Northamptonshire Archaeology

An Iron Age pit alignment at Ravenstone Road, Ibstock, Leicestershire March-April 2013

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Report 13/169

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QUALITY CONTOL

	Print name	Signed	Date
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Approved by	Andy Chapman	AC	04/10/13

OASIS REPORT FORM

PROJECT DETAILS	**OASIS No: 159934**	
Project title	An Iron Age pit alignment at Ravenstone Road, Ibstock, Leicestershire. March-April 2013	
Short description	In March-April 2013, an archaeological excavation was carried out by Northamptonshire Archaeology for CgMs Consulting, on behalf of Davidsons Development, on land at Ravenstone Road, Ibstock, Leicestershire. The works examined segments of a pit alignment, probably dating to the Iron Age. An isolated cremation burial, radiocarbon dated to 0-130 cal AD, was cut into the upper fill of a pit and a dump of hearth material, including pottery of 1st to 2nd century AD date was present in the upper fill of another pit.	
Project type	Excavation	
Previous work	Geophysical survey and Evaluation	
Current land use	Arable	
Future work	Unknown	
Monument type and period	Iron Age and Roman	
Significant finds	Pottery and cremation burial	
PROJECT LOCATION		
County	Leicestershire	
Site address	Ravenstone Road, Ibstock	
Easting Northing	SK 406 113	
Area (ha)	10.17 ha	
Height aOD	141mAOD	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology (NA)	
Project brief originator	CgMs Consulting	
Project Design originator	CgMs Consulting	
Director/Supervisor	Jason Clarke (NA)	
Project Manager	Myk Flitcroft (CgMs) and Adam Yates (NA)	
Sponsor or funding body	Davidsons Development	
PROJECT DATE		
Start date	25/03/2013	
End date	09/04/2013	
ARCHIVES	**Location (Accession no.)**	**Contents**
Physical	XA.35.2013	Pottery, Human bone
Paper		Site records (1 archive box)
Digital		Client report PDF. Survey Data, Photographs
BIBLIOGRAPHY		
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AN IRON AGE PIT ALIGNMENT AT RAVENSTONE ROAD, IBSTOCK LEICESTERSHIRE MARCH-APRIL 2013

Abstract

In March-April 2013, an archaeological excavation was carried out by Northamptonshire Archaeology for CgMs Consulting on behalf of Davidsons Development on land at Ravenstone Road, Ibstock, Leicestershire. The works examined segments of a pit alignment, probably dating to the Iron Age. An isolated cremation burial radiocarbon dated to 0-130 cal AD was cut into the upper fill of a pit and a dump of hearth material, including, pottery of 1st to 2nd century AD date was present in the upper fill of another pit.

1 INTRODUCTION

In March-April 2013, an archaeological excavation was carried out by Northamptonshire Archaeology (NA) on land at Ravenstone Road, Ibstock, Leicestershire (NGR: SK 406 113, Fig 1). The work was commissioned by CgMs Consulting, on behalf of Davidsons Development Ltd, and was undertaken in compliance with conditions attached to planning permission for residential development (ref: 12/00264/OUTM, Conditions 11 and 12).

The scope of works was outlined and detailed in the Written Scheme of Investigation prepared by CgMs Consulting (Flitcroft 2013). The objectives of the excavation were to mitigate the impact of the development upon archaeological remains through preservation by record.

2 BACKGROUND

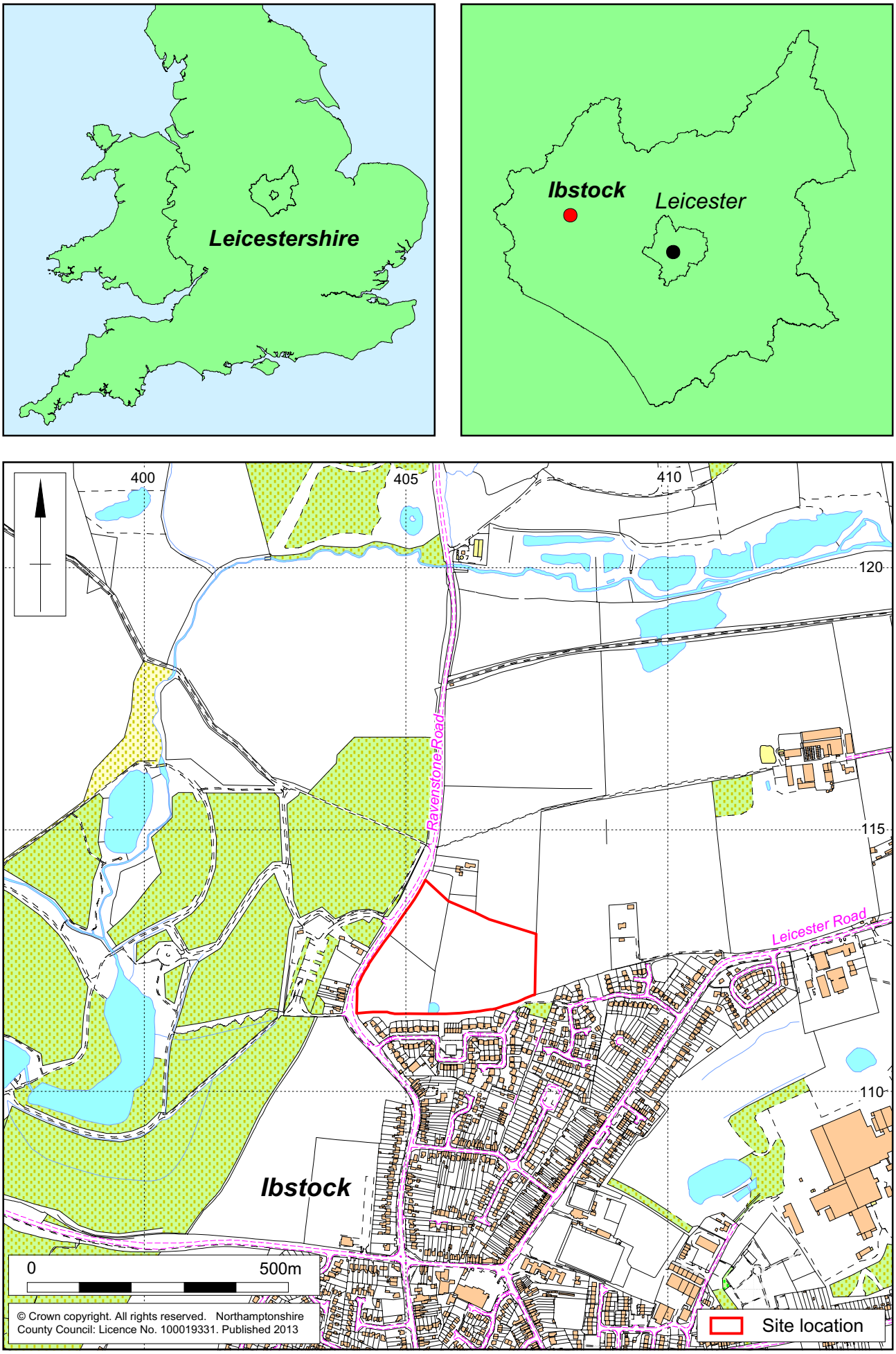
2.1 Location and geology

Location

The area proposed for residential development comprises a single arable field and two paddocks, totalling 5.9ha. It lies to the north of Ibstock, on the east side of Ravenstone Road. It is bounded to the south by the existing Chandlers Croft & Flats Close housing development and to the north and east by fields. It stands at an approximate elevation of 140m AOD and is mildly undulating with an overall slope down to the east.

Geology

The solid geology of the site is mapped as the Radcliffe member of the Sidmouth Mudstone Formation (formerly known as the Lower Keuper Marl). A capping of glacial till is present in the south of the area (BGS 2012).



Scale 1:10,000

Site Location Fig 1

2.2 Historical and archaeological background

The proposed development area lies immediately to the south of a substantial but poorly investigated Roman settlement, which Peter Liddle has classified as a 'small town' (Liddle 2004, 68-9). Cropmarks and fieldwalking evidence suggest that it was linear in plan, and extended for a distance of at least 1km along the line of a Roman road, the *Via Devana*. Piecemeal salvage excavation and watching briefs on the western half of the town, in advance of open-cast mining, have recorded various boundary ditches, structural remains and kilns, but it appears that much else may have been destroyed without adequate record (Lucas 1981, Liddle 2004).

The geophysical survey confirmed the presence of part of a substantial Roman roadside settlement lying along the course of the *Via Devana* (Walford 2011). This comprised a regularly laid out set of plots arrayed along either side of a road (Fig 2). The plots were delineated by boundary ditches, and several contain internal features such as pits and kilns. There was no clear evidence for wall footings or other structural remains but such features are difficult targets for magnetometry (EH 2008: 14) and their absence may prove to be more apparent than real. Several outlying features were detected, but most of these are represented by such weak and fragmentary magnetic anomalies that their full significance and extent could not be determined. The only other features of archaeological interest are the traces of ridge and to the south of the settlement. The remaining anomalies detected by the survey all related to modern features and apart from one unusually large ferrous anomaly, were thought to be of little significance. Following the geophysical survey the boundaries of the proposed development area were redrawn to exclude the area of Roman settlement.

Subsequent trial trench evaluation by Northamptonshire Archaeology identified a pit alignment of possible Iron Age date. Two undated ditches were also identified. The site was traversed by remnant furrows of medieval ridge and furrow cultivation (Fisher 2012).

Immediately south-west of the proposed development area is the Ashby Road site, where Northamptonshire Archaeology undertook a magnetometer survey in 2010. This survey detected very little of archaeological interest, apart from a single pit and some very slight traces of ridge and furrow cultivation (Butler 2010). Subsequent trial trenching confirmed that there was little of archaeological interest on the site (Jarvis 2010).

3 METHODOLOGY

Four archaeological areas targeting segments of the linear pit alignment were excavated in accordance with a plan prepared by CgMs Consulting and approved by Richard Clark (Senior Planning Archaeologist, Leicestershire County Council) (Fig 2).

The targeted areas were positioned using a Leica system 1200 GPS.

A 360^{o} tracked mechanical excavator fitted with a 2m-wide ditching bucket was used to remove overburden to archaeological levels or the natural substrate, whichever was encountered first. The targeted areas were cleaned sufficiently to enable the identification and definition of archaeological features. A hand-drawn plan of all archaeological features was made at scale 1:50 or 1:100 and was related to the Ordnance Survey National Grid. Archaeological deposits were examined by hand excavation to determine their nature. Recording followed standard NA procedures as described in the *Fieldwork Manual* (NA 2011). Deposits were described on *pro-forma*

sheets to include measured and descriptive details of the context, its relationships, interpretation and a checklist of associated finds. Context sheets were cross-referenced to scale plans, section drawings and photographs. Photography was with 35mm black and white film, supplemented with digital images. Sections were drawn at scale 1:10 or 1:20, as appropriate and related to Ordnance Survey datum. Spoil heaps and features were scanned with a metal detector to maximise the recovery of metal objects.

All works were conducted in accordance with the Institute for Archaeologists' *Code of Conduct* (IfA 2010) and *Standard and Guidance for Archaeological Field Evaluation* (IfA 1994, revised 2008).

4 THE EXCAVATED EVIDENCE

4.1 General stratigraphy

The underlying geology was Keuper Marl, mudstone, which was encountered between 0.3-0.6m below the modern ground surface. This occurred as light-mid orange-brown sandy clay with occasional-frequent sub-angular to sub-rounded pebbles and flint. The subsoil was mid orange-brown silty clay and the topsoil was mid-dark grey-black sand. Both soils contained occasional-frequent sub-rounded pebbles and flint. All archaeological features were cut into the natural geology and sealed by the subsoil.

4.2 The pit alignment

A prehistoric pit alignment was located to the east of Ravenstone Road. The pit alignment was recorded over a length of 220m, with four areas measuring 25m by 10m being opened for excavation (Figs 2 and 3), in addition to the parts located in the evaluation Trenches 7, 16, 17 and 18. Geophysical survey and aerial photography indicates the pits continued between the targeted areas and to the east and west beyond the development area. The pit alignment followed a linear north-west to south-east course but with slight changes of angle along its course.

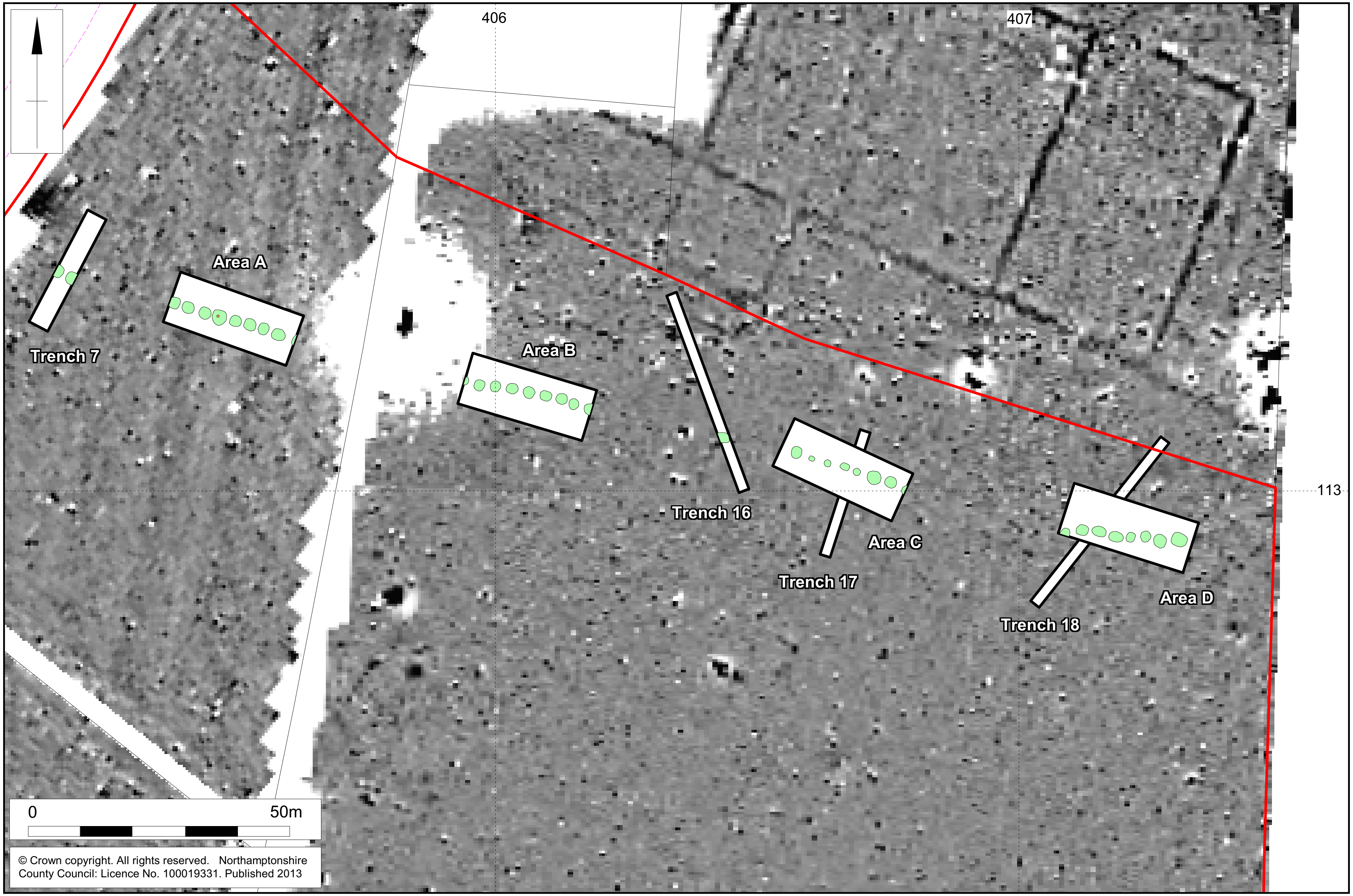
The pit alignment was situated on a relatively flat plateux, *c*141m aOD, with the ground descending to the north and north-east. The pits were cut into the underlying mudstone with sand and large glacial erratic stones present in the east.

Within the four excavated areas were thirty-four roughly sub-square pits. Twenty-eight of these were fully exposed and of these twenty-six were excavated, and the remaining six were only partly exposed and were not excavated.

Excavation typically comprised half sectioning, but selected examples were fully excavated where atypical fills or form were apparent.

Scale 1:2500 (A4)

General site plan Fig 2



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The pit alignment Fig 3

Trench 7

Two pits were present within Trench 7 of the evaluation (Table 1, Figs 2 and 3). The pits were sub-square, with similar dimensions, although their full extent was not present within the evaluation trench.

The pits had silted due to natural weathering with no evidence of deliberate in-filling or re-cutting (Fisher 2012, Figs 3 and 5).

Table 1: Pits in Trench 7

Fill/pit	***Dimensions***	***Description***	***Pit spacing centre to centre***
705/704	0.50m thick	Grey-brown sandy clay with small to large pebbles	
706/704	0.50m thick	Blue-grey sandy clay with small gravel inclusions	
704	2.31m diameter 0.91m deep	Sub-square, steep-sided, flat bottom	3.0m
708/707	0.60m thick	Brown-grey sandy clay with small to large pebbles	
709/707	0.30m thick	Blue-grey sandy clay with small gravel inclusions	
707	2.40m diameter 0.90m deep	Sub-square, steep-sided, flat bottom	

Area A

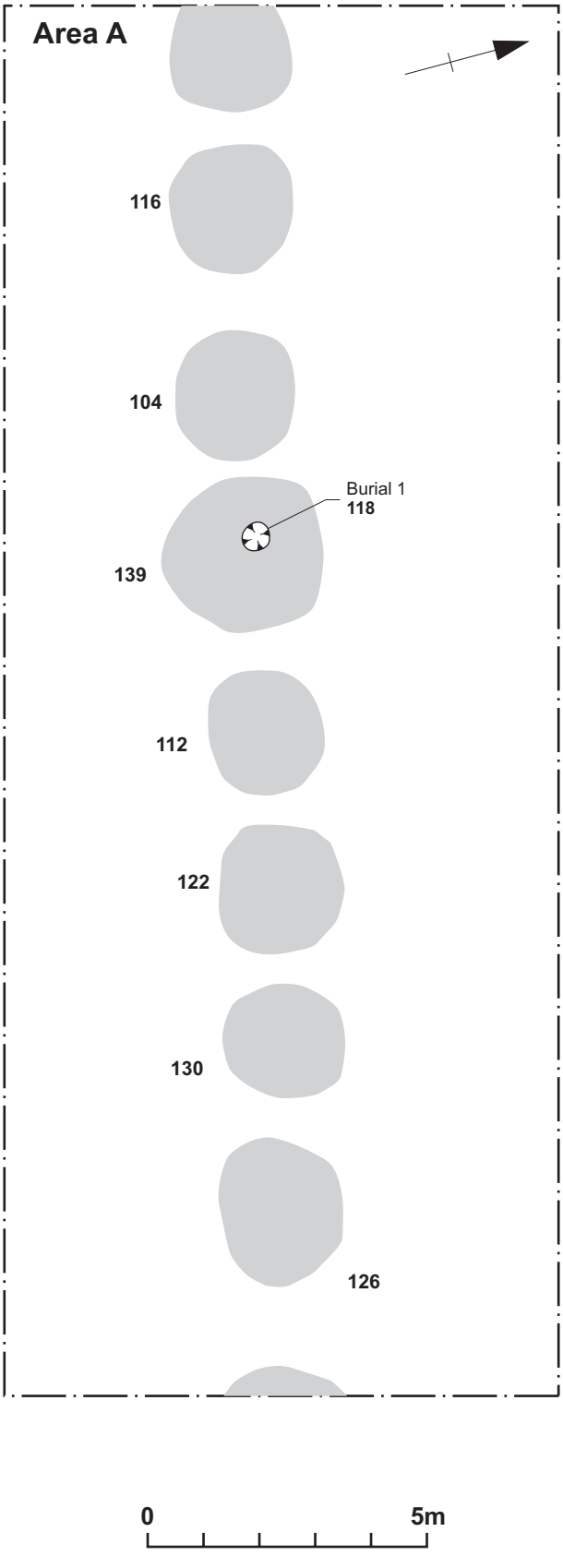
Nine pits were present within Area A, of these seven were excavated (Table 2, Figs 2, 3-6. The pits followed a linear alignment and were sub-square, with similar dimensions and spaced at *c* 3m apart (centre to centre).

All pits had silted due to natural weathering with no evidence of deliberate in-filling or re-cutting. The exception to this pattern was pit [139], the largest pit within the area, which had a cremation burial [118] deposit in a pit cut into the upper fill. The cremation burial was unurned but it may have been contained within a wooden or fabric container that had decayed leaving no trace. It comprised the remains of an adult of indeterminable age or sex with hob nails, probably from boots; burnt bone was attached to some of the nails suggesting the boots were worn by the person during the cremation process. Oak and ash charcoal from the pyre were also present and were probably used as pyre fuel. Oak charcoal has given a radiocarbon date of 0-130 cal AD (Beta 356955, 95% confidence, 1940+/-30BP). This date is contemporary with the pottery dumped into the upper deposit of pit [174].

Table 2: Pits in Area A

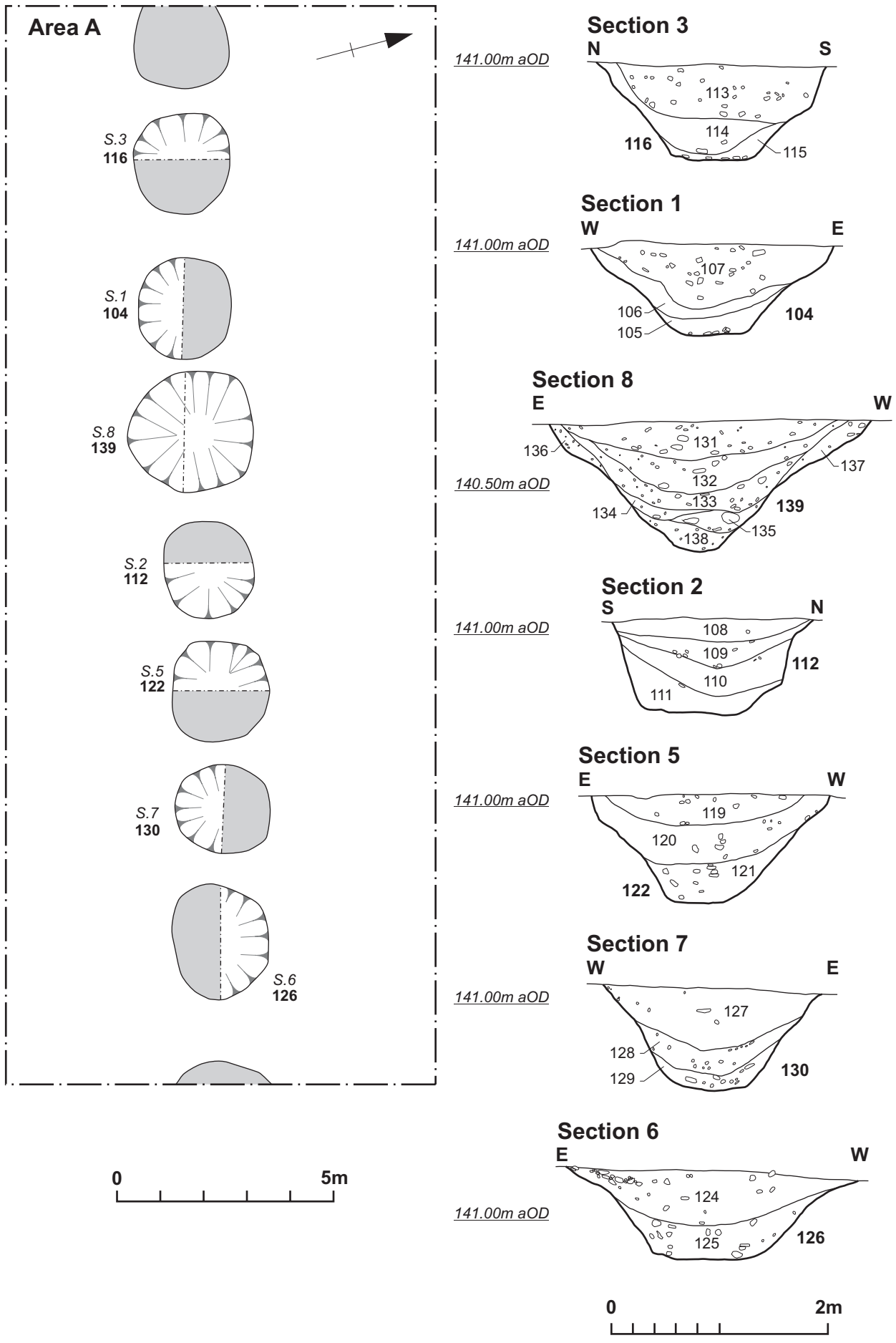
Fill/pit	***Dimensions***	***Description***	***Pit spacing centre to centre***
	-	Unexcavated	2.80m
113/116	0.50m thick	Mid brown-orange sandy clay with frequent stone inclusions	
114/116	0.33m thick	Light brown-orange silty sand	
115/116	0.20m thick	Mid grey sandy clay with frequent stone inclusions	
116	2.40m long 2.14m wide 0.88m deep	Pit, sub-square, concave sides, eroded upper edges, flat base	3.40m
105/104	0.20m thick	Mid brown-grey sandy clay with frequent stone inclusions	
106/104	0.26m thick	Light orange-brown sandy clay	
107/104	0.61m thick	Light brown-orange sandy clay	
104	2.20m long 2.24m wide 0.85m deep	Sub-square, concave sides, flat base	3.00m
117/118	0.14m thick	Mid brown-grey sandy clay with human cremated bone, charcoal (sample 1)	
118	0.40m diameter 0.14m deep	Circular, cuts fill (131) of pit 139	
131/139	0.36m thick	Mid grey silty sand	
132/139	0.32m thick	Mid grey-brown silty sand	
133/139	0.28m thick	Mid grey silty sand	
134/139	0.12m thick	Mid brown-red sandy clay	
135/139	0.22m thick	Mid grey sandy clay	
136/139	0.20m thick	Mid red-orange clay sand eroded from SE side	
137/139	0.18m thick	Mid orange-red sandy clay eroded from the NW side	
138/139	0.24m thick	Mid red-orange sandy clay	
139	2.94m diameter 1.21m deep	Sub-square, concave sides and base	2.90m
108/112	0.21m deep	Mid grey-brown sandy clay	
109/112	0.25m deep	Mid orange-brown sandy clay with frequent stone inclusions	
110/112	0.26m deep	Mid grey-orange silty sand	
111/112	0.39m deep	Mid grey-brown clay sand	
112	2.00m diameter 0.97m deep	Circular, steep-sided, flat base	2.90m
119/122	0.28m deep	Light brown-grey sandy clay	
120/122	0.27m deep	Light brown-orange silty sand	
121/122	0.36m deep	Light brown-grey sandy clay	
122	2.45m long 2.21m wide 1.01m deep	Sub-rectangular, steep-sided, flat base	
127/130	0.55m thick	Mid brown-grey silty sand	
128/130	0.26m thick	Light grey sandy clay	
129/130	0.15m thick	Mid red-brown sandy clay	

130	2.02m diameter 0.94m deep	Sub-rectangular, steep-sided, flat base	3.00m
123/126	0.15m deep	Mid brown sandy clay	1.00m wide
124/126	0.51m deep	Mid brown-orange sandy clay 1 sherd pottery 4th century AD	2.71m wide
125/126	0.30m deep	Grey sandy clay with frequent large stone inclusions	2.06m wide
126	2.70m long 2.20m wide 0.82m deep	Sub-rectangular, concave sides, flat base	
-	-	unexcavated	m



Scale 1:125 (A4)

Pit alignment, Area A, Burial 1 Fig 4

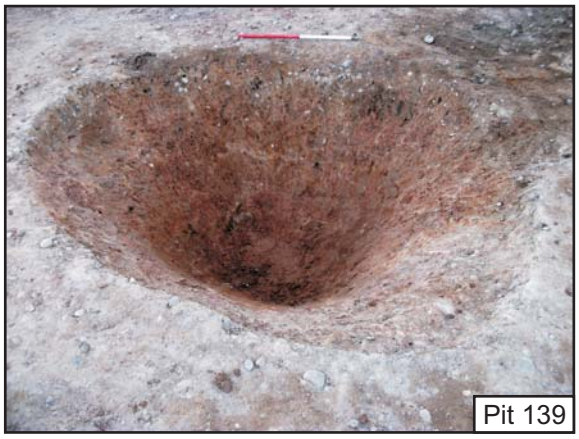


Scales, Plan 1:125, Sections 1:50 (A4) Pit alignment, Area A, plan and sections Fig 5

General view of Area A, looking south-east

Pit 104

Pit 116



Pit 139

Pit 139, section

Photographs of pit alignment in Area A Fig 6

Area B

Nine pits were present within Area B, of these seven were excavated (Table 3, Figs 2, 3, 7-8). The pits followed a linear alignment and were sub-rectangular, with similar dimensions and spaced at *c*3m apart (centre to centre). They were cut into the natural substrate of sandy clay.

All pits had silted due to natural weathering with no evidence of deliberate in-filling or re-cutting. The exception to this pattern was pit [174] which had a deposit of probable hearth waste (166) filling the subsidence hollow in the final fill, containing pottery dated to the 1st to 2nd centuries AD (Fig 13), ash and charcoal.

Table 3: Pits in area B

Fill/pit	***Dimensions***	***Description***	***Pit spacing centre to centre***
-	-	Unexcavated	2.80m
166	0.05m thick	Mid brown-black sandy clay hearth deposit with frequent charcoal inclusions and Roman pottery	
168/174	0.16m thick	Mid brown-grey silty sand with infrequent charcoal flecks	
169/174	0.36m thick	Mid light orange-brown sand	
170/174	0.18m thick	Light grey silty sand	
171/174	0.20m thick	Mid brown-orange silty clay/sand	
172/174	0.26m thick	Mid grey-brown silty clay/sand	
173/174	0.20m thick	Mid orange sand	
174	2.14m diameter 0.78m deep	Sub-rectangular, steep-sided, step on west side, flat base	3.10m
140/143	0.25m deep	Mid brown sandy clay, 2 sherds Roman pottery dated 4th century AD	
141/143	0.34m deep	Mid brown-orange silty sand	
142/143	0.21m deep	Grey sandy clay	
143	1.90m diameter 0.80m deep	Sub-rectangular, sloping sides, flat base	3.30m
144/148	0.40m thick	Light grey-brown clay-sand	
145/148	0.20m thick	Mid brown silty clay	
146/148	0.20m thick	Mid grey clay sand	
147/148	0.65m thick	Mid yellow-grey clay sand	
148	2.20m wide 0.65m deep	Sub-rectangular, sloping sides, flat base	3.30m
149/152	0.31m deep	Mid grey-orange sandy clay	
150/152	0.31m deep	Mid grey-brown sandy clay with frequent pebble inclusions	
151/152	0.24m deep	Dark grey sandy clay	
152	2.25m diameter 0.87m deep	Sub-rectangular, sloping sides, rounded base	3.20m
153/157	0.23m deep	Mid orange-brown sandy clay	
154/157	0.10m deep	Grey sandy clay	
155/157	0.31m deep	Mid brown-orange sandy clay	
156/157	0.16m deep	Grey sandy clay	
157	2.18m diameter 0.80m wide	Sub-rectangular,	3.10m
158/161	0.55m thick	Orange-brown silty sand	

Fill/pit	*Dimensions*	*Description*	*Pit spacing centre to centre*
159/161	0.20m thick	Mid grey clay-sand	
160/161	0.20m thick	Dark grey sandy clay	
161	2.20m diameter 0.85m deep	Sub-square, steep-sided, flat base	2.40m
162/165	0.39m thick	Mid orange-brown sandy clay	2.14m wide
163/165	0.36m thick	Mid orange-brown silty sand	1.81m wide
164/165	0.15m thick	Grey sandy clay	1.50m wide
165	2.14m diameter 0.90m deep	Sub-rectangular, sloping sides, flattish base	3.00
-	-	unexcavated	-

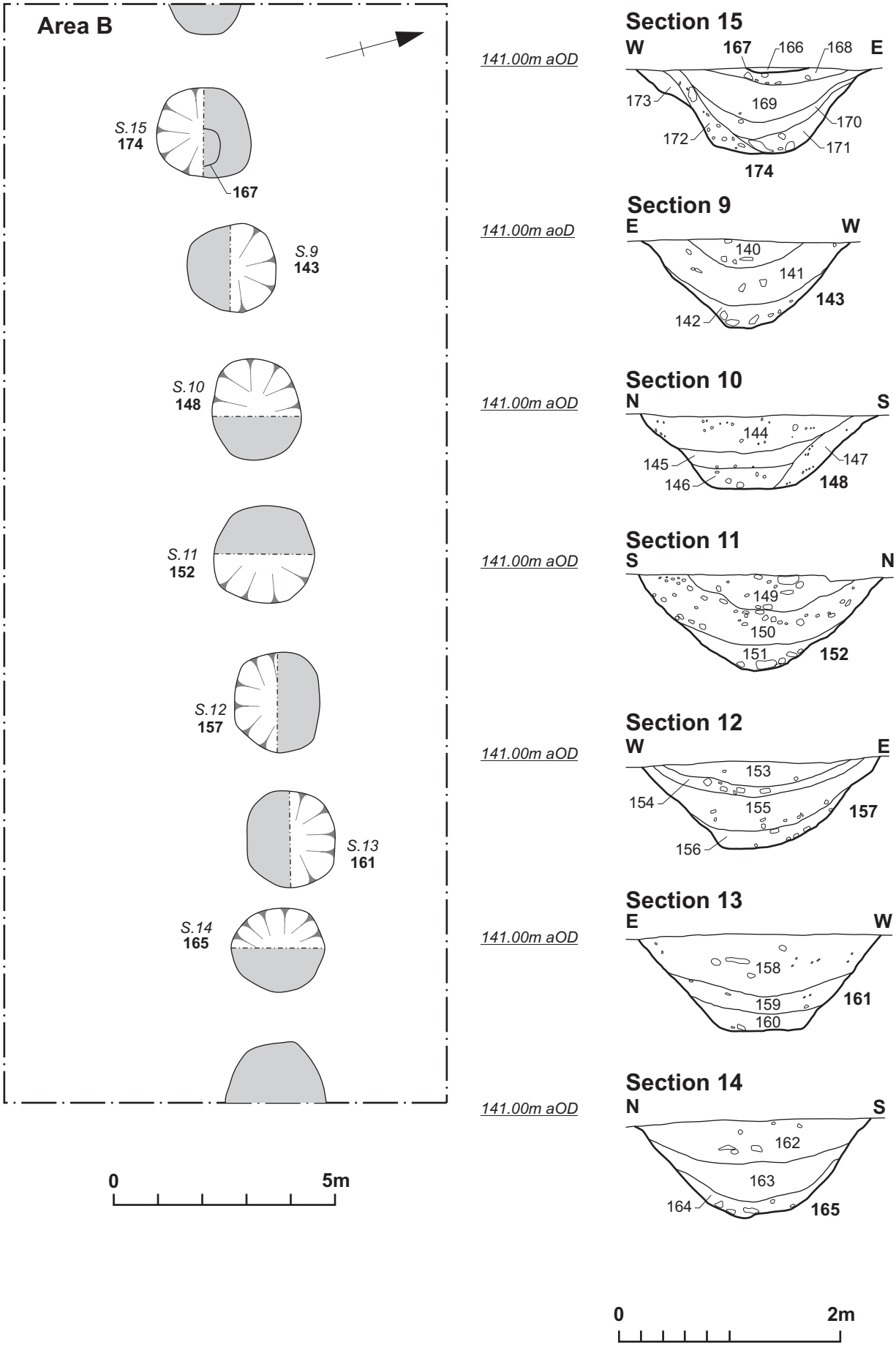
Trench 16

A single pit was present within Trench 16 of the evaluation (Table 4, Figs 2 and 3). It was sub-rectangular shaped with a slight concave base and measured 0.90m deep. Its full extent was not present within the trench (Fisher 2012, Fig 4).

The pit had silted due to natural weathering with no evidence of deliberate in-filling or re-cutting.

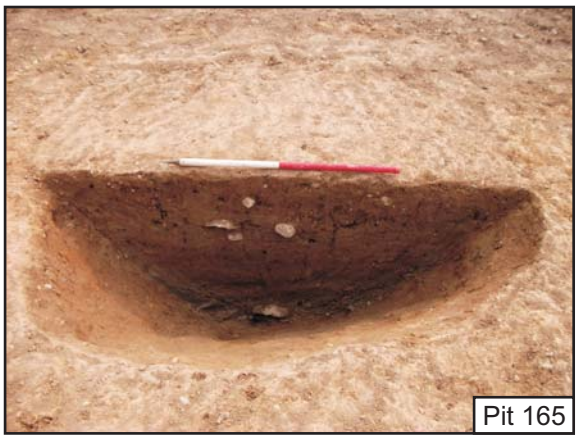
Table 4: Pit in Trench 16

Fill/pit	*Dimensions*	*Description*	*Pit spacing centre to centre*
1606/1608	0.65m thick	Orange-grey sandy clay with small to large pebbles	
1607/1608	0.25m thick	Mid orange-grey sandy clay with small gravel inclusions	
1608	1.70m diameter 0.90m deep	Sub-rectangular, steep-sided, slight concave bottom	



Scales, Plan 1:125, Sections 1:50 (A4) Pit alignment, Area B, plan and sections Fig 7

General view of Area B, looking south-east



Photographs of pit alignment in Area B Fig 8

Area C (trench 17)

Eight pits were present within Area C. Of these, five were excavated and a further two had been excavated as part of the evaluation [1704] and [176] (Table 5, Figs 2, 3, 9 and 10) (Fisher 2012). The pits were cut into the natural substrate of clay-sand and followed a broadly linear alignment.

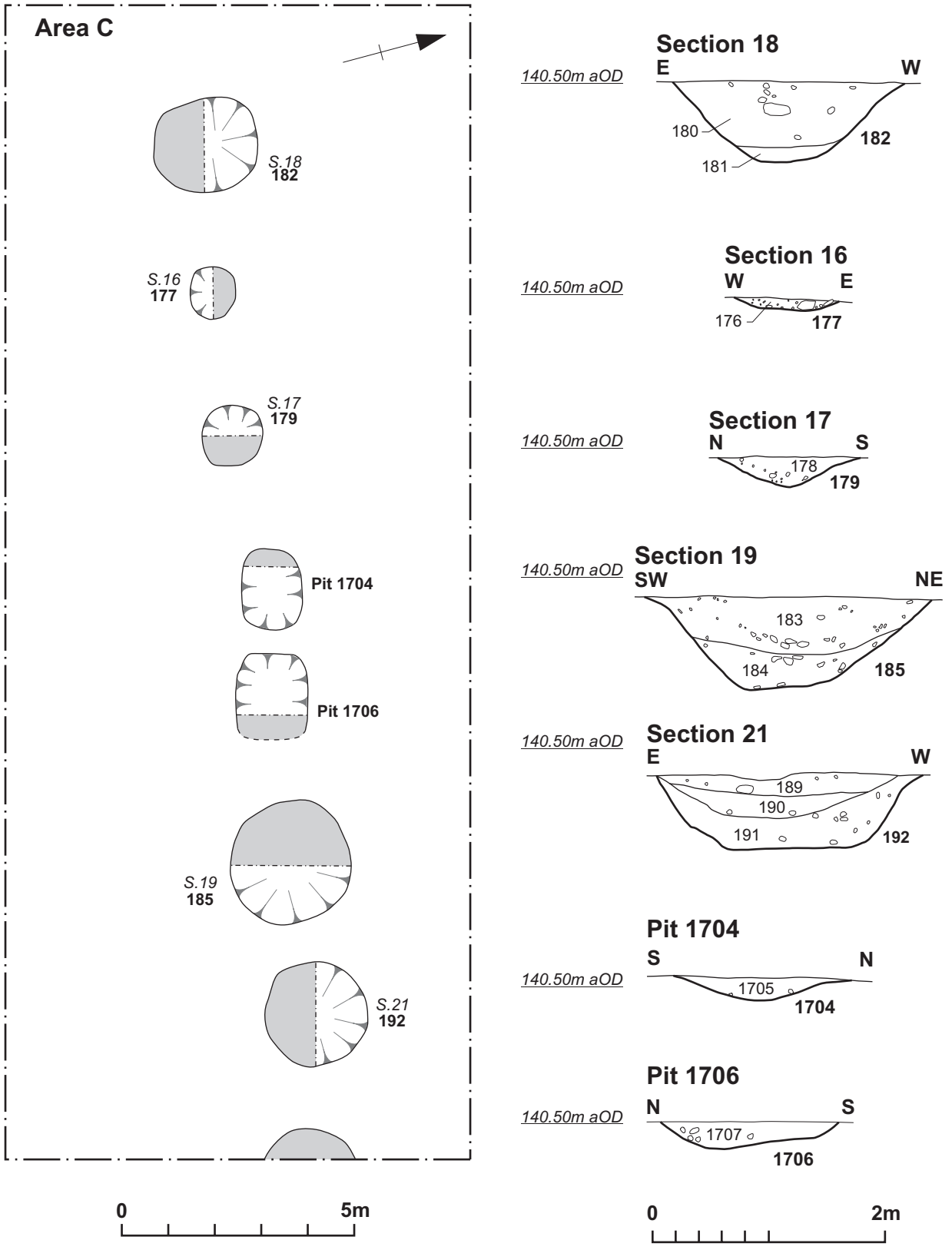
A group of four pits [177], [179], [1704] and [1706] were smaller in size and depth, pit [177] was 1.0m in diameter and 0.09m deep with frequent stone pebble inclusions within its homogeneous fill. Pit [179], located 3.40m to the east of Pit [177] was 1.20m in diameter and 0.26m deep with moderate stone pebble inclusions within its homogeneous fill. Pit [1704] was 1.40m long, 1.30m wide and 0.20m deep and pit [1706] was 1.10m in diameter and 0.20m deep. These pits were distinctly different in their dimensions to all other pits recorded within the alignment and may represent an entrance through the alignment. The pit to the east of pit [1706] was sub-rectangular shaped and pit [185], measuring 2.49m diameter and 0.88m depth, was the largest pit in the area.

The spacing between the pits within the area was more variable. The spacing varied from 2.50m to 3.60m (centre to centre) and all pits silted due to natural weathering with no evidence of deliberate in filling or re-cutting.

Table 5: Pits in Area C (including trench 17)

Fill/pit	***Dimensions***	***Description***	***Pit spacing centre to centre***
180/182	0.55m thick	Medium-Light brown loamy clay with orange flecks	
181/182	0.14m thick	Grey sandy clay	
	2.00m diameter	Sub-square, sloping sides, flat base.	3.20m
182	0.69m deep		
176/177	0.10m thick	Light brown sandy silt	
	0.90m diameter	Circular, shallow sloping sides to base	3.00m
177	0.10m deep		
178/179	0.26m thick	Orange brown silty clay	
	1.20m diameter	Circular, sloping sides, rounded base	3.40m
179	0.26m deep		
1705	0.20m thick	Light grey-brown sandy clay	
	>1.4m long		4m
	1.30m wide		
1704	0.20m deep		
1707	0.24m thick	Mid grey-brown sandy clay	
1706	>1.1m long		2.5m
	1.10m wide		
	0.24m deep		
183/185	0.49m deep	Mid brown loam	
184/185	0.36m deep	Orange-mid brown sandy clay	
	2.49m diameter	Sub-square, gently sloping sides with broad, flat base	3.20m
185	0.88m deep		
189/192	0.21m thick	Light grey-brown sandy clay	
190/192	0.20m thick	Mid grey brown sandy clay with silty clay in parts	
191/192	0.66m thick	Orange-brown silty clay	

Fill/pit	*Dimensions*	*Description*	*Pit spacing centre to centre*
192	2.30m diameter 0.66m deep	Sub-square, sloping sides, flat base.	
-	-	Unexcavated	3.0m


Area C
S.18
182
S.16
177
S.17
179
Pit 1704
Pit 1706
S.19
185
S.21
192
0
5m
Section 18
140.50m aOD
E
W
180
181
182
Section 16
140.50m aOD
W
E
176
177
Section 17
140.50m aOD
N
S
178
179
Section 19
140.50m aOD
SW
NE
183
184
185
Section 21
140.50m aOD
E
W
189
190
191
192
Pit 1704
140.50m aOD
S
N
1705
1704
Pit 1706
140.50m aOD
N
S
1707
1706
0
2m

General view of Area C, looking south-east

Pit 177

Pit 179

Pit 185

Photographs of pit alignment in Area C Fig 10

Area D (trench 18)

Eight pits were present within Area D, of these seven were excavated (Figs 2, 1-12). The pits were cut into the natural substrate of sand with large fragments of stone from glacial erratics present throughout the area. The pits were all sub-square in plan.

A feature interpreted as a natural hollow within trench 18 of the evaluation (Fisher 2012, Fig 4), was on further investigation confirmed to be a pit [217], and part of the pit alignment.

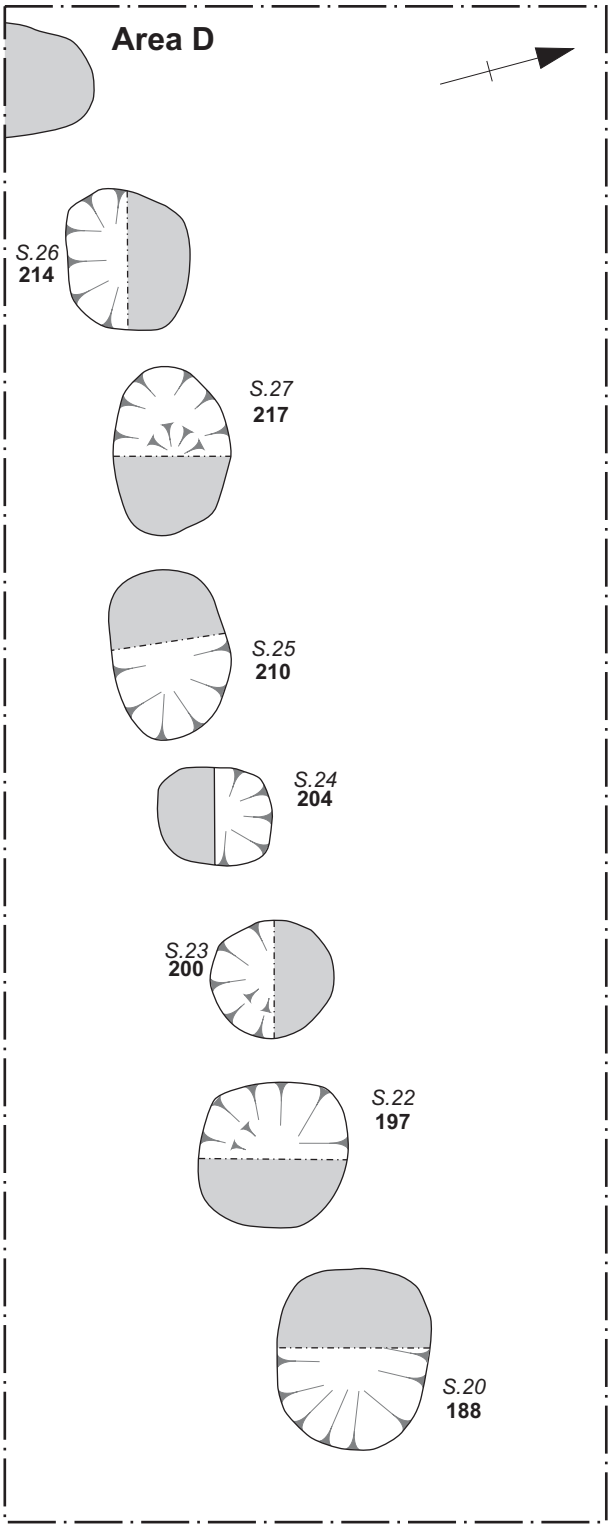
The alignment changed to a north-east to south-west direction and the pits were slightly off-set to the north. The slight change of alignment, off-setting and variable dimensions of the pits was most probably due to the geological conditions. The geology was markedly sandier and contained large boulders. The sand would have rapidly eroded, resulting in the irregular shaped pits in this area.

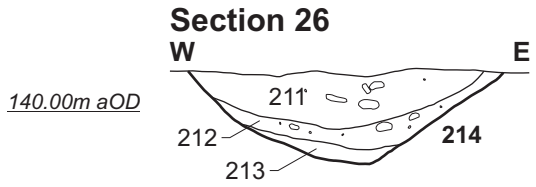
The pits appear to have silted due to natural weathering, with no evidence of deliberate in-filling or re-cutting.

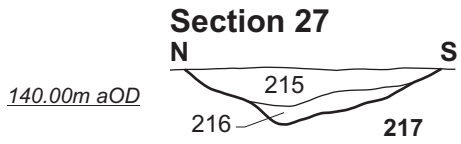
Table 6: Pits in Area D

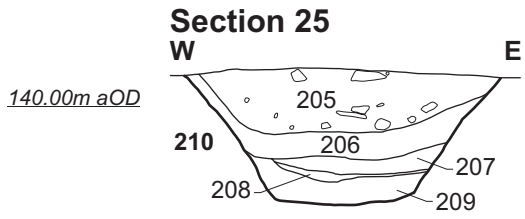
Fill/pit	***Dimensions***	***Description***	***Pit spacing centre to centre***
-	-	Unexcavated	3.00m
211/214	0.40m thick	Mid brown sandy clay	
212/214	0.20m thick	Orange brown silty clay	
213/214	0.12m thick	Mid brown sandy clay	
	2.00m wide	Sub-square, sloping sides, flat base	3.30m
214	0.63m deep		
215/217	0.26m thick	Mid red-brown silty sand	
216/217	0.12m thick	Mid/dark brown silty sand	
	1.70m wide	Sub-square sloping sides to base	3.00m
217	0.38m deep		
205/210	0.40m thick	Orange-brown silty sand with inclusions of large granite fragments	
206/210	0.20m thick	Brownish orange sand	
207/210	0.10m thick	Orange brown silty sand	
208/210	0.05m thick	Lens of reddish brown silty sand	
209/210	0.30m thick	Orange brown silty sand	
	2.10m wide	Sub-square, steep-sided, flat base.	2.80m
210	0.90m deep		
201/204	0.19m thick	Mid orange-brown silty clay	
202/204	0.41m thick	Mid grey-brown silty clay inclusions of large granite fragments	
203/204	0.19m thick	Mid grey-brown silty clay	
	1.90m wide	Sub-square, steep-sided, flat base	2.60m
204	0.68m deep		
198/200	0.74m thick	Mid grey-brown sandy clay	
199/200	0.24m thick	Dark grey brown silty clay	
	2.20m long 1.80m wide	Sub-square, sloping sides with sharp break of slope south and east sides, flat base	3.00m
200	0.74m deep		
193/197	0.44m thick	Mid grey-brown silty sand, inclusions of large granite fragments	

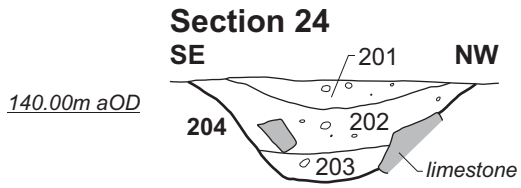
Fill/pit	*Dimensions*	*Description*	*Pit spacing centre to centre*
194/197	0.12m thick	Mid/Light yellow brown silty sand	
195/197	0.32m thick	Mid/Dark brown-grey silty sand with infrequent charcoal flecks	
196/197	0.12m thick	Mid brown-grey silty sand	
197	2.35m diameter 0.94m deep	Circular, fairly steep sloping sides to base, stepped on NE side. Small, flat base	3.20m
186/188	0.50m deep	Yellowish-brown silty sand	
187/188	0.35m deep	Orange-brown sandy clay, large granite fragment on eastern edge	
188	2.70m wide 0.75m deep	Circular, W edge sharp break of slope to gentle break at base. E edge flat step in side to gentle break of slope at base. Flat base. Fills (187) (186)	3.0m

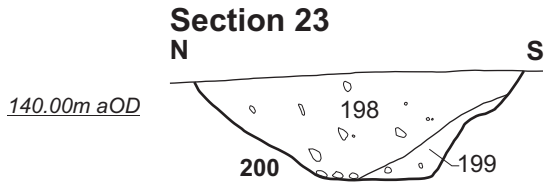

Area D
S.26
214
S.27
217
S.25
210
S.24
204
S.23
200
S.22
197
S.20
188
0
5m

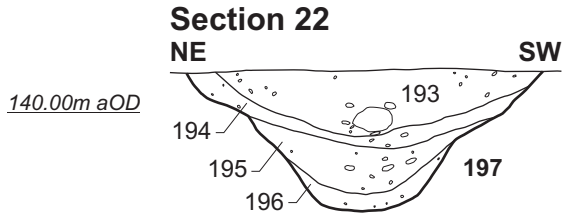

Section 26
W
E
140.00m aOD
211
212
214
213

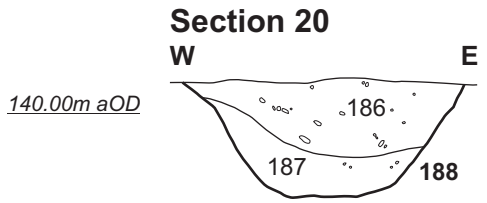

Section 27
N
S
140.00m aOD
215
216
217


Section 25
W
E
140.00m aOD
205
210
206
207
208
209


Section 24
SE
NW
140.00m aOD
201
204
202
203
limestone


Section 23
N
S
140.00m aOD
198
200
199


Section 22
NE
SW
140.00m aOD
193
194
195
197
196


Section 20
W
E
140.00m aOD
186
187
188


0
2m

General view of Area D, looking south-east

Photographs of pit alignment in Area D Fig 12

5 THE FINDS AND ENVIRONMENTAL EVIDENCE

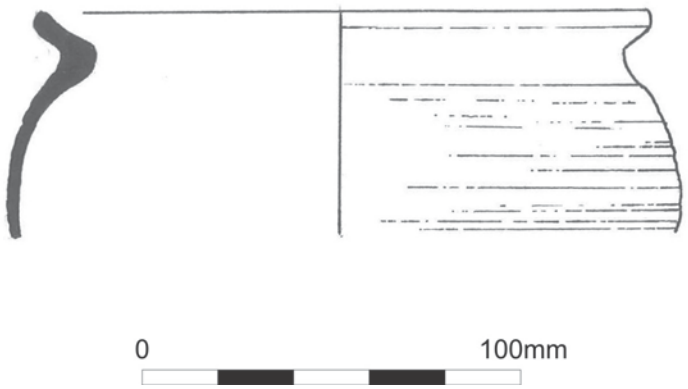
5.1 The pottery by Rob Perrin

Some 61 sherds of pottery, weighing 268g and with a rim estimated vessel equivalent of 0.12, was recovered from the upper fills of pits within a pit alignment.

Table 7: The Roman pottery fabrics

Fabric	Sherds	Weight (g)	Eve
Dark brown	3	10	0.4
LNVCC?	1	28	0.8
Reddish yellow	57	230	
Total	**61**	**268**	**0.12**

The sherds in the reddish-yellow fabric are all from one vessel, a globular jar with a cupped lid-seated rim (Fig 13), 160mm in diameter, and external cordons and grooving were from a dump of probable hearth material (166) in the top of pit [174]. The fabric contains small multicoloured quartz grains and is rather soft and powdery. It is likely to have been produced locally but no parallel can be cited and, as Pollard (2005, 153), notes, rural pottery production in Leicestershire is both "poorly understood" and its "characterisation … is fraught with difficulty". A late 1st to 2nd century date is probable. The Lower Nene Valley colour coated (LNVCC) vessel, from the upper fill (124) of pit [126], is from an imitation of a samian ware form 38 bowl, probably of 4th century date.



Globular jar with a cupped lid-seated rim from a dump of probable hearth material (166), in pit [174] Fig 13

5.2 Nails by Tora Hylton

A small collection of iron nails and undiagnostic fragments were recovered from the cremation burial, fill (117) in pit [118]. All the nails are covered in corrosion deposits, some with fragments of calcined bone attached, suggesting that the item to which they had been attached had also been placed on the pyre. The sized and the form of the complete nails indicate that they are hob nail, presumably originating from shoes. The nails measure *c* 20mm in length and have a domed head measuring *c* 10-12mm across and they represent Manning's Type 10 nail (1985, fig 32, 10).

5.3 Human bone by Sarah Inskip

A deposit of cremated bone was recovered from the fill (117) of a shallow pit [118] in the top of pit [139] of the pit alignment; it may have suffered from some machine disturbance.

The human skeletal material was examined following the Institutes of Field Archaeology's 'Guidelines to the Standards for Recording Human Remains' (Brickley and McKinley 2004) and English Heritage's *Human Bones from Archaeological sites: A Guideline for Producing Assessment Documents and Analytical Reports* (Mays, Brickley and Dodwell 2002). The material was received washed and dried. Large fragments of extraneous material were recorded including fragments of stone and animal bone.

Weight and fragmentation

McKinley (1997, 68) suggests that a cremated adult can produce between 1000g and 2400g of bone. Trotter and Hixon (1974) found that bone from modern males could exceed 3400g. Results also demonstrated that a substantial amount of bone is recovered from child cremations with individuals over 3 years producing around half a kilogram of material. The cremated deposit was weighed to the nearest 1g.

Fragmentation generally dictates the quantity of identifiable bone; the smaller the bone fragment, the lower the chance of identification. In order to assess fragmentation, the cremated deposit was passed through 10mm, 5mm and 2mm sieves. Each sieved fraction was weighed to the nearest 1g. The material was then sorted into elemental groups; skull, long bones, axial skeleton, hands/feet and unidentifiable. The largest fragment was measured to the nearest 1mm using sliding digital callipers. As it is not uncommon to find multiple individuals in a single cremated deposit, attention was paid to whether certain skeletal landmarks were duplicated.

Pyre conditions

The colour of cremated bone is indicative of pyre conditions with white bone produced by temperatures in excess of 650˚C (Mays 2010: 322) with ample oxygen. Temperatures below this create varying shades of grey, blue and brown fragments. Black bone is produced by poor oxygen levels and temperatures around or below 350 ˚C (Mays 2010: 322). Variation in pyre conditions over the body may be detected through variation in fragment colour throughout the skeleton. As such, the colour of each cremated deposit was recorded as a whole and also by elemental group.

Results

The fact that only 332g of material was excavated suggests that the cremated deposit represents a partial individual. As the deposit may have suffered from machine disturbance, it is not possible to comment further on the incompleteness.

Table 8: Total and sieve section weights for the cremated deposit

Fill/cut	Total (g)	Sieve size 10mm	5mm	2mm	Largest fragment
117/118	332	24g	157g	121g	29mm

The high proportion of small bone fragments (Table 8), demonstrates that the remains were highly fragmented, as is reflected in the high percentage of unidentifiable material (Table 9). Again, if the deposit has been disturbed, it may have lost further fragmented large pieces of bone. However, as many fragments were retained in the 5mm sieve section, it was still possible to identify some skeletal elements. All areas of the skeleton were represented (Table 9). Considering the proportions of the skeleton that each

elemental group make up, there does not appear to be any bias in the recovery of skeletal elements from the pyre.

Table 9: Quantity of identified skeletal elements

Skull	Limb	Hands/ Feet	Axial	Unidentifiable	Total
8g	62g	3g	11g	248g	332g

Table 10: Identified skeletal elements

Skull	Upper limb	Lower limb	Axial	Hands feet
Parietal	Radius	Tibia	Thoracic	Lunate
Temporal		Femur	Cervical	Scaphoid
Teeth roots			S4	Metacarpal head
Premolar root			Os coxae	Manual phalanx (prox)
			Ribs	Manual phalanx (distal)
				Pedal phalanx

Identifying information

The highly fragmented nature of the remains meant that obtaining an accurate age at death and sex estimate was not possible. However, small clues as to the individual's age were visible in the material. The presence of premolar roots implies that we are dealing with an individual over the age of 12 years (based on Gustafson and Koch 1974 reproduced in Hillson 2002). There was also no evidence for unfused epiphysis which would indicate that the individual was immature. It therefore seems likely that the person was an adult.

Pyre conditions

Over 95% of the bone white/cream in colouration. A few fragments of grey bone were noted but these were largely restricted to the internal surfaces of thick bone, such as the femur and tibia. This suggests that the pyre temperature was high and that ample oxygen was available. There was no variation in the colour of bones from different areas of the skeleton, implying uniform pyre conditions over the body.

Discussion and conclusions

Due to the incompleteness and possible disturbance, it is difficult to comment in depth on the remains. However, it is likely that the remains are that of an adult individual who, when placed in the pyre was subject to intense, even burning across the body. The colour of the bone and partial nature of the burial are not uncommon to the Roman period. Finds of isolated burials and bones is also commonplace. For example, in Barrow-upon-Soar, 12 miles from Ibstock, a pit containing Roman human and animal bone was found (Anon 2013). If a strict cremation procedure existed in the Romano-British period, a far more consistent pattern of fragmentation, colour and skeletal representation would be found in the archaeological record. As it stands, a huge variation cremation practice appears to exist (McKinley 1997).

5.4 Charred plant materials by Val Fryer

Samples for the retrieval of the plant macrofossil assemblages were taken from cremation deposit (117) in pit [118] (sample 1) and pits [174] and [188] (samples 2 and 3 respectively), and three were submitted for assessment.

The samples were bulk floated by NA and the flots were collected in a 300 micron mesh sieve. The dried flots were scanned under a binocular microscope at magnifications up to x 16 and the plant macrofossils and other remains noted are listed in Table 11. Nomenclature within the table follows Stace (1997). All plant remains were charred. Modern roots and seeds were also recorded.

Results

Seeds of common grassland herbs and wetland plants were recorded at a low to moderate density within the assemblages from samples 1 and 2, but were absent from sample 3. Preservation was moderately good, although some puffing of the seeds had occurred during combustion.

Sample 1, from cremation burial [118] contained a single possible barley (*Hordeum* sp.) rachis internode, but this was the only cereal remain recorded. Otherwise, seeds of brome (*Bromus* sp.) and persicaria (*Persicaria maculosa*/*lapathifolia*) were noted along with grass (Poaceae) fruits and sedge (*Carex* sp.) nutlets, with the latter being indicative of areas of damp grassland. Charcoal/charred wood fragments were present within all three assemblages, and samples 1 and 2 also included moderate to high densities of charred root or stem.

The fragments of black porous and tarry material were all probable residues of the combustion of organic remains at very high temperatures. Other remains were scarce, although the cremation deposit did contain a number of very small fragments of calcined bone. Coal fragments (coal 'dust') were present throughout, but it was thought most likely that all were intrusive within the features from which the samples were taken.

Conclusions

As the assemblages are so small and sparse, with none containing sufficient material of quantification that any accurate interpretation of the remains is very difficult. However, the composition of the assemblage from cremation burial [118], which almost certainly includes the remains of plants burnt *in situ* beneath the pyre, appears to suggest that the cremation was conducted within an area of grassland. The assemblage from the hearth deposit in pit [174] of the pit alignment is very limited, but the remains which are recorded all appear to have been burnt at a very high temperature, possibly indicating material derived from a hearth or similar context. Sample 3 contains insufficient material for interpretation.

As none of the assemblages contain a sufficient density of material for quantification (i.e. 100+ specimens), no further analysis is recommended. However, a summary of this assessment should be included within any publication of data from the site.

Table 11: The charred plant remains

Sample No.	**1**	**2**	**3**
Context No.	**117**	**166**	**187**
Feature No.	**118**	**167**	**188**
Feature type	**Burial**	**Pit**	**Pit**
Plant macrofossils			
Hordeum sp. (rachis internode)	xcf	-	-
Bromus sp.	x	-	-
Persicaria maculosa/lapathifolia	x	-	-
Small Poaceae indet.	x	-	-
Large Poaceae indet.	-	x	-
Carex sp.	x	xx	-
Charcoal <2mm	xx	xx	x
Charcoal >2mm	x	xx	-
Charred root/stem	xxx	xx	-
Indet.bud	-	xcf	-
Indet.inflorescene frags.	-	x	-
Indet.seeds	x	xx	-
Other remains			
Black porous 'cokey' material	x	xx	x
Black tarry material	x	-	x
Bone	xxb	-	-
Burnt /fired clay	-	x	-
Burnt soil concretions	-	xx	-
Small coal frags.	x	x	x
White mineral concretions	-	x	-
Sample volume (litres)	**15**	**20**	**40**
Volume of flot (litres)	**<0.1**	**<0.1**	**<0.1**
% flot sorted	**100%**	**100%**	**100%**

Key to table
x = 1 – 10 specimens xx = 11 – 50 specimens xxx = 51 – 100 specimens
cf = compare b = burnt

5.5 Charcoal by Dana Challinor

Two samples from Romano-British features, one a cremation burial and the other a dump of hearth material were submitted for the analysis of the charcoal. Standard identification procedures were followed, with reference to appropriate keys (Hather 2000; Schweingruber 1990) and modern reference material. For the richer sample 1 (>100 identifiable fragments), a random selection of 50 fragments was identified.

The results are presented in Table 12. The charcoal was in a poor condition and covered with sediment which obscured anatomical characteristics. Both samples contained material which was not identifiable wood charcoal, but sediment concretions with charcoal flecks. It was not possible to comment on the maturity of the wood owing to sediment obstruction; there were no whole roundwood stems although sample 2 contained a few fragments with moderate ring curvature (r-w). Some of the oak from

cremation burial (118) exhibited moderate levels of vitrification. A few tuber/rhizome fragments were present in sample 2.

Table 12: Results of the charcoal analysis

	Feature	**Cremation 118**	**Pit 167**
	Context	117	166
	Sample	1	2
Quercus sp.	oak	30	1
cf. Maloideae	hawthorn grp	-	5
Fraxinus excelsior L.	ash	5	-
Indeterminate	-	15	-

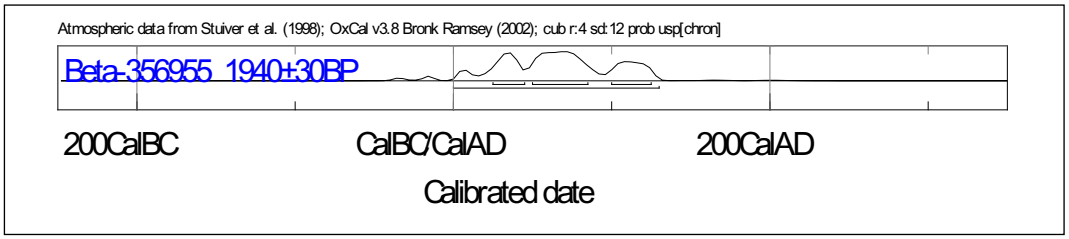
The poor condition of the charcoal limited full analysis, but it was, nonetheless, clear that the cremation assemblage was dominated by oak, with some ash. It is possible that other species were represented in the high levels of indeterminate fragments, but there was no clear indication of diffuse porous taxa. That oak should have formed the main fuelwood for the cremation is unsurprising, as oak provides the high calorific heat required for efficient cremation. It is also commonly recovered from Romano-British cremation-related assemblages (Challinor 2007a; Challinor 2007b; Gale 1997). The pit sample was too poor to provide meaningful data beyond the observation that domestic assemblages of locally gathered firewood tend to be diverse with a high content of hedgerow type taxa (which includes the Maloideae) rather than oak-dominated.

5.6 The radiocarbon determination

Table 13: The radiocarbon determination

Lab. & Sample No.	Context	Sample details	13C/12C N15/14	Conventional Radiocarbon Age BP	Cal AD intercept *68% confidence* **95% confidence**
Beta-356955 XA35/118	***Fill 117*** Pit 118 Cremation burial	Oak Charcoal (quercus)	-25.0	1940+/-30	70 Cal AD *30-40 &* *50-80 Cal AD* **0-130 Cal AD**

Laboratory: Beta Analytic, Miami, Florida, USA
Calibration: INTCAL09 Radiocarbon Age Calibration



6 DISCUSSION

Pit alignments are generally regarded as landscape boundaries dating to the late Bronze Age and early Iron Age. Their function as physical boundaries is uncertain as continuous ditches would have provided more efficient barriers, and Cunliffe (2005) suggests that pit alignments may have been used to define territory, while allowing movement across the boundaries.

It is not known what influenced the original alignment of these boundaries, but Pollard (1996) argues that they may have served to re-instate existing divisions, delineating actual boundaries but also symbolic ones. Certainly the degree of care and precision used in excavating the pits is far more than would be required to merely create a physical boundary. The topographical position of the alignment at Ibstock was along the edge of a plateau and watershed at the head of a dry valley, overlooking the lowlands to the north.

The origin of the Ibstock pit alignment cannot be dated as there are no associated finds and no material suitable for radiocarbon dating. An early Iron Age date can only be assumed by comparison with similar dated sites.

The Ibstock pit alignment runs west-north-west to east-south-east but, like many pit alignments, there are many slight variations of alignment along its course. Similar changes of alignment have been noted at excavated sites in Northamptonshire; Briar Hill, Northampton (Jackson 1974), Harlestone Quarry (Field and Chapman 2006) and Pitsford (Hallam *et al* 2003). At Gayhurst Quarry, Newport Pagnell Buckinghamshire, there were multiple abrupt changes in alignment (Chapman 2007).

One explanation of these changes had been to suggest that they may the junctions between lengths dug by separate gangs, but this should not be taken to imply that the changes of alignment were merely accidental products of gang work. At Ibstock, the displacement at the east of the alignment, in Area D, may have been due to a change in the geology, with frequent large glacial erriatics stones located in this particular area.

The pit alignment at Ibstock lay along a division between geological zones, mudstones to the west and sand with glacial erratics stones to the east, and a pit alignment at Warth Park, Raunds, Northamptonshire was similarly along the division between geological zones, in this case cornbrash and marl clay (McAree 2006).

Some of the pits at Ibstock were certainly sub-square, with steep sides and a flat base, but as they had all been allowed to silt naturally the originally plan forms had been subject to much erosion, rendering them more circular. However, many pit alignments on harder geologies have shown that a common feature is a general consistency of plan form, size, profile and depth, with the pits being consistently rectangular, square or circular. At Ibstock it would appear that the alignment comprised square pits, with occasional variations.

The most marked change in form comprised a group of four pits, in Area C, which were considerably smaller in size and depth than any of the other pits recorded. This group were located where the geology changes from mudstones to sand, and the pits may have marked this change from heavier clay soils to lighter soils. Alternatively, the shallower pits may have formed a point of access across the boundary. At Upton in Northamptonshire it was noted that a smaller and shallower pit may have marked the western terminal of a pit alignment (Carlyle 2010), although this does not appear to be the case at Ibstock.

The individual pits at Ibstock appear to have silted through natural processes. The presence of material datable to the early Roman period either in features cut into the upper fills or within the filling of the subsidence hollow above the final pit fills, indicates that the pit alignment was still visible and recognised within the landscape during the early Roman period. The subsidence fill of one pit contained hearth debris, including pottery dating from the 1st to 2nd centures AD, and the cremated remains of an adult placed within a pit cut into the upper fill of a pit has been radiocarbon dated to the 1st or early 2nd centuries AD (Beta 356955, 0-130 cal AD, 95% confidence, 1940+/-30BP).

The placing of an isolated cremation burial in the top of a particularly large, silted pit appears to have been deliberate, possibly a way of reaffirming ancestral links to the boundary or perhaps sealing or closing the pit alignment. There are several examples of pit alignment boundaries surviving as landscape features into the Roman period, including St Ives, Cambridgeshire (Pollard 1996), Ferrybridge, West Yorkshire (Roberts (ed) 2005) and Wollaston, Northamptonshire (Meadows 1995).

Immediately to the north of the Ibstock pit alignment there is a substantial but poorly investigated Roman settlement, possibly a small town (Liddle 2004, 68-9). The settlement was linear in plan, and extended for a distance of at least 1km along the line of a Roman road, the *Via Devana* (Fig 2*)*. This pit alignment may have influenced the alignment of the road in the locality, and hence the position of the small town to the north.

While many aspects of the creation, function, use and significance of pits alignments remains uncertain, a broad role in demarcating land divisions, perhaps land-use rather than territorial boundaries, now seems quite firmly established. Excavations at Wollaston, Northamptonshire revealed a network of pit alignments that defined blocks of open grasslands probably used for pasture (Meadows 1995). This may have been the case at Ibstock with the land to the south being open grassland used for pasture, and only coming into cultivation in the medieval period.

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