

Preliminary Excavation Report, Site D, Alexander Reid, Navan



McGlade

03/10/2017

16E449

NT1130058

VOLUME 1

archaeology plan

HERITAGE SOLUTIONS

SITE NAME

Area D, Alexander Reid, Navan, Co. Meath

CLIENT

Grandbrind Ltd., 120 Rathgar Road, Dublin 6

RMP

N/a

PLANNING

Meath County Council NT1130058

LICENCE

16E449 & metal detection licence 17R0065

PROJECT REF

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REPORT AUTHOR

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ABBREVIATIONS USED

DoAHRRGA	Dept. of Arts, Heritage, Regional, Rural and Gaeltacht Affairs
NMI	National Museum of Ireland
NMS	National Monuments Service
OS	Ordnance Survey
RMP	Record of Monuments and Places
NIAH	National Inventory of Architectural Heritage
LAP	Local Area Plan

Table of Contents

1	Introduction	1
	Report summary	
	Site location	
	Development	
	The townland of Alexander Reid	
	Archaeological Background	
2	The Excavation	8
	Methodology	
	Early Medieval settlement	
	Annex Ditches	
	Features within the ringfort	
	Features within eastern annex	
	Features within the western inner annex	
	Features within the outhouse annex to west and south	
	Unenclosed features to the north	
	Seventeenth century phase	
	.	
3	Discussion	70
	Summary of main findings	
	Early medieval topographic landscape	
	Early medieval cultural landscape	
	Phasing of the early medieval settlement	
	Entrances	
	Structures	
	Kilns	
	Metalworking	
	Complete animal skulls	
	Early medieval artefacts	
	Early medieval church	
	The 17th century	
4	Specialist reports	113
	References	115
	Appendices	Volume 2

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I would like to thank Antoine Giacometti for his advice and encouragement during the post-excavation process. Thanks also to Johnny Ryan for his work in creating the plans and sections for the report, and to Paula Kehoe for her work on the report on the excavation and processing of the burials.

Finally I would like to thank the specialists who are currently working on the material from the site. I look forward to seeing your results.

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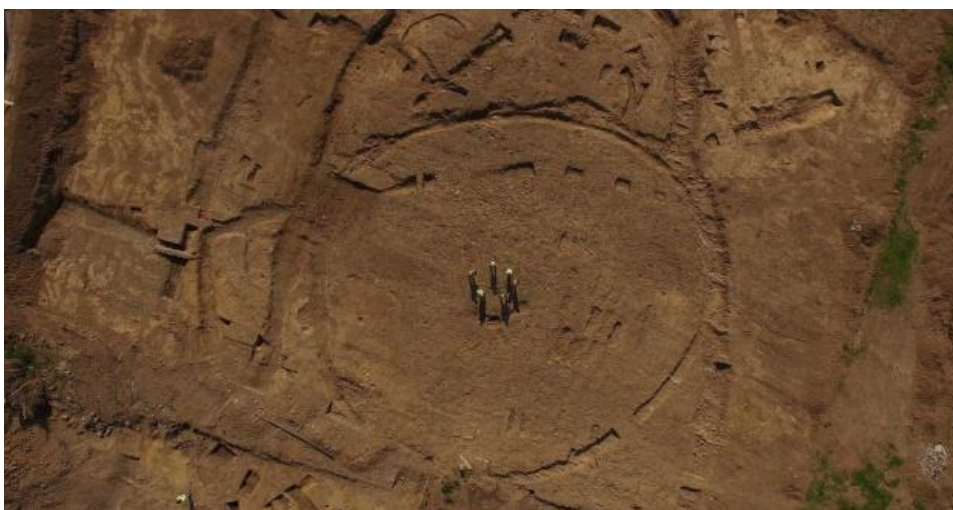
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Section 1 Introduction

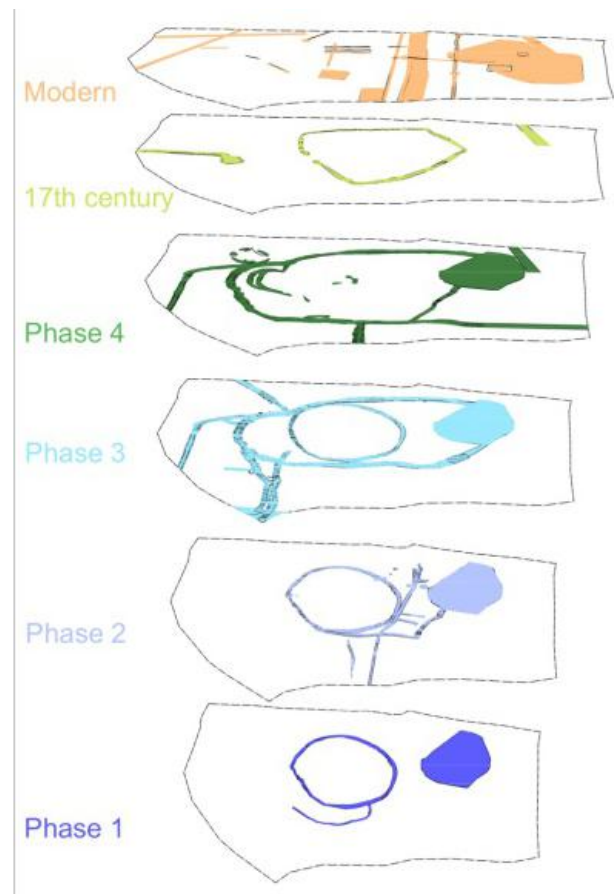
Report summary

Whilst some residual flint artefacts hint at an earlier phase of human activity in the vicinity of the site, the earliest archaeological features relate to an early medieval ringfort encircling the low hillock in the centre of the site. A number of annexes enclosed space to the east, south and west of the ringfort, and further ditches probably demarked field systems to the west, southwest and south. Although the site was heavily truncated in the post-medieval or early modern period, a number of features associated with the early medieval phase of activity on the site survived, such as kilns, a metalworking area, and storage and processing pits.

A later enclosure relating to a phase of burial on the site was constructed over the earlier ringfort. This enclosure did not encircle the low hillock, or correlate directly with the ringfort. Its western side was within the area enclosed by the ringfort and its eastern and southern edges extended beyond the ringfort. This suggests that when the burial enclosure was laid out after the ringfort was largely levelled, though elements of the ringfort and annex ditches or banks may have survived, along with the memory of the former settlement. The burial site may relate to a 17th century Catholic chapel granted by a Lady Dowdall of Athlumney in the townland of Alexander Reid or Bailis and used until c. 1691. While the exact location of this chapel is unknown, the presence of the small burial ground on this site may suggest that the chapel was located here also.

Following the closing of the chapel, the land returned to agricultural use, which is archaeologically demonstrated by the formation of several post-medieval field boundary ditches. In the mid-19th century the site was altered once more during the laying out of the estate lands of Sion House to the south, and an estate avenue was established over the site. A number

of semi- and dis-articulated burials were identified in pits to the north of the site and it is possible that some burials were disturbed during the setting out of new field boundaries or the avenue and that these were reinterred nearby. Evidence for significant levelling across the site was identified, particularly in the central low hillock where the ringfort and burials were located. This may have taken place during landscaping works during the laying out of the Sion House estate, or during later agricultural or horticultural activity. A garden was laid out on the site in the mid-20th century associated with St. Martha's College of Agriculture and Domestic Science, which was established at Sion House by the Sisters of Charity of St. Vincent De Paul in the 1930s.





Site location, basemap from Bing Maps (top)

Development plan with Area D highlighted (bottom)

Site location

The archaeological excavation ('Area D') extended over an area 60m by 50m within Alexander Reid townland. It lies towards the southern end of a larger development site in Alexander Reid and Bailis townlands. The development site is located to the south of the R153 Kentstown Road and to the east of Navan, Co. Meath (689240/767020). St. Martha's College, formerly Sion House, is situated to the south, and the housing developments of Johnstown Wood and Athlumney Hall are to the west. The land to the east is presently undeveloped, and the site bounded on that side by a small tributary stream of the River Nanny and the old Johnstown Road (L5050).

Development

The overall residential development site measures c.14.6ha in area and comprises 310 residential units and associated site development works. The development has been granted planning permission (Meath County Council Ref. NT1130058), with Condition 29 relating to archaeology. This condition required the archaeological monitoring of all groundworks on the site.

The townland of Alexander Reid

Alexander Reid, which appears to be forename and surname combination, is a very unusual townland name.

There are references to the townland of Alexander Reid from at least the 16th century. A late 16th century reference to a John Cusack of Al-liston-read, Co. Meath, describes how he took



part in the rebellion of William Nugent and was captured by Hugh O'Neill, Earl of Tyrone in January 1582 (Dunlop 1885-90b, 188). He later betrayed the Irish side and gave evidence leading to the arrest of Nicholas Nugent (who was then the Chief Justice of the Common Pleas) on the 28th January 1582 (Dunlop 1885-90a, 263). John Cusack was the son of Sir Thomas Cusack, a judge and member of the English court, sheriff of Meath in 1541, and Lord Chancellor in 1551 (Dixon 1885-90, 355). He was an amateur stonemason (Hickey 1973, 52), carving a number of monuments in the vicinity, such as the Wakely monument in Ballyburly, Co. Offaly (Hickey 1974, 18), the tomb of his father in Trevet, Co. Meath, and a number of other monuments and crosses in the Meath area relating to his family (Cusack 1981, King 1984, 96).

The name of the townland is given as 'Alstonreade' on the Down Survey of the mid-17th century and as 'Allistonread' in the Civil Survey of County Meath 1656-1656 (Simington 1940, 117). It is recorded as covering 179 acres, of which 160 were arable, 4 were meadow and 15 were pasture. A 'farme thatch howse' was observed within the townland (Simington 1940,

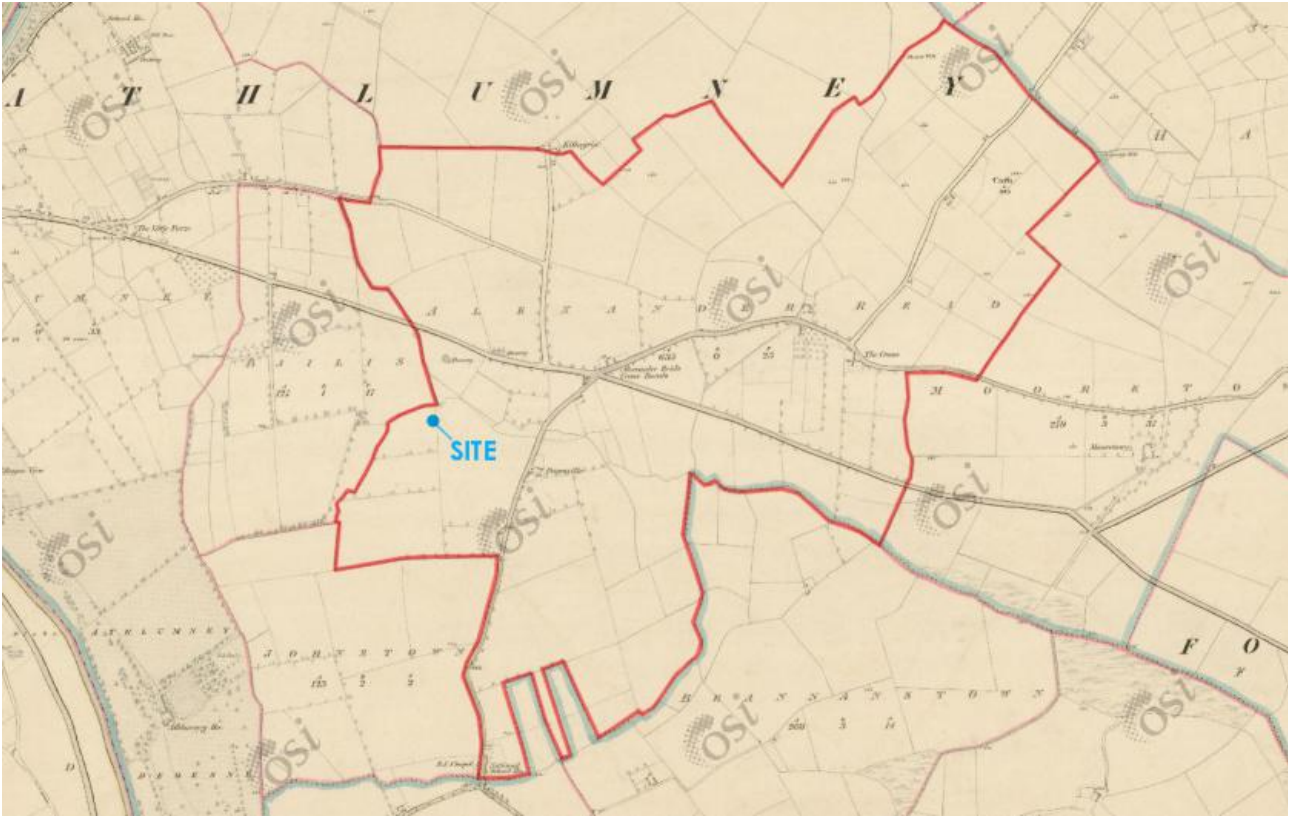
117). Bailis, recorded as Bellis, had 41 acres, of which 40 were arable and 1 was meadow. A 'thatch farme howse and some cottages' were observed in the townland (Simington 1940, 118). Both townlands are in the possession of 'Lawrence Dowdall of Athlumney, Irish Papist' (ibid.). The Dowdalls were lords of Athlumney and built a towerhouse there in the mid-15th century, later adding a mansion extension in the 16th or 17th century (RMP files).

A description of the townlands of 'Alexandr Red and Bellis' from 1700 is included in a small notebook identified as 'Forfeited Estates Counties of Meath and Louth 1700, with a pencil annotation 'Sir Wm Petty's' on the following page (Horner & Loeber 2011, 59. This document describes a landscape of Jacobite properties, which appears to have seen much investment in creating or rebuilding big houses and in re-dividing the land for new farming systems' (ibid.). For 'Alexandr Red and Bellis' (ibid, 148) it states:

Lyes in ye Parish of Aghlomny. In Bellis there is a Large Thatch'd House w[i]th good stone walls and a Good Orch[ar]d & Barne, a fine

Down Survey Barony Map of Skreene c. 1655 showing 'Alstonreade' townland, with approximate site location in blue North is to the left





1st Edition Ordnance Survey Map showing Alison Reid townland (in red) and site in blue

Streame of a Good Orch[ar]d & Barne [sic] a find stream of water running by ye doore. There is about 40 acres of Corne of Severall Sort's and about 20 acres of Meadow. There is about ye house Severall Ash Trees. It is worth 10s p[er] acre in ye Possession of James Gough part of S[i]r Luke Dowdall's Estate.

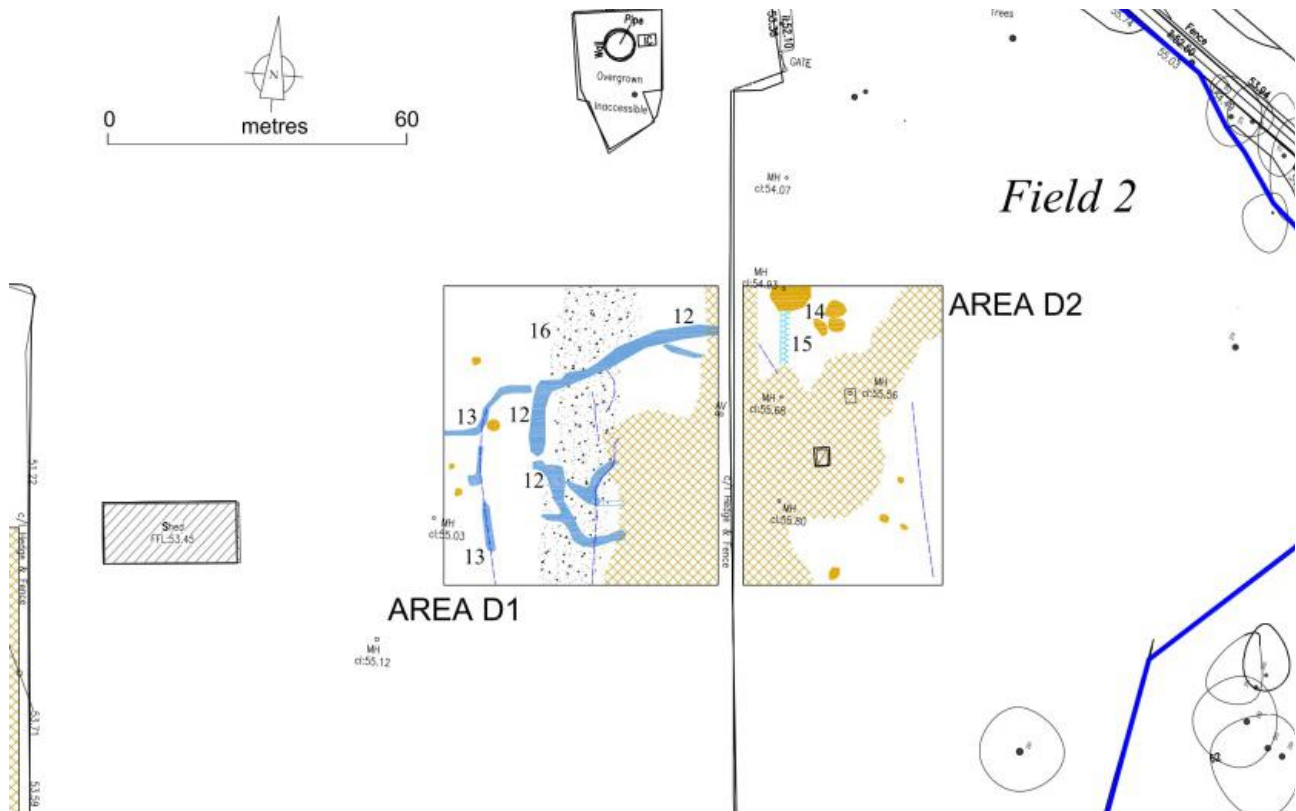
Alexander Read is good Corne and has 7 houses in it. Worth 8 s[hillings] per Acre. Distant from Dublin 19 miles, from Trim 6 & from ye Boyne One. In ye Possession of James Gough and James Cusacke. Part of S[i]r Luke Dowdall's Estate.

By the 19th century the name is closer to its current form, with the name given as 'Alorander Read' on Larkin's map of Meath of 1812. The High Commission Survey and Valuation Report of 1824 records the name as 'Alexander Reid', and in the Ordnance Survey name books of the 1830s John O'Donovan records the name as Alexander Reid, with a note on the possible Irish name given as 'Alasdran Reud, a man's name' (Loganim.ie). The townland was labelled Alex-

ander Reid on the 1st Edition of the Ordnance Survey and the name has remained the same since that time. The local spelling of the townland is Alexandraide (pers. comm. Vincent Mulvany 2017).

Where this unusual place name derives from is unclear. There is a strong possibility that it is an English occupant that gave his name to the townland, however it is unusual for a townland to get the forename and surname of an individual in this way. Also, prior to the 16th century the land would have formed part of the territory associated with Athlumney Castle and the Dowdall family. There is no record of an Alexander Reid in relation to the area.

It is also possible that the place name is an Anglicisation of a now lost place name. The 17th century name of 'Allistonread' may refer to a fort: A-lis-ton-read, possibly áth-lios-tóin réad – ford of the fort at the bottom of the star. The presence of a fort on the edge of a wetland area within the townland does make the translation



Geophysical survey results (Joanna Leigh, 2011)

at least partially plausible.

The name of the field in which the excavation took place is given locally as 'Back Avenue Field', a reference to the former access to Sion House, which crosses the site (pers. comm. Vincent Mulvany 2017).

Archaeological background

Geophysical Survey

An archaeological assessment of the site of the proposed development was carried out in 2011 (Courtney Deery 2011). This included an archaeological geophysical survey (Leigh 2011, Licence No. 11R049). The geophysical survey identified five areas (A-E) within the development as having archaeological potential. The excavation described in this report relates to Area D.

The geophysical survey identified a number of features of archaeological potential within Area

D. Due to interference caused by the underlying bedrock outcrop, buried building rubble, modern buildings, manholes and other modern disturbance creating magnetic disturbance, the survey was not able to identify all the features on the site. Despite this, a number of ditches were identified. These included the western inner and outer annex ditches, the annex ditch to the north and parts of the southern returns of the western inner and middle annex ditches (Responses 12 and 13 of the geophysical survey in Leigh 2011, 9). An additional ferrous response to the north of the annex ditch in Area D2 was also recorded, though due to a nearby pipe trench, it was discounted as non-archaeological (Response 14, *ibid.*). The location of this response correlates with one of the kilns (C466) uncovered during the excavation. A number of unlabelled geophysical responses reflect part of the ringfort enclosure ditch (C4) and two sections of land division ditch (C245 and C309). To the east in Area D2, a geophysical trend was noted marking the location of part of the burial enclosure ditch (C16), and further

to the east the later post-medieval ditch (C551) was also identified as a trend.

Testing

Seventeen test trenches were excavated across the proposed development site targeting features highlighted by the geophysical survey in the five areas (A-E) of archaeological potential (Walsh 2011, Licence No. 11E240). Within Area D, four test trenches were excavated. Trenches 11, 12 and 13 were located within Area D1 to the west of the field boundary, and Trench 14 was located in Area D2 to the east of the boundary.

Trenches 11, 12 and 13 encountered ditches interpreted as an enclosure measuring c. 60 by 35m with a possible annex to the west measuring 30 by 10m. The ditches encountered during the testing programme included the outer western annex ditch (C79), the inner western annex ditch (C69) and the annex ditch to the north (C2). The ringfort ditch was not tested, as the bedrock it had been cut into had masked its geophysical response. Trench 14 tested an area to the south of the annex. Whilst the sewer trench cutting across this part of the site was identified, this was an unusually empty part of the site and no archaeology was identified in the trench.

Monitoring

Archaeological monitoring was carried out during all groundworks relating to the development. In July 2016 archaeological monitoring of Areas D and E was carried out by Pdraig Clancy of Courtney Deery Ltd. The townland boundary and a field boundary were encountered in Area E. Both of these were tested and found to have been cut (or re-cut) in the post-medieval period with no evidence for earlier material surviving within them. The monitoring in Area D confirmed the presence of an enclosure, with the majority of the enclosure lying to the west of the field boundary (Clancy 2016, Excavation Licence No. 16E268). During the monitoring the remains of two burials were exposed and the monitored stripping of the central portion (28m by 12m) of

the enclosure was halted. The two burials were identified at a depth of 150-200mm below the PGL (present ground level).

Additional testing

An additional phase of testing was carried by the author in 2016 to further assess the unstripped section in the centre of the enclosure, to assess whether the site represented the remains of a graveyard, and to identify whether additional grave cuts were present within the stripped portion of the site.

This phase of testing consisted of the hand excavation of a further two test trenches through the remaining topsoil across the central area of the site, and the examination of a third stretch of previously stripped ground running perpendicular to these trenches along the edge of the stripped area. A systematic survey of exposed bone on the site was also carried out by an archaeologist with osteological experience. The aim of this was to identify the spread of human bone across the site and assess the in situ articulated human remains.

A further five very fragmentary shallow juvenile and infant burials were identified during the testing programme. These were resting on the surface of the underlying bedrock or in very shallow cuts. At this stage it was considered that the site could represent a post-medieval children's burial ground within an early medieval settlement enclosure. The testing indicated that

Trench 11 in Area D (Walsh 2011)





Area D interpretation based on pre-excavation survey and testing (McGlade 2016) showing outline of overall development site

the burials were in a poor state of preservation, and due to the shallow nature of the grave cuts were vulnerable to erosion. The potential of further damage to the burials in the future was considered high. Following liaison with Tom Condit of the National Monuments Service, it was decided that the site would be excavated and preserved by record. This report presents the findings of the excavation.

Section 2 The Excavation

Methodology

The excavation of the site of Area D took place from the 6th February to 19th May 2017.

During the excavation the site was divided into two areas by the estate avenue and post-medieval field boundary. Area D1 to the west was the larger part of the site and included the bulk of the settlement. It was excavated over the course of twelve weeks. The weather was wet and poor at the beginning but improved from the latter half of the excavation. The final two weeks were spent in Area D2 to the east of the avenue. The weather during this part of the excavation was dry and sunny.

Following from the findings of the testing programme in 2016 (McGlade 2016), a short phase of monitoring was undertaken on the western, southern and eastern sides of the site where topsoil was still present overlying the archaeology. During this a significant amount of modern build up to the south of the ringfort was identified. A wedge of additional topsoil had been deposited here during the 19th and 20th century and overlay the post-medieval topsoil. This material was added to level up a depression along the southern side of the low rise upon which the ringfort was located, which was poorly drained and would have been liable to flooding. This layer of modern material had masked the archaeological features in this area during the 2011 geophysical survey. Once the layer was removed archaeological features were apparent below.

A 10 by 10m grid was surveyed across the site. All hand-drawn plans and sections of the excavation were tied into the grid. Detailed plans and sketches were conducted throughout the excavation. The final post-excavation plan of the site was surveyed using a Total Data Station.

The forensic archaeologist excavated the majority of the burials on the site, with assistance from other archaeologists where required. All burials were carefully hand excavated, recorded, planned, and photographed. Bulk samples were taken from below the skull, pelvis, hands and feet or each burial. These were later processed by the forensic archaeologist to retrieve smaller bones missed during the excavation. Once the burials were fully recorded, the remains were lifted and bagged, and carefully moved a secure storage area in the site compound. They were stored in large plastic containers with lids.

The remainder of the team hand-cleaned and hand-excavated archaeological features on the site. The ringfort and annex ditches were dug in regular box sections rotating around the site clockwise from the northeast. Smaller features were resolved in full during this phase of the excavation. Features were excavated, planned, drawn, photographed and recorded. Samples were taken of selected fills based on stratigraphic interest or environmental potential.

Artefacts were collected in trays during the day, which were transferred into labelled bags each evening and stored in the site office. Grid coordinates and levels were recorded for significant finds. Following consultation with an archaeological conservator, iron artefacts were dried out in the site hut prior to storage in an air-tight container. Composite material artefacts were kept in small bags of soil from the same fill to avoid deterioration of any components.

Significant quantities of animal bone were retrieved during the excavation. Where required, ditch fills were numbered to allow for spatial analysis of bone and artefacts within the enclosures and annexes.

Following the retrieval of a small iron knife



General working shots during the excavation

within the ringfort ditch in the first week of the excavation, a metal detection licence was obtained (Licence No. 17R0065). A systematic metal detector survey of the entire site was subsequently carried out. This involved walking the site in 2m strips scanning the underlying ground using the metal detector, a C-Scope CS770-XD Audio Disc. Any spots indicated during the survey were marked with a tag so that the excavation team were aware and alert to metal artefacts. Throughout the excavation the metal detector was used to scan spoil coming out of the features and the scan the lower levels of features as they were reduced. This methodology proved fruitful with 78 metal artefacts retrieved during the excavation.

Once sections were dug through all features and significant recording had been carried out, the remaining baulks between the box sections were excavated. Sections in sensitive areas were excavated by hand. Where appropriate a mechanical excavator was used to reduce the fill in the annex ditches. This was done slowly and was monitored by two archaeologists. A metal detector was used to scan the features throughout the process.

At two separate stages a complete drone photographic survey of the excavation and site was carried out: at mid-excavation stage while excavating the western portion of the site; and at post-excavation stage across the whole site.

Appendix 1 contains the context register including measurements. Appendix 8 contains digitised



site plans and sections of the excavation.

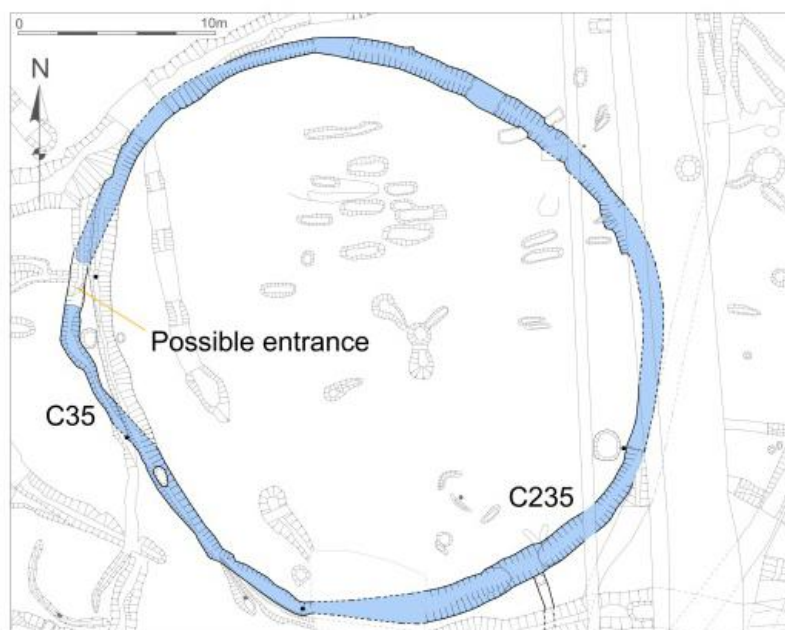
Early medieval settlement

The central feature of the early medieval settlement was a near-circular enclosure, which for the purposes of this report I have termed the ringfort. This was defined by a sub-circular ditch measuring 28m north-south and 26.4m east-west internally. The ringfort enclosed a low-lying hillock formed by a bedrock outcrop and the enclosure ditches of the ringfort were all rock-cut. Two phases of entrance across the ditch were recorded to the southeast of the ringfort and another two phases of entrance were recorded to the northwest. A number of re-cuts were noted along the line

of the ringfort ditch, and some features that may originally have been located within the ringfort, or within the annexes, were cut into - or cut by - various phases of the ringfort ditch.

Ringfort ditch

The earliest phases of the ringfort ditch only survived in two sections to the west (C35) and the south (C235). These are likely to be from the initial establishment of the ringfort, however it is also possible that the southern



Aerial view of the site, looking north (top)

Plan highlighting sections of the ringfort (bottom)

section is a Phase 2 recut of the original ditch. The earliest phase of the ringfort ditch was rock-cut with a steep U-shaped profile. The surviving portion was narrow and relatively insubstantial. It had a single fill (C570), which was similar to the basal fill of the later realigned ringfort ditch (C4) to the east, indicating a similar process of infilling for these two phases. As the later realignment of the ringfort ditch (C4) was cut through where an internal bank would have been located, it is possible that the earlier ditch (C35) was backfilled with the bank material that needed to be moved for the new ditch.

The earlier enclosure ditch terminated to the northwest, indicating that there had originally been an entrance at this point. The northern side of the Phase 1 entrance did not survive as it was recut in later phases. The early phase of the enclosure ditch was also truncated by a pit (C30) to the east and by a slot trench (C143) to the south.

Four fills were recorded within the southern section of the early phase enclosure ditch. The basal fill was a localised silty clay deposit (C409) along the external side of the ditch to the west of the later entrance features. This may relate to slumping of material from the exterior of the ringfort ditch, possibly bank material. Overlying this was a slump of stony material from the internal side of the ditch (C404), which became the main fill of the ditch further to the east. This fill appeared to relate to the slumping of an internal bank, and also comprised the main backfill of the ditch to the east suggesting the bank had been intentionally used to infill the ditch. An iron object, possibly a pommel, was retrieved from this fill. To the west of the entrance and east of the modern pit C555 another relatively stony deposit (C405) was recorded as the tertiary fill of the ditch. It also appeared to be slumping in from the internal side, and again may relate to a slumping of the internal bank or the intentional deposition of bank material into the ditch. To the west of the modern pit this fill was again present and was recorded under a separate context number (C236). Here the fill formed the basal fill of the ditch and was present across the entire base, similar to the secondary fill as it moved west. An oval posthole (C237) was cut into the base of the ditch 0.47m



View of ringfort ditches C4 and C35 to west, looking southeast (top)

View of ringfort ditches C235 and C239 to south, looking west (centre)

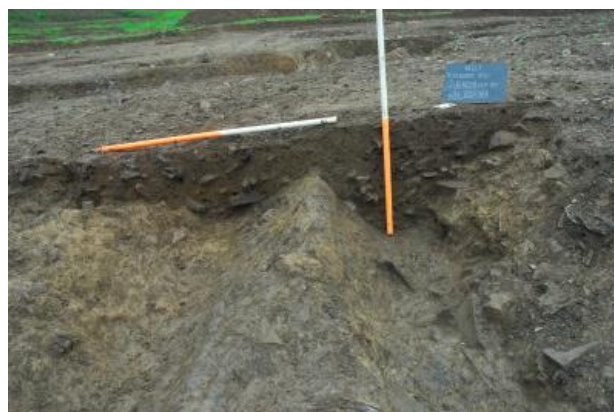
View of ringfort ditches C235 and C239 to west of entrance C317, looking east (bottom)

to the west of the modern pit (C555). It had a single fill (C238), which was identical to the fill (C236) of the ringfort ditch above. The fills of this section of the ditch suggest that prior to

the re-cutting of the ringfort ditch the original ringfort ditch was infilled, possibly using the bank material on the internal side of the ringfort. This section of the ditch was cut by the re-cutting of the ringfort ditch (C239), with the re-cut ditch running along the same alignment as the early ditch in the southeast section of the ringfort. It was cut by the entrance feature (C449) associated with the re-cut ditch also to the southeast. To the southwest it was cut by the earliest eastern annex ditch (C159) that ran from the edge of the ringfort ditch.

The later phase of the ringfort ditch to the north and west (C4) must have taken the same line as the original ringfort ditch, as only one phase of the ditch was identified in this section. The ditch here again presented as a narrow U-shaped and rock cut ditch. No entrance gaps were apparent within the northern arc of the re-cut ringfort ditch. The ditch truncated a kiln (C222) to the north indicating a later phase of re-cutting of the ditch. The presence of the kiln in this location demonstrates that the previous ringfort ditch had been infilled and the internal bank removed, as a flue for the kiln was present on the internal side of the ringfort. To the west, the re-cut ringfort ditch was moved slightly further to the east and did not follow the same alignment as the earlier ditch (C35). The reason for this was unclear. The ditch truncated the earlier line of the ringfort ditch as well as a large pit (C30), which was located on the internal side of the earlier ditch, partially truncating it. The basal fill of this section of the ditch (C27) was only present along the western arc of the ringfort. This fill may relate to slumping of bank material into the base of the ditch and was similar to the material (C570) backfilling the earlier phase of the ditch (C35) to the west. Along the southwestern arc of the ringfort, a sub-circular pit (C50) was identified cut into the basal fill of the ditch.

The upper fill of the ringfort was consistent along the entire northern and western arc. To allow for spatial assessment of finds the fill was given three separate context numbers (C5 to the northeast, C60 to the northwest and C61 to the west). This fill appears to have accumulated in the ditch over time, and contained frequent animal bone and occasional burnt bone throughout suggesting that waste from the set-



View of ringfort ditch C4 to north, looking east (top)

View of ringfort ditch C4 truncated by re-cut C403, looking north (bottom)

tlement was being dumped into the ringfort ditch. In the fill (C5) of the north and north-eastern section an iron knife, two unidentified iron objects, and a burnishing stone were recovered. A sherd of post-medieval pottery and a fragment of glass were also retrieved from the upper level of the ditch fill and are likely to be intrusive. This section of the ditch was truncated by the latest cutting of the annex ditch C2, indicating the annex ditch was maintained and remained open after the ringfort ditch had filled in. It was also truncated by four grave cuts (C73, C75, C95 and C400) as well as the burial enclosure ditch (C19 and C302). Modern features such as the service trench (C86), field drain (C178), hedgerow (C85) and avenue (C182) truncated the fill to the east. In the northwestern section of the fill (C60) the blade of an iron shears and two other unidentified iron objects were uncovered. This section of the fill was also truncated by annex ditch C2 to

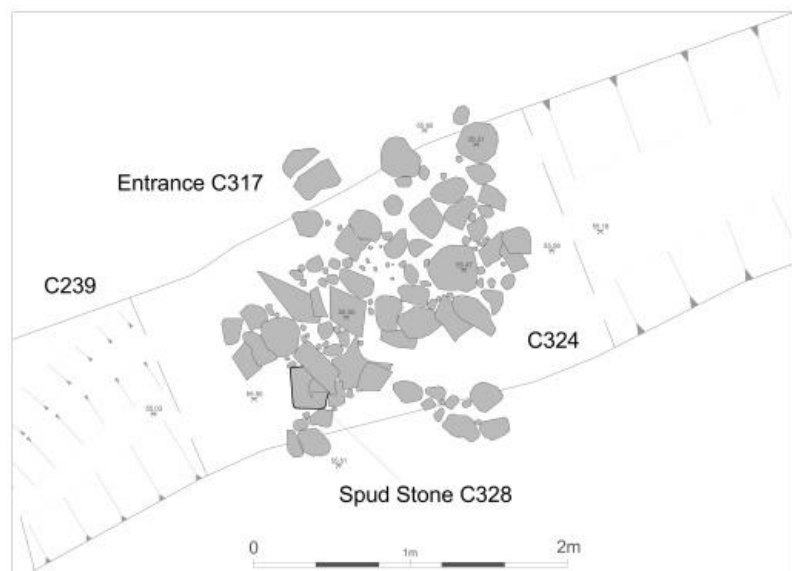
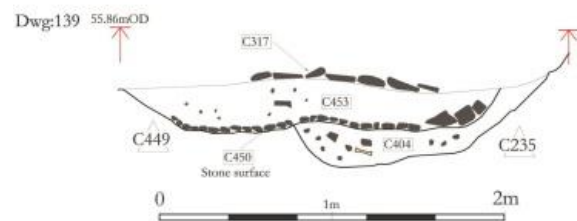
the north. A north-south running ditch (C403), contemporary with curvilinear ditch C127 in the inner western annex, also truncated the fill cutting along the western side of the ditch. In the western section of the fill (C61) a stone loom weight, an iron knife and an iron object were retrieved. This fill was truncated by modern levelling at the southwestern end of the ringfort. It was also truncated by a stake-hole (C45) and associated north-south running slot trench (C143) that extended into the inner western annex. Another stake-hole (C28) was identified directly to the north also cut into the ringfort fill.

A re-cutting of the southern arc of the ringfort was also identified (C239). This occurred contemporaneously with the cut (C449) for the cobbled entrance (C450) across the ditch to the southeast. It represents a redefinition of the ringfort ditch either side of the entrance, with the western side rising up sharply to the cobbles and the eastern side rising up sharply to the east of the entrance gully (C347). The re-defined ditch was wider and deeper than the earlier phase of the ringfort ditch (C235) and was also set slightly further to the south. It truncated ditch C262 in the eastern annex. It was truncated by a pit (C240) and associated posthole (C242) within the ringfort, as well as by modern features such as the service trench (C86), field drain (C178), hedgerow (C85), avenue (C182) and the large modern pit (C555). It did not survive to the southwest due to scarping. Six fills were identified within the ditch, three on either side of the entrance. The basal fill to the west of the entrance (C573) was very similar to the basal fill to the east (C266), both being loosely compacted silty clays. This is likely to

relate to backfilling within the ditch. The secondary fill to the west (C406) was a mixed deposit present along the southern external side of the ditch. It may relate to slumping of material from the exterior of the ditch. The upper fill of the ditch to the west of the entrance (C407) was a silty sand and relates to the final infilling of the ditch. Two iron objects were retrieved from this fill, one of which was the broken handle of a tool. To the east of the entrance the secondary fill (C267) was a silt deposit and may relate to water-laid. The upper fill (C266) was a silty sand similar to the upper fill to the west (C407). An iron bracket or fixing was retrieved from this fill.

The ringfort entrance

An entrance to the southeast relating to the initial phase of the ringfort ditch (C235) was not identified. It is possible that a temporary bridge of planks crossing the ditch served as the entrance at this time. An entrance indicated by the terminus of the early ringfort ditch (C35) to the northwest may indicate that the original entrance to the ringfort was to that side, however



Northeast-facing section through both phases of the entrance (top right)

Plan of the paved entrance (bottom right)



View of paved entrance C317 looking south (top) and looking east (middle)

View of section through both phases of entrance looking west (bottom)

it is likely that there was always an entrance to the southeast in addition to the northwestern entrance.

The earliest entrance feature (C449) to the southeast was constructed on, and partially cut into, the backfill (C404) of the earlier ringfort ditch (C235). It was metalled with small rounded pebbles (C450), with the cut for the entrance extended 0.9m to the south of the re-cut ringfort ditch (C239). The entrance was 1.7m in width and 1.9m in length. A gully (C347) defined the eastern side of the entrance and may have defined the edge of a path leading to the entrance. The gully continued to the south of the ringfort and curved around to the west suggesting the route of the main approach to the settlement at this time. The re-cut ringfort ditch (C239) re-defined the line of the ringfort on either side of the entrance and was clearly related.

Overlying the metalled surface of the entrance a silty sand deposit (C453) was identified, which may have accumulated over the cobbles through use, or been intentionally deposited prior to the laying of the new entrance feature (C317). Overlying this was a grey silty clay stained with metallic residue (C324), which appears to have been used as bedding material for the new entrance. The last entrance feature was a stone paved surface (C317) consisting of flat angular stones forming a rough pavement crossing the ditch. A number of shaped paving stones were also present in the surface and some rounded stones were

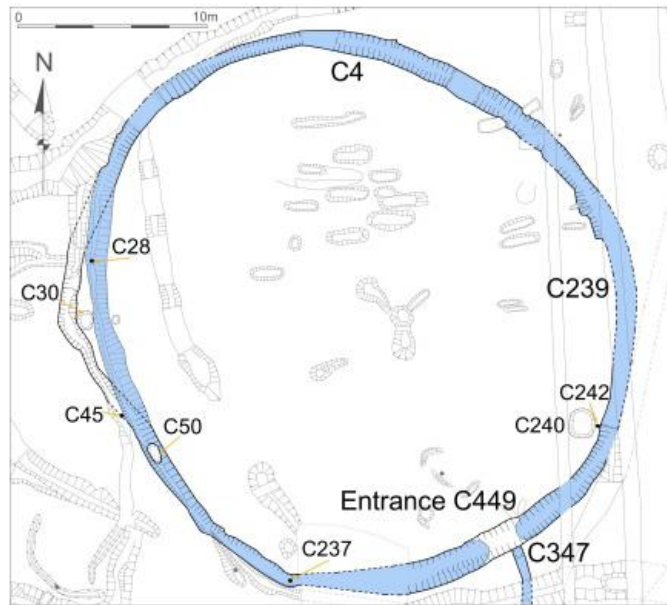
present along the northeast side of the surface at the inner edge of the ditch. The surface did not survive perfectly. Some of the stones partially overlay one another, and the northwest side of the surface appeared to be missing or disturbed, however enough survived to indicate

that it was intentionally laid. A spudstone or pivotstone (C328) was found at the southwest side of the surface, indicating the presence of a gate or door at the external side of the surface that opened inwards swinging to the west. The surface extended to the east and west of the earlier entrance, and was wider, at 1.9m in width. It was also present over the full width of the two ditch cuts and extended over the upper fills (C407 and C268) of the ditch re-cut to the east and west. As the entrance was constructed at this level it must be assumed that the banks and upper, now truncated, portions of the ringfort ditch remained when the entrance was constructed. The presence of the spud-stone on the external side of the surface is particularly interesting. It would seem that the obvious place for this would be on the internal side as once you crossed the ditch at the entrance you would enter through the gap in the bank. In order for the gate location to be a functional defensive or security feature it must have been associated with some form of barrier on the external side of the ringfort. This suggests that the ringfort may have had an external palisade, or possibly a hedgerow that was associated with the external gate.

Features associated with the ringfort ditch

A number of features were cut into the ringfort ditch at various stages. To the west, a large pit (C30) truncated the early ringfort ditch (C35) along the inner edge of the ditch, placing the pit within the interior of the Phase 1 ringfort. The pit was interpreted as a fire-pit, however there was no in-situ burning on the sides or base of the feature and it may also have been a rubbish pit. A number of large stones (C12) in the south and east of its basal fill may represent a former lining within the pit. The secondary fill within the pit (C10) was loose with frequent charcoal ash and occasional burnt and unburnt bone inclusions. This may have been dumped in the pit from elsewhere. The upper fill (C11) was a compact material used to seal the pit once it went out of use. The pit was later truncated by the re-cutting of the ringfort ditch (C4), which was further to the east and placed the infilled pit on the exterior of the ringfort.

Along the southwestern arc of the ringfort ditch re-cut (C4), a sub-circular pit (C50) was



Location plan of feature relating to the ringfort ditch (top)

Mid-excitation section of Pit C30 cutting early phase of ringfort ditch C35 to right and cut by later phase ringfort ditch C4 to left, looking south (middle)

Post-excitation shot of pit C50 cut into ringfort ditch with semi-articulated animal spine, looking northwest (bottom)

identified cut into the basal fill (C27). The fill (C51) of the pit contained a semi-articulated spine of a large animal (cow or horse). The articulation of the spine indicates that the flesh was still attached when it was placed in the pit, and thus probably represents a joint of meat. It is possible that this pit functioned as a food storage pit as the spine, appeared to be intentionally placed rather than being dumped in with other refuse. The joint may have been stored in the pit to keep it cool as it was aged, or perhaps for some other culinary function, such as fermentation or slow cooking.

A north-south running slot-trench (C143) truncated the upper fill of the re-cut ringfort ditch (C61) to the southwest, and extended to the south into the inner western annex. A stake-hole (C45) was associated with the slot trench and was identified cut into the basal of the ringfort below the slot-trench. Another stake-hole (C28) was identified directly to the north also cut into the ringfort fill. This stake-hole was identified cut into the basal fill directly to the east of the northern end of the curvilinear ditches (C127 and C58) in the inner western annex and was centrally located within the ditch. It had a single fill (C29), which had frequent charcoal flecking. While the feature was recognised cut into the basal fill (C27) it is possible that it was also cut through the upper fill (C61) and may relate to the fence-line indicated by slot trench C143. The slot trench did not survive further to the north, however this is likely due to truncation.

Along the inner side of the southeastern arc of the ringfort two features were identified cut into the upper fill (C268) of the re-cut ringfort ditch (239). A shallow circular pit (C240) was identified, possibly the remains of a hearth, though no in situ burning was noted on the base or sides. Large stones (C244) were uncovered within and on top of the fill (C241) of the pit. The stones were flat and angular with some heat cracking and evidence for being burnt on one side. They could have been pot-boilers, or possibly originally lined the sides of the pit and were dumped in the centre when the hearth went out of use. The fill of the pit (C241) had a high concentration of charcoal with both burnt and unburnt bone present. Immediately to the



Mid-excavation view of pit C240 and posthole C242 cut into inner side of ringfort ditch, looking south

northeast of the pit a sub-circular posthole (C242) was uncovered. The fill of the posthole (C243) contained some medium-sized stones at the base that may have been packing stones. This posthole was probably associated with the hearth given its proximity and may relate to some form of hearth furniture.

Annex ditches

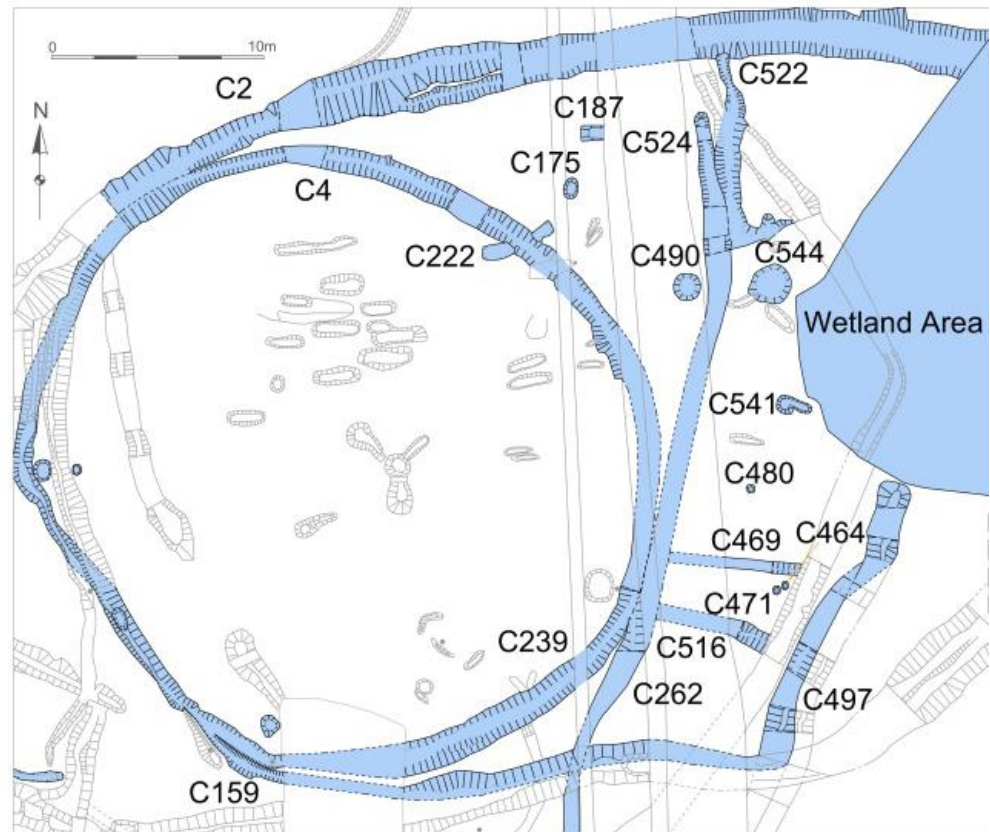
Ditches forming annexed enclosures were identified to the east and west of the ringfort enclosure, with a later annex ditch enclosing additional space to the south. The area to the north of the ringfort does not appear to have been enclosed by an annex ditch, though features here are likely to have been enclosed within the larger field system associated with the ringfort. The ditch forming the northern side of the eastern annex was incorporated into all phases of this enclosure and the line of this ditch is likely to have been re-cut many times. The fact that the later burial enclosure ditch respects the line of this ditch suggests that the some element of this boundary survived into the post-medieval period.

Earlier eastern annex

The eastern annex was defined by ditch C2 along its northern side and by ditch C159 to the south, while the southeastern side may have been defined by ditch C497. The ditches ran up to the edge of a natural wetland area located at the eastern side of the annex. The eastern an-

nex appears to have been the earliest annex of the ringfort, indicated by ditch C159, which branched off the southwestern side of the ringfort and curved towards the east. The ditch partially truncated the fill (C236) of the ringfort ditch (C235) to the west indicating it post-dated the initial backfilling of the ringfort ditch, or remained in use after this section of the ringfort ditch was filled in. Ditch C159 was re-cut by the Phase 3 annex ditch (C162), which joined the eastern annex and the western inner annex. The northern arm of the annex ditch (C2) also connected with the ringfort ditch itself, though in this case the line of the

ditch was reused by later variations of the annexes. The ditch was found to slope down to the east. It was shallow to the west, where it was rock-cut and became gradually deeper to the east as it moved off the underlying bedrock outcrop. The early phase of the annex ditch was not identified beyond the avenue to the south-east, however ditch C497, which ran towards



Location plan of features within the early eastern annex (right)

Aerial view of the site looking west with the eastern annex in the foreground (bottom)





View of section through the ringfort ditch (C235 and C239) to left, early phase eastern annex ditch (C159) in centre and later phase eastern annex ditch (C162) to right, looking east (top)



View of section through annex ditch C159 showing re-cut C162 to left, looking west (bottom)

the wetland area to the northeast may be the return of the annex ditch on this side. This suggests the eastern annex was originally slightly smaller, measuring c. 42 x 10m.

Five fills were recorded within the annex ditch C159. Only the upper fill (C62) survived in the western end of the ditch to the west of the modern pit (C555) truncating the ditch. This was the same as the upper fill (C161) of the ditch further east. The fill was a loosely compacted occupation material with frequent charcoal and animal bone. An animal skull and the tip of an iron knife were recorded at the base of the ditch near the junction with the ringfort ditch to the west. To the east of the modern pit (C555) a basal fill was identified (C160) below this layer. This was more clayish and compact than the material above, though may have resulted from a wetter variation of the overlying layer. Again charcoal and animal bone

were present within the fill. Further to the east again in the deepest section of the ditch to the west of the avenue two fills were again recorded. The basal fill (C416) was a grey sandy clay, possibly only filling this low-lying part of the ditch and relating to standing water. Overlying this the secondary fill (C417) was similar to the basal fill to the west (C160). The upper levels of the ditch were truncated away above this point. The ditch appears to have been infilled by relatively flat layers with the lowest fill (C416) within the deepest section representing silting, overlaid by a secondary fill (C160 and C417), which was in turn overlaid by the upper surviving fill (C62 and C161), intentional dumping – or deposition of accumulated waste material – into the ditch.

This phase of the ditch was contemporary with a ditch running into it from the north (C262) within the eastern annex and another running into it from the south along the same alignment (C396). These are likely to relate to land divisions associated with this phase of annexation.

Later eastern annex ditch

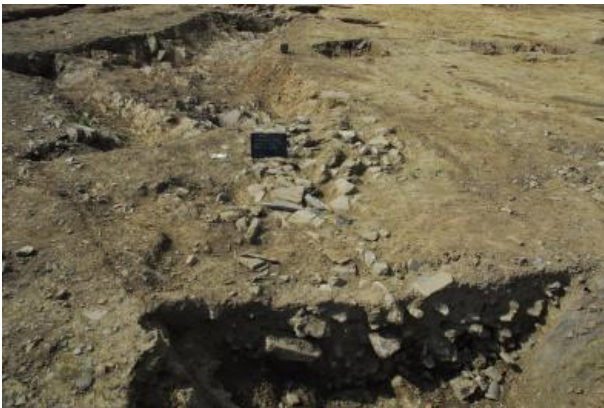
The later eastern annex extended further to the east and south, measuring c. 42 x 18m. The northern ditch of the eastern annex (C2) was used throughout. It was a broad rock-cut ditch with undulations in the base and sides due to the presence of harder bands of bedrock in places. It ran from the northwestern end of the ringfort ditch and was orientated east-northeast to west-southwest and curved slightly. It par-



View of eastern end of Ditch C2, looking east (top)



View of western end of Ditch C2 and junction with ringfort ditch C4, looking southeast (upper centre)



View of stone crossing C572 (lower centre) and animal bone deposit below (bottom), looking southwest



tially truncated the fill of the ringfort indicating that it remained open after this level of the ringfort ditch had been backfilled. It was truncated by a north-south running ditch (C8/403), which was contemporary with the later phase of the western annex ditch (C52) at its western end. A small gully (C6) ran into the ditch from the north.

Nine fills were recorded within the ditch. The basal fill (C21) of the ditch in the western portion of the site was a stonier fill present along the base and external side of the ditch, possibly relating to a slumping of an external bank, or a surviving earlier fill that was re-cut along its internal side. A complete cow skull with its horn sheaths removed was retrieved from the base of this fill. A discrete deposit of sand (C22) overlay this fill to the north of the ringfort and was only present for a short distance. The main fill of this section of the ditch (C3) was present along the entire length of the ditch within Area D1 and related to the backfilling of the ditch. The fill contained frequent animal bone and domestic waste, along with occasional finds such as an iron and glass pin, an iron knife, an iron nail and three pieces of flint. This ditch appears to have been in use over an extended period of time, Phases 2-4 of the early medieval settlement, and this fill relates to the final infilling of the feature, possibly with material that had accumulated in rubbish heaps nearby.

Overlying this, a rough stone crossing (C572) over the ditch was uncovered to the northwest of the ringfort relating to Phase 4 of the early medieval settlement. The surface was cut by the burial enclosure ditch (C19). It was orientated northwest-southeast, parallel to the probable early medieval field boundary ditch (C33) to the northwest, which may have formed the edge of an approach to the entrance. Generally flat angular stones were used, though some rounded stones were also present. The surface appeared to be relatively informal and was not as well-laid as the entrance to the southeast, which lay opposite. Below the surface a concentration of cow long-bones arranged in a narrow linear band was identified, possibly used as levelling material under the surface.

To the east of the field boundary the ditch con-

tinues before petering out within the wetland area to the northeast of the site. The basal fill of the western end of this section (C23) possibly represents a slump along the inner side of the ditch. The secondary fill (C24) was present along the remainder of the base and the northern side of the ditch and is likely to correlate with the basal fill (C21) to the west of the field boundary. The upper fill of this section of the ditch (C18) was similar to the upper fill (C3) to the west, however it was more compact and sorted, with more animal bone and larger stones present towards the base of the fill, suggesting it was partially waterlogged when infilling. Further to the east the fills of the ditch changed as the ditch moved towards the wetland area. The basal fill here (C487) was again present as a slump along the southern side, suggesting it was related to the slump (C23) to the west, though the fill at this point was significantly more organic. The upper fill (C486) was highly organic, with wood, twigs and leaves present along with frequent animal bone, largely stained dark brown. This fill accumulated in the ditch and was preserved by the wet nature of this part of the site. It is likely that the upper fills to the west (C3 and C18) are more decomposed versions of this fill. There was no evidence for an external bank at the eastern end of the ditch. The ditch ran up to the edge of the wetland area to the northeast of the site, with this forming part of the boundary of the annex.

The southern ditch forming the eastern annex (C162) replaced and altered the alignment of the earlier eastern annex ditch (C159). Rather than branching off the southern edge of the ringfort ditch itself the later ditch ran to the south of the ringfort ditch and continued to the west to form the western inner annex. The ditch was given a separate number (C97) to the west, though it was contemporary with this ditch. The ditch was also given a separate number (C527) to the east of the field boundary, where the line of the ditch increased the size of the eastern annex, extending further to the east before connecting with the wetland area to the northeast. Ditch C162 was relatively narrow and V-shaped to the west but widened and deepened to the east, becoming a broad U-shape in profile. To the west it ended c. 1m to the east of the edge of a large posthole (C329). Beyond this point the fills changed and the ditch is recorded as

C97 beyond this point. The ditch cut the earlier line of the annex ditch along its southern side. It also truncated the gully associated with the earlier entrance to the ringfort (C347) and a later gully (C357), and was itself truncated by the later burial enclosure ditch (C344).

Eight fills were recorded within this section of the ditch. The basal fill to the west (C163) was a silty clay present along both sides of the ditch and may indicate ditch maintenance as it was not present within the middle of the ditch. An iron knife and an iron pin were retrieved from this fill. This was overlaid by a stony silty sand (C164) with animal bone and charcoal inclusions, which was present to the western end of the ditch forming the sole fill of this end of the ditch. This is likely to be occupational material dumped in the ditch. An unidentified iron object was retrieved from this fill. Overlying this two discrete deposits were identified. A lens of ash (C408) was identified to the east of the large modern pit (C555) and a charcoal-flecked silt (C402) was uncovered further to the east. The silt deposit may have accumulated through natural silting within the partially infilled ditch, while the ash deposit (C408) relates to the dumping of the contents of a hearth or kiln into the ditch. Overlying this a dark red fill (C165) with burnt clay, charcoal, ash and animal bone was uncovered. This material may relate to the metalworking furnace (C415) that was cut into the partially backfilled ditch further to the east. A piece of flint and the tang of a copper-alloy buckle or brooch were retrieved from this fill. The upper fill of the ditch (C166) represented the final backfilling of the ditch after it had gone out of use. An iron tool, an iron knife and bone with iron adhesions were retrieved from the fill. To the east below the furnace (C415) a further two fills were identified within the ditch. Both were affected by the heat from the furnace above. The basal fill (C418) was a silty sand and may have been comparable to the secondary fill (C164) further to the west. The upper fill (C419) was a sterile compact stony silty sand along the northern edge of the ditch, which was baked solid by the furnace that was cut into it. The nature of this material suggested it may have been intentionally deposited into the ditch to provide a better base for the furnace.

To the east of the field boundary the southern

arm of the annex ditch was recorded under a separate number (C527), which began to curve up to the northeast towards the wetland area. The northeastern end of the ditch was truncated by the modern pump house associated with the well currently over the spring. The ditch had a broad U-shaped profile along the east-west orientated section but the external side became more gently sloped as it turned to the northeast, possibly due to being down slope of the internal side at this point, while the base was deepest along the internal side of the ditch. This section of the ditch was truncated by a north-northeast to south-southwest orientated ditch (C499) and truncated ditch C497, possibly relating to the Phase 2 eastern annex.

Six fills were recorded in this section of the ditch. The basal fill to the west (C548) was a stony sand deposit along the base of the ditch. It was overlaid by a silty clay fill (C547) with frequent animal bone inclusions, likely to derive from occupational waste being dumped into the ditch. To the east the basal deposit (C537) was a relatively sterile clay along the base and internal side of the ditch. This fill may have been a slump of material from the internal side of the ditch or a survival of an earlier fill when the ditch was cleaned out. A fragment of a metal-working crucible was retrieved from this fill. The proximity of this find to the furnace to the west may suggest that this section of the ditch was relatively open while the furnace was in use. The secondary fill to the east (C535) was also a silty clay fill, comparable with the secondary fill (C547) to the west, however it had a higher organic content due to its proximity to the wetland part of the site. A concentrated deposit of animal bone was recorded at the base of the fill along the internal side of the ditch. Overlying the bone a charcoal and ash deposit (C529) was recorded as a lens within the main fill. The

View of section through later eastern annex ditch C527, looking northeast (top)

View of stone C288 overlying furnace C415. A broken quern stone (16E449:288:1) can be seen in the centre (middle)

Mid-excavation view of furnace C415 cutting annex ditch C162 (bottom)

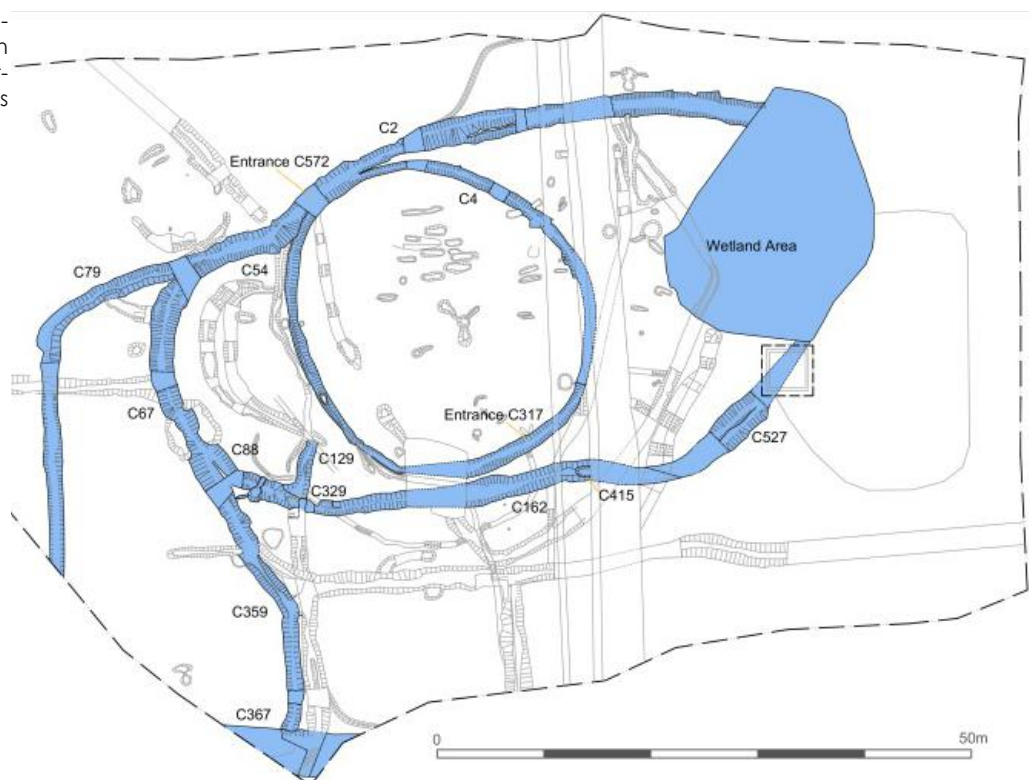
bone and charcoal and ash deposit are likely to have been associated marking a dumping point within the ditch. The upper fill (C528) of the entire section of ditch was a compact deposit of grey clay mixed with redeposited natural. This was an intentional backfilling event within the ditch.

Furnace

Cut into the upper fill (C419) of the annex ditch (C162) to the southeast of the ringfort a metal-working furnace pit (C415) was uncovered. This was truncated to the east by a post-medieval drain (C178) and to the west by a service trench



Plan showing the location of the later eastern annex and early western annex ditches (Phase 3a)



(C86). The presence of the furnace at this level within the ditch suggests that the ditch was partially infilled prior to the establishment of the furnace. It is possible that the upper fill (C419) of the ditch below the furnace was deposited into the ditch to create the furnace. The reddened fill (C165) within the ditch to the west relates to waste material from the furnace and indicates the ditch was still partially open to the west during the use of the furnace. The presence of the crucible fragment within the basal fill (C537) of the ditch to the west may suggest this part of the ditch was kept clear and open while the furnace was in use. The shape of the furnace was unclear due to truncation, however it was U-shaped in profile and orientated east-west. A curving alignment of stones (C288), which included one broken quern stone, to the north of the furnace probably formed a wind-break or base for the superstructure. Stones above the upper fill of the furnace may have been displaced from this feature. The basal fill of the furnace (C420) was baked orange and consisted of metalworking residues and silts and represents a former furnace base. One piece of flint was retrieved from the fill. Overlying this was a solid furnace hearth-cake (C421) consisting of metal-working residues, with inclusions of charcoal and animal bone. One iron nail, likely to have been created using the furnace, was found within this fill.

Earlier western inner annex

The western inner annex was defined by a ditch connected to the later phase of the eastern annex ditches enclosing an area measuring c. 22 x 9m to the west of the ringfort. The western annex kinked out slightly along its northern side from the junction of the eastern annex ditch and the ringfort rather than continuing the line of the eastern annex ditch. To the south the ditch continued relatively straight to form the southern arm of the western inner annex and the later eastern annex (C162). Two phases of annex ditch were noted in all sections of the western inner annex ditch, however it is likely that this ditch was maintained and re-cut multiple times during its lifetime. Ditches C54, C67 and C88 relate to the earlier phase of the western inner annex, while ditches C52, C69, C97 and C200 relate to later phases.

The earliest phase of the ditch to the north (C54) was a U-shaped ditch with a flat base. It was rock-cut to the east where it connected ditch C2. The ditch was steep-sided along its inner edge. As ditch C2 was used during multiple phases of annex layout, it was not possible to identify the earliest relationship between these ditches, however based on the evidence to the south the earliest phase of the eastern annex ditch pre-dates the earliest phase of the western

annex ditch. This ditch appears to have truncated the initial fill (C21) within ditch C2. The latest line of ditch C2 is contemporary with the re-cut of the northern annex ditch (C52), with both of these truncating ditch C54. A north-south running ditch (C403) associated with the re-cut western inner annex ditch (C52), running into the ditch from the south, also truncated ditch C54. It is contemporary with the earlier western arm of the western inner annex ditch (C67) and with the outer western annex ditch (C79), which splits off the western end of the ditch.

Two fills were identified within ditch C54. The basal fill (C56) was a dense silty clay suggestive of a water-laid deposit, with the ditch silting up over time. A moderate number of animal skulls were identified within this fill. Above this, the upper fill (C55) was again a silt-rich deposit with animal bone inclusions. This phase of the ditch appears to have filled in over a period of time, with occupational waste from the settlement dumped throughout the ditch.

The earliest phase of the western section of the western inner annex ditch (C67) was the deepest surviving ditch on the site. It branched off the northern section of the ditch and curved to the south while the second branch (C79) continued to the west to form the outer western annex. The ditch was U-shaped with a flat base. A narrow channel was present along the base of the ditch. The ditch sloped down to the south at the northern end before rising up slightly further to the south. The reason for this deeper section of ditch was unclear. The ditch was heavily truncated by the later re-cutting of the ditch (C69), which ran along the internal side of the ditch. It was also truncated by the construction cut (C117) for Structure 4 and the associated pathway (C63) to the south. A small ditch running to the west from the external side of the ditch (C155) may have been contemporary with this phase of the ditch, though this could not be confirmed due to truncation.

Only one fill (C68) survived within ditch C68. This survived at the base of the ditch to the north, below the level of the re-cut, and along the entire external side of the ditch further to the south. This may suggest that the fill repres-



Western inner annex ditches to north (C52 and C54), looking southwest (top)

Western inner annex ditches to west (C67 and C69), looking north. The possible stylus (16E449:68:1) can be seen to the right in section (middle)

Western inner annex ditches to southwest (C88 and C97) to left with ditches (C359) and C200) branching off to right (bottom)

ents a slumping of bank material into the ditch from the external side, however it is also possible that the ditch was infilled by a single event as part of a re-design of the ditch layout in this part of the site. An iron paddle-headed stick-pin or stylus was retrieved from the fill.

The western inner annex ditch forked to the south of the construction cut (C117) for Structure 4, with one branch running to the east and one to the south. There were again at least two phases of each fork evident here. The earliest phase of the branch to the east (C88) was largely truncated away by the later re-cut (C97), however, where it survived it was found to be U-shaped in profile with a flat base and steep sides, rising up to the southeast. A kiln (C99) was cut into the southern side of the ditch. The southeastern end of the ditch was unclear. It may have continued to the east in line with the later annex ditch (C97). It is also possible that it was related to ditch C129, which curved into the inner western annex, possibly indicating a different annex layout.

Three fills were identified within ditch C88. The basal fill (C90) was found along the internal side of the ditch and may represent a slumping of internal bank material into the ditch. An iron object was retrieved from this fill. The secondary fill (C91) was a sterile sand and may also represent part of a slumping event. The upper surviving fill (C89) was a silt deposit with charcoal and animal bone present. This fill was present within both branches of the forking earlier ditch, being present in the ditch (C359) running to the south also indicating both branches were open at the same time. A piece of flint and a fragment of blue glass bead were retrieved from the fill.

Later western inner annex ditch

To the north, the early phase of the ditch was re-cut by a broad, shallow U-shaped ditch (C52), deepest along the inner edge of the ditch. This ditch was shallower than ditch C54, though deepened to the west. It was contemporary with ditch C69 forming the western arc of the annex and with the north-south running ditch (C403), which ran along the eastern side of the annex at the northern end. This phase of the annex ditch was contemporary with the latest phase of the eastern annex ditch (C2), which was still in use at this time. The re-cut also truncated part of the upper fill (C208) of one of the curvilinear slot trenches (C207) representing a structure outside the annex to the northwest.

Two fills and an entrance feature were identified

within ditch C52. The basal fill (C57) was a silty deposit suggesting it had been water-laid over time. There was a concentration of mid-sized stones near the base of the fill indicative of sorting. A bone weaving tool and two pieces of flint were retrieved from this fill along with animal bone. Immediately to the southeast of Structure 3 a rough stone surface (C571) consisting of flat angular stones was identified. The surface lay at the base of the upper fill and over the basal fill and appeared to be an intentional placement of stones to aid crossing the ditch and connecting the western inner annex with the area to the northwest. The upper fill of the ditch (C53) represents the final backfilling. The fill appeared to relate to occupational material being dumped into the ditch, with animal bone present throughout along with a piece of flint, part of an iron barrel loop with copper-alloy rivet, an iron stick pin or stylus and an iron nail.

To the northeast of the western inner annex a north-south running ditch (C403) was identified. This was contemporary with the re-cutting of the annex ditch (C52) and with the earlier of the shallow curvilinear ditches (C127) within the annex itself. The ditch connected the re-cut to the curvilinear feature, and cut along the external side of the ringfort ditch (C4). The fill of the ditch (C381) was the same as the fill of the northern end of the shallow curvilinear ditch.

Ditch C69 was the re-cut of the western side of the annex ditch and was contemporary with the re-cut to the north (C52). The re-cut ditch was positioned along the internal edge of the previous ditch, but was not as wide. Again this section of the ditch was dug to a greater depth than to the north with the deepest part of the ditch located just to the south of the fork dividing the inner and outer annex ditches. The ditch re-cut was truncated by the construction cut (C117) of Structure 4 and the associated pathway cut (C63) to the south. It truncated the small east-west running ditch (C155) connecting the inner and outer annex ditches at the northern end of the western outer annex.

Three fills were identified within this section of the ditch. The basal fill (C70) was a compact water laid silty clay. A number of larger flat stones were present within this fill along with

occupational waste material such as charcoal and bone. A stone grinding slab was also retrieved from this fill. A discrete deposit of ash and charcoal was found at the top of this fill located centrally within the ditch while a sticky pale clay with frequent burnt bone formed a lens at the top of the fill along the internal side of the ditch. The secondary fill of this section of the ditch (C71) was a clayey silt, again with moderate inclusions of animal bone and finds including a stone weaving tablet, an iron pin, an iron knife and two unidentified iron objects. This fill represents occupational waste being dumped into the ditch. The upper fill of this section of the ditch (C72) was a looser material and represents the final backfilling of the ditch. A piece of flint, stone tools, and iron stick pin and two other iron objects were retrieved from this fill.

The later southern arm of the western inner annex ditch (C97) largely truncated away its precursor (C88), though was slightly shallower to the northwest where the earlier ditch survived. It was a broad U-shape in profile and rock cut. It truncated a ditch (C129) curving into the western inner annex, as well as the kiln (C99) within the earlier phase of the annex ditch (C88). It was contemporary with ditch C309 and the later phase of the eastern annex ditch (C162). A rock-cut pit (C329) was uncovered in the base of the ditch towards its eastern end. To the east of the pit the ditch became shallower after the junction with ditch C309. A further 1m to the east the form of the ditch altered with the ditch taking on a V-shaped profile. A change of fill was also evident beyond this point, and this section of the ditch was recorded under a different context number (C162) as it was consistent with the ditch forming the eastern annex ditch. It is possible these two ditches were in existence at the same time but were excavated and backfilled separately.

Ten fills were recorded within this section of the ditch. The basal fill (C118/C335) was a silt with frequent stone inclusions. The stone appears to derive from the rock-cut edges and base of the ditch, which may have eroded further while the ditch was open, or never have been entirely cleaned out after excavation. Overlying this was a discrete deposit of char-



Section through mid point of western inner annex ditch to south (C97) and ditch C309, with pit C329 below, looking north (top)

Section through western inner annex ditches to south (C97 and C129), looking east (middle)

Section through western inner annex ditches to south (C97 and C129) with truncated kiln C99 in foreground, looking east (bottom)

coal and seeds (C126) located near the junction with ditch C309. This fill was lower than the base of ditch C309. The deposit related to refuse material from elsewhere being dumped into the ditch and the proximity of the kiln (C99) to the west may indicate that this is the source of

the waste. The next fill encountered (C98) was present throughout the ditch and was the major backfilling event within the ditch. This fill overlies the truncated and backfilled kiln (C99) indicating the kiln had gone out of use prior to the re-cutting of the inner annex ditch. The remainder of the fills were all evident in the vicinity of the junction of the annex ditch with ditch C309. This area appears to have been selected as a dumping ground for the settlement. A number of discrete localised lenses of charcoal and seeds (C311, C336 and C312/C125) in a silt matrix was identified above fill C98. While it is tempting to associate these with the nearby kiln to the west (C99), stratigraphically these are later and may come from elsewhere within the settlement or from a spoil heap associated with the kiln being deposited within the ditch. Overlying this phase of activity was a stony clayey silt (C337) material that spread into the north-south running ditch also. This was overlaid by the upper fill identified within the ditch, a localised compact stony deposit (C331). Both of these fills relate to the final backfilling of the western inner annex ditch (C97) and the north-south running ditch (C309).

At the base of the western inner annex ditch (C97) a large oval rock-cut pit (C329) was uncovered. This may have been a well or water-hole accessed from the base of the ditch, however the bedrock on the site was poor at holding water – though it also possible the drainage and water table was different during the early medieval period. It is possible the pit was lined in some way to aid in its purpose, though no evidence for this survived. The pit may also have acted as a marker or posthole. The annex ditch to the east (C162) appears to end to the east of the pit. The earliest phase of the annex ditch to the west is unclear at this point, though it may have curved to the north into the western inner annex as ditch C129 or terminated at the pit also. The form of the annex ditches was different to the east and west of the pit also. The junction of the later re-cutting of the western annex ditch (C97) and ditch C309 was also situated over the pit, suggesting this may have been a significant feature. The pit had a single fill (C330) consisting of broken angular bedrock with occasional pockets of silt between the stone. Charcoal was identified at



Section of southern end of ditches C309 to left and C359 to right, looking south (top)

Section of kiln C270 cut into ditch C359 and in turn truncated by ditch C200, looking southeast (middle)

Post-excavation view of ditches C359 branching off inner enclosure ditch with ditch C309 running along side it at the southern end, looking northwest (bottom)

the base of the pit and some animal bone was present near the top of the fill. The pit appears to have been backfilled with the material excavated while creating it, possibly indicating it was not open for very long. This may indicate it was a posthole rather than a well, which would have

been open for longer, however a post socket was not identified.

To the southwest, the southern branch (C359) of the fork in the western inner annex ditch continued in a northwest-southeast direction before turning to run to the south. It was truncated by the outer annex ditch (C367) at its southern end, however may have been contemporary with an earlier phase of this ditch. To the north it was truncated by the construction cut (C117) for the Structure 4 and by the later redesigned annex enclosure ditch (C200). This ditch may have been associated with the division of space within the outer western annex. An east-west orientated ditch (C245) ran up the western side of the ditch and may also have been part of the land division within the outer annex enclosure. Two kilns (C270 and C444) were cut into the ditch. The southern end of the ditch ran parallel with ditch C309, which was contemporary with the later phase of the western inner annex ditch. This later phase of ditch may have been re-establishing this north-south boundary.

Seven fills were recorded within ditch C359. At the northern end the ditch was filled by the same fill (C89) as eastern fork of the ditch (C88). This fill was truncated along its upper western side by the Phase 4 annex ditch (C200). Further to the south two fills were recorded within the ditch. The basal fill (C258/ C269) was a compact silty clay with small stones and animal bone inclusions. This was overlaid by an upper fill (C256), a loose silty clay with occasional larger stones. This fill was also present within the shallow pit (C227) to the east of the ditch indicating these two features were infilled at the same time. Further to the south, at the point where the ditch turned to the south, a further two fills were identified. The basal fill (C456) was still a silty clay though lighter in colour than the fill to the north. It was overlaid by a compact rusty brown silty clay (C457). This is the point where the ditch was truncated by one of the kilns (C444) and it is possible the upper fill here is the same as the lower fill, with the colour variation relating to the later kiln. A single fill (C360) was present in the southern end of the ditch, a yellow silty clay, which is possibly the same as the basal fill (C456) at the

point where the ditch turned to the south. A corroded iron ring was retrieved from this fill.

Outer western annex ditch

An outer annex ditch formed an enclosed space to the west and south of the ringfort relating to Phases 3 and 4 of the early medieval settlement. The ditch was truncated to the southwest and southeast by modern activity. The northern side of the outer annex ditch (C79) ran northeast-southwest, continuing the alignment of the northern arm of the western inner annex ditch (C52 and C54). The ditch was contemporary with ditch C54 and an associated shallow ditch (C155) ran between the two forming a small enclosed space to the southwest of the junction of the two ditches. The outer annex ditch turned sharply to run north-south at its western end. It varied in depth along its length with a deeper section at the point where it branched off the inner annex ditch and another at the point where it turned to the south. To the south of this the base of the ditch rose, with the north-south running section of the ditch being significantly shallower. Although the ditch was contemporary with the earlier phase of the inner annex ditch, it probably remained in use during the later phase. The ditch was truncated by the pathway (C63) leading to Structure 4. The southwestern corner of the outer annex was truncated by modern activity.

Two fills were recorded within this section of the ditch. The basal fill (C80) was a compact silty clay, which became more gravelly to the west. It was present in the deeper sections of the ditch. This phase of ditch fill appeared to relate to the basal fill of the inner annex ditch (C56). This was overlaid by the upper fill (C81), a moderately compact silty clay relating to the final backfilling of the ditch. A row of stones was uncovered at the base of this fill at the northeast end of the ditch similar to that found in the basal fill (C57) of the re-cut of the inner annex ditch (C52). This indicates that the line of the outer annex ditch was in use during various phases of the western inner annex ditch.

The southern section of the western outer annex ditch (C367) was identified running east-west at the southern end of the site. It was a broad U-shaped ditch, with the latest version



Section of outer annex ditch C79, looking south (top)

Working shot of stone layer at base of upper fill within outer annex ditch C79, looking east (upper middle)

of the ditch truncating ditches C309 and C359. The easternmost of these ditches (C309) was contemporary with ditch C97 and was seen to continue beyond the outer annex ditch indicating the outer annex ditch remained open after the inner annex ditch had been infilled. Only one fill (C368) was identified within the ditch, suggesting it had been well maintained and cleaned out during its final phase of use. This section of the ditch was truncated to the east, south of the excavated area, by significant modern activity.

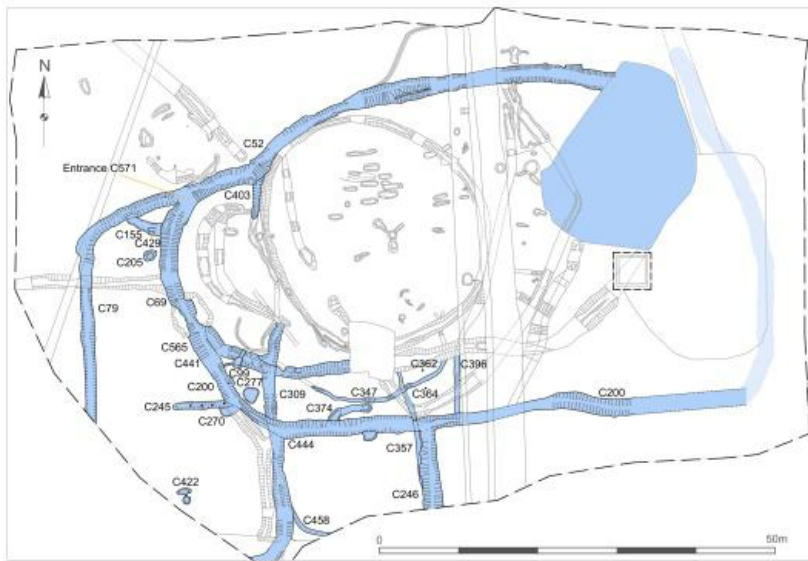
A return of the outer annex ditch towards the ringfort and associated annex ditches was not identified at its eastern end. It is possible a north-south running ditch (C246) was associated with this enclosure, however this may also relate to a field division within the outer annex. Another ditch possibly relating to an eastern return of the enclosure were encountered further to the east. Ditch C551 was identified as a post-medieval field boundary ditch and was located at the eastern end of the site. The southern end of the ditch had been truncated by activity associated with the modern well and pump-house. It is possible that the line of this ditch continued in use into the post-medieval period and it may be a surviving element of the early medieval landscape.

Extended western and southern annex ditch

A significant redesign of the annexed area to the south and west of the ringfort was identified during the excavation (C200) relating to Phase 4 of the early medieval settlement. This related to a re-cut of the western arm of the western inner annex ditch to the north, however it was not possible to identify which due to the truncation by the foundation cut (C117) of Structure 4. The depth of the ditch would suggest that this phase of annexation may relate to the upper fill (C72 and C53) of the re-cut western annex ditch, and that an additional re-cut is present there. The northern end of the re-designed annex remained the same as the previous annex layout, making identification of

Post-excavation view of western inner annex with outer annex ditch C79 to left, looking north (lower middle)

Section of outer annex ditch C367, looking east (bottom)



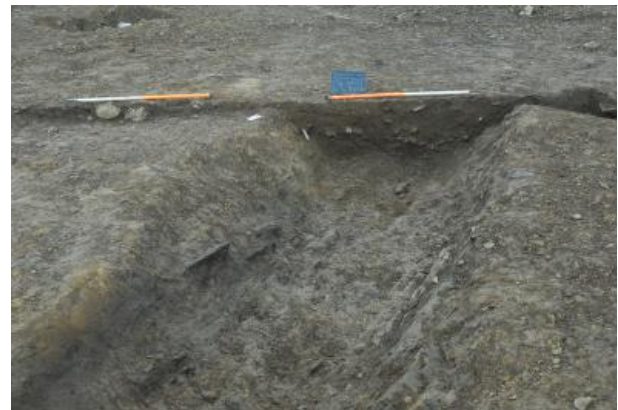
Plan showing the location of the later Phase 4 annex ditch C200

Section of processing pit C227 to left with ditch C359 re-cut by ditch C200 to right (top)

View of ditch southern section of C200, looking west (middle)

View of meandering eastern end of ditch C200, looking east (bottom)

the ditch in this location more difficult. To the south, however, the annex was extended by approximately 5m. The old annex ditch was abandoned by this time. The new ditch was U-shaped in profile with steep sides and a flat base. To the west it continued in a similar north-west-southeast alignment to ditch C359 before turning to run east-west. A return on the eastern side was not identified, possibly suggesting this area was not fully enclosed by the new ditch layout, or that the return has not survived the modern truncation of the site. The ditch began to meander slightly at its eastern end before petering out as it ran up the slope of the small hillock to the east of the ringfort. The ditch truncated a number of features relating to earlier phases of activity on the site. To the west it truncated ditch C359 and kilns C270 and C444 cut into the backfill of the ditch. It also truncated the eastern end of the ditch C245 associated with land division within the outer western annex. It truncated ditch C309, which was contemporary with the later phase of the western inner annex ditch (C97). To the south of the ringfort, it truncated gully C357 and ditch C396, which was contemporary with the early phase of the eastern annex ditch (C159). Its relationship with ditches (C497 and C499 to the east was truncated by the later field boundary (C180) and avenue (C182), however stratigraphically ditch C499 may be related to it. Two contemporary ditches were identified associated with this phase of annexation. A short



section of ditch (C374) ran parallel to the ditch to the south of the ringfort before turning to run into the ditch from the north. To the east of this a north-south running ditch (C246) connected with the southern edge of the ditch and continued to the south. This is likely to relate to land division to the south.

Nine fills were recorded within the ditch along its length. To the west in the northwest-southeast running section of the ditch the basal fill was a discrete deposit of charcoal, burnt clay and ash (C221) deposited on the base of the ditch along its western side. This was close to where the ditch had truncated an earlier kiln (C270) and this fill may relate to material eroded from the kiln. The main basal fill in the western end (C202/ C101) was a compact silty clay with occasional large stones within the fill. A piece of flint, a burnishing stone, a grinding stone, an iron knife and the side plate of a bone comb were all retrieved from this fill. The upper fill of this section of the ditch (C201/ C93) related to the backfilling of the ditch. Occasional lenses of charcoal and ash were apparent within the fill along with frequent animal bone inclusions indicating occupational material was deposited into the ditch. A piece of chert, an iron knife, an iron object, a fragment of iron and an antler off-cut were all retrieved from this fill. Further to the east along the east-west running section of the ditch two main fills were again identified. The basal fill (C373) was a grey silty clay, which contained a piece of metalworking slag. It was overlaid by and sandy silt material (C372), which became deeper to the east. Further to the east in the vicinity of the junction ditch C246 a further three fills were identified. The basal fill (C371) was a marl silt and the same as the basal fill (C247) of the north-south running ditch (C246). This fill appeared to relate to the silting up of both of these ditches at the same time and indicated poor drainage in this part of the site. There may have been standing water within the ditches here. This was overlaid by a localised slump (C370) along the northern side of the ditch. The upper fill (C369) was a sandy silt similar to the upper fill (C248) of ditch C246 but less compact, possibly silting up later ditch C246. To the east of the field boundary (C180) only one fill was recorded (C534), a clayey silt becoming more organic to the east. It would ap-

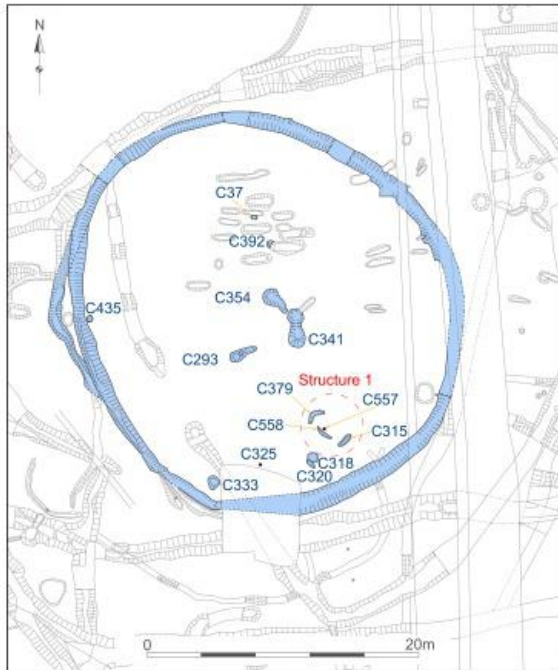
pear that two major infilling events occurred along the length of the ditch, with variations to the fills caused by localised soil and drainage conditions, and a number of additional discrete deposits also present. Both of these fills may have accumulated over time and involved the deposition of occupational material from the settlement into the ditch.

Two features were identified to the west truncated by the ditch. An oval posthole (C565) was identified along the external side of the ditch to the south of the foundation cut (C117) of Structure 4. One large flat stone stood vertically along the western side of the posthole. The posthole was truncated by the ditch and had two fills. The basal fill (C434) was a charcoal-rich silt containing possible charred wicker fragments. The upper fill (C437) was a silty clay fill with charcoal flecking relating to the backfilling of the posthole. It is possible the upright stone within the posthole relates to packing material, while the charred wicker may relate to a burnt wicker fence or panel associated with the post.

To the north of this a square-cut posthole (C441) was uncovered, also truncated by the ditch (C200). This had a single fill (C442), vertical sides and a flat base. This may relate to a square-cut post being driven into the ground rather than a pit having been dug to insert the post. The two postholes may also indicate a former fence line along the external side of ditch C359, which was later truncated by ditch C200.

Features within the ringfort

Three kilns, the slot trench of a small structure, two hearths or fire-pits, five pits and a shallow gully were identified within the ringfort enclosure. The flue of a kiln located in the eastern annex was also located within the ringfort, as was the remnants of a possible bank to the west. Modern truncation and ground level alteration had taken place across the interior of the ringfort, which occupied the highest ground within the excavated area. This levelling may have occurred during the laying out of the grounds for Sion House to the southwest, or for garden landscaping associated with 20th



Location plan of features within the ringfort (top)

View of Structure 1, looking northwest (bottom)

century St. Martha's College. Many features within the interior were shallow, including the later burials. It is likely that many features that had previously occupied the central portion of the ringfort were lost during these ground level alterations.

Structure 1

To the southeast of the ringfort interior, the slot trench of a small circular structure (2.7m internal diameter) was identified. The slot trench did not survive as a complete circuit however two arcs of slot trench were uncovered, one to the northwest (C379) and the second to the southeast (C315). A terminus was apparent at the northeast end of the southeast terminus suggesting the structure had an entrance to the east. The slot trench petered out on all other sides due to truncation and undulations in the depth of the slot trench caused by bedrock outcrops, so the gaps apparent to the northeast and southwest do not necessarily represent entrances. The fills of both arcs of the slot trench (C380 and C316) both contained occasional animal bone inclusions, with charcoal also noted to the northwest (C380).



A small possible stake-hole (C557) was uncovered within the structure, located to the northwest of centre lying 1m from the north-western edge of the slot trench. The fill of the stake-hole was similar to that found within the northwestern arc.

Burial B IX was uncovered within the interior and post-dated the structure.

A shallow gully (C558) was also identified within the interior of the structure running northwest-southeast towards the southwestern side. While it was initially considered that this may relate to an internal division within the structure, the gully lined up with the northern end of the gully associated with the entrance (C347) and may relate to this feature. The relationship between the gully and the slot trench could not be established.

Kilns

Three kilns were uncovered within the ringfort: two near the centre of the ringfort (C341 and C354) and a third further to the southwest (C293).

The kiln to the southwest (C293) was heavily truncated but may have been a keyhole-shaped kiln with a firing chamber to the southwest and a flue to the northeast. The kiln was partially rock-cut, with the bedrock cracked through heat action, though no in situ burning was evident. The surviving elements of the kiln were very shallow and it can be assumed that the kiln was heavily truncated during modern landscaping. The fill of the firing chamber (C295) contained charcoal as well as the unburnt bones of a small animal, possibly a dog. It is possible that the animal was buried in the kiln after it had gone out of use. No charred seeds were evident within the fill. The upper fill of the kiln (C294) was present in the flue and partially spread into the firing chamber and relates to the backfilling of the feature after it had gone out of use.

To the northwest of this, near the centre of the ringfort, two kilns were identified, a keyhole-shaped kiln (C354) to the northwest and a figure-of-eight shaped kiln (C341) to the southeast. The keyhole-shaped kiln (C354) was orientated northwest-southeast with the drying chamber to



Mid-excavation view of kiln C293, looking southeast (top)

Mid-excavation view of kiln C341, looking east (middle)

Post-excavation view of kiln C354, looking northeast (bottom)

the northwest. It was rock-cut with in-situ burning on the base present between the flue and the drying chamber indicating the fire was set back slightly from the drying chamber. The flue rose up to the southeast and terminated before encroaching upon kiln C341. This may indicate the kilns were designed to respect each other. The primary fill (C355) was present along

the base of the entire kiln and contained charcoal, charred seeds and ash. The upper fill of the kiln (C356) was the main fill within the kiln and appeared to be an intentional backfilling of the feature. The lack of additional layers relating to the use of the kiln indicate the feature was well cleaned out after use, with the basal fill representing the final firing of the kiln. The kiln was truncated by the grave cut (C107) of burial B VIII.

Kiln C341 was figure-of-eight shaped in plan and was orientated north-south. The northern chamber appears to have been the firing chamber with in situ burning evident, particularly to the north. The kiln was rock-cut. The base of the southern chamber was stepped up from that of the firing chamber and sloped gently up to the southern end. It may represent the flue of the kiln and no in situ burning was apparent. For this kiln the drying chamber may have been located above the firing chamber. The basal fill of the kiln (C342) was present along the base of the entire kiln and contained charcoal, charred seeds and occasional burnt stones. This relates to the last firing of the kiln, while the upper fill (C343) relates to the backfilling of the kiln. A sherd of post-medieval pottery retrieved from this fill is likely to be intrusive. Again, the kiln appears to have been well cleaned prior to its last firing with only one layer relating to the firing of the kiln along the base. The kiln was truncated by the grave cut (C82) of burial B X.

Pits and postholes

At the western end of the ringfort a shallow sub-circular fire-pit or hearth (C435) was identified. There was evidence for in situ burning on the base of the pit, which was rock-cut, and the fill (C436) contained charcoal, charred seeds and burnt bone. This may have been a cooking hearth associated with the settlement. The pit was located at the edge of the ringfort ditch (C4), which is interesting as this is where one would expect the ringfort bank to be located. This may indicate that the bank was originally further to the west closer to the early ringfort ditch (C35), or that the bank between the ringfort and western inner annex was removed at some point. A wedge-shaped section of soil (C564) directly overlay the hearth and extended along the inner side of the ringfort ditch was in-



Pre-excitation view of hearth C435 at the edge of ringfort ditch C4 and overlaid by bank material C564, looking south (top)

Mid-excitation view of hearth C318, looking west (bottom)

dicative of a bank was constructed here after the hearth had gone out of use. This relates to the re-cutting and realigning of the ringfort ditch and implies the hearth predates this realignment (C4), which was moved slightly to the east and encroached partially on a former occupation area within the ringfort.

To the southwest a small circular pit (C333) was identified, also situated where a bank should have been located. The pit had a single fill (C334). It is likely this feature also predates the moving of the western bank and ditch of the ringfort.

At the southern end of the ringfort, to the southwest of Structure 1, a circular hearth or fire-pit (C318) was identified. It was shallow and rock-cut, with in situ burning evident on the base. Charred seeds and charcoal were retrieved

from the fill (C319). The fill was truncated by an oval cut feature (C320) on one side. While this may be a later pit, it is probable that this represents a stone socket created during the scarping of the ringfort interior. It had a single fill (C321) of sterile re-deposited natural.

An isolated posthole (C325) was identified at the southern end of the ringfort to the west of hearth C318. It had a single fill (C326) and no other associated structural features were noted in the vicinity. It may be a truncated posthole of a structure within the ringfort.

To the north of the two kilns in the centre of the ringfort a circular pit was identified (C392). It was truncated to the east by a later grave cut (C351). The pit was rock-cut and had a relatively sterile basal fill (C394). The upper fill had frequent burnt bone and charcoal inclusions. No in situ burning associated with the pit was identified to suggest the pit related to a hearth.

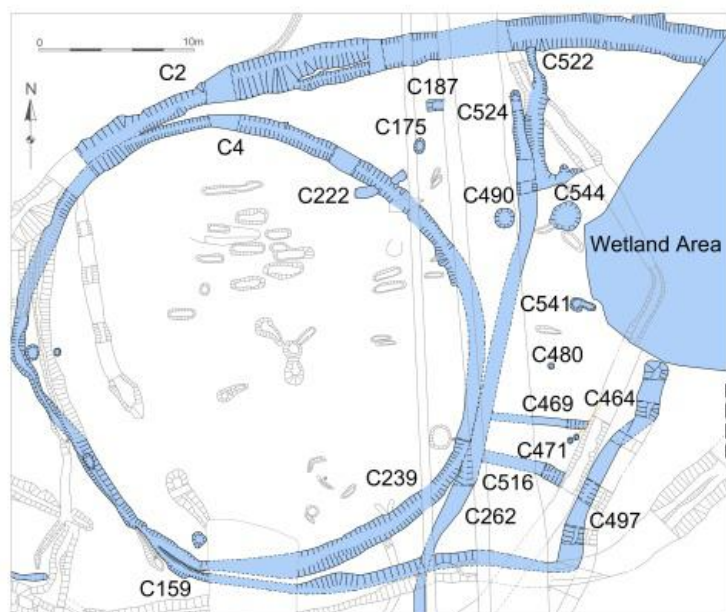
Also at the northern end of the ringfort a shallow sub-circular pit (C37) was identified, which was truncated along its northern side by a grave cut (C13). This was a shallow pit with a flat base and concave sides. The fill of the pit (C36) contained frequent charcoal flecking and occasional burnt bone. An iron hobnail retrieved from the northern edge of the pit where it was truncated by the grave cut may be intrusive and relate to the burial rather than the pit.

Features within eastern annex

The eastern annex of the early medieval settlement was defined by a ditch to the north (C2) and south (C527), with another ditch to the south (C200) indicating a later expansion. The ground level slopes down from west to east and the ditches forming the annexed enclosure appear to end at a low-lying area to the northeast. This was occupied by a later pit (C509) likely to relate to drainage management. A modern well and pump house are also present here, suggesting the presence of a former spring. During the early medieval period, this spring may have fed a pond or wetland area that defined the eastern end of the annex. Two kilns, one hearth or fire pit, six additional pits, two postholes and ten linear features were identified within the eastern annex of the ringfort.

Kilns

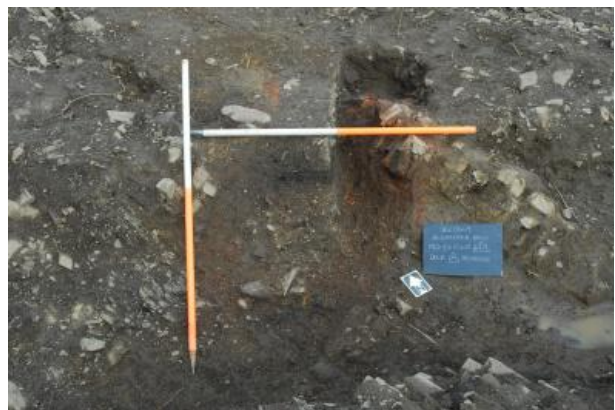
The two kilns identified within the eastern annex of the ringfort were both located to the northeast of the ringfort ditch. The southernmost kiln (C222) lay directly north of the ringfort ditch (C4) and was partially truncated by it. The flue of the kiln (C229) was located in the interior of the ringfort, suggesting the kiln either predated the ringfort, or was constructed at a time that the ringfort ditch in this part of the site was allowed to fill in partially. The ringfort ditch (C4) was then re-cut, truncating the central portion of the kiln. A modern service



Plan showing the location of features within the eastern annex

trench (C86) and furrow (C183) further truncated the northeastern end of the kiln. The surviving portion of the kiln was the northern end of the firing chamber, with substantial in situ burning apparent along the base and sides. The kiln was rock-cut and orientated northeast-southwest, with the flue (C229) to the southwest. The drying chamber appears to have been to the northeast however this end of the kiln was heavily truncated and only the beginning of this chamber was visible. The probable flue (C229) to the southwest was separated from the firing chamber by the ringfort ditch (C4), however the location and orientation of the feature suggest it is likely to be the flue of the kiln. This would suggest the kiln had been a figure-of-eight shape in plan with a flue feeding the southwestern firing chamber. The drying chamber appears to have been at a higher level to the firing chamber.

Five fills were recorded within the firing chamber of the kiln whilst an additional fill was recorded within the flue to the southwest. The basal fill (C251) was a deposit of ash, charred seeds and charcoal, which was overlaid by a deposit of natural-like clay (C252) at the northeast end of the kiln. This was overlaid by a large infilling event (C223), which filled the majority of the firing chamber. Over this a thin layer of charcoal (C224) was identified indicating the kiln was not completely abandoned following the infilling event. The upper fill (C225) also contained frequent charcoal and may relate to a later phase of use of the kiln. It is possible that the upper two fills relate to a different use of the mostly backfilled kiln, either as a hearth or fire-pit, or possibly a metalworking pit. Charred seeds, charcoal and possible hammer-scale were noted within the fill. Very lightweight burnt clay was noted in a number of the fills, possibly part of the superstructure of the kiln. The flue to the southwest appears to have been intentionally backfilled, with one fill recorded. A near-complete cow skull was placed centrally on the base of the flue further suggesting an intentional termination of the flue and kiln. An iron pin was also present within the fill, and charred seeds were noted. This fill is likely to correspond with the main fill (C223) of the kiln and suggests the feature was largely decommissioned by this event. The fact that the kiln was



Mid-excavation view of kiln C222 truncated by ringfort ditch C4, looking northwest (top)

Mid-excavation view of kiln C222, northeast (middle)

View of animal skull at the base of flue C229 of kiln C222, looking southwest (bottom)

present on both sides of the ringfort ditch suggests that at least part of the ringfort bank had been removed and ditch backfilled prior to its construction.

A second kiln (C187) was located to the northeast. This kiln was rock-cut and orientated east-west. Only the firing chamber of the kiln

survived, with the eastern end of the kiln having been truncated by a drain (C178) and the avenue (C182). Four fills were recorded within the kiln, with the basal fill (C188) containing charcoal, charred seeds and burnt bone, which is likely to relate to an earlier firing of the kiln. Overlying this was a layer of ash (C189) with frequent animal bone fragments, which was in turn overlaid by a second charcoal-rich layer (C190). These two layers are likely to represent to final firing and use of the kiln. The presence of animal bone within the ash layer is interesting and may suggest that bone was added to supplement the fuel within the kiln. The final fill within the kiln (C191) related to the back-filling of the cut after its final use. The upper levels of the kiln were disturbed by root action from the hedgerow (C85) directly overhead.

Pits and postholes

Between the two kilns to the northeast of the ringfort an oval hearth or fire-pit (C175) was uncovered. The pit was rock-cut and slightly uneven due the heat fracturing of the bedrock, though in situ burning was noted at the base of the pit. The pit had two fills, a basal fill (C176) with charcoal, burnt bone and charred seeds present. This was overlaid by the upper fill (C177), which related to the backfilling of the feature. A sherd of post-medieval pottery within the upper fill is likely to be intrusive. The presence of charred seeds within the fills may suggest this is the surviving base of another kiln, however too little survived to say this with certainty. The upper levels of the fill were disturbed by root action from the nearby hedgerow (C85).

Feature C490 lay beneath the avenue (C182) and was truncated by the field boundary ditch (C180) to the east. It was a circular patch of fire-reddened bedrock corresponding to the base of a fire-pit or kiln, however nothing further of the feature survived and there was no associated fill. The depth of the feature may suggest that it was a kiln rather than a hearth, however this was unclear.

A small pit (C474) was identified to the east of the avenue (C182) to the northeast of the ringfort. The pit had a single fill (C475) and was truncated along its southern side by gully C462.



Post-excavation view of kiln C187 truncated by avenue C182 to left, looking south (top)

Post-excavation view of firepit C175, looking southwest (bottom)

To the south of this a small shallow oval-shaped pit (C460) was identified on the southern side of gully C462. While no in situ burning was identified on the base of the pit, frequent charcoal within the fill (C461) suggested it may have been a fire-pit or hearth.

Immediately to the south of this pit a large shallow pit with gently sloping sides (C544) was uncovered. This pit had a single fill (C545), which was truncated by the grave cut (C476) of burial B XXXIV to the west. A struck flint was retrieved from the fill. The pit had a relatively stony base and resembled other pits of similar size and form on the site (C227 and C205). These pits all have flat bases, with metallurgy present on the base of one (C227). The base of this pit was quite stony and would not have required metallurgy for use as a working surface. It

was possibly used for storage or for some form of processing.

South of this a circular pit (C541) was recorded, truncated by the grave cut (C538) associated with burial B XXXVIII. A small patch of in situ burning was noted on the western edge of the pit and the fill of the pit (C543) contained occasional charcoal and burnt clay flecks. The pit may have been another hearth associated with the settlement.

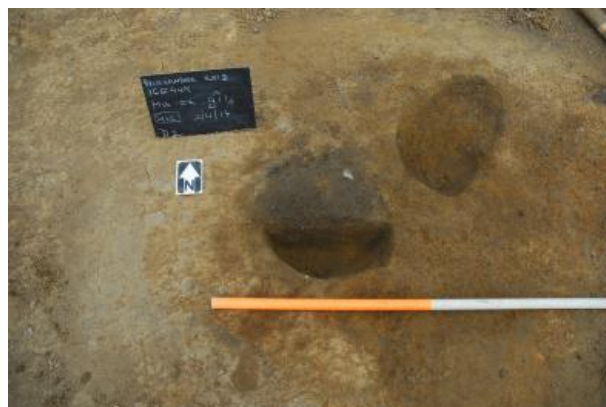
There was a gap in the cut features relating to the ringfort immediately to its east. This absence of cut features may relate to a connection between the eastern annex and the ringfort at this point, however it may also be a coincidence of survival. To the south of this a small circular posthole (C480) was identified. In situ burning along the eastern side of the posthole suggested that the post may have been burnt whilst still in place. The fill of the posthole (C481) consisted mainly of charcoal, possibly the remains of the burnt post.

A further two postholes were identified to the southeast of the ringfort. A sub-oval posthole (C464) was recorded to the south of gull C469. The feature was deepest at one end and it is possible that the feature relates to a posthole with the shallower end created during the removal of the post. The feature had a single fill (C465).

Immediately to the southwest of this a second posthole (C471) was uncovered. This was a more regular circular shape in plan and also had a single fill (C472). Two possible packing stones were noted within the fill. It is possible that these three postholes (C464, C471 and C480) represent the deeper surviving elements of a truncated structure in the eastern annex.

Gullies

Three narrow gullies (C462, C469 and C516) were identified running approximately east-west. The gullies were not parallel, and they appeared to radiate out from the ringfort, though none of them were shown to connect with the ringfort ditch itself due to the truncation associated with the field boundary ditch (C180) and avenue (C182). It is also possible that the gullies run



Post-excitation view of pit C544 truncated by Burial BXXXV to the left, looking north (top)

Mid-excitation view of posthole C480, looking north (middle)

Mid-excitation view of posthole C471 with C464 to the right, looking north (bottom)

from the eastern side of the north-northeast to south-southwest orientated ditches (C262, C520, C522, and C524) and divided the remainder of the annex to the east into smaller parcels of land. The gullies were not identified to the east of the modern sewer service trench

(C507), though this is likely due to the falling ground level beyond this point.

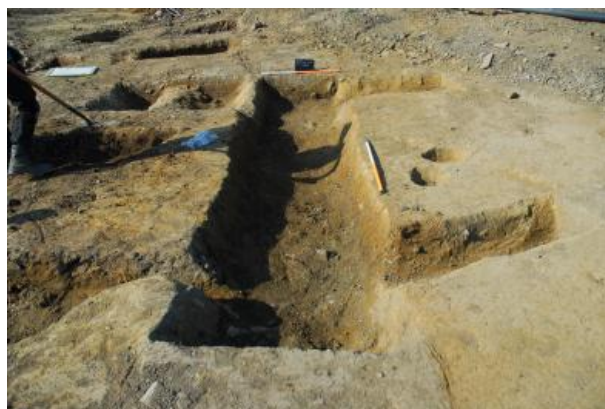
The northernmost gully (C462) ran slightly west-southwest to east-northeast. It truncated the southern side of a pit (C474) and was contemporary with the earliest of the series of ditches to the west (C520). It was truncated by the burial enclosure ditch (C16) to the east and was not noted further to the east. It was narrow and had a steep U-shaped profile. The gully had two fills (C463 and C473), both of which appeared to relate to the silting up of the feature over time. A shallow north-south running furrow (C518) ran into the gully from its southern side. This was a very ephemeral feature with a single fill (C519) and petered out further to the south.

The central gully (C469) ran slightly west-northwest to east-southeast. It was truncated by the field boundary ditch (C180) to the west and by the burial enclosure ditch to the east (C503). It continued beyond this where it was truncated by ditch C497. As this ditch may mark the eastern end of the Phase 2 eastern annex, the gully had been infilled prior to this ditch going out of use and must relate to Phases 1 or 2 of the early medieval settlement. This was similarly narrow with a steep U-shaped profile. The gully had one fill (C470), which appeared to have silted up over time, and contained an iron fragment.

The southernmost gully (C516) was orientated more northwest-southeast. It was relatively close to the central gully and was also cut by the field boundary ditch (C180) to the west, and by the burial enclosure ditch to the east (C503). The southern gully was broader and less steep-sided than the two northern ones. It had a single fill (C318) and is likely to have silted up over time.

Ditches

Three intercutting ditches ran north-northeast to south-southwest from the northern end of the eastern annex. The earliest of these (C520) was the most easterly. It was cut by the latest version of the annex ditch (C2) to the north, however is likely to have been contemporary with an earlier phase of this boundary. It was contemporary with gully C462, which extended



Section of gully C462 with pit C474 to the right, looking west (top)

Section of gully C469 looking west (middle)

Mid-excavation view of burial enclosure ditch C503 with gullies C469 and C516 to right and ditches C497 and C499 to left, looking southwest (bottom)

from its eastern side. It had a single fill (C521), which was similar to the upper fill of the gully (C363). It was truncated to the south by the field boundary ditch (C180) and to the west by a second ditch (C522) running along a similar line. The second ditch was slightly further to the west and slightly deeper than the first. It ter-

minated c. 2.5m to the south of the northern annex ditch (C2), possibly leaving an access gap. Again a single fill was identified within the ditch (C523) and the ditch was truncated by the field boundary ditch to the south and by the third ditch (C524) along its western side. The third and final ditch along this alignment was the most westerly. Like the second variation of the ditch, a gap of c. 2m was left between the northern terminus of the ditch and the annex ditch to the north, probably for access. The ditch turned slightly to run north-south at its northern end, breaking slightly with the previously used alignment. The fill of the ditch (C525) was highly compacted, possibly due to proximity to the field boundary ditch (C180) and the later avenue (C182) to the west. A crude stone oil-lamp was retrieved from the fill of this ditch. The ditch was truncated by the field boundary ditch to the south and was partially truncated, along with the upper levels of the fills of the two earlier ditches, by the grave cut (C476) of burial B XXXIV.

To the west of the field boundary ditch another ditch (C262) was identified running in the same alignment at the southern end of the annex. This ditch is likely to correlate with one of the ditches further to the north, however it was not possible to establish which one. It was cut by the Phase 3 ringfort ditch (C239). The ditch was truncated by a field drain (C178) to the north, and by a modern service trench (C86) to the south, as well as the cut for the metalworking furnace (C415), which was cut into the upper fills of ditch C162 to the south. Whilst it was unclear whether the later phase of the annex ditch (C162) truncated the ditch due to the drop in levels and the presence of the furnace cut, another ditch (C396) carrying on in the same alignment on the external side of the annex ditch was found to be contemporary with the earlier phase of the annex ditch (C159) and was truncated by the later annex ditch (C162). The ditch became shallow to the south and would have connected with the annex ditch well above the base. Three fills were recorded within the ditch. The basal fill (C263) was quite stony and gravelly and may have been intentionally deposited to assist drainage within the ditch. Overlying this was a silty clay deposit (C264) likely to be associated with the abandonment of



Section of ditches C520, C522 and C524, looking south-southeast (top)

Section of ditch C262 truncated by ringfort ditch C239, looking south (bottom)

the ditch. This was overlaid by a looser material of similar composition (C265), which may be the same fill though loosened and disturbed by the hedgerow (C85), which partially overlay the ditch to the east.

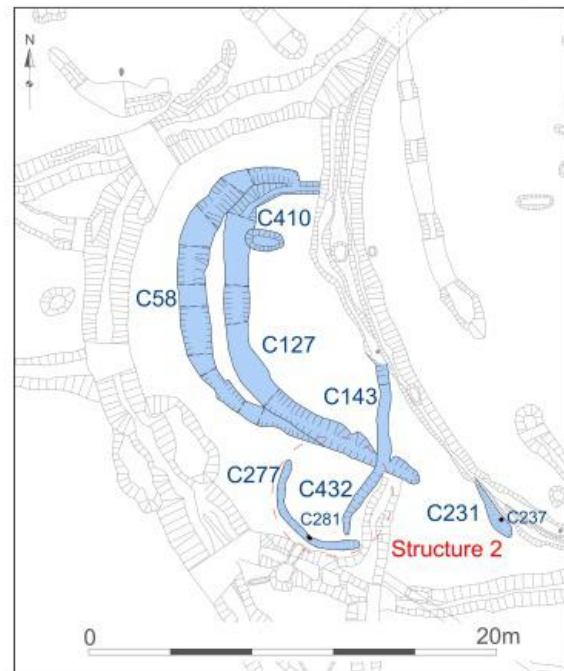
Two further ditches were excavated within the eastern annex running in a similar north-northeast to south-southwest alignment further to the east. In this instance two phases of ditch were identified. The earliest ditch (C497) was located slightly to the west of the later ditch (C499). It was truncated by the later ditch (C499) along its eastern side, and at its northern end. Both ditches may have shared the same terminus. To the south it was truncated by the continuation of the southern arm of the later eastern annex ditch (C537), which correlates with the later phase of the inner annex ditch (C162) to the

west. It is possible that ditch C497 may relate to the earlier phase of the annex ditch (C159) to the west. While the surviving portion of this ditch appears shallower and narrower than ditch C159, the base of both ditches is at a similar level (54.7m OD). The difference in appearance is likely due to heavier truncation of the eastern portion of the site. The ditch was truncated by the field boundary ditch (C180) to the south of this so further investigation was obstructed. Gully C469 was truncated by the ditch. Two fills were recorded within the ditch, a basal silt (C550) that was more prevalent to the south and an upper silt (C498) with staining toward the upper level is suggests that the ditch silted up over time.

The second ditch following this alignment (C499) was set slightly further to the east, and was slightly wider and deeper than the first. This ditch terminated near the edge of the modern pit (C509) in the northeast of the site, which is believed to have redefined an earlier wetland area or pond in the same location. The ditch truncated the annex ditch (C527) to the south indicating it relates to a later phase of activity, possibly the later annex ditch (C200) relating to Phase 4 of the early medieval settlement. The connection between this ditch and the southern annex ditch was truncated by the field boundary ditch (C180). This ditch also had two fills and the similarity between the basal fills indicated that the same filling processes impacted both ditches. The basal fill (C549) was a silting event along the base of the ditch, while the upper fill (C500) was a mixed fill of silty clay and pure silt (C498), similar to the upper fill of the first ditch (C498), but suggestive of an intentional back-filling of the ditch. This ditch may be a re-establishment of this boundary line after ditch C527 had been abandoned.

Features within the western inner annex

The western inner annex of the early medieval settlement was defined by a curving ditch to the north, west and south. This ditch had a number of phases of use with a number of context numbers given for each section. To the north an early ditch (C54) was replaced by a later ditch



Plan of features within the western inner annex

(C52). The western section also saw two phases of ditch with the earlier ditch (C67) giving way to a later ditch (C69). The southern section also had two phases of activity, with the earlier ditch (C88) being replaced by a later ditch (C97). This in turn was altered with a new ditch (C200) further to the south established to annex additional space to the south of the ringfort. Features within this additional annex will be included in the following section. Two curvilinear ditches enclosing a smaller space within the western annex were recorded along with a two slot trenches, two stake-holes, an additional curvilinear ditch, and a kiln.

Curvilinear ditches

The western inner annex contained two curvilinear ditches that mirrored the curve of the annex ditch itself, enclosing a smaller space closer to the ringfort. These ditches were significantly shallower than the annex ditch. The earliest of the curvilinear ditches (C127) formed a C-shaped enclosure and was partially rock-cut. It narrowed and shallowed to the north and was contemporary with a re-cutting of the ringfort ditch to the west (C403) and the later phase of

the annex ditch (C52). As this ditch post-dated the backfilling of the ringfort ditch to the west, it relates to a feature at a later point in the evolution of the settlement. Five fills were recorded within the ditch, with the earliest (C138) being a relatively shallow deposit along the base to the southwest and west. Two fills were identified overlying this. One was a clay lining (C139) identified along the inner (eastern) edge of the ditch to the west and south, which was not mirrored on the external side of the ditch. The second (C381) related to an intentional backfilling event within the ditch and was present in the western and northern parts of the ditch. At the northern end of the ditch this became the basal fill and continued into ditch C403 at the northeast end of the curvilinear ditch. Overlying both fills another intentional backfilling event (C140) was present in the southern and western sections of the ditch. This fill contained a dog skull at the western end of the ditch. The upper fill of the ditch (C128) represents the final backfilling of the ditch and was the only fill consistently present along the entire length of the ditch. Two animal skulls, possibly bovine, were retrieved from the fill, one in an upside down position to the west and another upright close to the junction with the re-cut of the ringfort ditch (C403).

Once the initial curvilinear ditch had been fully backfilled another curvilinear ditch was excavated (C58) slightly further to the west. This ditch was similar to the first, also being rock-cut, though slightly shallower. It partially truncated the earlier ditch at its northern and southern end. The northern end terminated c.1.75m to the west of the line of the ringfort ditch, possibly allowing for an access point to the north. The ditch contained three fills, with the basal fill (C59) being present throughout the ditch. Two animal skulls were retrieved from the fill, one 2.45m from the northern terminus, and the second at the western side of the ditch. Both skulls were within the fill near the top of the ditch. Two fragments of iron were also retrieved from the southern end of the ditch within this fill. Overlying the basal fill were two layers possibly associated with an internal bank dumped or slumping into the mostly infilled ditch. Both were only present to the west, with the lower of the fills (C65) being a redeposited



Junction of curvilinear ditches C58 and C127, looking northwest (top)

Section of curvilinear ditch C127, looking east (upper and lower centre)

Animal skull in fill of curvilinear ditch C127 (bottom)

natural clayey silt present along the whole western internal side of the ditch. Overlying this was a compact grey clay fill (C66) that was present from the west to the northwest, again just along the internal side of the ditch. Both fills were largely sterile.

To the southeast the later ditch (C58) appeared to reuse the terminus of the earlier ditch (C127). The connection between the ditches was unclear as a band of hard bedrock was present at this point and the base of the ditches rose up over this almost to ground level. The terminus was given a separate number (C438), however almost certainly relates to both phases of curvilinear ditch. Two fills were identified within the terminus. The initial fill of the terminus (C439) was a layer of redeposited natural along the external southern side. This was overlaid by the main fill at the terminus (C440), which may be a more compact and stonier variation of the main fill (C59) of the later curvilinear ditch (C58). The terminus was in the form of an oval pit, being deeper than the ditches to the west. The terminus ended c. 1.75m from the edge of the ringfort ditch, possibly providing access to the space enclosed by the curvilinear ditches from the south.

Another curvilinear ditch (C129) was identified at the southern end of the annex. This ditch was heavily truncated by later ditches running along similar alignments. It terminated to the west, and ran to the east-southeast, being truncated along its southern side by the later phase of the western inner annex ditch (C97), before turning to the north and being truncated along its eastern side by ditch C309. Both ditches truncating the curvilinear ditch are contemporary and they may have been re-workings of this earlier ditch. It is possible that the curvilinear ditch is related to the earlier line of the inner annex ditch (C88), though a relationship between these ditches was not established. The curvilinear ditch truncated the kiln (C99) within the earlier phase of the inner annex ditch (C88). The ditch had a single fill with a number of larger stones at the western end. At the western terminus of the ditch a large stone with rounded edges measuring 300mm by 300mm by 150mm was uncovered with three pecked cup-marks. This has been kept for analysis and may



Section of ditch C58, looking south (top)

Animal skull in northern end of ditch C58, looking east (centre)

relate to an earlier phase of prehistoric activity on the site.

Kiln

An east-west orientated kiln (C410) was identified truncating the upper fill (C128) of the earlier curvilinear ditch (C127). The western end of the kiln partially truncated the ditch while the remainder of the kiln was cut into bedrock. The kiln was key-hole shaped in plan, widening to the west where the firing chamber was located. In situ burning was noted on the base of the firing chamber, which was deeper than the eastern end of the kiln. The probable flue was located at the eastern end of the kiln, however a small patch of in situ burning was noted at this end also. There were four fills recorded within the kiln. Two basal fills were present, one to the west at the base of the firing chamber (C412) and the other to the east at the base of the pos-

sible flue (C411). Both were thin layers with frequent charcoal and ash with burnt bone and charred seeds present and may well have been concentrations of the same fill along the base of the kiln relating to its final use. Overlying this was a backfilling event (C413), which filled the majority of the kiln and contained occasional animal bone including a partially complete animal skull. The upper fill (C414) was a thin layer of charcoal localised in the east and south-east of the kiln. This may relate to kiln waste accumulating over the largely backfilled kiln, or to a later phase of reuse, the majority of which has been truncated away.

Structure 2

At the southern end of the annex a shallow curvilinear slot trench (C277) was uncovered. It survived in part of the site where a band of sandy and clayey subsoil was present, possibly as the softer ground allowed the slot trench to be dug deeper at this point. This shallowed out to the northwest 1.25m from the edge of the later curvilinear ditch (C58) at a seam of natural bedrock. To the west it shallowed out before the edge of ditch C129. It is possible that the slot trench relates to a semi-circular structure, possibly a windbreak, though it is also possible that the slot trench originally formed a complete circuit and relates to a structure with a minimum diameter of 4.48m. If this were the case it must have pre- or post-dated the curvilinear ditches (C58 and C127) to the north and the ditches to the east (C129 and C309) as these lie in the path of the projected circuit, however it was not possible to identify the sequence of these features due to modern truncation. The slot trench had a single stake-hole (C281) along the base 1.8m from the eastern end. The stake-hole was oval in plan and partially rock cut. The fill of the stake-hole (C282) was relatively sterile and was overlaid by the fill (C278) of the slot trench. The fill of the slot trench was largely silt, suggesting it had been allowed to silt up over time after abandonment. Occasional charcoal flecks were apparent throughout, with a concentration of charcoal and charred seeds recorded to the south in the upper part of the fill. The slot trench lies directly northeast of the kiln (C99) within the inner annex ditch and it is possible it is related.



Section of kiln C410, looking south (top)

Mid-excavation view of Structure 2, looking northeast (middle)

Aerial view of western inner annex showing curvilinear ditches C58 and C127 to left and Structure 2 to right, looking west (bottom)

Other slot trenches

A second linear slot trench (C143) was recorded to the east of Structure 2 running north-south. It ran from the western edge of the ringfort ditch, which it partially truncated, and was associated with a stake-hole (C45) to the north. The stake-hole was cut into the primary fill of the

ringfort (C27) and had a single fill (C46). Another stake-hole (C28) further to the north also cut into the basal fill of the ringfort ditch and may be related to the fence-line represented by the slot trench. The slot trench (C143) truncated the upper fill of the ringfort (C61) to the north and ran to the junction of the curvilinear ditches (C58 and C127) to the south. It was rock-cut and very steep-sided and narrow. It is possible it represents a fence line or windbreak. The junction to the south was difficult to interpret as a vein of hard bedrock had necessitated a rise in the base level of the ditches, and a modern drain (C553) truncated the upper levels of the intersection. Slot trench C143 truncated the two curvilinear ditches (C58 and C127) and ditch C309. The southern end of the slot trench became imperceptible, though it did not continue beyond the northern edge of the inner annex ditch. Three fills were recorded within the slot trench, with the basal fill (C145) being more prevalent to the north. This was overlaid by the main upper fill (C144), which was present throughout the feature. The localised uppermost fill, a charcoal-rich silt (C443), was only identified near the junction with the curvilinear ditches.

A third slot trench (C432) was relatively shallow and lay to the northeast of Structure 2. It petered out to the south and terminated to the north at the junction with the curvilinear ditches (C58 and C127) and the north-south slot trench (C143). It was found to post-date these features and was truncated by the modern drain disturbance (C553). The function of the feature was unclear, it may have served as a drainage gully, though could also be the deepest surviving element of a structural slot trench for a feature that has largely been lost during the levelling activity on the site in the 19th and 20th centuries.

Pits and postholes

At the western end of the early eastern annex ditch (C159), a linear pit (C231) was identified running along and partially truncating the external side of the ditch. The pit was also rock-cut and mirrored the curvature of the annex ditch (C159) to the north suggesting it was related, possibly a partial re-cutting of the western end of the ditch at the junction with the

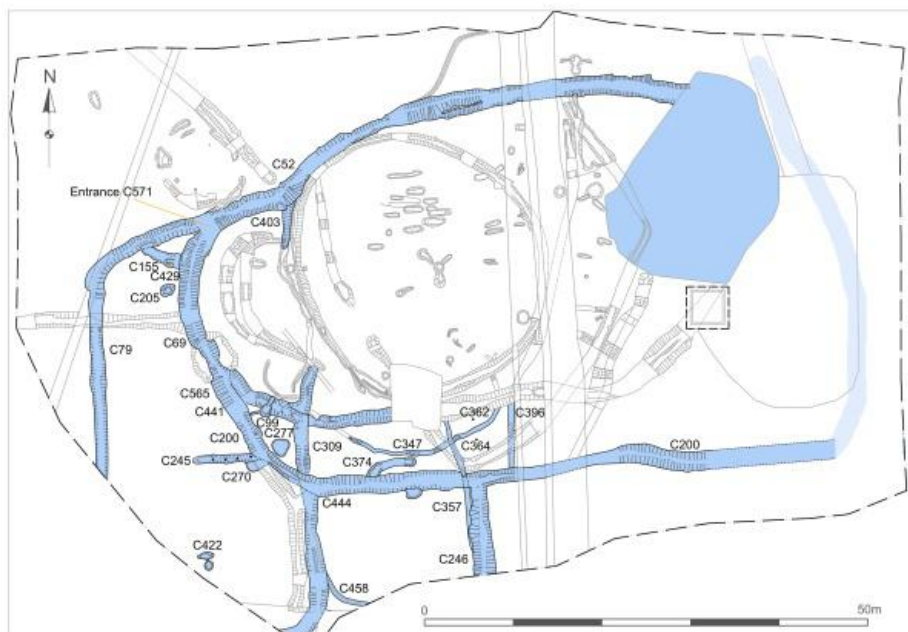
ringfort ditch itself, though this cannot be said with certainty due to scarping above this point. The pit was orientated northwest-southeast and the base and sides varied in form due to being rock cut. A posthole (C233) was located along the northwest side of the pit near the southeast terminus. The posthole was steep-sided and had an uneven broken bedrock base. It is likely that the posthole predates the pit as a second posthole (C237) was identified in the base of the ringfort ditch itself to the east and may be associated. The posthole was filled with broken stone in a grey clay matrix with charcoal flecking and occasional animal bone. The fill of the pit (C232) was moderately compact and contained inclusions of bone and charcoal, likely to derive from occupational waste.

Features in the outer annex to the west and south

A number of features were recorded in the area external to the line of the inner annex ditch to the west and south. Six ditches, three pits, four kilns, two gullies and two postholes were recorded in this part of the site.

Ditches

The northernmost of the ditches in this part of the site was a shallow, slightly curved ditch (C155) that ran between the inner western annex ditch (C67) and the northern end of the outer western annex (C79) ditch. It sloped down slightly to the east, towards the deeper ditch C67. The ditch was truncated by the re-cut of the inner annex ditch (C69) suggesting it had gone out of use by this time. The ditch was contemporary with the outer annex ditch (C79), with the only fill of the ditch (C156) being almost identical to the upper fill (C81) of the outer annex ditch. The ditch partially truncated the northern side of a pit (C429). Traces of burning were recorded along the southern side of the ditch, however this is likely to relate to the upper fill of the pit. The pit (C429) was oval in plan and had two fills. The basal fill (C431) was relatively sterile with occasional stones, and possibly formed during the use of the pit. The upper fill (C430) was siltier and contained occasional charcoal and animal bone fragments and flecks of burnt clay. The purpose of these two



Plan of features within the outer annex to the west and south

features is unclear. The pit may have been used for the occasional dumping of waste, though there wasn't a particularly high concentration of bone or charcoal to suggest an intentional rubbish pit. The later ditch clearly ran between and connected to the inner and outer annex ditches. The area enclosed by the annex ditches to the north of the ditch is very small and seems unlikely to have been a particularly useful land division, though it may have served to keep people or animals away from the junction of the two annex ditches.



Post-excitation view of ditch C155, looking southeast (top)

Working shot of ditch C245, looking east (bottom)

To the southwest of the site an east-west oriented ditch (C245) was identified. This ditch related to the division of space in the outer western annex. It ran towards the ditch C359 and is probably contemporary with this ditch, however the junction of the two ditches was truncated by a probable kiln (C270). Three postholes and a post socket were identified along the ditch and suggest that a fence line ran along the ditch. The ditch stepped up slightly 2.5m from the eastern end and the base continued to rise to the western end where it petered out, though may well have continued on to the outer western annex ditch (C79) originally. The fill of the ditch (C563) overlay the fill of the eastern posthole and filled the other postholes. The easternmost posthole (C260) had a single fill (C261), which contained a number of larger

stones, possibly packing stones. A post socket (C566) was located 1m to the west along the northern side of the ditch, formed by arc of four stones surrounding the post socket. A further 0.9m to the west another shallow posthole (C567) was recorded at the lower edge of the step in the base of the ditch. A further 0.9m to the west a fourth posthole (C568) was recorded. It is possible the ditch represents a slot trench created for the erection of a fence dividing up the fields in the outer annex.

To the east of this a north-south orientated ditch (C309) was uncovered. This terminated to the north within the western inner annex and continued to the south running parallel to the southern end of ditch C359. The northern end of the ditch was found to truncate ditch C129 within the inner annex. It also truncated the gully (C347) associated with the ringfort entrance further to the east, indicating this ditch was inserted after this phase of the ringfort entrance had gone out of use. The ditch was truncated by the Phase 4 annex ditch (C200), by a kiln (C444), and by modern drain disturbance (C553) to the north, which truncated the intersection of the ditch with the two consecutive curvilinear ditches (C58 and C127) within the inner annex. It was contemporary with the latest phase of the western inner annex ditch (C97). Towards the southern end the ditch split in two with a smaller branch (C458) splitting from the main ditch and running slightly further to the east-southeast. The ditch was truncated by the latest phase of the outer western annex ditch (C367) to the south, and continued beyond the limit of the site. The fill (C459) of the ditch branching off to the southeast was very similar to the upper fill of the main ditch, suggesting this may have been a later redirection of the ditch. The relationship between the branch to the southeast (C458) and the outer annex ditch (C367) was not established due to modern disturbance. Three fills were recorded within ditch C309. The two lower fills were more prevalent to the south with only the upper fill present at the northern end of the ditch. The basal fill (C391) was a water-laid silt with inclusions of animal bone including the upper portion of a ram skull. The secondary fill was a darker grey silt, also a water-laid deposit. The upper fill (C310) was present throughout the ditch and



Post-excavation view of ditch C309 to left, looking south (top)

Section of ditches C309 and C458 branching to south, looking south (middle)

Aerial view of ditch C309 running along side ditch C359, looking north (bottom)

contained inclusions of struck flint, iron wire and possibly worked bone, as well as a shard of glass that is likely to be intrusive. The fills of the ditch suggest the northern end of the ditch was well drained while standing water may have been present within the ditch to the south. This was apparent during the excavation also, with

the ditches in the centre of the site draining better than those to the south and east, possibly due to the underlying natural.

To the west of this ditch and south of the ringfort a short section of ditch (C374) was uncovered. This ditch was contemporary with the ditch C200. It ran parallel to the north of the ditch for c. 4m before curving at its western end to flow into ditch C200 at the same level as the upper fill of the ditch. The purpose of the ditch was unclear, though it may have served to offer additional drainage at the southern end of the newly widened inner annex. It had a single fill (C375), which was identical to the upper fill (C372) of ditch C200 to the south.

Further to the east another ditch (C246) contemporary with ditch C200 was identified. This ran from the southern side of the ditch and ran to the southern limit of excavation. Later monitoring further south of this revealed that the area to the south of the site had been severely truncated. This may have occurred during the laying of a large water main further to the south, or relate to the large modern drainage pit (C249), which truncated the upper level of the ditch. This truncation removed the connection between the ditch and the outer annex ditch (C367) to the south. It is likely the ditch represents another division within the annexed space to the south of the ringfort. In the centre of the northern end of the ditch a posthole (C389) was recorded in line with the southern side of ditch C200. This may relate to water management within the ditches. The fills of both ditches in the vicinity of the junction of the ditches were very similar. The basal fill (C247) of ditch C246 was a silty clay marl and was the same as the basal fill (C371) of ditch C200. It was present along the full length of ditch C246 and relates to standing water within the ditches at this point, with the ditch slowly silting up over time. This fill was also present within the posthole (C389), suggesting the post had been removed when the feature was abandoned. The upper fill (C248) of the ditch was similar to the upper fill (C269) within ditch C200. It was also a water-laid silt deposit, and was deeper to the north in line with the annex ditch, suggesting the annex ditch had remained open and in use after ditch C246 was abandoned. The fills in this



Mid-excitation view of terminus of ditch C374 to left and gully C347 to right. Ditch C374 joins with ditch C200 in the top left, looking west (top)

Mid-excitation view of ditch C246 with modern drainage pit C249 to right, looking north (bottom)

part of the site suggest that there were drainage issues here. These may have continued until recent times, as suggested by the large drainage management pit (C249), which truncated the ditch. It is possible that this slightly lower-lying area to the south of the ringfort was somewhat marshy, perhaps with a small spring, and may have been difficult to maintain and manage. This may be the reason the earlier inner annex ditch did not extend further to the south to enclose this land.

A final ditch (C396) was identified further to the west of the field boundary (C180). This ditch was orientated north-northeast to south-southwest and was truncated by the burial enclosure ditch (C344) and ditch C200. It sloped down to the north into the inner annex ditch, being truncated by the re-cut of the ditch (C162) and

contemporary with the earlier phase (C159) of the annex ditch. This ditch was in the same alignment as the ditches (C262, C520, C522 and C524) within the eastern annex and is likely to relate to the same phase of activity (Phase 2), possibly serving as a land division to the south of the inner annex ditch. It may also represent the western side of an avenue leading to the ringfort from the south, with gully C357 representing the opposing side. It was truncated by the modern drainage pit (C249) at the southern end. The base of the ditch had risen significantly at its southern end, rising by 0.33m over a 6m distance, and it is possible that it also served to manage the water in the marshy area to the south of the inner annex ditch at the point. Three fills were recorded within the ditch, with the basal fill (C397) present in the deeper section of the ditch to the north representing a water-laid deposit. It was overlaid by a secondary fill (C398), which was also a water-laid deposit, and again present only in the northern end of the ditch. The upper fill (C399) was present along the full length of the ditch and relates to the final silting up of the ditch after the deeper northern end had already silted up.

Kilns

There were four kilns identified in this part of the site. The most westerly (C422) was located to the southwest, east of the outer annex ditch (C79) and south of ditch C245, placing the kiln within the southwestern field associated with the ringfort. It was the only feature identified in this part of the site. The kiln had been truncated during stripping due to the soft ground above and poor weather conditions, however it appears to have been a figure-of-eight shaped kiln orientated northwest-southeast. The firing chamber was located to the northwest and was damaged by a wheel rut. A short flue connected it to the drying chamber to the southeast. There was no surviving sign of a flue leading in to the firing chamber of the kiln. Four fills were recorded within the kiln. The basal fill (C425) was recorded only in the drying chamber and contained only occasional charcoal flecking, which may indicate the kiln had been cleaned out prior to abandonment. This was overlaid by a layer (C424) with frequent charcoal and fire-cracked stone, again only present within the drying chamber. The upper fill within the drying cham-



Section of ditch C396 to left truncated by burial enclosure ditch C344, looking east (top)

Post-excitation view of kiln C422, looking south (bottom)

ber (C423) was a compact clay with frequent charcoal flecking, charred seeds and burnt bone. This was in turn overlaid by the upper fill of the kiln (C428), a disturbed layer that filled the firing chamber and part of the flue and overlay the upper fill of the drying chamber. This is likely to be a mix of the fills within the firing chamber caused by the wheel rut running across this end of the feature.

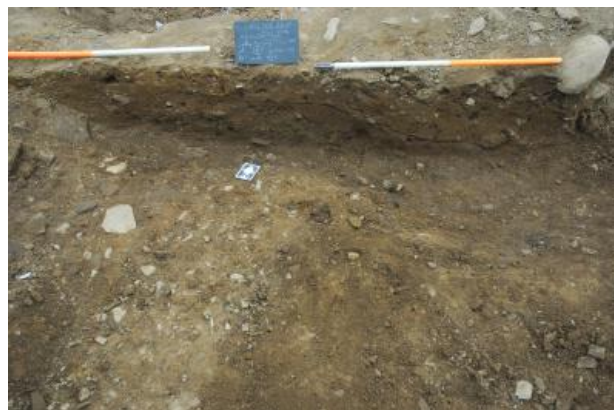
Kiln C270 was recorded truncating the junction of ditch C245 and ditch C359. The western side of the kiln was cut into natural whilst the eastern side was cut into the two backfilled ditches (C245 and C359). The softer fills on this side of the kiln appears to have necessitated the construction of a partial stone lining (C332) along the eastern side of the kiln, with this side subsequently being truncated by ditch C200. The

kiln appears to have been keyhole-shaped with a short flue to the southeast defined by the stone lining (C332) and cut into the backfill of ditch C359. Two fills survived within the kiln with the basal fill (C271) relating to the final use of the kiln, with inclusions of charcoal, charred seeds and metalworking bloom. The presence of metalworking residue within the kiln may suggest these features served more than one function and may have served as impromptu sites for small-scale metalworking activities. The upper fill of the kiln (C327) appeared to relate to the intentional backfilling of the kiln. The kiln appears to have been used after ditch C359, though it is possible that a bank associated with this ditch may have survived to offer shelter for the kiln.

Kiln (C444) was identified at the junction of ditch C309 and ditch C200 and was heavily truncated. The kiln was cut into the fill (C310) of the north-south running ditch (C309) as well as the earlier ditch C359 to the west. It was orientated east-west with the northern and eastern sides of the kiln truncated by the ditch (C200) related to the widening of the inner annex to the south. The firing chamber appeared to be to the east with a flue to the west, though the shape and layout of the kiln was difficult to identify due to the truncation. Four fills were identified within the kiln. The basal fill (C445) was a layer of fire-reddened clay and charcoal along the entire base of the feature, being deeper to the west within the probable flue, and is likely to relate to a firing of the kiln. No seeds were noted within this fill, however possible hammer-scale was present, which may lead to the suggestion that this feature was involved in metalworking rather than cereal processing. A secondary deposit of clay (C446) overlay the basal fill and may relate to a period of disuse, or a dump of material to douse the kiln. This was overlaid by another layer of burnt clay and charcoal (C447) associated with a later firing of the kiln, which was only noted at the eastern end of the kiln. The upper fill of the kiln (C448) was a relatively loose deposit with inclusions of frequent unsorted stone. This is an intentional backfilling of the kiln. It is possible that the stones may originally have been associated with the kiln, possibly forming part of a superstructure, however none were in situ.

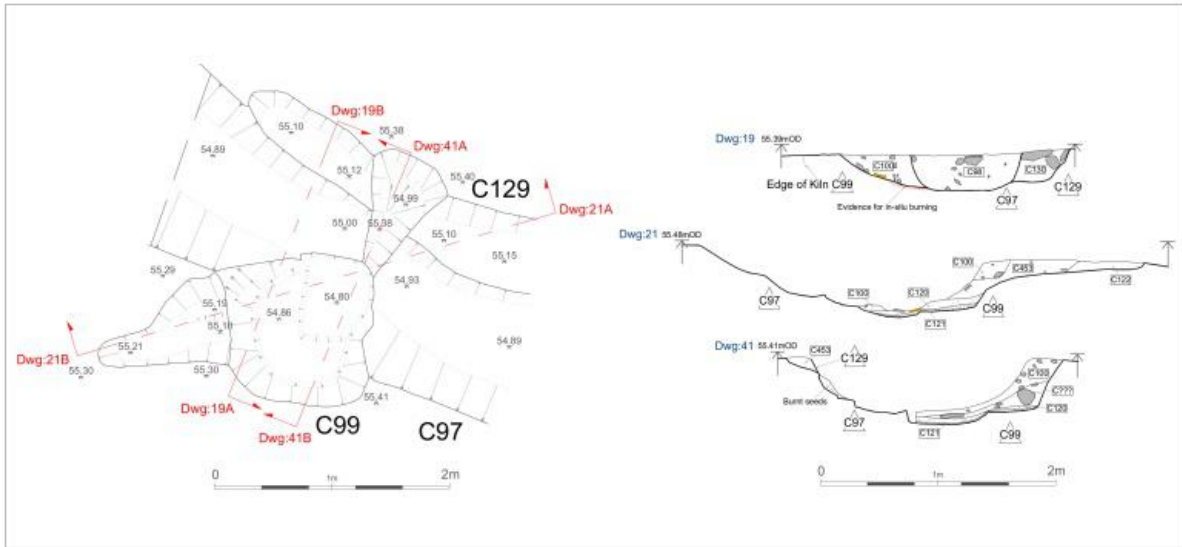


Post-excavation view of kiln C270 with partial stone lining of flue cut into ditch C359 in section, looking southeast (top)



Section of kiln C444 cutting ditch C359, looking northwest (bottom)

Kiln C99 was located to the north within the inner annex ditch. It is likely to relate to the earlier phase of the inner annex ditch (C88) and was truncated by the later re-cutting of the ditch (C97). It was also truncated by the curvilinear ditch running along the northern side of the annex ditch and curving in to the inner western annex (C129). The kiln was somewhat unusual in shape. An east-west oriented flue led down to the firing chamber, which was cut into the southern side and base of the annex ditch. From the northern side of the firing chamber a narrow rock-cut funnel led up the northern side of the ditch, possibly suggesting the drying chamber of the kiln was at ground level within the western inner annex. Interestingly this is the location of Structure 2 (C277) and it is possible this structure was related to the kiln. Charred



seeds were also noted in the fill of the slot trench of the structure. It is also possible that the funnel to the north was a second flue for the kiln, and that the drying chamber was positioned over the kiln, however the funnel would appear to be too steep to have served this purpose. Six fills were recorded within the kiln. The basal fill (C121) was a thin layer of charcoal and charred seeds at the base of the firing chamber, and related to a firing of the kiln. It was overlaid by a layer of ash, burnt and unburnt bone, charred seeds, and charcoal chunks (C120), possibly the fuel from the final firing of the kiln. A possibly worked animal bone was retrieved from this fill. This was overlaid by a silt deposit (C119), likely to relate to the abandonment of the feature. A separate fill (C122) was identified below the silting up phase within the flue to the west indicating it had been backfilled prior to the silting up of the kiln. The upper fill of the kiln (C100) was a mixed backfill representing an intentional backfilling of the feature. It sloped into the kiln from southwest to northeast, being deeper to the northeast, suggesting the kiln was backfilled from the southwest. It was not present within the flue to the southwest, which had already been filled by this time. The fill (C109) of the funnel/ flue to the north of the firing chamber was a clayey silt with charred seeds and charcoal inclusions. It was possibly related to the silting up phase (C119) within the main body of the kiln, however the relationship was obscured by the truncation of the curvilinear

Plan and sections of kiln C99 (top)

Section of kiln C99, looking southeast (middle)

Post-excavation view of kiln C99, looking southeast (bottom)



ear ditch (C129) and the re-cut of the inner annex ditch (C97).

Shallow pits

Two broad shallow pits were identified within this part of the site. To the southwest of the ringfort a broad shallow pit (C277) was identified to the northeast of ditch C359. This pit was sub-circular and was located to the south of kiln C99 and east of kiln C270. A metallised surface (C257) was uncovered lining the base of the pit forming a level surface. It was filled with a loose silty clay (C256), which was also the secondary fill of ditch C359 to the west of the pit indicating these two features were in use at the same time. The shallow pit appeared to be creating a relatively clean work surface, perhaps associated with the nearby kilns, such as for threshing.

To the west of the ringfort another sub-circular pit (C205) was identified towards the northern end of the outer western annex. The pit had a single fill (C206) and some stones were noted on the base. While little of interest was noted regarding this pit, the similarity with the other broad shallow pit was noted and it is possible this pit served a similar function. A third broad shallow pit (544) was recorded in the eastern annex of the ringfort.

Gullies

Two steep-sided gullies were recorded to the south of the ringfort. The earlier gully (C347) was associated with the cobbled entrance to the ringfort and defined the eastern side of the entrance. It ran to the southeast for c. 4m before turning to run to the southwest for c. 13m and then curving to the west and northwest for an additional c. 11m. The gully petered out to the south of ditch C97, but was picked up again on the northern side of the ditch, where it was truncated by ditch C309. It was not identified further to the west of this point, though this is likely to be due to truncation. The gully was truncated by the annex ditches (C97, C159 and C162), the later gully (C357), and then burial enclosure ditch (C344), implying it relates to an earlier phase (Phase 1) of the ringfort layout. It is possible that it defined the southern side of a path leading to the ringfort entrance from the west. It may also have led to the structure (Structure 2) in the western annex. The gully and the



Section of pit C277 to left with ditch C359 to right, looking southeast (top)



Post-excavation view of pit C277 with metallising C257 visible on the base of the pit, looking east (bottom)

cobbled entrance (C450) both truncated an earlier phase of the ringfort ditch (C325). The gully had two fills. The basal fill (C378) was present in the deeper section of the gully to the west of the burial enclosure ditch and may represent an initial localised silting up phase. The main fill of the gully (C348) was a compact silt and related to the silting up of the feature. Charcoal flecking was present throughout the fill though became denser to the east, closer to the ringfort entrance.

The later gully (C357) ran north-northwest to east-southeast. It was truncated by the re-cut of the inner annex ditch (C162), the burial enclosure ditch (C344) and by ditches C200 and C246. It sloped down to the south. The relationship with the earlier inner annex ditch (C159) and the ringfort ditch to the north was not estab-

lished. The gully had a single fill (C358), which was a sorted silt deposit indicating the gully had silted up over time. The purpose of this gully was not established. It may have marked a land division in the southern annex, or like the earlier gully (C347), it may have marked the side of a path leading towards the later paved ringfort entrance. It is interesting that when viewed with the ditch to the east (C396) the gully forms a funnel leading towards the entrance of the ringfort from the south. Ditch C396 does not closely resemble the gully in form, and was sloping in the opposite direction. It should also be noted that the land to the south of the ringfort was quite marshy, which may not have been advantageous as the main ringfort entrance, though drainage solutions may have been put in place and (temporarily at least) successful enough to provide a route through to the ringfort from the south

Postholes

Two postholes were identified to the south of the ringfort on either side of the earlier gully (C347). The northern posthole (C362) was located 0.83m north of the gully and south of the inner annex ditch (C162). It was circular in plan and packing stones (C395) within the posthole indicated the post had been positioned in the southwestern side of the posthole and had measured 150mm in diameter. The upper fill of the posthole (C363) filled the post socket and overlay the upper sides of the packing stones and was consistent with the posthole filling in after the removal of the post.

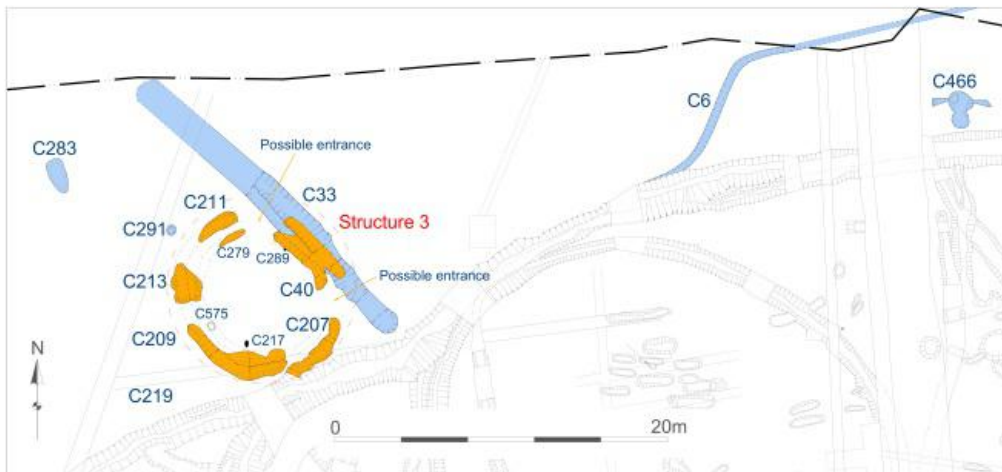
A second posthole (C364) was located 0.85m to the south of the gully with the two postholes being in a northwest-southeast alignment. The top of the posthole had been truncated by scarping so appeared shallower and less substantial than the first, however the level on the base of both postholes was identical. The fill (C365) of the southern posthole was identical to the northern one, though no packing stones were present. The positioning of these postholes was interesting, given their near equidistance from the gully associated with the entrance. It is possible they relate to a structure along the path leading to the ringfort entrance, perhaps a barrier of some sort.



Mid-excavation view of gully C347 with pothole C362 to left and pothole C364 to right, looking east (top)

Mid-excavation view of gully C357 with ditch C246 to right, looking north (middle)

View of packing stones C395 within posthole C362, looking east (bottom)



Plan of features to north (top)

View of double slot trench C40 cutting ditch C33 in two sections, looking northwest (bottom)

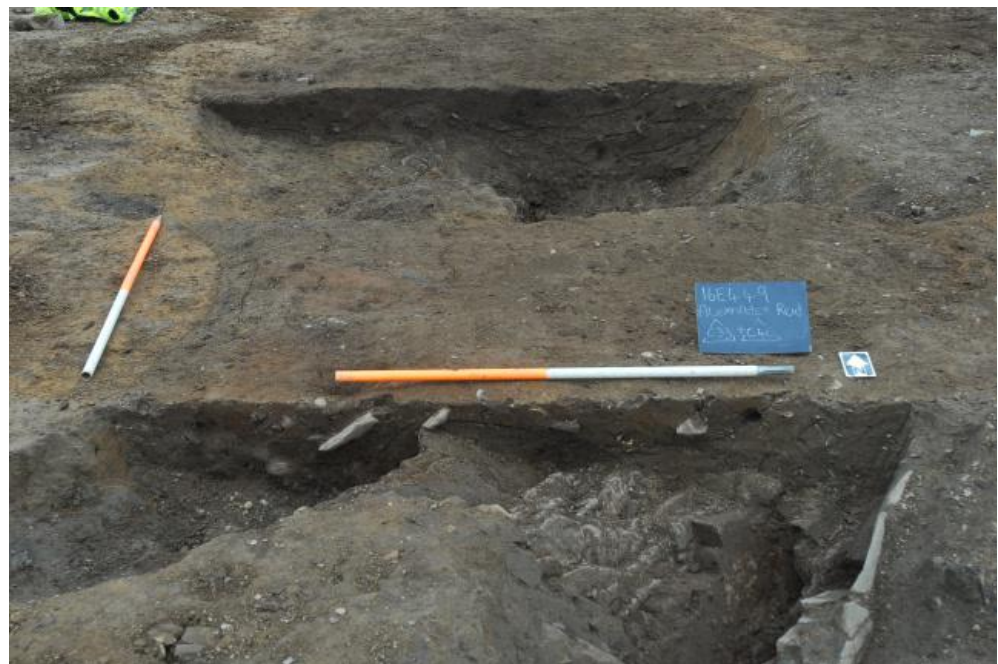
Unenclosed features to the north

A number of features were identified in the unenclosed space to the north of the site. These included a complex of four curvilinear ditches to the north of the western annexes with an associated pit. Another three pits, a shallow curvilinear feature and a posthole were all closely associated with these features, which were all located to the west of a northwest-southeast running ditch. Near the northwest corner of the site an isolated pit was also uncovered, while to the north of the eastern annex a kiln and a shallow ditch were recorded.

The ditch

The majority of the features identified to the north of the ringfort were located to the west of a northwest-southeast running ditch (C33), which appears to have been a land division associated with the ringfort. It ran towards, but did not connect with, the junction of the annex ditches and ringfort ditch, stopping 0.4m from the edge. While it is possible that this

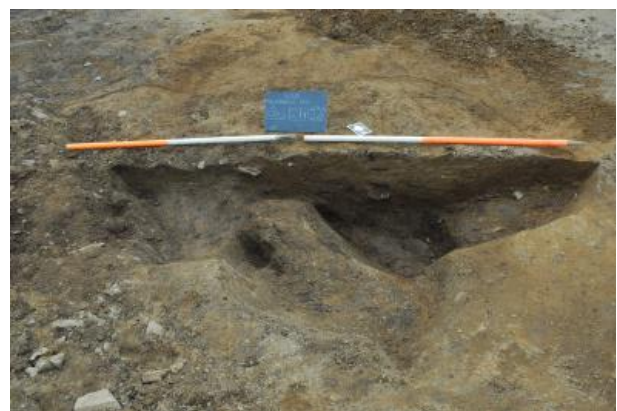
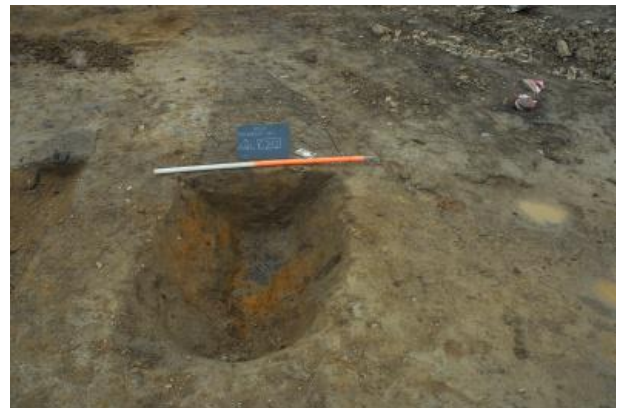
gap represents a bank that the ditch ran up to, the distance appears too narrow. Perhaps some other form of barrier was in place along this side of the ringfort, such as a hedgerow or a fence-line, though postholes for the latter were not noted. The natural in this part of the site was different to the bedrock outcrop present over much of Area D1, with the features here being cut into a band of yellowish brown gritty natural silty clay overlying the bedrock, situated between the small hillock that the ringfort was located on and another bedrock outcrop at the western end of the site. The ditch (C33) was cut through the subsoil and into the bedrock below. It was truncated by a modern sewer pipe to the northwest before rising at the western bedrock



outcrop and petering out. The ditch was truncated by a double curvilinear slot trench (C40) immediately to the west, with the curvilinear feature cutting across most of the ditch at its widest. At the northern end of the ditch a shallow shelf appeared to run alongside the ditch, which was filled with the upper fill (C226) of the ditch. The basal fill of the ditch (C43) was a water-laid silt deposit present at the base of the ditch and filling the uneven rock-cut base of the ditch. This was overlaid by a layer of silt with occasional charcoal flecking (C574) present in the central and southern end of the ditch, though this fill had petered out by the northern end of the ditch. The charcoal inclusions in this layer may relate to proximity to the ringfort and annex to the south. The upper fill of the ditch (C226) related to the final infilling of the ditch. As the features to the west of the ditch all appear to respect the line of the ditch, yet the easternmost of these (C40) truncates the back-filled ditch, it is possible that a bank defined the eastern side of the ditch and it was this feature that confined the features to the west rather than the ditch itself.

Structure 3

A possible structure was uncovered to the north of the western annex. Five curving slot trenches (C40, C207, C209, C211 and C279) was identified forming a possible double-walled sub-circular enclosure c. 7m in internal diameter. The internal diameter of the outer slot trench was c. 8.5m. A tree bole (C213) identified to the west had disturbed another section of slot trench. The eastern curvilinear slot trench (C40) was orientated northwest-southeast, curving to the south at the southern end. This was the most substantial, though least defined of the slot trenches, possibly due to it being partially cut into the backfilled ditch (C33) It formed the northeastern arc of the structure. The southern end is separated from ditch C33 and is a relatively narrow slot, however the feature runs directly alongside the ditch for much of its length with the fills widening over most of the ditch. The feature represents a double



Mid-excavation working shot showing the southeastern end of the outer slot trench of C40 cutting ditch C33, looking northwest (top)

Mid-excavation view of slot trench C211, looking southwest (upper middle)

Mid-excavation view of slot trenches C207 and C209 in background, with ditch C52 to left, looking west (lower middle)

Section of treebole truncating slot trench C213, looking east (bottom)

slot trench, which would explain the width of the spread over the ditch to the east. The eastern slot was cut into the infilled ditch and was not cut into natural at any point. Three fills were identified within slot trench C40, and were present within both slots indicating that they were infilled at the same time. The basal fill (C41) was a silt and contained frequent charcoal and burnt bone. It was overlaid by a reddened scorched clayey silt (C42), again with frequent charcoal and burnt bone. This did not appear to represent in situ burning, rather an infilling of scorched material from elsewhere. The upper fill (C34) contained less charcoal and burnt bone and represented the final infilling of the double slot trench.

To the northwest another two slot trenches were identified (C211 and C279). The outer slot trench (C211) was more substantial and had a clear terminus to the east. It tapered off and petered out to the west. The inner slot was shallower and less substantial but mirrored the arc of the outer slot and terminated at the same point to the east. It also petered out to the west. Both slots had a single fill each (C212 and C280), which were both similar in composition and are likely to have relate to the same infilling process.

The southwestern arc of the structure was again defined by two slot trenches (C209), however this was not recognised during the excavation due to truncation by a post-medieval furrow (C219), which ran along the same line as the inner slot trench towards the central part of the slot. The outer slot trench was more substantial to the east and had a defined terminus at that end. It tapered and petered out to the west. The inner slot trench was shallower and terminated in line with the eastern end of the outer slot. It was truncated by the furrow to the west but appears to peter out and was not noted beside the western end of the outer slot. The outer slot tapered and rose up at its western end. The eastern terminus of the outer slot trench did not align with the western end of the slot trench to the southeast (C207), though it is possible this is due to truncation by the post-medieval furrow (C219). Two fills were recorded within the outer slot trench, with the basal fill (C274) being a sandy silt present at the

deeper end of the slot trench to the east. The main upper fill (C210) related to the final infilling of the slot trench and was the same as the fill within the inner slot trench to the north.

The southeastern arc of the structure was defined by a single slot trench (C207), which was partially rock-cut. The western terminus of the slot trench was in close proximity to the northern edge of the annex ditch and it was initially thought that the latest re-cutting of the annex ditch (C52) partially cut the terminus of the slot trench. Upon further review of this the post-medieval furrow truncating this part of the site had disturbed the section at this point, however it is still possible that the annex ditch truncated the slot trench at this point. The base and sides of this slot trench was uneven in parts due to the underlying bedrock. The western terminus of the slot was out of alignment with the outer slot to the west (C209), perhaps indicating a slight kink in the side at this point. An inner slot trench was not noted along this section of the structure, though this is likely due to truncation rather than a slot being absent in this location. Three fills were recorded in this slot, with the basal fill (C273) being a stony silt present in the deeper section of the slot to the southeast. Overlying this was a charcoal-rich deposit also present in the deeper section of the slot trench. The upper fill (C208) was present along the entire length of the slot and was similar to the upper fill (C210) of the slot to the west (C209). An iron knife was retrieved from this fill.

To the west a feature (C213) was uncovered within the alignment of the four slot trenches. A number of root holes in the sides indicated the feature represents a tree bole, which might account for the irregular shape of the feature. The width of the feature is very similar to the distance between the external side of the outer slot trench and the internal edge of the inner slot trench to the north. The feature also lies directly in line with the arc of the slot trenches to the north and south. Two fills were recorded within the pit. The basal fill (C228) was a reddened scorched silt with frequent charcoal and occasional burnt bone, similar to the secondary fill (C42) of the slot trench to the east (C40) and the secondary fill (C272) of the slot

trench to the southeast (C207). The upper fill (C214) was similar to the fill of the slot trenches to the south. It is possible that this feature represents a disturbed section of slot trench, with the lower fill, which was deepest to the west, relating to the fill of the outer slot and the upper fill representing a disturbed fill of the tree bole, which combined the upper fill of the outer and inner slot trench. It is possible this is the remains of a tree bole planted on the western side of the structure.

The gaps between the sections of slot trench may not be intentional, though the gap between the slots trenches C211 and C40 may mark an entrance. It is clear that some level of segmentation was present in the construction of the slot trenches, as indicated by the two slots to the south not lining up perfectly.

Three features were uncovered within the structure. To the northwest a small posthole (C289) was recorded along the inner side of slot trench C40. The upper fill of the slot trench (C34) overlay the fill of the posthole and the slot may have truncated the post, however it is also possible that the upper fill had spread beyond the original edge of the slot trench. The posthole was very shallow and had a single charcoal-rich fill (C290). To the southwest an oval pit (C217) was identified to the north of slot trench C209. This pit also had a charcoal-rich fill and was very shallow. Possible in situ burning was noted on the base. The third feature was a patch of scorched earth (C575) to the west of this. This is likely to represent the base of a fire-pit or

hearth with the upper portions of the feature truncated away during previous levelling on the site.

Pits to northwest

Two pits were also recorded outside the structure to the northwest. The closest of these was a small circular pit (C291) c. 1.5m to the northwest of the structure near the edge of the western rock outcrop. The pit had a fill of fire-cracked stone and charcoal in a dark silt and ash matrix (C292). It is possible that pit was a fire-pit, though it may also have been a small metal-working pit.

Further to the northwest a northwest-southeast orientated linear pit (C283) was identified cut into the bedrock. It had uneven sides due to being rock cut. The pit had a clayey silt fill with inclusions of animal bone. The purpose of the pit was unclear, though it may have served as a refuse pit for the structure.

Curving ditch

To the north of the eastern annex a shallow ditch or gully (C6) was identified running from the northern edge of the ditch C2 to the northeast for 6m then turning to run to the east-northeast to the limit of excavation. This ditch was identified again during monitoring to the north of the site after the excavation and continued in an east-northeast direction until it met with the wetland area to the north of pit C509. It was truncated by the sewer trench (C507) and appears to enclose an additional space to the north of the eastern annex, possibly an additional shallow field boundary relating to the ringfort. The fill of the ditch (C7) was very similar to the upper fill (C3) of the annex ditch (C2).

Kiln

Within the space enclosed by ditch C6 a



Post-excitation view of kiln C466 with flue C488 to left and flue C501 to right, looking south

kiln (C466) was identified. The kiln lay 0.3m to the north of ditch C2. The kiln was figure-of-eight shaped in plan, orientated north-south. The firing chamber was located to the north and two flues were connected to it, one from the west (C501) and another from the east (C488). The flues were both sub-triangular in plan, splayed at the ends and narrowing as they neared the firing chamber. The bases of the flues were up to 190mm above the base of the firing chamber. They were not directly across from one another with the eastern flue (C488) being slightly further to the north.

The basal fill of the kiln within the firing chamber (C478) was a charcoal-rich clayey silt with charred seed inclusions that covered the entire base of the firing chamber and stretched into the northern end of the drying chamber. The basal fill at the southern end of the drying chamber (C485) was the same, though less charcoal was present as it was further from the firing chamber. This fill relates to a firing of the kiln. Overlying this a clay lining (C479) was identified lining the sides of the entire kiln. This lining was also used to narrow the connection between the two chambers of the kiln. No in situ burning of the lining was apparent. The next fill within the kiln (C467) appears to be a deliberate backfilling of the kiln. A number of large stones were uncovered within the fill that may be baffle stones associated with the kiln, though they were within the fill rather than on the base of the kiln. The upper fill (C468) represented the final infilling of the cut after its initial backfilling and

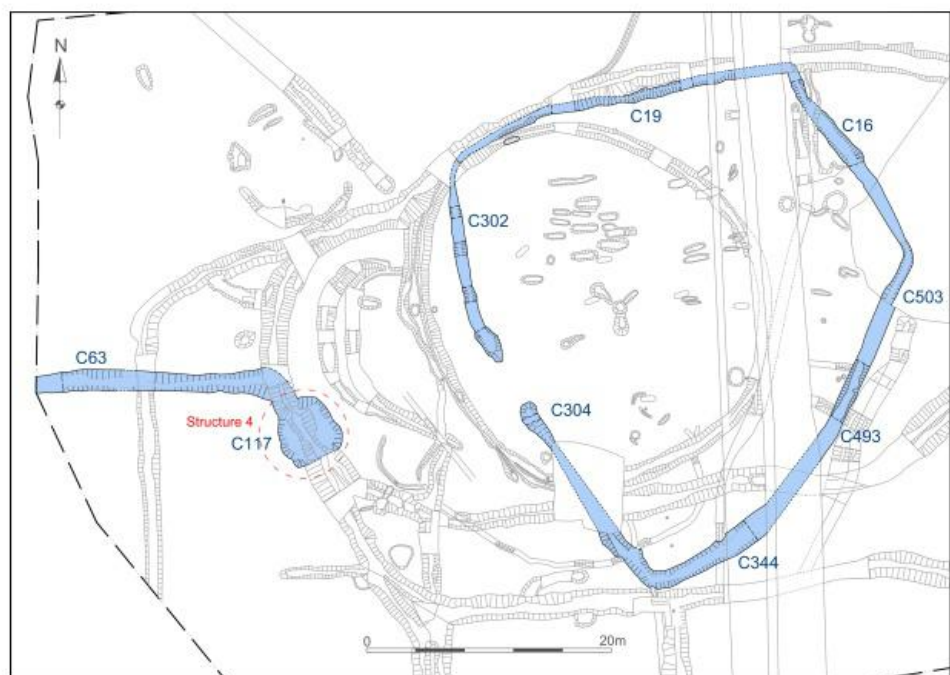
also filled the flue (C488) to the east. The western flue (C501) had a separate fill (C502), a compacted clay. It is possible that this flue was not used in the final firing of the kiln and had been blocked prior to its last use, while the eastern flue was used on the final firing of the kiln and was allowed to fill in along with the kiln post-abandonment.

Seventeenth century phase

Burial enclosure

The burial enclosure was sub-quadrilateral in shape with an entrance to the southwest. The area enclosure measured 37m (northwest-southeast) by 33m. The ditch was recorded under seven separate context numbers (C16, C19, C302, C304, C344, C493 and C503) relating to different sections of the ditch, and twenty fills were identified within the ditch. The unexcavated entrance measured 4m in width and was located roughly centrally along the southwestern side of the enclosure, lying slightly closure to the northern end of the enclosure.

The 17th century burial enclosure did not correspond to the early medieval enclosure(s) over which it was built. However, there were indications that some of the earlier enclosure ditches may have remained visible until the 17th cen-



Plan of features relating to the 17th century phase



ture. The northern side of the burial enclosure followed the line ditch C2, and the southern corner of the burial enclosure turned sharply just before ditch C200, possibly suggesting these were still surviving at this time.

To the north of the entrance the burial enclosure was formed by a relatively shallow, slightly curving ditch (C302), which was orientated north-northwest to south-southeast and ran to the edge of the junction of the ringfort (C4) and annex ditch (C2). It then turned sharply to the east to run west-southwest to east-southeast to form the northern side of the burial enclosure. This section was recorded under a different number (C19) and ran at a slight curve along the

Mid-excavation view of burial enclosure ditch C302 from terminus at entrance, looking northwest (top left)

Mid-excavation view of burial enclosure ditch C19 cutting ringfort ditch C4 and annex ditch C2, looking east (middle left)

Mid-excavation view of eastern corner of burial enclosure ditch C16/C503, looking southwest (bottom left)

Mid-excavation view of southern corner of burial enclosure ditch C344 with section through ditch C304 to top (middle right)

Aerial image of the site centred on the burial enclosure. The sharp corners to the south and west stand out clearly (bottom right)

inner side of and partially truncated ditch C2. The ditch took another relatively sharp turn to run to the southeast and form the northeastern side of the enclosure. This section was recorded under a different number (C16) and was relatively straight. The ditch took another relatively sharp turn to the southwest to form the southeastern side of the enclosure. This section was recorded under three context numbers (C344, C493 and C503) and was significantly more curved than the other sides of the enclosure. The ditch then returned in a sharp curve to run to the northwest and form the southern end of the southwestern side of the enclosure. This section was also recorded under different context numbers (C304 and C344) and ran relatively straight towards the entrance terminus.

The shape of the burial enclosure ditch varied slightly across the site, though these variations are likely to relate to differing levels of truncation and changes in the underlying subsoil and bedrock. In most places it was flat-bottomed with relatively steep sides and a U-shaped profile. The surviving portion of the ditch was narrower and shallower to the north, though this is more likely to represent the truncation seen in this part of the site as well as the rock-cut nature of the ditch in this area, and because the ditch was being cut across the trend in the natural rock outcrop. At the entrance to the southwest, the northern terminus gradually rose up to ground level and was slightly rounded. The southern terminus was more squared and

Plough coulter 16E449:494:1 recovered from burial enclosure ditch



steep-sided. The stretch of ditch to the south of the entrance was V-shaped in profile, again apparently due to it cutting diagonally across the trend in the underlying bedrock.

The burial enclosure ditch truncated features C2, C4, C347, C357, C396, C469 and C516 associated with the early medieval phases of the site. Its relationship with ditches C522 and C520 to the northeast could not be ascertained, though it clearly would have truncated these features. Its relationship with the inner annex ditch (C162) to the southeast had been truncated by the field boundary ditch (C180), the later avenue (C182) and associated drain (C178), and finally the hedgerow (C85). To the east it was truncated by the large drainage pit (C509). It was also truncated by modern services (C86 and C507) and by a large modern pit (C555) to the southwest.

Burial enclosure fills

Twenty fills were identified within the ditch. The fill of the ditch to the north of the entrance (C303) was a dark brown silty clay, which gave way to a dark greyish brown sandy silt (C20) along the northern side of the enclosure ditch. Both of these fills were loosely compacted and had frequent stone inclusions and occasional animal bone. A hone stone was retrieved from the fill (C303) in the section to the north of the entrance (C302). These sections of the burial enclosure ditch were positioned at the highest point of the rocky outcrop and as seen during the excavation, the underlying bedrock striations allowed for relatively good drainage in this part of the site. Unlike the fills to the east and south, which were water-laid deposits, these fills were not associated with natural silting and relate to an intentional infilling of the ditch.

To the east of the field boundary (C180) the burial enclosure ditch turned to the southeast and contained two fills. The basal fill (C482) was a compact mid-grey silty clay representing an initial phase of silting within the ditch. The upper fill (C17) was a dark grey silty clay of moderate compaction representing the back-filling of the ditch. East of the sewer pipe trench (C507) the basal fill was a compact dark grey clayey silt with occasional stones (C533). This was overlaid by two identified slumping

events (C532 and C542). A later slumping event (C530) was also evident to the south. All the slumping events were noted along the internal side of the ditch and may represent the slumping of an internal bank into the ditch. They consisted of orange and grey silty sand redeposited natural material. They were in turn overlaid by fills (C531 and C494) similar to the basal fill indicating similar silting processes within the ditch. An iron plough coulter was identified within fill C494 near the eastern corner of the ditch. It is unclear at present whether this is of 17th century date or relates to the re-deposition of an artefact from the early medieval phase of activity on the site within this later ditch.

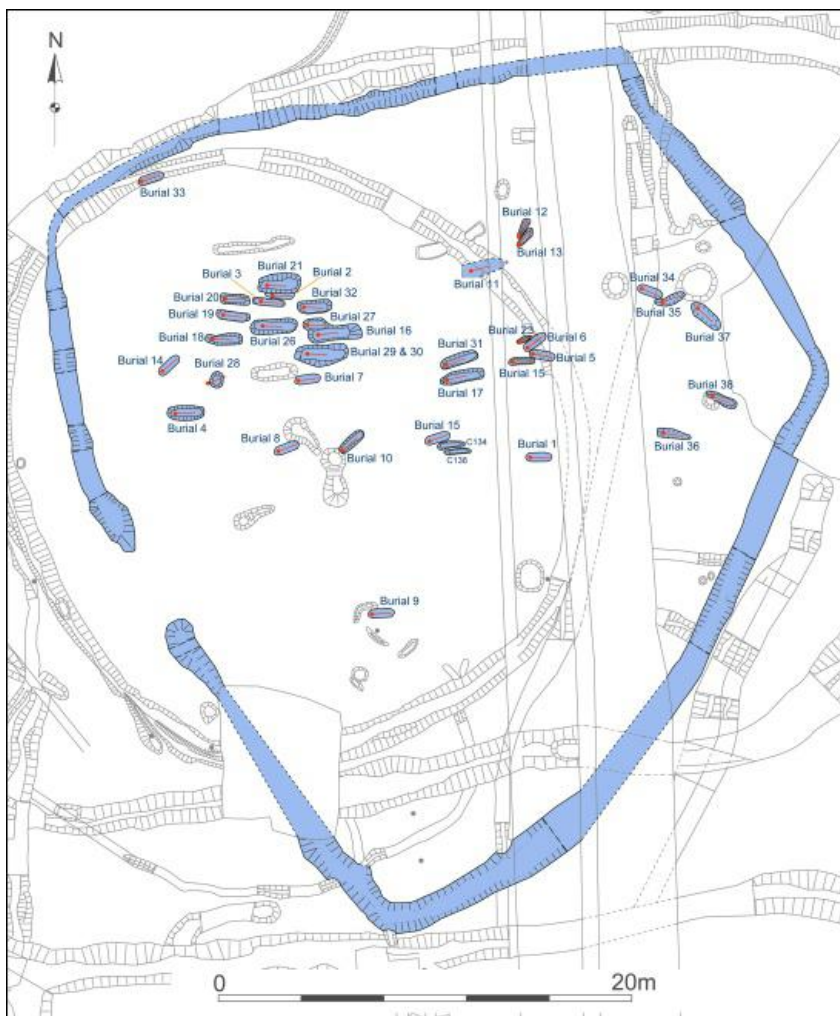
The three main fills of the ditch (C494, C531 and C533) derived from the same silting process and relate to the poorer drainage evident in this part of the site. They were water-laid deposits with occasional slumping (C530, C532 and C542) occurring along the internal side. Overlying the main upper fill (C494) to the south a

discrete deposit of ash and charcoal (C504) containing a sherd of early post-medieval pottery was identified at the base of the deposit. This is likely to represent a dump of redeposited material into the ditch following an initial period of silting.

At the southern end of the burial enclosure ditch a further five fills were recorded. The fills here were again indicative of poor drainage. The primary fill was a mottled grey silty clay with orange flecking (C361). This was present as a thin layer over the base to the east and as a layer along the side of the ditch to the west, suggesting that the fill had been truncated during ditch maintenance. It was present in the deeper southern section of the ditch and absent as the ditch moved up slope to the northwest suggesting it was a localised silting event. Overlying this was a mid-grey compact clayey silt (C346), which was present along the full length of this section of the ditch. A cow skull was identified at the base of this fill towards the western end of this section. A

localised slump of mottled beige sandy clay with iron panning (C388) overlay this along the external side of the ditch. This in turn was overlaid by a mid-grey silty clay (C387), again only present in the deeper eastern end of this section of the ditch. The upper fill (C345) was present along the entire section of the ditch and was a brownish grey sandy silt with a number of large stones present. An iron object was retrieved from this fill.

Four fills were recorded within the final section of the ditch to the south of the entrance and north of modern pit C555. The basal fill (C305) was a mottled brown silty clay and was overlaid by the secondary fill (C306), a gritty dark brown silty clay. The tertiary fill (C307) was a greyish brown silty clay. All three of these fills sloped in from the external side of the



ditch and may represent a slumping event. They were all moderately compact and stony, with the secondary fill being stonier. The upper fill of this section (C308) was a dark greyish brown silty clay of looser compaction that contained occasional larger stones as well as occasional animal bone. A possibly worked stone object was also retrieved from this fill. This appeared to be an intentional backfilling event within the ditch and resembled the fill of the ditch to the north of the entrance (C303).

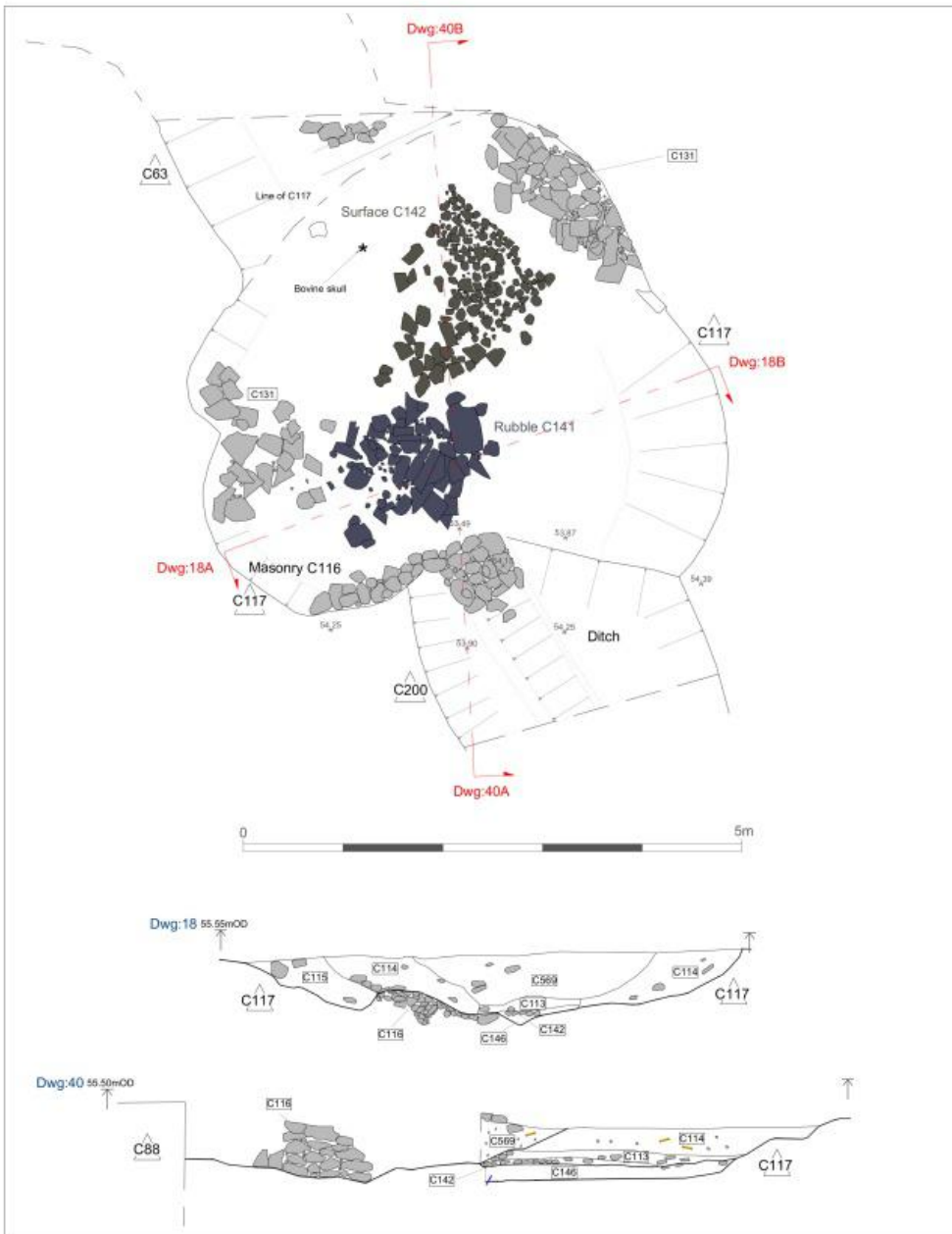
Burials

Thirty eight burials were uncovered during the excavation at Alexander Reid. They were all located within the burial enclosure, with the majority in the northern half of the enclosure. The main cluster of burials were also contained within the earlier ringfort, however five of the burials truncated the ringfort ditch and another seven burials were within the annex to the east.

The burials were predominantly shallow and had been heavily truncated by landscaping and agricultural activity on the site. The burial ground was found contain a mix of adults (both male and female), children and infants representing a small local community burial ground. A preliminary discussion of the burials is given in Appendix 7.

Structure 4

To the west of the burial enclosure a sunken structure (C116) was identified cut into the latest phase of the western inner annex ditch (C69 and C200). This structure clearly post-dated the ringfort phase of the site, and may be 17th century in date, broadly contemporary with the burial enclosure. The cut for the sunken structure (C117) truncated the backfilled annex ditch indicating that by the time of the





Mid-excavation view of Structure 4 with masonry C116 in foreground. A pile of stones (C141) can be seen overlying the fill in section, looking northwest (top)



Mid-excavation view of the fills overlying metallised floor C142, looking west (bottom)

construction the ditch was largely infilled. The cut was sub-oval in shape, expanding beyond the sides of the ditch to the east and west, and was orientated northwest-southeast. It had a sharp break of slope at the top and a gentler break of slope at the base, which was slightly concave. A separate cut (C147) for the structure floor was almost certainly contemporary. Some fill of the former ditch survived below the floor cut.

The structure consisted of a roughly rectangular drystone masonry construction to the south measuring 1.04m in length and 0.84m in width and survived to 0.7m in height. This masonry block was constructed of uncoursed angular stones of sandstone and limestone 0.3 x 0.35 x 0.3m in size and was 3-5 stones in height. It was located near the centre of the former ditch and protruded to the south of the line of the structure cut. A cow skull was built into the eastern face of the masonry construction 0.3m above the base. A possible grinding stone was also incorporated into the structure. The masonry construction was the widest and most substantial part of the structure to survive. It was constructed at the deepest point of the backfilled ditch and may have acted as a support wall along the southern side, preventing collapse of the softer fills of the ditch into the structure. A band of rounded sandstone blocks curved along the western side of the cut from the northeastern corner of the masonry construction. This row of stones was placed on a slight shelf above

the base of the structure and was poorly constructed. It was 1.4m in length and 0.4m in width. This is likely to represent an in situ wall base for the mud wall superstructure. Between the stones of the structure a dark brown silty sand (C148) flecked with charcoal was identified and may relate to the superstructure of the building, or to some form of informal mortaring of the masonry.

Sloping deposits of collapsed stones (C131) identified along the edges of the cut originally formed the base of the walls of the sunken structure. Collapsed deposits were identified to the north (C131; measuring 1.54m in length and 0.8m in width), east, and northeast (2.1m in length and 0.62m in width). The collapsed masonry comprised angular limestone and sandstone blocks, though some sub-rounded stones were also present. They were generally



Mid-excavation view of Structure 4 with inverted bovine skull visible within clay floor to west of metal surface C142, looking south (top)



Mid-excavation view of Structure 4 with section through floor material visible, looking southwest (bottom)

thinner than the stones forming the masonry pier to the south, ranging from 0.15-0.2m in thickness. In the northeast section two flat upright stones along the edge of the cut may have been in situ.

A rough floor surface (C142) of largely angular flat stones with some small rounded pebbles was present to the northeast. This was set into a slight step in the base of the structure, which was given a separate cut number (C147/C153). Initially this was thought to be remnants of the

annex ditch truncated by structure cut (C117), however the cut extends beyond line of the ditch to the west. The cut for the stone surface was relatively shallow to the east and cut into the bedrock below. It measured 2.3m in length north-south and 1.3-1.48m in width and was 0.18-0.2m in depth. A bedding (C146) of dark greyish brown sand was identified below the floor. The stone floor surface did not extend across the base of the entire structure and it would appear that the floor surface to the east and south was of earth (C154). A complete cow skull was buried upside down within the earthen floor at the same level as the stone surface 0.45m to the east. Two iron objects were found directly over the surface

Overlying the floor was a thin layer of silty sand (C113) that may relate to the use of, or initial phase of disuse of the structure. A further three fills were identified associated with the backfilling of the sunken structure. A discrete charcoal and bone-rich fill (C115) was present in the southwestern end of the structure overlying collapsed masonry to the west. Two degraded iron objects were uncovered within this fill. This was overlaid by a large backfilling event (C114), which was encountered throughout the structure, mainly around the edges, and overlay both earlier fills (C113 and C115). A possible bone point was retrieved from this fill. This fill may represent the collapse of the sod upper walls of the structure. The next backfilling event (C569) was located centrally within the structure, the sides having been infilled by the previous infilling event. Overlying this, a pile of stones (C141) roughly centrally within the structure was the final fill, and appears to be a dump of ex-situ stone, possibly originally parts of the walls of the structure. The stones were placed neatly in a sub-rectangular pile. An iron object was retrieved from amongst the stones. It is possible they were placed as a marker or set aside for later re-use and subsequently forgotten.



View of pathway C63 as it truncates the inner annex ditch to the north of Structure 4, looking north (top)

View along pathway C63 with disturbance from a sewer pipe visible in the centre, looking east (bottom)

Possible pathway

To the north of the structure, and cut to the same level as the floor, a linear cut (C63) was identified. This truncated the backfilled inner annex ditch (C69) to the north for a short distance before turning to run east-west and continued to the limit of excavation. It also truncated the outer annex ditch (C79).

The feature had relatively steep sides and a broad flat base. It was shallow at the western edge of the site and became gradually deeper to the east. As it approached the edge of the inner annex ditch the feature widened slightly and sloped down to the floor level of the structure (C116) was apparent. The feature may represent a sunken path leading to the entrance of the partially sunken structure (C116). This was a broad U-shaped feature with a flat base. It was 1.3m in width for much of its length, broaden-

ing to 2.3m as it approached Structure 4.

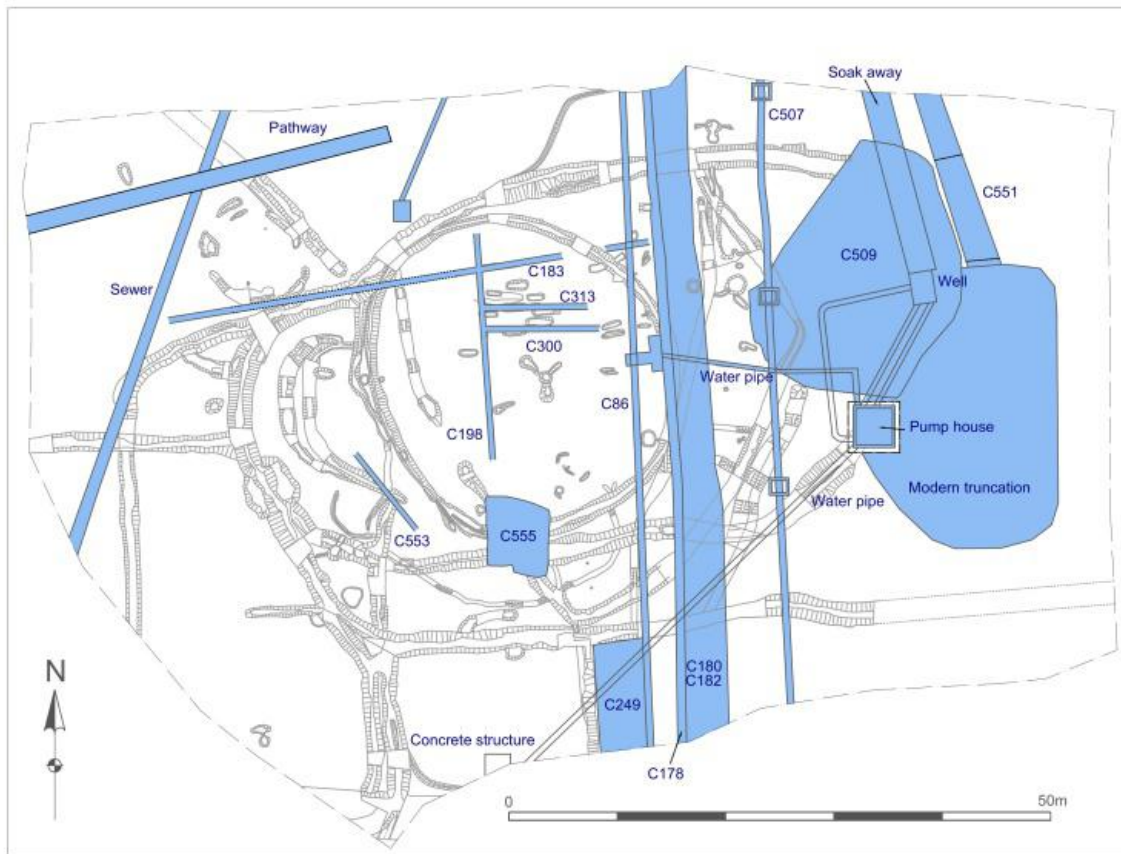
The ditch contained a single fill (C64) present along its entire length. The consistency of the fill, including in the deeper section to the east as it dropped down to the floor level of the structure, suggests the feature was infilled in one event.

Later post-medieval and early modern

Large pits

In the northeastern end of the site a large, relatively shallow pit (C509) was identified. This corresponds with the former wetland area within the site. The pit was largely filled with silts to the west becoming preserved organics to the east where organic preservation was possible due to the anaerobic conditions of the soil. The pit truncated the 17th century burial enclosure ditch. A soakaway pit associated with the modern well and pump-house to the east partially truncated the eastern side of the pit, and the modern sewer (C507) also truncated the central part of the pit. Three fills were recorded within the pit (C510, C514 and C526). The basal fill (C526) was present at the southern end of the pit and consisted of silty material mixed with redeposited natural. This may have formed when the pit was initially cut. The main fill of the pit (C510) appears to relate to the pit silting up over time, with better organic preservation to the east. This fill had significant quantities of animal bone, which may relate to the earlier pond or wetland area that was present in this location. This fill also contained an iron nail and a piece of struck flint. A third fill (C514) was the same as the main fill of the pit, however it was given a separate number as it overlay the upper fill (C513) of B XXXVII, which was partially truncated by the western edge of the pit.

This pit appears to have been a drainage intervention and interestingly coincides with the suggested location of an earlier pond or natural boggy hollow that appears to have formed the eastern boundary of the eastern annex of the ringfort. This would suggest that this boggy wetland area survived for a significant length of time and was still an issue in the 18th century



after the abandonment of the burial ground. The modern well, which is depicted as being present on the 3rd Edition OS map in the 1910s, was located at the eastern end of this boggy area and it is possible that originally a spring was present here.

Another large, flat-bottomed pit (C249) was uncovered to the south. This pit was also dug into a lower-lying part of the site. It truncated two of the early medieval ditches (C200 and C256) and an earlier gully (C357). It continued beyond the southern baulk of the site, however subsequent monitoring in this area indicated that significant modern disturbance had removed any traces of archaeology further to the south. The eastern side of the pit appeared to respect the line of the field boundary (C180) to the east, possibly indicating this ditch was in place prior to the excavation of this pit. The pit was filled with a blue-grey dense silty clay marl (C250) with inclusions of brick, glass and early modern pottery. This was clearly a water-laid deposit and there is a suggestion from the fills of the earlier features in this part of the site

that this area had previously been very badly drained. This pit may have been inserted as a drainage intervention during land improvement works in the 18th, 19th or 20th century.

A third large pit (C555) truncated the southern side of the ringfort and inner annex ditches. This was a rectangular rock-cut pit that had a single fill (C556). The fill consisted of a large quantity of twisted iron bars and suggests the pit was used for the disposal of construction waste. The location of this pit was unfortunate as it removed a significant intersection on the site, where the ringfort ditch, the earlier and later eastern annex ditches and the burial enclosure ditch intersected. The positioning of this pit also suggests that it was excavated at a time when there was little or no above ground indication of the ringfort, or the subsequent burial enclosure, and it is likely that this pit is a modern feature.

Field boundaries

At the eastern end of the site a ditch (C551) was identified running NNW-SSE. This ditch



Section through ditch C551, looking southeast

was located to the east of the modern drainage pit (C509), and it is possible that they are contemporary as they appear to intentionally avoid one another. The ditch had two fills (C552 and C560) representing the silting up of the ditch, with the upper fill (C560) containing some red brick fragments. Both fills contained animal bone, which may relate to the nearby boggy hollow that formed the eastern boundary of the early medieval settlement. To the south a small channel (C561) drained into the ditch from the east. It was orientated NW-SE and its fill (C562) overlay the main surviving upper fill of the ditch, suggesting upper levels of the ditch have been truncated away elsewhere. To the south the ditch and channel were both truncated by significant modern disturbance associated with the modern well and pump-house, and the northern end was truncated by the linear soakaway pit associated with the well. This ditch and associated drainage channel are not depicted on the 1st Edition OS map, though it would line up with the corner of the townland boundary to the northwest. It may have been a relatively short-lived field boundary that was removed by the 1830s. It is also possible that it relates to an earlier phase of activity on the site and was still in use until the post-medieval period.

The division between Areas D1 and D2 was a modern hedgerow (C85), which formed the current field boundary prior to excavation. Prior to this an estate avenue and a field boundary ditch followed the same alignment. The earliest of these was a field boundary ditch (C180),

which meandered slightly along its length and was not as straight as the features it was replaced by. The field boundary is depicted on the 1st Edition OS map in the 1830s, though must have been laid out after the burial enclosure fell out of use, presumably in the late 17th century. The field boundary ditch does not respect the burial enclosure ditch, nor indeed the burials it contained, with burials identified on both side of the ditch. The ditch was well maintained (or recently maintained prior to backfilling) as there were no silty layers within the ditch. The ditch had a single, relatively sterile redeposited natural and stone fill (C181) representing the intentional backfilling of the ditch prior to the laying out of the estate avenue (C182). An iron nail was retrieved from the fill.

The estate avenue (C182) is depicted on the 3rd Edition OS map but is likely to have been in place from the late 1830s when Sion House was constructed. The field boundary (C180) was backfilled to accommodate the laneway, which connected the house with the Kentstown Road to the north. The ground level was reduced first, presumably to create a level surface for the avenue, which was subsequently built up with a layer rubble, gravel and stone that formed the bedding of the avenue. Small rounded cobbles and pebbles were beaten in place to form the surface, though it was not particularly well-laid. To the west a drain (C178) ran parallel to the road. This ran along the inner side of the ring-fort ditch and removed any evidence for the ditch at this point. The drain was partially stone-lined in places, though this may have been fortuitous rather than planned, where the flat bedrock stone was used to line the drain as it was cut to allow for the drain. The drain was partially filled (C179) with stone to allow for the movement of water through the drain, and the base of the drain was partially silted up.

The later hedgerow (C85) appears to have been planted over or beside the drain, on the west side of the avenue. The hedgerow formed the field boundary prior to the excavation.

Garden features

It was clear during the excavation that a significant phase of levelling or truncation had taken place across the site, particularly in the higher

ground of the western portion of the site. This was indicated by the shallowness of the surviving ringfort ditch cut, the shallowness of the surviving burials, and the absence of internal features and structures within the ringfort. This levelling may have taken place during the laying out of the estate lands associated with Sion House in the mid-19th century. The low hillock where the ringfort was situated was reduced, whilst the lower-lying area to the south was built up to level out the field. This explains why there was no above ground indication of the monument prior to archaeological investigation.

During the 20th century when the Sisters of Charity of St. Vincent De Paul took over Sion House, turning it into St. Martha's College of Agriculture and Domestic Science, a large garden patch covered the portion of the site to the west of the avenue, extending to the north and south, as depicted on the mid-20th century OS map. A number of features in the centre of the site appear to relate to this gardening phase of activity on the site.

One north-south orientated furrow (C198) was identified with an additional five roughly east-west orientated furrows (C183, C219, C300, C313 and C338) also uncovered. Of these only one (C219) was located outside the ringfort. The north-south running furrow (C198) was very shallow, surviving mainly as a strip of cleared rock running through the centre of the ringfort. While shallow, this feature was found to have truncated a number of burials that lay along its path, with B XVIII, B XIX and B XX all being truncated by the feature. In all three of these cases the western portions of the truncated skeletons were removed, which extended beyond the line of the furrow itself, suggesting the skeletons were intentionally removed when encountered, possibly for reinternment elsewhere. Two relatively shallow pits or postholes (C185 and C285) were identified along the base of the furrow. These may relate to posts along the line of the furrow, possibly suggesting the furrow relates to a fence line, though it is also possible that these pits or postholes may be earlier features truncated by the furrow, or stone sockets from outcrops of bedrock disturbed by the furrow. Both were of similar proportions and were partially cut into the soft bedrock be-

low. A struck flint artefact and a sherd of post-medieval pottery were retrieved from the fill (C186) of the more northern posthole (C185).

An additional three east-west orientated furrows (C183, C300 and C313) were crossing the centre of the ringfort. These were roughly parallel to one another and perpendicular to furrow C198. The most northern of these (C183) was found to meander slightly along its length, with a number of dips and rises apparent on its base. It was relatively shallow and was identified within the northern end of the ringfort as well as in the eastern annex, where it truncated a kiln (C222) and was truncated by a modern service trench (C86).

Approximately 3.6m to the south of this lay the second east-west furrow (C313). This furrow was similar to the northern furrow, though did not survive to a similar length. It was found to have truncated B XXVI and B XXVII, and a number of deeper partially rock-cut sections were apparent to the east of the burials before the furrow petered out.

A third furrow (C300) was present 1.8m to the south of this. This furrow was more substantial in places than the two northern examples. It was steep-sided with a flat base, except where it was cut through rock. A human femur was found at the base of the furrow along with some post-medieval pottery. The furrow truncated B XXIX and B XXX. The greater depth and width of this furrow may imply a different function to the other furrows. It may for example have had a drainage function, however it is also possible that the deeper sections relate to where burials were disturbed and the furrow was widened and deepened to allow for the removal or the burial.

The fills (C184, C199, C301 and C314) of the furrows within the ringfort were broadly similar, mid- to dark brown sandy clays with frequent stones and angular pebbles. The fill (C301) of furrow C300 was a mottled yellow and brown clayey silt with frequent stones and angular pebbles. Occasionally post-medieval pottery was present within the fills along with animal and human bone, probably from truncated features.

Post-medieval pottery and a fragment of iron band, possibly a barrel loop, were retrieved from the fill (C199) of furrow C198, and post-medieval pottery was also noted in the fill (C301) of furrow C300. The furrows are likely to relate to a series of garden features of 20th century date. Based on the mid-20th century map all of these furrows would have been located within a single garden plot. It is possible that initially the east-west running furrows were spaced 1.8m apart, with a furrow lying between the two northern examples not surviving.

An additional furrow (C219) was identified to the northwest of the site. This was the only furrow to be identified to the west of furrow C198 and may relate to gardening activity in the plot further to the west on the mid-20th century OS map. It is broadly similar to the furrows further to the east and in a similar alignment to the northern furrow (C183) within the ringfort. It truncated the southern end of Structure 3. It had a single fill (C220), which was broadly similar to the fills of the furrows to the east, though less stony, due to the natural subsoil in this part of the site.

An additional feature was identified to the south of the western inner annex. This was a linear cut (C553) running east-southeast to west-northwest and was found to truncate a number of early medieval features (C58, C127 and C143). This may have been a drainage feature associated with the gardens. Its fill (C554) was largely redeposited natural with occasional chunks of concrete present. A struck flint was also retrieved from this fill.

The garden features clearly impacted on the underlying archaeology. This may have been due to the shallow nature of the topsoil surviving over the central part of the site at this time following the levelling out of the site. While the furrows impacted on a number of burials, some care seems to have been taken to remove the truncated burials (for example B XVIII, B XIX and B XX), possibly for reinternment elsewhere on the site. A number of pits (C149, C157 and C169) within the burial ground were found to contain semi-articulated and disarticulated human remains. These appear to relate to the reinternment of disturbed burials. It is unclear

as to when this activity took place. It may have occurred during use of the burial ground with older graves disturbed by later ones, or when the burial ground was truncated by the field boundary ditch and later by the estate avenue, or during the gardening activity during the 20th century.

Modern services

A north-south running field drain (C86) with a plastic pipe running along it truncated the eastern end of the ringfort enclosure. This drain also truncated one of the burials (B XI) a kiln (C222), the early medieval ringfort and annex ditches and the 17th century burial enclosure ditch. It was backfilled with a mix of sand and gravel with redeposited material (C87).

To the east of the avenue a modern sewer (C507) was present running north-south with three manholes present. The sewer truncates the early medieval eastern annex ditch, the 17th century burial enclosure ditch, and the drainage pit (C509) in the northeastern end of the site. It was a straight-sided service trench sloping down to the north containing a 6" concrete pipe. The manholes were 0.9 x 1.4m concrete boxes.

A second sewer pipe was identified to the west, which truncated part of the outer western annex ditch (C79) and the 17th century pathway (C63). This was orientated northeast-southwest and contained a 6" concrete pipe. It is likely to relate to the sewerage pipe to the east (C507).

Additional modern services were also encountered during the excavation. To the north of the ringfort enclosure a concrete manhole and service trench was present. To the east of the site a pump-house and covered concrete well were present, with a significant amount of associated modern disturbance. A number of iron and plastic water pipes led to the pump-house and were found to truncate archaeological features in the eastern annex. The well itself was associated with a gravel-filled soak-away pit running off to the north-northwest, which truncated the earlier drainage pit (C509). A concrete-constructed manhole was present at the eastern end of the ringfort enclosure. This truncated the ringfort ditch and may well have truncated burials in the vicinity. A concrete hy-

drant marker post was present at the eastern end of the manhole, which was in line with the north-south running hedgerow (C85). A water pipe ran to the east from the manhole in the direction of the well, truncating the burial enclosure ditch and the drainage pit (C509).

All of the services are likely to relate to the period during which St. Martha's College of Agriculture and Domestic Science operated at Sion House. The site may well have been largely if not completely levelled by this time as little effort was made to avoid archaeological features.

Section 3 Discussion

Introduction

The early medieval settlement at Alexander Reid had a number of phases of evolution, with alterations to the enclosed spaces, layout, approaches and entrances. Evidence for metal-working, cereal production, weaving and animal husbandry indicate this was a self-sufficient community.

The numerous kilns provide a particularly fruitful avenue of investigation, and evidence for threshing barns associated with them is unusual. A large variety of artefact remains were recovered from the excavation, including three possible styluses which may imply an ecclesiastic connection.

Documentary evidence for a 17th century chapel ties in with the archaeological evidence of a burial ground and possible church on the former early medieval settlement.

Animal skulls ritually deposited in and around the site reveal unexpected connections between the early medieval and 17th century phases.

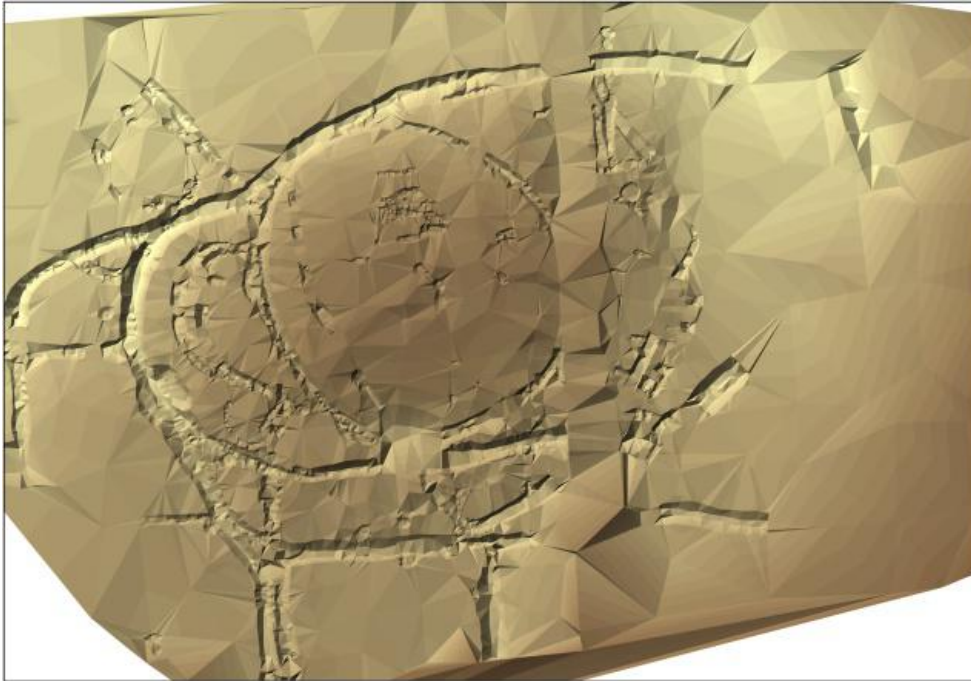
Summary of main findings

The excavation at Alexander Reid Site D identified a number of separate phases of use at this site. The earliest was an early medieval settlement consisting of a circular ringfort with enclosures or annexes to the east, west and south. Additional ditches radiating outwards, and sub-dividing the annexes, represent field ditches and provide an indication of the layout of the farm associated with the settlement. The ringfort was located on a bedrock outcrop forming a low hillock with poorly drained or wetland areas to the southeast and the east.

A ringfort or rath is defined as a circular, oval or pear-shaped area enclosed by one or more

Oblique aerial view of the site, looking southeast





Contour plan of the site taken from the site survey

earthen banks and ditches, with the enclosed space generally being 15-35m diameter (Edwards 1990, 14). The example at Alexander Reid is slightly oval in plan, and measures c. 29m northwest-southeast and under 26m in width. It is relatively small when you take a bank into consideration, with the maximum internal space (including a small 1m width bank) 24m by 27m. This small initial size may have necessitated the annexes to the west and east as the settlement expanded.

The settlement at Alexander Reid appears to have been abandoned during the high medieval period. No occupational evidence relating to this period were identified on the site. As the site was at least in part surviving until the 17th century, the former settlement may have survived as an important local landmark and have been fully integrated into medieval field systems locally, carefully left untouched out of respect or superstition.

The site was reused in the post-medieval period as a low density burial ground. There are references to a 17th century church within the Bailis/ Alexander Reid area in the 17th century and it is possible the burial ground was associated with this unlocated church site. The burial enclosure ditch truncated many of the earlier features on the site, including the ringfort ditch itself, suggesting the majority of the former settlement had been levelled. However, the burial

ground enclosure respected the northern annex ditch of the early medieval settlement suggesting that an above ground element survived. Thirty eight burials were uncovered within the 17th century burial enclosure, as well as a number of ex situ burials that had been moved and buried in pits, probably after being disturbed during later post-medieval activity on the site.

The final phase of activity occurred after the abandonment of the burial ground and represents later post-medieval and early modern use of the site. A north-south field boundary truncated the burial enclosure and the former settlement site, representing a phase of agricultural use. This phase of activity is likely to relate to land improvements being made to the Athlumney estate, which the development site formed part of at this time. In the 1830s Sion House was built to the south of the site, which formed part of the estate grounds of the house. In the 19th century the field boundary was filled in and replaced by an estate avenue connecting Sion House with the Kentstown Road to the north. The hedgerow that had been planted along the western side of the road was retained after the avenue went out of use and formed the modern field boundary.

All the archaeological features on the site were heavily truncated by landscaping and levelling works in the 19th and 20th centuries. Many features were shallow, and the relationships

between them were often difficult to confirm as only the lower fills of features survived. A number of features, including burials, lay directly below the topsoil and overlying bedrock. The site may have been levelled as part of land improvement works prior to the construction of Sion House, or during the laying out of the estate grounds for the house. During the 20th century the house became an agricultural training school and a garden was established over the site.

Early medieval topographic landscape

As with other ringforts (O’Sullivan et al. 2008, 58), the site at Alexander Reid is situated in an area of good agricultural land and is situated on the lower slopes of a low ridge above the base of the Boyne valley.

In many cases, evidence for earlier phases of activity are identified on ringfort excavations (O’Sullivan et al 2008, 61). This may be coincidental, due to natural characteristics of certain locations, or perhaps reflect a desire to locate a settlement on a previously significant location or in the vicinity of a visible earlier monument. There were no features identified during the excavation at Alexander Reid that suggested an earlier period of occupation of the site prior to the early medieval period, however a number of late Neolithic flint artefacts indicate prehistoric activity here or nearby (Sean Sharpe pers. comm. 2017). It is therefore possible that an earlier monument or other visible signs of prehistoric activity had previously been located in the vicinity of the settlement.

The earliest phase of the early medieval settlement was located on a bedrock outcrop forming a low hillock within the surrounding landscape. The surviving ringfort ditch was quite narrow and shallow, however it would have been much more prominent during the lifespan of the settlement prior to the extensive 19th and 20th century levelling of the landscape. The ground within the ringfort has been significantly reduced to the point where only the deepest features associated with the settlement have sur-

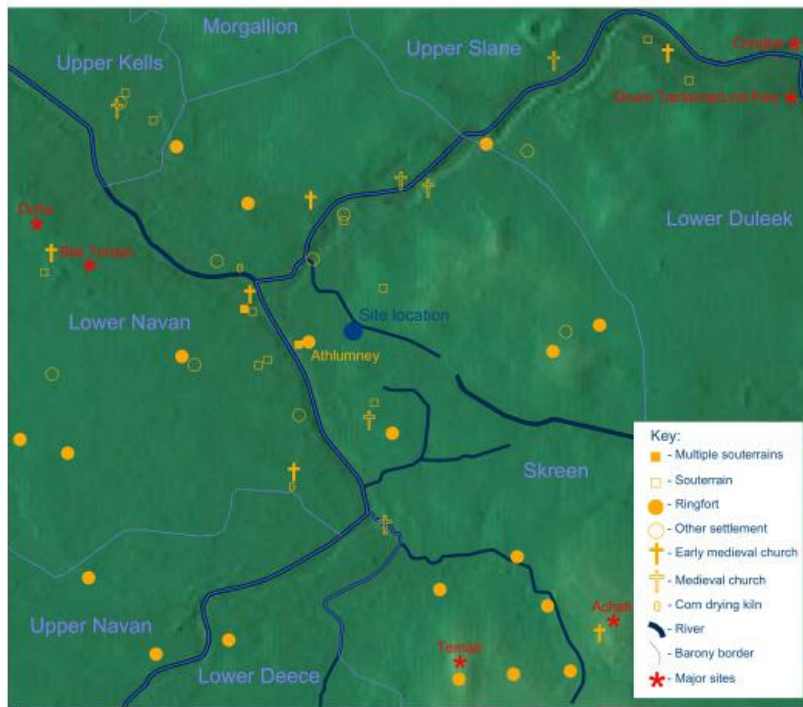
vived. The hillock may have been located on a low ridge of higher ground, with the ground falling off to the northwest, southeast and east. Further to the southeast and south the ground rose up gradually again to a higher ridge, which is depicted on Larkin’s map of 1821. A higher hillock, also formed from a bedrock outcrop, was located to the east.

The bedrock outcrop was formed from bands of sedimentary rock running in a northeast-southwest trend across the site with occasional bands of harder rock interspersed with softer rock and sandy layers. The softer rock, while easier to dig through, was brittle and crumbly, a fact that the archaeologists and the original excavators of the site must have been acutely aware of. Ditches dug through this material would have worn quickly and required maintenance. The variations in the rock also had implications for the original excavation of ditches, with some particularly hard bands of rock causing the ditches to rise or narrow until the band was crossed. This indicates that many of the ditches were not intended to channel water, though they would have drained the internal area of the ringfort.

The bedrock outcrops, and undulations to the southeast and east of the ringfort, meant that the landscape in and around the site was badly drained. A former spring was situated to the east of the ringfort, and remained in use into the modern period. This spring created a wet-

Cup-marked stone retrieved from ditch C129 to the south. Some additional worked flint was also retrieved, however no prehistoric features were identified





Map showing the surrounding early medieval sites along with the later barony boundaries and rivers. The proximity to the important site uncovered at Athlumney appears significant. Along with Athlumney, the site appears to be surrounded by a stream system, with streams running to the Boyne to the north and south, and the River Nanny rising to the east

kingdom of Mide. Mide is reputed to have come into being in the 1st century AD, formed by the semi-mythical Túathal Teachmar, high-king of Ireland. At its greatest extent, the kingdom of Mide included Meath, Westmeath, and parts of Cavan, Dublin,

land area between the hillock upon which the ringfort was situated, and the higher hillock to the east, and this wetland area formed the eastern boundary of the eastern ringfort annex. This may have been one of the influencing factors for locating the ringfort here. The wetland area was deemed sufficient to provide some defence, or at least a boundary screen along one side of the settlement. It would also have provided a water supply for the settlement.

Kildare, Longford, Louth and Offaly. This later split into two separate kingdoms: Mide to the west and Brega to the east. Brega extended from the Liffey and Tolka rivers in the south to the River Dee in Louth (Eogan 2012, 695), and east to the sea. Its western border with Mide appears to have been more fluid, though at some point ran from the upper reaches of the Blackwater near Castlekieran to Trim and possibly back again to the Tolka (ibid.).

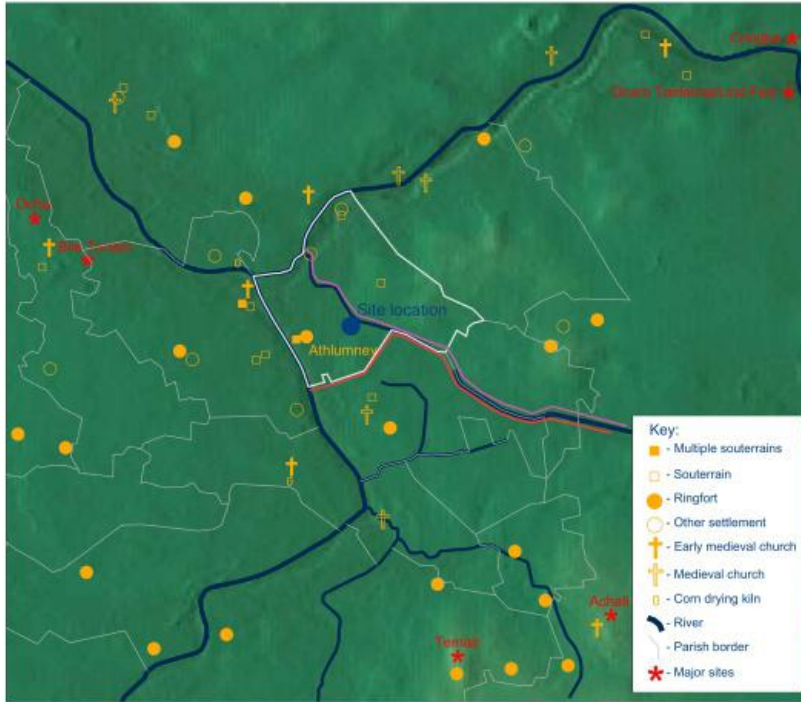
The location of the settlement on the lower bedrock rise provided the early medieval settlement with shelter from the elements. It also provided the settlement with good views to the east and north towards Navan and the Boyne, though views to the south were limited as the land sloped up in this direction towards Johnstown. This may indicate that key factors in the siting of the settlement were shelter and good views of the approaches from the Boyne. The wetland areas to the south and east also provided the site with additional natural protection on those sides, as well as providing a local spring.

Brega and Mide were annexed by the Southern Úi Néill in the 6th century. The Síl nÁedo Sláine were the Southern Úi Néill overlords of Brega. They owned Tara, but residing at Rath Airthir (near Oristown), Lagore, and from the 9th century Knowth (Byrne 1973, 87). The name of their ancestor indicates a connection with the Slane area (Eogan 2012, 695), and they probably had a significant settlement here before moving to Knowth (ibid., 775). A dynastic quarrel between the Síl nÁedo Sláine led to the battle of Imblech Pich (Emlagh, near Kells) in 688, after which the kingdom split in two, with South Brega ruled from Lagore crannóg near Dunshaughlin, and North Brega ruled from Knowth and Rath Airthir beside Teltown (ibid.).

Early medieval cultural landscape

In the proto-historic period the site lay in the

The Uí Enechglais were an early dynasty in the Slane region. They were a branch of the Laigin, who had been possession of Tara and southern



Map showing the surrounding early medieval sites along with the later parish boundaries and rivers. Again the proximity of the sites at Alexander Reid and Athlumney appears significant, coupled with them lying within the southern end of the same parish. Two possible suggestions for the line of the earlier division between North and South Brega from the late 7th century

likely to have been created to give the Déisi a mythical noble origin story, as heirs to a dynasty expelled from Tara.

It is possible that any one of these political groupings were involved in the establishment of the settlement at Alexander Reid, or overlords of those that lived there.

Mide prior to its creation. They were driven away from their homelands as the Úi Néill expanded southwards.

The Ciannachta Breg were a ruling force in northern Brega from the early 6th century until the battle of Imblech Pich (Emlagh, near Kells) in 688 after which they lost the over-lordship of their territory to the south of the Boyne. The Ciannachta territory stretched from Glasnevin to Lough Remor in Cavan, and they were a relatively homogenous group, unlike the disparate sub-kingdoms in western Mide (Byrne 1973, 69). This was probably as a result of the Boyne valley having been an area of settled culture since the Neolithic period (ibid.). After their defeat in the late 7th century the Ciannachta territory was restricted to Ard Ciannachta in the vicinity of the barony of Ferrard in Co. Louth between the River Delvin and Dublin (Byrnes 2000, 128).

The sub-kingdom of Lóegaire was confined to an area around Trim and Navan, though the exact extent of this is unclear, possibly not extending beyond the Boyne (Byrne 1973, 93). The Déisi Temro were reputedly located in the vicinity of Tara. Two 8th century texts describe a fictional history of the Déisi being driven from their lands near Tara, however these are

Following the division of Brega into North and South, the River Nanny marked part of the boundary between the kingdoms (Eogan 2012, 696). Eogan (ibid.) has suggested the boundary extended directly west from the head of the Nanny which would place the early medieval settlement at Alexander Reid at the very southern end of the North Brega kingdom, and under the overlordship of Knowth. The boundary would be in the vicinity of Kilcarn to the south. However, it is possible that the boundary followed the Nanny to its source then followed the small stream to the west until it joins with the Boyne. This would place the early medieval settlement at Alexander Reid at the northern edge of the South Brega kingdom under the overlordship of Lagore. Either way, the excavated ringfort was situated on the edge of these rival factions from the 8th century.

A substantial multi-vallate ringfort was identified to the east of the site at Athlumney (Hession 2009, 31). Four souterrains and a large enclosure were identified surrounding a central bivallate enclosure, as well as further evidence for structures and features from the early medieval period. Evidence for significant earlier prehistoric occupation was also uncovered in

the form of a sub-rectangular Bronze Age settlement enclosure with and an elliptical Iron Age settlement enclosure and kiln complex (ibid.). The Athlumney ringfort was subsequently used as a burial ground during the early medieval period leading the excavator to class it as a cemetery/settlement site (ibid, 85; see also (O’Sullivan & McCormick 2017, 105 for more examples). An association of cemetery/settlement with ferta sites (ancestral familial burial grounds) referred to in the early Irish texts has been suggested (O’Sullivan et al 2008, 176). Newman notes that Ardsallagh and Baronstown to the south may also be fertae (2011, 30-33), whilst Site M at Knowth may also be classified as such (O’Sullivan et al 2008, 177; see O’Sullivan & McCormick 2017, 109 & 113 for more examples). The interpretation of the site at Athlumney as a ferta, combined with the continual reoccupation of that location suggests it was a site of some significance. The presence of this larger and apparently more significant site 1km to the east would have had an influ-

ence on those that built and lived in the ringfort in Alexander Reid. Indeed the earliest approach to the ringfort appears to have been from the east, towards the settlement in Athlumney. It is possible that the smaller ringfort at Alexander Reid was occupied by a client or retainer of the resident of the Athlumney ringfort.

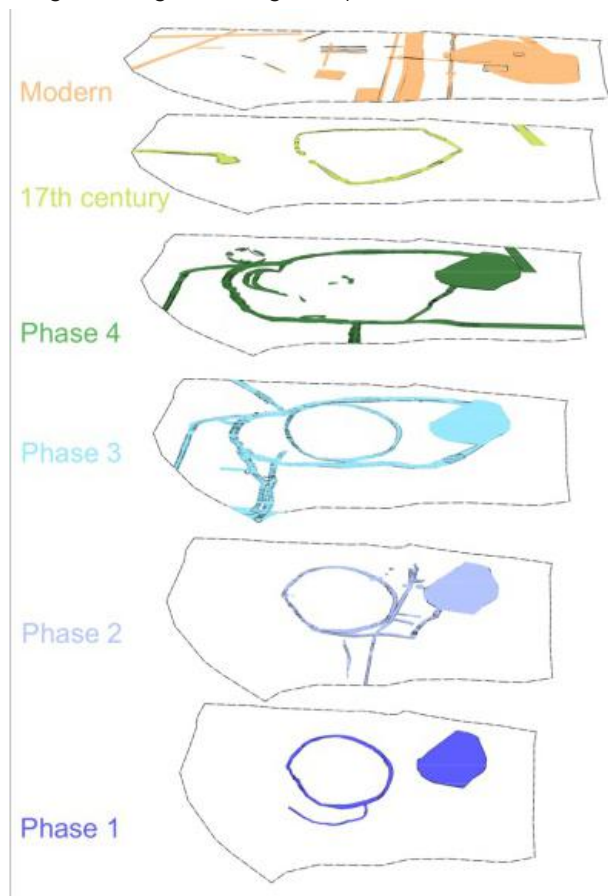
In later centuries the arrival of the Vikings in Ireland would have had an impact on settlements within their sphere of influence. While Navan may not have been of particular prominence in the early medieval period, it would not be accurate to say the Vikings were not interested in it (Giacometti 2008, 6). The Viking-controlled hinterland of Dublin may in the 10th century have included Co. Kildare as far southwest as Mullaghmast and parts of Co. Meath (O’Keeffe 2000, 189). A Viking burial, interpreted as a warrior burial, was uncovered near Navan Railway Station in 1848 (ibid, 190-1). In light of the frequent association between Viking burials and adjacent settlements, it is possible that a Viking, possibly rural, settlement may have existed nearby (Bradley c. 1985, 94).

A number of battles are recorded in the vicinity of the mound of Odhbhra, believed to be Navan Moat, from the years 607, 890, 1016 and 1072 (Cogan 1862, 150). This is interesting in that it suggests this area may have been a frontier zone, near the edges of the early kingdoms. Odhbhra is also reputed to have given its name to an ancient territory in Meath, though the extents of this are unclear (Moore 1893, 56). The latter two dates relate to battles against foreigners, further implying a foreign presence in the Navan area (Giacometti 2008, 6). The presence of different population groups arriving into the area may have had an influence on the settlement at Alexander Reid, possibly leading to changes within the settlement, or even its abandonment.

Phasing of the early medieval settlement

The ringfort was established as the focus of the initial settlement (Phase 1). An entrance to the southeast had a trackway defined by a gully on the exterior. The trackway turned to the west

Image showing the change in layout of the site

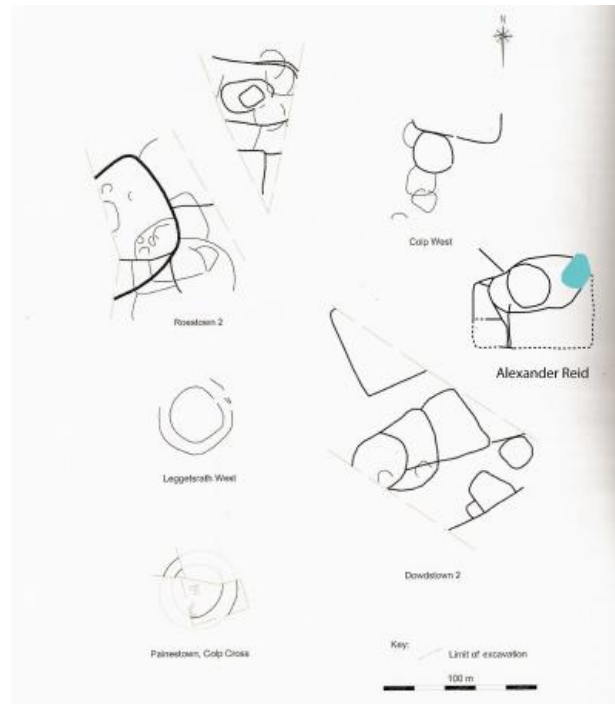


and curved around the southwestern arc of the ringfort. As it is truncated by the later annex ditches this phase of the ringfort predated all the annexes to the east, west and south. The later entrance was constructed over a fill within the ditch, implying an earlier entrance, possibly a simple wooden bridge, crossed the ringfort ditch during Phase 1. Two postholes along a perpendicular alignment to the southwest of the entrance, of equal depth and equidistant from the entrance trackway, may have formed a barrier controlling access to the ringfort. A second possible entrance to the northwest in the form of an undug causeway was noted relating to the Phase 1 ringfort ditch, however the gully defining the Phase 1 access suggests an entrance was always present to the southeast.

In the next phase (Phase 2) the eastern annex was added, branching off the ringfort. The eastern side of the annex was bounded by an area of wetland. A spring was probably situated here during the early medieval period, an in recent times a modern well and pump-house occupied this area. While other parts of the site was well drained, this area had poor drainage, and organic preservation was excellent in some features indicating they had remained waterlogged for a significant time. The approach to the ringfort entrance was from the south during Phase 2. The eastern annex was sub-divided into discrete areas from the time of its initial laying out.

The third phase (Phase 3) involved the addition of western annexes. The eastern annex (and presumably the wetland area to its east) remained in use during this time. The ditch forming the southern side of the western inner and the eastern annexes did not join with the ringfort ditch at this time, and were instead set back slightly further south of the ringfort. An outer annex to the west and south was also laid out during this phase of expansion, along with a field division ditch running to the south.

A major redesign of the settlement took place in Phase 4. The circular ringfort enclosure was amalgamated with the western inner enclosure and a space equivalent to the earlier eastern annex into a much larger non-circular enclosure. The southern side of this enclosure was a further 5m to the south of the Phase 3 annex ditch. A large enclosed field was located to the



Comparative plan of the site with other early medieval settlements, the form being particularly similar to Colp West, Co. Meath (after Lennon & O'Hara 2011, 230, fig. 15.5)

southwest of this within the outer annex. A return of the outer annex ditch on the eastern side was not identified for this phase, and it is possible the outer annex enclosure was left open on this side. A large post-medieval ditch was identified to the east. It is possible that the Phase 4 ditch was re-cut in the post-medieval period and may originally have formed the eastern boundary of the later phase of the settlement. This would have provided two additional enclosed fields to the southeast and east of enclosure centred on the earlier ringfort. This phase appears to see settlement shift from within the ringfort to an unenclosed site to the northwest. It is possible the large enclosures apparent during Phase 4 no longer relate to the settlement itself and may define agricultural enclosures rather than settlement, with settlement becoming unenclosed.

The enclosure of additional spaces in and around the primary ringfort has been documented at other archaeological sites, for example at Colp West, Co. Meath (Murphy 2011, 253) and Ninch, Co. Meath (McConway 2010, 160). At Lusk, Co. Dublin (Giacometti

2011, 158), the linear arrangement of the early medieval D-shaped enclosure and associated enclosures and annexes was similar to the layout of the early medieval settlement at Alexander Reid.

Implications of the phasing

The phasing of the early medieval settlement set out above reflects changes in the way the early medieval settlement was seen, and used, during its occupation. This ties in with an increasing interest by archaeologists in the social and economic changes taking place in Ireland between the 5th and 12th centuries AD (e.g. O'Sullivan & McCormick 2017, 107). Three implications of this are discussed below: the expansion of the settlement enclosure(s); the elaboration of the approach to the ringfort; and the evidence for a shift in the primary settlement focus from the enclosure to unenclosed spaces to the north.

The area enclosed by the ringfort at Alexander Reid (at 29m NE-SW by 26m internally) is small in comparison with other comparable excavated sites. These measurements do not take into account the truncation of the ditches, which would previously have been wider, or the absent bank. The average internal diameter of ringforts is usually c. 30m, though Stout's survey of surviving ringforts in the West Midlands demonstrated a large variation in internal diameter within the banks from 15.5 to 75m, with 84% in the range of 28 to 35m (Stout 1997, 15). Although Stout proposed that new ringforts could have been laid out using a measuring line pivoted from a central stake (ibid, 14), subsequent excavations have demonstrated that in many cases the evolution of ringforts is more complex and numerous non-circular ringforts have been identified. The original establishment of the ringfort at Alexander Reid, however, does conform to an almost perfect circle when the sloping nature of the land and underlying bedrock ridge are taken into account, suggesting that the initial builders had an idealised concept of a circular dwelling. Interestingly this idealised concept does not appear to have been considered important by Phase 4.

The continuous expansion of the site, with additional space being enclosed to the east, west

and south, suggests that the settlement was growing in size, and evolving with the changing needs of its occupants, with the settlement focus possibly moving out from the interior of the ringfort in later phases.

The size of the ringfort may also give us some indication of the people living here. In Early Irish law, base clients (*giállnae*) of a king (or higher ranking noble) owed a fixed amount of manual labour to their superiors, including help in the construction of the ringfort (Stout 1997, 113). The relatively small size of the initial ringfort indicates that the primary occupant did not have a large pool of labour to draw on to construct a large and impressive residence. This suggests that the primary occupant was not of the highest status in Irish society of the time. The increase in size of the enclosed spaces in and around the ringfort over time, represented by the annexed spaces to the east, west and south, could be interpreted as a growth in stature and importance. The later phases of the ringfort entrance to the southeast become increasingly elaborate during Phases 2 and 3. This, and the annex ditch to the south, gave the impression of entering a ringfort encircled by two ditches and banks. This could have evoked the shared cultural understanding of what constituted a higher status settlement, without the ringfort actually being bivallate. Visitors to the ringfort may have interpreted the bivallate impression as suggesting the settlement was important, without the ringfort actually assuming a bi- or multi-vallate form, which may have not have pleased higher-ranking occupants of multivallate ringforts elsewhere, such as the one in Athlumney to the west.

Prior to the excavation of large numbers of ringforts from the late 1990s onwards, archaeologists questioned whether ringforts were occupied for a relatively short-lived period (e.g. Mytum 1992, 126) or over long periods of time with successive owners (e.g. Stout 1997, 115). The latter argument has been supported by numerous excavations (O'Sullivan & McCormick 2017). The ringfort at Alexander Reid, with its substantial re-design of the layout throughout the lifetime of the settlement, was likely occupied over an extended period, though this will be investigated further following the specialist

analysis and radiocarbon dating. Several ringfort excavations (O’Sullivan et al 2008, 63) have demonstrated that an early ringfort was replaced by a larger one (Lisleagh 1, Co. Cork), or the addition of an additional defensive bank and ditch (Rathgureen, Co. Galway). At other sites the ringfort was replaced by a slightly different settlement types such as a raised rath (Deer Park Farms, Co. Down) or unenclosed settlements (Knowth, Co. Meath). At the Alexander Reid ringfort, evidence was found suggesting that the internal bank of the ringfort was removed (or may never have been present), based on the fact that features are present at the edge of the existing ditch to the north and west. Kilns within the ringfort ditch suggest a period where the ringfort ditch may have been partially or completely in-filled in places, though it was re-defined at a later period. This suggests that the settlement evolved throughout its lifespan, with periods when the original ringfort ditch was not maintained and features relating to the settlement were constructed within it, and other times when the main ringfort enclosure was re-defined and reinstated.

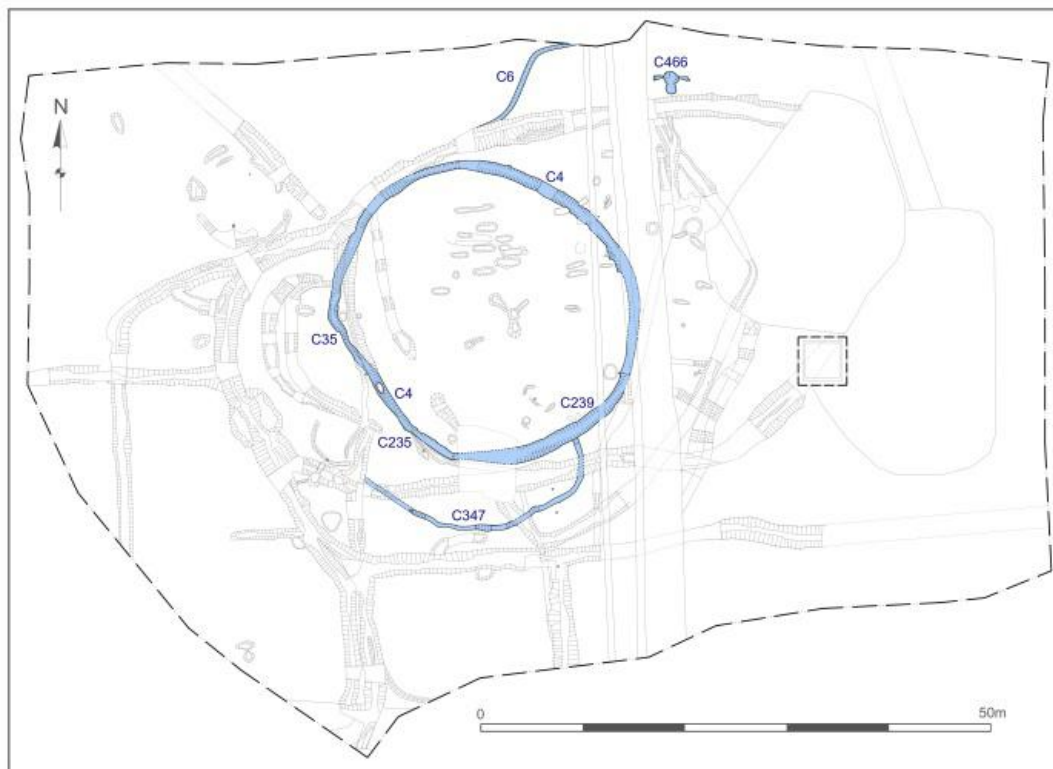


Hearth C435 beneath Phase 3 ringfort bank C564 (top)

Plan of Phase 1 of the early medieval settlement (bottom)

The ringfort bank and ditch

The excavation demonstrated that at some stages the bank and ditch of the Alexander Reid ringfort were allowed to deteriorate, or were intentionally removed, possibly to allow improved



access to the annexed spaces to the east and west. This was noted to the west, where a hearth (C435) just within the later alignment of the ringfort ditch (C4) was covered by a wedge of later bank material (C564). This bank relates to the later alignment of the ringfort enclosure (C4), which had shifted 0.85-1.4m to the east of the original ringfort ditch (C35). A large pit (C30), interpreted as a fire or rubbish pit containing large stones possibly representing a former lining, was identified further west of the hearth. This pit was cut into the backfilled early line of the Phase 1 ringfort ditch on its internal side, and cut by the later Phase 3 re-cutting of the ringfort ditch. Another pit (C333) was located to the southwest 0.51m from the internal edge of the ringfort ditch. The placement of these features would not have left enough space for a bank associated with the original ringfort ditch.

It is possible that the original Phase 1 bank was insubstantial, due to the underlying bedrock making excavation of large amounts of material from the ditch more difficult. As the ditch is rock-cut it is also possible the 'bank' was originally of stone, which was later removed for use elsewhere. The hearth may be evidence of occupation relating to Phase 1, when the ringfort ditch was further to the west, or at a time when the bank between the ringfort and the western inner annex had been removed, and indeed the re-cutting of the ringfort ditch in this location indicates that the ditch had been infilled, at least partially during Phase 2.

A second hearth (C318) was identified in the southern part of the ringfort 1.88m from the internal edge of the enclosure. It was located to the west of the entrance at a point where the bank may have been retained and maintained throughout the use of the ringfort and may give some indication of the size of the bank (i.e. 1.88m), albeit a relatively narrow one. The hearth may relate to a structure built beside the ringfort bank or an unenclosed cooking or workspace.

The ringfort ditch was fully integrated into the use of the settlement. This was demonstrated by the excavation of a sub-circular pit (C50) cut into the basal fill (C27) of the Phase 3 ringfort enclosure ditch (C4). The fill (C51) of the pit



Semi-articulated spine of a cow or horse within pit C50 cut into the ringfort ditch, looking northwest (top)

Kiln C222 truncated by Phase 3 re-cutting of the ringfort ditch C4, looking northwest (bottom)

contained the semi-articulated spine of a cow or horse. The articulation of the spine indicates that the flesh was still attached when it was placed in the pit, and thus probably represents a joint of meat. This pit may have functioned as a food storage pit as the spine, appeared to be intentionally placed rather than being dumped in with other refuse. The joint may have been stored in the pit to keep it cool as it was aged, or perhaps for some other culinary function, such as fermentation or slow cooking.

Further evidence was identified for the partial removal of the bank. A kiln (C222) cut into an early phase of the ringfort enclosure ditch and truncated by the Phase 3 re-cutting of the ringfort ditch used the ditch to provide shelter for the firing chamber. The flue of the kiln was located within the interior of the ringfort where the bank should have been located. The drying



Aerial view centred on the ringfort, facing west

chamber of this kiln was not located. It may have been located on the higher ground to the northeast within the eastern annex or have been stacked over the firing chamber.

Another example of a feature located on the internal side of the ringfort ditch (where one would have expected the bank) is a shallow circular pit (C240). This cut the Phase 3 ringfort ditch along its internal edge. It may have been a hearth, though no in situ burning was noted. Large flat and angular stones (C244) with evidence of having been burnt on one side were uncovered within the pit. They could have been pot-boilers, or possibly originally lined the sides of the pit and were dumped in the centre when the hearth went out of use. A smaller pit or sub-circular posthole (C242) was uncovered beside the hearth and may relate to some form of hearth furniture. Charred seeds and possible metal-working residue was retrieved from the fill of the pit.

While these features demonstrate alterations and adjustments to the ringfort ditch and bank during Phases 1-3, the entire enclosure (including the bank and ditch) appears to have been infilled by Phase 4 of the settlement development. The Phase 4 annex ditch to the north was found to truncate the backfilled ringfort ditch and an associated ditch to the west also truncated the ditch indicating that by this time the

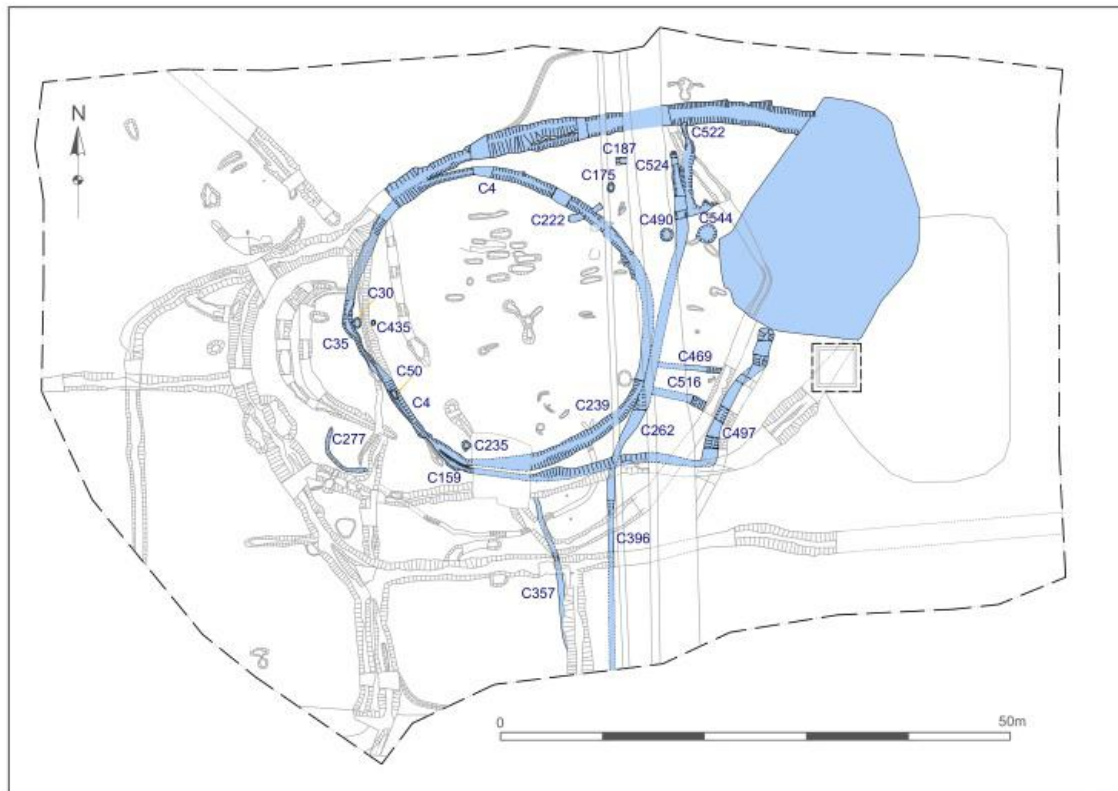
original circular ringfort enclosure had gone out of use, giving way to a less structured settlement form. The banks and ditches of the later Phase 4 settlement appear to have been visible until at least the 17th century as they were respected by the later burial ground.

The eastern annex

The eastern annex was the first addition to the ringfort (Phase 2). Its original extent to the southeast was unclear, though an early ditch was identified running northeast towards the wetland area in the northeast corner of the site may have been the original eastern boundary of the annex. The annex ditch sprung from the ringfort ditch to the northwest and southwest. The annex was subdivided by a roughly north-south boundary. At least three re-cuttings of this subdivision were identified.

The cultivation of vegetables during the early medieval period, evidenced by archeobotanical studies and documentary sources, implies the presence of gardens, which would have to have been fenced to protect the crop from livestock (O'Sullivan et al 2008, 193). Due to the work required in their maintenance they would have been located near the settlements and the small annexes associated with many ringforts and other enclosed settlements, including the ones seen at Alexander Reid, are quite likely to be

Plan of Phase 2 of the early medieval settlement



gardens (ibid.).

The sub-division ditch stopped just short of the edge of the annex ditch to the north. This may have stopped at the edge of a bank along the internal side of the annex ditch, or have been an access point. To the east of the sub-division ditch three gullies radiated out from the ditch. These defined four unequal enclosure or gardens within the eastern annex. No early medieval features were identified in the northern garden, which was bounded to the east by the wetland area. A shallow processing pit and two pits and a posthole with in situ burning were within the largest garden immediately to the east of the ringfort. A narrow garden to the south contained a pit and a posthole. The southern garden was also relatively narrow. These small gardens may have been used for the cultivation of crops, with the pits and postholes relating to other activities carried out within this part of the settlement at various times.

In the western portion of the annex two kilns (one partially within the ringfort ditch), a hearth and the burnt base of another possible hearth

or kiln were uncovered. These were the only features of this type within the eastern annex. The sub-division ditch divided these fire-related features off from the rest of the annex.

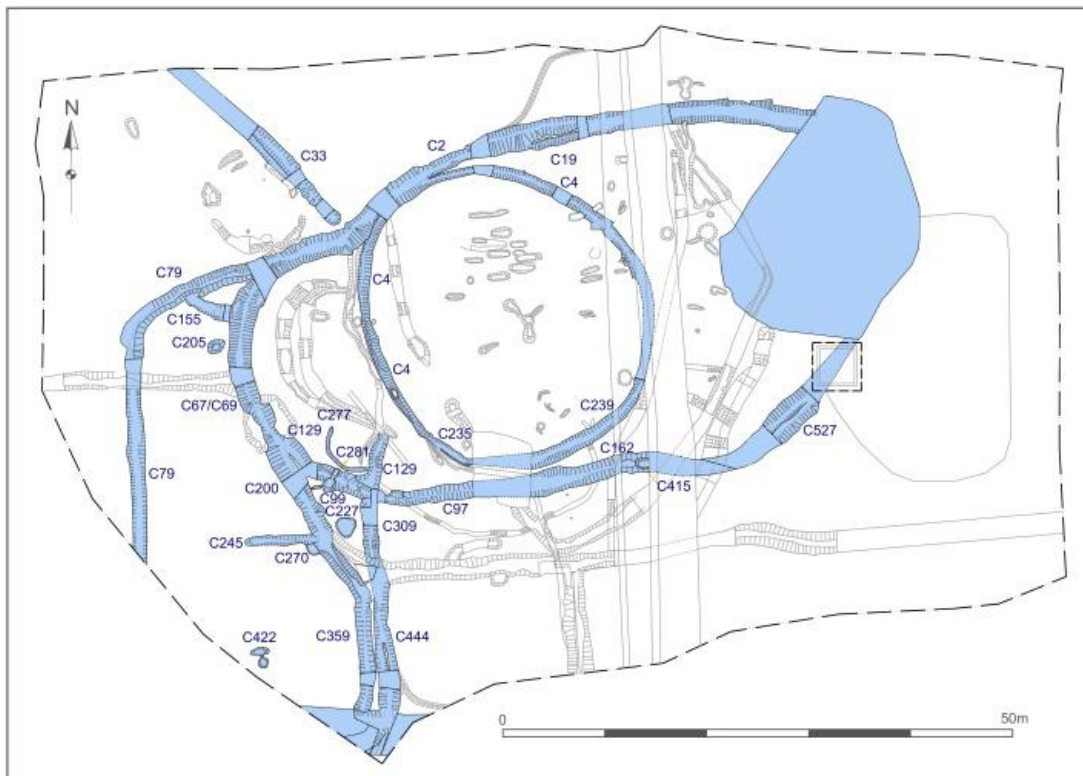
To the south, the line of this boundary continued beyond the annex and possibly defined the primary approach to the Phase 2 ringfort. Another gully (C357) was present to the west with the two linears forming a funnel shape, opening up at the ringfort entrance.

In Phase 3 the eastern annex was extended further to the east, truncating the internal subdivision ditch (C262). It is possible that the later annex was not sub-divided, perhaps functioning as a single open field for livestock or more cultivation. The ditched boundary of the Phase 3 eastern annex was also more substantial than the initial phase, perhaps to keep animals in, or out.

The western annexes

The western annexes were added to the ringfort as part of the Phase 3 expansion. The western inner annex enclosed a D-shaped space immediately outside the ringfort. The ditch defining

Plan of Phase 3 of the early medieval settlement



this area was the most substantial on the site. Structure 2 was located inside the southern end of the annex, next to a (possibly associated) kiln cut into the annex ditch. A possible early phase of the annex ditch (C129) was identified towards the southern end of the annex, however it was severely truncated. This appeared to relate to the initial Phase 3 layout of the western inner annex. A deep pit was located at the base of the annex ditch to the east of the kiln and southeast of Structure 2. This pit may be located on the site of an entrance from the western inner annex to the outer annex. The Phase 3a annex ditches to the east and west avoid the pit. Whilst it is unusual that a pit would be dug across an entrance, the fill of the pit indicated that it was not open for very long. It may have been a temporary closing of the access point. The later Phase 3b of the eastern annex ditch and the associated ditch C309 truncated the pit, with both ditches running directly over it.

The outer annex ditch to the west was established in Phase 3 and continued in use through Phase 4. This formed the outer enclosing boundary of the settlement to the west and

south, though the presence of two ditches to the north indicate that early medieval field systems extended beyond the spaces enclosed by the annexes. The outer western annex ditch truncated two of the north-south running field boundary ditches but likely connected with a Phase 4 north-south running ditch (C246), indicating it remained in use as the field systems around the ringfort were being realigned and perhaps engrossed.

The western outer annex was sub-divided into a number of smaller enclosures, which are interpreted as fields. These enclosed spaces may have related to the cultivation of crops, or have functioned as garden plots or animal enclosures. Few features were identified within the western outer annex. A pit was present to the north (possibly relating to Phase 2), which was truncated by a short ditch relating to the Phase 3 western inner and outer annex ditches. The narrow strip of land in the north of the annex was unlikely to have been useable, though it may have served to keep people or animals away from the junction of the two annex ditches. To the southwest of the inner annex the ditch split



Aerial view of the site facing south. The additional inner and outer annexes to the west (right) are clearly visible as is the ditch extending to the northwest (bottom right)

to the southeast and south. This appears to represent a field boundary running through the outer annex (C359). Another shallow ditch and fence-line was identified running off this to the west (C245) forming another field boundary within the western outer annex. A shallow pit, possibly a processing pit, was identified within the field to the north. To the south another field was present containing a single kiln. A further two kilns were cut into the curving boundary ditch to the northeast of this. To the east another field was identified. The eastern extent of this field was not ascertained, though may have corresponded with the entrance gully of the Phase 2 entrance. A shallow processing pit was located in the northwest corner of this field, which may relate to the kiln within the inner annex ditch to the north. A large field to the east formed the southeastern field of the settlement. The eastern extent of this field was not established as the eastern return of the outer enclosure ditch did not survive.

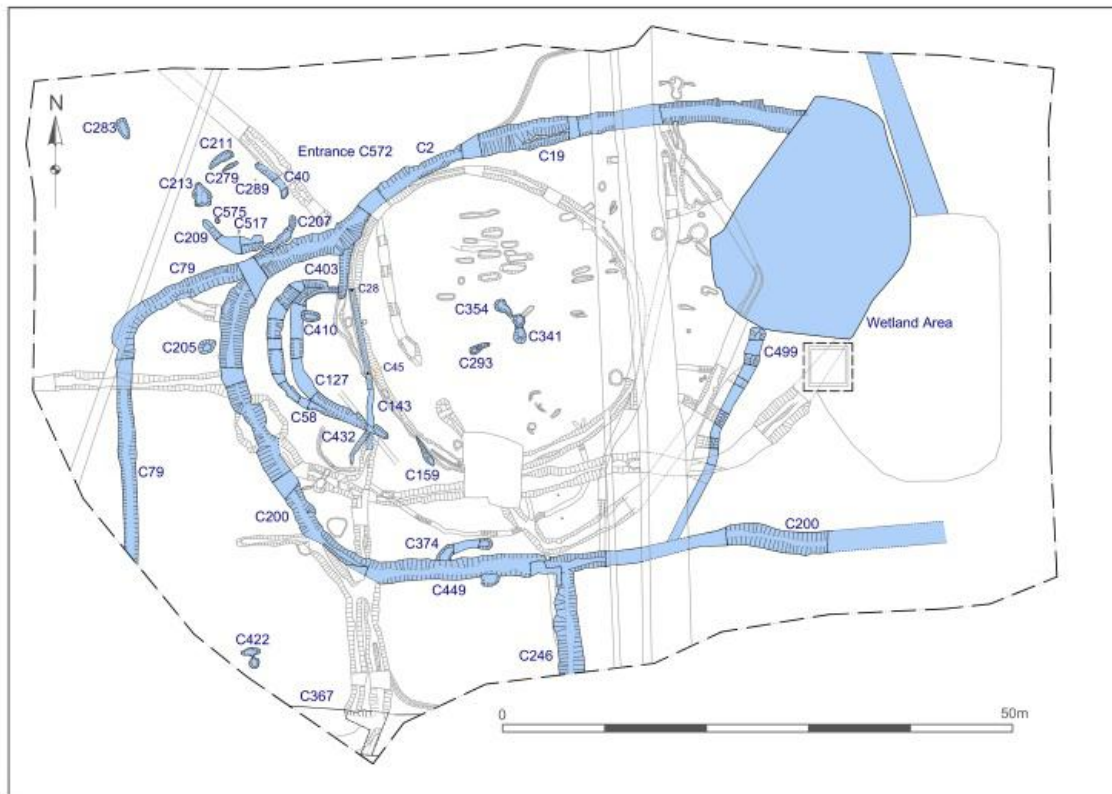
At a later point in Phase 3 the curving field boundary within the western outer annex to the southwest (C359) was straightened to run north-south (C309) and up to the southern edge of the curvilinear ditches within the western inner annex. This was contemporary with the Phase 3b of the inner annex ditch. This ditch also appears to have served a drainage function further to the south. The fields within the outer western annex were significantly larger than the

garden plots associated with the Phase 2 ringfort within the eastern annex, and the fields relating to Phase 4 are larger again. This may be indicative of an intensification of agriculture, or that the settlement had amassed a larger herd of livestock by this time, and may also represent changes in what was being produced within these enclosed spaces.

Phase 4 annexes

The Phase 4 settlement comprised a large central enclosure measuring c. 50 by 41m internally where the ringfort had previously been located, with an additional three large fields to the southwest, southeast and east. The enclosure formed by the Phase 4 ditches was now substantially bigger containing the western inner annex, the entire ringfort and the earliest eastern annex, with a northeast-southwest boundary ditch (C499) re-establishing the eastern extent of the earlier eastern annex and truncating the later eastern annex ditch to the south. This ditch also enclosed an additional space to the south of the inner annex ditches. This created a large enclosure focussed on the former ringfort with consecutive curvilinear ditches to the west (C58 and C127) forming internal divisions. The western outer annex ditch was still in use during this phase though only one sub-dividing ditch (C246) related to this phase. This suggests that a number of the fields within the outer annex were amalgamated during this phase.

Plan of Phase 4 of the early medieval settlement



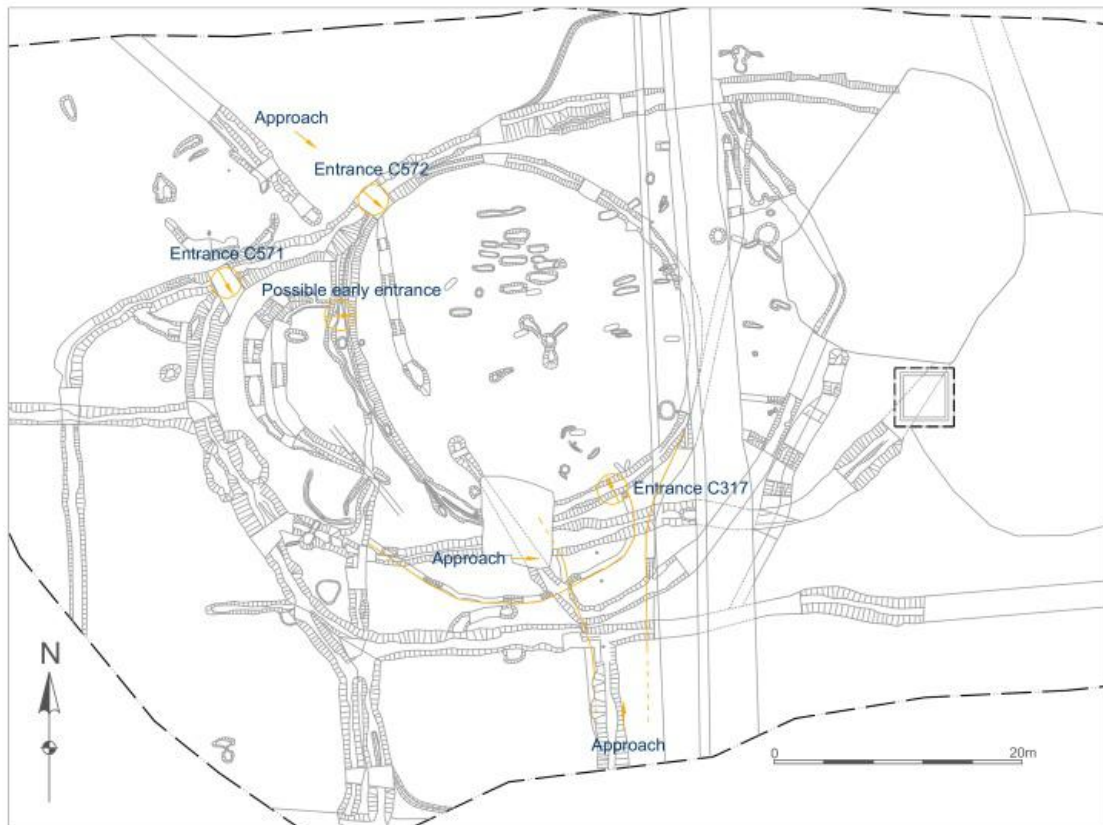
By the time of Phase 4 of the settlement, the original circular enclosure appears to have been infilled and amalgamated into larger agricultural enclosures. It is possible that Structure 3 to the northwest relates to this phase of the settlement, with the domestic focus shifting away from the interior of the ringfort. This may also be the phase where the kilns within the interior of the ringfort were established in a prime location, now made available by the shift of the domestic focus to the northwest.

The enclosed space within the western inner annex contained two shallow curving ditches. The earlier of these was contemporary with the later phase of the annex ditch to the north indicating that these features are relatively late in the evolution of the settlement, relating to Phase 4. The purpose of the ditches was unclear, however they truncated the backfilled ringfort ditch. They may represent an extension to the internal space enclosed by the central enclosure, suggesting that circularity had been abandoned by this time. A linear fence-line was identified to the east of this, also truncating the ringfort ditch. This may be related to the curvilinear

ditches, forming a straight side along their eastern side and creating a small D-shaped enclosure. A kiln (C410) was cut into the internal edge of the earlier curvilinear ditch. It may be contemporary with the later ditch and associated with an internal bank of the ditch, or post-date both of the ditches.

The full extent of the early medieval settlement was identified during the excavation. However, the central circular enclosure, and the attached enclosed annexes, are likely to be part of a larger agricultural landscape. The section of ditch radiating from the enclosure to the north suggests that fields associated with the settlement continued in that direction. The archaeological site is located at the northern end of an unusual spur of Alexander Reid townland, projecting further to the west than the remainder of the townland boundary. The townland boundary curves around the site to the north and west and does not follow any specific topological features. Sections were excavated through this boundary during the testing carried out in 2011 (Walsh 2011) and the monitoring phase carried out in 2016 (Clancy

Plan of the entrances and approaches identified



2016) revealing that only the modern cutting of the boundary survived, however, it is possible that it preserves the line of an earlier territorial boundary associated with the settlement.

Entrances

A possible entrance to the ringfort from the northwest was noted as a terminus of the Phase 1 ringfort ditch. The opposing side of this possible entrance had been truncated away by later phases of the ringfort ditch. This may suggest that the ringfort initially had two entrances. The establishment of the western annex in Phase 3 and the re-cutting of the ringfort ditch at that time removed this entrance.

The excavation also identified a second entrance to the ringfort from the southeast. Two phases of entrance were identified: an earlier metallised surface defined by a narrow gully, 1.76m wide; which was replaced by a later surface of flat stones 1.9m wide. The earliest entrance to the southeast related to Phase 1 of the ringfort, though fill was identified beneath the metallised

surface suggesting the ditch had been open for a period prior to the creation of the entrance. A phase of infilling had occurred within the ringfort ditch prior to the establishment of this entrance. The ringfort ditch was re-cut on either side of the metallised entrance at this time. It is possible that the original entrance to the ringfort was to the northwest, with the southeastern entrance added at a later time during Phase 1, however it is also possible that an entrance was always present to the southeast, perhaps via a temporary wooden bridge prior to the establishment of the metallised entrance feature.

The gully associated with the Phase 1 ringfort entrance curved west around the external side of the ringfort and appears to have defined the approach to the ringfort at that time. It was cut by the inner annex ditch indicating this entrance pre-dates the laying out of the annexes of the ringfort and relates to Phase 1 of the ringfort. During Phase 2 of the ringfort the access to the southeastern entrance appears to have approached from the south. Two narrow gullies defined this approach to the south of the entrance, widening as they approach the annex



View of paved entrance C317 looking south (top)

View of section through both phases of entrance looking west (upper centre)

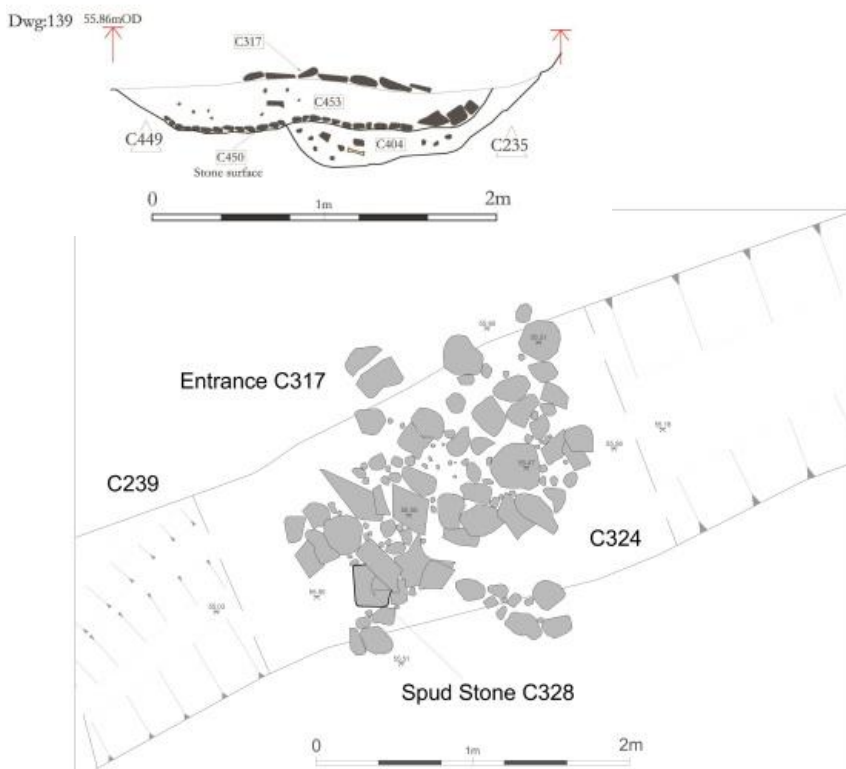
Northeast-facing section through both phases of the entrance (top right)

Plan of the paved entrance (bottom right)



ditch. As no crossing points were identified within the annex ditches, they may have been bridged by wooden planks. The approach to the ringfort from the south shows a change from the earlier period (Phase 1), where the approach had been from the west. There is also a shift from an approach curving around the ringfort to a direct approach.

A layer of fill lay between the metallised surface and the later stone paving possibly indicating a period when the entrance was not well maintained. The stone paved entrance was created at a higher level within the ditch and possibly relates to Phase 3 of the ringfort development. The re-cutting of the ditch to the east and west of the earlier entrance had filled in by this time and was not redefined during the creation of the new paved entrance. This would suggest that the ditch was significantly more substantial in the past than the surviving section excavated. Shaped paving stones show that some care and effort was put in to creating and presenting the entrance. A pivot stone was identified as part of the later surface on the external side of the entrance indicating a





Phase 4 entrances C571 (top) and C572 (bottom), looking west

gate or door was present in line with the exterior of the enclosing ditch. For the gate to form an effective barrier, some form of upstanding enclosing element must have been present on the external side of the ringfort ditch. While it is possible a bank was present here, these are usually on the internal side of the ringfort ditch, and the proximity of the annex ditch in this location indicates this is not the case. It is more likely that a fence line, or possibly a planted hedgerow encircled the ringfort on the external side of the ditch. There is a notable lack post- or stake-holes to suggest a fence, however the substantial scarping across the site may have removed any indication of these.

Two further entrance features were identified during the excavation, both relating to Phase 4 of the ringfort development and approaching from the northwest. One was located to the northwest on the opposite side of the ringfort

to the main entrance. This feature crossed the ringfort ditch and the partially infilled annex ditch. The 1.3m wide surface was of poorly-laid flat stones with occasional rounded stones. A concentration of cow long-bones arranged in a narrow linear band was identified below the surface, possibly used as levelling material, or a drain allowing water the pass under the surface. The approach to this entrance was defined by a ditch (C33).

Another entrance feature (C571) was identified connecting the enclosure centred on the site of the former ringfort and Structure 3 to the northwest. It was similar to the entrance to the northwest of the ringfort, poorly constructed and was identified at a similar level within the ditch. It was constructed over the

basal fill of the re-cut of the western inner annex ditch. It was a narrower crossing at 0.8m in width, likely to have been for pedestrian passage only.

The northwestern entrance feature and the entrance between the western inner annex and the northwest were not as well defined or constructed as the example to the southeast. Their location at the upper levels of the backfilled ditches indicates they relate to a late phase in the use of the ringfort, though it must be remembered that significant scarping has taken place across the site. It is interesting that the two entrances give access from the northwest. Could they relate to the Structure 3 located outside the settlement enclosures to the northwest? There was no surviving stratigraphic relationship between the structure and either of the entrances, though their proximity may suggest they are not contemporary.

The location of the entrance to the southeast corresponds with the predominant pattern of eastern entrance locations of ringforts (Cody 2007, 5). As well as being customary (Cody 2007, 5), a southeastern position for the entrance would mean that the banks elsewhere could provide protection from the prevailing southwesterly winds, and take advantage of the available sunlight (Stout 1997, 19).

As mentioned above, during Phases 2 and 3, the annex ditch to the south was separated from the ringfort ditch slightly at the entrance. This may have given the impression of bi-vallation, particularly when approached from southern the entrance.

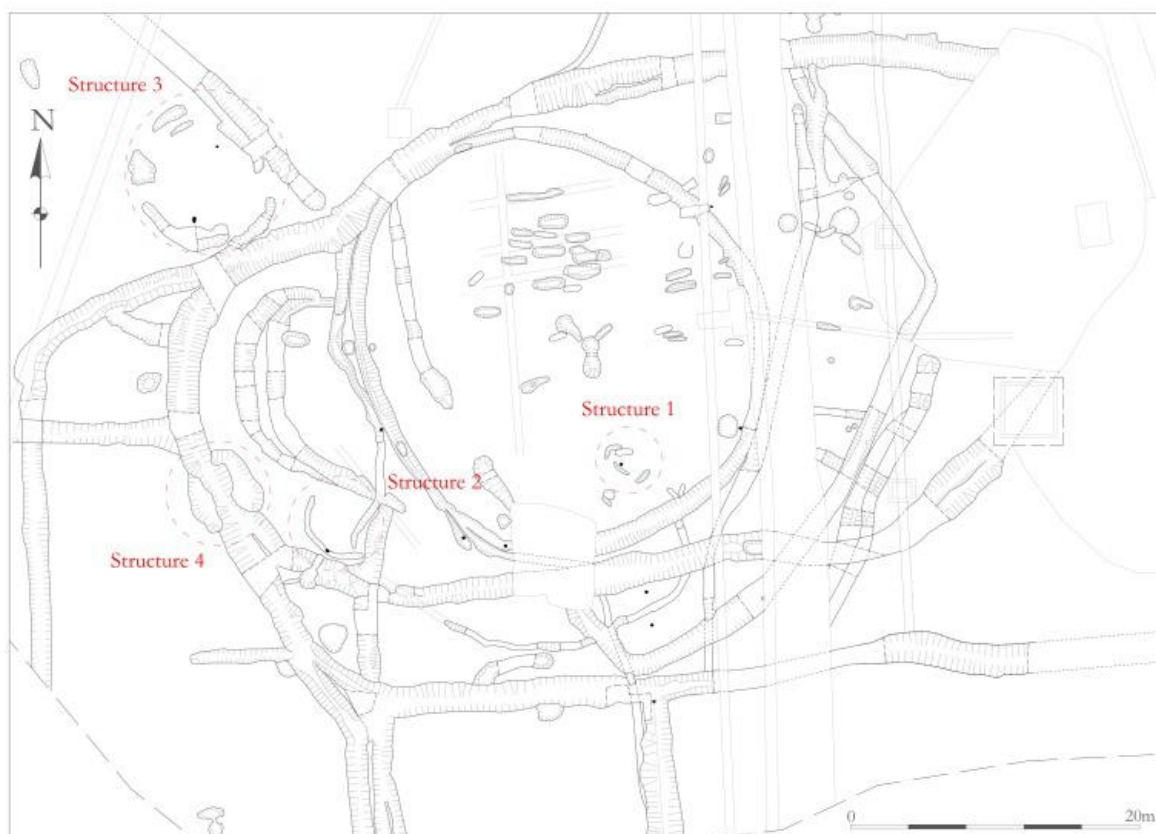
Structures

Three early medieval structures were identified on the site: one in the ringfort (Structure 1), one in the western inner annex (Structure 2) and a third in unenclosed space to the northwest of the ringfort (Structure 3). The first two may be associated with kilns, and the third may have

been a house. A fourth Structure (Structure 4) dates to the 17th century and is discussed in a later section.

One of the unfortunate results of the scarping of the site in the 19th and 20th century is the poor survival of features within the ringfort itself. Aside from kilns, the only features surviving within the ringfort enclosure that are likely to relate to early medieval activity are a small circular hut structure, two hearths, an isolated posthole, and three pits. The structure within the ringfort (Structure 1) consisted of a circular shallow slot trench surviving as two arcs (C315 and C379) with an entrance to the east. It was small at 2.7m in internal diameter. A single stake-hole was identified off-centre within the interior of the structure, and a nearby shallow gully may also have been related.

The law text *Crith Gablach* implies that typical farmer's houses were 6-8m in diameter (O'Sullivan and Nicholl 2011, 72). Many archaeologically investigated examples are smaller than this, at 4-5m in diameter (*ibid.*). The structure at Alexander Reid, with an internal



Plan showing the location of the structures identified. Structure 4 will be discussed in the 17th century section



View of Structure 1, looking northwest. The terminus of the southeastern slot trench can be seen to the bottom right indicating an opening to the east (top)

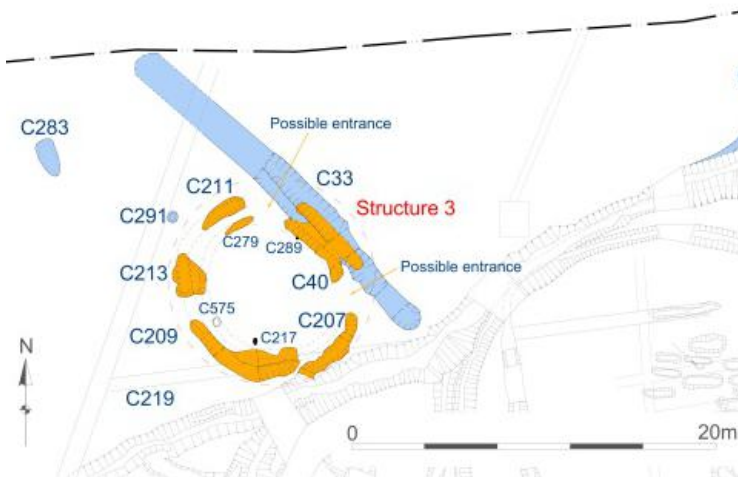


View of Structure 2, looking northeast. Only a C-shaped section of the slot trench survived and it was unclear whether this originally formed a complete circuit or represents an unenclosed windbreak (bottom)

diameter of 2.7m, is particularly small and may have served a non-domestic function. Its location directly in line with the entrance to the southeast may be of significance, possibly indicating the structure served as a guardhouse. Another possibility is that the structure relates to some form of craft activity being carried out within the ring-fort that could not be carried out within the house, or that was not desirable within the confines of the main living space. It is more likely, however, that the structure relates to the Phase 4 kilns to the northwest within the interior, set back from them and not downwind of the prevailing southwesterly wind.

The structure (Structure 2) within the western inner annex was represented by a shallow slot trench forming the south-

western third of a circular building. It is possible that the slot trench relates to a semi-circular structure, possibly a windbreak, though it is also possible that the slot trench originally formed a complete circuit and relates to a structure with a minimum diameter of 4.48m. If this were the case it must have pre- or post-dated the curvilinear ditches (C58 and C127) to the north and the ditches to the east (C129 and C309) as these lie in the path of the projected circuit, however a stratigraphic relationship with these features did not survive. A concentration of charred seed was retrieved from the fill of the slot trench, which lies directly northeast of



Plan highlighting the sections of Structure 3 (top)

View of slot trench C40 truncating ditch C33, looking northwest. The double slot trench is apparent in section and the reddened fill is also visible (bottom)

the kiln (C99) within the inner annex ditch. It is therefore probable the structure relates to the kiln. A rock-cut funnel was identified running up the side of the annex ditch from the firing chamber of the kiln and the drying chamber was not identified, and was probably directly above the firing chamber or above ground on the internal side of the ditch. While the scale of the structure make it unlikely that it represents the drying chamber, it may relate to the storing or processing of the grain.



The structure to the northwest (Structure 3) was unusual as it was located outside of the spaces enclosed by the ringfort and annex ditches. A ditch was located immediately to the northwest of the structure and had partially infilled prior to the construction of the structure. The structure survived as five slot trenches (C40, C207, C209, C211 and C279) forming a possible double-walled sub-circular enclosure, or a slot trench and drip gully, in either case measuring c. 7m in internal diameter. The internal diameter of

the outer slot trench was c. 8.5m. Two slot trenches were apparent to the north and east while only the outer slot was apparent to the south. The western side of the structure had been disturbed by a tree-bole and resembled an irregular pit, however the width of the feature was comparable to the two slot trenches to the north. Gaps were present between the slots to the northeast and southeast, possibly indicating the location of entrances. Further 'gaps' to the northwest and southwest appear to be the result of scarping. A kink in the southern side of the structure was also recorded, where two of the slot trenches did not join up neatly. Two small and shallow postholes or pits were identified within the interior of the structure along with a possible hearth to the southwest. A further two pits, one possibly relating to metal-working, were located to the northwest of the structure. There was an informal crossing point over the inner annex ditch to the south of the structure, however it is very close to the slot trench of the structure and may not be related. A second crossing of the annex and ringfort ditch to the east of the structure may be related. This crossing gives access to the ringfort from the northwest, possibly bounded by the ditch and probable associated bank to the east of the structure. While the ditch had been infilled prior to the construction of the structure

the bank or an associated fence or hedge-line may have still been partially in place. The possible entrances to the northeast and southeast point towards an approach running along the eastern side of the former ditch suggesting access to the structure was from that side. The structure is within the range of 6-8m for house sizes of typical farmers, as outlined in the law text Crith Gablach, and above the average 4-5m diameter of excavated examples (O'Sullivan and Nicholl 2011, 72). The double-walled round-house excavated at Moynagh Lough, Co. Meath, the largest excavated so far at 10m in internal diameter, had a double wall of post and wattle with infill material such as straw and ferns (Bradley 2003, 211) to provide insulation. There is evidence to suggest they were roofed with wattle also, explaining the lack of internal support posts (ibid.).

The fills of Structure 3 had a evidence for burning to the east and west. There was also a significant amount of burnt bone within the eastern slot trench. It is possible the reddened fill, charcoal and burnt bone relates to cooking carried out within the structure, though it is also possible the structure burnt down.

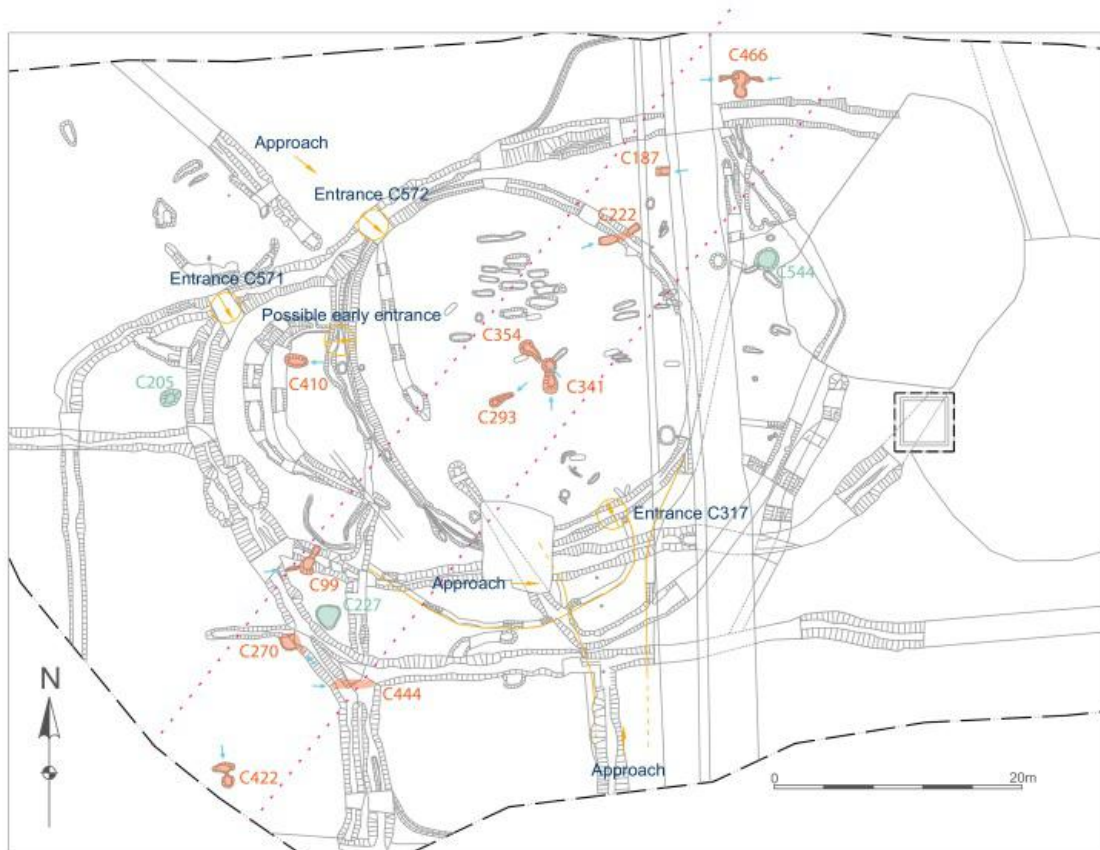
Kilns

The soils in the vicinity of the site are Street gleys to the west and Dunboyne grey-brown podzolics to the east (Fenwick 1997, 25). These would have provided good pasture land during the prehistoric period (Newman 1997, 233). By the early medieval period the soils in the vicinity of the site were being used for arable farming, as attested by the number of corn-drying kilns on the site. The expansion of the settlement

also saw an increase in the number of enclosed spaces, the size of these spaces and the overall area enclosed with relatively substantial ditches. It should be noted that earlier land enclosing may have used lighter fences or natural hedgerows that have not survived. While some of these are likely to have been animal enclosures and gardens, some are also likely to have been arable. Changes in population, changes in inheritance laws and its relationship to changes in the structure of kinship from derbfine to gelfine may have influenced this, however the social pressures of inheritance created a downward social momentum (e.g. Bolger 2011, 4-6). The fact that the enclosed spaces associated with the settlement at Alexander Reid appears to grow throughout its lifespan suggests different factors may be at play. Outside economic factors relating to the demand for grain or livestock from beyond the settlement may have influenced this, or perhaps a desire for non-contamination of different grains, or the addition of new crops being produced at the site. The scale of the increased enclosed spaces suggests that the settlement became more successful despite the pressures of inheritance law. Perhaps this was achieved by improving the output of the settlement. The number of kilns identified on the site indicates that cereal production was an important aspect of the agricultural output of the site and may have been key in not only maintaining the settlement, but growing it.

Eleven kilns or probable kilns were identified across the site. The locations of the kilns were interesting as they were generally located in a northeast-southwest band running across the entire site. They had a variety of forms and faced different directions. Three were located

Context	Location	Wind direction (from)	Shape	Phase
C99	Within inner annex ditch	W	Keyhole	Late 3
C187	Within eastern annex	E	Truncated	2
C222	Within ringfort ditch	WSW	Truncated	2
C270	Within boundary ditch to S	SE	Keyhole?	Late 3
C293	Within ringfort	NE	Truncated	4
C341	Within ringfort	S	Figure-of-eight	4
C354	Within ringfort	SE	Keyhole	4
C410	Within western inner annex	E	Keyhole	Late 4
C422	Within western outer annex	N	Figure-of-eight	3-4
C444	Within boundary ditch to S	W	Truncated	Late 3
C466	N of eastern annex	E and W	Figure-of-eight	Unknown



Plan showing the location of the kilns (in orange) identified during the excavation and the wind direction required indicated by the flues. The northeast-southwest trend in kiln location is highlighted in pink. The shallow processing pits, possibly relating to threshing and associated with the kilns are highlighted in green.

centrally within the ringfort, and a fourth cut, and was subsequently cut by, the ringfort ditch. A further three were located within the annex ditches, one was located in the western inner annex, one in the eastern annex, one in the western outer annex and a final one in unenclosed space to the north of the eastern annex. The lack of uniformity between the kilns suggests their forms were adapted depending on their location.

The kilns date to different phases and were not all in use at the same time. The earliest kilns appear to be those to the northeast (C222 and C187) as they are in a plot or garden defined by a Phase 2 sub-division ditch. The kiln truncating

the ringfort ditch is later cut by the re-cutting of the ringfort ditch in Phase 3. These are also located downwind of the settlement, an advantageous location with less chance of the spread of fire from the prevailing southwesterly wind. Three of the kilns (C99, C270 and C444) are within ditches relating to Phase 3 of the ringfort expansion, though are all likely to be late additions to that phase. The metalworking furnace to the east was also located within the partially-filled Phase 3 ditch. This indicates a change in focus of the processing activities on the site during Phase 3, with corn-drying and other industrial activities shifting to the south and southwest. This may relate to the Phase 3 expansion of the settlement, with these kilns pushed back away from the enlarged habitation area of the ringfort, and centrally located within the newly enclosed Phase 3 fields. An isolated kiln in Field 7 to the southwest of the site (C422) may relate to Phases 3 or 4. The three kilns (C293, C341 and C354) within the interior of the ringfort have no stratigraphic indicators to suggest what phase they relate to. However, their presence in the centre of the ringfort may



Figure-of-eight shaped kiln C341, looking northeast (top) and keyhole-shaped kiln C354, looking east (middle) located within the centre of the ringfort. Both kilns are likely to relate to Phase 4 of the settlement, when the settlement had shifted to the northeast of the original enclosure

Shallow pit C227 looking east, with metallated base in the vicinity of three Phase 3 kilns. This may be the remains of a threshing surface within a light barn

suggest they relate to Phase 4 when it appears the ringfort itself was amalgamated into a larger enclosure with the domestic focus to the northwest. Another kiln (C410) clearly related to the latter part of Phase 4, cutting one of the curvi-

linear ditches (C127) in the western inner annex. The final kiln (C466) lay to the north of the eastern annex. This substantial and well-constructed figure-of-eight kiln was unenclosed, though a shallow ditch to the north and west may have formed an insubstantial boundary around it. It is possible this belongs to Phase 1 or 2, as a Phase 2 field boundary ditch within the eastern annex runs directly towards it.

Usually kilns are situated away from the settlement area during the early medieval period, and they are not generally identified within the primary ringfort enclosure, perhaps due to the dangers of fire. This pattern can be seen at a number of early medieval settlement sites where multiple kilns have been excavated. At Raystown, Co. Meath all of the kilns in this intensive agricultural centre lay outside of the habitation areas (Lyons 2016, 124; Seaver 2016, 87). At Ninch, Co. Meath activities of a noxious or flammable nature were generally carried out away from the focus of settlement (McConway 2010, 171). At Rosepark, Balrothery, Co. Dublin (Carroll 2008, 163) numerous contemporary kilns were also identified. In that instance many of the kilns were dated to a similar time period, which Carroll (*ibid.*, 104) suggesting reflected high status and an intensification of farming in the area, including the cultivation of cereals and the malting of beer. The Rosepark kilns were also located away from the main settlement area (*ibid.*).

Early Irish law tracts stipulate that a kiln should not be placed within a certain number of paces of a dwelling house (Monk 1981, 227). Examples of kilns within the ringfort enclosure are known, for example at Ballynakelly, Co. Dublin a kiln was located to the east within the primary enclosure (McCarthy 2011, 241), and at Gortbruigane, Co. Limerick three kilns were located in the southeast of the enclosure (Long 2009, 23).

Monk points out that the early Irish documentary sources imply a close connection between the threshing floor and the kiln (Monk 1981, 228). This suggests that processing would have taken place in the vicinity of the kilns. It is possible that barns or light framed structures may have been used for this work. Evidence for this



Kiln C99 cut into Phase 3a western inner annex ditch and in turn was truncated by the Phase 3b ditch, looking southeast (top)

Kiln C222 was cut into the Phase 1 ringfort ditch and was truncated by the Phase 3 recutting of the ditch, looking northeast (bottom)

was identified during the excavation in the form of a distinctive broad shallow pits with hard stony bases, either intentionally laid or naturally occurring due to the underlying bedrock. Two of these (C227 & C544) were situated directly beside kilns, and the third (C205) was relatively close to a third kiln. These pits could have been surrounded by light fencing, or may even have been the base of a light structure, with the shallow 'pit' representing a threshing surface for the processing of the grain.

Kilns C99, C222, C270 and C444 are all constructed within ditches, which would have provided the kilns with shelter. Kilns constructed into the side of pre-existing banks or ditches have also been documented at other ringfort excavations, such as Baronstown, Co. Meath (McCormick et al 2011, 37), Moathill,

Navan (Giacometti 2011, 51), Brehon's Chair, Co. Dublin (Monk and Kelleher 2005, 84), and Kilmacredock Upper, Co. Kildare (ibid.). The location of kilns within enclosures may have provided protection from wind as well as livestock (McCormick et al 2011, 37).

Monk and Kelleher note that the drying floor of the kiln must be built higher than the hearth, and that the fire must be placed at ground level where there is stagnant air and where there is good airflow over the top of the kiln. This is in order to draw air through the flue and chamber in a process called the 'chimney effect' (Monk and Kelleher 2005, 95). This would necessitate the flue mouth and the fire setting to be at a lower level than the top of the drying chamber (ibid.). This was noted in three of the kilns at Alexander Reid (C99, C187 and C222) where the drying chamber did not survive. Two of these were cut into ditches with the firing chamber at a greater depth to the flue. The four kilns constructed within ditches on the site (C99, C222, C270 and C444), had kiln bases at a similar level to the base of the pre-existing ditch, and the top of the drying chamber must have been raised to above the level ground outside the ditch to allow for proper air flow.

Evidence for dumping of kiln waste material, either directly from the kiln, or as secondary deposit from a spoil heap or bank was identified within the inner annex ditch. The ditch was clearly being used for purposes other than as a mere boundary, and likely served as a work space and was also used for waste disposal. Both cereal processing and metalworking were carried out within the ditch at different times, and sections of the ditch may have been infilled and others open at various stages. The maintenance of the ditch as a boundary may have become less important at times with cereal production being prioritised, while at other times the boundary re-established and the kilns and other processing activities truncated. All four of the kilns located in ditches on the site were cut by later re-cutting events indicating the kilns were not constructed in ditches that had been completely abandoned as boundaries. Rather this demonstrates the flexible nature of these spaces which served numerous functions within the settlement.



Figure-of-eight shaped kiln C466 to north of eastern annex with flues to east and west

The kiln to the north of the eastern annex (C466) is unusual as both the flues fed in from the sides of the firing chamber, and the drying chamber was perpendicular to the flues. The flues were also at a higher level to the bases of the two chambers. The top of the drying chamber of this kiln must have been higher to create the 'chimney effect' and draw the air through the kiln. The flues on either side allowed the kiln to function in variable wind directions. This kiln was also unusual because it was located outside of the main annexes of the ringfort, though a shallow and poorly surviving ditch (C6) appears to have defined an enclosed space around the kiln. This ditch was identified in later monitoring on the site running down to the edge of the wetland area to the east, possibly representing a small additional enclosure relating to the kiln.

Two of the notable features of the kilns uncovered on the site were their variability in both shape and orientation. While the predominant winds are from the southwest, the positioning of the kilns indicate that various wind directions were allowed for. It is possible that numerous kilns may have been available for use at the same time to take advantage of this. In terms of form, four of the kilns are key-hole shaped, three figure-of-eight shaped, and four are too truncated to identify a distinct form. The three figure-of-eight kilns are located in open parts of the site, while two of the keyhole kilns are located within ditches and a third is located beside a ditch. There is no clear relationship between the shape of the kilns and the phasing of the settlement either, with keyhole and figure-of-eight shaped kilns present in both Phases 3 and 4. The Phase 2 kilns were too truncated to ascribe a type to. It is possible that, contra to Monk's hypothesis, in this instance the shape of the kilns was dependant on their location rather than temporal variation. Radiocarbon dating will be utilised to try and establish whether the kilns represent multiple phases of small-scale use or shorter intensive usage of many kilns at once,

and whether an intensification of kiln use coincides with the intensification of kiln use identified around Tara during the 5th and 6th centuries, and declining in the 8th century, perhaps reflecting the rise and fall of local dynasties (O’Sullivan & McCormick 2017, 109).

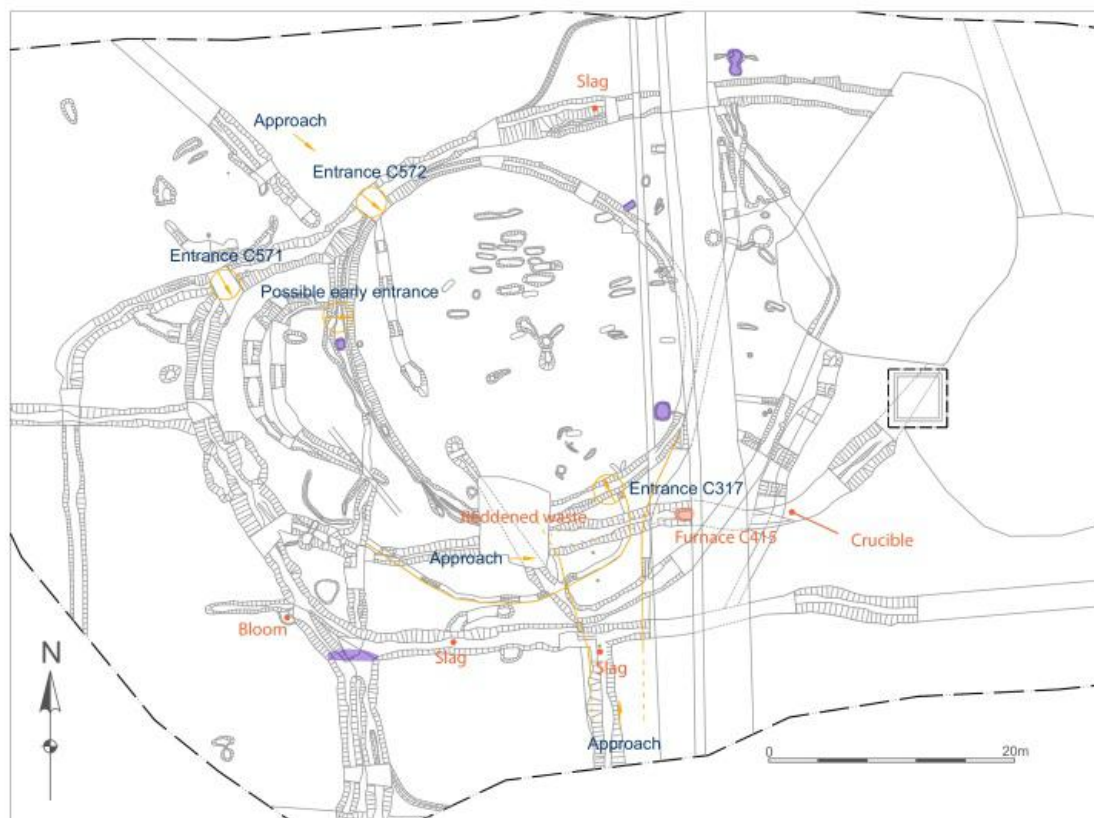
The majority of the kilns are located in a band under 10m in width running southwest-northeast across the site, with two outliers to the northwest and southeast. This band correlates with a ridge of higher ground, with the ringfort itself being on the high point of a low ridge. This ridge appears to have afforded a favourable location for kilns, perhaps due to having good airflow while still providing some shelter. This may explain the siting of the three kilns within the main ringfort at the highest point of the ridge. While it is possible that the kilns within the primary ringfort enclosure meant it did not function as a residence, it may also be that short-lived social, agricultural or climactic impetuses (such as a tribute demands from developing local elites around Tara, a bumper harvest, or a particularly wet harvest) necessitated kilns to be constructed and in the best location regardless of other considerations.

Metalworking

A metalworking furnace (C415) was identified within the southern ditch of the eastern annex. It was constructed on top of the partially-in-filled ditch. A drystone windbreak was identified along its northern side. As with the corn-drying kilns, the location of this feature within the ditch would have afforded it shelter and – crucially for metalworking – shade for viewing the colour of the flames.

Large quantities of metalworking residue and hearth cakes were retrieved from the furnace. A single square-headed nail was found within the metalworking residue. Waste for the furnace was spread over the partially infilled ditch to the

Plan showing the location of the metalworking furnace C415 and the crucible. The find spots of the other small quantities of metalworking waste are also indicated. Features that contained possible hammerscale or microslag are highlighted in purple and may be related to metalworking on the site



west and a metalworking crucible was retrieved from the ditch to the east. The crucible (16E449:537:1) was uncovered near the base of the ditch while the furnace was cut from a higher level suggesting the eastern end of the ditch remained open while the metalworking furnace was in use. The presence of the crucible have other implications, as they, along with tuyeres, may suggest that non-ferrous metalworking (Kerr et al 2013, 27). Though some previously analysed crucibles had iron residues, most tend to show traces of iron and copper (ibid.). As copper was under-represented on the site, with just one copper-alloy artefact retrieved, this may have implications for the economy of the site. Were copper-alloy items being manufactured here for trade elsewhere?

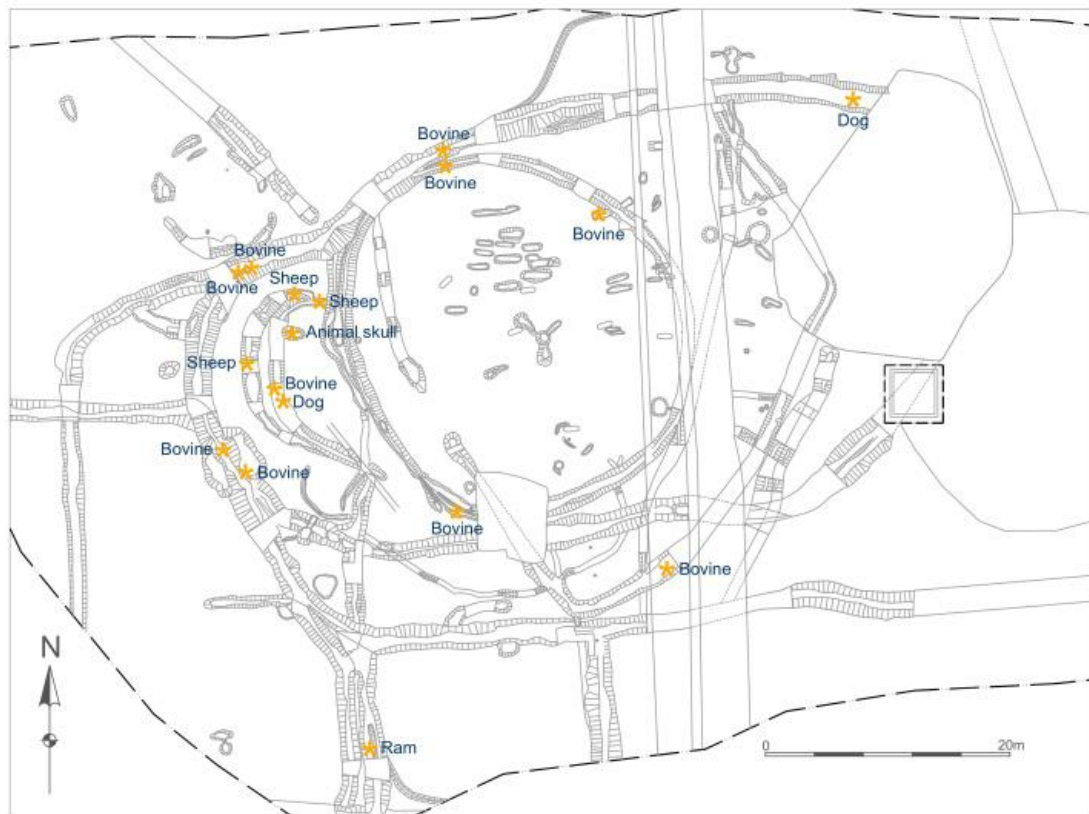
Metalworking residues were encountered elsewhere on the site also. Small quantities of slag were retrieved from the fill (C3) of the Phase 4 northern annex ditch. A sample of fused burnt bone in a residue from this context may also be related to metalworking waste. A small quantity of slag was retrieved from the Phase 4 annex ditch and the Phase 4 field boundary ditch to the southwest of the furnace. A small quantity

of bloom was retrieved from a kiln (C270) within a Phase 3 field boundary (C359) to the southwest of the ringfort. Fine magnetic material was identified within samples from three of the kilns (C222, C444 and C466) and two large hearth features at the edges of the ringfort (C30 and C240) possibly indicative of additional small-scale metal-working elsewhere on the site. The majority of these features relate to the later phase of the settlement, possibly suggesting that this was a later activity on the site.

Complete animal skulls

Complete animal skulls were identified during the excavation, and in a number of cases appeared to have been intentionally placed within features, possibly as ritual deposits. A cow skull was uncovered within the flue (C229) of a (Phase 2) kiln (C222). This had been placed facing upwards on the base of the flue and may have been intended as a terminal ritual deposit.

A truncated and poorly surviving cow skull was uncovered at the base of the Phase 2 eastern annex ditch (C159). The skull was badly dam-



Location of complete animal skulls on the site



Bovine skull, possibly a terminal deposit within the flue C229 of kiln C222, looking southwest (top)

Sheep skull at northern end of curvilinear ditch C58, which lies within the fill and may be waste rather than ritual deposition, looking east (middle)

Bovine skull buried in floor of Structure 4, looking southwest (bottom)

aged but appeared to have been placed facing upwards. The location of the skull at the base of the annex ditch near the point of connection with the ringfort enclosure may indicate intentional ritual deposition, possibly a termination deposit as this section of the annex ditch was abandoned prior to the establishment of the Phase 3 annex ditch.

The horns of a cow skull was retrieved from the upper part of the lower fill of the eastern annex ditch (C2). This had been truncated by the later re-cutting of the ditch. Immediately to the south of this, but within the ringfort enclosure ditch (C4), another horn was retrieved. All three horns had their sheaths removed indicating they had been processed, and the concentration of these in this location may imply a horn processing area relating to Phase 3 of the ringfort.

Five animal skulls were uncovered within the Phase 4 curvilinear ditches in the western inner annex. A sheep skull, positioned on its side, was identified at the northern end of the earlier of the curvilinear ditches (C127). At the mid-section of the ditch and near the top a cow skull was uncovered in an inverted position. Just to the south of this, a dog skull was retrieved near the base of the ditch, also inverted. At the northern end of the later curvilinear ditch (C58) a sheep skull was placed upright within a narrow section of the ditch. Another sheep skull was identified further to the south near the upper level of the ditch and did not appear to be intentionally placed. The placement of these skulls appears hap-hazard. Most

were within the fill of the ditches and they may have been deposited during waste disposal rather than as intentional ritual deposits. The sheep skull at the northern end of the later curvilinear ditch appeared to have more care in its

positioning. This may have been a ritual deposit, however, the presence of other animal skulls in the fills of the two ditches implies this area was used for waste disposal, including the disposal of animal skulls, and that the presence of complete skulls here may not have had any particular significance.

A dog skull was retrieved from the organic deposit within the latest phase of the eastern annex ditch (C2) to the northeast corresponding to Phase 4. This fill had a high quantity of animal bone and the skull is likely to have been included in a dumped deposit, and thus was not interpreted as a ritual deposit. A ram skull was retrieved from the basal fill of a Phase 3 field boundary ditch (C309) and a cow skull was uncovered at the base of the southern end of the 17th century burial enclosure ditch (C344). These also did not appear to be a ritually significant deposits.

Two cow skulls were incorporated into the 17th century structure (Structure 4) to the southwest of the ringfort. These were intentionally placed within the structure during its construction. One was built into the eastern end of the masonry wall (C116) to the southwest of the structure. It had been partially crushed by the masonry but had been complete when built into the wall. A second skull had been placed inverted at the base of the structure. A metalled surface formed the floor of the structure to the east of the skull, while the western end of the structure had an earthen floor into which the skull was incorporated.

Ó Súilleabháin (1945, 45) recorded the responses to a query sent out by the Irish Folklore Commission in 1938 on a tradition of burying animal heads or other objects in certain places. The responses indicated a tradition of animal skull burial, particularly horse but occasionally cow, existed in parts of the country in the 18th and 19th century. The respondents noted the burial of skulls under a flagstone or floor in front of the fire of houses where dancing would take place, and less commonly their burial under the floors of churches and into the walls of buildings (*ibid.*, 49). The reason given for the burial of the skulls was usually to provide an echo and amplification of either

dancing or speech and for luck, however Ó Súilleabháin believes the purpose of the tradition evolved over time and that the original reason for the placement of an animal skull beneath the floor was as a foundation sacrifice or offering (Ó Súilleabháin 1945, 50). An excavated example comes from Portmarnock, Co. Dublin. Here, a late 16th or early 17th century house had a single horse skull placed upright within the floor of the building when it was being constructed (Moriarty 2015). Another late medieval house on the site had eight closely-packed horse skulls placed inverted beneath the floor as it was being laid (*ibid.*).

The tradition is documented from the prehistoric period. An inverted horse skull was uncovered from a pit centrally placed at the entrance to an Iron Age annular enclosure (Linnane and Kinsella 2009, 18), and Newman (2011, 33) suggests that this infers not only horse sacrifice, but also the ritual significance of crossing over fertae or burial mounds as a form of claiming the land. Human skulls may also have been buried in this tradition, and a fragment of human skull was uncovered at the base of an early medieval kiln in Donacarney Great, Co. Meath (Giacometti 2010, 46). The practice of skull burial is also recorded outside Ireland, for example a horse skull was retrieved from an abandoned early Roman kiln at Walbrook in London (Seeley and Drummond-Murray 2005).

The burial of animal skulls at Alexander Reid may represent the continuation of a local tradition from the early medieval period to the early modern period. The two skulls from the 17th century sunken structure represent a tradition displayed in vernacular houses of the early modern period, associated with improving acoustics and providing luck. This was a ritual activity, possibly preserving an earlier tradition or ritual that was no longer properly understood. In the early medieval phase of activity, the ritual burial of some of the animal skulls may have had a different significance. Some of the skulls at Alexander Reid may have been used as decorative objects displayed around the settlement prior to their deposition, and some of them may represent a special offering or sacrifice, possibly in specific locations prior to the termination of features. In other cases the skulls

may have been deposited in features as waste, with no specific ritual significance.

Early medieval artefacts

Artefacts recovered during the excavation reveal aspects of life at the ringfort. A flint plough pebble and an iron plough coulter offer glimpses of the agricultural activities carried out on the site. Part of an iron shears indicate that sheep were being sheared for wool. Fragments of iron loops are likely to be from reinforced wooden buckets or barrels.

Iron pins and needles, a bone weaving tool, a stone loom weight, and a stone weaving tablet relate to the processing of wool and manufacture of clothing. Two burnishing stones may indicate leather working.

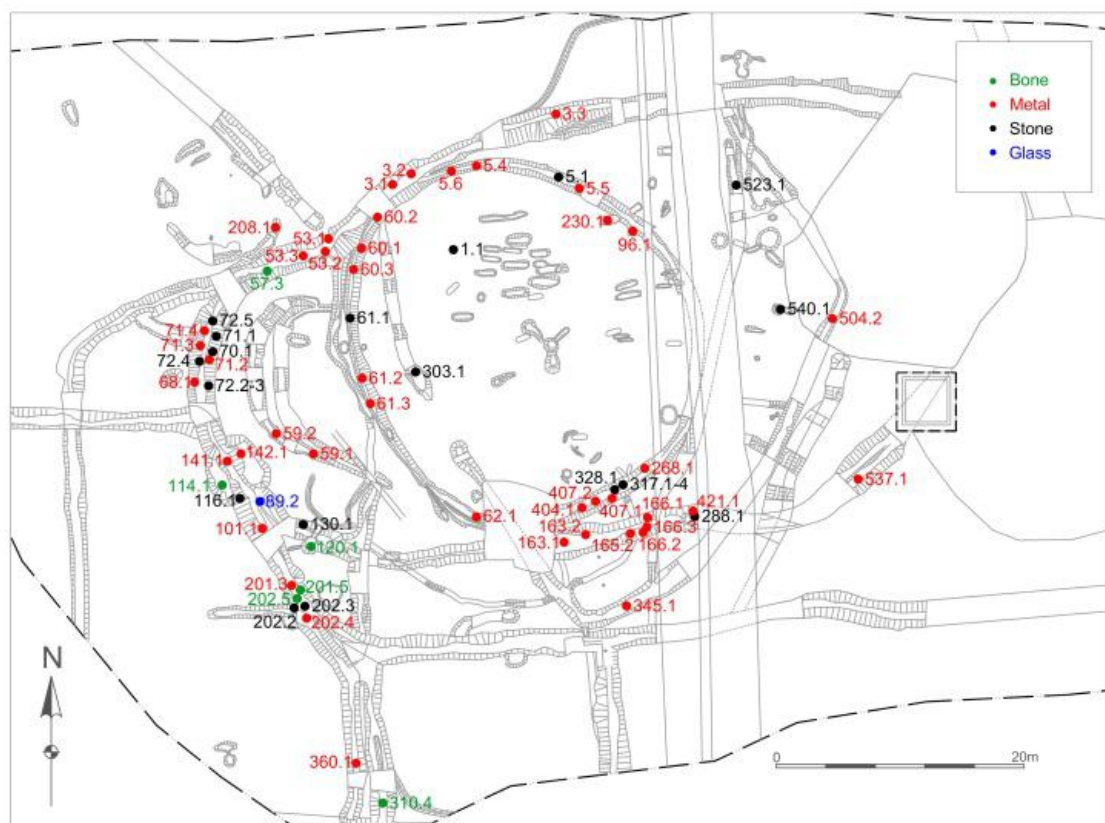
Iron tools such as (possible) chisels, a spatula, an iron collar for attaching a handle to a tool, and iron handles were retrieved, and may have been manufactured on the site. A hammerstone was likely to relate to either processing or in-



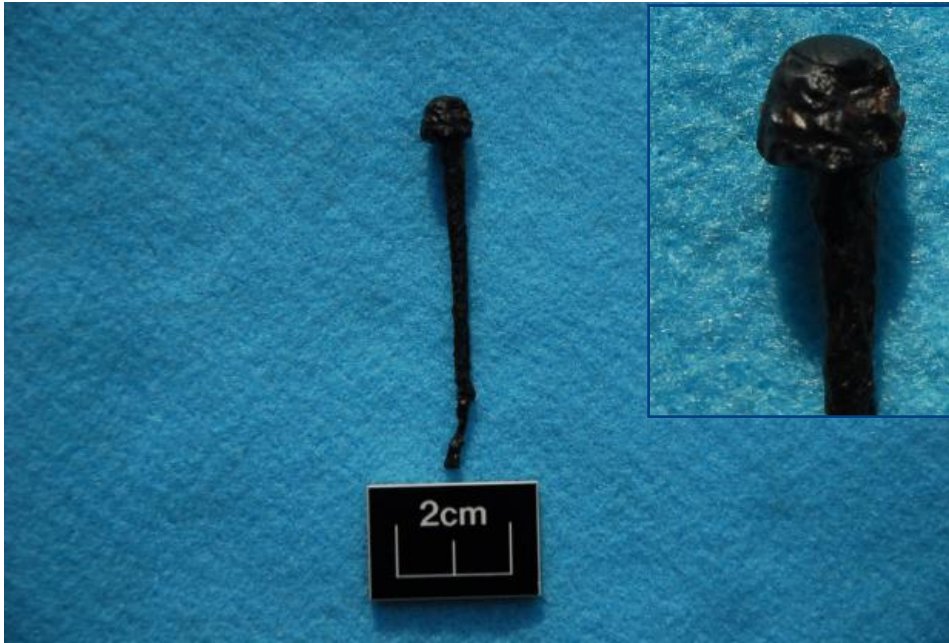
Plough coulter pre-conservation

formal maintenance on the site was also retrieved.

Ten iron knives were recovered from various parts of the site. A hone stone was also retrieved, which would have been used in sharpening knives such as the ones uncovered. The knives are all small and could have served multiple functions from use at mealtimes to craftwork.



Location of artefacts retrieved during the excavation



Glass-headed iron pin retrieved from the annex ditch to the north of the site with insert showing detail of head

The eleven kilns on the site indicate the importance of cereal production. Stone grinding slabs and a fragment of a quern-stone relate to this.

A fragment of a ceramic crucible was retrieved from the Phase 3 eastern annex ditch to the southeast, and may have been associated with the metalworking furnace (C415). Crucible fragments from ironworking have been retrieved from a number of early medieval sites such as Roestown, Co. Meath (O'Sullivan et al 2008, 78), Platin, Co. Meath (ibid., 92), Marlinstown, Co. Westmeath (ibid., 180), and Twomileborris, Co. Tipperary (ibid., 221).

A rudimentary stone oil lamp was uncovered on the site. This was a roughly fist-sized stone with a bowl chipped into one face. The opposing side was flat for the base of the lamp. Animal fat would have been burnt in the bowl to provide light. Simple stone lamps such as this are known from prehistoric times, for example the stone lamp uncovered at Phoenixtown 3, Co. Meath (Licence No. A029/012, E3130, Excavations Ref. 2007:1369), and were used until the medieval period. Examples have been found on early medieval ecclesiastic sites such as Ballywiheen, Co. Kerry (Licence No. 98E371, Excavations Ref. 1998:266) and the possible ecclesiastic settlement of Ardbraccan 2, Co. Meath (Licence No. A023/024, E3116, Excavations Ref. 2006:1487). They have also been uncovered at secular sites such as the royal site of Lagore Crannog, Co. Meath (Edwards 1990,

95), the ringfort at Crossnacreevy, Co. Down (Excavations Ref. 1971:12), the possibly Viking influenced cashel and byre house at Rinnaraw, Co. Donegal (Excavations Ref. 1992:032). A possible medieval stone lamp was uncovered during the excavation of a castle at Moyle Big, Co. Carlow and other more refined medieval lamps known as cresset stones are known from the 10th and 11th century (Ó Carrigáin 2009, 133).

Iron hooks, brackets and fixings relating to the structures and furniture of the settlement were uncovered, as well as early medieval nails (one nail found inside the ironworking furnace demonstrate these were manufactured on site). A fragment of iron possibly from a horse snaffle (similar to Seaver 2016, 142, ill. 7.16) and an iron ring may have formed part of a horse harness.

An iron pin with a glass head found in the annex ditch to the north of the ringfort was a decorative personal ornament. Two fragments of possible buckles were uncovered. A fragment of blue-glass bead retrieved from the inner annex ditch to the west, and the prong of a copper-alloy buckle or brooch retrieved from the eastern annex ditch to the southeast, were other personal ornaments. The side-plate of a bone comb of possible late 7th to early 8th century date (Ian Riddler pers. comm. 2017) was retrieved from the Phase 4 annex ditch to the southwest of the ringfort. A possible iron



Iron stylus (top) and possible second stylus or stick pin, both from the anew ditches to the west

more ornate stylus. They may be pins of some sort, however the interpretation of the objects as styluses (pointed objects for writing on wax tablets) or pins (pointed objects associated with dress) may be based on the ornateness of the decoration of the object. As styluses were associated with writing, considered a prestigious activity, they are assumed to be of higher craftsmanship. The latter two objects, also being made of iron, may be too simple to be interpreted as styluses, though it remains a possibility. It is also conceivable that styluses were worn as a pin, possibly as an emblem of

pommel retrieved from the Phase 1 ringfort ditch to the south and may be the remains of a dagger or sword.

An iron stylus of 7th to 8th century date (Ragnall O'Floinn pers. comm. 2017) was retrieved from the Phase 4 western inner annex ditch. Two further possible styluses were also retrieved, one from the Phase 4 western inner annex ditch, and the second from the Phase 3 western inner annex ditch. Both of these objects had a paddle-shaped head and slightly squared shafts. One was broken half way along the shaft. They were less decorative than the

the educated.

The presence of the stylus (or styluses) on the site is of great interest as it may indicate that at least some of the residents of the settlement were literate. Literacy in early medieval Ireland would not have been wide-spread amongst the general populace. Whilst literacy was strongly tied to early Christian monastic settlements (O Cathasaigh 1996, 59), it was not only confined to the clerics. Binchy suggests that the Latin alphabet came into use in native Irish law schools during the 6th century (Binchy 1961, 12). Other learned classes, such as the *filid*, appear to have

embraced both literacy and Christianity stage (Johnston 2013, 175). Some members of the noble classes would also have been literate, particularly as some were fostered by churchmen in their youth (*ibid.*, 168). Despite this, as Johnston (2013, 165) points out, writing was the skill of a small minority and was seen as special. The possession of literacy had implications for the control and distribution of information (*ibid.*), both in the religious teachings of the expanding Christian Church, for political aggrandising and other potentially propagandist secular uses such as in law making. Slane, situated 10km to the northeast of Alexander Reid, was a famous centre of learning during the early medieval period (Cogan 1862a, 61). Styluses are occasionally found on ecclesiastical sites, for example at Clonmacnoise, Co. Offaly (Licence No. E000558, Excavations Ref. 1998:548) and Roscrea, Co. Tipperary (Licence No. C325, Excavations Ref. 2010:631). They have also been retrieved from Viking contexts, for example Fishamble St., Dublin (Excavations Ref. 1977-79:037). An example has recently been recovered from a non-ecclesiastic early medieval site in Portmarnock, Co. Dublin (*pers. comm.* Gill McLoughlin 2017).

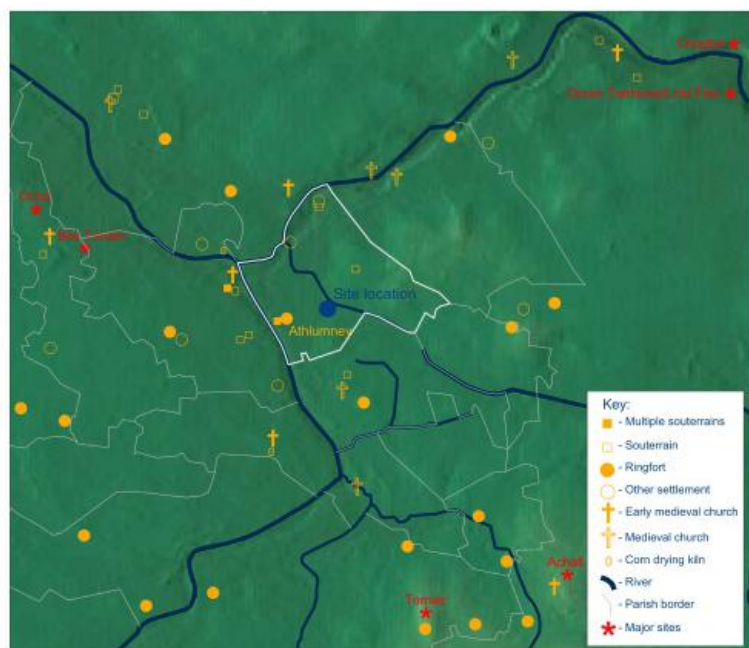
The early medieval church

The presence of possible styluses on the site leads to connotations of literacy, which was strongly associated with the early church. If this were the case, the existence of ecclesiastic associations for the site may have been a factor in the locating of the later burial ground on the site in the 17th century. The styluses from Alexander Reid may indicate that literate people, either from the secular or ecclesiastic communities, were residing at the ringfort, or interacting with those that resided there. They may alternatively indicate that the site had an ecclesiastical function. Excavations at a cashel at Owenbristy, Co. Galway which produced typical domestic waste, a small rectangular building and a cemetery (Delaney &

Silke 2011, cited in O’Sullivan & McCormick 2017) have raised questions about the archaeological indicators of ecclesiastical versus secular sites, and about whether distinguishing between the two is always useful.

Fundamental cultural and landscape change took place in the region, and Ireland as a whole, during the course of the 5th century, with the key among these being the arrival of Christianity from the Late Roman world and the introduction of literacy (Eogan 2012, 694). The expansion of Christianity saw the church spread throughout Ireland at this time, initially aiming to gain a foothold in the country and then aiming to extend their power and influence. The location of important early Christian sites immediately beside two of the royal sites of the *Síl nÁedo Sláine* indicates the influence they had gained over the overlords of Brega.

A number of early monasteries and ecclesiastic sites are known from the region in the vicinity of Alexander Reid. Ardraccan to the northwest and Slane to the northeast were early episcopal sees (Cogan 1862, 5). Donaghmore and Donaghpatrick, both to the northwest, were also notable early ecclesiastic sites. Slane was a noted place of learning in the 7th century (Cogan 1862, 61).



The siting of Donaghpatrick in close proximity to Rath Airthir and the ancient assembly place Tailtiu, demonstrates the influence of the incoming church on the earlier pagan and royal sites. The Síl nÁedo Sláine are likely to have had a significant settlement at Slane also, possibly moving from there to Knowth due the expansion of the ecclesiastic site at Slane (Eogan 2012, 775).

A 6th century foundation was reputedly located in Ardsallagh, southwest of the site, called Escair-Branain or Ard-bren-ndomnach (Cogan 1862, 113). Donaghmore, to the northwest, was an impressive ecclesiastic site with its round tower from the 9th or 10th century, it was founded by St. Patrick for St. Cassanus (Gwynn and Hadcock 1970, 34). Donaghpatrick or Domhnagh-mor near Tailteann was also founded by St Patrick, intentionally in close proximity to the pagan assembly place of Teltown. Fennor, to the south of Slane, was also an early ecclesiastic foundation reputedly founded by St Neachtain, a disciple of St Patrick (Cogan 1862, 136). Skryne, previously known as Achill and situated close to Tara, was the site of an important battle in the 1st century. An early abbey was founded here also, which by the 9th century held the shrine of St Colmcille, a nationally significant relic of the Irish church (Cogan 1862, 151). Ardmuchan, to the north of Alexander Reid, and Kilcarne to the south, are also early ecclesiastical foundations (Hogan 1910; Breathnach 2011, 129).

A monastery called Nuacongbhail was located in Navan near Alexander Reid on the site of the later Anglo-Norman Augustinian monastery (Cogan 1862, 150). The given Irish translation for Navan is An Uaimh, or 'the cave', however it may derive from Nuachongbhail, or new dwelling, a name frequently given to new ecclesiastic foundations (Moore 1893, 55). As such, the name Navan may derive from the early ecclesiastic settlement there, though this settlement must have been small and relatively insignificant as there is little reference to it in the annals (ibid.).

These early ecclesiastic sites show the expansion of the early church in this area. Powerful families of the area may have been keen to ally

themselves to the growing religion, which may have contributed to the rapid growth in early ecclesiastical sites in the region. As the centuries progressed, more monasteries were established in Mide and Brega than any other Irish over-kingdom, with the greatest houses owning large tracts of arable land (Byrne 1973, 269).

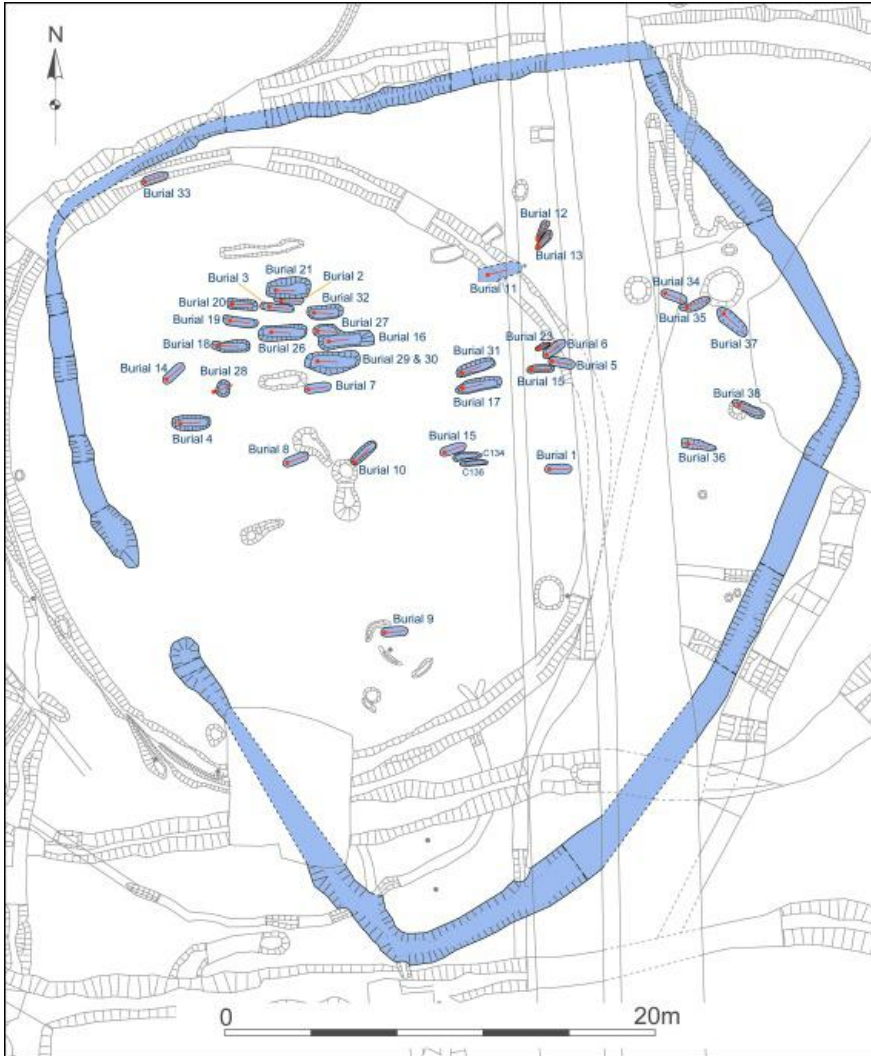
A number of early ecclesiastic foundations have not been identified, such as that of Inneidhnen or Indenen, believed by Cogan to be in the vicinity of Slane (Cogan 1862, 138). Another monastery called Liolcach situated near the Boyne in the vicinity of Slane has yet to be identified (ibid. 149). There is a possibility that the early medieval settlement at Alexander Reid was an ecclesiastic settlement.

The 17th century

The burial ground

The burial ground was contained within an irregularly-shaped enclosure measuring 37 x 33m. An entrance was identified approximately midway along the western side of the enclosure. The northern side of the enclosure followed the line of the northern annex ditch of the early medieval settlement, suggesting some element of this boundary was still extant when the burial ground was laid out. The burial enclosure truncated many of the ditches associated with the early medieval settlement, suggesting the majority of the settlement was poorly surviving by the 17th century. Five of the burials (B V, VI, XI, XXI and XXXIII) were cut into the back-filled ringfort ditch, clearly indicating it had been infilled before this. Other features relating to the settlement were also truncated by the later burials, with two kilns (C341 and C354) cut by burials (B X and B VIII) in the centre of the ringfort, four pits (C37, C392, C544 and C541) cut by burials (B III, B XXIX, B XXXV and B XXXVIII) and a boundary ditch (C520) cut by a burial (BXXXIV) in the eastern annex.

Burial within the enclosure was not dense, however the burials are all located in a relatively narrow east-west band to the north of the western entrance into the enclosure. This corresponds with the higher ground within the enclosure. A cluster of seventeen burials was



Location of the burials within the burial enclosure

evident to the north of the entrance with another cluster of eleven to the west of the laneway and another five to the east of the laneway. Only one burial (B IX) lay to the south of the entrance. A second outlier lies to the far north, near the northwest corner of the burial ground.

It is highly likely that a number of burials were truncated or disturbed during the laying out of the field boundary and subsequent laneway in the 19th century. A number of cut features were identified at the eastern end of the larger cluster of burials to the north of the entrance. Two later pits (C157 and C169) were found to contain disarticulated and semi-articulated human remains from several individuals, with one of

the pits clearly cutting two burials. These pits probably relate to the re-interment of burials disturbed during the laying of the later field boundary, avenue and garden furrows. The charnel remains in the pits were semi-articulated, suggesting the truncation took place prior to the decomposition of all connective tissue of the bodies. This suggests that some of the burials were disturbed and re-interred prior to full decomposition. The upper portion of burials (B XVIII, XIX, XX and possibly the lower portion of B XXVIII) were truncated by a furrow. One of the garden furrows appeared to run right over a fully cleaned-out grave cut. A disarticulated human femur was retrieved from the fill of this furrow.

Most of the burials were shallow and survived poorly, and had been truncated by later agricultural activity and the scarping of the site in the 19th and 20th centuries. The shallow graves may have been influenced by the underlying bedrock, though to the east where the burials are not cut through the bedrock outcrop they are not substantially deeper. None of the burials are thought to pre-date the post-medieval period, however this will be further assessed through radiocarbon dating.

The majority of the burials (18) were oriented east-west (feet-head). Four of the burials to the east were orientated WNW-ESE and an additional burial, also to the east, was orientated in a pronounced NW-SE direction. Eleven burials were orientated ENE-WSW, three in a pronounced NE-SW direction and one was orientated NNE-SSW. The reason for the variation in orientation was unclear. With some of



the burials orientated slightly north or south of standard east-west, the variation may be down to the time of the year giving a false impression of true east, though it is interesting that all the burials orientated WNW-ESE and NW-SE were clustered to the east. However this cannot be the case for the burial orientated NNE-SSW.

The burial ground may have been in operation for over a generation, as a number of the burials cut one another. For example, B XII truncated B XIII to the northeast, and burial B II truncated the fill of deeper burial B XXI.

B II with partial stone lining and B III to right, looking west (top left)

B XXX disturbed burial placed in a skull-and-crossbones position above the head of later burial B XXX, looking west (bottom right)

Burial B II was the only burial that had a partial stone lining (C44). Two flat slabs were placed under the legs of the individual and the remains of three thin upright flat stones were present along the northern side. One stone to the south may also have originally lined that side. Two flat stones were also placed over the right leg of the burial. Flat stones placed over burials were noted in four other burials (B IV, XI, XVII and XXIX). This practice may have been unintentional – the bedrock on the site formed in bands and was relatively soft, breaking in flat pieces. The stone may have been broken off during the digging of the graves, and placed on top of the burials carefully so as not to be thrown on top unsympathetically during interment. Possible earmuff stones were recorded, both to the south of the skulls, of B IV and B XXXVIII. Earmuff stones are known from early medieval contexts, though usually occur in pairs. It is unclear whether the stones uncovered within these burials were intentionally placed and intended as grave furniture. There is a possibility that the burial with the stone lining (B II) may date to the early medieval period, however it post-dates an earlier burial (B XXI) and forms part of the cluster to the north of the entrance that appear to relate to one another and have been buried in a similar orientation, so this is unlikely.

Burial B XXIX appears to have been buried within the grave cut of an earlier burial, B XXX, with the skull and long bones of the earlier burial being used to make a ‘skull and crossbones’ symbol at the head of the later



burial. The skull and crossbones symbol was often seen as a memento mori – a reminder of one’s mortality, and was occasionally carved onto gravestones. The use of symbols of mortality on sepulchral monuments became popular in Europe during the 15th and 16th centuries, appearing in Ireland from the 16th century (McCormick 1983, 278). Many skull-and-crossbone motifs are known from gravestones in Monaghan and Fermanagh, such as at Donaghmoyline graveyard, Co. Monaghan and Aghalurcher graveyard, Co. Fermanagh, however these are of a later 18th century date (McCormick 1983, 273). Some 17th century examples of skull-and-crossbones are known, however, such as on the Cheevers Slab in Athlumney graveyard to the east of the site, dating to 1692 (RMP files). A grave-slab from Bangor Abbey, Co. Down is dated to 1620 and includes the text ‘Memento Mori’ above (Bigger and Hughes 1900, 197). Another 17th century example from Kildrumfertan Church, Co. Cavan is dated to 1688 and again includes the memento mori text (O’Connell 1927, 76). An earlier example from the Protestant parish church in Enniskillen dates to 1627 (Bradshaw 1878, 50).

The displacement of bones, especially long bones and skulls through later truncation, is frequently identified on burial sites. It occurs in busy graveyards, though this does not appear to be the case here, as much of the burial ground was unused. Aside from the slope off to the south there is no identifiable reason for the clustering of burials to the north of the entrance. Another reason for the displacement of an earlier burial is if burials are not marked, leading to the accidental truncation or partial truncation during later grave-cutting. This

may have been a factor at the Alexander Reid burial ground, demonstrated by the intercutting graves at different alignments. A third explanation could be familial graves, where later members of the same family are buried within the same plot or grave cut. This appears to be the best explanation for the skull-and-crossbones burial, with the earlier burial (B XXX) being moved into a memento mori position, possibly as an act of respect, during the burial of the later individual (B XXIX).

A small assemblage of finds were associated with the burials. A simple silver ring with a turquoise stone setting was uncovered within burial B XI. The ring was retrieved from near the right hand of the burial. This burial was truncated by a modern service trench and it is possible the ring was dislodged during this truncation. An iron hobnail was retrieved from the edge of the grave cut for B III. The grave truncated an



B XI cutting ringfort ditch and truncated by modern service trench, looking west (top)

Detail of pelvis of B XI with rig 16E449:96:1 visible to side of right arm - left of image (bottom)

earlier pit (C36) at this point and it was unclear whether the hobnail related to the pit or the grave cut. A small lead ingot or weight was retrieved from B XXI. The reason for the inclusion of this artefact within the grave cut was unclear and there is a possibility that it relates to an earlier phase of activity on the site.

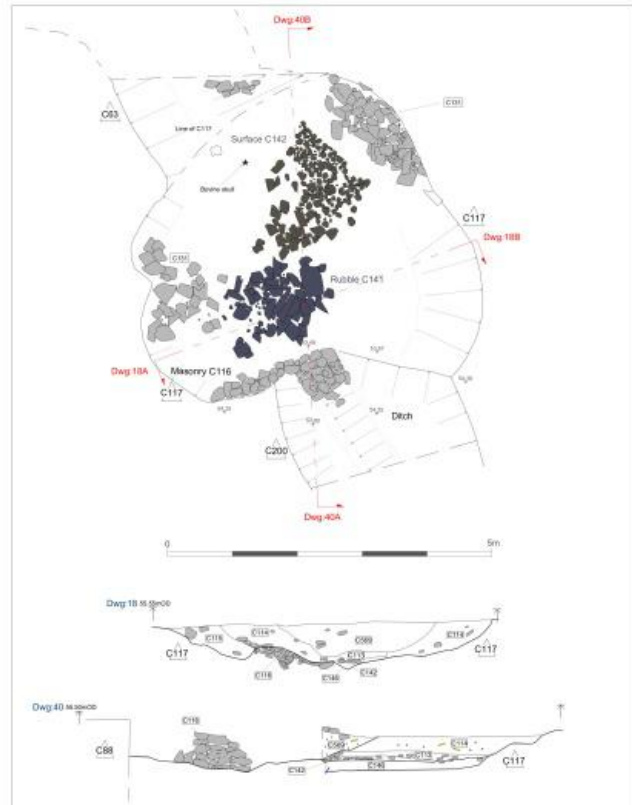
A possible church? (Structure 4)

To the west of the burial ground a masonry structure (Structure 4) was identified. This was cut into the inner annex ditch of the early medieval settlement and was accessed by a partially sunken pathway to the northwest that turned to run off the site to the west.

The structure (C116) had masonry foundations below ground lining the cut, and the superstructure was probably made of sod or mud. The original form of the structure is unclear, though it appears to have had curving sides. The entrance was to the north, accessed from the pathway. The structure was probably recessed into the ground to provide additional shelter, though its purpose remains elusive. The interior of the structure was approximately 3.6m by 3m, small for a dwelling. It is possible it may have been related to the adjacent burial ground, perhaps used as a small mass house during funerals. Fragments of iron were recovered from the fills within the structure, though nothing diagnostic.

A cow skull had been built into the southern foundation wall, and a second inverted cow skull had also been constructed into the clay floor of the structure to the west. The eastern side of the structure was roughly floored with flat angular stones and small rounded pebbles. As discussed previously, animal skulls were occasionally inserted below the floors of vernacular structures and churches, either for luck or because it was believed to improve the acoustics. Typically altars are located at the eastern end of churches with the congregation facing east. The stone surface may relate to the part of the structure reserved for the altar and the priest.

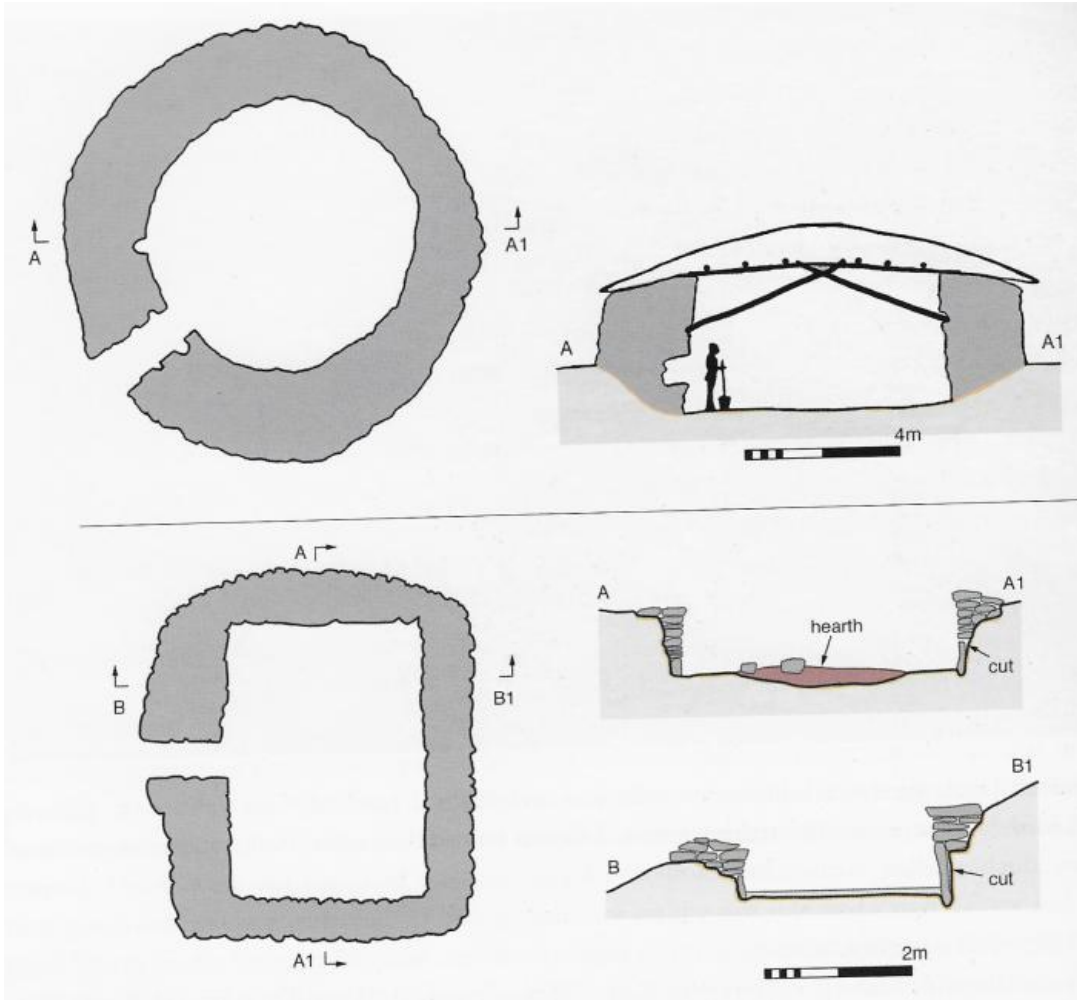
The structure had been partially dismantled after it had gone out of use. A squared pile of stones over the collapsed fill of the sunken structure, away from the walls, was clearly intentionally placed, possibly for reuse elsewhere. A charcoal and animal bone rich layer was uncovered in the southwestern part of the



Mid-excitation plan and sections of Structure 4

View of Structure 4, looking southwest





Plans and sections of sunken early medieval houses from Beginish (top) and Inishkea North (centre), after Cotter 2012, 286, fig. 13.31 & 13.32

19th century photo of sunken structure at Mweenish in Connemara, after Cotter 2012, 287, fig. 13.33 (bottom left)

structure, however this overlay the collapsed stones. This must postdate the collapse of the structure, or may have been disturbed from elsewhere during its demolition. The lack of stone to the southeast may indicate that stone was removed from the structure for use elsewhere after it had gone out of use.

Buildings with sunken floors are known from early medieval sites in Ireland, such as Dún Aonghasa, Co. Galway, Beginish, Co. Kerry, Inishkea North, Co. Mayo and Truskra, Con-



nemara (Cotter 2012, 285). Beginish and Truskra were suggested to have had Hiberno-Scandinavian influences, with aspects of the structure and the associated sunken pathway having comparisons in the Scandinavian world (ibid., 286). A much more recent vernacular example from Mweenish, Connemara was described by ethnographer Charles Browne as ‘...the most primitive type of house yet met with in the course of these surveys are to be seen on the islands of Mweenish and Mason; these are dug out of the sandhills and lined with walls of dry stone; the roof is low with scarcely any pitch, and the walls rise above it to the height of two or three feet to prevent the strong gales of autumn and winter from blowing the thatch away. There is no window, a space a foot or so in height being left at the top of the door to admit light and air. These houses are of small size, about 10 feet by 8 feet and consist of only one room’ (Browne 1900-1, 542, cited in Cotter 2012, 287). The description of the Mweenish house could be a close match for the structure

at Alexander Reid. The trend for the other sunken houses mentioned above noted a distinct western trend in their location, with their sunken, hunkered down appearance suggested to relate to their exposed and coastal settings. The use of this western coastal building form in central Meath is certainly unusual. However, perhaps the building form was selected for its low and unassuming form, rather than sheltering from Atlantic storms perhaps the building was attempting to shelter from storms of a social nature. If the building does indeed represent a church, this building form would have attracted the least attention possible at a time when over signs of Catholicism were repressed.

Bailis Chapel

The first Catholic chapel erected after the Reformation within Athlumney parish was in the townland of Bailis or Alexander Reid (Cogan 1867b, 242). The land was granted by Lady Dowdall of Athlumney (*ibid.*). Unfortunately, her maiden name is not recorded so an exact date cannot be established. There are references to a chapel in Bailis townland in 1669, 1670, and 1671, when Dr. Patrick Plunkett, Bishop of Meath, held ordinations there (*ibid.*). The Dowdalls remained Catholic throughout this period and supported the Jacobite cause during the Jacobite-Williamite War of 1688-1691. Cogan notes that the chapel continued to be used as a place of worship until Protestant named Eklin, a soldier in the Siege of Derry, came into possession of the property, after which he closed up the chapel saying 'he would lose no ground with mass-houses' (*ibid.*).

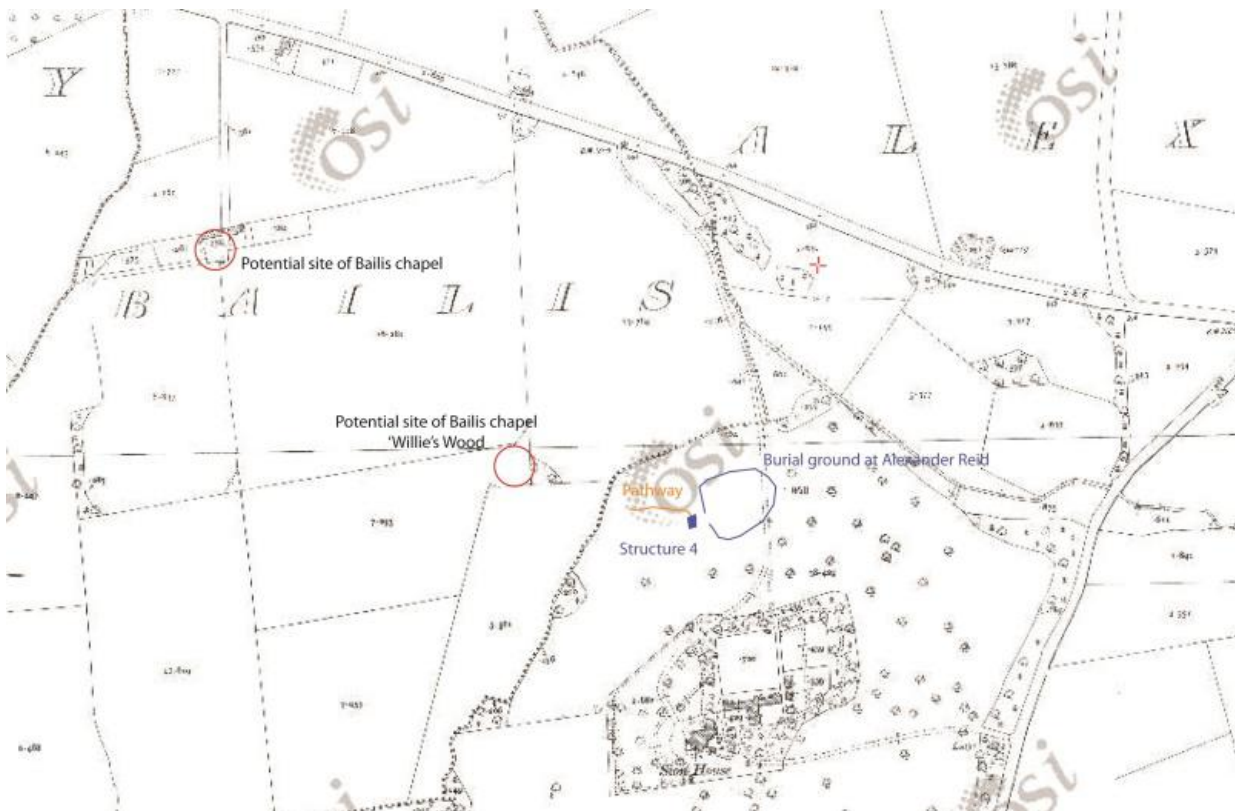
The Siege of Derry occurred in 1688-1689 and the Penal Laws were introduced in the 1690s. The chapel in Alexander Reid or Bailis probably lasted until the early 1690s. Launcelot Dowdall, the last of the Dowdall's of Athlumney Castle was a Catholic and supporter of James II during the Jacobite-Williamite war of 1689-1691. He would have forfeited his lands due to the Williamite victory and so burnt his castle to the ground and fled the country (RMP files). It is likely that after this at least part of his lands were given over to a veteran of the Siege of Derry, Ecklin, who stopped the use of the Catholic chapel at Alexander Reid. This sug-

gests the church at Alexander Reid or Bailis was present from at least the 1660s until the early 1690s.

Another site was granted by a Mr. Cusack in Johnstown townland after this, interestingly identifying a Cusack connection surviving in the area to that time, and the church is recorded as being a mud-wall thatched edifice (Cogan 1867b, 242), probably not dissimilar to the earlier church in Alexander Reid or Bailis. After this decayed, a site was granted by a Protestant named Noey with a thatched mud-walled house again sufficing as the church (*ibid.*, 243). This lasted for around 73 years, with the current Johnstown Church built on the same site in 1837 (*ibid.*). This would put the construction of the church on Noey's land at about 1764.

Vincent Mulvany of the Navan and District Historical Society carried out research on the Bailis chapel in the 1990s, asking a number of older locals about the folklore surrounding the location of the site (Mulvany 1998). Two possible locations for the site of the church were suggested, both to the west of the current development in Bailis townland. The first was at a place known locally as 'Willie's Wood', which lay directly to the west of the site. A survey of this site was carried out in the 1990s by Meath County Council as part of the Navan Area Development Plan, which detected the sub-surface remains of an oblong building (*pers. comm.* Vincent Mulvany 2017). This site is preserved within a green space in the housing development to the west. A second site is also suggested by a number of locals at the end of the lane to Bailis farm, further to the northwest of the site (Mulvany 1998).

Mulvany also notes a record of the local history of Johnstown parish by the Johnstown I.C.A. Guild in 1985, which stated that the Old church of Bailis was levelled during the 'Cromwellian Invasion', and that the ruins of the church were obliterated during tillage operations a few years previously (*ibid.*). This may suggest that two Catholic chapels had been constructed in Bailis townland, one destroyed during the Cromwellian conquest of Ireland between 1649 and 1653, and another present from at least the 1660s until the beginning of the 1690s.



1910s OS map with potential sites for Bails chapel as identified through folk memory highlighted (information courtesy of Vincent Mulvany) and the location of the graveyard and possible church at Alexander Reid

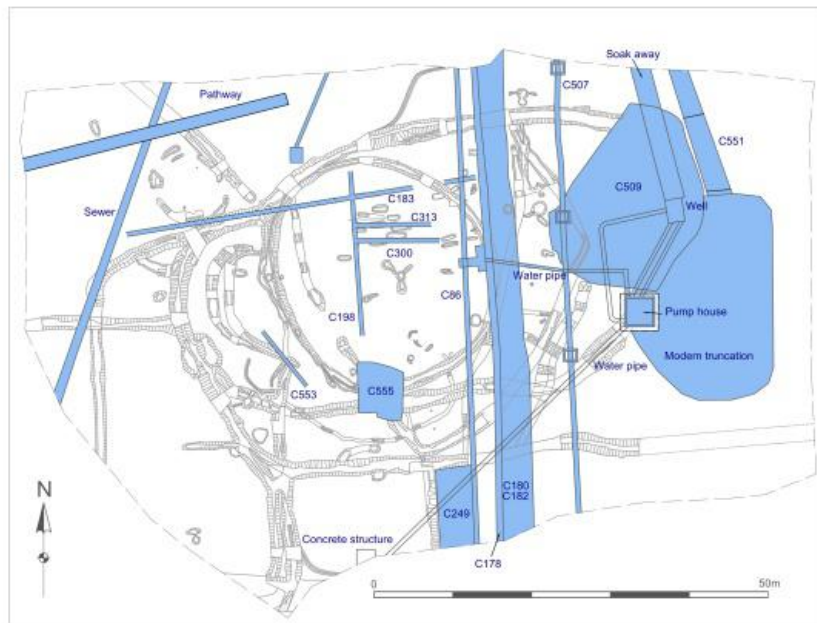
There is no record of a burial ground relating to the church, however burial must have taken place somewhere. The Dowdall's remained Catholic throughout their reign at Athlumney until the early 1690s and would have allowed the local population to continue in the Catholic faith without hindrance. The burial ground is likely to have been used by the local population, the shallowness of the grave cuts may suggest a relatively poor population. While the folk memory of the chapel location place it off the site to the west, it is possible the structure identified during the excavation (Structure 4) may have served as a small chapel or mass house associated with the graveyard. As these small mud-walled structures did not survive for long periods it is possible that both the site at 'Willie's Wood' and Structure 4 in Alexander Reid both served as chapels. The path leading from Structure 4 to the west runs in the direction of the 'Willie's Wood' site. Could these both have been chapels in the 17th century, with the burial ground potentially staying in use throughout?

The site at Alexander Reid may have been chosen as a burial location due to some survival of it in local memory, perhaps as an old settlement, or even an old ecclesiastic site. During the excavation a local person referred to the site as 'the Cillín', suggesting a local tradition of a children's burial ground at the site. This was not found to be the case during the excavation, though a number of younger individuals were interred as part of a mixed population.

So why is there no record of the excavated burial ground? The key reason may be in Cogan's note on the new landowner in the 1690s, Eklin. The following years saw the Penal Laws come into effect and the suppression of the Catholic religion in Ireland. The field boundary truncating the site, which dates to the 18th century at latest, truncates both the burial enclosure and earlier settlement. No attempt appears to have been made to avoid a site that was, in all likelihood, of relatively recent date when the field system was being laid out. Could this be an intentional destruction of a commoner's graveyard during the laying out and improving of the land in the 18th century?

Subsequent truncation of the site largely relates to this new boundary, with the later 19th cen-

tury avenue following the same line and the furrows to the west running perpendicular and parallel to it. It is unclear when the site was levelled and the top of the ringfort scarped and the lower-lying areas to the south infilled, though it may also have taken place at this time. The lack of care shown to the burial site suggests either the memory of the graveyard had diminished, or a change of ideology where no importance was given to those that were interred there. The change of ownership of the Athlumney estate at the end of the 17th century corresponds with the start of the Penal Laws, a low point in the treatment of Catholics in Ireland. The site demonstrates that the divergent ideology of the new landowner meant that the graveyard was not only abandoned, but destroyed during this period.



Modern truncation of the site (top)

Google satellite image of the site (middle)

Oblique aerial view of the site, looking southwest (bottom)



Section 4 Specialist Reports

Specialist analysis and reporting on the archaeological material retrieved during the excavation is currently being carried out. The final findings of excavation informed by the specialist analysis will be compiled in a final report once this work is complete.

Environmental analysis

The environmental analysis for the excavation is being carried out by Lorna O'Donnell. Over one hundred environmental samples were taken during the excavation. It is hoped that the analysis will provide information on the environment and land use in the vicinity of the site during its use, as well as providing information on wood selection associated with kilns on the site. An organic sample was taken from the fill of an annex ditch to the northeast of the site. We aim to have this material analysed to shed further light on the wetland area that formed part of the boundary of the settlement during the early medieval period. Charcoal will also be selected from these samples to be sent to Queen's University Belfast for dating radiocarbon dating. This will target the various phases of activity of the settlement as well as the later burial ground.

Due to the large number of kilns uncovered during the excavation, a substantial quantity of charred seeds were retrieved. These will be assessed and analysed by David Stone.

Finds analysis

A nice assemblage of metal artefacts was retrieved from the site. These are currently undergoing conservation and will then be sent to Cormac Bourke for analysis and recording.

The glass-headed pin will be sent for additional

analysis to Mags Mannion, who will also look at the blue glass bead from the site. We are currently sourcing a specialist in 17th century jewellery to analyse the ring uncovered in Burial 11.

A limited assemblage of worked bone was retrieved from the site, which will be analysed by Ian Riddler. The post-medieval pottery is being analysed by Antoine Giacometti. Sean Sharpe is conducting analysis on the lithic assemblage and Niamh Kelly is analysing the ground stone tools from the site.

Metallurgical waste

Samples from the furnace within the annex ditch to the southeast of the ringfort were taken along with a number of other metalworking residues retrieved from elsewhere on the site during the course of the excavation. These have been sent to Brendan O'Neill in UCD for further analysis. Brendan will also be analysing the metalworking crucible fragment found during the excavation.

Osteological analysis

Thirty eight burials were excavated during the course of the excavation. A number of additional ex-situ burials were also uncovered, which had been reburied in pits after being disturbed by later activity on the site. Initial processing of the human remains was carried out by our forensic archaeologist, Paula Kehoe. Sixty eight samples relating to the burials were also taken during the excavation. These have also now been processed. The remains will now be sent to our osteoarchaeologist, Denise Keating for analysis and reporting.

The animal bone from the site is being analysed

by Emily Murray. She will be reporting on the diet and animal husbandry carried out on the site, adding to the picture of how life was on the site during the early medieval period. She will also be analysing the cremated animal bone from the site. At present it is not believed that cremated human remains were uncovered during the excavation. A small assemblage of fish bone was also retrieved, which will be analysed by Sheila Hamilton-Dyer.

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