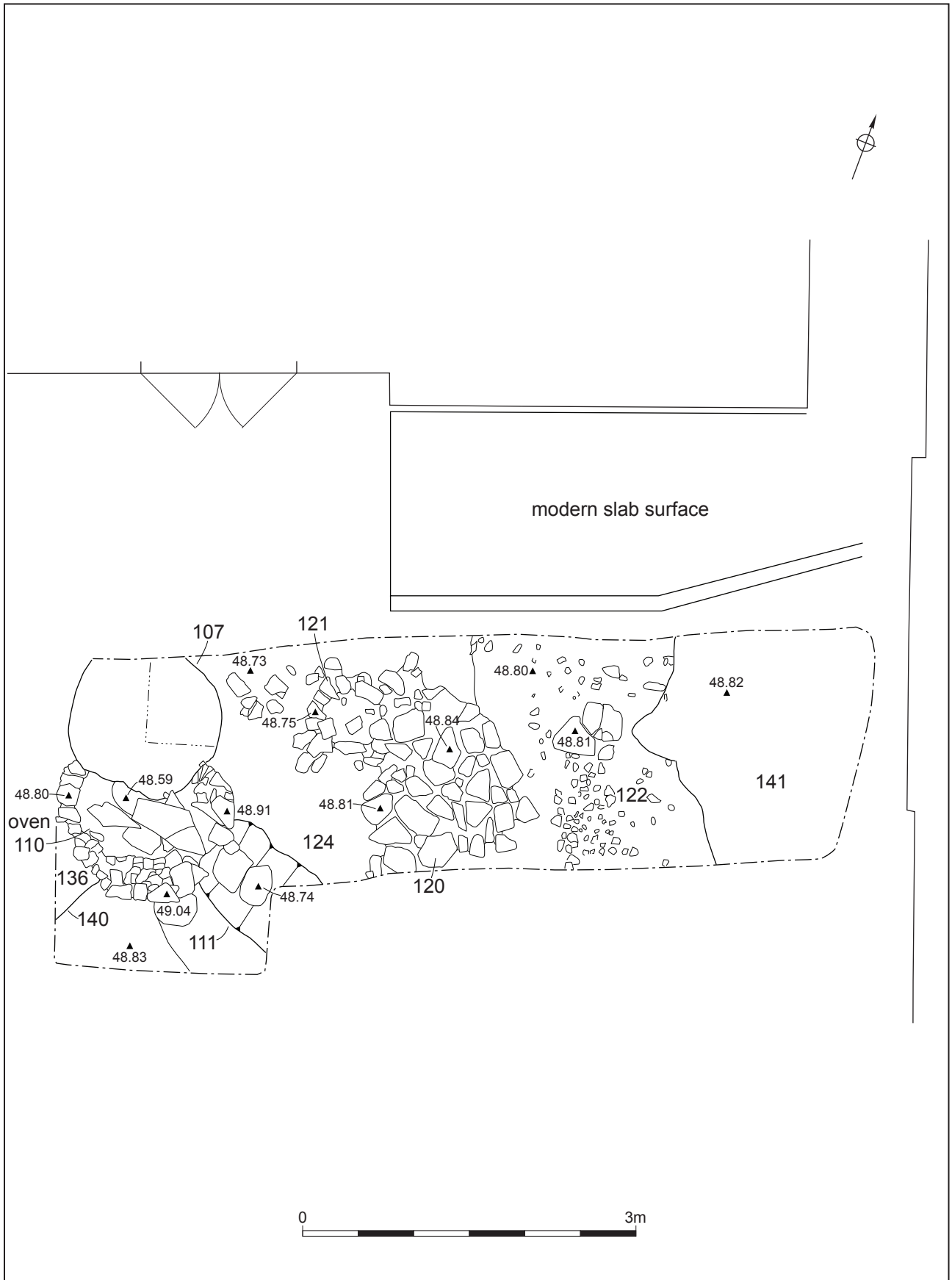
Location of the site

Figure 1



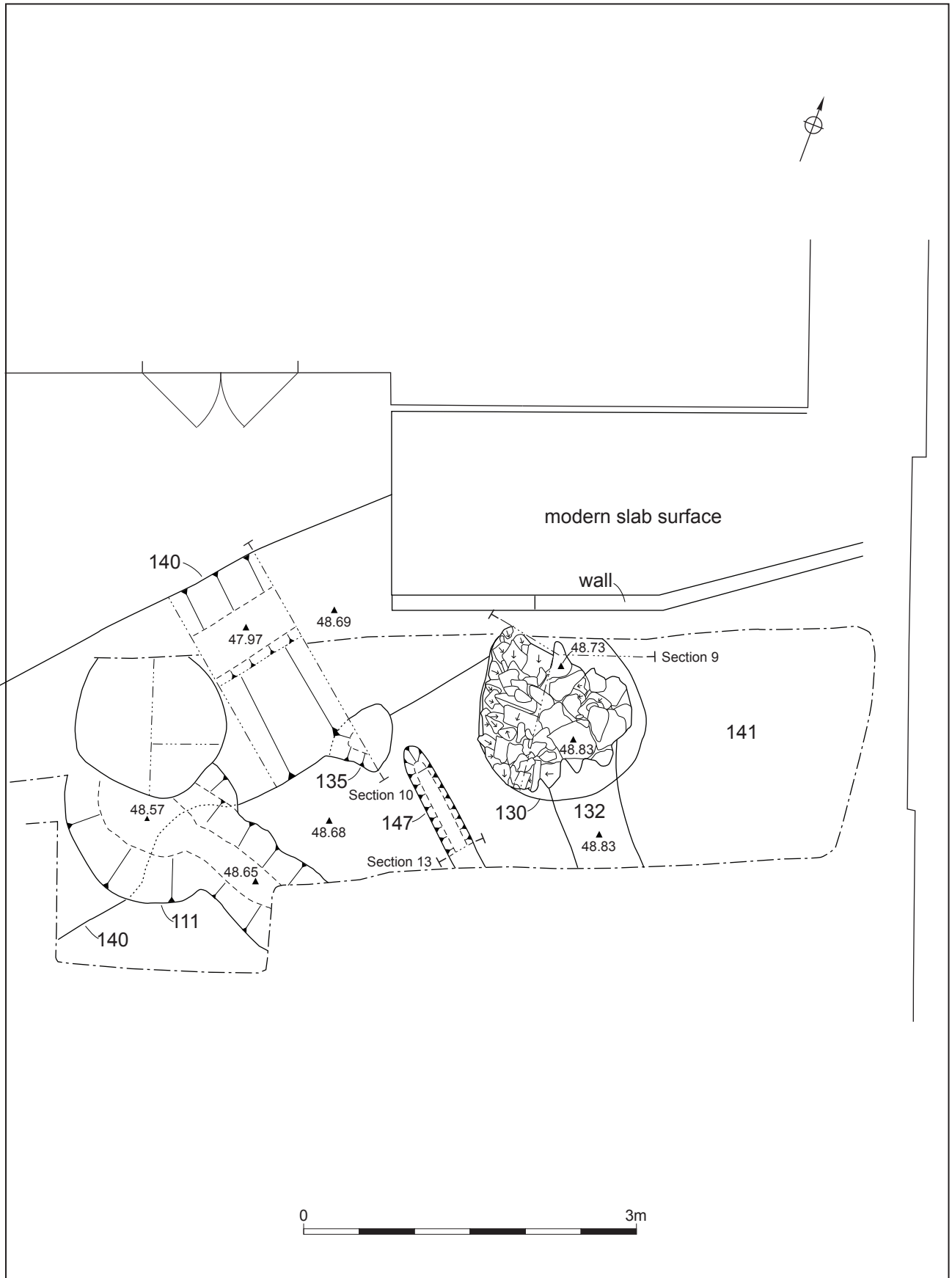
Trench location plan

Figure 2



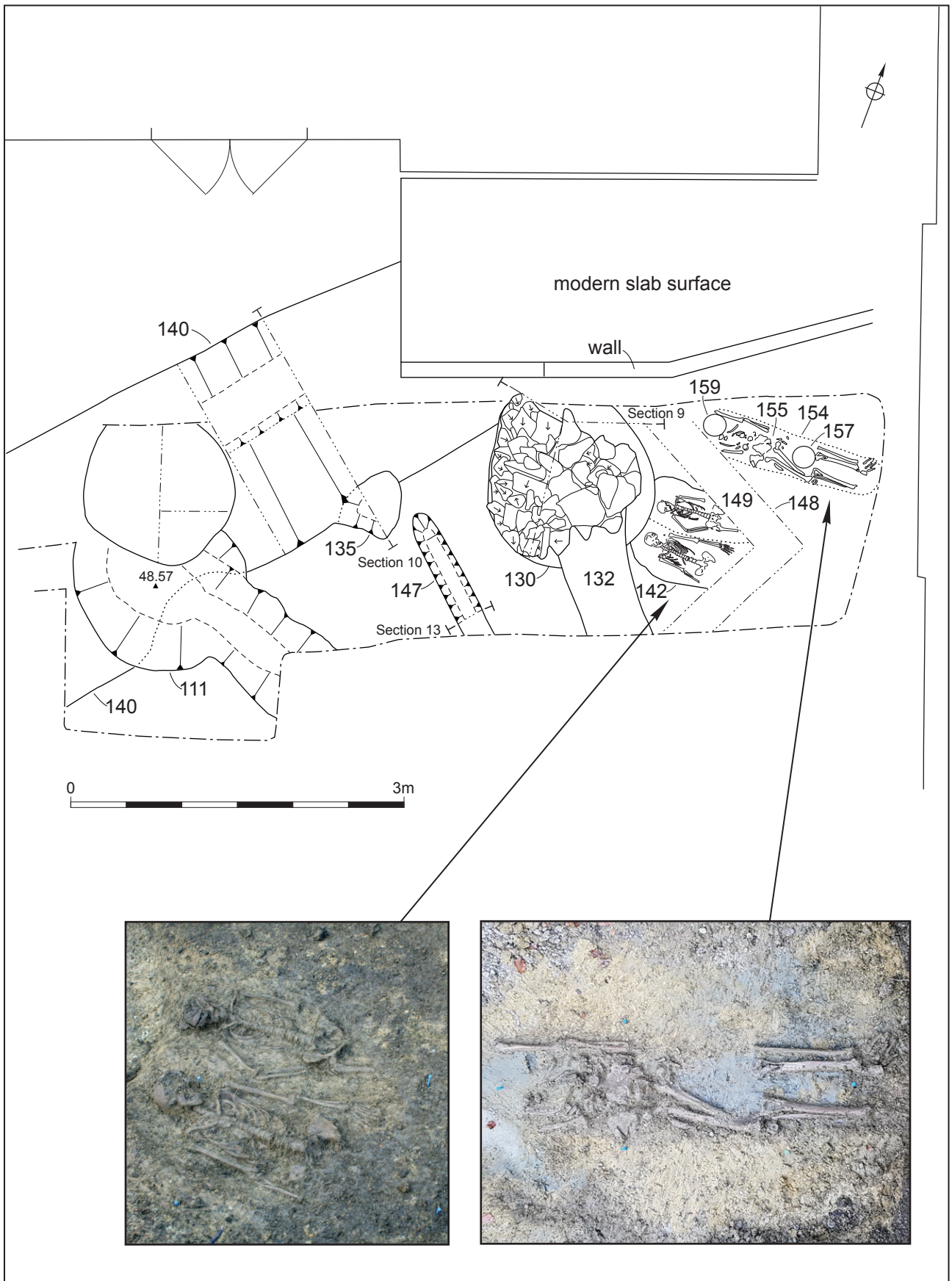
Post removal of demolition, surfaces 120 and 122 and oven 110

Figure 3



Post pad, ditch and beam slot

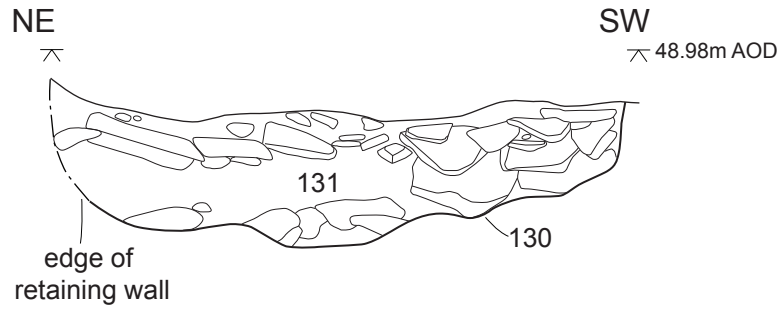
Figure 4



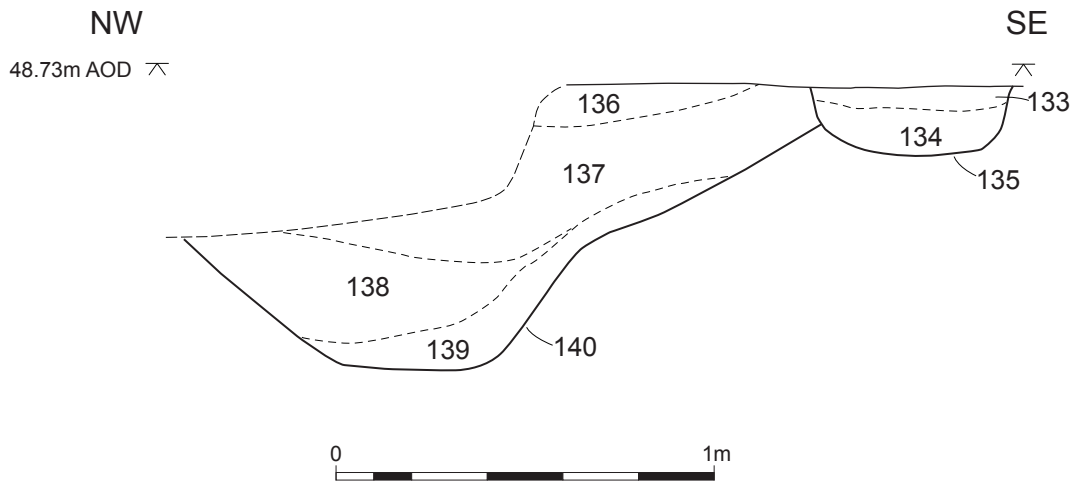
Location of skeletons

Figure 5

SECTION 9: PIT 130



SECTION 10: DITCH 140 AND POSTHOLE 135



SECTION 13: BEAM SLOT 147



Sections

Figure 6

Plates



Plate 1: The site from the southeast, taken from the belltower of the Church of St Mary the Virgin (No 2 Trinity Close is the central of the three triangular houses in the middle ground).



Plate 2: General photograph of site, looking east



Plate 3: Sk(155), looking west



Plate 4: Sk(143) and Sk(144), looking west



Plate 5: South west facing section of Ditch [118]



Plate 6: Northeast facing section of Aisle Post pit [130]



Plate 7: Surface (122) to east, and surface (120) with postpad [135] to west



Plate 8: Detail of postpad [135] with (121) stone surround and (112) capping stone



Plate 9: Oven (110), looking northwest



Plate 10: Oven (110), looking south

Appendix 1 Trench descriptions

Trench 1

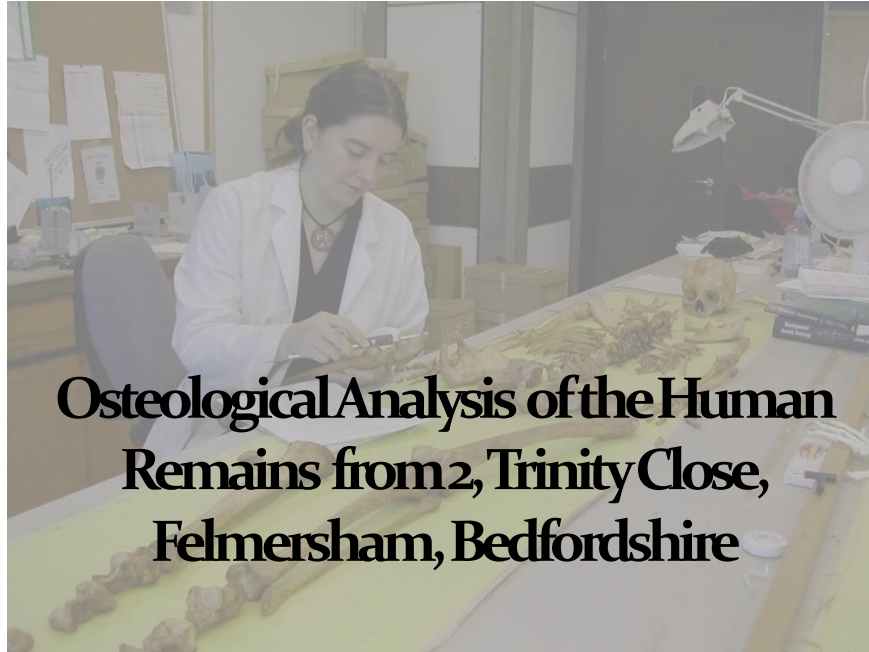
Context summary:

Context	Feature	Context	Description	Height/ depth	Deposit description
100	Topsoil	Layer	Topsoil	0.3	greyish black clay silt
101	Layer	Layer	Historic topsoil/ ploughsoil (upper ridge and furrow)	0.28	brownish grey silty clay
102	Layer	Layer	Post occupation levelling deposit	0.12	Brown clay silt
103	Layer	Layer	Some coal and charcoal fragments	0.3	Compact yellow clay
104	Surface	Structure	Stone surface on south side and butting over 110	0.05	
105	Well	Fill	Upper possible well fill	0.09	Grey clay silt
106	Well	Fill	Well fill	0.57	Yellow clay
107	Well	Cut	Round sided vertical cut. Possible well	0.66	
108	Oven	Fill	Frequent burnt limestone pieces up to 0.28m length. Collapse material	0.15	Soft yellowish brown clay
109	Oven	Fill	Fill in base of oven	0.08	Greyish black silt
110	Oven	Structure	Medieval oven		
111	Oven	Cut	Cut for oven 110		
112	Post pad	Structure	Single stone within the centre of a circular feature.		
113	Ditch	Fill	Upper fill of ditch	0.5	Moderately Compact greyish yellow silty clay
114	Ditch	Fill	Fill of ditch	0.48	Moderately Compact brownish grey silty clay
115	Ditch	Fill	Fill of ditch	0.42	Compact yellowish green silty clay
116	Linear	Fill	Dump of upcast naturals during 1960's levelling/ landscaping	0.22	Soft greyish yellow silty
117	Linear	Layer	1960's landscaping layer	0.3	Soft blackish grey silty clay
118	Linear	Cut	Same as 140		
119	Ditch	Fill	Same as 139	0.5	
120	Surface	Structure	'Flagged' stone surface		
121	Post pad	Structure	c.0.6m diameter ring of		

			angular limestone slabs, topped by 112		
122	Surface	Structure	Rubble surface		
123	Layer	Layer	Same as 141		
124	Oven	Fill	Oven sweep out	0.06	
125	Layer	Layer	Insitu burnt clay and charcoal fragments	0.07	Compact reddish black
126	Linear	Cut	Cut of 1960's landscaping	0.3+	
127	Oven	Structure	Slabs of limestone laid flat into the base of the oven and running out through the flue.		
128	Oven	Fill	Oven sweep out from original use	0.08	
129	Oven	Fill	Area of heat affected natural with some material from 128=109 washed in from above.	0.02	Reddish black clay silt
130	Pit	Cut	Isolated pit feature, possible huge postpad for aisle post	0.36	
131	Pit	Fill	Possible post pad filling of 130	0.36	
132	Layer	Layer	Band of insitu burning to south of stone filled pit 130	0.04	Moderately Compact pinky Red clay
133	Posthole	Fill	Upper fill of posthole 135	0.06	Soft greyish blue clay silt
134	Posthole	Fill	Lower fill of posthole 135	0.12	Grey clay silt
135	Posthole	Cut	Posthole	0.18	
136	Ditch	Fill	Upper fill of ditch. Same as 113	0.11	
137	Ditch	Fill		0.46	
138	Ditch	Fill		0.3	
139	Ditch	Fill	redeposited natural	0.5	Yellowish grey clay
140	Ditch	Cut	E-W aligned medieval ditch	0.7	
141	Layer	Layer	Tamped earth layer		Greyish yellow silty clay
142	Grave	Cut	Cut of grave for sk143 and 144		
143	Grave	Fill	Skeleton 143		
144	Grave	Fill	Skeleton 144		
145	Grave	Fill	Fill of grave 142		Moderately Compact greyish yellow silty clay
146	Beam slot	Fill	Fill of beam slot 147	0.13	Soft yellowish grey silty
147	Beam slot	Fill	Cut of beam slot	0.13	

148	Foundation trench	Cut	Cut of right angled linear at extreme east of site	un ex	
149	Foundation trench	Fill	Upper fill of unexcavated foundation trench	un ex	
150	Layer	Layer	Unexcavated layer at east end of site	un ex	Greyish brown clay silt
151	Layer	Layer	Unexcavated layer at east end of site	un ex	Greenish grey clay silt
152	Layer	Layer	Same as (156) Mixed fill	un ex	Yellowish clay silt
153	Natural	Layer	Natural	un ex	Compact yellow silty clay
154	Grave	Cut	Cut of grave	0.1	
155	Grave	Fill	Skelton in grave 154		
156	Grave	Fill	Backfill of grave 145	0.1	Yellowish clay silt
157	Stakehole	Cut	Stakehole though grave 154	un ex	
158	Stakehole	Fill	Fill of stakehole though grave 154		Compact greyish blue clay
159	Stakehole	Cut	Stakehole though grave 154	un ex	
160	Stakehole	Fill	Fill of stakehole though grave 154		Compact greyish blue clay

Appendix 2



Osteological Analysis of the Human Remains from 2, Trinity Close, Felmersham, Bedfordshire

A Report for Worcestershire Archaeology

March 2018

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Project OA1092

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1. Introduction

The aim of this report is to present the data obtained from the osteological analysis of human skeletal remains recovered during the archaeological excavation of land at 2, Trinity Close, Felmersham, Bedfordshire (NGR: 499141 27725, project code P5203). Archaeological excavations were undertaken in advance of development of the site for the construction of an extension as proposed by Mr. Donald Stevenson (Wheeler 2018).

During the course of the archaeological excavation, the human skeletal remains of three individuals were discovered, referred to in this report as SK[143], SK[144] and SK[155]. All the burials were located on the eastern side of the site. SK[143] and SK[144] appeared to have been inhumed within the same grave cut whereas SK[155] was located in a individual grave to the north-east. The skeletons had been laid out in a supine position orientated on a west-east alignment. Human remains have been accidentally found in the vicinity previously and it had been suggested that these could be medieval in date from the presence of a clasp found with one of the skeletons (Wheeler 2018). However, stratigraphic evidence from this latest excavation indicates that the burials reported on here are likely to pre-date the medieval activity on the site and therefore may be late Saxon in date. Unfortunately, there were no finds directly associated with the human remains so this could not be independently confirmed.

Osteoarchaeological analysis of the inhumated remains was undertaken to assess the condition and completeness of the remains recovered as well as to determine the age, sex and stature of these individuals. Any non-metric traits, skeletal and dental pathologies were also recorded. An overview of the observations is presented here in addition to a summary catalogue of the human remains.

2. The Human Skeletal Remains

2.1 *Methods and Process*

The skeletal material was analysed according to the standards laid out in the guidelines recommended by the British Association of Biological Anthropologists and Osteologists in conjunction with the IFA (Guidelines to the Standards for Recording Human Remains, Brickley and McKinley (eds) 2004, as well as by English Heritage (Human Bones from Archaeological Sites: Guidelines for producing assessment documents and analytical reports, Centre for Archaeology Guidelines, 2002).

Recording of the material was carried out using the recognised descriptions contained in Standards for Data Collection from Human Skeletal Remains by Buikstra and Ubelaker (1994). Full recording forms are supplied separately to be archived with any other archaeological recording forms. All skeletal data has been recorded using an MS-Access database(s) which can be found on the CD-Rom provided.

The material was analysed macroscopically and where necessary with the aid of a magnifying glass for identification purposes. Where relevant, digital photographs have been used for illustration and a full digital image archive of all pathologies and any other features of interest has been provided on the CD-Rom enclosed with this report.

The material was analysed without prior knowledge of associated artefacts so that the assessment remained as objective as possible.

Comparison of the results was made with published osteological data from contemporary skeletal populations where relevant.

2.2 Reasons for the Analysis

Osteological analysis was carried out to ascertain:

- Inventory of the skeletal material
 - Condition of bone present
 - Completeness of the skeleton
 - Age Assessment
 - Sex Determination
 - Non-metric Traits
 - Stature and Morphometric Data
-

- Skeletal Pathology

- Dental Pathology

2.3 *Skeletal Inventory*

An inventory of the skeletal elements present is undertaken to assess the completeness of the skeletal remains and identify the number of individuals present. An inventory also provides information on the specific elements within the skeleton that are present and can be assessed for pathological changes. Each element is recorded as present or absent. The long bones are recorded according to the presence or absence of the proximal (upper), middle and distal (lower) sections as well as the proximal and distal joint surfaces. The completeness of the bones of the axial skeleton (with the exception of the spine) is recorded according to the categories of <25%, 25-50%, 50-75% and 75%>.

A summary inventory of the skeletal elements present for the inhumated skeletons is provided in the skeletal catalogue below (see Section 4). A full inventory can be found on the MS Access database.

2.4 *Condition of the Bone Present*

The condition of the bone was assessed macroscopically according to the categories and descriptions provided by the Guidelines to the Standards for Recording Human Remains (Brickley and McKinley, eds, 2004). Since most skeletons exhibit more than one grade of state of preservation, these categories are simplified into 4 main groups of preservation: Good (grades 0-2), Fair (grades 2-4), Poor (grades 4-5+) and Varied (more than 4 grades of condition). The condition of human bone can be influenced by both extrinsic (i.e. taphonomic conditions) and intrinsic (i.e. robustness) factors (Henderson 1987).

All the skeletons were found to be in 'good condition' overall and were scored as grades '1' and '2'.

2.5 *Completeness of Skeletons*

This is a guide to the overall completeness of the individual's skeletal remains and is calculated according to the percentage of the bones present in relation the total number of bones in a

complete human skeleton. Completeness of remains is gauged through an assessment of the amount of material representing different areas of the body. A complete skeleton comprises of:

Skull = 20%

Torso = 40%

Arms = 20%

Legs = 20%

Each area of the skeleton was assessed and then placed into the following four categories of completeness: <25%, 25-50%, 50-75% and 75%> (Buikstra and Ubelaker 1994).

Recording the completeness of the individual can allow an insight to be gained into how much post-depositional activity has occurred as well as to assess how much information can potentially be gained from the remains.

All the skeletons were approximately 50-75% complete, though different parts of the skeleton had been preserved, as dictated by the post-deposition disturbance affecting each context. SK[143] and SK[144] consisted of skeletal elements from the upper part of the body including the skull, torso, upper limbs and pelvis, whereas SK[155] comprised the lower spine, left arm, pelvis and lower extremities.

2.6 *Age Assessment*

Establishing the age and sex of individuals from an archaeological assemblage not only provides an insight into the demographic profile of the population but can also be used to inform us of patterns in pathological distributions in a skeletal assemblage.

The age of sub-adults is assessed using both dental development (Smith 1991) and eruption (Ubelaker 1989) as well as long bone lengths (Schaefer *et al.* 2009) and epiphyseal fusion (Scheuer & Black 2004). These methods can usually provide a reasonably accurate age estimation due to a relatively narrow range of variation in normal sub-adult development. Thus, sub-adults can be placed into the following age categories: Foetal (<36 weeks), Neonate (0-1 month), Young Infant (1-6 months), Older Infant (6-12 months), Child (1-5 years), Juvenile (6-12 years) and Adolescent (13-17 years).

Assessment of adult age at death, unfortunately, results in much less specific age estimates due to a much greater individual variation in the features exhibited by the examined elements at particular ages (Cox 2000). Age estimation of adults was assessed from analysis of the auricular surface (Lovejoy et al. 1985) and the pubic symphysis (Brookes and Suchey, 1990). Each of these methods examines the deterioration of these surfaces and categorises them accordingly. This deterioration is due in part to the health status of the individual but can also be influenced by life-style and so the variation produced by these factors results in much wider age categories: Very Young Adult (18-24), Young Adult (25-34), Middle Adult (35-49) and Old Adult (50+) (Buikstra and Ubelaker, 1984). Grading of dental attrition was not used as an age assessment technique on this occasion due to an absence of a complete set of molar dentition in the individuals present.

The good condition of the skeletal elements in combination with the presence of the pelvis in all three contexts allowed for age assessment to be undertaken for all three individuals.

SK[143] and SK[144] were both found to be old adult individuals, both of an age of at least 50 years at death.

SK[155] was found to be younger, aged between 30-40 years at death and therefore classified as a 'young-middle' adult.

2.7 *Sex Assessment*

Sex is assessed using the criteria laid out by Buikstra and Ubelaker (1984) in the analysis of morphological features of the skull and pelvis. In addition, metric data is also used where possible, taking measurements of sexually dimorphic elements such as the femoral and humeral head (Bass 1995). Categories ascribed to individuals on the basis of this data were 'Male', 'Possible Male', 'Indeterminate', 'Possible Female', 'Female' and 'Unobservable'. Sex may be ascribed on the basis of metrics alone where no sexually dimorphic traits are observable. Where sex was not observable by either metric or morphological observations, it was recorded as 'Unobservable'. No sexing of sub-adult material is attempted due to the lack of reliable criteria available.

It was possible to undertake an assessment of sex on all three individuals by both examining the sexually dimorphic skeletal elements present (i.e. the pelvis and/or the skull) as well as by undertaking a metric assessment of the long bones (i.e. femoral and/or humeral head diameter).

All three individuals were found to be female.

2.7 *Non-Metric Traits*

Non-metric traits are morphological features that occur both in bone and dentition. These features have no specific functional purpose and occur in some individuals and not in others. The origins of non-metric traits have now been shown to be highly complex, each having its own aetiology and each being influenced to differing extents by genetics, the environment and by physical activity. A review of the current literature suggests that the undetermined specific origins of these traits and the fact that there is more genetic variation within populations than between them can prevent useful conclusions regarding their presence or absence in skeletal remains from being drawn (Tyrell 2000).

The presence of any non-metric traits is noted in the skeletal catalogue below (see Section 5).

2.8 *Stature and Morphometric Analysis*

Stature of adult individuals can be reconstructed from measurements of long bones of the skeleton. Since the long bones of sub-adults have not yet fully developed it is not possible to provide an estimate of stature for immature remains. Stature is the result of many factors including genetics and environmental influences (Floud *et al.* 1990), such as malnutrition and poor health. Height can be used as an indicator of health status and there is a wide range of literature on the relationships between height, health and social status. Estimated stature was calculated by taking the measurements of the individual long bones and using the formula provided by Trotter (1970). Variation in estimated stature can be up to 3cm.

Metric analysis of the long bones, cranium and mandible may also be undertaken on adult remains to provide comparative information on morphological variability.

Stature could be estimated for all three individuals due to the presence of complete long bones.

For SK[143], stature was estimated as 1.68m and for SK[144] as 1.61m, both estimates being based on measurement of the left humerus.

For SK[155], height was estimated as 1.64m from the right femur.

These estimates compare well with the average of 1.61m given by Roberts and Cox (2003) for the early medieval period (410-1050 AD), with two individuals being slightly taller. This may indicate that these individuals had an improved nutritional or social status compared to average or could also reflect a genetic predisposition of this group to being taller.

A summary of the morphometric data is provided in the skeletal catalogue (Section 5).

2.9 *Skeletal Pathology*

Palaeopathology is the study of diseases of past peoples and can be used to infer the health status of groups of individuals within a population as well as indicate the overall success of the adaptation of a population to its surrounding environment. Pathologies are categorised according to their aetiologies; e.g. congenital, metabolic, infectious, traumatic, neoplastic etc. (Roberts and Manchester 1997). Any pathological modifications to the bone are described. The size and location of any lesion is also noted. Distribution of lesions about the skeleton should be noted to allow diagnosis. A differential diagnosis for any pathological lesions should also be provided.

A summary of the pathological conditions identified in each individual is presented here:

SK[143]

This old adult female individual exhibited changes associated with degenerative joint disease in the lower spine, as indicated by the presence of moderately sized osteophytes in the lumbar vertebral bodies. Joint disease is most frequently observed in old age adults and is at least in part due to the aging process (Salter 1999).

SK[144]

These remains represented an old adult female who had very similar degenerative joint disease in the lower spine to SK[143]. In addition, minor enthesophytes, which occur as a result of minor or repetitive trauma and stress placed on muscle attachments, tendons and ligaments, were also present. These were located at the left humeral head on the lesser tubercle, which is the attachment site of the *subscapularis* muscle, the right femur at the site of the fovea as well as the greater trochanter, and at the inferior aspect of the right glenoid cavity at the attachment site of *coracobrachialis* and the short head of *biceps*. The function of the *subscapularis* and *coracobrachialis* muscles are similar, involving rotation of the shoulder inwards and drawing the arm forwards or downwards from a raised position (Saladin 2015). The short head of *biceps* assists with these movements and helps to stabilise the shoulder joint when a heavy weight is carried by the arm (Saladin 2015).

The presence of these enthesophytes indicates that physical stress was placed on the shoulders and the right hip, possibly as the result of habitual movements or perhaps from minor traumatic incidents, though rupture of the coracobrachialis muscle is rare (Iannotti and Williams 2007).

SK[155]

Although SK[155] was a young-middle aged adult, this individual also exhibited moderate and extensive osteophytes in the lower spine on the vertebral bodies associated with degenerative joint disease. Given that aging techniques of archaeological adult skeletons can lead to the underestimation of age at death, it is unclear if this individual had developed spinal joint disease at a younger age or whether this individual was actually older than indicated by the pubic symphysis and auricular surfaces.

It was also noted that six lumbar vertebrae were present instead of the usual five, which is a relatively common developmental anomaly and generally of little clinical significance.

2.10 Dental Pathology

Dental diseases include conditions that not only directly affect the teeth but also the soft tissue surrounding them, sometimes observable in changes to the underlying alveolar bone (Hillson 1986). Each condition can give an indication of different aspects of lifestyle and health of the individual. For example, caries is associated with diets high in sucrose content. The presence of calculus can inform us about dental hygiene whilst enamel hypoplastic defects testify to developmental stresses that an individual has undergone in childhood (Goodman and Armelagos 1985, Hutchinson and Larsen 1988, Dobney and Goodman 1991). The analysis of dental disease, therefore, not only informs us of specific oral conditions but provides complimentary data regarding overall health status and cultural practices. A summary of dental inventories and pathology is provided in Section 5 below.

SK[143]

Substantial calculus deposits were found on the teeth, especially the anterior dentition. The build up of calculus or mineralised plaque tends to reflect poor oral hygiene routines and extensive deposits can lead to gingivitis (gum disease) and periodontal disease, which in turn can result in tooth loss. It is commonly present in the early medieval period, affecting 13.2% of the population, a higher rate than found amongst the Roman population in the UK (8.4%) (Roberts and Cox 2003). Some evidence of periodontal disease was also present.

SK[144]

Seven molar and two anterior teeth had been lost ante-mortem, a corollary of old age and in addition, two teeth had caries, associated with a sugary diet. Roberts and Cox (2003) estimate that 5.2% of the early medieval population had dental caries, and attribute this to the consumption of honey, the only source of sugar available at the time with the exception of naturally occurring fructose in fruit. This individual also had minor calculus deposits on the teeth and minor periodontitis.

SK[155]

No teeth were present so there was no means by which to observe dental pathology.

3. Conclusion

Excavations at 2, Trinity Close, Felmersham, Bedfordshire, resulted in the discovery of three adult inhumations possibly dating to the late Saxon period, all of whom were female. Two of these individuals were old age adult and one was estimated to be a young-middle aged adult. All three individuals exhibited joint disease in the lower spine, occurring as a result of age and of physical strain placed on the vertebrae. Evidence of similar physical repetitive activity or possibly minor trauma was present in SK[144], where several enthesophytes were present in the shoulders and the right hip. All the individuals were of average or above average stature for the period, possibly indicating good health status and none of the individuals with dentition present displayed evidence of dental enamel hypoplasia, associated with poor nutrition or bouts of febrile illness during childhood. Examination of the dentition where present found examples of substantial calculus deposits, caries and ante-mortem loss related to old age, indicating that oral health was poor.

The burials discovered at No. 2, Trinity Close represent a rare opportunity to investigate the health and lifestyles of rural populations in Bedfordshire as well as to consider more specifically the development of Felmersham over time in relation to habitation and burial practices following the introduction of the Christianity. The mid to late Saxon period is associated with a general cessation of the 'pagan' practice of burying the dead in grounds located outside of and separate to a settlement, favouring instead a location within areas of habitation. This possibly reflects the Christian act of intercession for the dead and the desire to include their physical remains within the community of the living (Hoggett 2010), a practice that continued into the medieval period until the time of the Reformation. Many settlements underwent restructuring during this period and this is reflected in burial patterns. Following the introduction of Christianity, some burial grounds show continuity of use over long periods of time whereas other new cemeteries were also being founded, sometimes in use simultaneously, presenting evidence for a variety of burial rites (such as being buried with grave goods or without) during the mid and late Saxon periods (Buckberry 2010). As such, this diversity reflects the impact of the introduction of the early Christian church in England on preceding traditional burial rituals, seemingly representing a religious pluriformity. Very often evidence for burial practices during this period is obscured by either the abandonment of these early Christian burial grounds or by later development and burials on the same site (Hoggett 2010).

Despite the fact that numerous inhumated skeletons have been found in the Felmersham area, little osteoarchaeological analysis has been undertaken to date. Burials have been discovered in an adjacent plot at Trinity Close that at the time were dated to the medieval period. The burials consisted of two articulated skeletons aligned on a west-east axis. Unfortunately, there is currently no osteological report available on the human remains. Other investigations in the grounds or in the vicinity of St Mary's Church have also revealed human remains (Pilkinton 2009, HER Bedfordshire). Two inhumations from the Early Anglo-Saxon period were found located near to the present churchyard boundary of St. Mary's during archaeological investigations at the site of The Plough public house (HER 15640). These remains were thought to either be associated with or pre-date the earliest Church in Felmersham. The area north of the location of the burials was subsequently investigated but no further burials were found. The remains of nine individuals thought to be medieval or early post-medieval were also noted during a watching brief in the grounds of St. Mary's Church itself (Pilkinton 2009).

Given that the site of St. Mary's Church appears to have been a focus for burial during the Early Saxon period and from 1240 onwards, when the construction of St Mary's Church was completed, it is important to understand the nature of the burials at Trinity Close, situated a short distance from the church in a separate area of burial. In the absence of any associated finds, AMS radiocarbon dating of the skeletons is recommended as well as osteological analysis of the skeletons previously found in the neighbouring plot of land to confirm their age and sex as well as to identify any pathology present. It would, for example, be pertinent to know if there were males present in the previously discovered burials on the adjacent plot of land, considering their absence in the small sample analysed here. These avenues of further evidence would help establish a more complete understanding of how Felmersham developed as a settlement and why the focus of burial locations changed during the Saxon and Medieval periods.

4. Catalogue of Human Remains

A summary of the osteoarchaeological observations are presented below. A full inventory and recording of the human skeletal remains can be found on the MS Access database.

SK143

Inventory: Cranial fragments and mandible; 12 right ribs and 11 left ribs; Complete spine; humeri, ulnae and radii; Fragmented ilia; Incomplete left ischium; Incomplete scapulae; clavicles; sternum; Partial sacrum, Left metacarpals 1-5; 5 proximal hand phalanges 3 middle hand phalanges, 2 distal hand phalanges.

Completeness: 50-75%

Condition: Good (Grades 1 and 2)

Dental Inventory and Pathology:

143	<i>Observable dentition</i>	<i>Observable tooth sockets</i>	<i>Ante-mortem loss</i>	<i>Caries</i>	<i>Calculus</i>	<i>Periodontal disease</i>	<i>Enamel hypoplasia</i>	<i>Abscess</i>
<i>n</i>	9	14	0	0	9	3	0	0

Substantial calculus was present on the majority of the dentition.

Age Assessment: Old Adult, 50 years+

Sex Determination: Female

Stature: 1.68m (L Humerus)

Non-Metric Traits: None

Skeletal Pathology: Degenerative joint disease lumbar spine (moderate osteophytes lumbar bodies).

SK144

Inventory: Cranial fragments, mandible; Complete spine; 12 left ribs; 12 right ribs; Humeri, right radius and ulna; Proximal right femur; Fragments of ilia, right ilium; Incomplete scapulae and clavicles; All right metacarpals and carpals, 5 hand proximal phalanges, 4 middle hand phalanges and 2 distal hand phalanges.

Completeness: 50-75%>

Condition: Good (Grades 1 and 2)

Dental Inventory and Pathology:

144	<i>Observable dentition</i>	<i>Observable tooth sockets</i>	<i>Ante-mortem loss</i>	<i>Caries</i>	<i>Calculus</i>	<i>Periodontal disease</i>	<i>Enamel hypoplasia</i>	<i>Abscess</i>
<i>n</i>	13	28	9	2	12	12	0	0

Minor and moderate calculus was present throughout. Moderate and severe periodontal disease.

Age Assessment: Old Adult, 50 years+

Sex Determination: Female

Stature: 1.61m (L Humerus)

Non-Metric Traits: None

Skeletal Pathology: Minor enthesophytes right hip and both shoulders, degenerative joint disease lumbar spine (moderate osteophytes vertebral bodies).

SK155

Inventory: C2, L1-L6; 1 left rib; 1 right rib; Left humerus, incomplete radii, left ulna; Femora, tibiae, fibulae; Incomplete sacrum; Right metacarpals 1-4, left metacarpals 2-5; Right metatarsals 2-5, left metatarsals 1-5, Tali, Calcaneii, left cuboid, 2nd and 3rd cuneiform; 6 proximal hand phalanges, 3 middle hand phalanges; 3 proximal foot phalanges.

Completeness: 50-75%>

Condition: Good (Grades 1 and 2)

Dental Inventory and Pathology:

155	<i>Observable dentition</i>	<i>Observable tooth sockets</i>	<i>Ante-mortem loss</i>	<i>Caries</i>	<i>Calculus</i>	<i>Periodontal disease</i>	<i>Enamel hypoplasia</i>	<i>Abscess</i>
<i>n</i>	0	0	-	-	-	-	-	-

Age Assessment: 30-40 years old, Young-Middle Adult

Sex Determination: Female

Stature: 1.64 (R Femur)

Non-Metric Traits: None

Skeletal Pathology: Supernumerary lumbar vertebra (L6). Degenerative joint disease lumbar vertebrae and T12. Moderate and extensive osteophytes bodies.

6. Acknowledgements

Osteological analysis and report writing were carried out by Gaynor Western of Ossafreelance. Thanks are due to Tom Rogers and Jesse Wheeler of Worcestershire Archaeology for the provision of contextual data.

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THE ARCHIVE

Type	No	Type	No
Skeleton Recording Form A	3	Skeleton Recording Form L	0
Skeleton Recording Form B	3	Skeleton Recording Form P	0
Skeleton Recording Form D	3	Skeleton Recording Form Q	0
Skeleton Recording Form E	3	Skeleton Recording Form R	0
Skeleton Recording Form F	0	Skeleton Recording Form S	0
Skeleton Recording Form G	0	Skeleton Recording Form V	0
Skeleton Recording Form H	3	Skeleton Recording Form W	1
Skeleton Recording Form I	3	Articulated Inhumated Db	1
Skeleton Recording Form J	3	Disarticulated Assemblage Db	0
Skeleton Recording Form K	1		

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Appendix 3 Technical information

The archive

The archive consists of:

- 53 Context records AS1
- 2 Field progress reports AS2
- 3 Photographic records AS3
- 301 Digital photographs
- 1 Drawing number catalogues AS4
- 15 Scale drawings
- 1 Context number catalogues AS5
- 3 Skeleton records AS6
- 1 Sample records AS17
- 1 Sample number catalogues AS18
- 1 Flot records AS21
- 1 Levels records AS19
- 1 Trench record sheets AS41
- 1 Box of finds
- 1 CD-Rom/DVDs
- 1 Copy of this report (bound hard copy)

The project archive is intended to be placed at:

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Castle Lane
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