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**AN ARCHAEOLOGICAL SCHEME OF MONITORING WORKS:  
CHURCH FARM, WADDINGHAM ROAD,  
STH KELSEY  
LINCOLNSHIRE**

**Site Code:** CFSK 08  
**NGR:** TF 041 982  
**LCNCC ACC. NO:** 2008.136  
**PCA 487 09 - 01 Rev A**

*wjd appl 121005*

Report prepared for Dragonby Vale Partnership

by  
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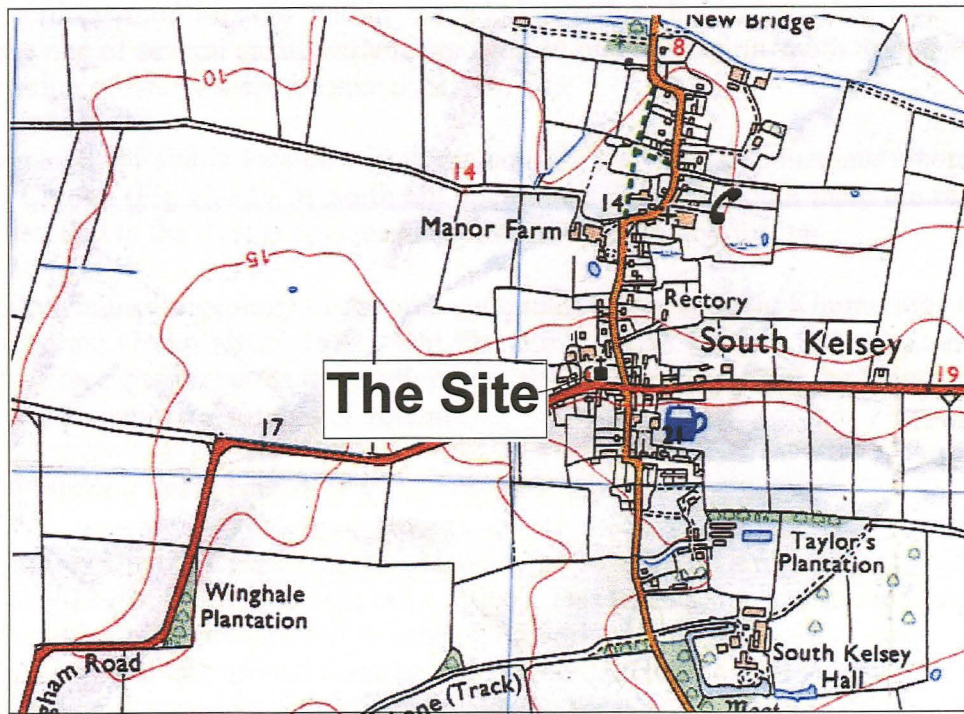
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*Summary*

- *An archaeological scheme of works was carried out by Pre-Construct Archaeology (Lincoln) during the initial development of land situated at Church Farm, Waddingham Road, South Kelsey, Lincolnshire.*
- *The scheme identified Anglo Saxon occupation of a broadly 7<sup>th</sup> - 9<sup>th</sup> century range, further characterising the nature of early settlement within the village.*
- *Two un-dated features and ridge and furrow were also recorded.*



**Fig 1: Site location at scale 1:12,500**  
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## **1.0 Introduction**

Planning permission was granted for the residential development of land at Church Farm, Waddingham Road, South Kelsey, Lincolnshire. The permission was granted subject to the implementation of an archaeological scheme of works that would ensure the preservation, by record, of any archaeological remains disturbed or destroyed as a result of developing the area.

The fieldwork and reporting methodologies described in this report are consistent with the recommendations of *Archaeology & Planning: Planning Policy Guidance Note 16* (Department of the Environment, 1990), *Standards and guidance for archaeological watching briefs* (IFA, 1999) and the Lincolnshire County Council document *Lincolnshire Archaeological Handbook: a manual of archaeological practice* (LCC, 1998).

## **2.0 Site location and description**

South Kelsey is situated on the B1205 between the A15 and Caistor. It lies approximately 26km north-east of Lincoln within the administrative district of West Lindsey. The village is one of several small settlements situated on a low north-south orientated ridge, the elevation of which is approximately 21.5m OD.

The development site is located within the core of the village, immediately north of St. Mary's Church (Fig 1). To its north are open fields; east and south there are residential properties, and to the west is open pasture containing ridge and furrow.

The underlying solid geology of the area comprises Upper Jurassic Kimmeridge Clays of the Ancholme Group (BGS 1982), and the site NGR is TF 041 982. The undulating ground surface rises towards the south of the site (in the vicinity of the church) and the site covers an approximate area of 2000m<sup>2</sup>.

## **3.0 Planning background**

West Lindsey District Council granted planning permission for a residential development comprising 12 dwellings (planning ref; 121005). This permission was granted subject to the undertaking of an archaeological scheme of works during all stages of the development involving ground disturbance; to record archaeological remains that would be disturbed or destroyed as a result of developing the area.

There are no immediate plans for the construction of the 12 dwellings, therefore this report relates exclusively to the monitoring of civil engineering works – access/sewer construction, drainage trenches, storm water storage tanks, and the installation of some services.

#### **4.0 Archaeological context**

The earliest archaeology from South Kelsey derives from an assemblage of lithic artifacts. These date from the Late Mesolithic to the Bronze Age periods and were recovered from cover sands to the east of the village (3-4 km northeast of the development). An isolated Neolithic polished stone axe was also discovered c.700m to the north of the site.

At the site of the former Winghale Priory, southwest of the development, small-scale gravel extraction has revealed evidence of almost continuous occupation dating from the Iron Age to the Middle Saxon period. The priory itself was not established until after the Norman Conquest, and during the 12<sup>th</sup> – 14<sup>th</sup> centuries it owned most of the land surrounding the village.

The village continued to expand during the medieval period, and was eventually divided into two separate secular and ecclesiastical administrative units, each centred upon a church: St. Nicholas' church was located at the north of the village and St Marys' at the south. Both were in existence by 1254 (St Nicholas' was demolished in 1795).

An archaeological evaluation carried out in 2000 on land to the rear of Thornton Road immediately south of the development site identified three principal phases of archaeology, dating from;

- (a) the mid to late Iron Age
- (b) the late Saxon period
- (c) the medieval period.

Potentially stratified pottery of Iron Age date was recovered from only one feature, a ditch. However, residual sherds were also recovered from later features. The majority of archaeological deposits were associated with late Saxon and medieval settlement of the area (10<sup>th</sup> to 15<sup>th</sup> centuries), with a very tentative hiatus occurring between the 12<sup>th</sup>-13<sup>th</sup> centuries (the medieval archaeology of this area has not been extensively explored and so the superficial hiatus may in fact be little more than a gap in the present state of knowledge) (Rylatt 2000).

A strip, map and recording exercise carried out on the same site in 2007-2008, recovered a small but significant ceramic assemblage, confirming settlement of the area between the Mid-Saxon and later medieval periods, although all of the pottery was entirely residual, and the general character of this settlement remains unclear.

#### **5.0 Methodology**

The scheme of monitoring and recording was applicable to all works associated with drainage, road construction and service installation and these works were monitored by the author between August and September 2008.

Due to a misunderstanding on the part of the developer, some initial stages of the work were not monitored – the actual road strip, the drainage pertaining to the new road, and the area for the storm water storage tanks. On inspection of the works already completed, a small truncated pit was observed towards the south of the site. However, much of this area was characterised by made ground deposits and demolition rubble from previously demolished buildings (Fig 2, inset plan). Following consultation with the developer, it was agreed to re-strip a large area of the road at the north of the site and an area approximating 8 x 2.50m adjacent to the tank area at the north-west.

The excavation of these areas was initially carried out using a machine fitted with 1.8m ditching bucket followed by the hand excavation of archaeological features (with the exception of a single pit at the south of the site that had been truncated by the machine prior to the commencement of monitoring).

All other works (drainage runs, sewer and service trenches) were monitored.

Following the excavation of features, and the checking of stripped spoil for artefacts, section drawings were prepared at a scale of 1:10 and 1:20; plans at 1:250, 1:500 and 1:100. Context information was recorded on standard pro-forma context record sheets, and a colour and digital photographic record was maintained throughout the scheme, examples of which are appended to this report.

## **6.0 Results**

The earliest deposit recorded on the site was of geological origin. This comprised light pink-brown clay with streaks of blue-grey alluvial clay (103), approximately 0.50m below the modern ground surface (Fig 3, G-H). Overlying (103) was a second geological deposit of light yellow sandy clay with streaks of blue-grey alluvial clay (102) (Fig 3, G-H + M-N). Archaeological features had cut through this layer.

### **6.1 Un-monitored road strip (Fig 3 K-L)**

Only one feature was exposed, a sub-circular pit-like cut [104] with a width/diameter approximating 0.30m and a surviving depth of 0.10m (Fig 3). It was filled with mid brown silty clay (105); partially truncated during machining. No finds were recovered to date this feature.

### **6.2 Re-stripped area of road (Fig 3, A –B & C-D)**

Two features were identified in this area.

A second possible pit, or possibly a trench, [112] had a steep, deep (0.95m) U-shaped profile and was filled with homogenous mid brown silty clay with occasional small stones (111) (Fig 3). No dating evidence was recovered from this feature.

The other feature was ditch [114] (Fig 3). This was orientated east-west and was filled with mid brown sandy clay (113). Although no dateable finds were recovered, included in the animal bone assemblage was the wing of a Grey Heron - a species thought to have been consumed as a status bird during the Anglo Saxon period (although there is no evidence that the bird had been butchered or consumed) (Woods 2009, Appendix 5). A likely Anglo Saxon date for this feature derived from a re-cut [116] which contained a single fill (115) of mid grey brown silty clay. Included within this were four sherds of late 7<sup>th</sup>-mid 9<sup>th</sup> century pottery and an abraded sherd of Roman pottery, which would have been residual (Appendix 3).

The plant macrofossil assessment from context (115) revealed low levels of fire waste, charred food plant remains, animal bone and pottery fragments and suggested that the feature was used for deliberate waste disposal, or as an accumulator for domestic debris (Appendix 6).

### **6.3 Area stripped adjacent to tank (Fig 3 E-F)**

Approximately 0.35m below the modern ground surface was the partially exposed 'cut' of ridge and furrow [118]. This was shallow with a flat base and was filled with mid - grey brown silty clay and occasional inclusions of iron pan (117). Sealing [118] was 0.35m of topsoil.

### **6.4 Drainage trenches (Fig 3 I-J & M-N)**

The earliest context revealed in a short section of drainage trench comprised a 0.40m thick layer of mid-brown silty clay with occasional small fragments of ceramic building material and angular stones, (110) (Fig 2, Plate 5). Overlying this to a depth of 0.20m was a layer of mid grey – brown silty clay with frequent inclusions of gravel (109). A second layer of mid grey – brown silty clay (108) sealed (109), and this incorporated occasional inclusions of ceramic building material, charcoal and small angular stones. Two subsequent deposits comprised a layer of orange sand and gravel (107), and a layer of gravel and road stone (106). It is possible that all of these contexts were levelling or ground raising deposits and probably related to former farm building and/or previous yard surfaces (Fig. 2, inset plan).

A sample section of the drainage trench along the existing road at the entrance to the site revealed a layer of natural geology (102) sealed by a 0.25m layer of dark brown-black buried topsoil (122) (Fig 3 M-N). Two further contexts comprised 0.20m of sand and gravel (121) sealed by tarmac (120), which formed the modern ground surface in this area.

## **7.0 Discussion and conclusion**

The scheme identified a limited amount of Anglo-Saxon archaeology of a broadly 7<sup>th</sup> - 9<sup>th</sup> century date. Although only one feature (ditch re-cut [116]) could be securely dated to



this period, the inclusion of domestic waste (Appendix 6) strongly suggests that the ditch was associated with a more widespread occupation of the area. This is reinforced by the plant and macrofossil Assessment which suggests that the natural in the vicinity of the site 'comprised open and disturbed ground, typical of areas associated with occupation' (Ranner 2009, Appendix 6).

Although pit/trench [112] was situated within close proximity to the ditch, there was no dating evidence to suggest that it was of the same period, though this would seem likely.

There was no dating evidence from the ridge and furrow to determine whether this was of medieval or post-medieval date and no indication of it extending any further to the east of the area investigated. However, this could be put down to the fact that large areas of the site had been stripped of topsoil and other deposits prior to monitoring.

Whilst it is possible that archaeological deposits may have been truncated by former buildings at the south of the site (at least one feature was truncated by machining prior to archaeological monitoring in this area), this scheme has informed the further clarification of occupation in South Kelsey during the middle to later Saxon periods. This is particularly relevant as previous archaeological schemes (carried out immediately southeast of the development site) have failed to reveal settlement features - only dumps of pottery from secondary deposits (Rylatt, 2002, Hamilton, 2008).

## **8.0 Effectiveness of methodology**

The methodology was not entirely successful due to the developer not engaging an archaeological contractor during the initial stages of ground works. At least one consequence of this resulted in a feature being truncated by the machine. More importantly, in the small areas that were re-stripped, an Anglo-Saxon ditch, an un-dated pit/trench, and ridge and furrow were identified.

Furthermore, the results of this scheme of works are of long-term value in characterising the Anglo-Saxon occupation of the area and informing future planning applications.

## **9.0 Acknowledgements**

Pre-Construct Archaeology (Lincoln) would like to thank the Dragonby Vale Partnership for this commission.

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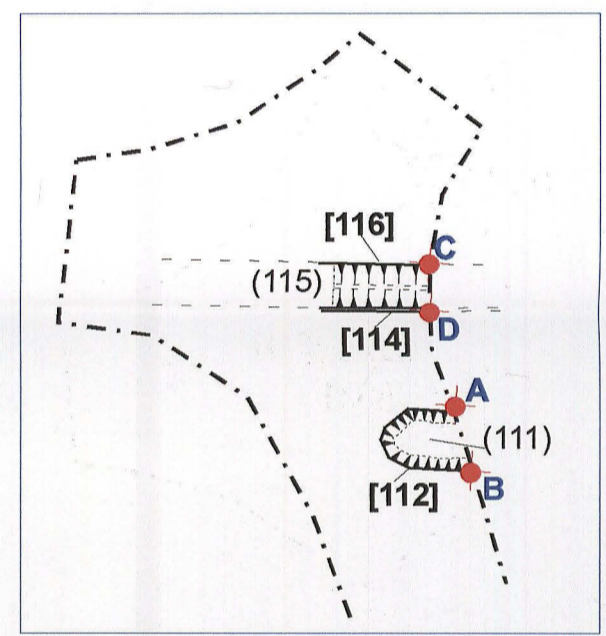
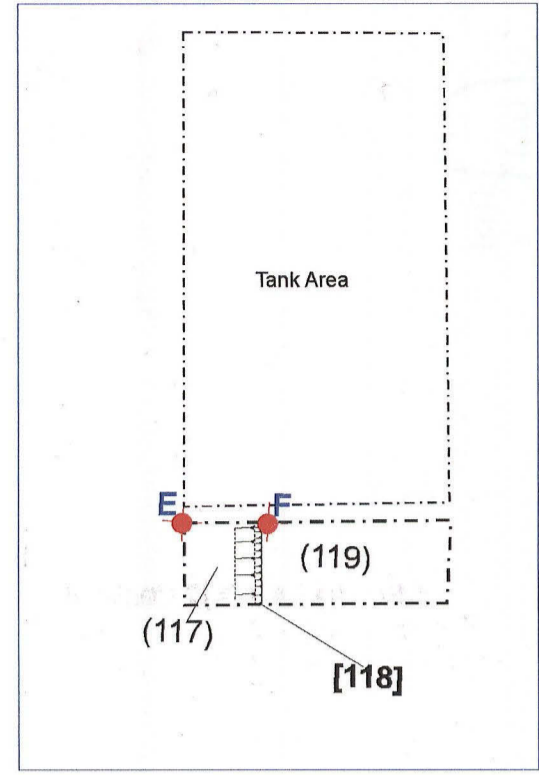
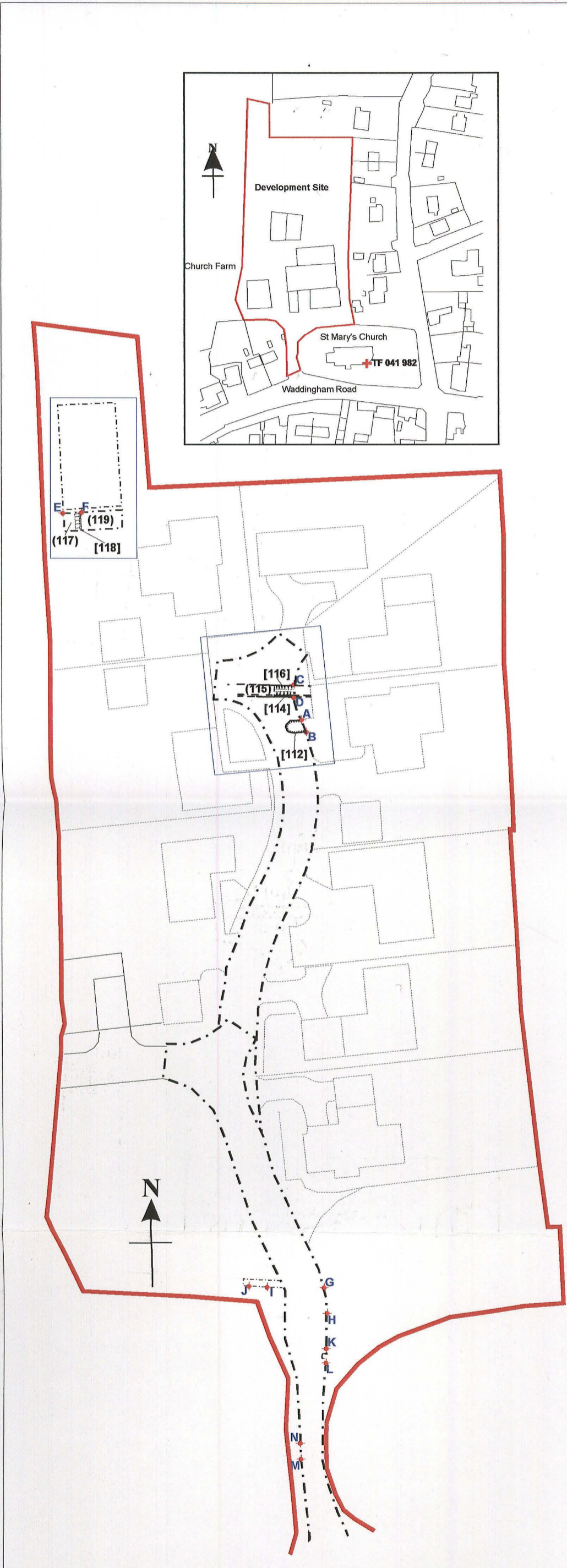
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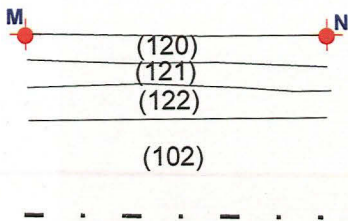
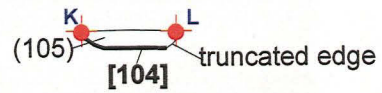
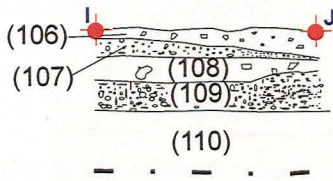
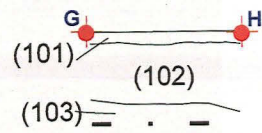
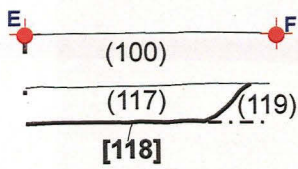
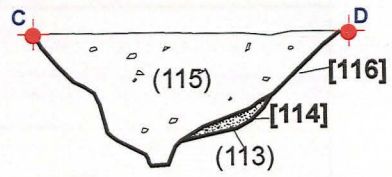
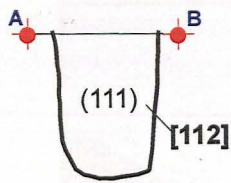
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### **11.0 Site Archive**

The documentary and physical archive for the scheme is currently in the possession of Pre-Construct Archaeology (Lincoln). This will be deposited at The Collection, Lincoln within six months. The global accession number for this scheme is LLN CC: 2008. 136.



**Fig 2:**  
 Plan of development outlined in red at scale 1:500 showing location of drawn sections.  
 Works covered by this report are in black. House plots for future development are in grey  
 Inset map section outlined in black showing location of former buildings at the south of the site at scale 1:1250  
 Inset plans outlined in blue showing features at scale 1:100



**Fig 3**

Drawn sections  
at scale 1:50  
(located on Fig 2)

**Appendix 1: Colour plates**



**Plate 1:** General view of site looking south showing a section of the unmonitored road strip and concreted sewer trench



**Plate 2:** General view of the site looking east also showing part of the road strip



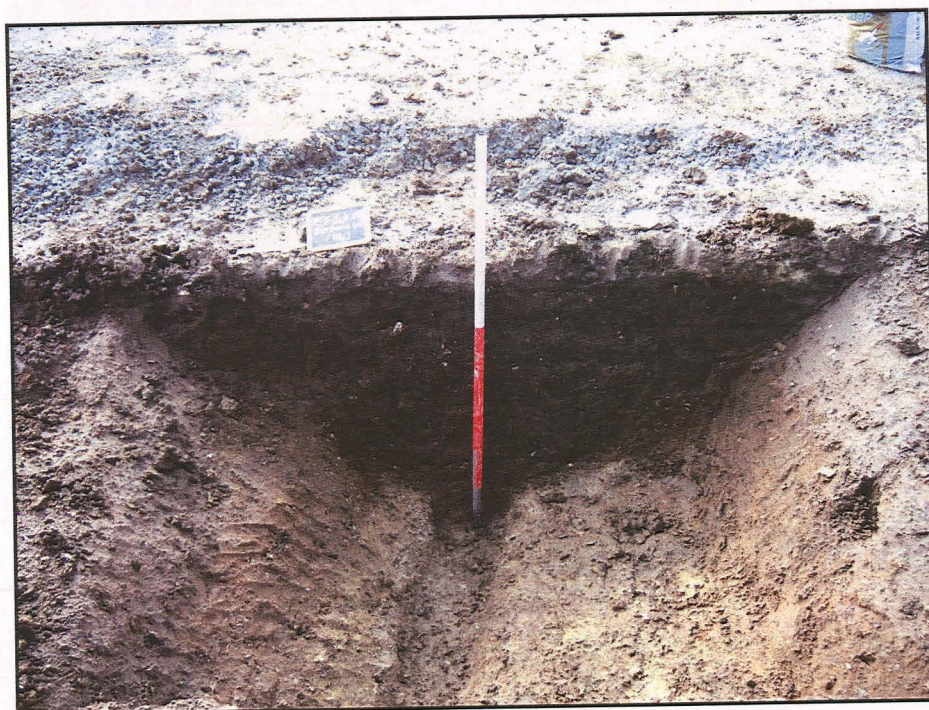
**Plate 3:** General view of the site looking north



**Plate 4:** Pit/trench [112] looking east



**Plate 5:** Sample section of short drainage run to man-hole looking south



**Plate 6:** Section through ditch [114] and re-cut [116] looking east



**Plate 7:** Section through ridge and furrow looking north



**Plate 8:** General view of drainage trench along access road looking north



## Appendix 2: List of archaeological contexts

Context	Type	Description
100	Layer of topsoil	Dark brown silty clay 0.35m thick
101	Layer of subsoil	Mid grey brown silty clay 0.20m thick
102	Layer of natural geology	Light yellow sandy clay with streaks of blue-grey alluvial clay
103	Layer natural geology	Light pinky-brown clay with streaks of blue-grey alluvial clay
104	Cut of a shallow pit	0.30m wide x 0.09m deep, truncated at the south
105	Fill of [104]	Mid brown sandy clay
106	Levelling layer?	Layer of gravel and road stone.
107	Levelling layer	Layer of orange sand and gravel.
108	Possible levelling layer	Mid grey brown silty clay with occasional inclusions of ceramic building material, charcoal, and small angular stones.
109	Possible levelling layer	Mid grey brown silty clay with frequent inclusions of gravel.
110	Layer	Mid brown silty clay with occasional inclusions of ceramic building material and angular and platy stones
111	Fill of pit [112]	Mid brown sandy clay
112	Cut of pit	0.95m deep u-shaped profile, width 0.70m
113	Fill of ditch [114]	Mid brown sandy clay
114	Cut of ditch	extending east-west
115	Fill of ditch re-cut [116]	Mid grey brown silty clay
116	Re-cut of ditch [114]	An irregular profile terminating in a shallow gulley at the base.
117	Fill of [118]	Mid - grey brown silty clay with patches of yellow brown sandy clay and occasional inclusions of iron pan
118	Cut	Cut of ridge and furrow
119	Layer of natural geology	= 102
120	Layer of modern tarmac	forming modern ground surface on entrance road
121	Leveling layer	Mixed sand and gravel 0.20m thick.
122	Layer of buried topsoil	Dark brown-black 0.25m thick

### Appendix 3

## Pottery Archive for Church Farm Yard, Waddingham Road, South Kelsey, Lincolnshire (CFSK08)CFSK08

Jane Young

A small group of five sherds representing four vessels was submitted for examination. One of the sherds is an undiagnostic abraded sherd of Roman Greyware. The other three shell-tempered vessels appear to be of Middle Saxon date, although none of the vessels is in a common fabric type. The fabric of two of the vessels is typical of Northern Maxey-type ware while the larger base sherd is similar to other local shell-tempered fabrics but is of less certain attribution. Previous finds of Middle Saxon pottery have been made at nearby Wingdale Priory.. The Middle Saxon vessels are of late 7th to mid 9th century date and should be kept for future study.

context	cname	full name	sub fabric	form type	sherds	vessels	weight	part	description	date
115	MSAXLOC	Local middle Saxon fabrics	fine-med shelly	jar ?	1	1	10	base	OX/R/OX;moderate mixed fine-medium fossil shell occ quartz & fe carb veg voids;thin walled;? ID	late 7th to mid 9th
115	R	Roman pottery	Grey	?	1	1	6	BS	very abraded;dark reduced fabric with fine-med quartz	Roman
115	MAX	Northern Maxey-type ware	U	?	1	1	4	base	abundant fine-med shell	late 7th to mid 9th
115	MAX	Northern Maxey-type ware	U	small jar	2	1	3	BS	abundant fine-med shell;carbonised int	late 7th to mid 9th

**Appendix 4**

**Ceramic Building Archive for Church Farm Yard, Waddingham  
Road, South Kelsey, Lincolnshire (CFSK08)**

**Jane Young**

<b>context</b>	<b>cname</b>	<b>full name</b>	<b>fabric</b>	<b>frags</b>	<b>weight</b>	<b>description</b>	<b>date</b>
115	FIRED	Fired clay	fine marbled fabric	1	4	abraded; fine silty marbled light orange and cream fabric	-

20 March 2009

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## Appendix 5

**Church Farm Yard, South Kelsey,  
Lincolnshire CFSK 08  
*The Faunal Remains*  
By Jennifer Wood**

### **Introduction**

A total of 33 (1345g) refitted fragments of animal bone were recovered by hand during watching brief works undertaken by Pre-Construct Archaeology Lincoln.

The remains were recovered from Middle Saxon and Undated deposits.

### **Methodology**

The entire assemblage has been fully recorded into a database archive. Identification of the bone was undertaken with access to a reference collection and published guides. All animal remains were counted and weighed, and where possible identified to species, element, side and zone (Serjeantson 1996). Ribs and vertebrae were only recorded to species when they were substantially complete and could accurately be identified. Undiagnostic bones were recorded as micro (rodent size), small (rabbit size), medium (sheep size) or large (cattle size). The separation of sheep and goat bones was done using the criteria of Boessneck (1969) and Prummel and Frisch (1986) in addition to the use of the reference material. Where distinctions could not be made the bone was recorded as sheep/goat (S/G).

The quantification of species was carried out using the total fragment count, in which the total number of fragments of bone and teeth was calculated for each taxon. Where fresh breaks were noted, fragments were refitted and counted as one. The data produced the basic NISP (Number of Identified Specimen) counts.

The condition of the bone was graded using the criteria stipulated by Lyman (1996). Grade 0 being the best preserved bone and grade 5 indicating that the bone had suffered such structural and attritional damage as to make it unrecognisable. Also fusion data, butchery marks (Binford 1981), gnawing, burning and pathological changes were noted when present.

Tooth eruption and wear stages were measured using a combination of Halstead (1985), Grant (1982), Levine (1982) and Payne (1973), and fusion data was analysed according to Silver (1969). Measurements of adult, that is, fully fused bones were taken according to the methods of von den Driesch (1976), with asterisked (\*) measurements indicating bones that were reconstructed or had slight abrasion of the surface.

### **Results**

#### ***Condition and Taphonomy***

The remains were generally of a moderate overall condition, averaging at grade 3 on the Lyman criteria (1996).

No evidence of burning, gnawing or pathology was noted on any of the remains. A single fragment of cattle metatarsal recovered from (113) was split longitudinally, possibly as part of marrow removal.

Table 1, Number of Identified Specimens Present (NISP), by Date and Feature

	Undated Ditch Terminal [112]	Undated Ditch [114]	Medieval/Post Medieval Ditch Re-cut [116]	
Taxon	(111)	(113)	(115)	Total
Cattle		1	15	16
Pig			1	1
Grey Heron ( <i>Ardea cinerea</i> )		2		2
Large Bird			3	3
Large Mammal	1		10	11
N=	1	3	29	33

Table 1 shows the number of identified specimens (NISP) within the assemblage. As can be seen, cattle were the most abundant species identified within the assemblage. Followed by sheep Grey Heron (*Ardea cinerea*) and a single fragment identified as pig.

## Discussion

The assemblage Church Farm yard is relatively small and therefore limited in providing information on underlying economies and husbandry practices save the presence of the animal remains on site.

The presence of Grey Heron is not common, but could not be considered unusual. Watercourses in the local area would have been fishing grounds for the bird. There is no evidence to suggest that the bird had been butchered or consumed, but a natural fatality would have suggested that more bones than an isolated wing would have been present. Grey Heron was consumed as status bird during the Anglo-Saxon period (Dobney and Jaques, 2002:14). Grey Heron was also considered to be suitable prey for the trained Goshawk pre-nineteenth century (Cherryson, 2002:312).

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Codes and references used in cataloguing animal bone

**Taxon:** Species, family group or size category.

Non-species specific codes: -

- : Equid- Horse Family
- : Gadidae- Cod Family
- : Passer- *Passerine*, Small songbirds i.e. Sparrow or Finches
- : Turdid- *Turdidae*, Blackbird/Thrush family
- : Corvid- *Covidae*, Crow family i.e. Crow, Rook or Jackdaw
- : Galliform- Fowl or Pheasant
- : Large Mammal - Cattle, Horse, Red Deer size
- : Medium Mammal- Sheep/Goat, Pig, Dog, Roe Deer size
- : Small Mammal- Cat, Rabbit size
- : Micro Mammal- Mouse sized
- : Unidentified- Not identified to species

**Element:** Skeletal element represented.  
: Unidentified- Not identified to element

**Side:** L-Left, R- Right, B- Both

**Zones:** Records presence/absence of individual areas of the bone.  
Based on Zone illustrations in Serjeantson, D, 1996 *The Animal Bones, in Refuse and Disposal at Area 16, East Runnymede: Runnymede Bridge Research Excavations*, Vol. 2, (eds) E S Needham and T Spence, British Museum Press, London.

**Prox & Dist:** Fusion of proximal and distal epiphyses  
: X- Not present, F- Fused, U- Unfused, B- Unfused diaphysis and epiphysis present, V- Fusion Line visible.

**Age Range:** Age range based on age at fusion. Based on Silver, I, A, 1969, *The Ageing of Domestic Animals*, in D. Brothwell and E.S. Higgs, *Science in Archaeology*, Thames and Hudson.

**Path:** Presence of pathology, details in notes column.

**Butch:** Presence of butchery, details in notes column.

**Burnt:** Presence of burning, details in notes column.

**Gnaw:** Presence of gnawing, details in notes column.

**Worked:** Fragment shows evidence of working, details in the notes column.

**Fresh Break:** Fresh break noted, fragments re-fitted as one bone.

**Associated:** Articulating or adjoining bones.

**Measured:** Measurements taken as according to Von den Driesch, A, 1976 *A Guide to the Measurement of Animal Bones from Archaeological Sites*, Peabody Museum.

**Tooth Wear:** Tooth wear score for aging data, taken as according to:

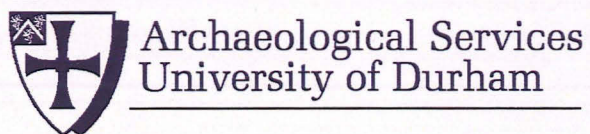
- Grant, A, 1982 'The Use of Tooth Wear as a Guide to the Age of Domestic Ungulates', in B Wilson *et al.* *Ageing and Sexing Animal Bones from Archaeological Sites*, BAR British Series 109, 91-108, Oxford
- Halstead, P, 1985 A Study of Mandibular Teeth from Romano-British Contexts at Maxey, in F Pryor, *Archaeology and Environment in the Lower Welland Valley*, East Anglian Archaeology Report 27:219-224
- Levine, M A, 1982 The Use of Crown Height Measurements and Eruption-Wear Sequences to Age Horse Teeth. In Wilson, B *et al.* *Ageing and Sexing Animal Bones from Archaeological Sites*. BAR British Series 109. 223 - 250



- Surface:** Taphonomies noted on the bone surface:  
W- Weathered  
A- Abraded  
R- Rootlet etched  
D- Chemical etching from digestion
- Condition:** Grades 0-5, where 0 = pristine and 5= indicating that the bone had suffered such structural and attritional damage as to make it unrecognisable. Based on Lyman, R L, 1996 *Vertebrate Taphonomy*, Cambridge Manuals in Archaeology, Cambridge University Press, Cambridge
- No.:** Number of individual bones/fragments
- (g):** Weight in grams
- Notes:** Notes on observed taphonomies, differences and associations.

Ctxt No	Taxon	Element	Side	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8	Prox	Dist	Path	Butch	Worked	Burnt	Gnaw	Fresh Break	Associated	Measured	Tooth Wear	Surface	Condition	No	(g)	Notes	
111	Large Mammal	Scapula	L	N	N	N	N	N	Y	N	N	X	X	N	N	N	N	N	N	N	N	N	X		3	1	14	
113	Cattle	Metatarsal I	L	N	N	Y	N	Y	N	N	N	X	X	N	Y	N	N	N	N	N	N	N	X		2	1	32	Split longitudinally
113	Grey Heron	Radius	L	N	N	N	N	Y	Y	N	N	X	X	N	N	N	N	N	N	N	N	N	X		2	1	0	
113	Grey Heron	Ulna	L	N	N	N	N	N	N	Y	Y	X	F	N	N	N	N	N	N	N	N	N	X		2	1	1	Did=12mm
115	Cattle	Tibia	R	Y	Y	N	Y	Y	Y	Y	N	V	F	N	N	N	N	N	N	N	N	N	X		3	1	278	GL=320, Bp=91, SD=36,
115	Cattle	Metatarsal I	R	Y	Y	Y	Y	Y	Y	N	N	F	X	N	N	N	N	N	N	N	N	N	X		3	1	143	Bp=45, SD=25
115	Cattle	Metacarpal	R	Y	Y	Y	Y	Y	Y	Y	Y	F	F	N	N	N	N	N	N	N	N	N	X		2	1	132	GL=176, Bp=55, SD=30, Dd=21, Bd=58
115	Cattle	Metatarsal I	L	Y	Y	Y	Y	Y	Y	N	N	X	X	N	N	N	N	N	N	N	N	N	X		2	1	53	
115	Large Mammal	Rib	X	N	N	N	N	N	N	N	N	X	X	N	N	N	N	N	N	N	N	N	X		3	3	24	
115	Cattle	Phalanx (I)	R	Y	Y	Y	Y	Y	Y	Y	Y	F	F	N	N	N	N	N	N	N	N	N	X		3	1	17	GLPE=54, Bp=30, SD=25, Bd=29
115	Cattle	Phalanx (I)	L	Y	Y	Y	Y	Y	Y	Y	Y	F	F	N	N	N	N	N	N	N	N	N	X		2	1	17	GLPE=54, BP=30, SD=25, Bd=28
115	Cattle	Phalanx (II)	R	Y	Y	Y	Y	Y	Y	Y	Y	F	F	N	N	N	N	N	N	N	N	N	X		2	1	10	GLPE=35, Bp=29, SD=23, Bd=25
115	Cattle	Phalanx (III)	L	N	N	N	N	N	N	N	N	X	X	N	N	N	N	N	N	N	N	N	X		2	1	12	DLS=64, LD=49, MBS=20
115	Cattle	Skull-premaxilla	R	N	N	N	N	N	N	N	N	X	X	N	N	N	N	N	N	N	N	N	X		2	1	7	
115	Cattle	Calcaneus	R	Y	Y	Y	Y	Y	Y	Y	Y	F	X	N	N	N	N	N	N	N	N	N	X		2	1	54	GL=127, Bp=32
115	Cattle	Astragalus	R	Y	Y	Y	Y	Y	N	Y	N	X	X	N	N	N	N	N	N	N	N	N	X		2	1	32	GLI=61, DI=34
115	Cattle	Nav-Cuboid	R	Y	Y	Y	Y	Y	Y	Y	Y	X	X	N	N	N	N	N	N	N	N	N	X		2	1	27	

Ctxt No	Taxon	Element	Side	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8	Prox	Dist	Path	Butch	Worked	Burnt	Gnaw	Fresh Break	Associated	Measured	Tooth Wear	Surface	Condition	No	(g)	Notes	
115	Mammal	Large Lumbar	B	N	N	N	N	N	N	N	N	F	F	N	N	N	N	N	N	N	N	N	X		3	4	180	
115	Cattle	Sacrum	B	Y	Y	Y	Y	N	N	N	N	F	X	N	N	N	N	N	N	Y	N	N	X		3	1	45	
115	Mammal	Large Vertebra	X	N	N	N	N	N	N	N	N	X	X	N	N	N	N	N	N	N	N	N	X		3	2	15	Fragment
115	Cattle	Tooth	R	N	N	N	N	N	N	N	N	X	X	N	N	N	N	N	N	N	N	N	X		3	1	29	Lower M3=g
115	Mammal	Large Skull-nasal	R	N	N	N	N	N	N	N	N	X	X	N	N	N	N	N	N	N	N	N	X		3	1	10	
115	Cattle	Innominate	R	Y	Y	Y	Y	N	N	Y	Y	F	X	N	N	N	N	N	Y	N	N	N	X		3	1	199	
115	Pig	Radius	L	Y	Y	Y	Y	N	N	N	N	F	X	N	N	N	N	N	N	N	N	Y	X		3	1	10	Bp=26
115	Large Bird	Long Bone	X	N	N	N	N	N	N	N	N	X	X	N	N	N	N	N	N	N	N	N	X		3	3	4	Possible Heron?



**Church Farm Yard, Waddingham Road,  
South Kelsey, Lincolnshire**

**plant macrofossil assessment**

*on behalf of*

**Pre-Construct Archaeology (Lincoln)**

**Report 2165  
April 2009**

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# Church Farm Yard, Waddingham Road, South Kelsey, Lincolnshire

## plant macrofossil assessment

*Report 2165*

April 2009

*Archaeological Services Durham University*

on behalf of

*Pre-Construct Archaeology (Lincoln)*

*47 Manor Road, Saxilby, Lincoln, LN1 2HX*

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**1. Summary**

***The project***

- 1.1 This report presents the results of plant macrofossil assessment of a single bulk sample taken during a watching brief, undertaken by Pre-Construct Archaeology (Lincoln), at Church Farm Yard, Waddingham Road, South Kelsey, Lincolnshire.

***Results***

- 1.2 The charred cultivated food plant remains indicate that pea/beans, barley, wheat, oats and possibly rye were being used. The natural environment of the site comprised open and disturbed ground, typical of areas associated with occupation.

***Recommendations***

- 1.3 The plant macrofossils recovered from this bulk sample are sufficiently varied to provide a preliminary interpretation of the assemblage; full analysis of this sample would not provide any additional information. However, analysis of any further material, if available, may provide data on cereal chaff and additional taxa, which would supplement the current interpretation. The Mollusca shell assemblage is worthy of full analysis by a specialist.

## **2. Project background**

### *Location and background*

- 2.1 A watching Brief has been undertaken by Pre-Construct Archaeology (Lincoln), at a residential development, Church Farm Yard, Waddington Road, South Kelsey, Lincolnshire (GR: TF 041 982). This report presents the results of plant macrofossil assessment of a bulk sample retrieved from the fill (115) of ditch [116]. This deposit contained animal bone, and pottery sherds of Roman and early medieval origin.

### *Objective*

- 2.2 The objective was to assess the plant macrofossil evidence within the sample, in order to establish any potential to provide information about the diet and agricultural practices of former inhabitants associated with the feature, and the palaeoenvironment of the site.

### *Dates*

- 2.3 Samples were received by Archaeological Services Durham University on 10<sup>th</sup> March 2009. Assessment and report preparation were conducted between 20<sup>th</sup> March and 1<sup>st</sup> April 2009.

### *Personnel*

- 2.4 Plant macrofossil assessment and report preparation were by Dr Helen Ranner. Sample processing was undertaken by Bryan Atkinson. Louisa Gidney advised on the faunal remains.

### *Archive*

- 2.5 The site code is CFSK08. The flot, residue and small finds are retained in the Environmental Laboratory at Archaeological Services Durham University, for collection.

## **3. Method**

- 3.1 The whole bulk sample was manually floated and sieved through a 500 $\mu$ m mesh. The residue was described and scanned using a magnet for ferrous fragments. The flot was dried slowly and examined at  $\times 40$  magnification. Identification of the plant remains was undertaken by comparison with modern reference material held in the Environmental Laboratory at Archaeological Services Durham University. Plant taxonomic nomenclature follows Stace (1997).

## **4. Results**

- 4.1 The bulk sample contained small quantities of fire-waste, comprising charcoal, coal and charred heather stems. Unburnt mammal bone fragments were common, with two cattle sesamoids and a tooth identified. Many of these bone fragments were etched and smoothed, which is consistent with having passed through a canine gut. A small assemblage of amphibian, i.e., frog/toad bones were also present, with abundant Mollusca shells (entire and



fragmented) from terrestrial snails. Flint fragments were common, and vivianite clasts were present. The few uncharred seeds appeared relatively fresh, and are most likely to represent modern intrusive material.

- 4.2 The small assemblage of charred food plant remains comprised grains of barley, wheat, oats and cf. rye, with pea/beans.
- 4.3 A few charred weed seeds were identified from taxa favouring a variety of habitats, and a pod from the arable weed wild radish. The sample contained a variety of cereal grains that would be suitable for radiocarbon dating. Plant macrofossil data are presented in Table 1.

## **5. Discussion**

- 5.1 The assemblage of charred food plant remains indicate that pea/beans, barley, wheat, oats and possibly rye were being used; a typical medieval assemblage. Peas, beans, oats and rye are not usually associated with Roman deposits (Greig 1991). The absence of any chaff remains precludes the specific identification of cereal types, and may reflect the use of cleaned grain at the site.
- 5.2 The presence of vivianite clasts is indicative of former organic material and water. These crystals are the product of the interaction of phosphate, iron and water in the natural environment and typically occur in association with human remains, human and animal waste deposits (McGowan & Prangnell 2006). The additional presence of shells from terrestrial Mollusca and frog/toad bones suggests a damp depositional environment.
- 5.3 This assemblage of low levels of fire-waste and charred food plant remains, together with animal bone fragments and pottery sherds, suggest an accumulation of domestic debris; this may have been as a result of the ditch feature having been used for deliberate waste disposal, or the ditch may have acted as an accumulator for domestic debris associated with an occupation site.
- 5.4 The few charred weed seeds suggest open and disturbed ground. The wild radish pod is likely to have been a contaminant of cleaned grain.
- 5.5 The assemblage of Mollusca shells indicated the presence of a variety of taxa (at least 5 different types), and further analysis of this sample may provide additional information regarding former local vegetation, and in particular the localised conditions that prevailed in the ditch feature during sedimentation.

## **6. Recommendations**

- 6.1 The plant macrofossils recovered from this bulk sample are sufficiently varied to provide a preliminary interpretation of the assemblage; full analysis of this sample would not provide any additional information. However, analysis of any further material, if available, may provide data on cereal chaff and

additional taxa, which would supplement the current interpretation. The Mollusca shell assemblage is worthy of full analysis by a specialist.

**Table 1:** Data from plant macrofossil assessment

Context	115
Sample	1
<i>Material available for radiocarbon dating</i>	✓
<i>Volume processed (l)</i>	12
<i>Volume of flot assessed (ml)</i>	75
<i>Residue contents (relative abundance)</i>	
Bone (unburnt)	2
Bone (unburnt) (total no.)	cattle sesamoids 2
Flint	4
Mollusca shell (terrestrial)	frag. 3
Teeth (total no.)	cattle 1
<i>Flot matrix (relative abundance)</i>	
Bone (etched and smoothed)	indet. frag. 3
Bone (unburnt)	indet. frag. 3
Bone	amphibian 3
Charcoal	2
Clinker	1
Heather stems (charred)	2
Mollusca shell (terrestrial)	whole/frag. 3
Seeds (uncharred)	1
Vivianite deposits	1
<i>Charred remains (relative abundance)</i>	
(a) <i>Raphanus raphanistrum</i> (Wild Radish)	pod 1
(c) <i>Avena</i> spp (oat species)	grain 2
(c) <i>Hordeum</i> spp (Barley species)	grain 2
(c) <i>Pisum sativum</i> (Pea) / <i>Vicia</i> cf. <i>faba</i> (Bean)	seed 1
(c) cf. <i>Secale cereale</i> (Rye)	grain 1
(c) <i>Triticum</i> spp (Wheat species)	grain 3
(c) Cerealia indeterminate	grain 2
(x) Fabaceae undifferentiated (Pea family)	seed 1
(x) <i>Rumex</i> spp (Dock)	nutlet 1
(x) <i>Vicia</i> spp (vetch)	seed 1

[a-arable; c-cultivated; x-wide niche]

Relative abundance is based on a scale from 1 (lowest) to 5 (highest)

## 7. Sources

Stace, C, 1997 *New Flora of the British Isles*, 2<sup>nd</sup> Edition, Cambridge

Greig, J R A 1991 The British Isles, in W Van Zeist, K Wasylikowa & K-E Behre (eds), *Progress in Old World Palaeoethnobotany*, Rotterdam

McGowan, G, & Prangnell, J, 2006 The significance of Vivianite in Archaeological Settings, *Geoarchaeology*, 21(1), 93-111

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**OASIS ID: preconst3-59459**

### Project details

Project name	Church Farm, Waddingham Road, Sth Kelsey, Lincs
Short description of the project	An archaeological scheme of works was undertaken at Church Farm Sth Kelsey. Anglo Saxon occupation was identified in the form of a ditch as well as 2 undated pits and ridge and furrow.
Project dates	Start: 11-08-2008 End: 18-09-2008
Previous/future work	No / Yes
Any associated project reference codes	2008.136 - Museum accession ID
Any associated project reference codes	CSFK 08 - Sitecode
Type of project	Recording project
Site status	Area of Archaeological Importance (AAI)
Current Land use	Cultivated Land 1 - Minimal cultivation
Monument type	DITCH Early Medieval
Monument type	RIDGE AND FURROW Uncertain
Significant Finds	POTTERY Early Medieval
Investigation type	'Watching Brief'
Prompt	Direction from Local Planning Authority - PPG16

### Project location

Country	England
Site location	LINCOLNSHIRE WEST LINDSEY CAISTOR Church Farm Sth Kelsey Lincolnshire
Postcode	LN7 6PN
Study area	0 Square metres
Site coordinates	TF 041 982 53.4699698874 -0.431533058308 53 28 11 N 000 25 53 W Point
Height OD / Depth	Min: 20.00m Max: 21.50m

**Project creators**

Name of Organisation Pre-Construct Archaeology (Lincoln)  
Project brief originator Local Authority Archaeologist and/or Planning Authority/advisory body  
Project design originator Pre-Construct Archaeology (Lincoln)  
Project director/manager Will Munford  
Project supervisor Linda Hamilton  
Type of sponsor/funding body Developer

**Project archives**

Physical Archive recipient The Collection, Lincoln  
Physical Archive ID 2008. 136  
Physical Contents 'Animal Bones', 'Ceramics'  
Digital Archive Exists? No  
Paper Archive recipient The Collection, Lincoln  
Paper Media available 'Context sheet', 'Drawing', 'Map', 'Photograph', 'Plan', 'Report'  
  
Entered by Linda Hamilton (linda@pre-construct.co.uk)  
Entered on 13 May 2009

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