

Preliminary Excavation Report Readsland, Dunshaughlin



MCGLADE 09/04/2020 LICENCES 15E0125 & 18R0174 D13A/0285

VOLUME 1

SITE NAME

Readsland, Roestown and Knocks, Dunshaughlin, Co. Meath

CLIENT

Castlethorn Construction Ltd., Ussher House, Main St., Dundrum, Dublin 16

LICENCE

15E0125 & 18R0174

PLANNING

Meath Co. Co. Ref. D13A/0285

REPORT AUTHOR

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DATE

9th April 2020

ABBREVIATIONS USED

DHCG	Department of Culture, Heritage & the Gaeltacht
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

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Acknowledgements

Firstly, I would like to thank Castlethorn Construction for funding the project, in particular Eddie Leavy and Brendan Dunne for all their assistance throughout its long duration. Thanks to all at Burke Construction for their help with machinery and to Paul Meade for surveying the site.

Thanks also to Matt Seaver, Antoine Giacometti, Claire Cotter, Aidan O'Sullivan and Conor Newman for their advice during the post-excavation process.

Thanks also to the specialists for the project, notably Lorna O'Donnell, Jonny Geber and David Stone whose enthusiasm and advice during the excavation was greatly appreciated. Thanks to the many specialists who are working on the finds, environmental remains and bone retrieved during the excavation, I would like to particularly thank Brendan O'Neill for taking on the metallurgical waste analysis, who advised continuously throughout the excavation of the metalworking area ensuring we were able to achieve the best record possible, which will benefit the analysis currently being carried out on the material.

Staff

I would also like to thank the hard work of the crew, through drought and flood! It was tough at times but fantastic to work with you all.

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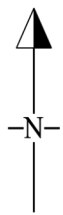
Section 1 Introduction

Report summary

This report presents the stratigraphic report and initial findings of an excavation spread across seven fields in Readsland, Roestown and Knocks townlands, which was carried out from May 2018 to March 2019. An early medieval cemetery-settlement was identified in the northern field during the initial geophysical survey and testing carried out on the site in 2009. The proposed development was subsequently redesigned to preserve the central enclosure of the settlement in situ.

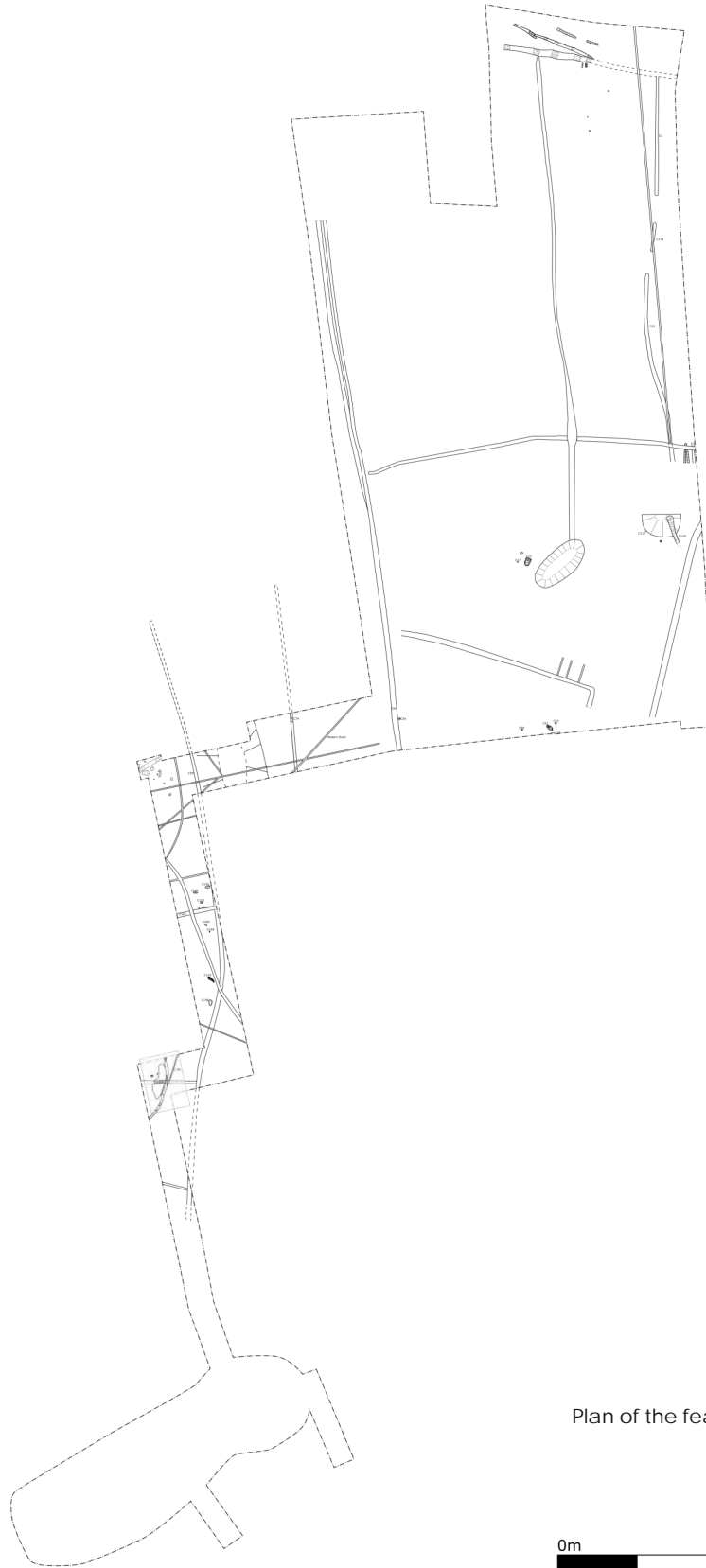
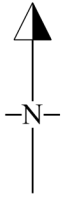
A series of enclosures and annexes were uncovered on all sides of the central settlement enclosure during the excavation. Both rectilinear annexes and crescent-shaped annexes were identified, which evolved and were expanded or replaced throughout the lifetime of the settlement. A number of entrances were identified associated with the annexes, with a masonry entrance feature to the north being the best surviving example.

A substantial ironworking area was uncovered in the northern annex with over a tonne of



Overall plan of the features identified in Phase 2





Plan of the features identified in Phase 1



metallurgical waste retrieved during the course of the excavation. At least eight separate furnaces were identified, along with a further eight probable furnaces, and additional metalworking features including a rectangular structure, possibly a smithy.

Twenty-five cereal-drying kilns were uncovered across the site. These are indicative of the longevity of the site, however the kiln activity culminated in a series of five large intercutting kilns with a large associated waste pit cut into the former annex ditch representing of a substantial intensification in production.

Numerous structures were also uncovered during the excavation. Many were windbreaks surrounding kilns. A circular structure beside a kiln may represent a barn or store. A cluster of structures were uncovered in the unenclosed space near the settlement entrance. Two of these were circular and may have formed a figure-of-eight structure or two separate circular structures. A large rectangular structure was also uncovered here. Close to the structures a large space enclosed by a slot trench and containing a metallised surface was uncovered, which may have been an enclosed field or paddock.

Metalled paths were identified across the site relating to various phases of the sites development, some connecting the settlement with the wider community and others traversing the settlement itself. The ditches defining the main settlement and multiple annexes contain numerous entrances. Overall, the numerous entrances and paths in and around the settlement do not suggest a strong consideration for defence.

A number of artefacts were retrieved during the excavation of the early medieval settlement , with the key examples being a stone gaming board, a cross-inscribed stone, a copper-alloy ring-pin, decorated copper-alloy fixings, glass and amber beads, fragments of glass and lignite bracelets, bone combs, and an iron hand-bell.

Prehistoric activity was identified near the lower lying wetlands to the south of the early medieval settlement. A large spread representing a cremation pyre was uncovered with a number of small cremation pits nearby. A second smaller



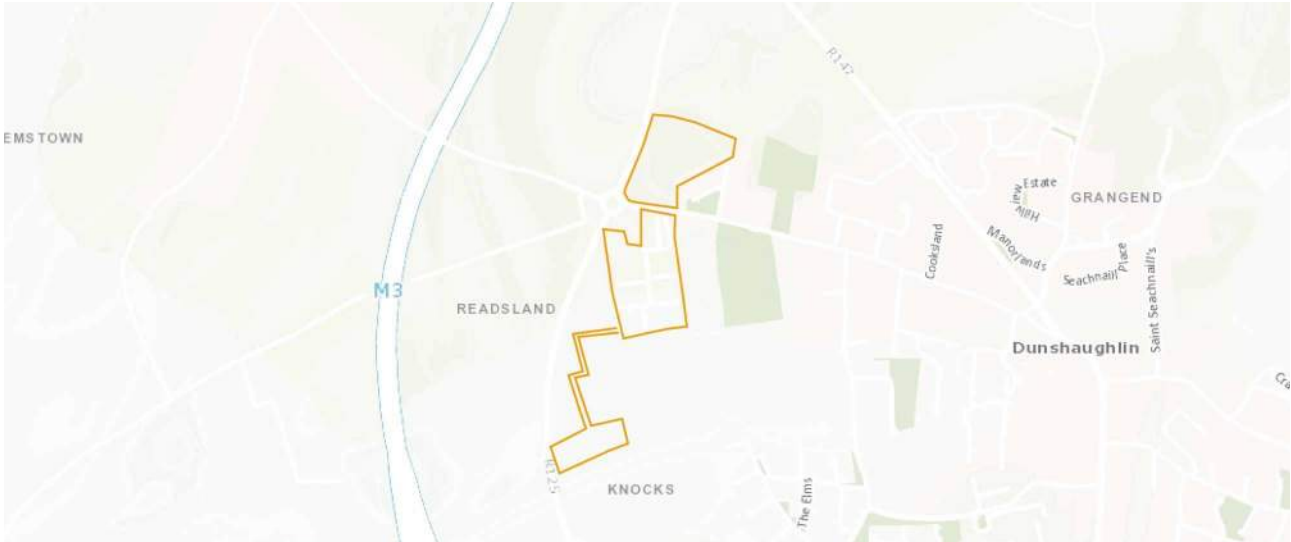
Copper-alloy ring-pin (top)

Bone comb (bottom)

pyre site was also uncovered along with two pit clusters and two separate fulachai fia. A number of hollow scrapers were retrieved from the prehistoric features along with other lithic artefacts. A medieval field system, structure and laneway dating from the 12th-14th century was also uncovered to the south.

Site Location

The site is located to the west of Dunshaughlin, Co. Meath (NGR co-ordinates 296000/ 252700) and covers 8.12 hectares in area. It lies in the townlands of Readsland and Roestown, with the attenuation area to the south extending into Knocks townland. The site is presently undeveloped and is bounded to the west by a newly constructed road (R125) associated with the M3 motorway, which lies further to the west. It is divided into two sections by the east-west running Drumree Rd., which runs from the new motorway access road (R125) to the town. The northern section is bounded by a small housing



Plan of the proposed development (top)

Site location (bottom)

development called 'The Meadows' to the east and open fields to the north. The southern section the site is bounded by Dunshaughlin GAA playing fields to the east, open fields to the south and an undeveloped wedge of land lies between it at the R125 to the west.

Development Proposals

The development proposes the construction of a residential development of 160 dwelling units of three- and four-bed houses, both detached and semi-detached (Meath Co. Co. Planning Ref. DA/120987). A crèche is also planned as part of the development. The development has been subject to a number of redesigns due to the discovery of archaeological remains within the development during earlier investigations. The remains, a bivallate ringfort with burials identified in the central portion, are located to the southeast side of the northern section of the site. It is intended to preserve the main site in situ and a redesigned layout was presented and discussed with the National Monuments Service in September 2012 and was favourably received, especially the design concept and layout. The new layout involves the northern section of the site centering on an open circular area over the archaeological monument, with short cul-de-sacs radiating out from it. This section



of the site will be accessed from the Drumree Rd. to the south.

The southern section of the site is laid out along short linear cul-de-sacs and will be accessed from the Drumree Rd. to the north and from the R125 to the southwest. A smaller open area is proposed for the southern area, which will also include the proposed crèche.

The development plans have been analysed and assessed for potential impacts on archaeological material. The proposed roads within the northern area of the site are to be have a finished level at approximately the same depth as the current ground level. The depth of the roads will be 435-635mm, dependant on the load bearing capacity of the sub-base material used.

Landscaping works will not negatively impact on the underlying archaeology. The central area in which the archaeological monument is being

preserved in situ will be raised slightly. A bank of material is to be added around the circumference of the green area to allow for tree planting and avoid impacting on the features below.

Planning

The development was initially granted planning permission following an appeal to An Bord Pleanála (Meath Co. Co. Ref. DA/120987, An Bord Pleanála Ref. PL 17.241988). Condition 4 of the An Bord Pleanála decision related to archaeology. The condition states that sections 3 and 4 of the Archaeological Addendum Report are to be implemented in full. The Archaeological Addendum Report was compiled by Margaret Gowan in 2012 following the last redesign of the development plan. The mitigation requirements laid out in this were as follows:

The new design itself has essentially mitigated the impacts on the main archaeological monument by placing the monument at the centre (and forming the central focus) of the scheme. As such the main monument itself will be preserved in situ.

Road construction within the development will result in the uncovering of archeologically significant features, but affording an opportunity to mitigate by building the road surface above them and thereby leaving them in situ. Notwithstanding this approach, some attrition will doubtless occur - on account of construction traffic etc. if nothing else. A number of sample investigations (cross-section trench cuttings) should be opened where features are exposed, in order to appropriately record the nature and fill of the features, and thereby gaining further relevant information on the nature of the monument, its date and cultural context.

Water-run-off drains adjacent to the roadways, insertion of services and other below-ground infrastructure and, of course, excavation for the foundations of the residential structural units themselves will give rise to significant impact, albeit on a limited number of areas and affecting only the ancillary and sometimes poorly preserved elements annexing the main monument. Archaeological monitoring, investigation and excavation will be required in these areas during the development, following topsoil removal and in advance of excavation for construction purposes. Following topsoil removal, features can be isolated, temporarily protected and identified with bunting or similar before being investigated and recorded in advance of further works

The results of archaeological monitoring and construction-phase excavation will inform and extend existing knowledge of the site and provide the basis for some form of presentation to those who may be curious to understand the nature of prior occupation on the lands and in the location where they now seek to make it their modern-day homes. The nature and content of any presentation (possibly a discreet plaque, or similar, on site) will be agreed with the National Monuments Service.

It is recommended that a full impact assessment is conducted, with the involvement of the design team, when all construction details have been finalised in order to assess:

- the scope and phasing of earthworks and where impacts on archaeological features may arise;
- the proposed finished and construction levels, and what these may give rise to by way of site preparation works and earthworks;
- the location and impacts of services infrastructure on the site;
- the requirements for the remediation of potential management issues arising from the need to cater for and work around a monitoring archaeologist and (a potentially small) excavation team.

The advice of the National Monuments Service, Dept. Arts, Heritage and the Gaeltacht should be sought in relation to the scope of the proposed mitigation measures. The scheme, the proposed mitigation measures in respect of archaeology and the final design for the open green space within which the monument will be preserved, will require the full approval of that office. Furthermore, the construction works will have to be monitored by a suitably qualified archaeologist under a new licence issued by the Dept. upon approval of a full-method statement outlining the scope of all proposed mitigation measures.

Metal detector Licence 18R0174

A metal detection licence was sought when works began in the early medieval settlement portion of the site, with a Viking V5 metal detector being used. While this is a recommended metal detector the results were less satisfactory than previous metal detector surveys carried out on our sites using a C-Scope metal detector and we will aim to use the latter in future.

An initial walk over survey was carried out once the topsoil stripping was complete with metal detector hits being flagged for attention during the excavation.

The metal detector was systematically used to check spoil being taken from various features and intermittently during the reduction of the fills within the ditches.

Previous archaeology on the site

The site has been the subject of intensive archaeological survey, geophysical survey and archaeological test excavation conducted in 2009 (Excavation Licence No. 09E214) in advance of the proposed development. Geophysical survey revealed a large, complex ditched enclosure, containing a discrete area containing burials and with additional annexes to the north, west and south. To the northeast of the northern section a small circular feature was identified, possibly representing a prehistoric barrow. A number of linear features and possible pits and postholes were also revealed during the geophysical survey and may relate to additional occupational features. Little was identified archaeologically in the area to the south of the R125 road during the geophysical survey asides from a number of possible pits.

A total of 15 test-trenches were opened during the archaeological test excavation in 2009 with 9 being opened in the northern section of the sit and a further 6 in the southern section. A number of the ditches and enclosing elements of the monument were tested, as was the possible barrow to the northeast. This revealed that the main focus of the archaeology on the site was indeed in the northern portion of the



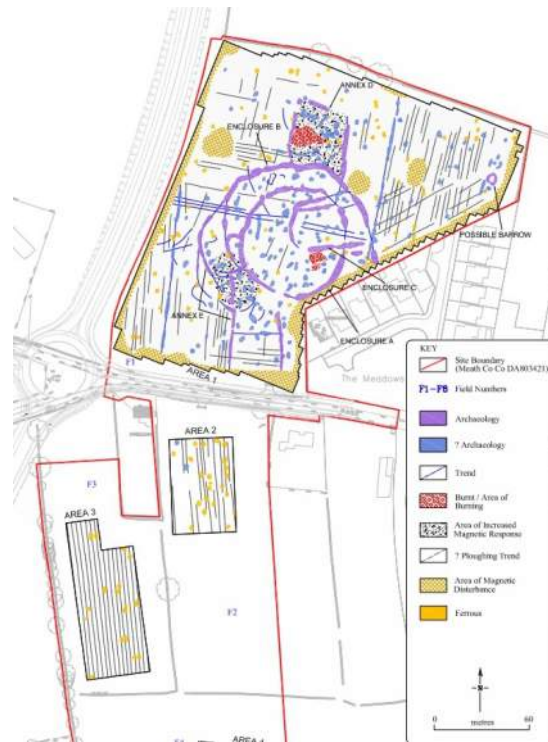
2009 geophysical surveying on the site and location of the 2009 test trenches (after Harrison 2009 and Hession & Moriarty 2009, top)

Close-up of the geophysical survey in Field 1 and the location of test trenches (after Harrison 2009 and Hession & Moriarty 2009, bottom)



site in the vicinity of the bivallate enclosure. Agricultural activity in the preceding centuries had significantly reduced the original ground level and that there was limited survival of shallower features, including the burials within the enclosure. Two small possibly prehistoric pits were also identified in the southern section of the site in the vicinity of the southwestern access to the development, however these were the only features of note in this part of the development.

The geophysical survey was largely proved accurate by the excavation in 2018 and 2019, although there was a skew in the identification of some of the linear features to the north due to the high quantity of metalworking and kiln waste in some features. The possible barrow to the east was not identified during the excavation. This portion of the site was located on an outcrop of soft sedimentary rock and was a high point within the field. Two kilns were identified cut into the bedrock in the vicinity of the anomaly, however only agricultural disturbance was noted where the anomaly was indicated. Bronze Age pottery was identified within a ditch to the west of the anomaly location and it is possible that a prehistoric feature was previously present here, which had a very shallow negative impression and did not survive the agricultural truncation of the site in the medieval and post-medieval periods.



Interpretation of the 2009 geophysical survey results (after Harrison 2009, top)

Satellite image of the site prior to excavation (bottom left)

Satellite image of the site following the excavation during construction phase (bottom right)



Section 2 Historical background

by Caroline McGrath, with contributions by Steven McGlade

Introduction

The excavation carried out in 2018 and 2019 took place on a development site (the Study Area) straddling the townlands of Readslane, Roestown and Knocks, c. 500m to the west of Dunshaughlin. A number of significant places are located in the vicinity of the Study Area. Assessing the archaeology uncovered within the Study Area and other significant archaeological and historical sites in the vicinity may help in the understanding of how the burial and settlement activity uncovered here related to the wider community from prehistoric period through to the post-medieval period.

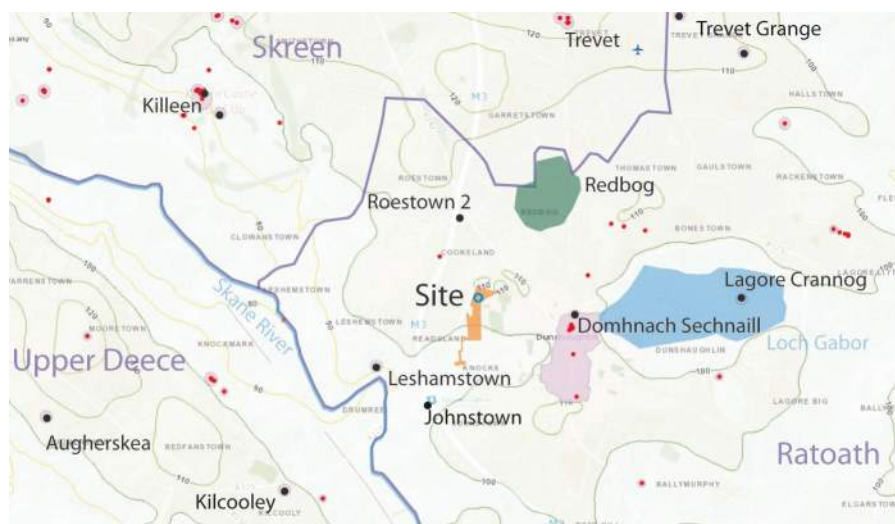
The crannóg at Lagore, near Dunshaughlin in Co. Meath, has been the focal point of research into medieval island residences for almost seventy years. The publication of Hugh Hencken's report into the excavation of the site proved to be a starting point for modern investigations into crannógs. In addition to this site, Dunshaughlin was home to significant settlements – both religious and secular. Located five kilometres from the Hill of Tara – at the heart of a complex political and ritual landscape and replete with ancient associations of kingship – Dunshaughlin has a fascinating historical and archaeological makeup.

Topography and land-use

The underlying geology of the site comprises Viséan limestone and calcareous shale, formed during the Loughshinny formation of the Lower Carboniferous period (c. 330-350 million years BP). The subsoil is classified as limestone till, class diamicton, which is a sediment most commonly defined as poorly-sorted glacial tills, ranging from clay to boulder size. It is located above the 100m contour line, on a gentle south-west facing slope towards the River Skane, a tributary of the Boyne. It lies at the southern extent of an upland area which encompasses the historic hill of Tara, located 5.8km northwest of the site and hill of Skryne, some 7.6km to the north.

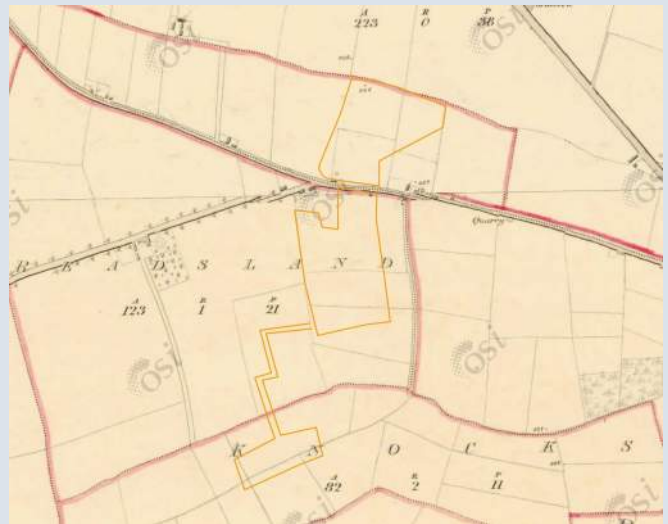
Toponyms

The Study Area was previously under intensive ploughing and the 19th century Edition of the 6-inch Ordnance Survey map of the area shows that the site was utilised primarily for pasture and tillage. The Down Survey shows the Study Area as being unforfeited lands in the parish of Dunshaughlin. This parcel of land included the modern townlands of Dunshaughlin,



Contour map showing some of the early medieval settlements in the vicinity of the Study Area. The extent of Loch Gabor proposed by Hencken (1950) is included

The First Edition Ordnance Survey map, dating to the 1830s, is the first detailed map of the Study Area. The Study Area is shown to lie in three townlands. To the north the portion of the site including the ringfort is located in Roestown, which occupies the narrow strip along the northern side of the road to the south of Cooksland. No features are depicted in the vicinity of the ringfort, however a field boundary is depicted running north-south through the ringfort, before turning to the east and joining a second north-south field boundary to the east of the ringfort. Another east-west boundary is also depicted within the bounds of the Study Area. All of the ditches were identified during the excavation. A structure depicted along the roadside at the southern end of the field was not encountered during the excavation and may have been located further to the south originally with the road having been widened. The southern portion of the site is depicted as being portions of five fields, four of which lie in Readsland and the southernmost in Knocks. No features are depicted and the field boundaries depicted are likely to be the same as those present on the site prior to the development



Cookstown, Redbog, Roestown, Knocks, Merrywell, Rath Hill, Ballinlough and Ballymurphy. The Civil Survey of 1654-6 indicates that Sir William Parsons, baronet, was in possession of the lands at Dunshaughlin and Roestown, among others (Simington 1940, 90-2). Leshamstown appears as Lustianstown in the Civil Survey, while the townlands of Suyockstown and Newtown are described to the south of Dunshaughlin, but their names do not survive in the modern townland names.

The name Readsland is likely to derive from the family name Read. There are no Read's listed as resident in the townland in the Tithe Applotment Books of 1823-37 or Griffith's Valuation of 1847-64, however Cogan (1867, 353) records the brutal death of Alison Read of Dunshaughlin in 1642, killed by 'Puritan soldiers'.

The same is possibly true of Roestown, which may derive from the family name Roe. Roe and Read are both recorded as family names in nearby parishes in the 19th century. O'Hara (2009, 57-8) notes that the townland name may derive from a mistranslation by John O'Donovan in 1836, and that 'baile an róidh' would be better translated as 'settlement of the red mire', referring to the former bog to the north at Redbog. He also noted that the townland was occasionally referred to as Raiste, with the 'ra' prefix perhaps preserving the term rath and being an earlier toponym (ibid.). The townland name Knocks, usually translated as 'The Hills', is unusual given its relatively low-

lying position. It is possible it derives from a family name rather than from Irish.

Eight additional townlands surround the three within the Study Area: Cooksland, Redbog, Dunshaughlin, Johnstown, Leshemstown, Clowanstown, Smithstown and Garretstown. Again the prevalence of family names forming the main component of the townland name can be seen in many of these.

Dunshaughlin (Dún Seachlainn) – the modern Irish name for Dunshaughlin – is a distortion of the original form Domnach Sechnaill 'the church of Sechnall'.

Leshemstown is likely to derive from a family name. The change of townland name between the 1650s and the 1830s suggests this family arrived in the area during this period. The previous townland name, Lustianstown, may also have an English derivation. The Old Saxon word lustian, meaning to be pleasing or to desire, occurs in Devon, northern England and Scotland (Wright 1898-1905). The name may have been given by English settlers prior to the 1650s and mean the pleasing townland. The Civil Survey records Sir William Parsons being in the possession of the churchlands in Lustianstown to the west under the provision that he maintain the church in Dunshaughlin (Simington 1940).

Smithstown, Garretstown and Johnstown are presumably named after a family names also,

with the latter two having substantial houses named after the townland depicted on the 19th century Ordnance Survey maps. It is possible that Johnstown may previously have been named Newtown or Suyockstown, both of which are described as lying to the south of Dunshaughlin in the Civil Survey in the mid-17th century, however the exact location of these townlands is unclear.

Clowanstown may be translated from the Irish Baile Uí Chlúmháin or Colman's town. Clann Cholmáin were one of the most powerful families in Brega during the early medieval period.

Cooksland derives from Sir Richard Cooke, Chancellor of the Exchequer, who was granted a large parcel of land in Dunshaughlin in 1603. Cooksland is also adjacent to the townland of Grangend. The word 'grange' has ecclesiastical connotations, being the outlying farmlands cultivated by monastic institutions from the 12th centuries onwards (Platt 1969, 12). The name suggests a relationship with the nearby Domnach Sechnaill, the early Christian establishment which gave its name to the town.

Redbog is an area of reclaimed marsh which was drained during the 19th century (O' Hara 2009, 141).

Ecclesiastical history

Dunshaughlin was the focal point for a large ecclesiastical settlement in early medieval times and was one of the eight episcopal sees of Meath that were consolidated before 1152, with the see fixed at Clonard (Cogan 1862, 5-6). Sechnall – the Irish form of Secundinus – is traditionally believed to have been the nephew of St. Patrick through his sister Darerca – also known as Liamhain – and Restitutus the Lombard (Stokes 1905, 248). The annals record his arrival in Ireland in AD 439, alongside bishops Auxilius and Iserninus, to aid in Patrick's evangelising mission (AU/AI 439). He is reputed to have been the author of the first Latin hymn of the Irish Church entitled *Audite Omnes Amantes* from the Book of Armagh, a poem in praise of Patrick (Orchard 1993).

Sechnall is reputed to have prayed at the shrine of Tobar Mucna in Mayo, which Patrick is also credited with founding (O'Donovan et al. 1864, 319f.). The historicity of Patrick has been hotly debated for decades, with O'Rahilly (1942, 21) and Dumville speculating that Sechnall assisted Palladius prior to Patrick's arrival, and furthermore, that Sechnall was the founder and first bishop of Armagh (Carney 1955; Bieler 1956). The foundation and dedication of Domnach Sechnaill has been tentatively dated at 443 (O'Donovan 1856, 135). Early Irish monasteries were often located on important travel routes – either land or water – or close to important settlements (Koch 2006, 1303). The monastery of Domhach Sechnaill had the advantage of close proximity to Lagore, and would have benefitted from its wealth and influence, as well as a ready water source. Early Irish domnach, derived from the Latin dominicum, appears in the specific context of a church building in Irish placenames (Flanagan 1984, 29). By the 8th century, evidence suggests that the term domnach was generally confined to place names, generally with ecclesiastical connections (ibid.). Sechnall's death is dated by the Four Masters as occurring on 27th of November 447, "in the seventy-fifth year of his age".

In the aftermath of Sechnall's death, the monastery continued to thrive for a number of centuries. The Annals record the deaths of a succession of abbots at the monastery from the late 8th century onwards. These included Feirghil, son of Comhsudh who was "secretly killed" (AM 876). The final record of an abbot's death was Feirghil's son in 883, though in the years 1027 and 1040, two "successors of Sechnall" – presumably both abbots – died (AM). During the 9th century, ecclesiastical power and influence reached a new peak, as indicated by the position *cenn athchomairc* or 'head of counsel', which was synonymous with *maer*, or steward of ecclesiastical property. According to the annals, the *cenn athchomairc* (Jaski 2000, 49f., 255) had authority over all men of Breg, both laymen and clerics, underlying the influence of the clergy over secular affairs in early medieval Ireland.

The compound name Máel Sechnaill 'Sechnall's servant/devotee' appeared from the 9th century

onwards, such as Máel Sechnaill mac Néill, one of the two kings of southern Breg, who was killed by 'Ulf the dark foreigner' (AU 870). Similarly, Máel Sechnaill I (d. 862) – who defeated the Norsemen at the battle of Tara in 980 – and Máel Sechnaill II (d. 1022) were High Kings of Ireland from Clann Cholmáin. The name Gilla Sechnaill 'Sechnaill's servant/devotee' appeared in the 11th century. In 1034, the death of Giolla Sechnaill, son of Giolla Mo Chonna, lord of south Breg was recorded (AM), whose descendants adopted the surname Mac Gilla Sechnaill and dominated the kingship of Deiscirt Breg from the 11th century onwards (Bhreathnach 1999b, 4). Bhreathnach (ibid.) points out the close association of this family with Dunshaughlin, suggesting their primary residence was in the vicinity of the ecclesiastic settlement.

In 1026, the monastery was attacked by one Gearr-an-Chogaidh, who was subsequently murdered along with his two brothers by Muireadhach Ó Céile – an act credited to the miraculous powers of God and Sechnaill (AM). This was part of a period of attacks and retaliations between native Irish kings and Norse rulers in the 11th and 12th centuries. The consolidation of power under Brían Bóroimhe and subsequently Máel Sechnaill mac Domnaill caused a decline in Norse influence in Brega (Bhreathnach 1999a, 13). The death of Máel Sechnaill caused a power vacuum which led to Irish kings scrambling for control (ibid.). The church of Domnach Sechnaill was attacked and burned in 1143, and subsequently plundered in 1152 by Tigernán Ua Ruairc (d. 1172) of Uí Briúin Bréifne, along with the nearby churches at Skreen and Trevet. Ua Ruairc was a warlike king whose ambitions stretched far beyond the newly-consolidated kingdom of Breifne. He also had claims upon the kingship of Mide through his wife Derbforgaill, daughter of Ua Maeleachlainn (Duffy 2005, 799). Hencken (1950, 227) viewed the arrival of the Norsemen as a key factor in the decline in influence of Lagore in its later phase (indicated by the relative decline in the quantity of deposited cow bones compared to those of pig and sheep). The political turmoil which encompassed Meath appears to have heralded a decline in the influence of Lagore, and the final nail in its coffin arrived with the Anglo-Norman invasion.

In 1200, Walter de Lacy, son of Anglo-Norman Lord of Meath Hugh de Lacy, made large grants to the Augustinian Abbey of St. Thomas the Martyr in Dublin. (Archdall 1873, 34). These grants included the churches of Trevet, Ratoath and "Dunelinsachlin, with the grange, as his father had granted it" (ibid.), referring to a previous grant by Hugh in 1180 (ibid., 31). The church at Dunshaughlin and its grange lands remained in the possession of the Abbey until the Dissolution. It was agreed by the canons of St. Thomas that the men of Dunshaughlin should have access through their grange lands through the lake of Loch Gabor (Gilbert 1889, 26-7). At the Dissolution, this holding was described as the manor of Grangend, consisting of the townlands of Grangend and Thomastown (White 1943, 32-6).

Trevet (the anglicised form of Treoid) was located 2.9 km northeast of the Study Area. Originally named Duma Dergluachra 'mound of the red rushy place', this monastery is the reputed burial place of Art, son of legendary 2nd-century High King Conn Cétchathach (Petrie 1845, 99). Despite the alleged early date for the foundation of Trevet, the first record from annals dates from the 8th century. The size and importance of the religious house is evidenced by the presence of both an abbot and a bishop in residence. In 769, both Abbot Albran and Bishop Forannan are recorded as having died. In 848 (AU 850/CS 850), the oratory of Trevet was burned by Vikings, killing seventy people inside. In 1145, Donnchadh Ua Cearbhaill of Airghialla launched an attack on the monastery, killing sixty people. After the Anglo-Norman conquest, the church was rebuilt and dedicated to St. Patrick (Cogan 1862, 154). Parish priests were recorded at the rectory from 1690 until 1823, when the parish of Trevet was united with Skryne (ibid., 158). Though the church is still extant, no trace of the monastery remains.

Killeen is located 4.7 km northwest of the Study Area. There is reference to a nunnery commonly called Cill-aíne built by St. Enda for his sister, St. Fanchea in AD 480 (Archdall 1876, 551). Though no trace of the original church remains, the external enclosure was excavated, consisting of an outer and an inner fosse (Baker 2009, 57-60). A number of other early medieval



Historic maps of Dunshaughlin and Lagore – *Irlandiae Accurata Descriptio*, J. Ortelius (1606), *Map of Leinster*, John Speed (1610), *A General Mapp of Ireland*, William Petty (1657), *Atlas Maior*, Joan Bleu (1662-5)

enclosures were excavated in the immediate vicinity of the ecclesiastic site (ibid., 90-93). A new church was endowed by the Plunkett family on the grounds of an Anglo-Norman castle built in 1180 by Hugh de Lacy (ibid., 354). In the 15th century, a chantry was established for prayer for the family's souls, and subsequently a confraternity of brothers and sisters was founded under licence to King Henry VI (ibid.). Killeen became an important centre of worship with an associated college of clergy, supported by 1000 acres donated by Sir Christopher Fleming (Lennon 2008, 90). The church survives today as a national monument.

The 15th century saw a number of churches in Meath established as perpetual chantries (Lennon 2008, 187). A perpetual chantry involved a priest or priests receiving a licence from a local bishop to perform masses for the soul of a donor or saint. Chantry chapels or altars were often dedicated with a chapel or cathedral for this purpose. In 1467, a group including Richard, abbot of the Abbey of St. Thomas, made a proposal to establish a chantry of one or two chaplains at Dunshaughlin for an altar of worship to St. Katherine (Berry 1914, 455-61).

From 1536 onward, Henry VIII pursued his policy of suppressing ecclesiastical houses in Ireland, stripping properties and lands from religious orders. In addition to religious reasons, English authorities believed that monasteries were havens for Irish rebels (Scott 2005, 261). The surrender of religious houses was achieved successfully and largely voluntarily, as clerics generally accepted pensions and benefices in return for religious houses and property (ibid., 276). It was on 31st March 1545 that the abbey of St. Thomas, with all its properties and lands, both spiritual and temporal were granted to Lord Justice Sir William Brabazon (Archdall 1876, 52). In 1597, Vice-Treasurer of Ireland Sir Henry Wallop was granted the rectoral tithes of the parsonage at Dunshaughlin (Morrin 1862, 459).

In the years following the Dissolution, many chapels in Dublin and Meath were reported to be in poor repair (O'Neill 2002, 48ff.). Indeed, in 1622, Ussher gave an account of the church at "Donshahlen" as being in a ruinous state (Erlington & Todd 1847-64, 1, lxx). Nevertheless, in 1723/33, a visitation by Bishop Ellis recorded Dunshaughlin as being still in use in its pre-Dissolution state (O'Neill 2002, 51). In 1749, Isaac Butler stated that the chapel and tower were in good repair, but the chancel was ruined (ibid.).

In 1814, St. Sechnall's Church of Ireland Church was built on the site of the former church of Domnach Sechnall. The main road curves around the remains of the medieval monastic enclosure, similar to the curved Stephen's Street in Dublin (Clarke 2002, 2). Remnants of a number of ditches were discovered during excavations by Roseanne Meenan (Excavations Ref. 1991:101) and Linzi Simpson (1995:230), producing features and artefacts dating from the medieval period. Subsequent excavations uncovered further evidence of an inner and outer ditch (Meehan, Excavations Ref. 1999:683; Sweetman 2004:1235 and Rice 2018:472) and a possible ditch and several other small features (Donald Murphy 2002:1453). Testing associated with an extension to the church also identified 59 human burials to the north and west of the existing building (Kavanagh, Excavations Ref. 2005:1176).

Kingdom of Southern Breg 5th – 12th centuries

In the centuries prior to the Anglo-Norman invasion, the basic Irish territorial division was the túath, translated as 'tribe' or 'petty kingdom' (Kelly 1995, 3ff.). Its ruler was a *rí tuaithe* 'king of a túath', a title which encompassed the people of the túath in addition to the territory itself (Jaski 2000, 37f.). The area encompassing modern Meath, in addition to parts of Dublin and Louth between the Liffey and the Boyne, was known as Mag Breg (the plain of Breg). The political importance of Mag Breg is underlined by Muirchú, a 7th-century missionary of Patrick's: *in campo Breg maximo, ubi erat regnum maximum nationum harum* 'in the great plain of Breg, because it was there that there was the greatest kingdom among these tribes' (Bieler 1979, 82). This consolidated grouping of túatha, which became associated with the *Síl nÁedo Sláine*, part of the Southern Uí Néill and descendants of Áed Sláine (Áed mac Diarmato, d. 603/4). As their dominance grew over the centuries, smaller sub-kingdoms were erased and subsumed by this powerful dynasty (Bhreathnach 2004, 38). Their hold over these territories was not total however, and this area was often subject to political and social upheaval even before the arrival of the Vikings (MacShamhráin 2004, 128).

The two main branches of this group were the Uí Chonaing, which ruled the northern kingdom of Breg from Cnogba (Dowth), and the Uí Chernaig, rulers of the southern kingdom which



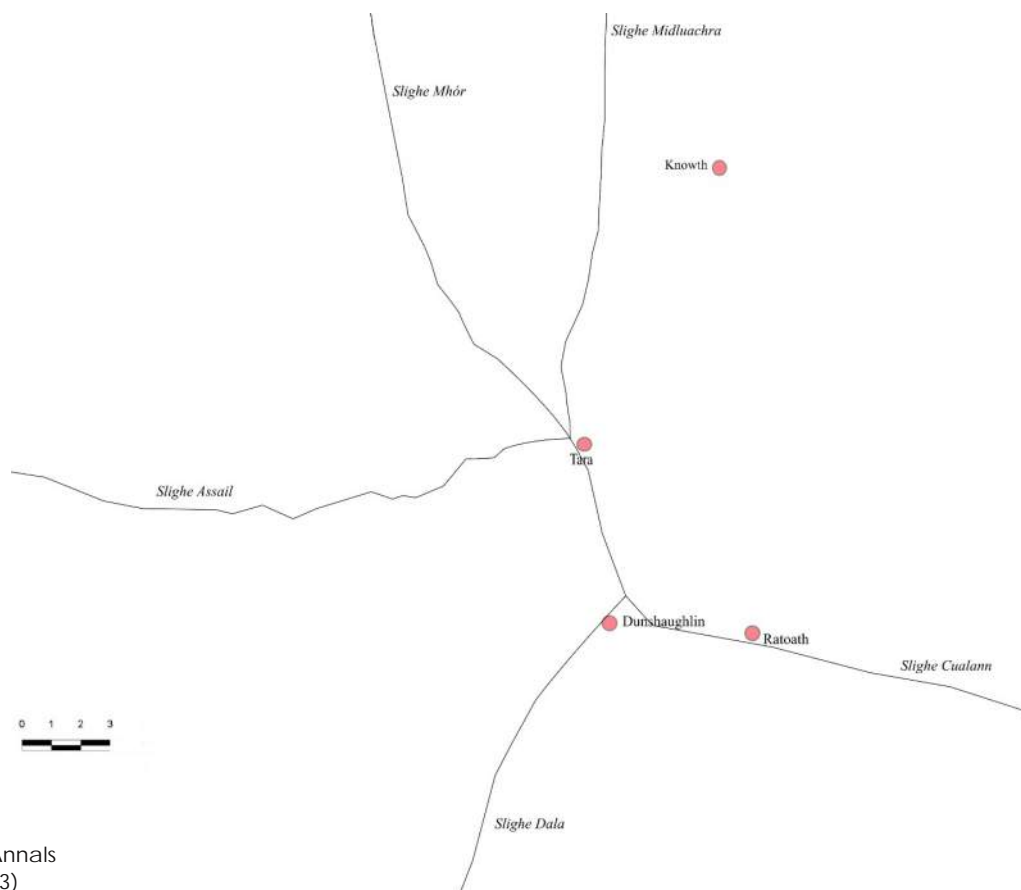
Approximate limits of Mag Breg

had its locus of power at Lagore (Loch Gabor) in Dunshaughlin. The latter were also known as Clann Cernaig Sotail 'the family of Cernach the Proud' (Carty and Gleeson 2013, 29). The split which divided these two factions is believed to have taken place at the battle of Imlech Pích (Emlagh, near Kells) in 688 in which the Uí Chernaig were victorious (Ó Cróinín 2008, 204).

In the 12th century Book of Leinster, Loch Gabor was described as one of seven lakes formed during the reign of Tigernmas mac Follaigh, among the mythical High Kings of Ireland (Best, Bergin & O'Brien 1954, 65). A middle-Irish tale about the 6th-century king Diarmait mac Cerbaill recounts his visit to Loch Gabor, where he is ambushed by his enemy Máelodrán while he and his men are feasting (Greene 1975, 49). Dunshaughlin, 6.5km southeast of Tara, may have been located close to Slighe Cualann and Slighe Dala, two of the legendary five roads which ran from Tara, though it should be noted that there is disagreement on the exact location of these ancient routes (see Morris 1938, 115). Seaver notes (2016, 7) that an east-west route running along the Broad Meadow River from Swords

through Greenoge and Dunshaughlin and on to Trim was followed by Prince John as Lord of Ireland in 1185, with this route possibly representing part of one of the earlier slighe.

The first historical reference to Loch Gabor (AU 677) mentioned Finnechta Fledech mac Dúchado (c. 695) – the SílnÁedo king of Tara – as the victor of a battle against the Laigin. The annals confirmed the existence of the kingship of southern Breg in 746, with the death of Fergus mac Fogartaigh (AU/AT 751). The title of 'king of south Breg' was first attested in the Annals of Tigernach in 727. The term 'king of Loch Gabor' (rí/ rex Locha Gabor) first appeared in 785, in which Máel Dúin mac Fergusa died, and would continue through the 9th century. Máel Dúin's successor, Fócartach mac Cumuscaig, was killed in the battle of Lia Finn the following year. The appearance of this term is indicative of a split within the Uí Chernaig of southern Breg in the 8th century, between the line of Conall Grant (d. 718) and that of his brother Fogartach (d. 724), who was briefly sent into exile only to subsequently return.



The five roads of Tara (Annals of the Four Masters AD123)

Date of death	Kings of Loch Gabor	Kings of South Breg
AD 751		Fergus mac Fogartaig (rí Desceirt Breagh; AT; AU)
AD 778		Niall mac Conaill (rí Desceirt Breagh; AU)
AD 785	Máel Dúin mac Fergusa (rí Locha Gabor; AU)	
AD 786	Fogartach mac Cummascaig (rí Locha Gabor; AU)	
AD 797		Cummascach mac Fogartaig (rí Deiscert Breg; AU)
AD 800		Ailill mac Fergusa (rí Deiscert Breg; AU)
AD 805	Cernach mac Fergusa (rí Locha Gabor; AU)	
AD 815		Conall mac Néill (rí Desceirt Breagh; AU)
AD 815		Fogartach mac Cernaig (leth-rí Desceirt Breagh; AU)
AD 825	Óengus mac Máele Dúin (rí Locha Gabor; AU)	
AD 826		Diarmait mac Néill (rí Desceirt Breagh; AU)
AD 836	Cairpre mac Máele Dúin (rí Locha Gabor; AU)	
AD 865	Tigernach mac Fócartai (rí Locha Gabor & lethrí Breg; AU)	
AD 868	Diarmait mac Etersceilli (rí Locha Gabor)	
AD 870		Máel Sechnaill mac Néill (leth-rí Desceirt Breagh; AU)
AD 888		Tolarg mac Cellaig (leth-rí Desceirt Breagh; AU)
AD 908	Máel Ograi mac Congalaig (rí Locha Gabor; AU)	
AD 916		Fogartach mac Tolaig (rí Desceirt Breagh; AU)
AD 916		Ceallach mac Foccartaigh (tighearna Desceirt Breg; AM)
AD 969	Beollán mac Ciarmaic (rí Locha Gabor; AM)	
AD 1014		Gilla Mo Chonna mac Fogartach mac Ciarmac (rí Deiscert Breg; AU)
AD 1027		Ruaidhri mac Fogurtaigh (rí Deiscert Breg; AU; AT)

Table: Dates of deaths of Kings of Loch Gabor and South Breg

Conall Grant's descendants resided at Calatruim (Galtrim, Co. Meath), while Fogartach's successors were based some 18km eastwards at Loch Gabor. Bhreathnach (2004, 40-3) suggested that the Battle of Calatruim – fought in 777 between Niall mac Conaill Grant (d. 778) and Cummasach mac Fogartaig (d. 797) – was related to the succession of the kingship of south Breg. The kingship of Calatruim sprang up to rival the kingship of Loch Gabor, of which the descendants of Fogartach were the sole successors by the end of the 8th century (ibid.). Niall emerged victorious from the battle, but the so-called 'Calatruim dynasty' was not successful, as the term rí/rex Calatruim did not continue after the death of Niall's grandson Máel-Dúin mac Conaill (d. 846). However, the rule of Loch Gabor continued for at least another century, having sprung from this division.

The fortunes of the kingdom of southern Breg continued to fluctuate over the course of the 8th and 9th centuries. From 704 onwards, when Fogartach joined Clann Cholmáin in their failed attack on the Laigin, they "tended to be

overshadowed by the Uí Chonaing of northern Brega" (O'Flynn 2011, 165). In contrast with the frequent use of the term rí/rex Locha Gabor, the title rí/rex Cnogba 'king of Knowth', appeared more sporadically as an alternative to rí/rex Breg, the term for the overlordship of Breg (Bhreathnach 2004, 39). In 770, south Breg joined forces with the Uí Chonaing to launch more attacks on the Laigin. Though the northern Breg were initially successful, their southern counterparts were routed at the battle of Bolg Bóinne. During the early decades of the 9th century, they inflicted defeat on the Cíannachta and were forced to submit in battle to Conchobar mac Donnchada, the Clann Cholmáin High King of Ireland. This was in revenge for their submission to Murchad mac Máele Dúin of Cenél nEógain, who attempted to seize the kingship for himself.

The first Viking raid on Ireland was recorded in 705, and major attacks were recorded at Rechru in 795 and Lusk in 827 (MacShamhráin 2004, 128ff.). The Scandinavians quickly recognised that the eastern waterways were a convenient means of attacking interior settlements. The year 837 saw the first incursion of invaders on the Boyne and into Breg territory, where "churches, forts and dwellings" were plundered (AU 837 /CS 837/AFM 836). In 848, Tigernach (d. 865), king of Loch Gabor scored his most famous

victory against the Scandinavians at Dísert Do-Chonna, resulting in the deaths of twelve score warriors (AU 838/CS 848/AM 846). This is the same year as 848 the annals record for the burning of the oratory of Trevet by Vikings, suggesting Tigernach's attack on the Vikings was in retaliation to this offence. Perhaps in memory of this decisive victory, the name Gilla Mo-Chonna appeared in the Loch Gabor dynasty until the 11th century (Bhreathnach 2004, 42).

The next year, Tigernach joined High King Máel Sechnaill mac Máele Ruanaid (Máel Sechnaill I) in his seizure of Dublin. Both men were betrayed by Cináed mac Conaing, the king of north Breg, who allied with the Scandinavians against them, plundering "Uí Néill from the Shannon to the sea" (AU 850). The Uí Chonaing had formed early alliances with the Scandinavians, probably as a means of bolstering their own power against rival dynasties and rivalling the power of Clann Cholmáin and Cenél nÉogain (MacShamhráin 2004, 130). With the help of his Viking allies, Cináed attacked and levelled the island of Loch Gabor. The following year, Máel Sechnaill I violated a surety of safety guaranteed by a group of noblemen including the abbot of Armagh, and drowned Cináed.

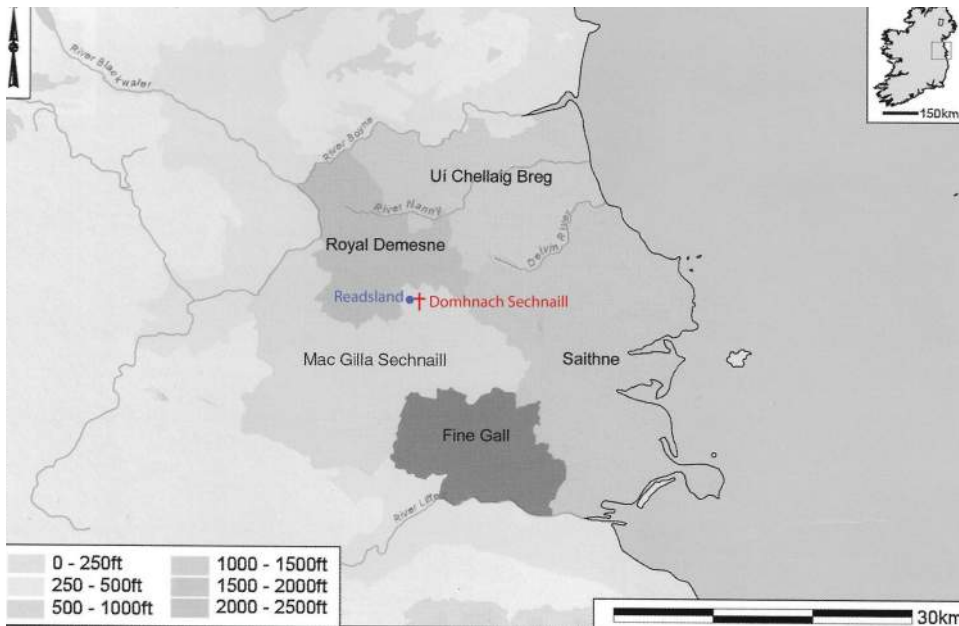
Despite the apparent destruction of the island, Loch Gabor continued to be a centre of power. The annals recorded the deaths of nine kings of Loch Gabor between 865 and 917. One of these kings was Diarmuid mac Etarscéle, who made a strategic alliance with the Norsemen and the Laigin in his dynastic struggle against Áed Findliath (d. 879) of the northern Uí Néill. He had claimed the title of High King after the death of Máel Sechnaill I. At the battle of Cell Ua nDaigri in 868 (AM 866), an alliance between southern Breg, the Laigin and three hundred Norsemen was vanquished and Diarmuid was killed, along with Flann mac Conaing, king of Breg. The Scandinavians were defeated at the hands of the men of Breg and Laigin in 902, and subsequently withdrew from Dublin. At the battle of Kilmashogue in 917, the Irish forces were routed, among them Cellach mac Fogartaigh, king of south Breg and "many other noblemen and plebeians, who are not enumerated" (AM 917). This resulted in the Vikings re-establishing themselves in Dublin.

During this time, the influence of Clann Cholmáin in Breg became more pronounced, with Donnchad Donn mac Flainn (d. 944) and Máel Mithig mac Flannacán (d. 919) defeating Fogartach mac Tolairg, king of southern Breg in 913.

In 935, Loch Gabor experienced another devastating attack at the hands of Amlaíb mac Gofraid (d. 941), Norse-Gaelic king of Dublin, after which he sacked Cnogba. He would later consolidate his power over the Vikings of Limerick and went on to plunder the ecclesiastical site of Cell Cuilinn (Kilcullen, Co. Kildare), which had hitherto gone unmolested by Scandinavians (AU 938). Amlaíb is generally believed to have ended his days as King of Northumbria after the death of Æthelstan (Woolf 2005, 25).

The year AD 969 saw the final mention of the kingship of Loch Gabor in the annals, with the death of Beollán (Bjólán) mac Ciarmaic. Beollán was a Norse-Gaelic king of Loch Gabor who married Cadlinar (Kaðlín) Hrólfsdóttir, daughter of Rollo, the first ruler of Normandy (Hudson 2005, 64). The death of the final king of southern Breg was recorded in Chronicon Scotorum in 1029 (AU 1032). Mathgamain ua Riacaín, king of both Breg kingdoms, had a fraught and violent relationship with his Irish and Norse neighbours. The annals record him abducting Amlaíb mac Sitric – son of Norse-Gaelic King of Dublin Sigtrygg Silkbeard – and demanding a massive ransom which included 1200 cows and 140 British horses (AU 1029). This act demonstrates both the value of such a nobleman to his captor and his military ambitions. Eventually, Mathgamain's hubris betrayed him and he was treacherously slain by Domnall ua Cellaig, one of the Uí Máine of south Connacht (AU 1032).

At this point, the kingdom of southern Breg appears to have effectively ceased, at least in written records. It may be that Loch Gabor never truly recovered from its depredations at the hands of Amlaíb in 935. In spite of Mathgamain's bold move in kidnapping Amlaíb, the power of southern Breg was already waning. Due to a combination of internal strife and external pressure, the kingship of Breg dissolved entirely in the 11th century. The territory was



The petty kingdoms of Southern Brega from c. 950-1180 with Readsland and Dunshaughlin depicted, after Bhreathnach 1999b

left under the tenuous control of a number of smaller lordships in conjunction with the Ua Cathasaig of Saithne, a former subject people (Jaski 2000, 212).

From c. 950-1180 there is compelling evidence to suggest that Deiscert Breg consisted of a number of sub-kingdoms, with the territory approximately coterminous with the baronies of Lower Deece and Ratoath being under the control of the Clann Chernaig Sotail (Mac Gilla Sechnaill) and the earlier population group the Déisi Breg (Mac Gilla Furlartaig) (Bhreathnach 1999, 3). The barony of Skreen, the border of which lies just to the north of the Study Area, related to the mensal lands of the kings of Tara and a variety of intruders (ibid.). The title of Rí Breg was of less significance after the end of the 10th century when Mael Sechnaill Mac Domhnaill lessened the independence of Brega and subsumed its power into the kingdom of Mide (ibid.). Hencken (1950, 7) suggested that the destruction of Lagore by the Norse in 935 followed by the final use of the title rex or rí Locha Gabor in AD 969 implied that the site was abandoned by the late 10th century. Bhreathnach (1999, 4) has posed an alternative scenario where Lagore was not subject to sudden abandonment but rather a phased withdrawal, or to an increased use of other important sites in the area, such as Dunshaughlin or Trevet. The Mac Gilla Sechnaill family, who held the tile rí or tighearna Deiscirt Breg on six occasions in the 11th and

12th centuries (1013, 1027, 1034, 1121, 1160 and 1171), were closely associated with Dunshaughlin (ibid.). The family name meaning 'servant of Sechnaill' and reference to them being 'comarba Sechnaill', meaning the hereditary farmers or wardens of the church lands of Sechnaill both indicate a strong link with Dunshaughlin, and their primary residence was at or in the vicinity of the town (ibid.).

The kingdom of Lagore and Lagore Crannog

During the early medieval period the Study Area was located within the territory of Lagore, controlled from Lagore crannog located 1km to the east of Dunshaughlin. Evidence for the 'royal' nature of the crannóg at Lagore derives primarily, though not exclusively from annalistic evidence. The name Lagore derives from Loch Gabor. DIL defines 1 gabor o.m. as 'goat', while 2 gabor f. as 'a horse (esp. a white one), a mare, mainly confined to poetic language'. Loch Gabor can be defined as "the lake of the horses", or Loch Dá Gabor "the lake of the two horses" (Gwynn 1991, 183). The association with horses is seen in the 12th century Metrical Dindshenchas, where 'the horses of Eochu, king of Munster' echrad Echach ríg Muman - brought as gift to the king of Tara - were driven in panic to 'the warriors' lake' láech-loch, where they drowned (poem/story 42).

Ní Bhrolcháin (2006) and Newman (2011) have examined the sacral relationship between Lagore and the surrounding landscape, specifically with inauguration rites on the Hill of Tara. There may indeed be a connection between Loch Gabor and the nearby Gabhra river, which runs some 2km from Dunshaughlin and close to the Hill of Tara. The equine symbolism associated with Loch Gabor seems to evoke the inauguration ritual famously depicted by Giraldus Cambrensis (O'Meara 1982, III.102). The small number of crannógs thus far excavated makes it difficult to clearly discern their relative status (Comber 1997, 101). However, the high-status nature of Lagore is also evidenced by artefactual analysis. There is evidence of non-ferrous metalworking, including a gold filigree ornament (Hencken 1950, 86f.). Though the source of raw materials is impossible to determine, there is plentiful evidence of metalworking, such as bronze and iron scrap metal, stone and clay moulds, a large number of crucibles, several motif pieces (Comber 1997, 105ff.). Evidence of fine decorative work, including glassmaking was also present (*ibid.*, 111). A number of glass beads, bangles and bracelets were among artefacts discovered, some of which appear to be imported British examples (Hencken 1950, 139).

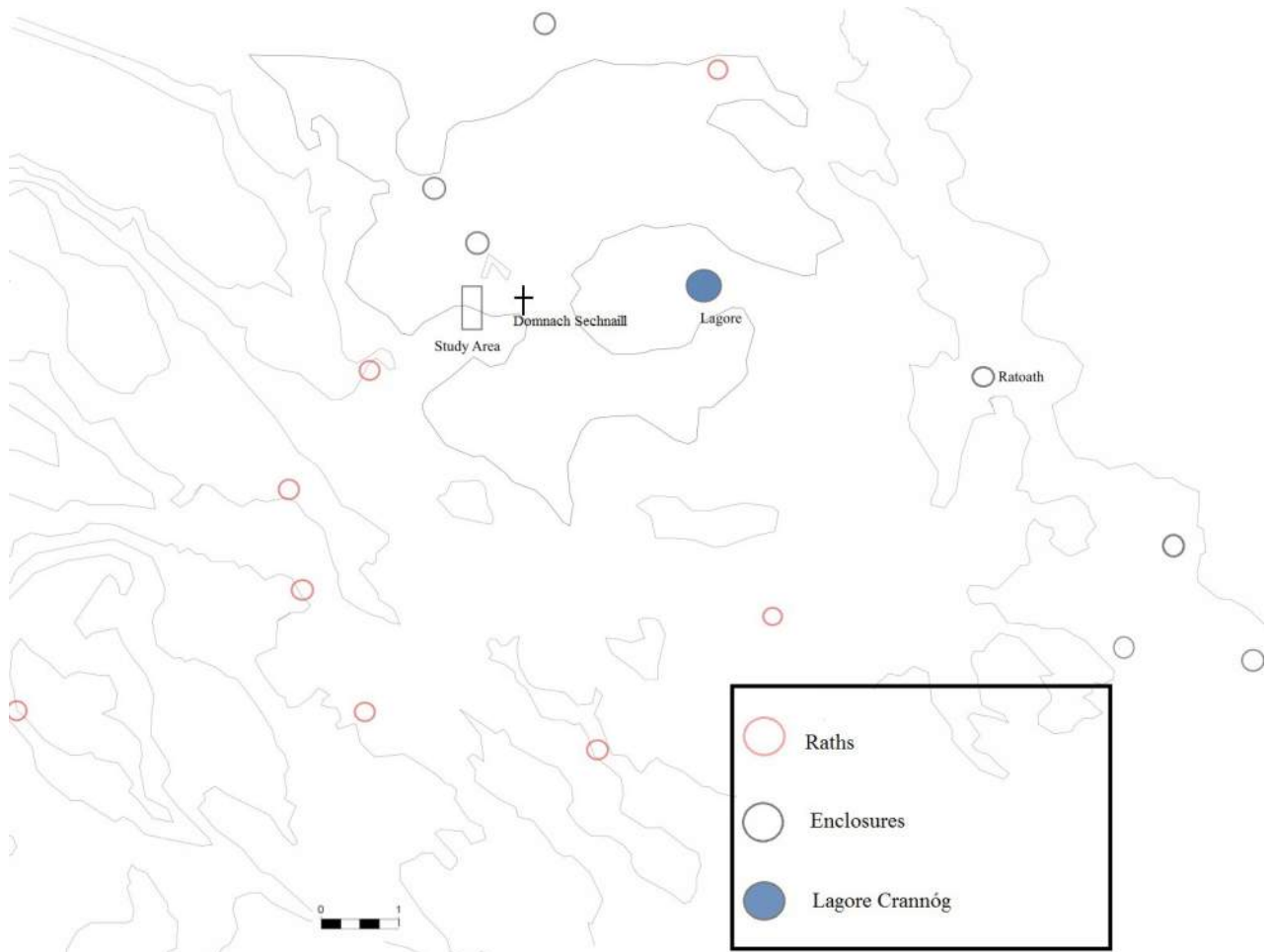
Marginal areas such as wetlands, lakes and rivers had ritualistic importance, as indicated by their use as locations for deposition of Bronze Age weapons (O'Sullivan & Breen 2007, 183) and Iron Age bog bodies (Kelly 2006). Furthermore, settlements located close to water had defensive and practical advantages, and their very inaccessibility may have been indicative of high status (O'Sullivan 1998, 94). Early medieval crannógs were often built on earlier lake settlement mounds from the Mesolithic, Neolithic or Bronze Age periods (*ibid.*, 133). The internal structure of crannógs remains unclear, due to the relatively few examples of houses heretofore uncovered. Examples include as Ballinderry crannóg no. 1, Moynagh Lough and Lagore (*ibid.*, 135), the latter comprising post and wattle structures of less than 10m in diameter (Hencken 1950, 46, 127). The recent excavation of a crannog at Drumclay, Co. Fermanagh uncovered a large number of wooden structures, including a double-walled wattle house, similar to examples found at Wood



Richard Bartlett's Drawing of Dungannon Castle and the stone chair at Tullaghoge, Co. Tyrone, circa 1602 (Hayes-McCoy 1964)

Quay (Chapple 2012, 11). Another example of a crannóg house was found at Sroove, co. Sligo (Fredengren 2002, 226f.). Unlike Richard Bartlett's well-known image of a crannóg with a house at its centre, it has been suggested that the hearth was the focal point of the structure – a place of communal gathering (*ibid.*, 34f.; Kinahan 1866–9, 31).

Crannógs have been compared to raths, due to their size, defensive advantages and high-status associations (O'Sullivan 1998, 138). Large quantities of animal bone – predominantly cattle bones – were discovered at Lagore (Hencken 1950, 7), highlighting the importance of cattle as currency, food and status markers in early Ireland. Unlike raths, the relative inaccessibility of island settlements – however defensively useful – likely rendered them impractical as cattle enclosures. The link between crannógs and raths has been discussed in the context of their royal status (Warner 1994). The size alone of the average crannóg island might preclude the



Map showing the location of raths recorded by the RMP in the vicinity of the site

presence of a *rígthech* – a royal domicile and feasting house, which was described in *Críth Gablach* as measuring about 11m (ibid., 64).

As opposed to being a “seat of kingship”, Warner suggested that Lagore formed part of a “wider royal complex” (1994, 65). In the case of royal island residences such as this, he expected “a ringfort and perhaps other structures and earthworks on or near the shore of the lake” (ibid.). Though no such ringfort site has yet been identified at Lagore, there appears to be a semi-circular pattern of ringforts radiating out from the crannog, with the Study Area located nearest. However, this may be a mere coincidence. Meath is among the counties with

the lowest density of surviving raths in Ireland, being both a region of intensive arable agriculture and part of the area of most intensive Anglo-Norman settlement (Stout 1997, 62). It is possible that other ringfort sites were destroyed in intervening years. Nevertheless, this pattern appears significant. The proximity of Ratoath (*Ráth Tó*) to this complex of sites is also noteworthy, as a number of enclosures have been identified in its vicinity. Stout (ibid., 113-4) argued that univallate ringforts belonged to non-noble classes (*ócaire* and *bóaire*). This suggests that the enclosures surrounding the Study Area were part of an archaeological landscape connected to Loch Gabor, perhaps providing hospitality, shelter or defence, growing food or providing resources for the royal site.

Another example of this pattern can be seen at Coolure Demesne, Co. Westmeath, where a cluster of crannógs are found within close proximity to an apparent royal ringfort believed to have belonged to *Uí Fiachrach Cúile Fobhair*

(O'Sullivan et. al. 2007, 36). Lough Ennell, Co. Westmeath features a number of crannógs including Cró-inis, the royal residence of Maelsechlainn II, of the Clann Cholmáin of the southern Ui Neill dynasty. Dún na Sciath, a multivallate ringfort also identified as a royal seat of the Clann Cholmáin, is located onshore nearby (O'Sullivan 1998, 136; 2004, vol.1, 67). An intriguing cluster of ringforts and enclosures also radiate from Moynagh Lough crannóg, Co. Meath. O'Sullivan described Moynagh Lough as "a probable lordly site" (ibid., 7) and there is evidence of significant multi-phase activity at the crannóg and surrounding area (Bradley 1982-3 etc.).

O'Sullivan (1998, 137) argued that even royal crannóg sites were only occupied at certain times of the year. These surrounding ringforts could represent a strategic base of royal sites for occupation when the crannóg was not in use. The king of a túath could have more than one residence, which "facilitated the king's movement even around a small kingdom, making him more accessible" (Charles-Edwards 2000, 258). Where ringforts appear in "clusters", often multi-vallate ringforts took up a boundary position, consistent with the group of sites in the vicinity of the Study Area (Fredengren 2002, 251). It has been persuasively argued that bivallate and multi-vallate raths are indicative of high status (Stout 2017, 126). As previously

discussed, the presence of a multi-vallate ringfort site close to a royal crannóg site is not inconsistent with other sites. As many other sites in the area remain unexcavated, the number of valla related to these sites is currently unknown. Nevertheless, the proximity of the Study Area to Lagore and its high status argue strongly in favour of it being at one point, a 'royal' ringfort.

A number of other early medieval sites have been uncovered in the vicinity of Lagore and the Study Area. Early medieval activity identified at Roestown 2 consisted of a substantial D- or plectrum-shaped enclosure developing in the late 6th or 7th century, which lasted until around the 11th century AD (O'Hara 2009, 86). A souterrain and four kilns were uncovered at the site along with a substantial quantity of animal bone indicating a combination of arable and pastoral farming was carried out at the site. There was strong indication that it was associated with the processing of animals (O'Hara 2009, 65). Evidence for small-scale non-ferrous metalworking on the form of a stone ingot mould, crucible fragments, bone motif pieces and droplets of copper alloy, as well as possible glass production and small-scale iron production (ibid.). Samples taken at Roestown 2 produced a range of radiocarbon dates, the earliest being AD 343-542 and the latest AD 1450-1635 (ibid., Appendix 5; Chapple 2018).



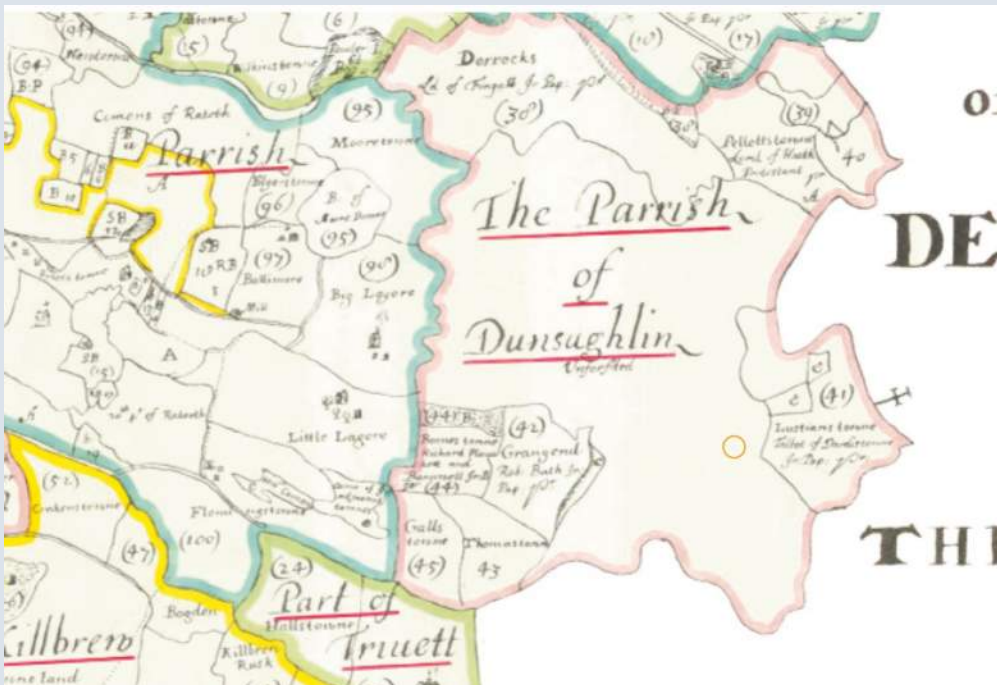
The Down Survey map of County Meath of 1654-6 shows the Study Area lying in the lands of 'Dunlaghlin'

A substantial early medieval settlement enclosure was uncovered at Johnstown 1 to the south of the Study Area consisting of a c. 50m diameter sub-circular ditch radiocarbon dated to AD 695-967 along with a number of prehistoric features (Elder & Ginn 2009a, 14).

An early medieval landscape was uncovered during the excavations at Killeen Castle with two ecclesiastical sites dating from the 5th-10th centuries AD, a bivallate ringfort dating to the 5th to 8th century AD and an agricultural site dating from the 7th to 11th century AD, which included a D-shaped enclosure that returned a

radiocarbon date of AD 990-1153 (Baker 2009, 90). The close proximity of these sites to one another suggested patronage, or familial relationships between the occupants (ibid., 92).

Augherskea, located 5km west of Dunshaughlin, has been interpreted as a cemetery settlement site with evidence for small-scale metal, possible glass production and cultivation Baker 2010, 2-9). A linear V-shaped ditch dating to AD 660-870 pre-dated the burials (ibid.; Chapple 2018). A D-shaped burial ground delineated to the east by a U-shaped ditch and by intersecting ditches to the west formed the central part of the



The Down Survey map for Ratoath shows the Study Area lying in unforfeited lands within 'Dunsaghlin' parish. Lustianstown, now Leshamstown, to the west of the Study Area, it shown as being in the possession of Talbot of Dardistown, with two small separate parcels of land, possibly relating to church land referred to in the Civil Survey, which were in the possession of Sir William Parsons (Simington 1940)



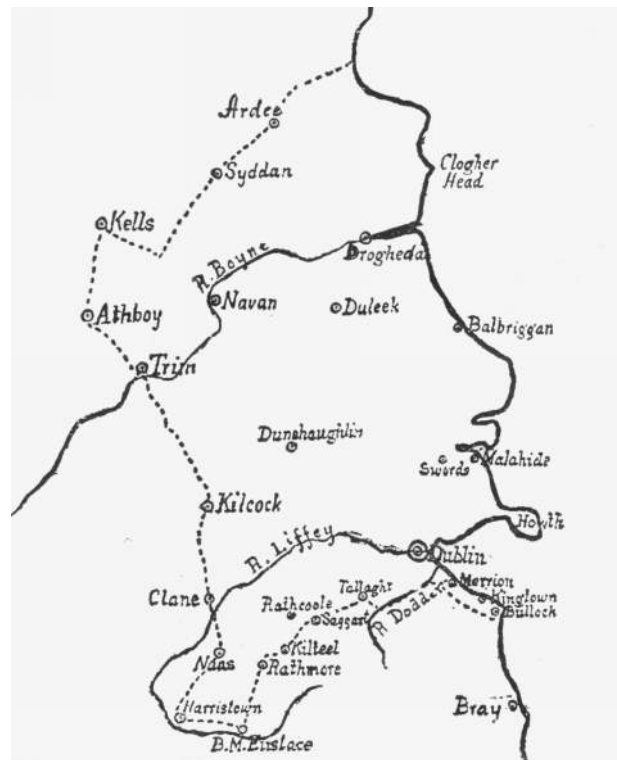
The parish map again shows the Study Area located in unforfeited lands in 'Dunshaghlin'. No additional detail is shown in the vicinity of the Study Area

settlement, with habitation evidence to the west dating to AD 770-980 (ibid., 7; Chapple 2018) and cultivation to the east, which dated to 890-1160 AD (ibid., 6; Chapple 2018). 187 burials were excavated in total, 23.9% of which were probably male, while 19.9% were probably female (Powers 2004, 6, 17). One of the burials has been dated to 674-865 AD (UBA-28177). Four of the burials had evidence of violent trauma, primarily decapitation (Baker 2010, 5).

Decapitation had a number of meanings and contexts, including punishment, armed combat, trophy hunting or relic collection (Carty 2015, 15). These decapitations are indicative of an endemic culture of violence in early medieval Ireland. According to the law tracts, the death penalty was not a preferred punishment. Instead it was used as an alternative to enslavement (Kelly 1995, 216–217) or to the éraic 'body fine' paid to the victim's family (ibid., 310). This pattern of decapitation is reflected in Lagore, where twenty-one individuals were represented by fragments of skull showing signs of trauma. Thirteen bones from the skull showed perimortem sharp force trauma in the form of cutmarks, and seven individuals with perimortem fracturing to the skull, all of which had been hacked or broken off from the rest of the skull through acts of excessive violence (Carty and Gleeson 2013, 35-7). These were all uncovered in the northeast of the site and may be the result of judicial killings where only the back of the skull was taken to Lagore for deposition (ibid., 42). Interestingly dismembered human remains dating from the Early Bronze Age, Early Iron Age and early medieval periods, were uncovered in the lower levels of Lagore Crannog, indicating that there was a long tradition of human sacrifice at Lagore prior to the establishment of the royal settlement (Newman 2011, 29).

12th-15th century Meath

The arrival of the Anglo-Normans in 1169 had an enormous and irrevocable impact on the physical and political landscape of Ireland. A settlement pattern based on manorial villages and market towns quickly emerged (Graham 1975, 223). The early Anglo-Norman occupation saw the creation of cantreds as a territorial



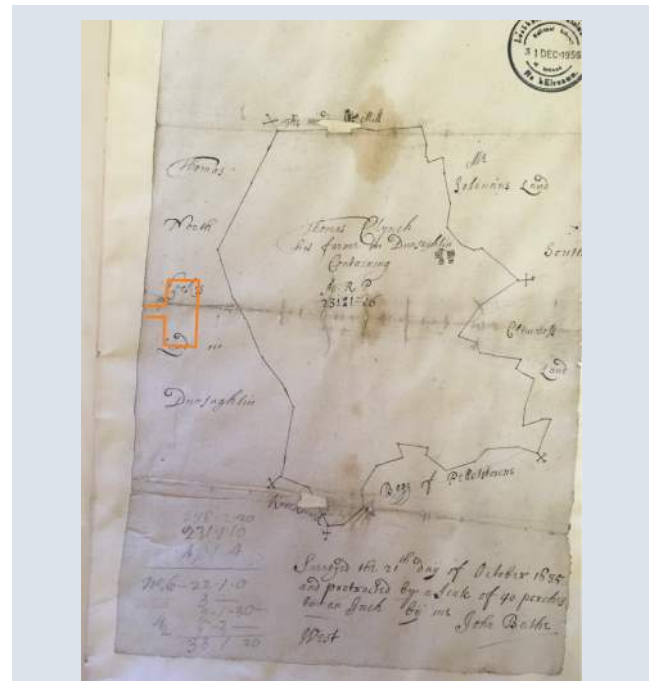
The Pale, or the English Pale, according to the Statute of 1488 (Joyce 1921)

subdivision (MacCotter 2005, 308). The traditional Irish land division which the cantred replaced was called *trícha cét* (ibid.). In general, the *trícha cét* corresponded with the *túath* in terms of size (MacCotter 2008, 22). Many of the manorial divisions made use of ancient territorial divisions as well as pre-existing settlements (MacCotter 2005, 310). A number of kingdoms were readily adapted as colonial lordships or counties, as in the case of modern Meath (MacCotter 2008, 40). On a smaller level, *trícha céts* often became the foundations of feudal baronies (ibid.) In place of cantreds, the title of barony was used in certain regions such as Meath, which was based on feudal divisions based on seigniorial manors.

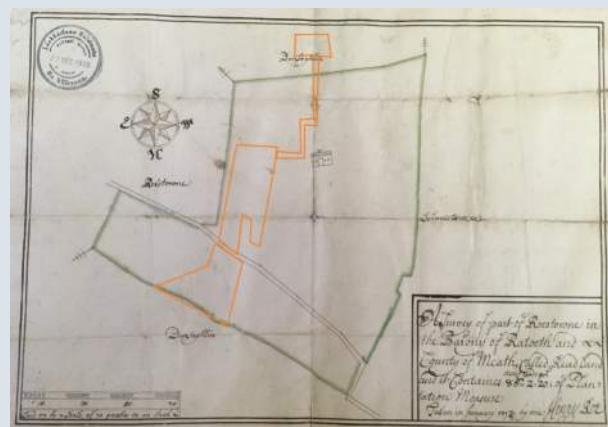
In 1172, Henry II granted Welsh lord Hugh de Lacy 'the land of Meath with all its appurtenances' (Mills & McEnery 1916, 177). The grant was offered as a "liberty", or royal franchise in return for his service, and also included Westmeath and parts of Longford and Offaly (Graham 1975, 225). De Lacy built his stronghold at Trim, which became one of the strongest Anglo-Norman fortifications in

Ireland. With the Anglo-Normans came the manorial system, the manor being the main unit of landholding within the barony or cantred. De Lacy divided (or sub-infeudated) the territory of Meath into ten major land-divisions, keeping land for himself in the form of seignorial manors and subletting the rest to tenants (ibid., 226). The main method of infeudation involved the granting of cantreds or half-cantred-sized fiefs by primary tenants to their dependent lords (MacCotter 2008, 27). Manors often occupied the same area as the medieval parish of the same name (Murphy 2008, 119). The centre or caput was where the lord was located, along with the parish church as well as other buildings (ibid.).

A medieval borough was 'nucleated settlement that enjoyed special privileges', established by a crown charter (Murphy & Potterton 2010, 192). With the exception of a few boroughs which were new creations, most – including Dunshaughlin – evolved from pre-Norman ecclesiastical settlements and took on new administrative and commercial roles while retaining their religious functions (ibid.). Dunshaughlin became one of the unwalled settlements which formed the centres of the major sub-infeudations, in this case within the barony of Ratoath, and possessing borough status (Graham 1975, 226). The other borough within Ratoath was Greenoge. Ratoath developed as a successful urban centre in the medieval period due to its fertile lands, and in 1227, Hugh de Lacy the younger established an annual fair in the town (Murphy & Potterton 2010, 465). Though there was no weekly market in Dunshaughlin (ibid.), its status as a commercial and ecclesiastical centre necessitated military protection – hence the construction of a motte and castle some 650m to the south of Domhnach Sechnaill. This area remained within the ownership of de Lacy, being passed on to his son Walter following his murder in 1186 (Veach 2009, 165). An inquisition post mortem taken in 1344 records that Dunshaughlin was in the possession of Walter de la Hide (National Archives of England C135/75), along with other lands in the Pale. The manor at Dunshaughlin is recorded as having seven cottars in 1344, along with an unspecified number of free tenants and burgesses (Murphy and Potterton 2010, 189-198). The manor is recorded as having an ox house and stables,



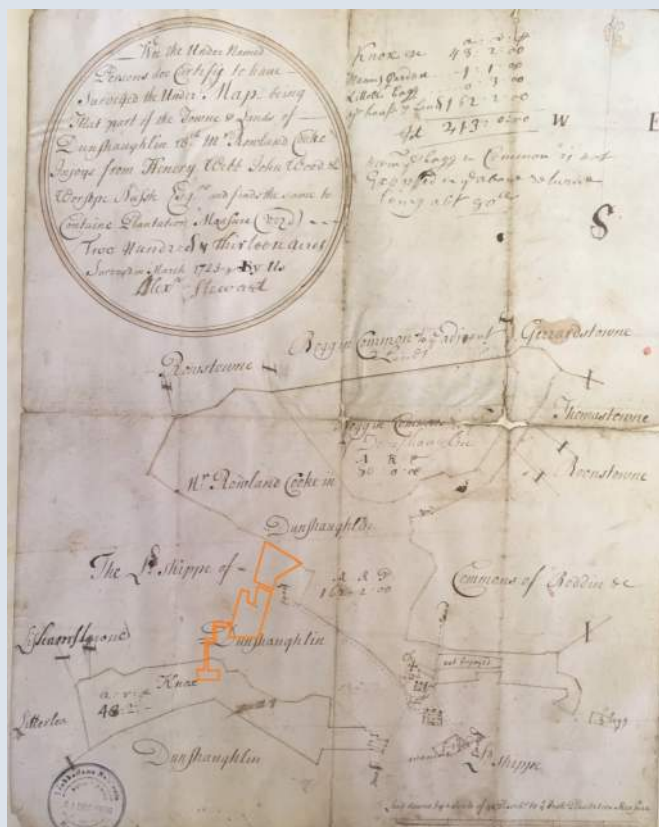
A survey of the lands of Thomas Lynch in Dunshaughlin dating to 1685 (north to left) shows a mill to the east, somewhere in the vicinity of Sechnall House, which still stands just off the main Dublin Road, with a cluster of buildings to the south in the vicinity of Johnstown House. This map records that the lands to the north belong to Thomas Cook, which includes Knocks at the southern end of the Study Area. (NLI Map Ref. 21F. 78 (38))



A survey dated to 1717 depicts the 'part of Roestown ... called Readsland', with the boundary of Readsland shown. It shows the townland extending to the north of the road to include the narrow strip of Roestown to the south of Cooksland. Interestingly, the road to Drumree is not depicted, however the road running toward Killeen to the northwest is. A simplified house is depicted centrally within the townland, however it appears schematic. (NLI Ref. 21 F. 78 (39))

A survey carried out in 1723 recording the lands of Mr. Rowland Cooke shows him in possession of Knocks (labelled 'Knox') and Cooksland (unnamed). The road running to the west of Dunshaughlin is depicted to just west of the Study Area. 'Rowstown' and Redbog are depicted to the north of Cooksland. While nothing specific is depicted within the Study Area the lands are labelled as 'The Lordship of Dunshaughlin'. Cook is listed as a tenant of Henry Webb, John Wood and Worsope Busshe. A Worsop Bushe of Dangen, grandson of Sir Thomas Worsop of Dunshaughlin, was born in 1692 and died in 1760 (Burke 1912, 92). A court case dating to 17th March 1740 between Richard, Earl of Rosse and Elizabeth Worsop, Worsop Bush and Noah Webb, relates to the inheritance of land in the vicinity of the Study Area. The case outlines that Sir Thomas Worsop married Elizabeth Wood, the earl of Ross' aunt (and Sir Adam Loftus' granddaughter), coming into possession of the manor, town and lands of Dunshaughlin and Rosetown and on a pretence that he had laid out £1000 in buildings and other improvements on the premises agreed a lease with the Earl, with the lease subsequently not honoured (Brown 1784, 411). Worsop Bushe, Henry Webb and John Wood were all descendants of Sir Thomas Worsop and heirs of the lease in question (NLI Ref. 21 F., 78 (40-42))

The manor of Dunshaughlin was granted to Sir Richard Cooke by letters patent 5th March 1604 (O'Dowd 1984, 136), however by the time of the Civil Survey of 1654-6 Sir William Parsons, baronet, was in possession of the lands at Dunshaughlin and Roestown, among others (Simington 1940, 90-2). Sir Walsingham Cooke is listed in possession in 1670, while the map of 1723 would suggest that the Cook's possessed a portion of the town, namely Cooksland and Knocks, and that they leased it, with the ownership of the land lying with the Parsons of Rosse



along with thatched kilns (ibid., 172). Simington (1940, 108) notes the Dunshaughlin had a parke of timber trees in the mid-17th century, while the bogs at Redbog to the north of the town would have been an important source of fuel in the medieval period and before. Land-use in the manor of Dunshaughlin c. 1300 was predominantly arable (over 90%) with some meadow also recorded, though a lack of recording of pasture within may be skewing this somewhat (Murphy and Potterton 2010, 288). The excavations carried out in the vicinity of the ecclesiastic site in Dunshaughlin revealed an extensive network of gullies, trenches and furrows suggesting the entire area had been under cultivation as part of the Anglo-Norman manor (Simpson 2005, 235).

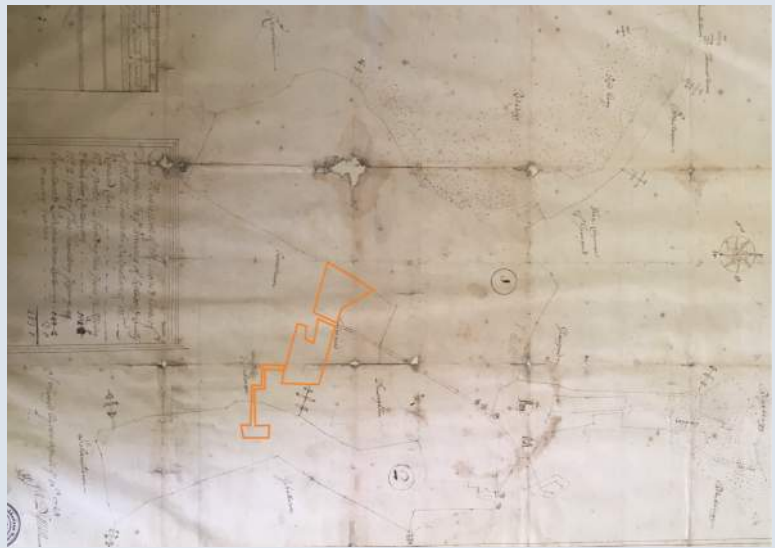
During the 13th century, the Anglo-Norman territories of Meath and Louth became securely fortified, protecting the manorial agricultural economy from encroachments by native Irish (Murphy & Potterton 2010, 264). Over two centuries later, this area was further enclosed by a palisaded earthen rampart and ditches – the

pale by which the region would be identified (ibid., 265). Dunshaughlin, lying 15.2km from the Anglo-Norman castle at Kilcock and 16.9km from Trim, was safely within the boundaries of the enclosure. Despite financial incentives to build fortifications at the Pale borders (ibid., 267), Gaelic power was revived in many parts of the country. By the late 15th century, The Pale remained the only part of the country subject to the English crown, and would remain so until the Tudor conquest.

Post-medieval history

In 1542, Henry VIII created the county of Meath from the pre-existing Anglo-Norman baronies (Simington 1940, xviii). During his lifetime, he had failed to bring the country to knee, and by the time of his death in 1547, English rule was largely confined to the Pale. However, policies such as surrender and regrant and the first successful attempt at colonial plantation in Ulster in 1606 help to copperfasten English power in Ireland. The 1641

A 1724 survey carried out for Mr. Rowland Cook again shows little detail within the Study Area, which is labelled as being in 'Rowstown', with the now Drumree Road labelled as the Dublin Road (NLI Ref. 21 F., 78 (26))



A survey of 1731 carried out on behalf of Mr. Rowly Cook shows James Joane's holding in the Knocks and includes 'Knock laine or Dirty Laine', the small access laneway, which was previously located where the GAA club is currently, just to the east of the Study Area. The Study Area is labelled as Roestown, with the portion to the north of the Drumree Road labelled as Mulally's holding. Cooksland to the north is labelled as Patrick Faye's holding (NLI Map Ref. 21F., 78 (36, 37))



Rebellion was a watershed moment, prompting the depredations of Oliver Cromwell's New Model Army as well as sectarian massacres of Protestants. This was followed by the forced expulsion of thousands of Catholics and, following the Land Grant Act of 1652, wholesale confiscation of land and possessions (Prendergast 1997, 44).

Between 1656-1658, the Down Survey of Ireland was undertaken to facilitate the redistribution of land to loyal subjects. It involved surveying and mapping the country to an unprecedented level of detail. The mapping was preceded by the Civil Survey in 1654-6, which identified and classified lands as profitable or unprofitable and listed the religion of the owners (ibid., 46). Furthermore, the Books of Survey and Distribution provided an official record of land distribution between 1656 and

1702, including the name and religion of landowners in 1641 and the townland name (ibid.).

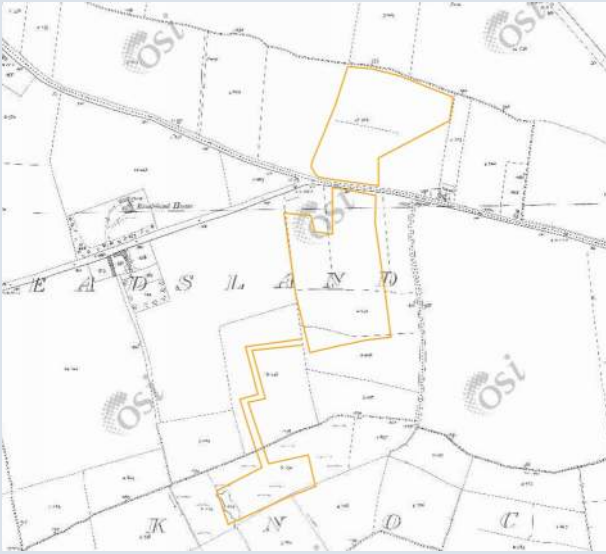
In 1603, Chancellor of the Exchequer Sir Richard Cooke had been granted a large parcel of land in Dunshaughlin, including a "capital messuage" or house, outbuildings and appurtenances, in addition to arable and pasture land, woods and bogland, amounting to 368.5 acres. Furthermore, he was granted 'the entire manor and house of Dunshaghlin, with the meadows and demesne lands thereof' and the heritable lands in the townland of Roestown, to the north of Cooksland. This land had been confiscated from John Dalahyde Jr., who had been accused of treason and granted to Cooke at a rent of 26 pounds, 12 shillings and 4 pence a year (Morrin 1880, 3). The 1654-6 Civil Survey of Meath records Thomas Cooke, a Catholic

A 19th century outline map of the town of Dunshaughlin shows the Study Area to the west of the town and labelled 'Rosetown called Readsland'. To the north of the road the area is labelled 'Rosetown held by Beggs'. E. Casey Esq. is the prominent landholder at this time, being in possession of Cooksland to the north of the Study Area and Knocks to the south, as well as much of Dunshaughlin to the east. This is the first map to show a small fork in the road west of the Study Area, with the northern road heading towards Killeen and the southern road towards Drumree. Dirty Lane to the east of the Study Area is depicted but not labelled and is shown crossing Knocks and running to the edge of Johnstown townland (NLI Ref. 21 F. 78 (43))



Larkin's map of 1812 does not show the site in any great detail, with a label in the vicinity of the Study Area of 'Rageland'. The fork in the road to the west of the Study Area is clearly depicted, as is Dirty Lane to the east. No structures are depicted within the bounds of the Study Area. Cooksland is labelled to the north of the Study Area with 'Rosetown' beyond, while he also depicts extensive bogs at Redbog and Lagore





The 1910s Edition of the Ordnance Survey shows that the field boundaries in the northern field had largely been removed along with the building along the roadside. To the south of the road the field fronting onto the road has been subdivided into three fields, with two of these falling within the Study Area. No other changes have taken place, though Knocks is now depicted as being marshy with a pool immediately west of the Study Area



OSI Othostat aerial image of the site, 1995. Note there is no visible trace of the early medieval settlement or later medieval field system at this point (top right)

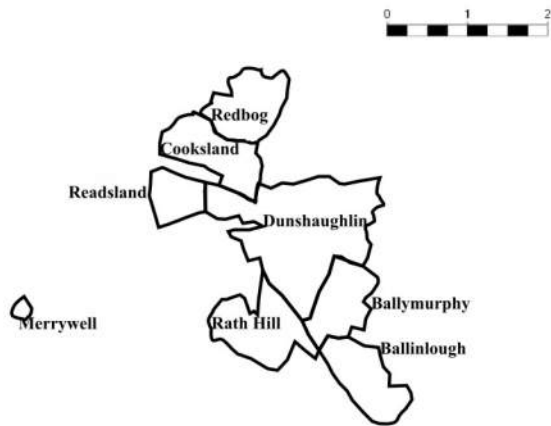
OSI Othostat aerial image of the site, 2000. No visible trace of the the early medieval settlement or later medieval field system. The boggy nature of Knocks to the south can be seen (bottom right)

inhabitant of Dunshaughlin, being in possession of 'One Mease and a garden' in Ratoath – mease meaning manor house (Simington 1940, 107).

In 1640, Sir William Parsons, Lord Justice of Ireland, was listed as proprietor of the townland of Dunshaughlin and 'Ladyhill' comprising 366 acres, which included a church, which we can presume was what remained of Domnach Sechnaill (Simington 1940, 90ff). He was also in possession of 135 acres in Roestown and 213 acres in Lustianstowne (modern day Leshamstown). This latter property was called 'the Church land of Donshaughlin', given on the condition that 'he should keepe the church of Donshaughlin in constant good repair' (ibid., 91). The same survey recorded a Catholic named James Plunkett as possessing a considerable amount of land in the parish of Dunshaughlin, including 172 acres in Lagore Big. He is also listed as owning twenty acres and three tenement buildings in Ratoath (ibid., 106f.).

In the 1670 survey, Richard's son, Sir Walsingham Cooke of Tomduffe, Wexford, High Sheriff of Ireland is listed as landowner of eight properties in Meath. Presumably these were the same lands as his father was granted by the king, namely the townlands of Merrywell,

Redbog, Ballinlough, Rath Hill, Ballymurphy, Dunshaughlin, as well as Readslane and Cookslane, likely named for his father. He was also the owner of extensive plantation lands in Wexford, and had rebuilt the ruined Glascarrig priory in 1654 (Flood 1905, 170).



Meath lands granted to Walsingham Cooke, based on Down Survey maps (1654-6)



OSI Orthostat aerial image of the site, 2005. Note the archaeological testing in advance of the Dunshaughlin by-pass has taken place to the west of the early medieval settlement (top right)

OSI Orthostat aerial image of the site, 2005-2013. The by-pass and the M3 beyond are complete by this point. Again none of the archaeological features uncovered during the excavation are visible (bottom right)

Section 3 Phase 1

Introduction

Phase 1 of the excavation in Dunshaughlin was spread over six fields lying in two townlands. Five of the fields (Fields 2-6) lay within Readsland townland to the south of the Drumree Road and east of the Dunshaughlin bypass and one field (Field 7) to the south of this lay within Knocks townland. Archaeology was identified within Fields 2-6 during the monitoring phase. No archaeology was identified within Field 7, which was wet and boggy. Features identified during the monitoring phase were cordoned off and subsequently excavated by the team. The archaeology uncovered ranged in date from prehistoric to post-medieval.

Prehistoric activity

Prehistoric activity was identified in Fields 4, 5 and 6 towards the southern end of the site. This was the lower-lying end of the development, with evidence for former wetlands identified in Fields 6 and 7. In Field 4 probable Bronze Age activity in the form of a fulacht fiadh trough and partial burnt spread was uncovered. In Field 5 a cluster of pits of probable prehistoric date were uncovered. In Field 6 probable Bronze Age activity was identified to the northwest, with a number of fulacht fiadh troughs and a burnt spread identified. In the central part of the field a number of possible cremation pits were identified while further to the south on slightly raised ground a possible cremation pyre and nearby cremation pit were uncovered. The artefacts retrieved from this part of the site suggested the burial activity may date to the Late Neolithic period.

Medieval activity

A medieval field system was uncovered across all fields in Phase 1 with the northern fields fronting onto a former road to the north, likely to be an earlier version of the Drumree Road. The remains of a structure associated with

numerous iron objects, possibly relating to ironworking, was also uncovered.

Monitoring

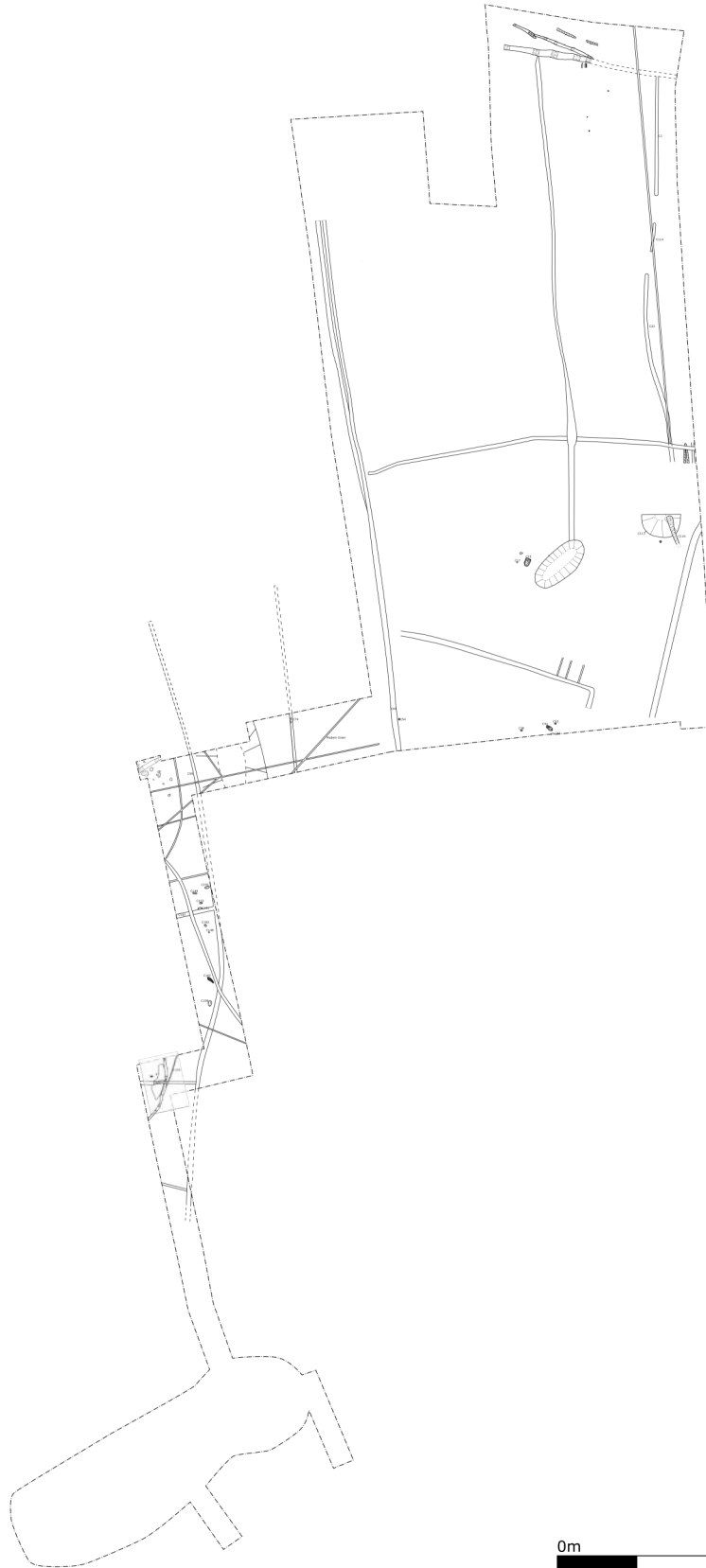
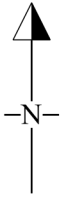
The monitoring and excavation for Phase 1 of the development was carried out from the 2nd May to 19th June 2018. The monitoring and excavation were carried out concurrently with features being cordoned off and excavated while the monitoring continued elsewhere. Two archaeologists were initially required to monitor the works, with an additional five brought in to excavate features as they appeared.

The topsoil (C100) ranged from 250-450mm in depth. It was generally a mid to dark brown silty clay, though became deeper with a higher organic content at the northern end of Field 6. This related to a low-lying depression and appears to have been a wetland pool in the past.

Monitoring initially focussed on the northern end of Fields 2-3, where the show homes for the development were to be constructed. Following this the main routes through the

Monitoring in Field 2





Plan of the archaeology uncovered in Phase 1

development were monitored. This allowed for the remaining areas to be monitored while providing routes for spoil management and allowing the initial drainage works for the development to proceed.

Fields 2-4 were fully stripped as part of the works. The northwest corner of Field 5 was also stripped as part of the works. In Field 6 a 15-20m wide trench was stripped to allow for drainage associated with the development. The remainder of the field was not stripped as part of this phase of the works. The western end of Field 7 was stripped for the insertion of the attenuation tank for the development.

A number of areas of archaeology were identified during the monitoring phase that required further archaeological investigation. These will be discussed below.

Methodology

General features

Following on from the monitoring phase of the works the team hand-cleaned and hand-excavated the archaeological features identified across Fields 2-6. Box sections were excavated across the medieval field boundary ditches, with particular attention given to ditch junctions. Smaller features were half-sectioned and resolved in full during the excavation. In some cases a specific methodology was carried out to

deal with more complex features. Features were excavated, planned, drawn, photographed and recorded throughout the excavation. 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 co-ordinates and levels were recorded for significant finds. As per the recommendation of the archaeological conservator, iron artefacts were dried out in the site hut prior to storing 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.

Metalled road surface

In the case of the metalled road surface at the northern end of Field 3 a specific methodology was devised. The entire surface was cleaned back and planned. Any features truncating the surface were excavated at this point. The surface was recorded and then removed to investigate the features overlaid by the surface.

Pyre

A specific methodology was devised for the pyre in Field 6. The surface of the pyre was initially cleaned back. The pyre was subsequently divided centrally by a northeast-southwest orientated line with five 2m boxes along either side separated by 1m wide baulks. This divided the

Cleaning of the medieval road (bottom left)

Excavation of the pyre and related features in grid system (bottom right)

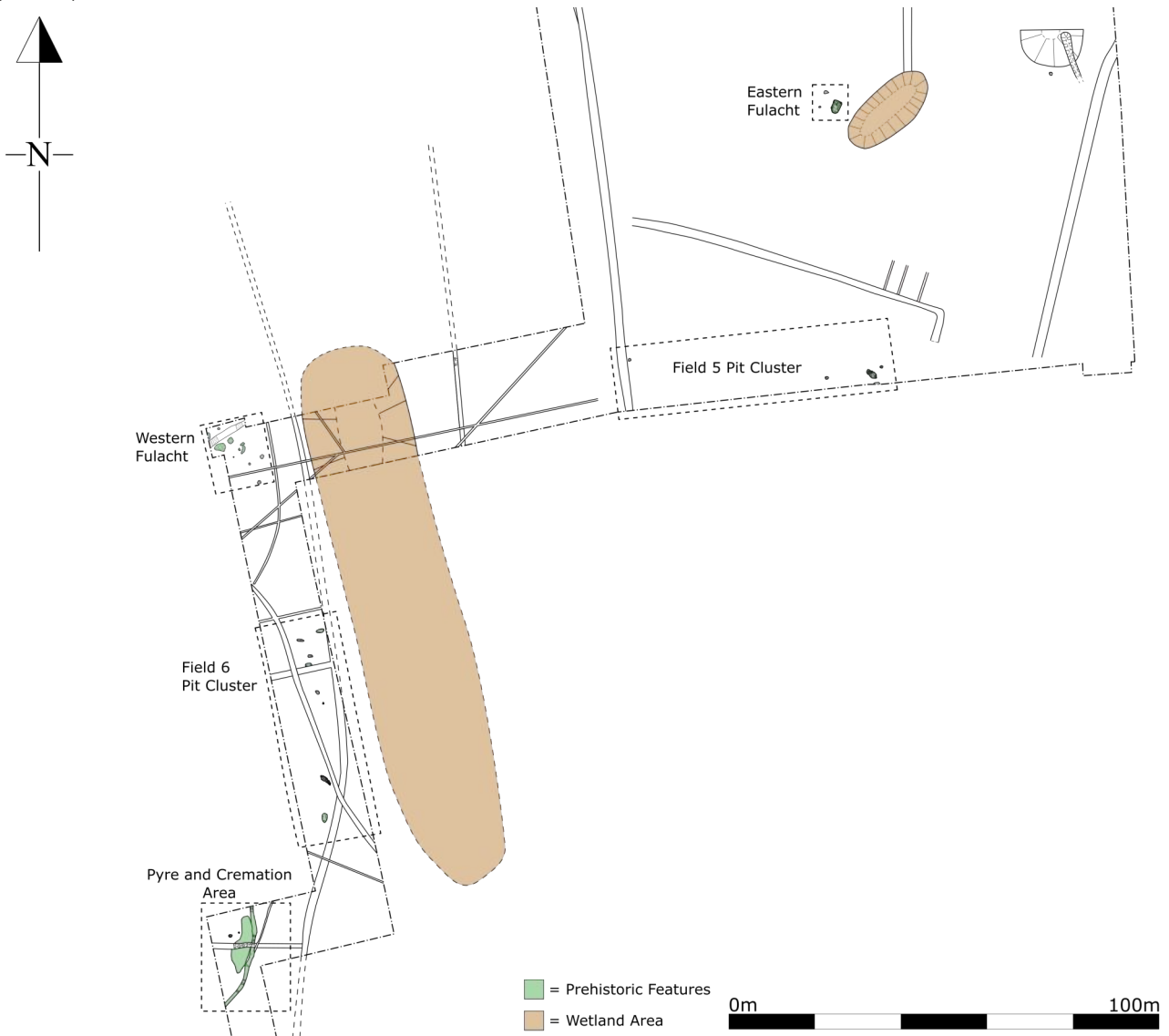




On-site dry sieving of pyre spread material (top)

pyre into five box sections and four baulks on either side of the central division, with side A being to the northwest and side B being to the southeast. A pre-excitation plan of the spread and features cutting it was drawn noting areas where burnt bone was more prevalent. An initial visual inspection of each box and baulk was carried out with bone, charcoal and finds collected and appropriately bagged. Following this the box sections were excavated through the features truncating the spread, and subsequently through the spread itself. Material removed from the spread was dry sieved on site to extract the bone, charcoal and finds. The section faces in each box section were recorded and drawn. Following this the baulks were excavated. Bulk soil samples were taken from each of the baulks for wet sieving. The remainder of the material

Plan of the areas of prehistoric activity on the site (bottom)



was dry sieved on site as per the box sections. A post-excavation plan of the area was drawn and final recording carried out. A series of photographs were taken at pre-excavation, mid-excavation and post-excavation stage.

Surveying and planning

As features and archaeological areas in the Phase 1 portion of the site were spread out across a large area various surveying techniques were used. The long linear ditches and isolated features were surveyed by the site surveyor. In areas where clusters of archaeology were identified 10 x 10m grids were established over the areas, which were planned by hand. Scaled sections and profiles were drawn of each feature as part of the excavation process.

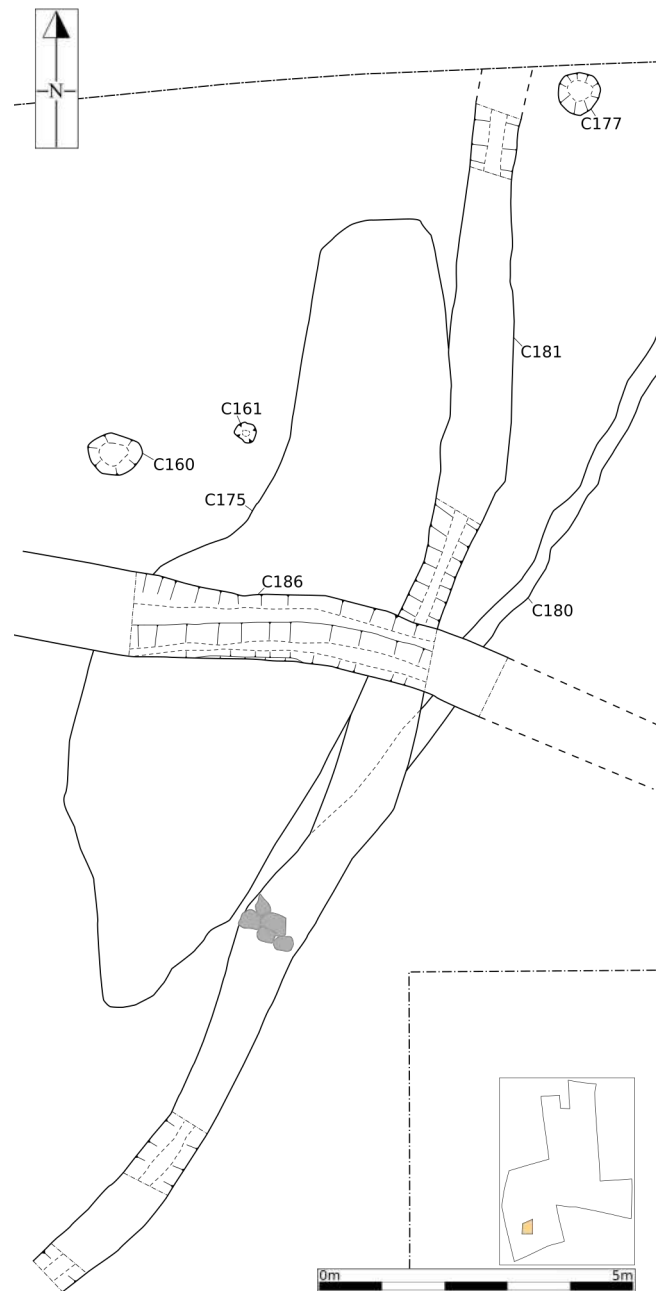
Processing

Bulk soil samples for Phase 1 were wet sieved. No water-logged deposits were encountered during the excavation. Samples were steeped in water and aggravated to loosen the soil and allow seeds or charcoal to float to the surface. This was sieved off the top of the water, dried and bagged as the flot from the sample. The remaining material was passed through graded sieves with 5mm, 2mm, 1mm and 250mic sieves used. The material from each sieve was dried and bagged as the retent from the sample.

Bone and ceramic artefacts were washed and dried as per the recommendations of the zooarchaeologist and ceramic specialist.

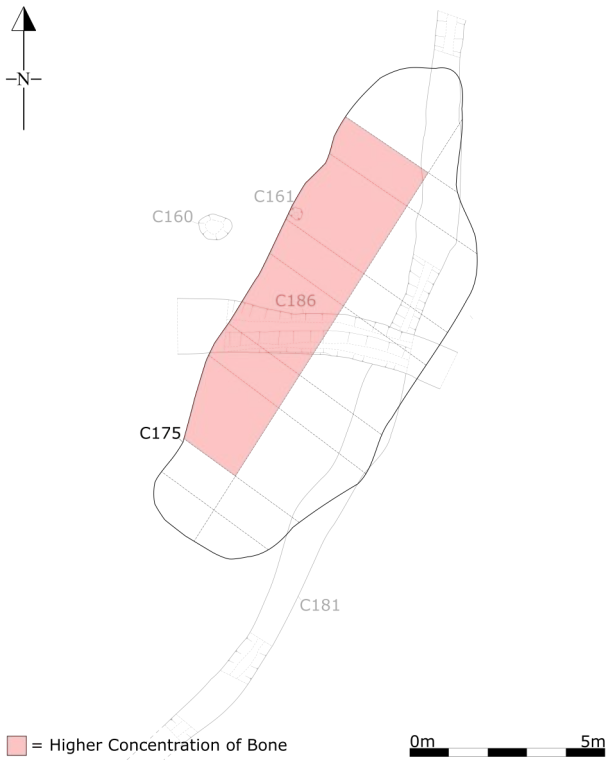
Prehistoric burial area

Towards the southern end of Field 6 a cluster of features were identified relating to prehistoric burial. A spread of material that has been interpreted as the remains of a cremation pyre was uncovered on the eastern crest of a slight rise, with the ground sloping off to the low-lying former wetland areas in Field 6 and 7 to the east and south. The raised area continued to the edge of the field to the west before sloping down towards where the bypass road runs presently. A cremation pit was identified to the west of the



Plan of the prehistoric burial area

pyre spread on the top of the rise. A second possible cremation pit was located to the north at the edge of the limit of excavation. A number of pits including a cremation pit and a fire pit were located c. 35m to the northeast (Field 6 pit cluster) in the low-lying area near the wetlands in the centre of Field 6.



Plan of the pyre spread showing grid and concentration of burnt bone to the west (top left)

Mid-ex view of pyre spread C175, looking southwest (top right)

Mid-ex view of pyre spread C175, looking northwest (centre right)

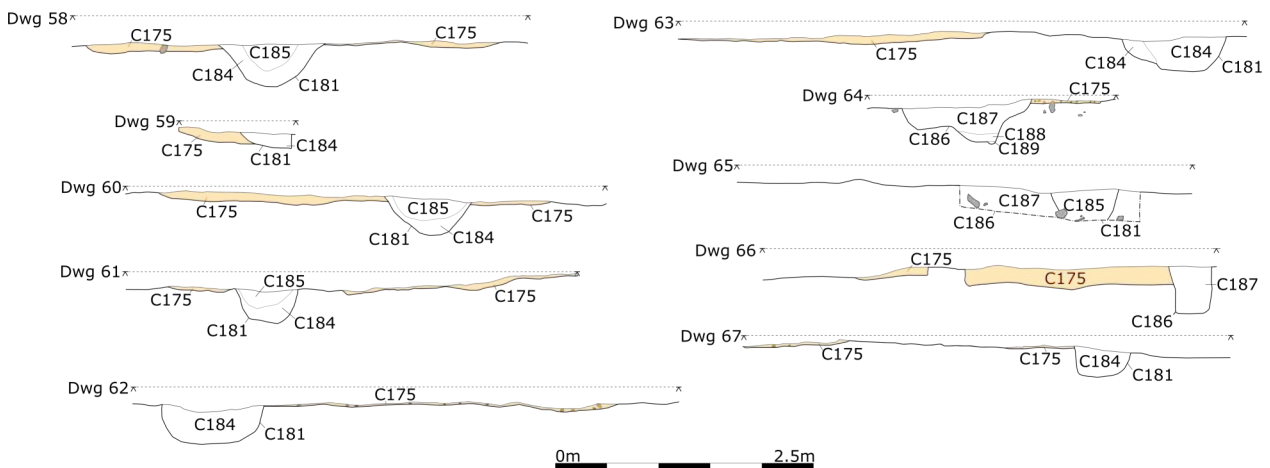
Sections of the pyre spread and related features (bottom)



Pyre spread C175

The pyre was a large northeast-southwest orientated ephemeral spread of material measuring 13.56m x 4.22m and consisting of a mixture of the underlying natural subsoil with evidence of light scorching and thin patches dark silt with inclusions of burnt and unburnt stone, burnt bone, flint and rare charcoal.

The spread was divided into boxes and this process indicated that a higher quantity of burnt bone came from the uphill northwestern half of the spread. Some in situ burning was recorded at





Mid-ex view of the pyre spread showing the shallow nature of the material, looking southwest (top)



Post-excavation view of the pyre, looking southwest (bottom)

the base of the spread under Baulk 3A and some in situ burnt natural stones were evident elsewhere, however the burning does not appear to have been very intense in any one location. The base of the pyre was slightly lower than the surrounding natural however no distinct cut was apparent, with the spread appearing to lie in a dished depression. This is possibly the result of the material being sifted through to remove material after the cremation. The total volume of burnt bone from the spread was relatively low. It was also consistently spread over the full length of the spread. This may indicate that the pyre was used on more than one occasion, or that more than just the human body was burnt

on the pyre.

Initial indications from the osteological analysis suggest that some animal bone is also present, implying animals or animal parts were also burnt on the pyre, perhaps as offerings as part of the burial ceremony (Jonny Geber 2018 pers. comm.). An initial clean-back of the pyre spread was carried out with material collected during this given a separate context number (C176) in case any of this material was intrusive from the topsoil above. Some slag was retrieved during the clean back and may derive from ditch C181, which also contained slag.

Cremation pit C160

Cremation pit was a small sub-circular pit. It was a shallow U-shape in profile with concave sides and base. The pit contained a single fill (C166), which had inclusions of burnt bone. The pit was located at the top of the slight rise towards the southern end of Field 6.

Possible cremation pit C177

To the northeast of pit C160 a second possible cremation pit was identified beside the limit of excavation within the trench. It was also a shallow U-shape in profile with concave sides and base and had identical dimensions to cremation pit C160. The pit had a single fill (C179), which was similar to the fill of cremation pit C160, however only a small quantity of burnt bone was retrieved from the fill.

Spread C161

This was a small spread of material similar to the fill of cremation pit C160 and lay between the cremation pit to the west and the pyre to the east. Some burning was evident at the base of the spread, which contained a piece of worked flint. This may be the base of a truncated feature associated with the cremation activity.

Prehistoric ditch C181

A number of ditches truncated the pyre spread. The earliest of these was a curvilinear ditch (C181), which continued beyond the limit of excavation to the north and curved around to the southeast before petering out. It is possible this end of the ditch was ploughed out. The ditch curves around the higher ground of the slight rise that the cremation pit C160 was located on and truncated the pyre spread C175, though may also be of prehistoric date. It was generally U-shaped in profile with a concave base.

It contained two fills to the north. The basal fill (C184) related to the initial silting within the ditch. No finds were identified within this fill. The upper fill (C185) was a compact silty clay with inclusions of flint scrapers, charcoal, burnt bone as well as a piece of iron slag. To the north of the pyre spread this fill was recorded under a separate number (C190) with one flint scraper being retrieved from the southern end of the ditch as it shallowed out. The basal fill was not



South-facing section of cremation pit C160 (top)

Mid-ex view of section through ditch C181, looking south
(upper centre)

Mid-ex overview of ditch C181, looking southwest
(lower centre)

Mid-ex overview of ditch C181, looking northeast
(bottom)

apparent at the northern end of the ditch. The slag indicates that the ditch can be no earlier than the Iron Age, with the flint artefacts likely to have been eroded out of the pyre spread the ditch truncated.

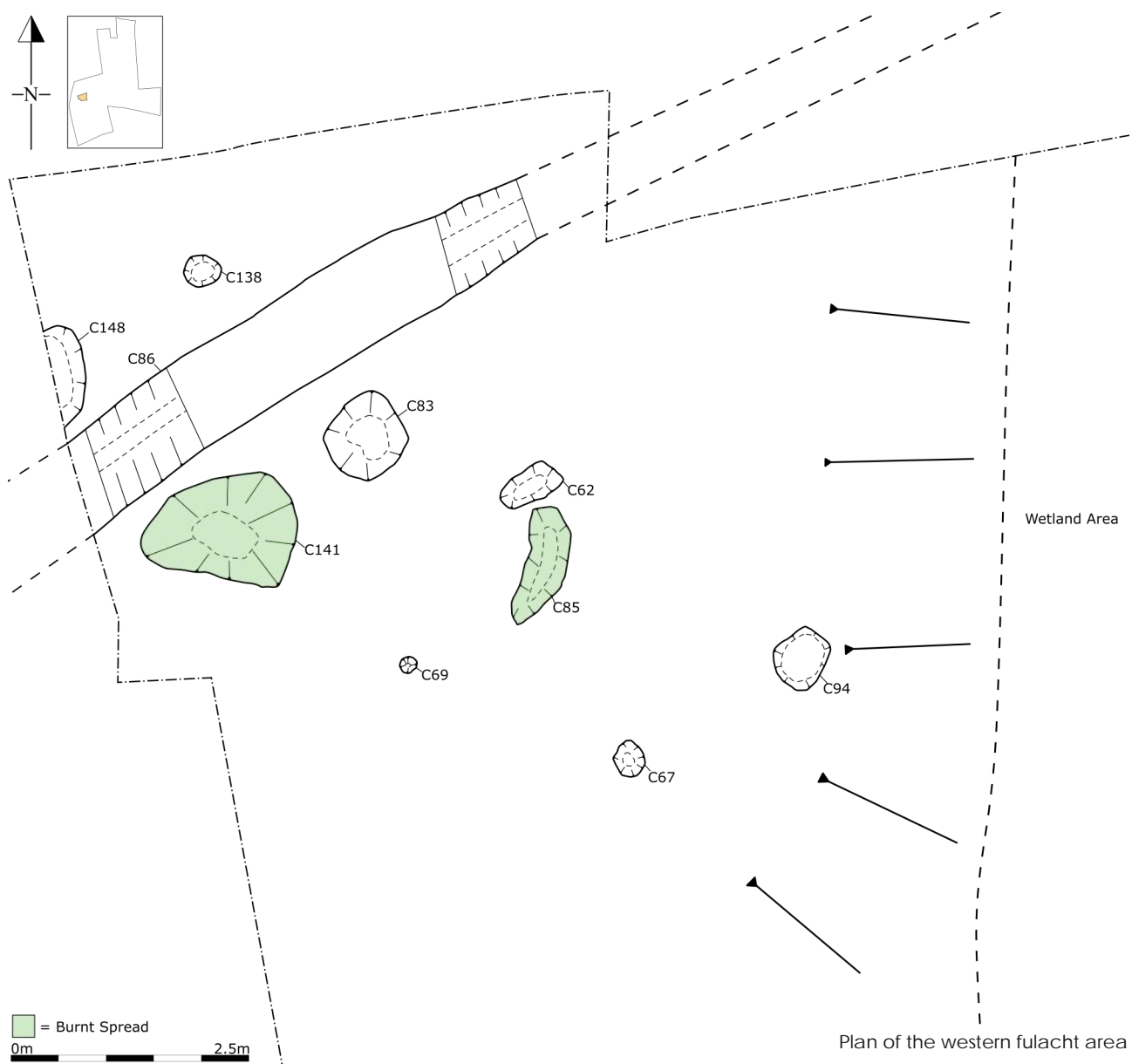
A hollow scraper was retrieved from the base of the topsoil (C100) just to the south of the pyre and cremation and may have originated in one of the features.

Western fulacht fiadh area

Towards the northern end of Field 6 a number of pits filled with charcoal and fire-cracked stone are likely to represent simple troughs of a fulacht fiadh.

Trough C83

This was a circular pit and was the northernmost of the probable fulacht troughs identified within the excavated area. It was steep-sided with a flat base and contained three fills with a later shallow re-cutting event also recorded. The basal fill (C82) was a thin layer few inclusions that may represent a period where the pit was open before its final use. The secondary fill (C81) was



more substantial and consisted of a black silt with patches of degraded burnt stone. This was waste material from the use of the fulacht that ended up within the trough after it went out of use. This was overlaid by the upper fill (C84), which accumulated within the pit after it was partially infilled with the fulacht waste material. After the pit was completely filled in a shallow steep-sided pit (C71) was cut into the southern end. The second pit was smaller than the first, however the steep sides and dark silt fill (C72) were similar to the earlier pit and it is likely the later pit is a smaller fulacht trough.

Pit C62

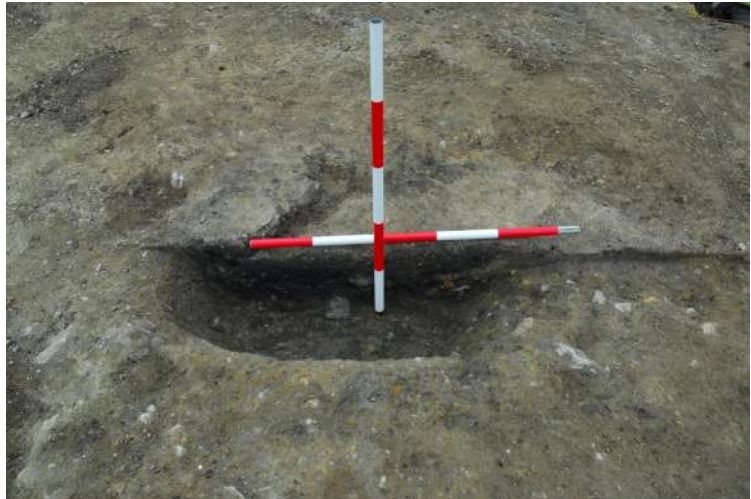
Sub-circular pit to the southwest of trough C83 with gradually sloping sides and a slightly uneven base. Two fills were recorded within the pit, a pale compact lower fill (C73) and a dark charcoal-rich upper fill (C63). While the pit was less defined than the trough the presence of the charcoal-rich fill suggests these features were open and used at the same time, possibly for different parts of the processing that was carried out at the site. Just to the south of the pit a curvilinear spread of burnt stone (C85) was present, which sat directly over the natural subsoil and was not within a cut. This represents the remains of the spread of burnt stone and charcoal usually associated with fulacht fiadh sites.

Pit C138

Sub-circular pit with sharp breaks of slope at the top and more gentle at the base giving concave sides. The base was relatively flat and the profile of the pit was a broad U-shape. It contained a single fill (C139), which had inclusions of charcoal and flecks of orange likely to relate to burning. This feature was similar in scale to the other possible fulacht troughs nearby.

Burnt spread C141

Spread of dark grey silty clay mottled with orange with inclusions of burnt



Mid-ex view of fulacht trough C83, looking west (top)

Post-ex view of fulacht trough C83, looking east (centre)

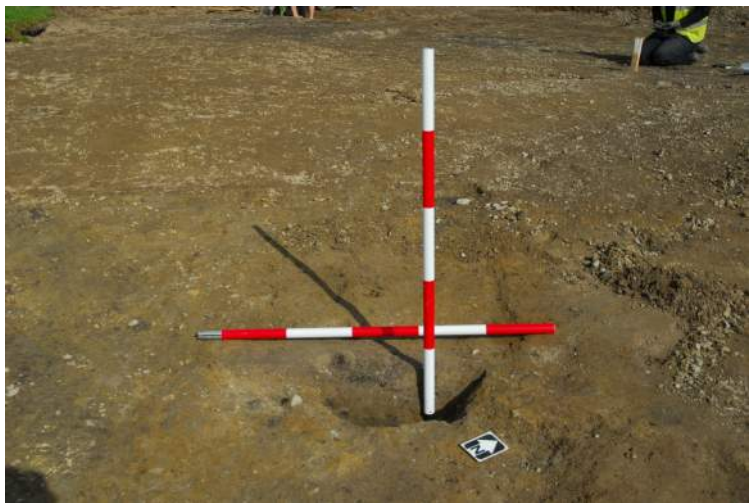
Mid-ex view of shallow burnt spread C141, looking north (bottom)

stone and charcoal. The spread was loosely compacted and is likely to represent the remains of a burnt spread associated with pyrolithic activity. It is possible that this spread originally connected with spread C185 a short distance to the southeast. As there was little topsoil clearance over these features, c. 0.2m, it is likely that the spread was impacted upon during agricultural activity in the past. Initially a cut number was given associated with the spread (C140), however the spread does not lie within a true cut.



Spread C148

A spread of charcoal-rich silt located at the limit of excavation within a shallow depression and continued into the unstripped area. The spread is likely to relate to the burnt spread associated with the fulacht fiadh. It was unclear whether it lay within a cut.



Pit C94

Subcircular pit located to the north of the fulacht troughs. The pit was slightly irregular though did appear to be archaeological. It contained a single fill (C95), which was the result of natural silting with some charcoal flecking at the top. This may have been a water-filled pit associated with a different phase of the processing carried out at the site.



Pit C67

Sub-circular pit also located in the area to the south of the fulacht troughs. The pit contained a single fill (C68), which for the most part was a pure silty clay though contained two lenses of charcoal near the top. The main fill of the pit was similar to that in nearby Pit C94. This pit may also have served a different function to the troughs further to the south. The charcoal lenses may relate to the burnt spread material associated with the fulacht.

Post-excitation view of spread C148, looking west (top)

Mid-ex view of pit C67, looking northwest (centre)

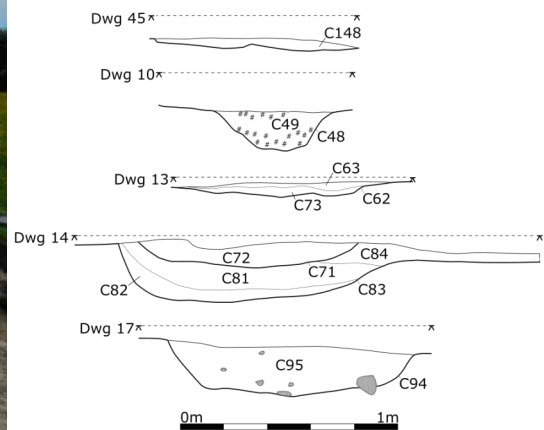
Post-ex view of western fulacht area, looking northwest (bottom)

Posthole C69

Circular probable posthole to the south of the fulacht fiadh troughs and north



Post-ex view of western fulacht area, looking south (left)



Western fulacht fiadh area sections (right)

of the other pits (C94 and C67) that are likely to be associated with other aspects of the processing on the site. The posthole was steep-sided with sharp breaks of slope at the top and base and contained a single fill (C70). The fill contained a piece of quartz along with occasional charcoal and is also likely to relate to the fulacht fiadh site.

Pit C146

Sub-circular pit orientated north-south with concave sides and flat base. The pit contained a single fill (C147) containing a number of possibly worked pieces of flint and chert, and was located between burnt spreads C85 and C140.

Field 6 pit cluster

Another cluster of activity was identified in the area between the two rises in Field 6. This portion of the field was more low-lying and these features would have been within or at the edge of the former wetland area.

Pit C151

Oval possible cremation pit located in close proximity to Pit C182, which was truncated by

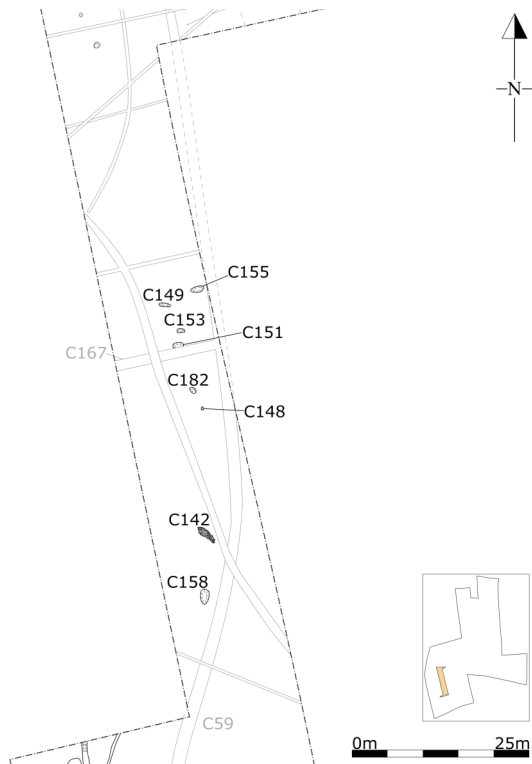
post-medieval ditch C167. The basal fill of the pit (C157) was a compacted and sterile clay, which may have been intended as a lining for the pit. The upper fill of the pit (C152) was loosely compacted and contained frequent charcoal and occasional burnt bone fragments. The quantity of burnt bone retrieved would not imply a complete cremation deposit.

Pit C155

Sub-oval possible cremation pit orientated east-west and located in close proximity to pit C149. There was a slight rise in the base creating a smaller area to the east, though both sections of the pit contained the same fill. The fill (C156) contained occasional charcoal flecks and burnt bone, though as with the fills of the other possible cremation pits nearby, the quantity of burnt bone would not imply a complete cremation deposit. Some wood fragments at the top may indicate inundation from the wetland area into the pit.

Pit C142

Large sub-oval, somewhat irregularly-shaped pit orientated northwest-southeast. The pit was generally U-shaped in profile but was steeper sided to the west. The base of the pit was irregular, though generally concave. A patch of scorching was evident towards the northern end of the pit overlying parts of the two possible lining fills and overlaid by the upper fill of the pit. It is possible that this originally marked the edge of the pit, with the narrow section to the northwest of this relating to later agricultural



Plan of Field 6 pit cluster (top left)

Mid-ex view of possible cremation pit C155 (centre left)

Mid-ex view of of possible cremation pit C151 cut by ditch C167 (bottom left)

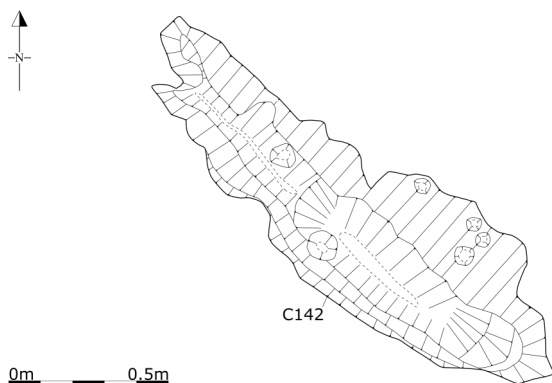
Mid-ex view of pyre pit C142, looking southwest (top right)

Post-ex view of pyre pit C142, looking southeast (bottom right)

disturbance. This would have made the pit a more regular oval shape. The scorching may indicate that burning was carried out in situ and that the pit may relate to a pyre rather than a cremation pit.

The pit contained three fills. The basal fill (C145) was a layer of sand along with no obvious inclusions, however was not common in the surrounding natural so may have been brought to the feature to form the basal layer. Overlying this the secondary fill (C144) was a





Plan of pyre pit C142

clay deposit perhaps intended as a lining for the cremated deposit above. Some burnt bone and worked stone was identified within this layer. The main cremation deposit was the upper fill (C143), which had inclusions of burnt bone, unburnt bone, rare charcoal and some worked stone including a large flint hollow scraper. The bone was mainly located at the top of the fill and was concentrated towards the centre of the pit. If interpreted as a pyre pit the initial layers of sand and clay are interesting and may relate to ground preparation prior to the burning event. Scorching of the base was only identified in one part of the pit, however the underlying subsoil in this location may have been damp given its low-lying position near the wetland.

Pit C153

Small oval pit with sharp breaks of slope at the top and base orientated east-west and located a short distance to the north of pit C151. It had a single fill (C154), which was rich in charcoal and also contained charred seeds. This pit did not contain burnt bone and was smaller than the possible cremation pits nearby. It is possible that it relates to a related activity in the vicinity of the burials, perhaps relating to an offering of some sort.

Pit C182

Small sub-oval pit with a single fill (C183), which had inclusions of charcoal and oxidised clay flecks.

Pit C158

Irregular in plan with gradually sloping sides and irregular base. The pit contained a single fill (C159), which had occasional charcoal flecking,

however the fill also contained some organics and may relate to the wetland situation rather than the potential nearby cremation pits.

Pit C149

Sub-oval pit orientated northwest-southeast with a sharp break of slope at the top and concave sides and an irregular base. The fill (C150) was a loose organic silt with inclusions of burnt seeds and one struck flint. This pit may also be associated with the burial rites being carried out in this part of the site, however it is also possible that the contents of the pit relate more to the wetland area itself rather than an intentional deposit.

Field 5 pit cluster

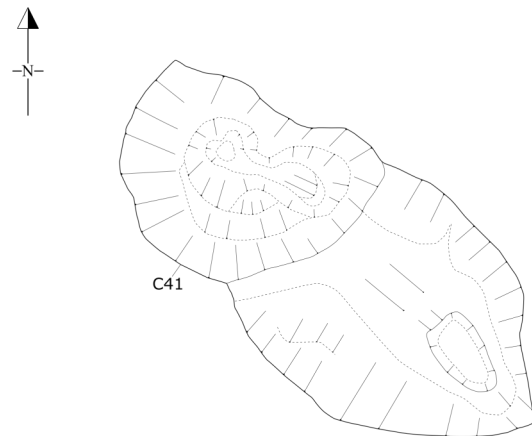
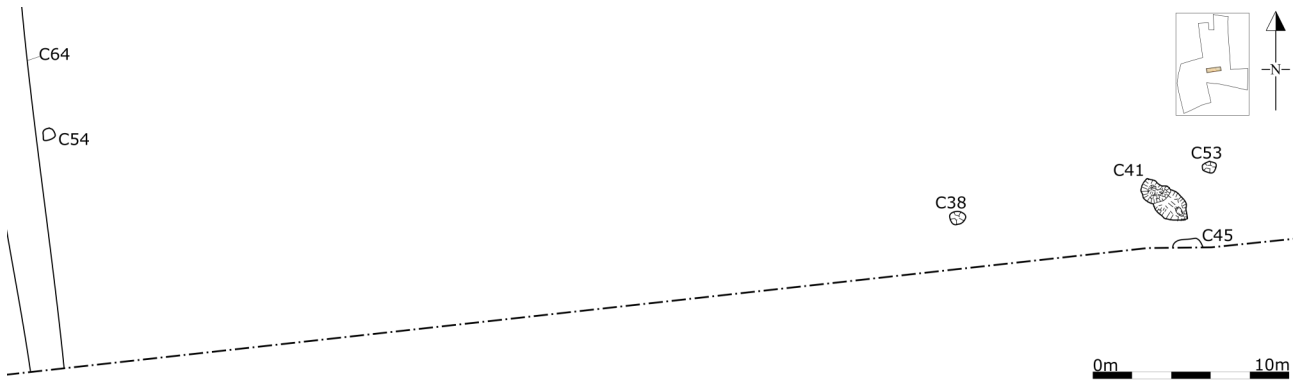
A number of pits were identified within Field 5 that may date to the prehistoric period.

Pit C41

Sub-circular pit with concave sides and base located near to southern limit of excavation in Field 5. The eastern side of the pit was near vertical. Three fills were identified within the pit. The basal fill (C44) was a sticky clay with occasional charcoal flecks, suggested to be the remains of a clay lining. This was overlaid by a loose silty clay (C43), also with charcoal inclusions. This fill also contained fragments of flint, three of which were burnt. The upper fill of the pit (C42) was charcoal-rich and contained two pieces of flint including a possible hollow scraper. To the southeast of the pit a charcoal spread (C45) extended out from the pit. This is likely to be disturbed material originally contained within the pit. Animal bone and two flint scrapers were identified within the spread.

Pit C38

To the west of pit C41 another pit was identified. This was a shallow oblong feature with a concave base and gently sloping sides. It is likely that this represents the base of a disturbed pit. It contained two fills. The basal fill (C40) was a pale clay and may represent the remains of a clay lining of the pit. The upper fill (C39) was charcoal-rich, similar to the fill of pit C41, and contained a piece of flint debitage and chert.



Plan of Field 5 pit cluster (top)

Mid-ex view of pit C41, looking east (centre left)

Mid-ex view of pit C38, looking south (bottom left)

Hollow scrapers. The example on the left was retrieved from pit C41 in the Field 5 pit cluster, the example on the right from pyre pit C142 in the Field 6 pit cluster (centre left)

Plan and section of pit C41 (bottom right)



Pit C53

Circular posthole located 1.75m from prehistoric pit C41 and close to the eastern limit of excavation in Field 5. This was a relatively shallow feature and was tentatively identified as a posthole due to its shape, however it is very shallow and may also be the remains of a pit. The fill (C55) was a loose silty clay with some evidence of root disturbance. No finds were identified.



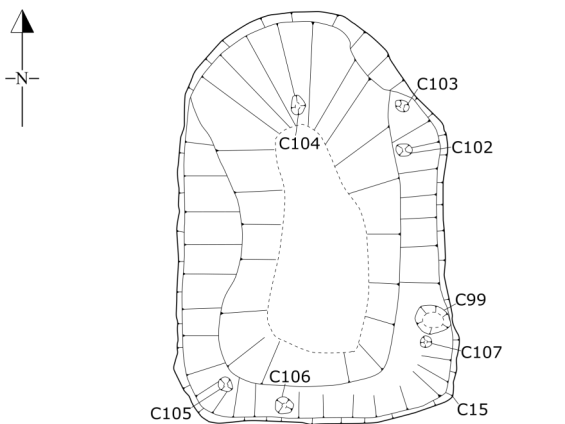
Scorching C54

This was a sub-circular patch of scorching located at the western end of Field 5 and truncated by ditch C64. No fill survived associated with the scorching. This is the remains of a burning event predating the medieval ditch.



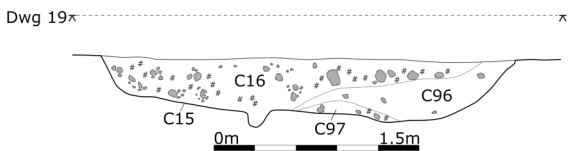
Eastern fulacht fiadh area

In Field 4 a sub-rectangular shaped fulacht fiadh trough (C15) was uncovered, orientated slightly northeast-southwest. The trough had rounded corners on all sides except to the southwest, which was slightly undercut. The sides were near-vertical and six stake-holes and a posthole were located at the edges of the base indicated that it had originally been lined. There were two stakeholes (C105 and C106) in the northeast corner, a posthole (C99) and a stakehole (C107) in the southwest corner (C102 and C103) and one midway along the southern side (C104). The posthole (C99) was double the diameter of the stakeholes and was the only one to have a



Mid-ex view of fulacht trough C15, looking east (top)

Post-ex view of fulacht trough C15 giving indication of depth of posthole C99, looking east. Note incorrect north arrow (upper centre)



Post-ex view of fulacht trough C15, looking east. Note incorrect north arrow (lower centre)

Plan and west-facing section of fulacht trough C15 (bottom)

distinct fill (C101), which may be a darker variant of the basal fill (C97) of the trough to the south. It is likely that additional structural elements were originally present in the southwest corner but not driven into the underlying natural. Possible packing stones were noted along the eastern side of the trough, which were not burnt and may have been part of the structure of the trough as opposed to the pyroclitic activity taking place within.

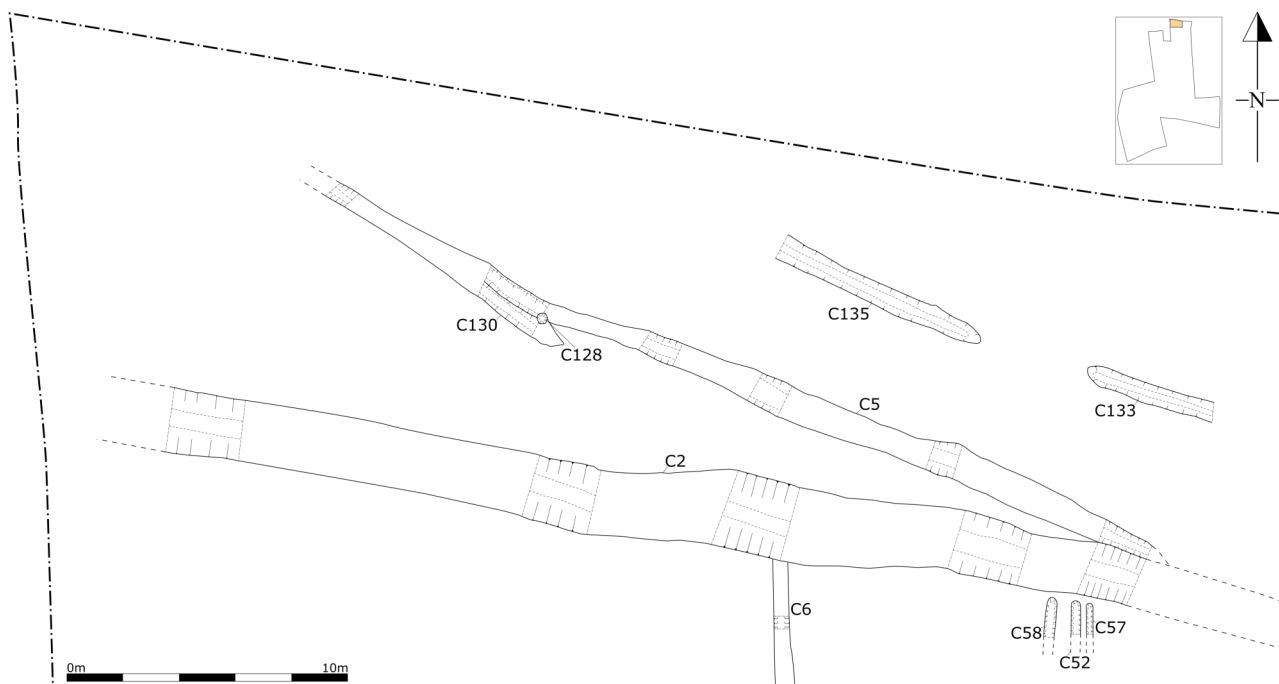
There was evidence for a cut or cleaning out event within the trough to the north, with the two earliest fills of the trough surviving to the south. The basal fill (C97) was a thin layer of dark clayey silt interpreted by the excavator as being a possible clay lining, though could equally be the material settling in the base of the trough after a fallow period, a mix of charcoal and silts washed through from the nearby waste heap or burnt mound. This was overlaid by another layer of silt (C96), paler in colour though still containing charcoal inclusions. Again this may have formed after the pit had been left open for a time unused. The upper fill (C16) of the trough, and sole surviving fill to the north was a typical black charcoal-rich silt with frequent burnt sandstone and contained four pieces of flint debitage. This is material that originally would have been in the burnt mound waste heap associated with the fulacht that has ended up

within the trough over time. While it is possible that some attempt was made to clean out the trough prior to abandonment, allowing this material to reach the base of the feature on the northern side, it is also possible that the silt layers to the south were soft and easily displaced as the burnt mound material encroached on the trough from the north.

The scant remains of the burnt spread (C13) were apparent 2m to the north of the trough. This material was similar to the upper fill (C16) within the trough consisting of burnt sandstone and charcoal. It is likely that the mound would originally have been more substantial but was largely ploughed out, with some ending up within the trough itself as fill C16.

The trough was located to the west of a natural depression (C19), a broad shallow hollow orientated northeast-southwest with a single homogenous silt fill (C20) suggesting it had been water-filled. This is likely to have been the water source for the fulacht fiadh.

Plan of the features at the northern end of Field 2



Early medieval drainage?

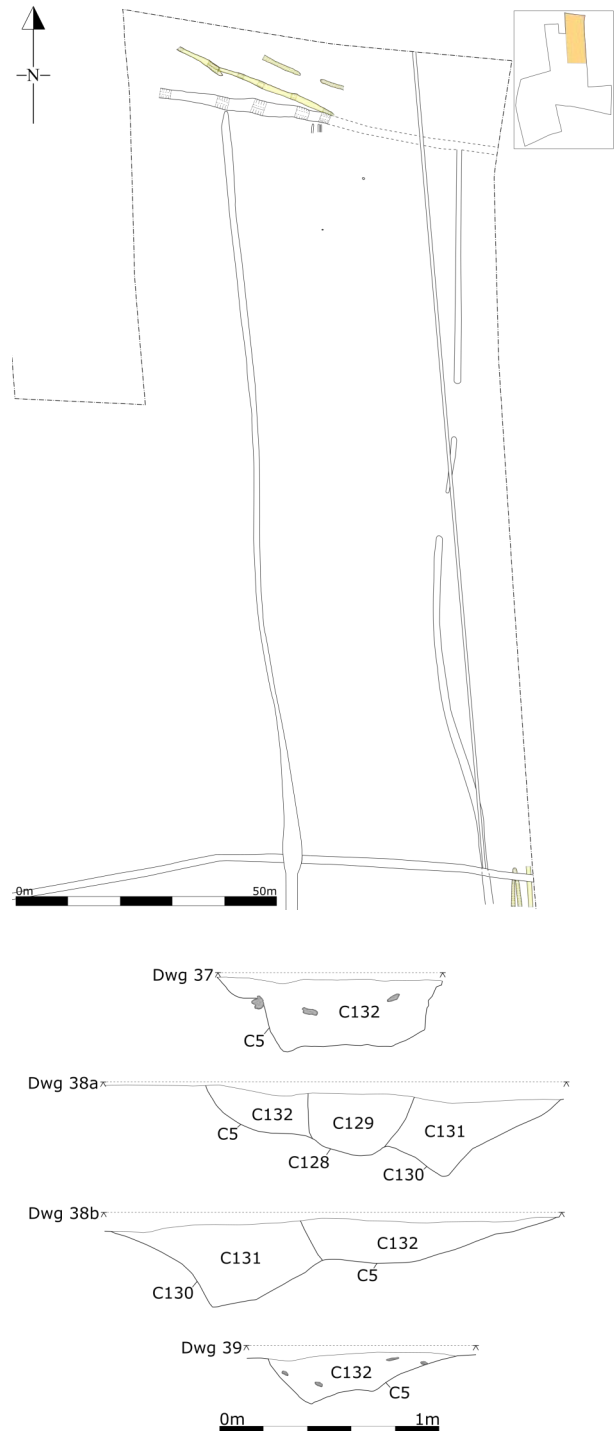
At the northern end of phase 1 and sealed by a later laneway (see below) a number of possible early medieval gullies were identified. The earliest of these was a section of ditch (C130) to the west, which was truncated away by a recut further west and terminated to the east. It was a broad V-shape in profile and had a single silt-rich fill (C131) with no inclusions.

A later ditch (C5) orientated northwest-southeast appears to have replaced it, extending further to the southwest than the earlier feature before being truncated by the medieval roadside ditch C2. It was a broad U-shape in profile and had a single silt-rich fill (C132), which contained a small quantity of slag.

A circular pit (C128) truncated both ditches at the acute angle of their junction. It was steep-sided and had a concave base. It had a single silt-rich fill with frequent small stone inclusions.

Parallel to Ditch C5 and to the north two sections of shallow channel or gully were identified. The western gully (C135) was shallow with a concave base and was partially rock-cut. A gap of 4m was present between the two sections of gully, which were in line with one another. The eastern gully (C133) was similar but was slightly deeper as it moved off the bedrock outcrop. Both sections of gully had the same fill (C134), which was a silt-rich material with no inclusions.

The lack of inclusions within these features makes it difficult to ascribe them to a specific



Plan of early medieval drainage features (top)

Sections of early medieval drainage features to north (centre)

Pre-ex view of ditch C5 overlaid by remains of metalled road C3, looking southeast (bottom)





Mid-ex view of east-facing section through ditch C5, looking west (top left)

Mid-ex view of intersection of ditch C5, C130 and pit C128, looking east (centre left)

Mid-ex view of ditch C5, looking east (bottom left)

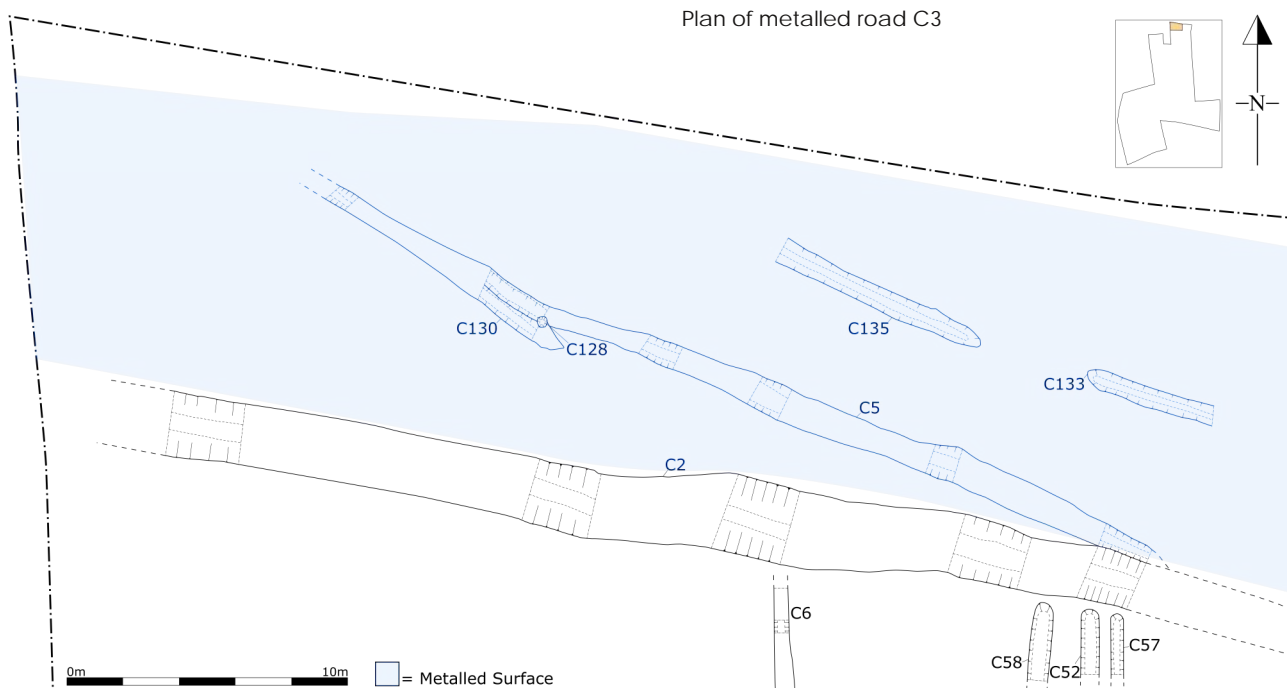
Mid-ex view of gully C133, looking west (top right)

Mid-ex view of gullies C133 and C135, with ditch C5 to the left, looking west (upper centre right)

Mid-ex view of gully C34, looking north (lower centre right)

Mid-ex view of gully C26, looking north (bottom right)





period, however as they were sealed by the medieval road surface and cut by the medieval field system it is probable that they relate to the early medieval settlement to the north. A number of similarly sized gullies were identified to the south of the settlement and may relate to cultivation. The lack of charcoal and other finds within the features would suggest they are agricultural in nature and somewhat removed from the main settlement activity.

Further to the south at the eastern edge of the site two narrow gullies (C34 and C37) were identified, converging at their northern end. Both contained single fills (C35 and C14), which were sterile, and were truncated by medieval field boundary ditch C8 at the point where the gullies were converging. A short linear drainage channel running into medieval ditch C32 also truncated the southern end of gully C34. The date and function of the gullies was unclear, however they clearly predate the medieval field system. The southern end of both gullies was lost in an area of modern disturbance.

Another north-south running gully (C26) was identified 1.1m from the eastern site boundary. This terminated 2m to the south of ditch C8 and may be related to the converging gullies. It also had a single sterile fill (C27).

Medieval laneway

At the northern end of Fields 2-3 an east-west orientated metallated surface (C3) was uncovered. This ran from the limit of excavation to the north to the edge of medieval Ditch C2 to the south and is likely to be an earlier version of the existing Dunshaughlin to Drumree Road. The surface consisted of rounded pebbles and occasional angular gravel beaten into the underlying subsoil. In some places the surface incorporated underlying bedrock outcrops. There was a slight downward slope on the surface from north to south. A pothole (C123) was identified roughly centrally within the surface, which contained two fills, a basal silt (C124) and a compact upper silty clay fill (C125) that may have been an effort to repair the pothole. The road formed by the metallated surface would not have been flat and undulations were apparent throughout. A layer of silty clay (C118) was identified overlying the surface. This contained occasional fragments of slag, animal bone, glass and a belt buckle, and is the material that built up over the road surface after it had gone out of use. The presence of slag here is interesting as a small metalworking site (C235) was identified at the southern end of the early medieval settlement to the north on the opposite side of the road. A field drain (C4) was identified running east-west cutting through the deposit overlying metallated surface.



Metalled road C3, looking east (top)

Metalled road C3, looking south (centre)

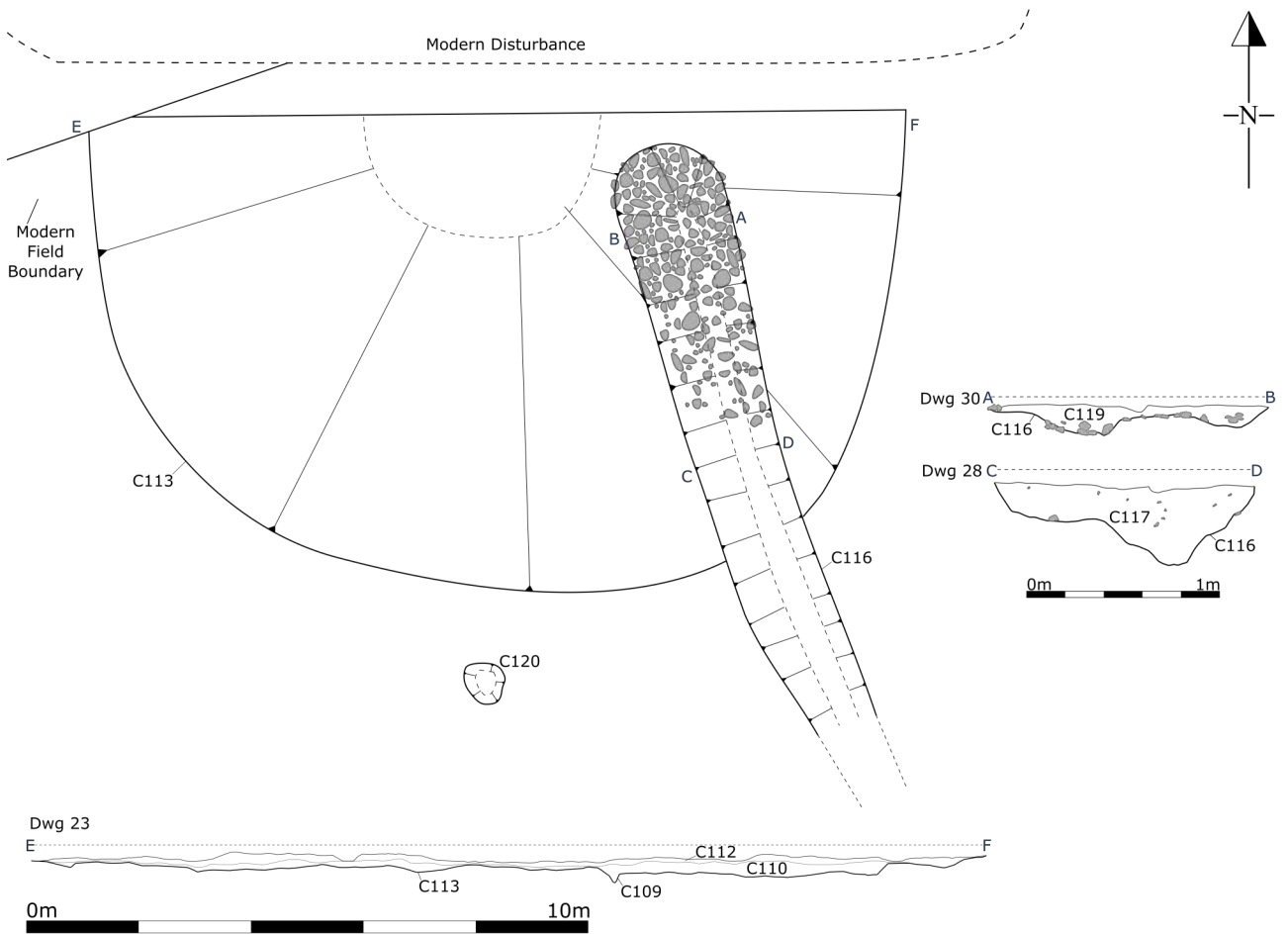
Post-ex view of metalled road C3, looking north. Note occasional sections of bedrock incorporated into the surface (bottom)



The positioning of the road slightly further to the south than the current road is somewhat interesting. During the laying of a service trench associated with the development across the Drumree Road an east-west running ditch was identified towards the northern end of the road, which formed part of the southern annex of the early medieval settlement. It is possible this was not entirely filled in by the medieval period and that the road was positioned slightly further to the south to avoid it. Over time the ditches associated with the early medieval settlement were infilled and ploughed out and the reason for the road to avoid this area diminished. There is a slight suggestion of a curve in the road on the First Edition Ordnance Survey map, but this would be too recent for this surface. Perhaps a slight curve in the road survived throughout the post-medieval and modern periods, only being straightened in the 19th century.



Some slag was retrieved from the topsoil (C100) overlying the laneway and is likely to have



Plan and sections of Structure A (top)

Mix-ex view of slot excavated across beaten clay floor of Structure A, looking west (top left)

Mid-ex view of cleaned strip of clay floor within Structure A, looking west (bottom left)





Mid-ex view of drain to east within Structure A, looking north (top)



Post-ex view of pit C120, looking north (bottom)

originated at the early medieval settlement to the north.

Medieval Structure A

Structure A was represented by a dished D-shaped area (C113) cut into the natural and truncated along its northern side by field boundary ditch C111 towards the eastern side of Field 4. The dished area had concave sides and a relatively flat base and may be the remains of a work area. No structural remains were identified to suggest the structure was walled or roofed,

however a north-northwest to south-southeast running drain (C116) was uncovered in the eastern half of the area. The drain was broader and had a metallised base (C119) to the north, where it was level with the base of the structure, and became narrower and more channelled to the south. A single fill (C117) was identified within the drain, which had inclusions of animal bone, particularly to the north. The fill of the remainder of the structure (C21/C112) was a compact material, with frequent iron finds, iron slag and occasional medieval pottery sherds. Some post-medieval material was also present at the upper part of this fill and may be intrusive, however the fill was unsealed. This is possibly the remains of a beaten earth floor surface of a medieval structure. While no evidence of a superstructure was identified it is possible that it was mud-walled or had a light-weight superstructure that did not leave an archaeological trace.

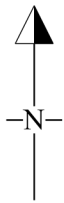
A sub-circular pit (C120) was uncovered 1.8m to the south of Structure A. The base of the pit was irregular and its function is unknown, however the fill (C121) was similar to the fill (C117) within the drain of the structure. This may have been a pit used to hold water in the vicinity of the work being carried out in Structure A.

Medieval field boundary ditches

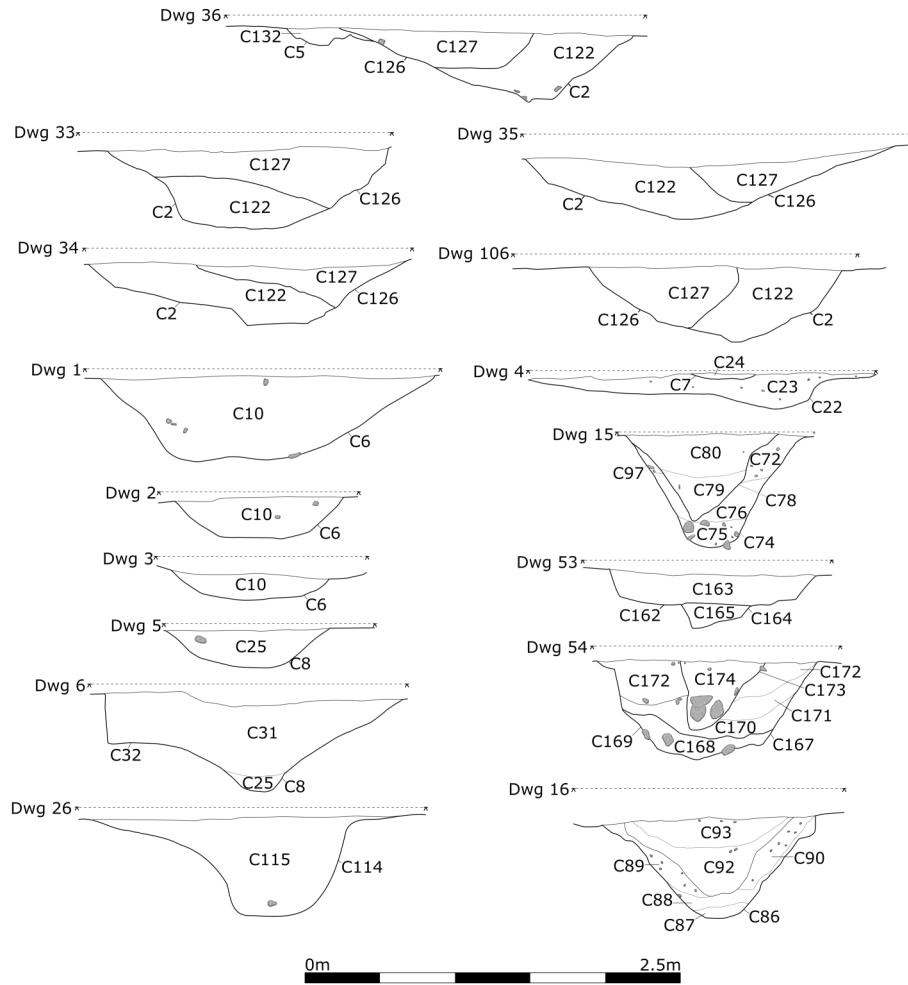
A number of field boundary ditches were identified within Field 6. Two of these were running approximately north-south similar to those in the fields to the east and appear to relate to medieval field divisions.

Ditch C74

At the eastern end of the field a north-south running ditch was identified at the northern end of Field 6 continuing beyond the currently stripped area to the north and south. It was V-shaped in profile with a narrow, slightly uneven base. It was steep-sided with sharp breaks of slope at the top and base. Three fills were identified within the ditch, which was subsequently recut (C78) along its eastern side. The basal fill of the ditch (C75) was a sandy silt with frequent stones, which are likely to have been deposited to aid drainage. Overlying this



Interpretive plan of the medieval field system and other medieval features identified in Phase 1



Medieval ditch sections (top)

Mid-ex view of Ditch C74, looking south (centre left)

Mid-ex view of Ditch C59/C164, looking north (bottom left)

Mid-ex view of Ditch C167, looking east (centre right)

Mid-ex view of Ditch C86, looking east (bottom right)



was a secondary layer of clayey silt (C76), which relates to the natural silting up of the ditch over time. The upper fill of the ditch (C77) was a mottled fill with frequent gravel inclusions mixed with redeposited natural. This may be an intentional infilling of the ditch, perhaps with associated bank material, prior to the ditch being recut.

The ditch was recut (C78) with the recutting running along the same alignment. The recut was slightly shallower and narrower than the original ditch and was cut into the eastern side of the original ditch. The recut was V-shaped in profile with a narrow base. It had convex sides at the top becoming concave at the base with a gentle break of slope at the top and sharp break of slope at the base. It was near-vertical in the central portion of either side. The recut contained two fills. The basal fill (C79) was a soft clayey silt relating to natural silting within the ditch. The upper fill was compact and similar to the topsoil (C80). It may relate to a final infilling of the ditch after it had gone out of use or a settling of the overlying topsoil into the upper portion of the ditch after it had been infilled. While no finds were identified within the ditch to confirm that it is of medieval date, it conforms with the medieval field boundary layout identified elsewhere on the site and is likely to relate to this field system.

Ditch C59

Another north-south running ditch (C59/C164) was identified further to the west in Field 6. This ditch was located to the west of the lowlying area that may have been a wetland pool during the prehistoric period and east of the fulacht fiadh area, which was situated on a rise at the edge of the wetland pool. The ditch was not straight, curving toward the southwest as it moved further south. It was U-shaped in profile with a flat base. The east side was less steep with some suggestion of recutting along that side. The ditch had a sharp break of slope at the top and more gentle break of slope at the base. One fill was identified within the initial cutting of the ditch (C61/C165), which was a silty clay relating to the natural silting up of the ditch over time.

The ditch was recut (C162) by a similar flat-bottomed ditch, which was slightly shallower than the original ditch. The recut was narrower

to the north but extended beyond the edges of the original ditch further south. It contained a single fill (C60/C163), which was a clayey silt relating to the silting up of the later recutting of the ditch. An iron horseshoe, blade, slag and sherds of medieval pottery were retrieved from this fill to the south.

Ditch C167

Northeast-southwest running ditch located in the lower-lying central section of Field 6 and partially truncating possible cremation pit C151. The ditch was largely U-shaped in profile with a sharp break of slope at the top and more gentle break of slope at the base with concave sides. The ditch contained one original fill (C168), with was a plastic water-laid clay with snail shell inclusions.

This was truncated by a recutting event (C169) within the ditch, which was more flat-bottomed. The recut contained three fills. The basal fill (C170) was a soft organic silt with occasional snail shell inclusions. The organic preservation in this fill is due to the low-lying location of this part of the ditch. The secondary fill within the recut (C171) was only present along the southern side of the ditch and was a compact clay. This may be a slumping of bank material into the ditch. The upper fill (C172) of the recut was a silty clay fill and was also compact. This may be an intentional infilling of the ditch after the field system had gone out of use. The recut was then truncated by a field drain (C173), which was steep-sided and narrow with a concave base. The drain had a single fill (C174), which contained frequent large stones 0.1-0.15m in diameter. It is possible the original ditch relates to the medieval field system, however no finds were identified to confirm this.

Ditch C86

Northeast-southwest running linear ditch located in the northwestern corner of the stripped portion of Field 6 and continued beyond the limits of excavation in both directions. It was U-shaped in profile with concave sides and a flat base. Four fills were identified within the ditch. The basal fill (C87) was a silty clay with high gravel content, likely to have been deposited through natural silting. The secondary fill (C88) was a pale clay with no

stone inclusions also likely to relate to the natural silting up of the ditch. Two fills were recorded overlying this (C89 and C90), however these are likely to be the same event and relate to the backfilling of the ditch, possibly with redeposited natural from a bank or similar.

The ditch was subsequently recut (C91), with the recut also being a U-shaped ditch with concave base, though shallower than the original. The recut had two fills, a basal pale clay (C92) relating to the initial silting up of the recut. This was overlaid by a sterile silty clay (C93) with no stone inclusions, which was the upper fill of the ditch. This ditch was located directly to the north of the fulacht fiadh troughs and some burnt stone was evident in some of the fills indicating it partially disturbed the burnt spread associated with the fulacht. The ditch was roughly perpendicular to medieval ditch C59 and may relate to the medieval field boundary system on the site.

Ditch C186

East-west running ditch (C186/C178) truncating pyre spread C175 as well as curvilinear ditch

C181 at the southern end of Field 6. The ditch was recut with the original ditch being narrower and possibly U-shaped and the later recut being flat-bottomed giving a stepped profile to the cut, which is reminiscent to the southern end of medieval ditch C59 to the east. It is likely this ditch forms part of the same field system. Two fills were recorded within the ditch. The basal fill (C189) was located within the narrow section along the base of the ditch and consisted of a silty clay with red organic decay mottling. This was overlaid with a loose silty clay (C188) with inclusions of occasional animal bone and infrequent burnt bone and flint, with the inclusions likely to derive from the pyre spread the ditch truncates.

The recut of the ditch was wider and shallower than the original and flat-bottomed. It contained a single fill (C187), a loosely compacted silty clay with only occasional stone inclusions apparent.

Further elements of the medieval field system were identified within Fields 2-5 to the east.

Mid ex view of Ditch C186 truncating pyre spread C175, looking east. Note the similar stepped profile to the southern end of ditch C59/C164 (bottom left)

Mid-ex view of Ditch C2, looking east (top left)

Mid-ex view of Ditch C2 with early medieval ditch C5 to right, looking west (bottom right)





Mid-ex view of Ditch C6, looking north (top left)



Mid-ex overview of ditch C6, looking north (bottom left)



Mid-ex view of Ditch C6 truncating ditch C8, looking south (top right)

Mid-ex view of broadened southern end of Ditch C6, looking south (bottom right)

Ditch C2

Running parallel to the metalled road surface was an east-west orientated ditch (C2). This ditch was rock-cut as the bedrock was high at this point. This appeared to be a roadside ditch associated with the surface. While no finds of medieval date were recovered from the fill of the ditch (C122), it forms part of a field system extending to the south in which medieval ceramics were retrieved.

A recut (C126) was identified within the ditch, not unexpected in a ditch that is likely to have required maintenance. The fill of the recut (C127) contained occasional animal bone, but again no ceramics of dateable material. It is

possible that the road was used for some time, perhaps up to the post-medieval period.

Ditch C6

Two ditches were identified running perpendicular to Ditch C2. To the west a shallow north-south running ditch (C6) ran for some distance to the south of the ditch. The northern end of the ditch connected to Ditch C2, though the base of C6 was higher than the roadside ditch at this point. Ditch C6 was not straight, meandering slightly along its length. To the south the ditch truncated an east-west running ditch (C8), also likely to be part of the medieval field system. The southern end of the ditch appeared to run into the wetland hollow (C19) to the east of the fulacht fiadh trough (C15) in Field 4 and the ditch was not identified further to the south of this. This suggests that this ditch remained in use after Ditch C8 had gone out of use. As Ditch C6 connects the roadside ditch C2 with the wetland hollow (C19) to the south it is likely that the drainage function of the ditch was just as important as the division of land. Two sherds of medieval pottery and the tip of an iron blade were retrieved from the fill of the ditch (C10).



Mid-ex view of Ditch C114, looking north (top left)

Mid-ex view of Ditch C22, looking north (centre left)

Mid-ex view of intersection of Ditch C8 and C32 with the same fill present in both ditches, looking west (bottom left)

Mid-ex view of terminus of Ditch C8 with Ditch C11 to right (top right)

Mid-ex view of medieval Ditch C11 to left and post-medieval ditch C12 to right, (centre right)

Mid-ex view of Ditch C8 to west of junction with C6, looking west (bottom right)

Ditches C1, C114, C22 and C32

To the east of Ditch C6 a series of ditches formed another part of the medieval field system. Four ditches formed this section of field boundary with distinct gaps evident between the segments of ditch. At the northern end a straight steep-sided section of ditch (C1) was uncovered running north-south and contained a single sterile fill (C30). The connection between this ditch and ditch C2 was truncated by modern disturbance, however it is likely to have connected in a similar way to ditch C6 to the west. 44.8m to the south of Ditch C2 the ditch terminated and there was a gap of 11m.

To the south of the gap the line of the field boundary was formed by a shallower and more

U-shaped ditch (C114). This ran for a length of 10.4m before it terminated at a gap measuring 8.4m in width. It contained a single fill (C115), which had inclusions of occasional animal bone.

To the south of this another section of ditch (C22) ran for 60m to the edge of ditch C8, appearing to shallow out just before reaching the edge. This section of ditch was shallow with concave sides and was truncated at its southern end by a post medieval ditch (C7). Two sherds of post-medieval pottery and an iron nail were retrieved from the fill of the ditch (C23), however they were recovered from a partially disturbed section of the ditch and may relate to the post-medieval ditch (C7) that truncated the ditch.

On the southern side of ditch C8 another section of ditch (C32) may also relate to this boundary, though it was running in a northwest-southeast direction. This ditch was also shallow and concave, with the fill (C33) being contemporary with the upper fill (C25) of Ditch C8. It also curved around Structure A to the south suggesting the structure, or something predating it, was present when the field system was being laid out.

The gaps present in the eastern boundary may be accesses to fields to the east. The changes in form of this boundary suggests the ditch sections were not dug as a consistent entities, and unlike the other north-south running elements of the field system, it was not intended to be used for drainage.

Ditch C12

To the west an additional ditch (C12) forming part of the medieval field system was identified. This was a large U-shaped ditch and was deeper than the others encountered. It contained a single fill (C192), which contained inclusions of medieval pottery. The ditch was truncated by a later post-medieval ditch (C11) running along a similar alignment but set further to the east. The post-medieval ditch also contained a sherd of medieval pottery, likely to have originated in Ditch C12.

Ditch C8

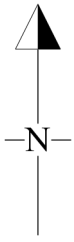
The southern end of the fields fronting on to the road to the north was formed by a U-shaped

ditch (C8) running east-west. It ran beyond the limit of excavation to the east and truncated two earlier gullies (C34 and C37) at this point. To the west it was truncated by two ditches (C6 and C11), one of which was a medieval ditch that remained in use (C6) and the other a later post-medieval ditch (C11). The ditch terminated 0.8m to the east of another medieval ditch (C12). It is possible the ditch ran up to a bank associated with the ditch, or that a gap was intentionally left between the ditches to allow for access. The ditch had two fills, a basal fill to the east (C31) and an upper fill (C25), which was the sole fill to the west. The upper fill was contemporary with the fill (C33) of ditch C32 to the south and contained a sherd of medieval pottery and two fragments of iron.

Post-ex view of posthole C46, looking north (top)

Mid-ex view of pit C48, looking east (bottom)





Post-medieval drainage in Phase 1

Features to south of road

Three features were identified to the south of the medieval road (C3). A posthole (C46) was uncovered 25m to the south of the entrance to the development. It had a single fill (C47), which contained occasional charcoal flecking. The surrounding natural was scorched.

A sub-circular pit (C48) was uncovered 12.3m to the southwest. The fill (C49) contained two distinct lenses of charcoal, one at the top and one midway through the fill, as well as lumps of oxidised clay. While there was no in situ burning noted on the sides of the pit it is possible this was a fire-pit, with layers of clay thrown in after the fire to quench it before it was used again.

To the south a patch of scorching (C50) is all that survived of another fire-related feature. Clay pipe and post-medieval ceramics were retrieved from the surface of the scorching suggesting a post-medieval date.



Mid-ex view of Ditch C11, looking south (top)

Mid-ex view of Ditch C64, looking south (centre)

Mid-ex view of Ditch C9, looking northwest (bottom)

Isolated fire-pit to west

A shallow circular pit (C136) with scorched edges was uncovered in the western part of the site approximately 12m from Ditch C11. This isolated pit contained a single fill (C137) with frequent charcoal inclusions and represents the remains of a hearth or fire-pit. As the feature was isolated it is impossible to identify what period the feature may date to.

Later field boundaries & agricultural features

A number of post-medieval field drains were identified and surveyed in the lower-lying Field 6. Where these did not interact with the archaeology identified they were simply surveyed and recorded.

Drain C180

A northeast-southwest running post-medieval drain was also identified to the east of ditch C181 and truncating pyre spread C175 as well as cutting across ditch C181 to the south of the pyre spread. The drain was relatively ephemeral suggesting that this part of the site was quite

reduced in more recent ploughing activity with the drain largely being ploughed out.

Ditches C11 and C64

North-south running ditch parallel to the existing western field boundary of Field 5 and located 2.4m further to the east. Wide U-shape

in profile with a concave base and sides. Two fills were identified within the ditch. The basal fill (C66) was a slightly silty clay relating to the initial silting up of the ditch. It was overlaid by a clayey silt fill (C64) with reddish flecking relating to decaying organics suggesting the ditch was allowed to silt up completely over time and was not intentionally backfilled. This may relate to ditch C11 further to the north. The ditch was much wider than the medieval field boundaries identified elsewhere on the site and is likely to be post-medieval in date, with the existing field boundary to the east marking an expansion of the field to the west, or indicating the field boundary had a central bank with a ditch on either side. The northern end of the ditch (C11) was identified truncating and probably replacing the medieval ditch C12. This ditch ran parallel to the existing field boundary and was located 6.2m to the east. It had a single fill (C191), which contained both medieval and post-medieval pottery.

Field boundary C111

Field boundary C111 was an extant field boundary prior to the monitoring on the site and it can be seen on the First Edition Ordnance Survey map in the 1830s. It was unclear whether it related to the medieval field system also, however the presence of ditch C8 to the north suggests it was later. It truncated Structure A (C113). It also truncated the relationship between medieval ditch C6 and natural hollow C19, with the ditch possibly running into the natural depression.

Ditch C9

Ditch C9 was located in the southwest corner of Field 4 and appears to relate to an earlier post-medieval field system to the surviving one. The main section of the ditch ran east-northeast to west-southwest before turning to run to the southwest at its southern end. It is likely to have been a former field boundary and contained a number of silt fills, which contained post-medieval ceramics and iron. A number of shallow furrows ran into the northern side of the ditch. The return of the ditch would continue into Area 5 beyond the area investigated during the current works. The fill (C17) was a water-laid silt and contained post-medieval ceramics.

Drain C109

A north-south orientated drain (C109) was also identified within Field 4 cutting through Structure A. It contained a single silt-rich and sterile fill (C110).

Ditch C7

To the east another post-medieval ditch (C7) was identified, orientated north-northwest-south-southeast. It truncated medieval ditch C22 and is likely to have truncated ditch C8 also, however it did not survive at this point. The fill (C24/C108) had inclusions of English whitewares, an iron nail and an iron trowel and did not appear to be earlier than the 19th century.

Furrows to north

Towards the northern end of the site three north-south running agricultural furrows were identified (C52, C57 and C58). These were located to the south of Ditch C2. A sherd of glass was retrieved from the fill (C51) of one of the furrows while two iron nails were retrieved from one of the others.

Section 4 Phase 2

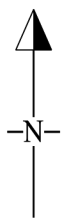
Introduction

Phase 2 of the excavation at Dunshaughlin was located in a single field (Field 1) across the Drumree Road to the north. This portion of the site is located in Roestown townland, however for ease and continuity of recording the site name Readsland was maintained. This phase of the project was centred on a bivallate early medieval cemetery settlement that was originally identified through geophysical survey in 2009 (Harrison 2009) and subsequently tested in the same year (Hession & Moriarty 2009). Due to the significance of the archaeology and the presence of extensive human remains within the inner enclosure of the settlement the

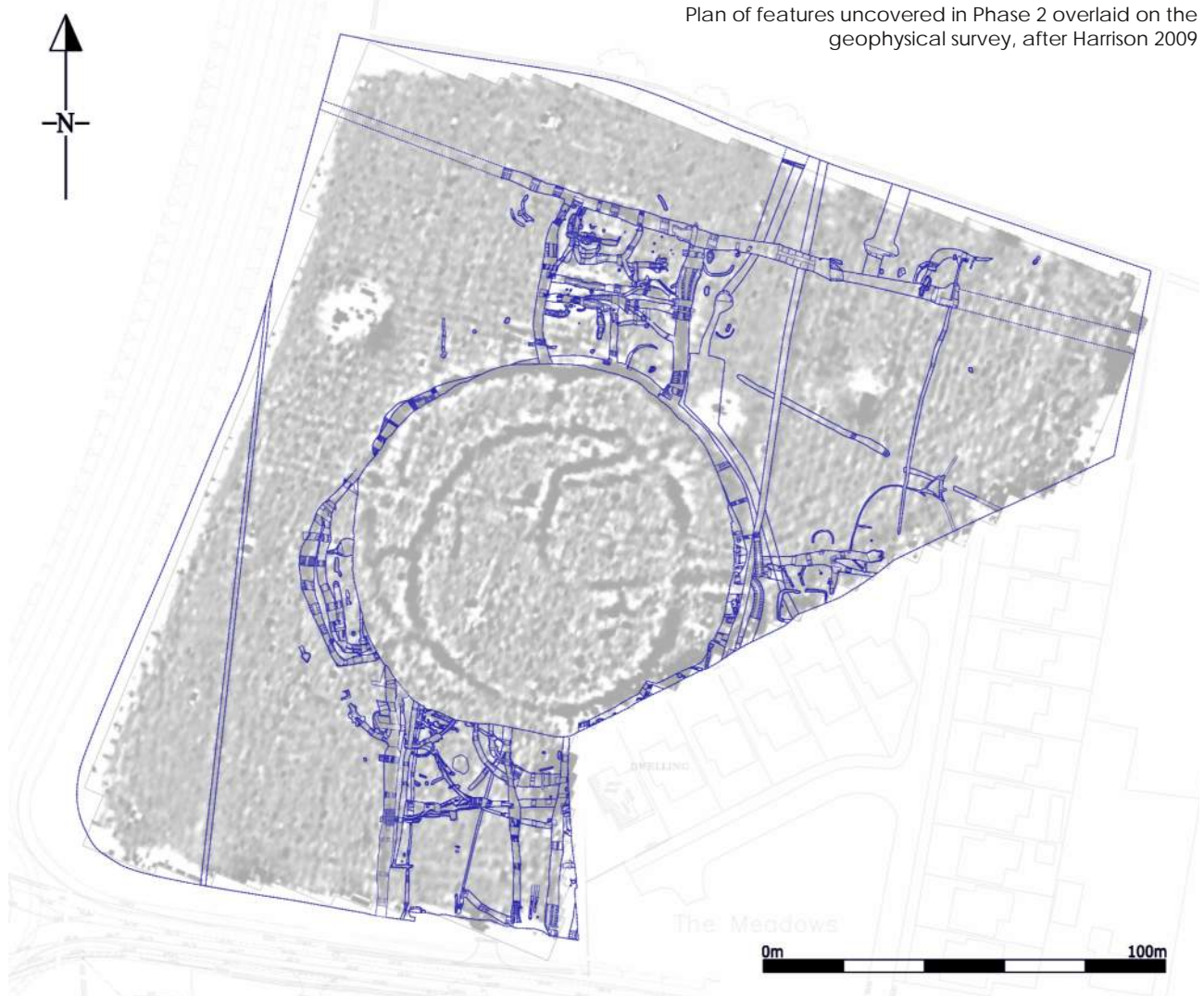
proposed development was redesigned to preserve the central portion of the early medieval settlement in situ. The impact of the proposed redesign of the development was archaeologically assessed (Gowan 2012), which concluded that the new design mitigated the impacts of the scheme appropriately.

Monitoring

Phase 2 of the development was divided into 6 areas (Areas A-E and A1) during the monitoring and subsequent excavation. Due to the size of the field and the amount of archaeology encountered in each area it was decided to



Plan of features uncovered in Phase 2



stagger the stripping programme so as not to leave the archaeology exposed for too long prior to excavation. The stripping began on 12/06/18 with the final large area (Area D) stripped in January 2019. The stripping of one area (Area A1) was delayed due to the presence of overhead wires until an appropriate stripping solution was agreed with the ESB. A final trench 2.5m in width was dug parallel to the southeastern boundary (Area E), which was required for the insertion of services, was excavated on 18/02/19.

The archaeological monitoring and excavation carried out by the author in 2018 and 2019 was in response to the mitigation proposed by the 2012 scoping document (Gowan 2012). The aim of the works was to expose and resolve the archaeology surrounding the main settlement. The main settlement and burial area is preserved in situ within the development as a green space.

The strip of ground between Area A and the road was also monitored and was found to be heavily truncated by numerous service trenches running parallel to the road. The topsoil in this area was removed for landscaping associated with the development. A structure was depicted along the northern side of the road on the First Edition of the Ordnance Survey map, however it did not survive and may have been removed for the insertion of the service trenches. No other archaeological features were identified along this strip, however the deeper ditches may survive beneath the services.

The topsoil (C200) was generally a mid-brown slightly humic silty clay with inclusions of post-medieval and occasional medieval artefacts. A separate context number (C1607) was given to the topsoil directly overlying the metalworking area within the northern annex in case additional artefacts relating to the use of this



Monitoring in Area A, looking southwest (top left)



Cleaning back within northern annex with features being tagged, looking south (bottom left)

Grid system used in metalworking area within northern annex, looking east (right)

part of the site were present within the topsoil. In some places a layer of deeper plough soil survived over cut features such as ditches. This was due to the settling of the fills within the cut features allowing for a deeper accumulation of the overlying plough soil. This material occasionally contained objects of early medieval date that had been eroded from the underlying features through agricultural activity.

A number of stretches of the outer enclosure ditch were encountered during the works along with curvilinear annexes to the south and west, and large rectilinear annexes to the north and south external to the outer enclosure. Additional unenclosed settlement evidence was identified to the east.

During the monitoring of the area to the east of the ringfort a heavily compacted deposit was uncovered containing a mixture of topsoil, modern material and disturbed fill. This was believed to be spoil from the development to the south that had been spread out across this part of the site.

Methodology

General features

Following on from the monitoring phase of the works the team hand-cleaned and hand-excavated the archaeological features identified across the northern field (Field 1). Box sections were excavated across the early medieval ditches, with particular attention given to ditch junctions to ascertain stratigraphic relationships. Smaller features were half-sectioned and resolved in full during the excavation. In some cases a specific methodology was carried out to deal with more complex features. Features were excavated, planned, drawn, photographed and recorded throughout the excavation. 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 co-ordinates and levels were recorded for significant finds. As per the recommendation of the archaeological conservator, iron artefacts were dried out in the site hut prior to storing in an air-tight container. Composite material



Grid system used in metalworking area within northern annex, looking north

artefacts were kept in small bags of soil from the same fill to avoid deterioration of any components.

Metalworking area

Prior to excavation the metalworking area appeared to be two large features filled with metallurgical waste. Both of these were divided into grids prior to excavation with 0.5m baulks left between the grids. Layers were reduced stratigraphically within the grids to identify underlying features.

The northern feature turned out to be a waste pit cut into an earlier ditch. Once this was understood the methodology was altered with the finds and metallurgical waste from each context combined rather than separated by grid.

The southern feature revealed itself to be a series of pits and metalworking furnaces cut into an earlier ditch. These were excavated and recorded within the grids until they were understood, after which the baulks were removed and the remainder of the features excavated. Once the metalworking features were removed the underlying ditch was excavated as normal.

Surveying and planning

The features and archaeological areas in the Phase 2 portion of the site were extensive. Pre-excavation surveying of the complex northern end of the site was carried out after the initial stripping. A 10 x 10m grid system was surveyed in over the areas, and the areas were planned by hand. Scaled sections and profiles were drawn of each feature as part of the excavation process.

Processing

Bulk soil samples for Phase 2 were wet sieved. No water-logged deposits were encountered during the excavation. Samples were steeped in water and aggravated to loosen the soil and allow seeds or charcoal to float to the surface. This was sieved off the top of the water, dried and bagged as the flot from the sample. The remaining material was passed through graded sieves with 5mm, 2mm, 1mm and 250mic sieves used. The material from each sieve was dried and bagged as the retent from the sample.

Bone and ceramic artefacts were washed and dried as per the recommendations of the zooarchaeologist and ceramic specialist.

Metal detection

A metal detection licence (18R0174) was sought when works began in the early medieval settlement portion of the site, with a Viking V5 metal detector being used.

An initial walk over survey was carried out once the topsoil stripping was complete within each area, with metal detector hits being flagged for attention during the excavation.

The metal detector was systematically used to check spoil being taken from various features and during the reduction of the fills within the ditches.

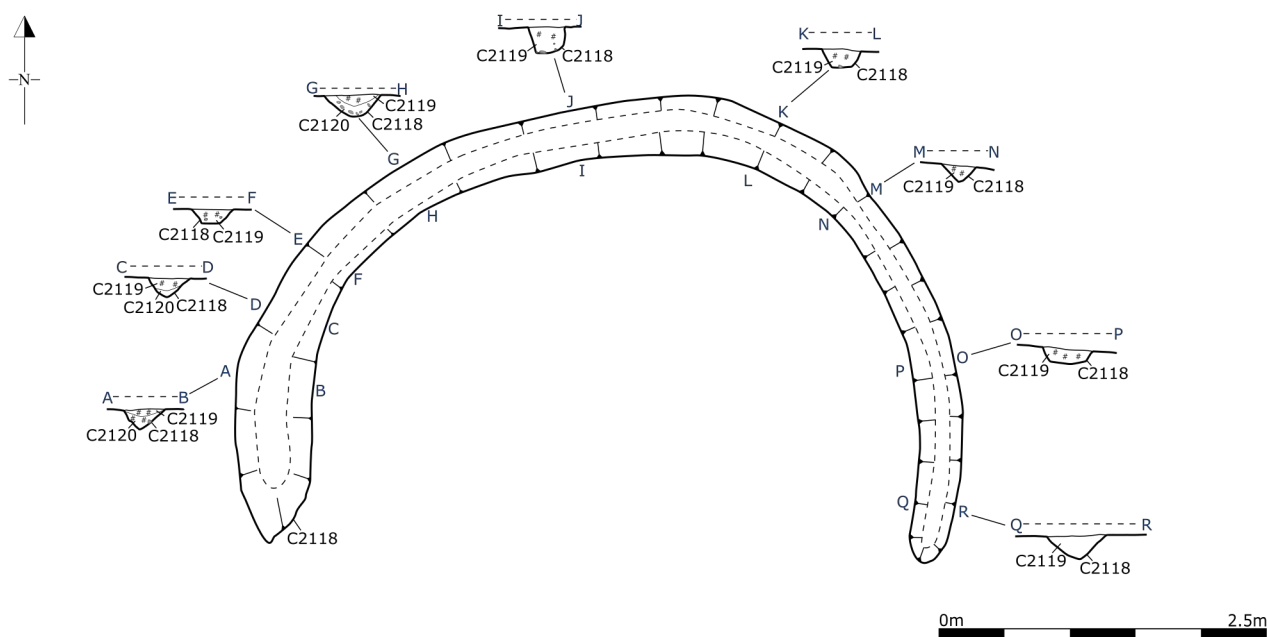
Tables of Structure, Path and Kiln numbers used in report

Structure	Context	Description
A	C113 (Phase 1)	Dished floor and drain associated with medieval structure
1	C2134/2228/2229	Palisade fence parallel to Path 4 to SE
2	C2118	Circular structure to SE
3	C2127/2259	Circular structure to SE
4	C2277/2261	Rectangular structure to SE
5	C2136	Paddock to SE
6	C1509	Windbreak associated with Kiln 3 or 4
7	C825	Windbreak associated with Kiln 8
8	C1185	Windbreak associated with Kiln 10
9	C2121	Windbreak associated with Kiln 11
10	C1307	Windbreak associated with Kiln 12
11	C1471	Windbreak/fence associated with Kiln 12/Structure 10
12	C997, 984, 1172, 1306, 1242, 1244	Windbreak associated with Kiln 12
13	C810	Windbreak associated with Kiln 22
14	C812	Windbreak associated with Kiln 22
15	C1368	Windbreak associated with Kiln 14
16	C2116	Windbreak associated with metalworking area
17	C1486/C1108	Windbreak associated with Kiln 19/20
18	C1181	Possible drip gully of structure associated with metalworking area
19	C1464	Entrance structure crossing outer enclosure ditch to NW
20	C614/C659	Cistern and channel in W annex
21	C402	Within S Annex
22	C602, 608, 635, 662, 664, 666	Windbreak associated with Structure 20/ Kiln 24
23	C699	Windbreak associated with Kiln 23
24	C728	Possible drip gully of circular structure
25	C481	Possible palisade along N side entrance to S of western annex

Path	Context	Location
1	C967/972/2123/2209	Along E. side of N. annex and Outer Enclosure
2	C2381/2258	Associated with Structures 2-4, to SE of Outer Enclosure
3	C976/1212	To E. associated with kilns in NW of N annex
4	C2143	Parallel to Structure 1
5	C2042	Path associated with Structure 18 entrance
6	C513/ C476	Assoc. with W Annex entrance and beyond
7	C289	Metalled surface, crossing point over C201
8	C250	Cobbled surface, crossing point over C242
9	C290	Revetment or pier, possible crossing point over C285
10	C2178/C2334	Metalled surface, crossing point over late phase of annex ditch C2208
11	C505	Medieval/ post-medieval crossing C205
12	C2523	Metalled surface within Structure 5 paddock

Kiln	Context	Location
1	C3010	To SE, within Outer Enclosure
2	C2276	To SE, within Outer Enclosure
3	C1503/1506	To NE, Processing Area
4	C1517	To NE, Processing Area
5	C950	To NE
6	C957/970	To NE
7	C1211	E, cut by large boundary ditch
8	C901	E. of N. Annex
9	C1031	E. of N. Annex
10	C2151	E. of N. Annex
11	C2131	SE corner of N. Annex
12	C1309	NE corner of N. Annex
13	C1341	NE quadrant of N. Annex
14	C1258	SE of NE quadrant of N. Annex
15	C1421/C2142	SW quadrant of N. Annex
16	C1293	NW quadrant of N. Annex
17	C1295	NW quadrant of N. Annex
18	C1118	NW quadrant of N. Annex
19	C946	NW quadrant of N. Annex
20	C1286	NW quadrant of N. Annex
21	C838	NW quadrant of N. Annex
22	C806	Within NW entrance of N. Annex
23	C331/C354	Within S Annex to N
24	C516/C682	Within S Annex to N
25	C296	Within S Annex to SE

Section 5 Unenclosed features to east



Structures

The most striking features to the east of the site were a cluster of structures, which continued beyond the limit of excavation to the south. Two circular structures were represented by curvilinear slot trenches while a slot trench or gully defined a rectangular space to the south of these.

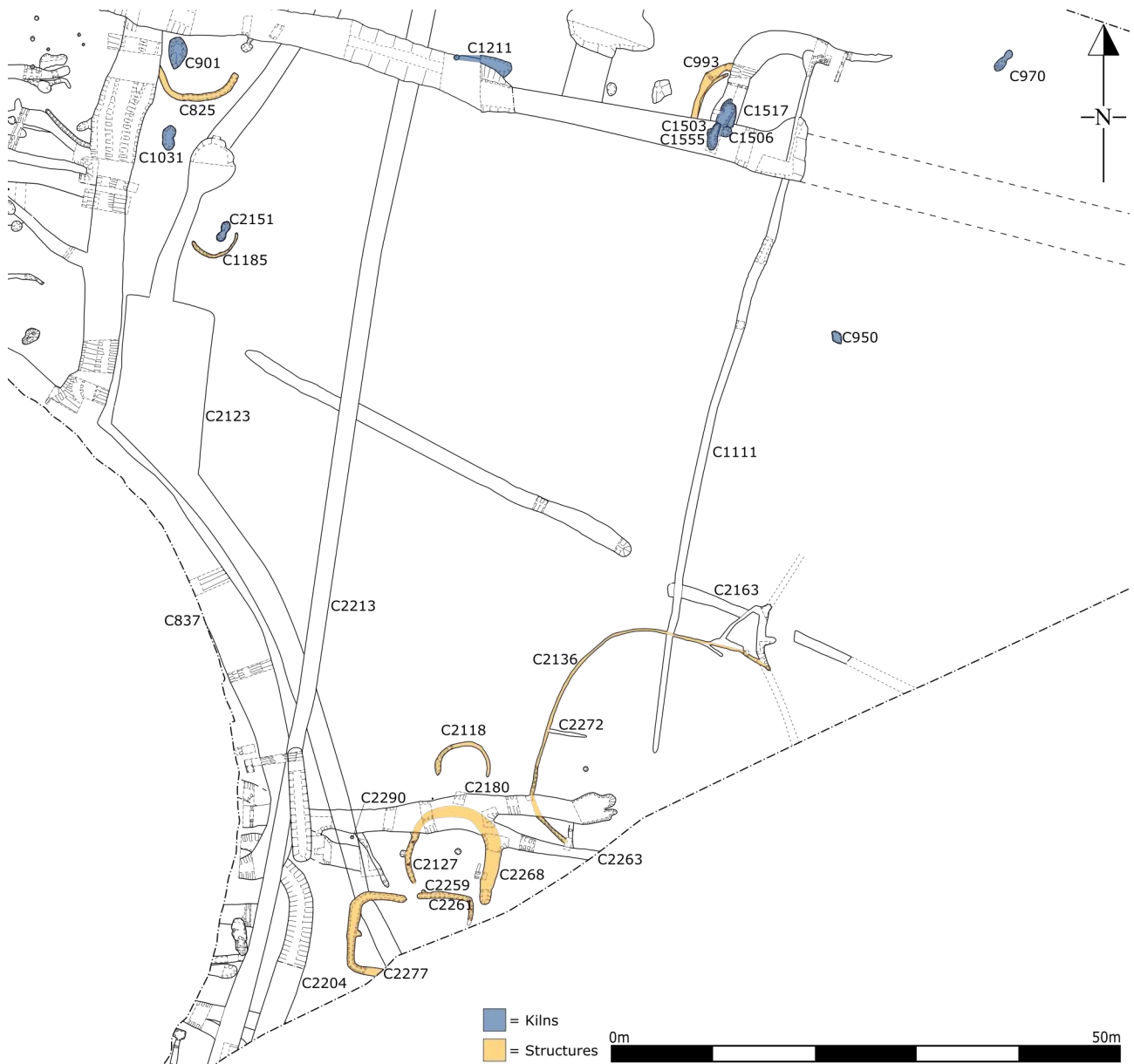
Smaller circular structure (Structure 2)

The northernmost curvilinear slot trench (C2118) formed a horseshoe-shape in plan and was steep-sided with a relatively flat base. The slot trench was penannular with a wide gap to the south measuring 4.5m in width. It enclosed a space measuring 4.5m in diameter and is likely to be related to the larger circular structure (C2127) to the south. Two fills were identified within the slot trench (C2119 and C2120),



Plan of Structure 2 (top)

Mid-ex view of Structure 2, looking south (bottom)



Plan of unenclosed features to east (top)

which were similar to one another but the basal fill (C2120) had a higher stone content. There was no evidence for in situ burning within the slot trench to indicate it had been burnt down and no features were identified in the interior. The lack of post or stake-holes within the curvilinear feature make it difficult to say whether this represents a slot trench or a drip gully. The homogenous nature of the fills suggest that if it represents a slot trench the structure was dismantled and the construction slot allowed to fill in over time once abandoned. It is equally possible that the feature represents the drip gully of

Post-ex view of Structure 2 in background and mid-ex view of Structure 3 in foreground, looking north (bottom)





Post-ex view of Structure 2, looking south (top)

Post-ex view of C2310, C2312, C2314 and C2316 post and stake holes cut into base of slot trench of Structure 3, looking east (centre)

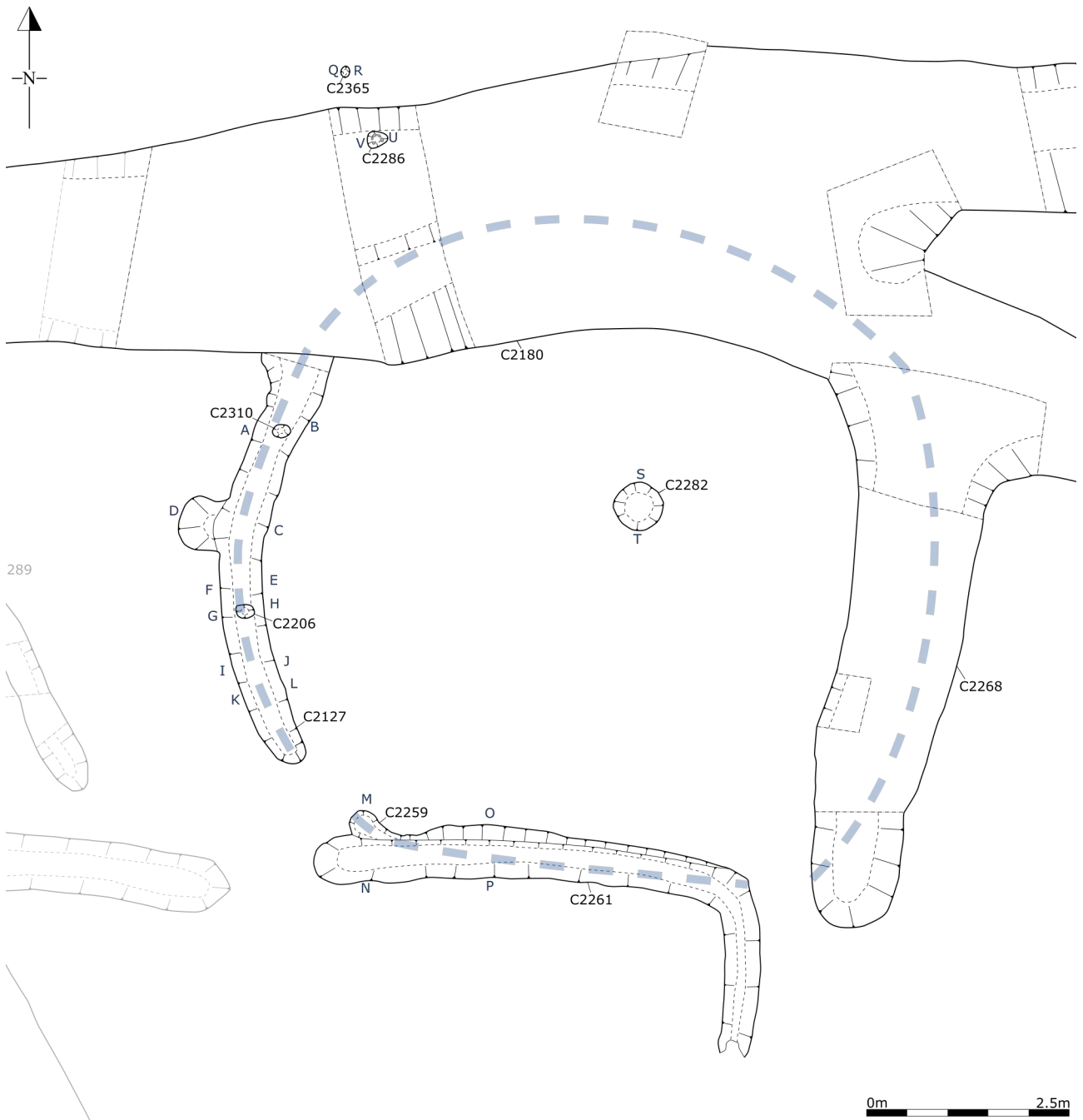
Mid-ex view of central posthole C2282 within Structure 3 with packing stones C2284 in situ, looking east (bottom)

a structure that does not survive, with the drip gully slowly filling in over time. A small stake-hole (C2185) was driven into the fill of the slot trench to the east. This was relatively shallow and tapered to a point along one side suggesting a wedge-shaped stake. The fill of the stake-hole (C2186) was all charcoal suggesting the stake was burnt in situ.

Larger circular structure (Structure 3)

To the south of Structure 2 the remains of a larger structure were identified. Two sections of slot trench (C2127 and C2259) were identified forming the southwestern arc of the structure with a gap to the southwest representing a doorway. The northern, eastern and southern parts of the slot trench were truncated by later features. The slot trench was steep-sided with a relatively flat base. The entrance gap to the southwest measured 1.05m and the slot trench enclosed a space measuring approximately 7.25m in diameter. Two fills were identified within the slot trench, a darker basal fill (C2275) and a more compact upper fill (C2128), which included occasional charcoal flecking and some animal bone.

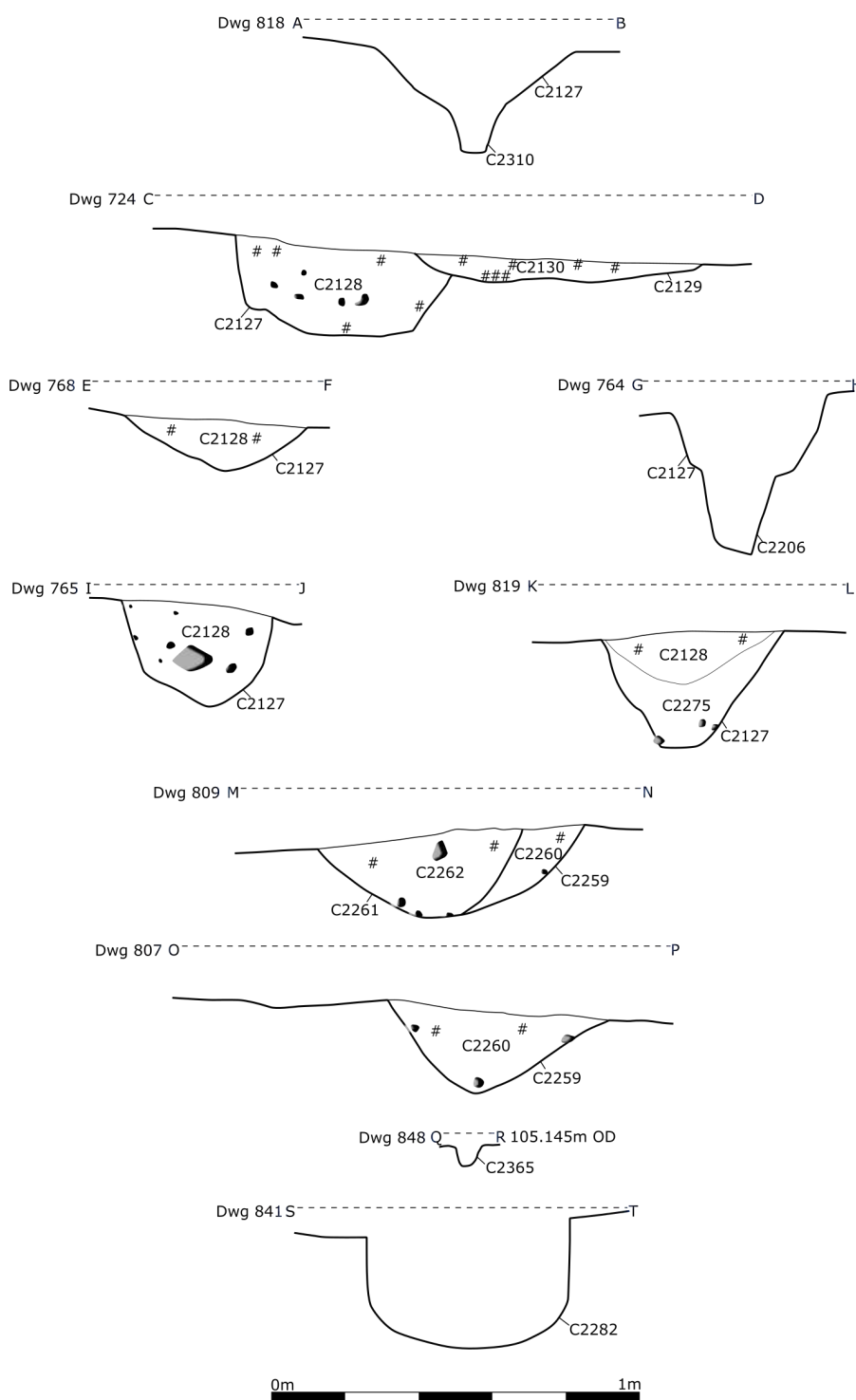
The presence of post- and stake-holes in the base of the feature suggest it represents the remains of a slot trench that would have held timber uprights. Four possible postholes were identified in the base of the slot trench to the west and were all relatively shallow. Two were sub-rectangular in plan (C2310 and C2312) while the other two (C2314 and C2316) were smaller and circular, possibly representing stake-holes rather than postholes. All four had similar fills (C2311, C2313, C2315 and C2317), with small sub-rounded stones noted in the first three. A deeper oval-shaped posthole (C2206) was present towards the southwestern end of the slot trench, the fill of which (C2207) was similar to the main fill (C2128) of the slot trench itself and contained degraded fragments of animal bone.



Plan of Structure 3 and proposed outline (top). Note that posthole C2286 is out of alignment to the north, which may relate to an additional element outside the structure

Post-ex view of Structure 3 with Structure 2 to left, looking south (bottom)





Structure 3 sections

To the north the slot trench was truncated by an east-west orientated ditch (C2180), which truncated any possible relationship with the slot trench to the north (C2118). An oval pit (C2129) truncated the western side of the slot trench and extended out to the west. The fill (C2130) had inclusions of animal bone, burnt stone and frequent charcoal suggesting the feature may have been a hearth.

A short section of the slot trench survived to the south of the doorway (C2259), which was truncated by the gully (C2261) of the rectangular enclosure to the south. This section of the slot trench had a single fill (C2260) and survived along the northern edge of the rectangular enclosure cut. Beyond this the slot trench of Structure 3 was absent. A north-south running linear ditch (C2268) was present where the eastern arc of the structure would have been expected, which truncated this part of the structure away. The slot trench was not identified to the southeast between the rectangular enclosure and the north-south ditch, possibly indicating a change in the level of the base of the slot trench or that there was another entrance at this point.

A large posthole (C2282) was located near the centre of the space enclosed by the slot trench. The posthole had packing stones (C2284) held in place with sterile



Post-ex view of Structure 3, looking north (top)

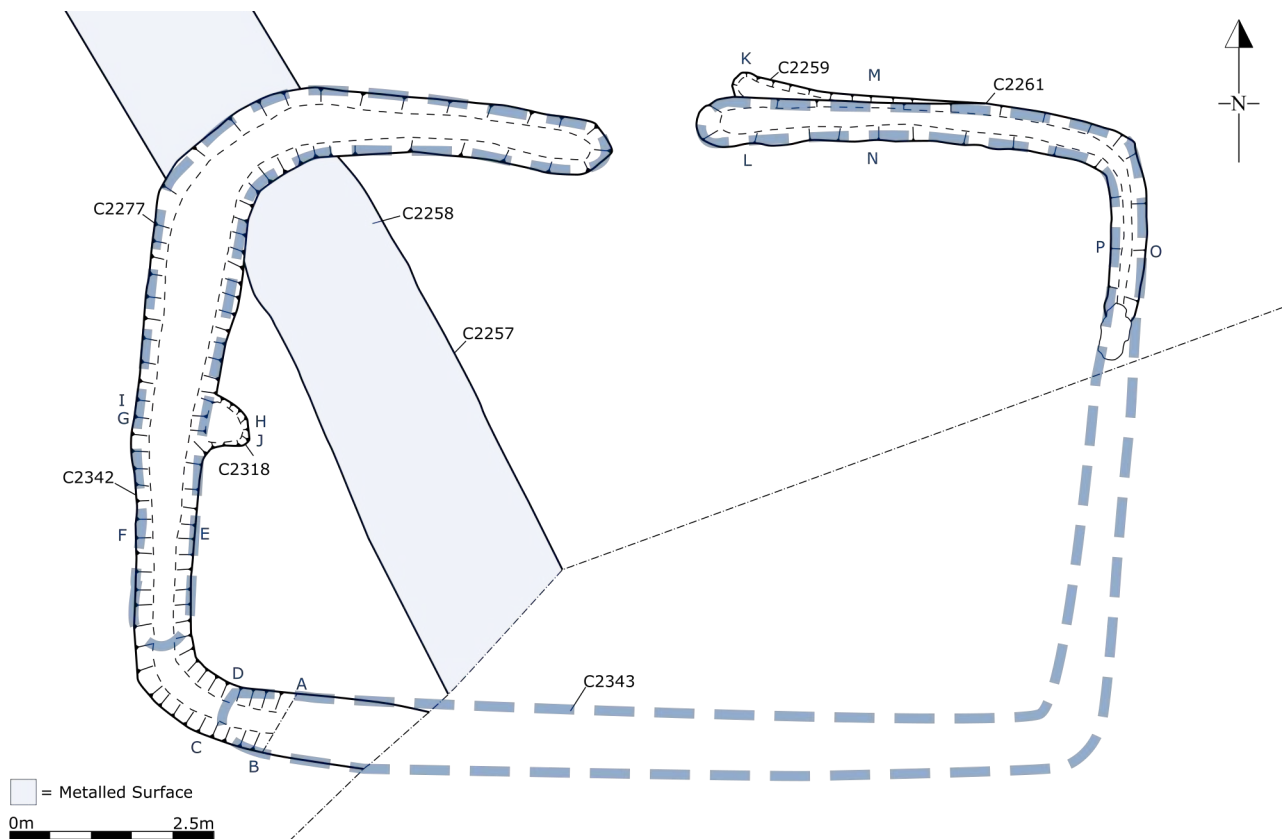
Plan of Structure 4 (bottom)

packing material (C2283) around the edges. The basal fill within the posthole (C2524) was sterile and similar to the material holding the packing stones in place and may have slumped into the base of the posthole when the post was removed. It was overlaid by the final fill within the posthole (C2285), which contained some animal bone. This accumulated after the post was removed.

Rectangular enclosure (Structure 4)

To the south of Structure 3 a rectangular

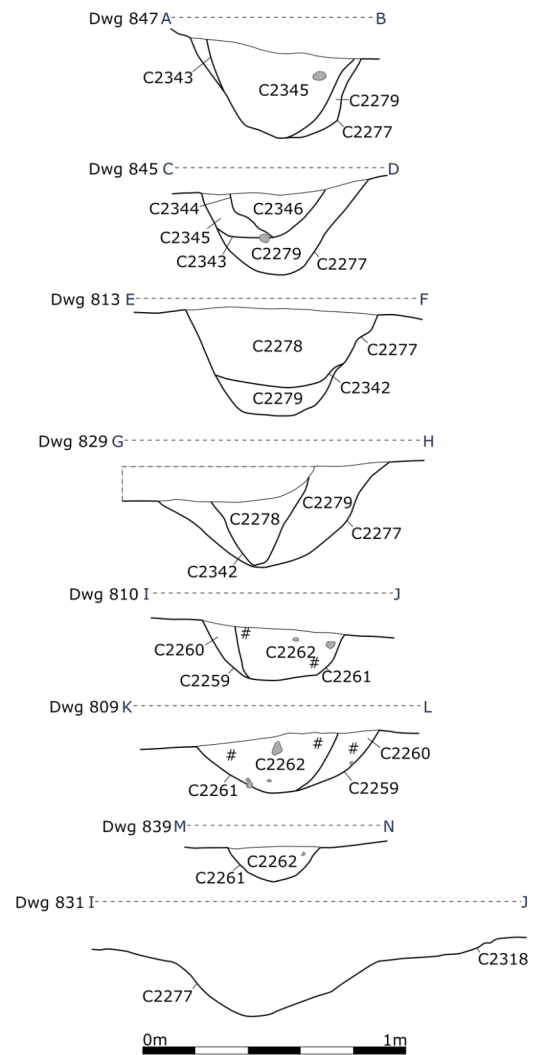
enclosure was identified, which may also represent the remains of a structure. Two sections of slot trench defined the structure, which measured c. 10.7m x 6.75m. The western end of the enclosure was initially defined by a U-shaped gully (C2277) with the northwest and southwest corners surviving, both of which were rounded. The gully continued beyond the limit of excavation to the south. The fill (C2279) contained some animal bone. A pit (C2318) was uncovered along the internal side of the gully to the west. It was shallower than





Mid-ex views of gully C2277 and recut C2342 (top left), and slot trench C2261 (bottom left), looking north

Structure 4 sections (right)



the gully and was filled by the same fill (C2279). This appears to be the truncated remains of a feature contemporary with the initial phase of the gully, however too little survives to identify a purpose. The gully truncated an earlier metalled surface (C2258; Path 1), which was associated with an early phase of the outer enclosure ditch.

The gully was recut by a slot trench (C2342) along its northern and western side with the recut terminating before the southwestern corner. The fill of the recut (C2278) contained an iron bell along with occasional animal bone. Two phases of slot trench (C2343 and C2344) were identified recutting the southern side. Both terminating before the southwest corner with a minimum gap of 0.09m between these recuts and the re-cutting of the western side and the southern side (C2342). The fills of the southern recuts (C2345 and C2346) were sterile. The uneven re-cutting would suggest that the function of the recuts was not for drainage. The

recuts were generally steep-sided and U-shaped, bearing a distinct resemblance to the slot trench (C2127) of the circular structure to the north. A gap of 1.05m was present along the northern side of the enclosure roughly at the midpoint, with the remainder of the northern and eastern side of the enclosure formed by a U-shaped slot trench (C2261). This feature was shallower and narrower than the earlier gully to the west (C2277), bearing a closer resemblance to the later recut (C2342). The northeastern corner was present and rounded, however the southeastern corner lay beyond the limit of excavation. It had a single fill (C2262), which contained occasional charcoal but no finds or animal bone. This section of the slot trench truncated the fill of the southern arc (C2259) of the circular structure to the north, however the fills were very similar and it is possible the two are contemporary.

The earlier gully to the west was wider and less



Post-ex view of Structure 4, looking south (top)



Post-ex view of Structure 4, looking northeast (centre)

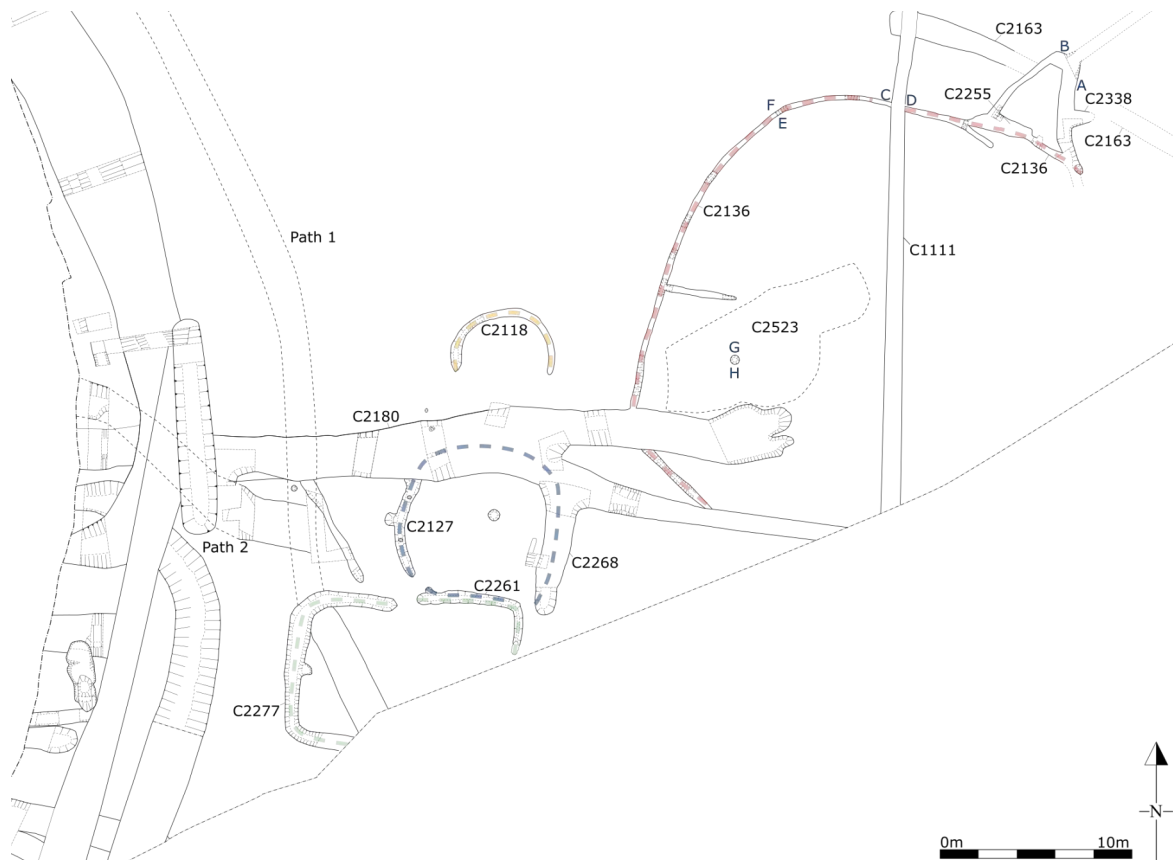
Scandinavian iron hand-bell retrieved from slot trench of Structure 4 (bottom)



steep-sided in places so cannot be identified with certainty as a slot trench. It is possible that this feature may represent a substantial drip or drainage gully associated with a rectangular structure, which did not survive within the interior of the enclosure. The later re-cutting, combined with the eastern slot trench suggest a rectangular structure was constructed here.

Enclosure or paddock?

To the northeast of the structures a shallow curvilinear slot trench (Structure 5; C2136) was uncovered, which may be the remains of a fence-line. The fence-line appears to have defined a space to the northeast of the structures. The slot trench did not survive to the east as the subsoil overlying the natural bedrock outcrop here did not survive, and is likely to have been levelled by agricultural activity in the past. The slot trench was a shallow U-shaped cut with a single fill (C2137/C2339/ C2309/C2256). The fill was largely a pale grey silt with few stone inclusions and had some orange or organic staining along the sides. Burnt stone was noted along the side of the cut towards the south. At the eastern end of the slot trench is split in two, with one section running to the northeast (C2308) and a second running to the southeast (C2255), both of which had the same fill as the rest of the slot trench. A short east-west running contemporary slot (C2272) connected with the north-south running portion



Plan of enclosure or paddock C2136, Structure 5 (top)



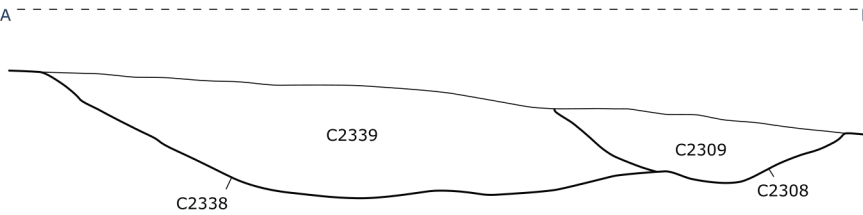
Mid-ex view of Structure 5, looking east (centre)



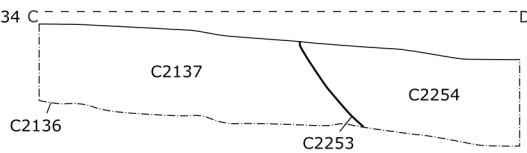
Post-ex view of posthole C2404, looking north (bottom)

of the slot trench along its internal side. The fill (C2273) was identical to the fill within the slot trench itself, and based on the positioning of the cut this may represent the remains of a slot that divided the space within the enclosure in half. The fill of the slot trench was silty and suggested to be water laid. This led to the initial interpretation as a drain, and indeed there may have been a drainage function to the slot trench. No post or stake-holes were identified along the line of the slot trench and it is likely the feature is quite truncated. It may represent a gully that ran around the perimeter of an enclosure c. 22m in diameter, or a slot trench in which hurdle fencing was held.

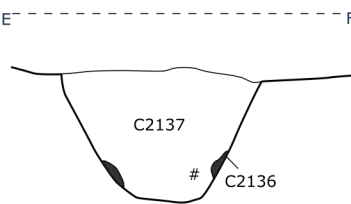
Dwg 835 A



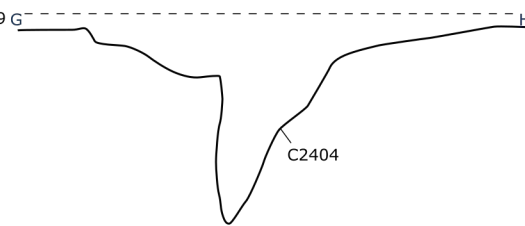
Dwg 834 C



Dwg 726 E



Dwg 869 G



The slot trench truncated a north-south running linear feature (C2338) at its northeastern end. This channel has a single fill (C2339), which was similar to the fill of the slot trench but looser. It did not survive for any great length, however the orientation is parallel to the northern annex ditch and it may be an agricultural feature predating the fenced enclosure. The fence-line was also truncated by a number of later features (C1111, C2307 and C2180). To the south of ditch C2180 the slot trench turned to run to the southeast before being truncated by ditch C2267. The slot trench was not apparent to the south of this ditch and either ran along the same alignment as that ditch to the limit of excavation, or rose up over the bedrock outcrop and did not survive.

Enclosed by the slot trench an expanse of metalling (C2523; Path 12) was uncovered during the initial monitoring. A number of post-medieval objects were retrieved from the surface of the metalling suggesting it was post-medieval in date. The surface was recorded and removed to assess whether features were present beneath it. Subsequently the slot trench was uncovered and excavated. It now



Structure 5 sections (top)

Post-ex view of Structure 5, looking east (bottom)

appears that the metalling related to Structure 5 and may be the surface of the yard enclosed by the slot trench.

A single cut feature was identified within the paddock (Structure 5) in the form of a small circular posthole (C2404). It was steep-sided with the base tapering to a point along the north side. A single packing stone (C2405) was present along the northern side, wedged halfway down along the side of the posthole. No finds or dating material were identified within the main fill of the posthole (C2406). Given the location of the posthole within the fenced enclosure it may be related in some way, perhaps a tethering pole for animals.

The interpretation as a paddock is based on the large size of the enclosure, which clearly was not roofed, yet was enclosed by a fence. The interior of the enclosure was metalled to protect the ground against wear. The enclosure was located at the approach to the settlement from the east and may have been used as a paddock or corral for horses of visitors to the settlement. Equally it may have been used as a cattle corral, however the location of the enclosure at the entrance and in the vicinity of a cluster of buildings that may also relate to dealings with visitors suggests it may have been used for horses.

Processing area to the northeast

Sub-rectangular enclosure

Few features were identified to the north of a

large east-west boundary ditch (C800) in the far north of the site. However, at the northeastern end of the site a sub-rectangular area defined by a shallow U-shaped ditch (C991) on its southern, western and northern sides was uncovered. The eastern side petered out as the underlying bedrock rose up at this point and an enclosing element was not identified along this side. The enclosure appears to have been related to an early version of boundary ditch C800, with the alignment of the ditch informed by the earlier ditch. The sub-rectangular area measuring c. 8m x 5m defined by ditch C991 was covered with a metalled surface (C962), which continued down the sides of the shallow ditch and across the base of the ditch. This defined a processing area with a solid floor surface. The original function of this processing area is unclear, however it was later used in cereal processing. Overlying the metalled surface a thin layer of material (C963/C1078) survived with concentrations of charcoal and burning in a number of places. When this was cleaned the concentrations were not found to relate to underlying features and must relate to waste material that was sitting over the metalled surface. Tiny scraps of copper-alloy were retrieved from this material, which may indicate non-ferrous metalworking was taking place here.

The initial fills of the enclosing ditch (C1594 and C1595) were sterile, and were located along the sides of the northern arm of the enclosure ditch, likely to be slumped natural. The main basal fill (C995) was identified throughout the enclosure ditch overlying the metalling at the



Mid-ex view of processing enclosure with metalled surface C962 visible and ditch C991 in foreground, looking east



Plan of processing area and Kilns 3 and 4

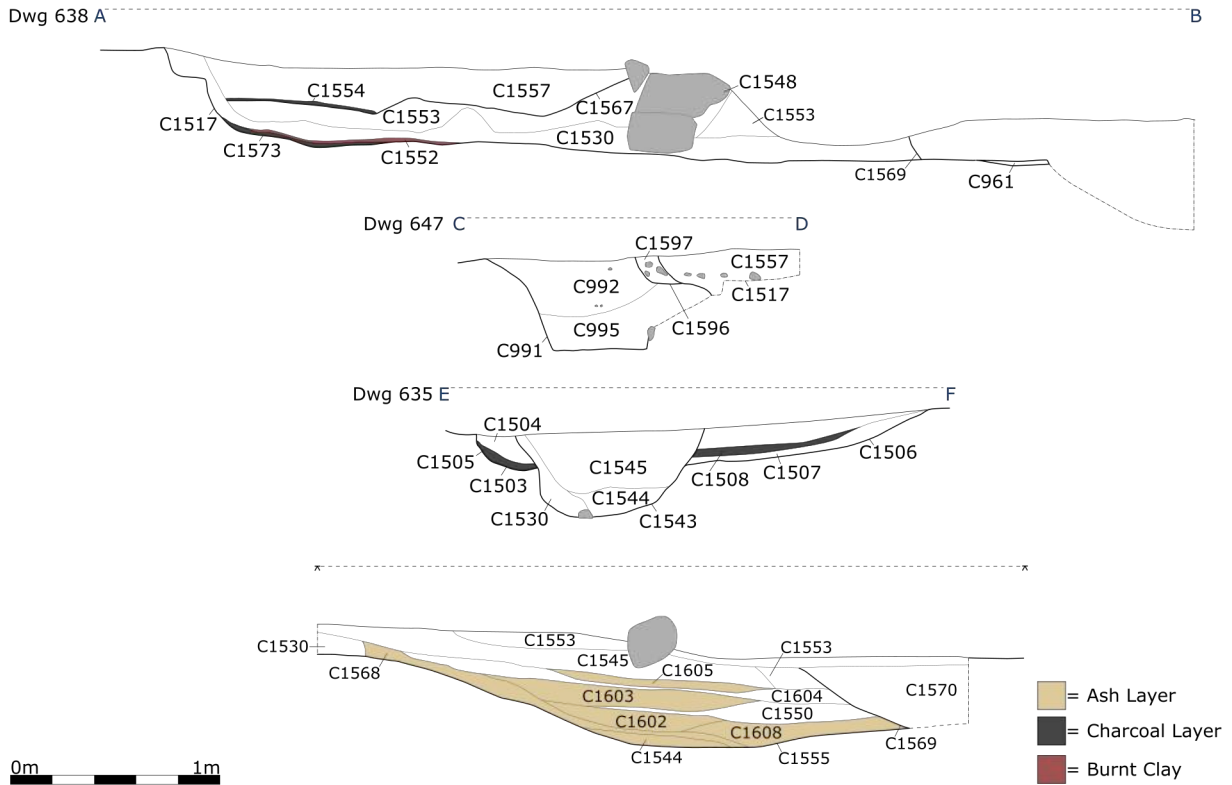
base of the ditch and was sterile. It was overlaid by the upper fill (C992), which was a silty water-laid material, suggesting the enclosure was left unused and was not maintained for a period. Some animal bone was present within this upper fill.

Kiln 3

After ditch C991 had silted up two phases of kilns were constructed within it to the west. The earliest appears to have been a small figure-of-eight shaped kiln (Kiln 3) orientated east-west, which was largely truncated away by the larger later kiln. A small portion of the firing chamber (C1503) survived to the west while the more intact drying chamber (C1506) was to the east of the later kiln (C1517). Both chambers of the kiln were at a similar level and were cut into the

fill of the enclosure ditch without truncating the metalled base of the ditch. In situ burning was evident around the western firing chamber, which appears to have been sub-circular with a flat base and straight vertical sides where they survived. The drying chamber was also sub-circular with a flat base and steep sides. This kiln was relatively small at c. 2.05m in length and was parallel to the large boundary ditch C800, located in the southwest corner of the small enclosure ditch (C991).

Two fills were recorded within the firing chamber, a basal charcoal-rich fill (C1505), which contained charred seeds, and a more sterile upper fill (C1504). Within the drying chamber to the east a basal charcoal-rich fill (C1507) was also present with a more sterile



Sections of processing enclosure including Kilns 3 and 4 (top)



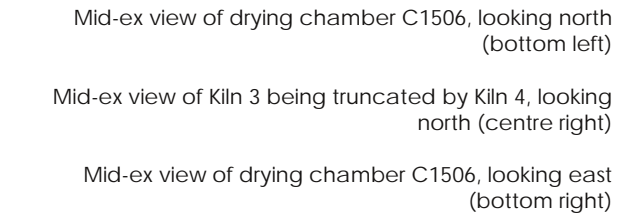
Pre-ex view of chamber C1503 in foreground and chamber C1506 in background being truncated by Kiln 4, looking east (centre left)



Mid-ex view of drying chamber C1506, looking north (bottom left)



Mid-ex view of Kiln 3 being truncated by Kiln 4, looking north (centre right)



Mid-ex view of drying chamber C1506, looking east (bottom right)

upper fill (C1508), though some burnt bone was retrieved from the upper fill. Given that only one phase of use is evident within this kiln it is possible it was relatively short-lived and was replaced by the larger example truncating it.

Kiln 4

Kiln 3 was truncated by a larger later kiln (Kiln 4) orientated north-south, which was constructed within the north-south running section of the backfilled ditch C991. Kiln 4 had two phases. An initial cut for the kiln (C1596) was identified at the northern end, which may relate to its initial construction. It was cut into the fills of ditch C991 and was truncated by a later recutting of the kiln, which did not extend as far to the north. A single fill (C1597) was associated with this phase of the kiln. The next phase was represented by cuts C1517 and C1555. The kiln was a large and elongated figure-of-eight shaped kiln with a flue feeding off the large boundary ditch to the south. This led to a firing chamber, which was partially stone-lined (C1548). The drying chamber was to the north and was also partially stone-lined. The base of the drying chamber was originally directly in top of the metallised base (C962) of

ditch C991. A burning event (C1552) directly overlying the metallising within the drying chamber indicates that initially this was used as a firing chamber for a differently configured kiln. The northern drying chamber was subsequently lined with a sterile clay (C1530) along its base and sides. This may have been to waterproof the kiln. The clay also filled a shelf along the top of the sides of the drying chamber and appears to relate to the springing point for a clay superstructure.

Pre-ex view of C1517, Kiln 4 with clay lining C1530 visible around the edges of the drying chamber, looking west (top left)

Mid-ex view of C1517, Kiln 4, looking east (bottom left)

View of stone lining C1548 within the drying chamber of Kiln 4, looking east (top right)

View of stone lining C1548 within firing chamber of Kiln 4, looking west (bottom right)



The stone lining (C1548) arced around the southern end of the drying chamber. Part of this represented in situ lining of the chamber itself, however some stones appear to be collapsed superstructure from the roof of the junction of the flue and the drying chamber. Originally there would have been a gap beneath the stones for the hot air to flow. It is also possible that the stones that rested directly on the base of the kiln were baffle stones. The evidence suggests this was a well-constructed kiln designed to control the flow of hot air to the drying chamber and minimise accidental charring of the grain. Part of the clay lining of the kiln (C1530) overlay the stones indicating they were an integral part of the design of the kiln. Within the firing chamber up to three courses of the stone lining survived on the western side with one larger stone on the eastern side, with intense burning evident on some of the stones. While some of the fill of the firing chamber partially underlay the stones of the lining it appeared that this may be due to eroding of the base of the kiln through cleaning or partial slipping of the lining rather than being related to an earlier kiln.

A number of firing events were identified within the southern firing chamber. It can be assumed that this is only representative and that the kiln was fired on many occasions. The first surviving fill (C1544) was located in the deepest part of the firing chamber and did not extend up the flue between the two chambers. This event consisted of a thin band of charcoal overlaid by a layer of ash. The next event (C1568) extended the whole way along the firing chamber and connecting flue and consisted of a layer of ash and charcoal that became more clay-rich as it extended up the flue to the north. This appears to be a mixed deposit combining a firing of the kiln with a cleaning out event. It was overlaid at its southern end by a mixed deposit (C1606) representing a cleaning out event. Another firing event (C1602) was identified over this consisting of a layer or pale ash with reddened burning and charcoal along the base to the south. This layer did not extend into the connecting flue to the north. This was overlaid by a mixed clay layer to the south that appeared to be a collapsed lining (C1550). This clay layer with both burnt and unburnt clay present may represent a layer thrown down on



Mid-ex view of drying chamber of Kiln 4, looking east (top)

Mid-ex view of firing chamber of Kiln 4, looking east (bottom)

the ash of the previous firing to give a solid surface for the next firing of the kiln, or represent a collapsed portion of superstructure. The next event (C1603) was another layer of ash with a thin band of charcoal at the base to the south. This was a thick layer of ash and may represent a number of firings and had a pinkish tone suggesting it has been mixed with burnt clay.

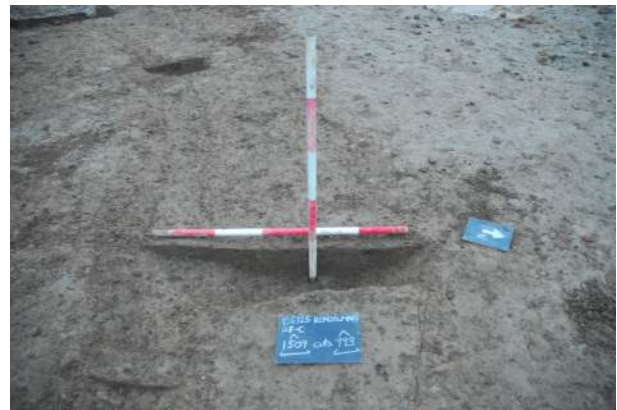
After this event and partially overlying it to the south a thin layer of clay (C1546) was added along the western edge of the flue as a lining. This was followed by a layer of burnt clay and

charcoal (C1604), which extended along much of the firing chamber and flue to the north, representing another firing of the kiln. This in turn was overlaid by the final ash deposit (C1605) within the firing chamber. Overlying this was a mottled deposit of clay (C1545) with both burnt and unburnt clay present that appears to be the collapsed clay superstructure of the kiln. A number of large stones were embedded in the top of this directly over the firing chamber, possibly originally forming an arch over the chamber. As such, while this is stratigraphically above the last firing event within the kiln it relates to part of the kiln structure itself. It is unclear whether this superstructure was rebuilt every time the kiln was fired or whether it would have been used for multiple firing events.

The final fill within the firing chamber was also the sole surviving fill (C1553) recorded within the northern drying chamber. This fill was not charcoal-rich and suggests the drying chamber was empty or had been cleaned out prior to abandonment. It may also attest to the well-constructed nature of the kiln, which avoided accidental burning within the drying chamber. Within the firing chamber this fill formed the upper fill of the kiln and was truncated to the south by the re-cutting (C1569) of the large boundary ditch (C800).

Within the drying chamber an oval-shaped fire-pit (C1567) was cut into the backfill (C1553) of the kiln. This had a charcoal-rich basal fill (C1554/C1519), which contained occasional burnt bone. The upper fill (C1557/C1518) was a backfilling of the pit and also contained occasional charcoal.

Curving around from the west to the north of the kiln two curvilinear features were uncovered. The earlier feature (C993) was broad and U-shaped in profile with a single sterile fill (C994). The width of this feature and the silty sterile fill may indicate this is a drainage feature associated with the kiln rather than a slot trench. As with kilns 3 and 4 to the south, it truncated the backfill of ditch C991 and is likely to be contemporary with the kilns. It in turn was truncated by a narrower slot trench (Structure 6; C1509) following a similar arc as the earlier ditch to the south but terminated



Mid-ex view of Kiln 4 with part of stone lining still in situ and shelf for clay lining apparent along edge of drying chamber, looking south (top)

Slot trench C1509 of Structure 6 truncating gully C993, looking southwest (centre)

Junction of gully C993 and ditch C991, looking west (bottom)

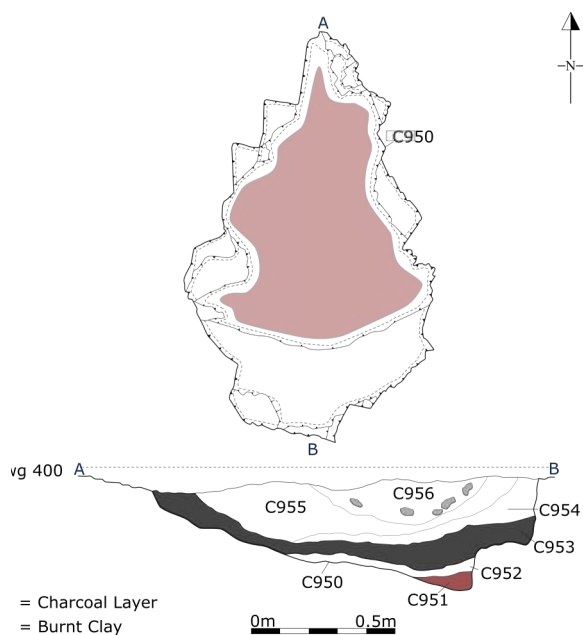
before the edge of ditch C991. It is related to a windbreak structure associated with one of the kilns and had a single fill (C1510).

An oval fire-pit (C1515) was uncovered cutting the fill (C1079) of the recutting of the boundary ditch (C1082) directly to the south of the windbreak and had a single fill (C1516). This appears to be a later event as it was cut into the fill of the ditch the kilns to the east were associated with.

Features to the northeast

Two further kilns were uncovered in unenclosed ground to the east of the processing area. To the southeast a truncated kiln (C950; Kiln 5) was identified. This was located near the interface of the natural subsoil and eastern bedrock outcrop and was rock cut. Only one chamber of the kiln survived and it is possible the kiln was originally keyhole-shaped, however the rock-cut base and sides were quite uneven. The basal fill (C951) was a burnt clay, which may indicate that the pit was partially lined once the pit was cut into the bedrock. This was overlaid by a loose sterile material (C952), possibly relating to a cleaning out event. Overlying this was a dense charcoal-rich layer (C953), which also contained burnt bone and charred seeds. This was overlaid by another burnt clay layer (C954) indicating another burning event. There was no additional charcoal above this layer and it is possible this layer relates to the collapse of the superstructure over the kiln rather than an additional burning event within it. Overlying this was a relatively sterile backfill material (C955), with a looser version (C956) on top being the same but disturbed through ploughing in the past.

To the east of the processing area a kiln (Kiln 6) was uncovered and recorded under two separate cuts. This kiln was cut into a band of boulder clay within an area of the site that was predominantly bedrock. While this kiln had the appearance of a figure-of-eight shaped kiln in plan, it was a keyhole-shaped kiln with a circular firing chamber to the north (C957), and a flue and rake-out pit to the south (C970). The natural around the firing chamber was oxidised consistently around the edge of the pit and



Plan and section of C950, Kiln 5 (top)

Mid-ex view of C950, Kiln 5, looking southwest (centre)

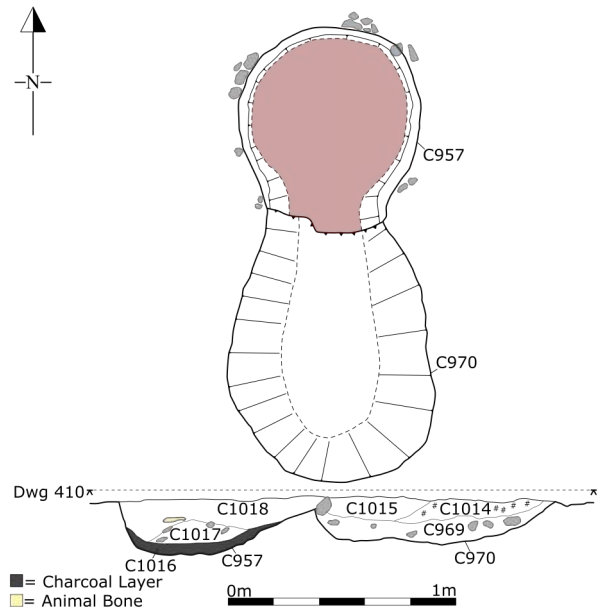
Post-ex view of C950, Kiln 5, looking northeast (bottom)

became more uneven to the south within the rake out pit as it had not been fire-hardened. The basal fill within the firing chamber (C1016) was a charcoal-rich layer, also containing charred seeds. It was overlaid by a loose stony deposit (C1017), which appears to be an intentional backfilling of the firing chamber rather than a collapse of the superstructure of the kiln as there was no evidence of burning within this material. The flue and rake-out pit to the south (C970) extended from the southern side of the firing chamber and was oval in plan. The basal fill (C969) was a dark stony material interpreted as a cleaning out event. It was overlaid by a charcoal-rich deposit (C1014) at the southern end of the pit, which appears to have been dumped or raked out of the kiln. An iron knife blade was retrieved from this fill. The final fill within the flue and rake-out pit (C1015) had a large stone located at the point where the two pits met and may relate to a firing of the kiln where the airflow through the flue was being controlled. This fill was partially overlaid by the upper fill (C1018) of the firing chamber, which was a compact clay and formed over the backfilled kiln after it had gone out of use.

In the vicinity of Kiln 6 a number of possible features were investigated. This area was notable as it was approaching the highest point on the site and also saw a significant change in the underlying natural from boulder clay to bands of gritty boulder clay, sand and mudstone bedrock, which formed in layers and rose up to the east and north. Accumulations of plough soil were apparent at the edges of the bedrock bands. These were investigated and found to be non-archaeological.

The continuation of boundary ditch C800 was only partially visible in this part of the site. A shallow version of the ditch appears to have continued along the same alignment as the remainder of the ditch, however it did not truncate the bedrock and could not be followed with certainty.

During the testing a possible ring-ditch was investigated in this part of the site. While every effort was made to identify this feature during the monitoring and subsequent excavation it could not be located.



Plan and section of C957/C970, Kiln 6 (top)

Mid-ex view of C957/C970, Kiln 6, looking east (centre)

Post-ex view of C957/C970, Kiln 6, looking north (bottom)

A shallow linear feature (C989) was uncovered at the eastern end of the site running east-west. This had a flat base and was cut through the bedrock. The basal fill (C988) was a slumped material. The main fill (C990) was very loose and it is possible the feature may relate to truncation of the bedrock through agricultural activity.

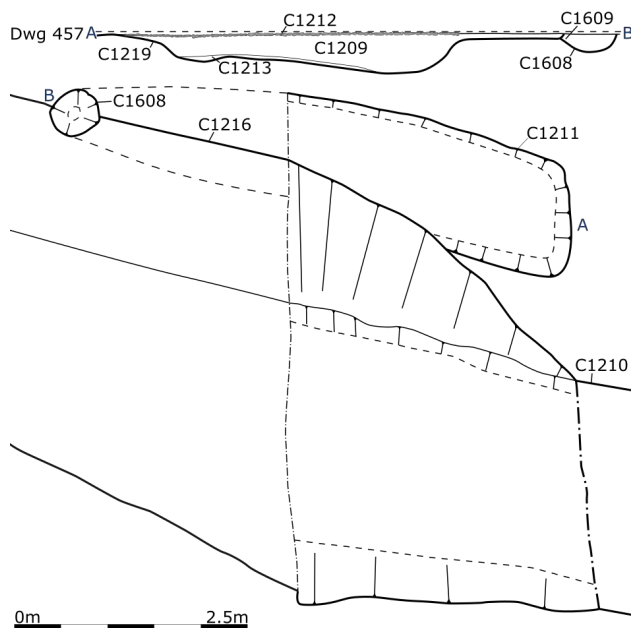
Along the southeastern boundary of the site a rich deposit of natural marl was uncovered during the monitoring. A similar deposit was uncovered to the east of the northern annex. These are part of the naturally forming stratigraphy of the site and are non-archaeological, however they may have been used as a raw material for the clay lining seen in Kiln 4 and other features, which was a similar dense marl clay.

Kiln north of boundary ditch

Along the northern side of the large boundary ditch to the east of Path 1 and west of Path 3 an east-west orientated kiln (C1211; Kiln 7) was uncovered. Although a direct relationship did not survive the kiln is likely to have been cut into an earlier phase of the large boundary ditch. The southern side of the kiln was truncated by the recutting of the ditch (C1226). The surviving portion of the kiln was elongated oval shaped in plan with a concave base and steeply sloping sides, running parallel to the ditch west-northwest to east-southeast. No subdivision was evident within the kiln to indicate its original shape. The basal fill (C1213) was a charcoal-rich material and contained charred seeds. This was overlaid by a fill (C1209) representing the deliberate backfilling of the kiln. The western end of the kiln was not clear due to truncation by the boundary ditch.

A circular pit (C1608) was located 1.7m to the west of the kiln and also cut by the ditch recut (C1226), cut into the side of the earlier boundary ditch. This pit had a charcoal-rich fill (C1609) and was located directly in line with Kiln 7, with the two possibly being related.

A layer of metallurgy (C1212) relating to Path 3 was identified overlying the backfilled kiln, which was in turn truncated by the recutting of



Plan and section of C1211, Kiln 7 (top)

Mid-ex view of C1211, Kiln 7, looking south (centre)

Post-ex view of C1211, Kiln 7, looking east (bottom)

the boundary ditch (C1226) to the south. This indicates the kiln predates the laying of Path 3, which was associated with the intensive kiln activity within the northern annex to the west.

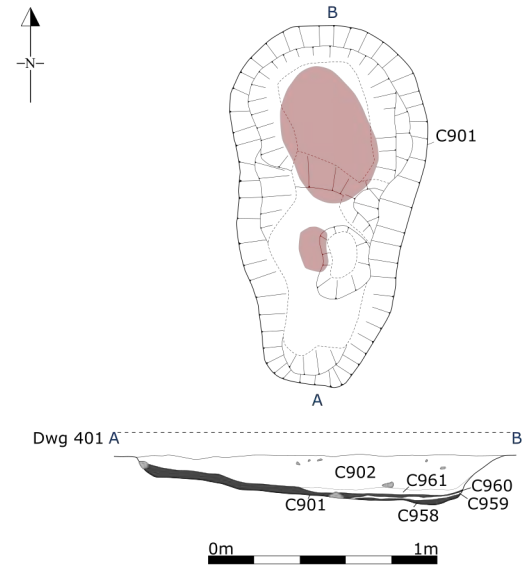
Kilns to east of northern annex

Kiln C901

Three kilns were identified in a strip of ground to the east of the northern annex, two between the annex ditch (C808) and the north-south path (C967, Path 1) to the north and a third on the eastern side of the path further south. The northernmost of the kilns (Kiln 8; C901) was located in the corner between the annex ditch and the large boundary ditch C800 to the north. It was pear-shaped in plan, originally being a keyhole-shaped kiln. The firing chamber was located to the north with a flue and rake-out chamber to the south. This may imply that a bank associated with ditch C800 was located to the south as kilns were frequently built into existing banks (Monk and Kellaheer 2005). Two episodes of *in situ* burning survived in the kiln. The basal fill (C958) was charcoal-rich and contained charred seeds. It was confined to the northern chamber overlying the scorched base of the chamber. This was overlaid by an ash layer (C959), which in turn was overlaid by a second layer of charcoal-rich material with charred seeds (C960). This layer extended into the rake-out chamber to the south and also contained fragments of burnt bone. This was overlaid by a second ash layer (C961), which was predominantly located in the northern half of the kiln. The final fill (C902) was a backfilling event after the kiln had gone out of use and contained infrequent animal bone.

Windbreak C825

Curving around the kiln from south to northeast a slot trench (Structure 7; C825) was uncovered. This is likely to represent a windbreak structure associated with the kiln. The basal fill (C873) of the slot trench was charcoal-rich, containing chunks of charcoal as well as charred seeds. This was overlaid by a less charcoal-rich material (C874), a backfilling event within the slot trench. The northern end of the slot trench terminated to the east of the kiln. The southwest arc of the slot trench was truncated by a number of plough furrows,



Plan and section of C901, Kiln 8 (top)

Mid-ex view of C901, Kiln 8, looking west (centre)

Post-ex view of C901, Kiln 8, looking west (bottom)

however a short section of it was identified running parallel to the earliest version of the northern annex ditch (C1103) to the west of the southern end of the kiln. Interestingly, within ditch C1103 a charcoal- and charred seed-rich fill was uncovered (C1460) adjacent to Kiln 8, which may indicate this kiln is contemporary with the earlier phase of the northern annex.

Pit C870

To the north of the northern end of the slot trench a pit (C870) was uncovered. This was circular and was partially cut into the fill overlying the Path 1. As such it is unclear whether it is contemporary with Kiln 8 to its west. It lies directly to the north of slot trench C825, which may indicate some correlation. The basal fill recorded within the pit (C903) is likely to be same as the fill (C971) overlying the metalling of Path 1 to the east, with the pit being slightly overcut. The true basal fill of the pit (C904) was a charcoal-rich layer, which was overlaid by an ashy deposit (C905). This was overlaid by a silty clay fill with infrequent charcoal (C906), which was the final backfilling of the pit. The pit was suggested to be a fire-pit due to the fills it contains, however no in situ burning was identified. The northern side of the pit was truncated by a narrow steep-sided linear feature (C913), which ran to the north before being truncated by the late drainage phase of the large boundary ditch. The fill of this feature (C914) was similar to the fill (C1495) of Ditch C1494 along the southern side of the northern boundary and it is possible this feature drained into this phase of the ditch.

Kiln C1031

To the south of Kiln 8 another north-south orientated kiln (Kiln 9; C1031) was uncovered. The kiln was figure-of-eight shaped in plan. In situ burning on the base of the kiln was sparse, located near the junction of the two chambers along the eastern side, though more predominant to the north. As such this kiln may also have functioned as a keyhole-shaped pit, with a firing chamber to the north and the southern chamber acting as a flue and rake out pit. The firing location initially appears to have been at the junction of the two chambers.

The basal fill (C1055) was located in the southern chamber overlying the in situ burning



Mid-ex view of slot trench C825 with charred material visible along the base, looking southwest (top)

Post-ex view of pit C870 cut into the grey silt fill overlying Path 1, looking east (bottom)

on the base of the kiln and contained rare charred seeds. It was overlaid by a similar but more compacted fill (C1054), which was located at the base of the northern chamber and extended partially into the southern chamber. The upper portion of this deposit was burnt by a later firing episode (C1053) within the kiln, which was located solely within the northern chamber. This was overlaid by an associated charcoal-rich layer (C1052), which contained charred seeds and some burnt bone. Within the southern chamber a deposit (C1050) containing charcoal, charred seeds and burnt clay may be a cleaning out event associated with this phase of the kiln. Overlying the charcoal-rich layer to the north was a sterile material (C1051) that may be a slump of material from the side of the kiln or

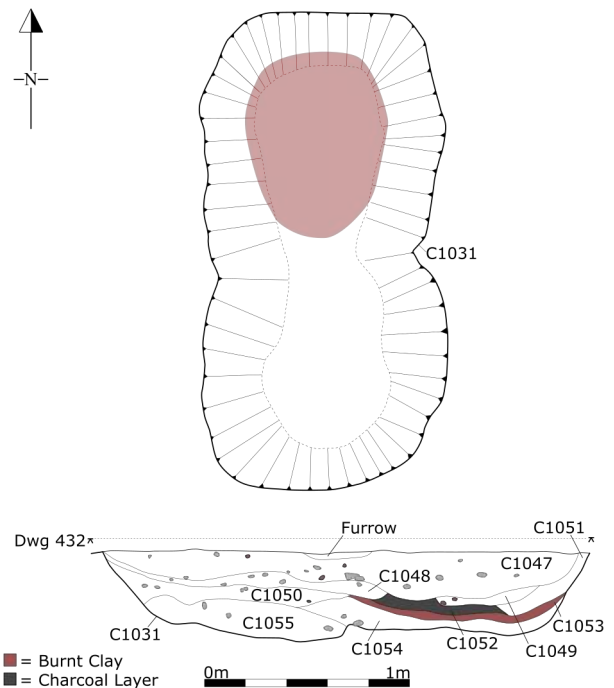
part of a collapsed superstructure. This was overlaid by a thin layer of redeposited natural (C1049) within the northern chamber, possibly thrown down to form a solid base for another firing of the kiln. A thin band of charcoal-rich material (C1102) overlay this, also within the northern chamber, possibly the remnants of an additional firing of the kiln, although in situ burning was not apparent beneath this layer. This was overlaid by another thin band of redeposited natural (C1048) which extended across the whole of the southern chamber, sloping up towards the surface.

While it is possible these thin bands of redeposited natural may represent the remains of the kiln superstructure, the lack of burning on this material suggests this is not the case. This fill may have been used to create a more funnelled flue to the south of the firing chamber. The final fill within the kiln (C1047) related to the backfilling after it had gone out of use and contained rare burnt bone and burnt clay fragments suggesting it contains the remnants of the kiln superstructure along with dumped material from elsewhere. A charcoal and charred seed-rich layer (C1104) was identified within ditch C1103, the early version of the northern annex ditch to the west adjacent to Kiln 9 suggesting this kiln was in use during the early phase of the northern annex.

During the initial monitoring of the area an ephemeral narrow arc was visible on the surface curving around the northern, eastern and southern side of the kiln. When the kiln was excavated this area was trowelled back and the arc did not survive. It is possible this was the remains of a windbreak, however the feature did not survive to any depth.

Kiln C2151

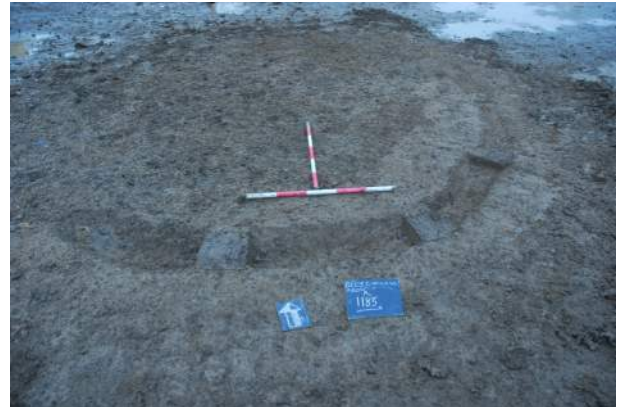
The third kiln in this part of the site (Kiln 10; C2151) was located to the southeast on the eastern side of Path 1. This was a poorly surviving figure-of-eight shaped kiln orientated north-south with the firing chamber to the north and the drying chamber to the south. In situ burning was present on the base of the northern chamber. Only one episode of use was identified within the kiln, however this is likely due to the kiln being cleaned out. The basal fill (2525) within the northern firing chamber was



Plan and section of C1031, Kiln 9 (top)

Mid-ex view of C1031, Kiln 9, looking west (centre)

Post-ex view of C1031, Kiln 9, looking west (bottom)

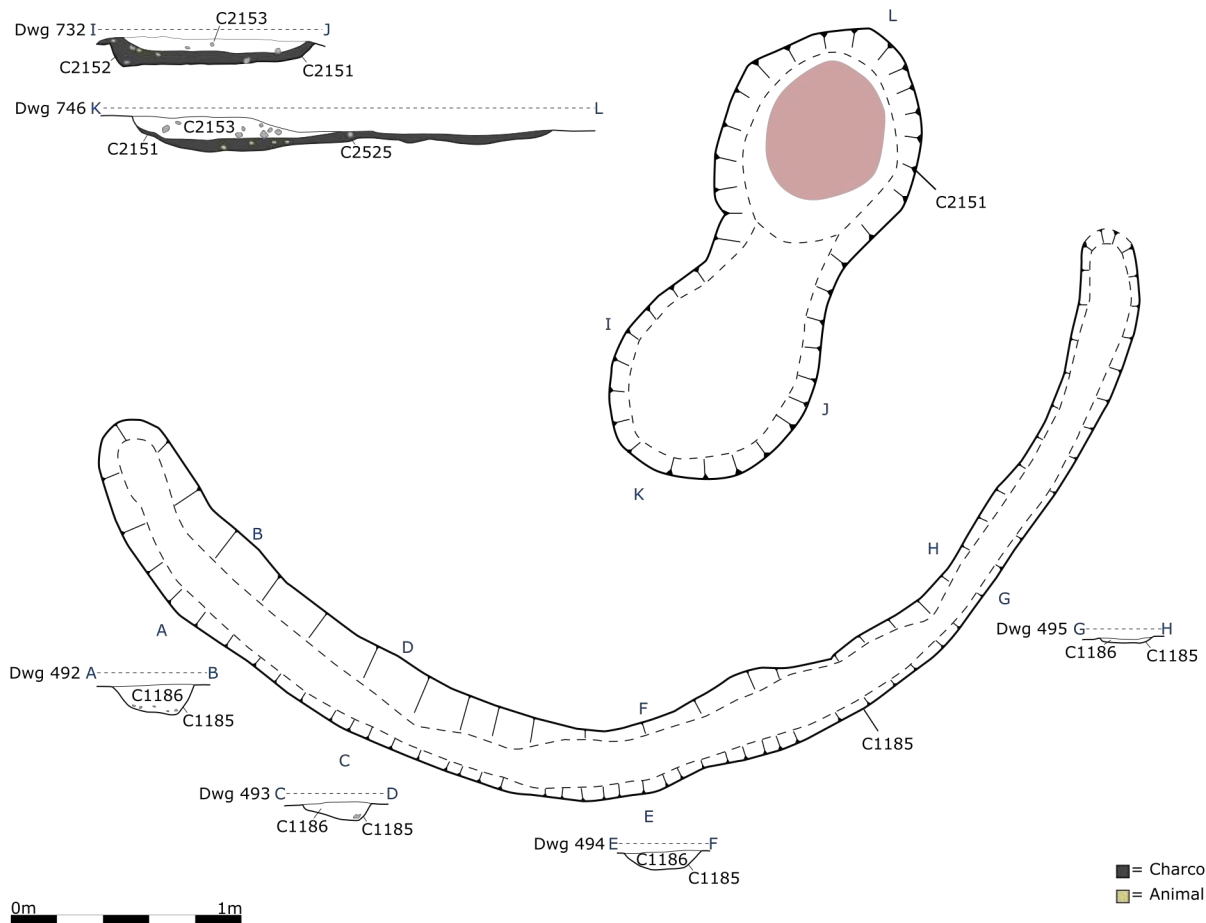


Mid-ex view of C2051, Kiln 10, looking east (top left)

Post-ex view of C2051, Kiln 10, looking south. North arrow incorrect (centre left)

Mid-ex view of slot trench C1185, looking north (top right)

Plan and section of C2051, Kiln 10 (bottom)



found to be identical to the basal fill (C2152) in the southern drying chamber. This was a charcoal-rich fill and contained charred seeds and frequent burnt bone, representing the final firing of the kiln. The upper fill of the kiln (C2153) was a redeposited natural very similar to the surrounding subsoil. This may be an intentional backfilling of the kiln or collapsed kiln superstructure, however there was no evidence that the material had been burnt so the former possibility seems more likely.

Windbreak C1185

To the south of the kiln a slot trench (Structure 8; C1185) was uncovered arcing from the southwest to south to southeast of the kiln. The slot trench had a distinct terminus to the west and shallowed out to the east. The fill of the slot trench (C1186) was relatively sterile and contained one degraded fragment of bone. This

is likely to be the remains of a windbreak for Kiln 10.

Metalled paths

A number of metalled or cobbled paths were identified across the site. Some of these were short representing crossing points over ditches while others were more substantial and give an indication into the control of movement around the settlement.

Path 1

A long metalled path (Path 1; C967/C972/C2123/C2209) measuring a minimum of 120m was identified to the east of the northern annex. It continued beyond the limit of excavation to the north and ran north-south roughly parallel to the annex ditch (C808),



turning at the southern end of the annex to run around the outside of the outer enclosure ditch. As the path respects the northern annex and the outer enclosure ditch of the settlement it is likely to be contemporary with this phase of activity. The path was truncated by the latest version of the large boundary ditch (C800) towards the northern end of the site. As this boundary was present throughout the development of the northern annex the path

View of section of Path 1 to east of northern annex, looking west (top left)

View of southern end of Path 1 to right truncated by Structure 4, looking south (bottom left)

View of slot across Path 1 to east of northern annex, looking east (top left)

View of slot across Path 1 to north of boundary ditch C800 with the fill of ditch C1586 in the foreground, looking east (bottom right)





must originally have bridged over the ditch.

To the north of the boundary ditch the trackway was located within a shallow flat-bottomed cut (C973). A relatively sterile grey silt (C971) overlay the metalling. A shallow north-south running ditch (C1586) was recorded running along and partially truncating the western side of the metalled surface at the northern end of the site. The ditch had two basal fills (C1588 and C1589), which were overlaid by the same fill (C971) that overlay the metalling. An additional fill (C1587) was identified overlying metalling and drain to the north. Two later north-south running probable agricultural features truncated the western side of the ditch (C1590 and C1592) and ran into the latest recutting of the large boundary ditch C800. These had sterile fills (C1591 and C1593).

To the south of ditch C800 the path continued in a shallow flat-bottomed cut (C966) running at a slight angle to the annex ditch. Its relationship with the windbreak (Structure 7; C825) for Kiln 8 to the west was unclear, however an associated pit (C870), did truncate



Path 1 in foreground with ditch C1586 in background, looking west (left)

Path 10 crossing recut C2208 in annex ditch C808, looking north (top right)

Junction of annex ditch C808 with outer enclosure ditch C837 with Path 1 visible in background running up to edge of annex ditch, looking northeast (bottom right)

the fill (C971) overlying the metalling. Further to the south directly east of Kiln 9 the cut for the metalling widened and deepened slightly. At this point two fills were recorded overlying the metalling, a darker basal fill (C968) and a pale grey silt upper fill (C971). The upper fill was recorded as the only fill overlying the metalling further north. To the south of the deeper section the cut for the metalling became shallower and was lost for a distance as it ran alongside Kiln 10. The relationship between the path and the windbreak for the kiln (Structure 8; C1185) did not survive.

The path widened into an expansive metalled yard to the northeast of the junction between

the northern annex ditch and the outer enclosure ditch. A number of sub-circular depressions in the surface at this point may have served specific functions, however no difference in the fill overlying the depressions was noted. Animal bone and a broken iron blade were retrieved from the fill overlying the metalling at this point. A metallated surface (C2178/C2334; Path 10) was identified crossing recut C2208 of the enlarged northern annex ditch to the west of the yard and appears to have served as an entrance into the annex at a later phase in the use of the annex.

The metalling narrowed to its original width as it ran around the outer enclosure and on to the limit of excavation to the south, running in a southeasterly direction as it exited the excavation. It was truncated by ditch C2180 and post-medieval ditch C2213 to the south. The survival of the metalling around the eastern arc of the enclosure was patchy as there had been more disturbance in this area when it was used to store spoil from the development to the south. The access point between the central enclosure and the pathway was not identified, though is likely to have been along the eastern arc. The relationship with Path 2 leading to Structures 2-4 did not survive. This trackway continued beyond the limits of the settlement and may have served to connect it to other sites and settlements in the vicinity, perhaps the early medieval site at Roestown 2 some 800m to the northwest and the ecclesiastic settlement of Domhnach Sechnaill 850m to the southeast. Path 1 appears to have been in use from an early point in the evolution of the settlement. Its relationship with Path 10 indicates it remained in use until the later phases of activity in the northern annex, yet it post-dates the structures to the east of the settlement to the south and Path 3 (see below) to the north. As Path 3 relates to the cereal processing at the northern end of the annex, Path 1 may have gone out of use after the iron production had ceased within the northern annex.

Path 2

Another path (Path 2; C2381/C2258), which ran for 9.8m, was uncovered running northwest-southeast out from the outer enclosure towards Structures 2, 3 and 4. The path was truncated by the later reorganising of

the eastern entrance of the outer enclosure (C837), by ditch C2180 and by post-medieval ditch C2213. At its eastern end a small gully (C2289) ran alongside the path. The path rose up and petered out to the west of Structure 3 and north of Structure 4. The fill overlying the metalling (C2257) was also the only fill of the associated gully. The relationship with the path running around the eastern perimeter of the outer enclosure (Path 1) did not survive, though Path 2 was cut or worn to a deeper level than Path 1. To the west of the outer enclosure ditch (C2325) the pathway was truncated to the north by a pit (C2382), to the south by a ditch (C2180) and to the east by a linear gully (C2280). The path appears to have connected the unenclosed structures lying to the east with the central

Path 2 within the outer enclosure truncated by ditch C2180 in foreground and pit C2382 in background, looking north (top)

Path 2 running diagonally and rising to east with gully C2289 to the right, looking northwest. Part of Path 1 can be seen at a higher level in the background (bottom)



enclosure. The orientation of the path implies it was running directly towards the sub-rectangular enclosure within the central enclosure of the settlement. This was suggested to be the burial enclosure during the previous testing on the site (Hession & Moriarty 2009). This is intriguing when considering that the path connects the large rectangular structure to the east (Structure 4), which was associated with an iron hand-bell, with the probable cemetery.

The pit (C2382) truncating the northern side of the metalled path continued into the preserved area to the east. It had two fills (C2383 and C2384), with no finds retrieved from either. It was truncated by linear gully C2280 to the east and by ditch C2180 to the south.

The small gully cutting the surface to the east (C2280) continued to the north into the preserved portion of the site. It had a single sterile fill (C2281) and the purpose of the feature was unclear. To the east it truncated the outer enclosure ditch (C837) and it was truncated on its western side by a feature (C2332), which continued into the preserved area. Too little of this feature was present within the excavated area to identify what it was. It also had a single sterile fill (C2333).

As the outer enclosure ditch (C2325) cuts across the line of the metalled path it is likely this section of path relates to the eastern annex enclosure (C2204).

Path 3

To the west of the processing enclosure a north-south running metalled path (Path 3; C976/C1212/C822) measuring c. 68.5m in length was uncovered. The first element of the path was a north-south running drain (C1610) located centrally beneath the surface, which terminated midway between the large boundary ditch C800 and the limit of excavation to the north. The drain continued to the north beyond the limit of excavation and had three fills (C1583, C1584 and C1585), all of which appeared to relate to natural silting up within the drain. The metalled surface overlay the backfilled drain and extended from the large boundary to the limit of excavation to the north. It was located within a broad, shallow U-shaped cut (C975).

The form of the path was quite unusual. The northern end of the surface was uniform in width however approaching the turn to the west at its southern end it splayed out significantly as it overlay the backfilled ditches forming the northern boundary. Just to the north of this it narrowed for a short distance after which two sloping extensions were apparent to the east and west. The section of metalling sloping up to the west petered out with a squared end, while directly opposite another section of metalling sloped up to the east with a more pointed end. These appear to have been access points running from the spaces to the east and west of the path, with the enlarged section at the intersection of the path with the boundary ditch possibly representing a yard or work area.

Mid-ex view of Path 3 visible in section excavated through Ditch C800, looking southeast (top)

Mid-ex view of north-south running section of Path 3 with sloping sightions rising up to east and west, looking west (bottom)





The path turned to the west running along the backfilled boundary ditch to the northeastern corner of the northern annex. It also overlay Kiln 7 (C1211). It was truncated by later recuttings of the boundary ditch (C1220, C1222, C1226, C1569), which relate to later drainage. It also overlay the northern end of C808, the eastern ditch of the annex, though the cut for the later drainage (C1159) removed it further south. This suggests a period where the annex and boundary ditches had largely been allowed to fill in and appears to be contemporary with the intensification of kiln activity in the northwest of the annex, which was associated with a large waste pit also cut into the annex ditch. The path clearly continued to the north, similar to Path 1, though further to the east, perhaps leading to another settlement such as Roestown to the north. The large quantities of processed grain that must have been produced during this phase of the site would have needed to be stored and distributed, with the path representing part of the related infrastructure. This phase marks the end of the annex as an enclosed space and it post-dates



Mid-ex view of Path 3 overlying kiln C1211 to left and cut by later drainage ditches C1220 etc. to right, looking east (left)



Mid-ex view of western end of Path 3 overlying backfilled northern annex ditch, looking west (top right)

Mid-ex view of Path 3 in section overlying earlier phases of boundary ditch and cut by later drainage ditch C1220 etc. to left and right, looking east (bottom right)

Path 1. The later drainage cutting the path along the line of the boundary ditch may post-date the settlement entirely.

A water-laid silt fill (C974 to the east and C1496 to the west) overlay the metalling. Some slag was retrieved from the surface of the path.

An oval pit (C977) was cut into the metallated surface to the east and was filled by the same material that overlay the metalling (C974). A small quantity of burnt bone was also retrieved from the base of the pit.

Ditches

Ditch C2163

This northwest-southeast running ditch ran from within the northern annex enclosure to the limit of excavation to the southeast. It was not particularly deep or wide. Within the northern annex this was recorded under a separate context number (C1147). It was truncated by the recutting of the eastern ditch of the northern annex (C808) as well as by ditches C1140, C1196 and pit C1034. The ditch was not identified further west due to being truncated by the metalworking area.

East of the northern annex there was a gap of 18.1m until the ditch resumed along the same orientation. This gap corresponds with the broad metallised yard along Path 1 (C2123), so it is probable the path is contemporary with this ditch. Further east there was another gap of 4.8m in the ditch, although there was no clear reason for the gap in this case. A long and narrow north-south running ditch (C1111) truncated the ditch towards the east. Just beyond this the relationship between the fence-line (C2136) and the ditch could not be identified as both features were too shallow by this point. The ditch could still be traced further east running shallowly over the rock outcrop at this end of the site.

Mid-ex view of section through Ditch C2163, looking west (left)

Mid-ex view of Ditch C1111 truncating slot trench C2136, looking south (right)



The gaps along the ditch are likely to indicate access points. This ditch clearly comes early in the sequence of the development of the settlement based on the site stratigraphy. This is unusual given its long and linear nature, which does not appear to correspond to other early features on the site. As it was not a continuous ditch it would not have served a drainage function. This is likely to have been a boundary feature of some sort, with the orientation and enclosure system later reworked significantly, particularly within the northern annex.

Within the metalworking enclosure the ditch was found to contain three fills (C1148, C1149 and C1150). To the east of the northern annex the ditch contained a single original fill (C2164) and had been recut (C2165) along the section between the two main gaps. The recut was slightly shallower than the original ditch and contained three fills (C2166, C2167 and C2168). None of the fills of the ditch or the recut were found to contain animal bone or finds.

Ditch C1111

A late north-south running ditch was identified towards the eastern end of the site. This narrow gully was steep-sided along the east side and may represent a drainage feature, however it may also represent a fence-line or something similar. It was given a number of context numbers due to it running across both Areas C and D of the excavation (C1111, C2182 and C2253), however the original number is used here for clarity. At its northern end it truncated metallised surface C962 and ditch C991 associated with a processing area to the east of the settlement. At the point where it truncates ditch C991 it turned to the east to run along the



same line as the earlier feature. This may suggest that some element of the earlier feature survived above the ground, such as a bank, or that they shared a similar purpose, such as providing drainage for a specific area.

The ditch had a similar silty fill (C1112) throughout, which is likely to be the result of the build-up of water-laid silts over time. Approximately 10m to the south of the eastern

end of ditch C800 two sherds of Bronze Age pottery were retrieved from the fill of the ditch. As the ditch is not of prehistoric date and is late in the stratigraphic sequence of the site, it is likely these sherds come from a truncated feature nearby. However no prehistoric features were uncovered in the vicinity during the excavation. At its northern end the fill was recorded under a separate number (C1062), with occasional animal bone inclusions. A layer of plough soil (C1072) overlay the northern end of the ditch and contained slag inclusions.

Ditch 2180

A series of ditches orientated east-west were identified to the east of the settlement and running into the preserved interior to the west. It truncated Path 2 leading to the Structures 2-4 to the east, and also truncated the intersection between Structures 2 and 3. Its relationship with the outer enclosure ditch was obscured as it was truncated by later post-medieval ditches (C2213 and C2217) at this point. However, the linear nature of the series of ditches and the truncation of features late in the sequence of the site would suggest the ditches post-date the early medieval settlement. To the east the

Mid-ex view of Ditch C2180 truncating Path 2 to left, looking east (top left)

Mid-ex view of junction of ditches C2180, C2263 and C2268 as they truncate the northern end of Structure 3, visible to left, looking west (bottom left)

Mid-ex view of Ditches C2180, C2263 and C2268 at the point where they converged, looking west (top right)

Mid-ex view of Ditch C2268, looking south (bottom right)



ditches rose above the bedrock outcrop and had been ploughed out. The earliest ditch (C2180) was a broad U-shaped ditch and had five fills. The basal fill (C2295/C2298/C2390) was a gritty material and was found along the length of the ditch. A pocket of clay (C2294) was present within this material to the east. An additional basal fill was identified at the eastern end along the southern side of the ditch, however the relationship of this fill with the basal fill elsewhere was obscured by later recutting events. An upper fill (C2299) was identified in some parts of the ditch.

This was recut by a steeper and narrower ditch (C2297) running along the same alignment. Three fills survived within the ditch. The fills to the east (C2300 and C2301) were variants of one another, both deriving from silting within the ditch. A grittier silt fill (C2391) was identified to the west.

This phase of the ditch was truncated by two recuts. One of these (C2302) followed the same alignment as the earlier ditches and was narrower and shallower than the previous cuts. It had a single fill (C2303). A second (C2263) veered off the alignment of the earlier ditches to the south towards the eastern end. It may relate to an adjustment to the boundary inferred by the series of ditches, or simply be a drainage feature. Two fills were recorded within the ditch, a compact basal fill (C2264) containing occasional animal bone and a looser upper fill (C2265). This was in turn truncated by a north-south running ditch (C2268), which turned at its northern end to run to the west along the line of the earlier ditches. This ditch may relate to subdivision of the space to the south of the boundary. The ditch truncated the eastern arc of Structure 3. Two fills were recorded within this ditch, a basal fill (C2269) containing some burnt bone and animal bone, and a looser upper fill (C2335).

A later recutting of ditch C2263 (C2266/C2385) truncated the north-south running ditch suggesting the lifespan of that feature was short-lived. The recut had a single fill (C2267/C2386), a loose silt. A final recut was also apparent running along Ditch C2180 (C2304), which was shallow with a silt fill (C2305). These later recutting events appear to

have mainly served a drainage function.

Ditch C2213

A large north-south orientated post-medieval ditch (C2213) was uncovered running across the site and truncating a number of the early medieval features. To the north it truncated the large boundary ditch C800 and further south it truncated ditch C2163, Path 1, the outer enclosure ditch (C837), eastern annex ditch (C2204), the side of Kiln 2, pit C2187 and ditches C2271 and C2184. This ditch is visible on the geophysical survey carried out in 2009 (Harrison 2009) and is depicted on the First Edition Ordnance Survey map. The base of the ditch was metalled (C2226) in one section, possibly to aid cleaning out of the ditch. The fill overlying the metalling (C2233) was a silty water-laid deposit. A further three fills (C2214, C2215 and C2216) were identified overlying this, all being similar with high silt content and more organic matter present at higher levels, which had not yet decomposed. Animal bone was retrieved from two contexts (C2214 and C2215) and medieval and post-medieval ceramics were retrieved from one context (C2215). It was truncated by later ploughing (C2196), which in turn was truncated by a later north-south orientated flat-bottomed linear feature (C2217). The purpose of this feature was unclear, though it is likely to be agricultural. It had a single fill (C2218).

Mid-ex view of post-medieval ditch C2213, looking north



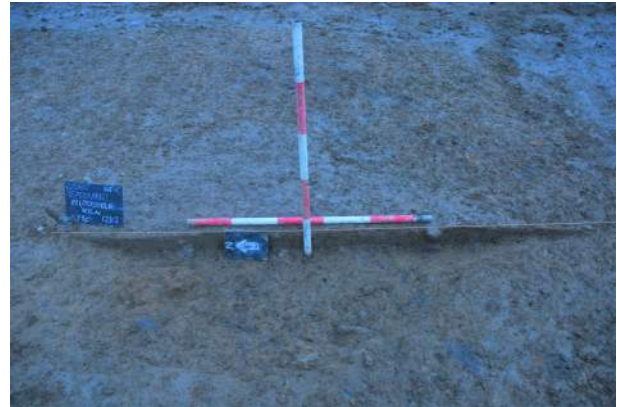
Posts, pits & stakeholes

To the north of Ditch C800 and 5m to the east of the protrusion in Path 3, a north-south orientated shallow tear-drop shaped pit (C1469) was uncovered. The feature was similar to a small kiln in plan and shape, though was very shallow and no in situ burning was evident. A single fill (C1468) was identified within the pit with no charcoal evident. It is possible that this is the remains of a cleaned-out kiln, however it would be unusual for no charcoal to survive. As it was located in the area accessed by the sloping protrusion from Path 3 it is likely to have been contemporary with this, possibly a processing pit relating to the nearby kilns.

Little archaeology was uncovered between ditches C800 and C2163 to the east of Path 1. This area was not intensely utilised for processing, perhaps representing fields or gardens associated with the settlement. A small shallow fire-pit (C1371) was identified within this area to the west of ditch C1111. It was circular and had a scorched base, with the scorching continuing beyond the edge of the pit to the west. The pit had a single fill (C1372), which contained occasional charcoal, ash and burnt bone inclusions. A number of pieces of burnt flint and possibly worked chert were also retrieved from the pit. Additional ephemeral patches were noted in the vicinity however did not survive to any depth.

To the southeast of the fire-pit and just to the west of ditch C1111 an oblong posthole (C2154) was uncovered. The initial fill of the posthole (C2155) contained occasional charcoal and had been scorched along its western side. Centrally located within the cut a charcoal-filled post pipe (C2156) was present, with some of the charcoal spreading out over the basal fill to the west and the packing stones present within the charcoal. This feature represents a small post that was burnt in situ, however there were no other structural elements identified in the vicinity.

To the east of ditch C1111 a large, isolated patch of scorching (C2140) was uncovered with a number of shallow indentations on top. Some charcoal was mixed with the upper surface of the burnt natural. This appears to be the result



Mid-ex view of pit C1469, looking east (top)

Mid-ex view of pit C1371, looking south (centre)

Mid-ex view of posthole C2154, looking north (bottom)

of a large burning event such as a bonfire. The indentations may be the result of ploughing or from cleaning out after the burning event.

A substantial posthole (C2290) was excavated to the south of ditch C2180 and north of Path 2. Its relationship with the path was unclear. Five packing stones (C2362) were identified within the posthole, with one at the base in situ and the others having collapsed into the post-pipe. The remainder of the fill (C2291) was loosely compacted and may have accumulated in the posthole after the removal of the post. The relationship of this posthole with Path 1 was lost as the path did not survive here. It does not appear to have formed part of a structure and may relate to a feature associated with Path 1 or Path 2, which intersect at this point.

A circular posthole (C2286) was identified cut into the northern side of Ditch C2180 and was truncated by the ditch. Packing stones (C2287) were identified surrounding the fill of the post socket (C2288). It is possible this is the base of a posthole associated with Structure 3 to the southeast, which was also truncated by the later ditches.

A stake-hole (C2365) was excavated to the north of ditch C2180 and northwest of posthole C2286 within the ditch. The base of the stake-hole was angled suggesting the stake was driven in at a 45-degree angle. Given its proximity to the posthole within the ditch and the angle of the base this may represent a support for the post within posthole C2386. The fill of the stake-hole (C2366) accumulated within the hole after the stake was removed.



Mid-ex view of scorching C2140, looking east (top)

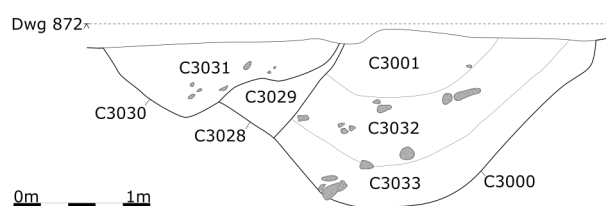
Mid-ex view of posthole C2290 with packing stones C2362 in situ, looking west (upper centre)

Mid-ex view of posthole C2286 with packing stones C2287 in situ, looking north (lower centre)

Post-ex view of stakehole C2365, looking north (bottom)

Section 6 The eastern annex

Two sections of ditch appear to have formed a small crescent-shaped annex to the east of the central settlement enclosure. The annex predated the latest phase of the outer enclosure to the north and appears to have post-dated the southern curvilinear annexes. A small section of the interior of this annex was revealed during the excavation, with a portion continuing into the preserved area and the remainder likely to have been lost to the development to the southeast. This was the closest the excavation came to the central enclosure of the settlement. Possible entrances leading towards the central enclosure were present to the north and west of the enclosure, with a path (Path 2) present to the north. The gap between the southern rectilinear annex and the eastern annex may also have provided an access to the interior.



Mid-ex view of Ditch C3000, looking west (top)

East-facing section of Ditch C3000 (centre)

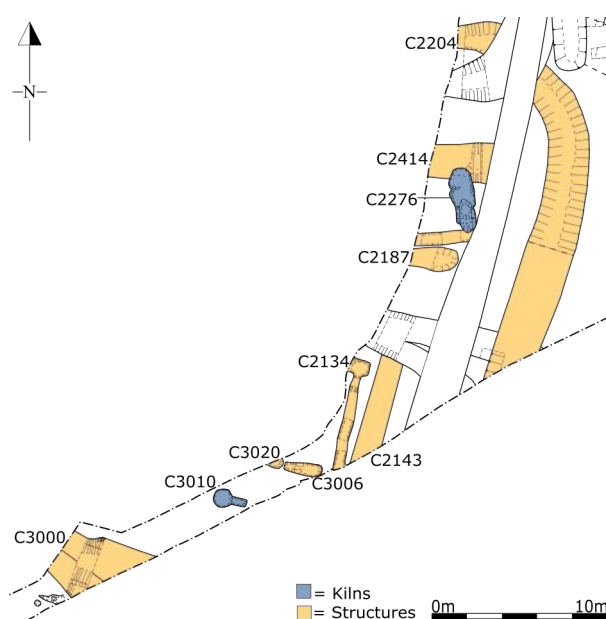
Plan of eastern annex and related features (bottom)

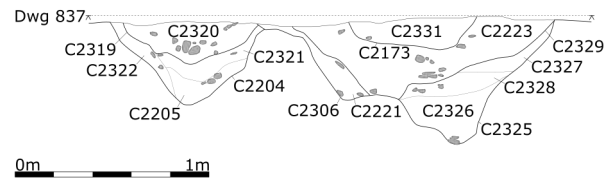
The eastern annex ditch

Ditch C3000

The southern return of the eastern annex ditch (C3000) was orientated east-west and had two shallower recuts along the southern side (C3028 and C3030), which followed the same alignment. The main ditch was large, steep-sided and had a relatively flat base. Three fills were identified with the basal fill (C3033) being a silty deposit with occasional stone, which was indicative of the ditch silting up over time. It was overlaid by a darker material with frequent animal bones indicating a period of dumping into the ditch. The upper fill (C3001) also contained frequent animal bones and one piece of slag. The two upper fills suggest the ditch was used to dispose of waste, or perhaps was backfilled with waste from the surrounding area after it had gone out of use.

A shallower recut was present along the southern side of the ditch, which had a sterile fill (C3031) similar to redeposited natural. This phase of the ditch may have been filled in with





Mid-ex view of Ditch C3000, looking east (upper centre)

Mid-ex view of Ditch C2204 cutting Ditch C2184, looking south (bottom left)

Mid-ex view of Ditch C2306 cutting Ditch C2204, looking east (top right)

West-facing section of Ditches C2306 and C2204 (bottom right)

bank material. A later recut of similar scale (C3028) cut along the southern edge of the earlier ditch. This had a single fill (C3029), which again contained frequent animal bone suggesting it was backfilled with waste material.

Ditch C2204

The northern return of the eastern annex ditch (C2204) arced out from the interior curving to the east and then south. The ditch defined an entrance into the interior to its north, which was associated with Path 2 and the structures to the east. It was truncated by a later phase of the outer enclosure (C2306), which would have required a change in the entrance position, shifting it further to the south. The ditch truncated one of the ditches associated with the curvilinear southern annex (C2184), indicating the southern curvilinear annex predated the eastern annex and the outer enclosure to the north.

Ditch C2204 was generally U-shaped in profile and became significantly wider and deeper as it curved around the exterior of the annex. It is probable that the wider and deeper section of the ditch reused the line of earlier ditches, for example Ditch C2414, which did not extend beyond the outer enclosure ditch and may have been an earlier ditch defining an entrance. At the point where it proceeded into the preserved area it measured 1.6m in width and 0.88m in depth, increasing to 3.3m in width and 1.56m in depth as the ditch turned to the south before decreasing to 1.08m in depth at the southern end of the site. The variation may suggest that pre-existing phases of the annex ditch were present along the arcing section of the ditch.

A number of fills were identified within Ditch C2204. The basal fill (C2322) was present along the northern (external) side of the ditch. It was

a sandy silt and may be the remains of a cleaning out event within the ditch. The secondary fill (C2205) was a water-laid silt present along the base of the ditch with inclusions of animal bone. A deposit of stone was present at the base within this fill in the section face leading into the preserved portion of the site, which may relate to bank material slipping into the ditch. This fill became more substantial in the deeper and wider arcing section of the ditch and was recorded under a separate context number (C2245), which contained frequent animal bone but less frequent stone. In the north-south running section of the ditch a deposit of ash and charcoal (C2412) was encountered sloping down into the ditch along the western side, with inclusions of burnt clay lining. This deposit may be kiln waste relating to Kiln 2, which was located immediately to the west of where the deposit was identified. The final fill of this phase of the ditch (C2321/ C2246) was another water-laid silt. In the arcing section of the ditch a this fill contained occasional animal bone and was located along the outer eastern side of the ditch, possibly indicating it was within the separate recut or cleaned out section of the ditch.

A shallow ditch (C2319/C2247) recut the top of the ditch along the east-west running portion of the ditch. This had a single silt fill (C2320) containing frequent stone and animal bone and one piece of slag. Within the north-south running portion of the ditch the fill (C2248) was similar with frequent animal bone, however the stones were absent suggesting these relate to activity in the vicinity of the entrance, perhaps with the bank being revetted with stone at this point.

Features within eastern annex

The majority of the area enclosed by the eastern annex ditch was preserved in situ. A small section from within the enclosure was excavated to the east and southeast within Areas D and E.

L-shaped palisade trench

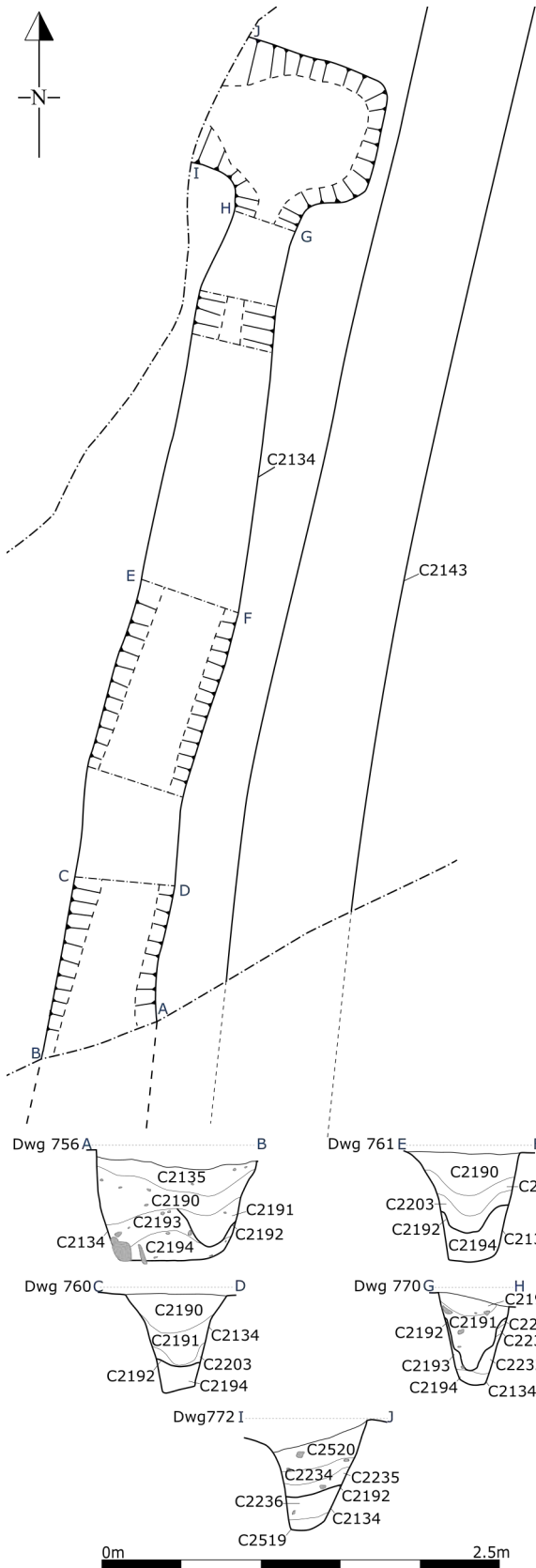
A steep-sided L-shaped slot trench (Structure 1) was identified at the limit of excavation to the southeast. Three separate numbers were given

to the feature relating to the different sections of the trench (C2134, C2228 and C2229) however they are all part of the same feature. The long section of the trench (C2134) was orientated roughly north-south and continued beyond the limit of excavation to the south. At the northern end the trench (C2229) turned to run into the preserved interior, but the section face showed that the trench continued to the west. The northern corner the trench was expanded slightly and was initially thought to be a posthole (C2228), however the fills within the trench were largely consistent throughout. It is possible, and indeed likely that a post stood at the corner, however it was removed along with the rest of the fence line prior to the infilling of the trench and there was no evidence for in situ survival of elements of the fence itself. There was no return identified to the west of the slot trench to suggest it related to a building. The trench was also deeper and more straight-sided than the slot trenches associated with possible buildings on the site. It is possible it relates to a palisade fence along the internal side of the bank associated with one of the phases of annex ditch to the east (C2271 or C2204).

The basal fill (C2194/C2519/C2236) was a water-laid silt suggesting the trench was left open for a period, perhaps before the fence was inserted. The secondary fill (C2193/C2235) was present throughout the trench and contained three lenses (C2230, C2231 and C2232) along the western side to the south of the corner. These lenses may have been packing material against the fence to hold it upright, or a deposit of material within the trench to provide a soft and stable material to erect the fence on.

The next event (C2192) has been interpreted as the removal of the upstanding elements of the fence line. It was identified along the north-south section of the trench and was generally U-shaped in section, with two deeper sections being V-shaped, possibly corresponding to posts. While this event was not as clear on the east-west running section of the trench the overlying fills correlated with those in the remainder of the trench.

Three fills were identified overlying the fence removal event. The lowest of these (C2203) was visible at the northern end of the slot and



Plan and sections of palisade trench C2134 with Path 4 running parallel (left)

Pre-ex view of palisade trench C2134 with Path 4 running parallel to right, looking north (top right)

Mid-ex view of palisade trench C2134 looking south (centre right)

Mid-ex view of burnt seeds C3007 at base of linear C3006, looking east (bottom right)



represented a phase of silting up in the slot trench. The secondary fill (C2191/C2234) contained frequent animal bone suggesting the trench was being used to dispose of waste by this point. This was overlaid by the upper fill (C2190/C2520), which was present throughout and is likely to have been an intentional infilling or sealing of the trench. An additional fill (C2135) was identified overlying the upper fill at the southern limit of excavation. As this fill continued beyond the limit of excavation it was not fully understood, however it appears to be later than the trench itself, possibly being plough soil or later disturbance overlying the trench rather than a fill of the trench itself.

A perpendicular linear feature (C3006) was identified to the west, which terminated 0.63m from the edge of the southern end of the slot trench. The feature resembled a linear pit, being deepest toward the southern end and shallowing out to the north. The linear continued (C3020) shallowly beyond this to the west after a gap of c. 0.1m, with this section of the linear continuing into the preserved area of the site. The fills (C3007 and C3021) of both cuts were similar and both are likely to be part of the same feature with an undulating base. Burnt seeds were retrieved from the deeper section of the linear (C3007) suggesting it may have been for waste disposal, with Kiln 1 located nearby to the south. The linear is substantially shallower than the slot trench, and it does not connect with it, however it may respect the line of the slot trench. Only a short section of this feature was exposed and excavated and its exact function is unclear, however given its orientation and proximity to the palisade fence it may have divided space in the area defined by the palisade.

Parallel to and 0.5m east of the north-south running section of the palisade trench a metallised surface (C2143, Path 4) was uncovered running for 5.7m. It continued beyond the limit of excavation to the south and was truncated by one of the phases of the southern curvilinear annex ditch (C2271) to the north. As this metallised surface is parallel to the palisade fence line, it is likely to be related and may represent a path (Path 4) between the fence and the bank of the outer enclosure ditch. As it is truncated by one of the southern curvilinear annex

ditches (C2271) it must relate to an earlier ditch curving around from the east, perhaps Ditch C2414.

Ditch C2414

Lying within the northern end of the eastern annex, an east-west orientated ditch (C2414) was identified. It was truncated by a post-medieval ditch (C2213) at its western end, obscuring the relationship with the annex ditch itself. The geophysical survey (Harrison 2009) shows a linear feature in this location extending between the outer and inner enclosure ditches, which appears to stop short of the inner enclosure ditch. The ditch may define an internal division of the space between the internal and external enclosure ditches, or possibly an entrance feature running in to the internal enclosure from the east. A positive linear feature is also shown on the geophysical survey between the ditch and the ditch of the outer enclosure, which turns inwards to the north. This may be a bank or raised path between the ditches running into the interior. The ditch had five fills (C2415, C2416, C2417, C2418 and C2419), which contained occasional animal bone and charcoal, particularly in the upper fill, as well as a piece of slag in fill C2415. The ditch did not continue to the east and must have turned to the north or south. It may relate to a realignment of the outer enclosure ditch to the north, to the eastern annex ditch to the

Mid-ex view of Ditch C2414, looking east



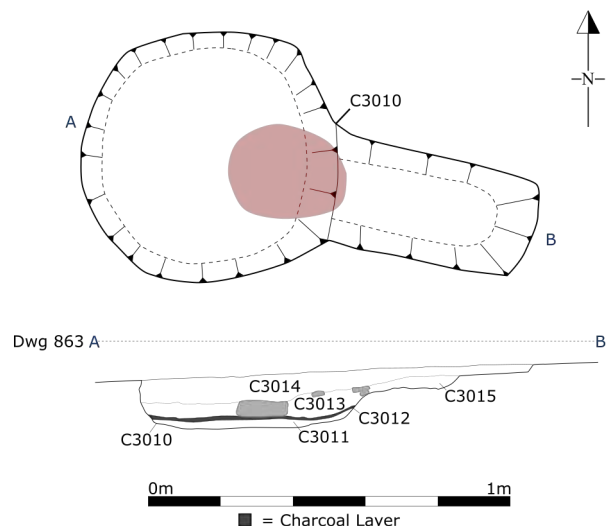
south, or to one of the three southern curvilinear annex ditches.

Kiln to southeast; Kiln 1

A kiln (C3010) was uncovered to the southeast within the eastern annex, orientated east-west. The feature was a small figure-of-eight shaped kiln, with a small chamber to the east and a larger chamber to the west. The connection between the chambers was waisted and sloped down slightly from the shallower eastern chamber. The basal fill of the kiln (C3011) was a layer of small burnt stones located centrally within the larger chamber. These may have formed a base within the kiln and had clearly been fired. The secondary fill (C3012) was a charcoal-rich fill associated with a firing of the kiln. Some slag was also retrieved from this fill. It was in turn overlaid by a third fill (C3013) within the larger chamber, which contained occasional larger stones. These may originally have formed part of the superstructure associated with the kiln, or have been used to backfill the feature after it had gone out of use. Within the connection between the two chambers to the east a similar fill (C3015) was present. Though it had a lower charcoal content it may be part of the same event. The final fill (C3014) was present across the top of the entire kiln and was the only fill to contain animal bone. This can be seen as a backfilling of the kiln.

Kiln to east; Kiln 2

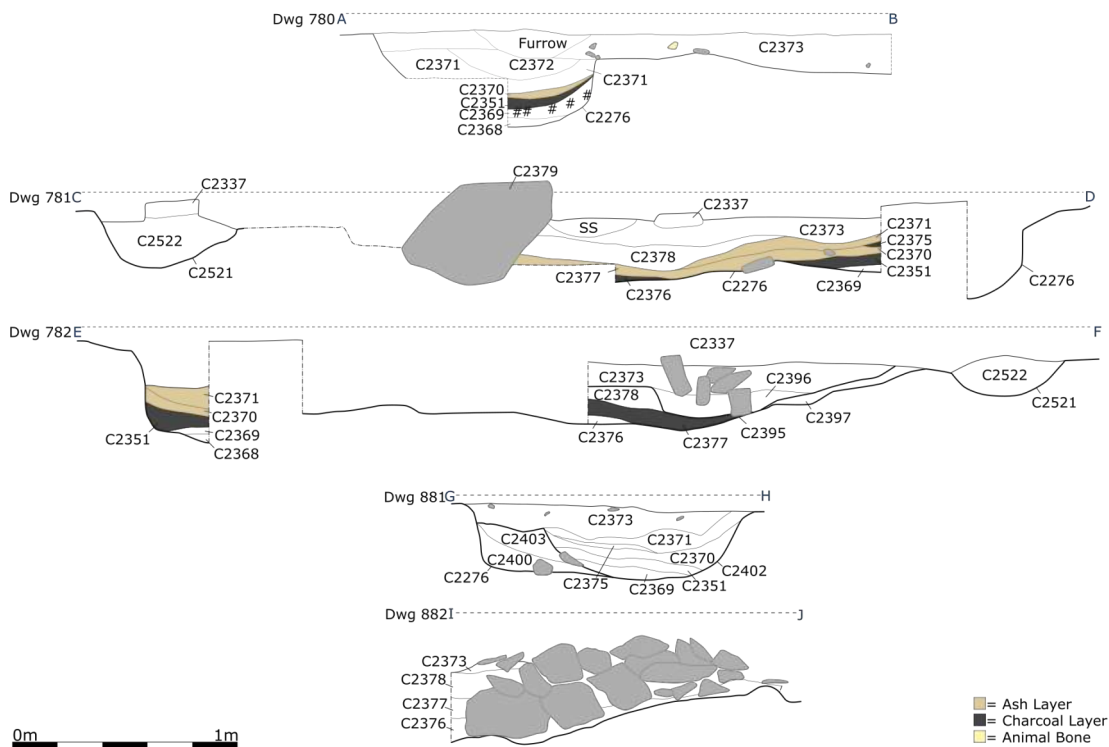
After ditch C2414 was backfilled a kiln was created to the south, partially truncating the southern side of the ditch. The earliest cut of the north-south orientated kiln (C2276) was figure-of-eight shaped. A flue associated with the northern chamber ran east-west along and truncated the southern end of ditch C2414. The base of the southern chamber was heavily burnt while light in situ burning on the base of the northern chamber suggested the kiln may have been used in both directions. Four fills were identified associated with this phase of the kiln. The charcoal-rich basal fill (C2376) was located in the southern chamber. It was overlaid by the remains of a cleaning out event (C2400), which contained occasional charcoal and burnt clay flecks, likely to be from the superstructure of the kiln and base of the firing chamber. This was present in both the northern and southern



Plan and section of Kiln C3010, Kiln 1 (top)

Mid-ex view of Kiln C3010, looking north (centre)

Post-ex view of Kiln C3010, looking south (bottom)





Mid-ex view of Kiln C2276 and northern flue with stones C2337 visible overlying remainder of kiln to south, looking south (top left)

Mid-ex view of northern chamber of kiln C2276 being truncated by later kiln recut C2402, looking north (bottom left)

Post-ex view of kiln C2276 with division between northern and southern chambers visible, looking west (top right)

Mid-ex view of fill within drying chamber of kiln recut C2402, looking west (bottom right)



extended to the south. A large sloping firing chamber was created to the south with a stone-lining (C2379) present along both sides. If a flue had been associated with the southern chamber of the earlier kiln this obliterated it. The recut kiln was significantly longer than the previous version. It reused the northern chamber of the earlier kiln, but the chamber for the new kiln was narrower allowing some survival of the fills of the earlier kiln. Some stones had been placed around the sides of the northern chamber of the new kiln, but it was not fully lined. Two stones on the base of the kiln between the northern and southern chambers may have acted as baffle stones, though they were relatively small. The remainder of the southern chamber of the original kiln appears to have acted as a flue between the southern firing chamber and northern drying chamber of the new kiln. Nine fills were identified within the recut kiln. Within the northern chamber a relatively sterile fill (C2368) was identified along the base of the northern end of the chamber. This is the point where the kiln truncated the earlier ditch (C2414) and this material may have been laid down to seal the base of the kiln. The basal fill to the south was the stone-lining (C2379),

chambers of the kiln. It was overlaid by another charcoal-rich fill (C2401) within the southern chamber, the remains of another firing of the kiln, which was overlaid by another charcoal-rich fill (C2403) in the northern chamber. Though this fill was not as dense with charcoal as the fill to the south they are likely to be part of the same event. Both burnt and unburnt bone were retrieved from this fill along with small quantities of slag.

At this point the ditch was recut (C2402) and



Mid-ex view of kiln recut C2402, looking south (top left)



Mid-ex view of flue C2521 to south of recut C2402 with both kiln and flue covered with stone layer C2337, looking west (bottom left)



Post-ex view of kiln C22766 and recut C2402 with stone lining C2379 in situ, looking east (top right)



Post-ex view of Kiln C2276 and recut C2402 with stone lining C2379 in situ, looking north (bottom right)

which constructed on a slight shelf along either side of the firing chamber. A large boulder formed the western side of the lining, with evidence for at least one more missing stone along that side, while the eastern side was formed by a number of smaller blocks. Both limestone and sandstone were present, with burning evident. Burning was also identified on the external face of the large boulder to the west suggesting the stone had been reused.

The secondary fill within the northern drying chamber (C2369) was a mix of burnt clay, charcoal and silt relating to a cleaning out event. A small quantity of slag was present in this fill. The main fill of the southern firing chamber (C2377) was a layer of ash and charcoal associated with a firing of the kiln. Both of these fills overlaid a portion of the stone lining (C2379). Within the drying chamber the tertiary fill (C2351) was a charcoal-rich fill relating to a firing of the kiln. A small fragment of copper-alloy sheeting was retrieved from this fill, though it was too fragmentary to identify what it came from. This fill had been partially cut into or cleaned out prior to the deposition of the fill above. The next fill (C2370) was an ashy deposit that contained rare animal bone, and extended between the drying chamber and the firing chamber. This in turn was overlaid by a similar ashy deposit (C2371), also extending towards the firing chamber. A thin charcoal-rich lens (C2375) between the two ashy layers within the drying chamber indicated that they were different events. Within the firing chamber this was overlaid by a partial backfilling event (C2378), which included a number of stones, possibly from the lining, and animal bone.

Within the drying chamber a different fill (C2372) was identified overlying C2371, which was limited to the northern end of the chamber and contained flecks of burnt clay, possibly associated with a former lining or superstructure and an iron nail.

The next event within the kiln was a smaller re-cutting event (C2395) to the south after the majority of the kiln had been filled in. This reused the stone lining and southern end of the second kiln recut but only extended part of the way along the firing chamber, making a significantly smaller kiln. A band of burnt clay (C2397) along the base of the kiln recut appeared to divide the kiln into two small chambers. The fill within both chambers was the same (C2396), which was a mixed ashy silt layer. A number of large stones were present, which may relate to collapse from the stone lining, or from the stony layer above (C2337; see below). The penultimate fill of the kiln complex (C2373) formed the upper fill of the kiln and flue to the north and was present within the southern firing chamber and overlay the final kiln recut to the south. Overlying this fill mainly within the firing chamber was a layer of largely flat stones (C2337). It is possible these originally formed part of a superstructure or a continuation of the stone lining of this end of the kiln. They appear to have been laid down over the infilled kiln to create a solid surface after the kiln had gone out of use. A layer of charcoal and charred seeds was identified within the eastern annex ditch (C2204) directly east of the kiln suggesting the kiln and the annex ditch were in use at the same time. The outer enclosure ditch was altered at a later point with an entrance created directly in line with the kiln. It is possible the flat stones on the top of the kiln (C2337) were used to seal the backfilled kiln to allow for the increased traffic associated with this now being an entrance.

An east-west running linear (C2521) was located immediately to the south of the sloping firing chamber. While it was no longer connected to the kiln directly, it is possible that this feature acted as the flue for the enlarged kiln (C2402). Its fill (C2522) was identical to the main upper fill of the kiln (C2373) and it was also partially overlaid with the deposit of stones (C2337) sealing the kiln suggesting the two were related

and backfilled at the same time.

Pit C2187

Immediately to the south of the east-west linear was a shallow pit (C2187). The basal fill of the pit (C2188) contained some animal bone as well as frequent charcoal while the upper fill (C2189) also contained frequent charcoal and occasional animal bone, as well as some slag. The pit did not have a direct association with the linear or the kiln to the north, however the close proximity of the features may indicate that were involved in the same or related activity. As there is evidence that the ditch to the east was used to dispose of waste from the kiln, the pit, close to the firing chamber, may have been used to store fuel. The pit was truncated by a post-medieval ditch (C2213) to the east.

Mid-ex view of pit C2187 with flue C2521 to the right, looking west



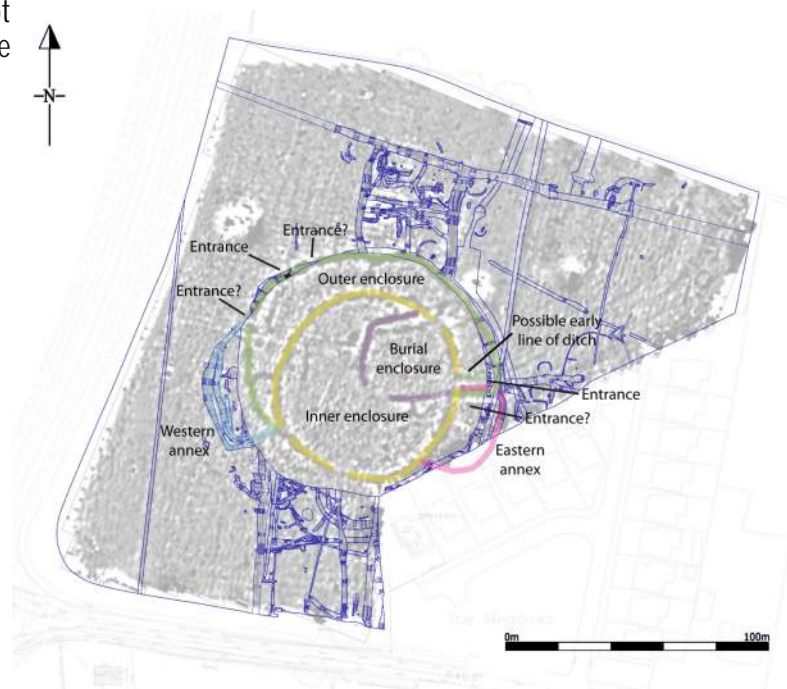
Section 7 The outer enclosure

The geophysical survey combined with the results of the excavation suggest that the ringfort was not truly bivallate. The outer enclosure was not concentric to the central enclosure, rather, it defined a large crescent-shaped space to the north. The entirety of this outer enclosure lay within the portion of the site preserved in situ. A portion of the outer enclosure to the north was stripped and subsequently reinstated as it lay beyond the required limit of excavation. This area was planned prior to the reinstatement, however the features identified were not excavated. No burials or significant features were identified in this area.

Since only the outer edge of the outer ditch was uncovered, it was not possible to establish if any parts of the outer enclosure turned inwards, forming an earlier phase of the outer enclosure. The latest phase, which was apparent to the east, truncated the eastern annex ditch, however there is strong evidence to suggest that a ditch defining the northern side of the entrance to the north of the eastern annex must have been present at some point. It was not possible to identify this during the excavation.



Site plan overlaid on the geophysical survey (after Harrison 2009) with the outer enclosure (green), inner enclosure (yellow), burial enclosure (purple), western annex (blue) and eastern annex (pink) highlighted. Known entrances from the northwest and east are marked along with possible entrances suggested by breaks in the geophysics or returned identified during the excavation

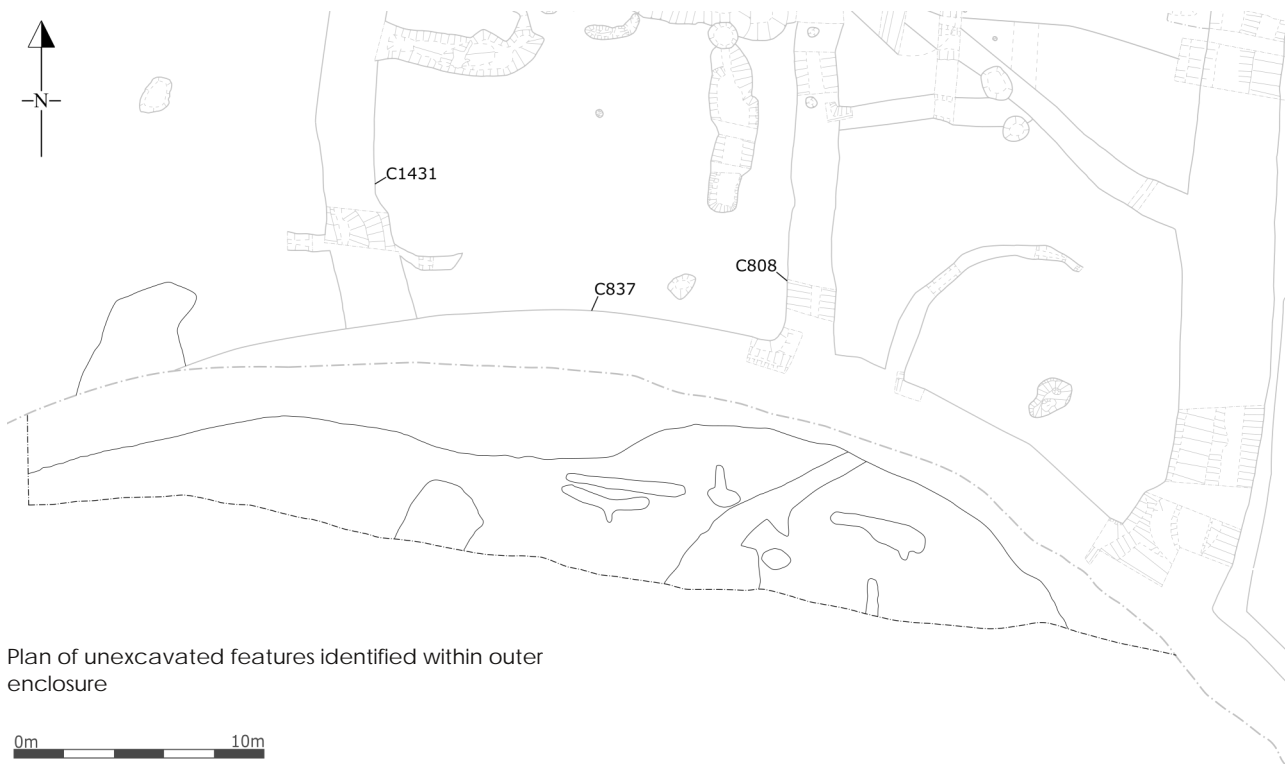


The outer enclosure ditch

East

The latest realignment of the ditch to the east (C2306) truncated the northern end of the eastern annex ditch (C2204) and turned in towards the interior just to the south of the earlier ditch. As the entrance associated with Ditch C2204 lay to the north this implies a change in the entrance location at this time. It is possible that the shallow ditch C2413/C2350 to the south marked the southern side of the later entrance, however there is a discrepancy in scale between the two ditches so this is unclear.

Four phases of this ditch survived to the southeast where the ditch turned into the preserved portion of the site. The ditch became significantly shallower and narrower as it turned in towards the interior. The earliest of the cuts (C2306) survived along the internal northern side of the ditch and was truncated away by later recuts to the south. The two fills (C2323 and C2324) were similar water-laid silts, with the basal fill being darker and containing a pocket



Plan of unexcavated features identified within outer enclosure

of small stones at the base. As the ditch turned to arc around to the north the fill (C2221) was equivalent to the uppermost of the fills further south and contained occasional animal bone and stone. This phase of the ditch was not identified further to the north as the internal edge of the outer enclosure lay within the preserved portion of the site.

This was recut by a deeper ditch (C2325) with a narrow U-shaped base, which was located slightly further to the south. This had three surviving fills. The lower two fills (C2326 and C2328) were both water-laid silt-rich deposits relating to the silting up of the ditch and contained small quantities of animal bone. They were overlaid by a mixed redeposited natural-type fill (C2327), which may relate to the intentional backfilling of the ditch. As the recut arced to the north it became substantially wider and deeper and was recorded under a separate context number (C2225). Two fills survived within this section of the ditch at the south of the arcing section. The basal fill (C2224) was a water-laid silt with no inclusions noted. It was overlaid by a similar material (C2223), which was more compact and darker in colour. Further to the north a discrete charcoal deposit (C2336) overlay scorched natural and bedrock on the base of the ditch indicating that in situ burning had taken place within the ditch. This

indicates that water was not always flowing through the ditch and that some activity was carried out within it. A separate deposit of charcoal (C2410) with occasional fragments of burnt clay and slag was present at the base of the cut along the internal edge of the ditch further to the north. This was not associated with in situ burning and is may represent dumping into the ditch from the interior of the enclosure. The main basal fill as the ditch arced to the east (C2212) was a layer of broken stone along the base. The ditch was partially rock-cut along its internal side at this point and the stone is likely to derive from here, however it is possible that the stone was originally used as bank material or as a revetment. Directly overlying the stony fill was a thick band of charcoal (C2411) present along the external side of the ditch and cut away by the later recut (C2329) to the west. This also related to dumping of waste material into the ditch. A thin band of this was also visible overlying the broken natural bedrock to the west beneath the recut C2329. Along the external side of the ditch two additional fills survived, with the lower fill (C2424) containing more stone and the upper fill (C2425) being a water-laid silt. Further to the north this phase of the ditch survived below recut C2329 with an additional two fills present. The basal fill at this point was a compact gravel (C2211), which may relate to



the stony layer (C2212) further to the south and had inclusions of fired clay. This was overlaid by a compact stony clay (C2210), which was not present elsewhere within the ditch.

To the south this was truncated by a shallower recut with a broad concave base (C2329). The recut had a single fill (C2330), with inclusions of occasional animal bone and a marine shell. Along the arcing section of the ditch the recut had deepened into a U-shaped profile with a steep internal side. Three silt-rich fills survived within the arcing section to the south (C2222, C2202 and C2201), which contained occasional stone inclusions near the base of the cut. Further to the north the recut had a more consistent fill (C2528), with stone inclusions and charcoal flecking apparent.

In one section of the outer enclosure ditch to the northeast an additional recut (C2426) was apparent cutting into the backfill of recut C2329. It had a narrow concave base and a single silt fill (C2427). This was truncated away elsewhere as it was at a similar depth to the later recutting of the ditch (C2173).

Mid-ex view of the outer enclosure ditch on right cutting eastern annex ditch on left, looking east (top left)

Mid-ex view of the outer enclosure ditch being truncated by post-medieval ditch C2213, looking north (bottom left)

Stony layer C2212 at base of recut C2325 with fill of earlier cutting of ditch beneath. The stony layer may relate to ditch being rock cut at this point and may have been used as bank material or as a revetment, looking southeast (top right)

View along section after removal of stony layer C2212, looking southwest (centre right)

View of broken bedrock along internal side of the ditch, which may have been a source of the stone layer, looking west (bottom)



The final recut (C2421) was a narrow steep-sided channel to the south, which became more U-shaped in profile as the ditch arced to the north (C2173). To the north this recutting became deeper and broader. A narrow straight-sided and flat bottomed channel (C2422) was cut into the base of this recut and filled with stone (C2423/C2169). This is likely to be a drainage feature. The remainder of the recut was filled with a single silt-rich material (C2200/C2331) to the south, which had animal bone inclusions. Further to the north an additional basal silt (C2170) was present, which was overlaid by a distinct band of redeposited natural (C2171/C2526/C2527). The upper fill of the arcing section was a loose backfill material (C2174/C2172), which contained a small quantity of slag as well as sherds of medieval pottery and an iron object.

A later post-medieval ditch (C2213) truncated the ditch along with a number of north-south orientated agricultural furrows and drains (C2196, C2197, C2198 and C2199).

North

As the outer enclosure ditch arced to the north

Mid-ex view of charcoal deposit C2336 at base of ditch associated with scorched natural, looking south (top left)

Mid-ex view of the outer enclosure ditch with recuts visible, looking southeast (bottom left)

Mid-ex view of junction of outer enclosure ditch and eastern ditch of the northern annex, with annex ditch continuing to for eastern side of outer enclosure, looking east (top right)

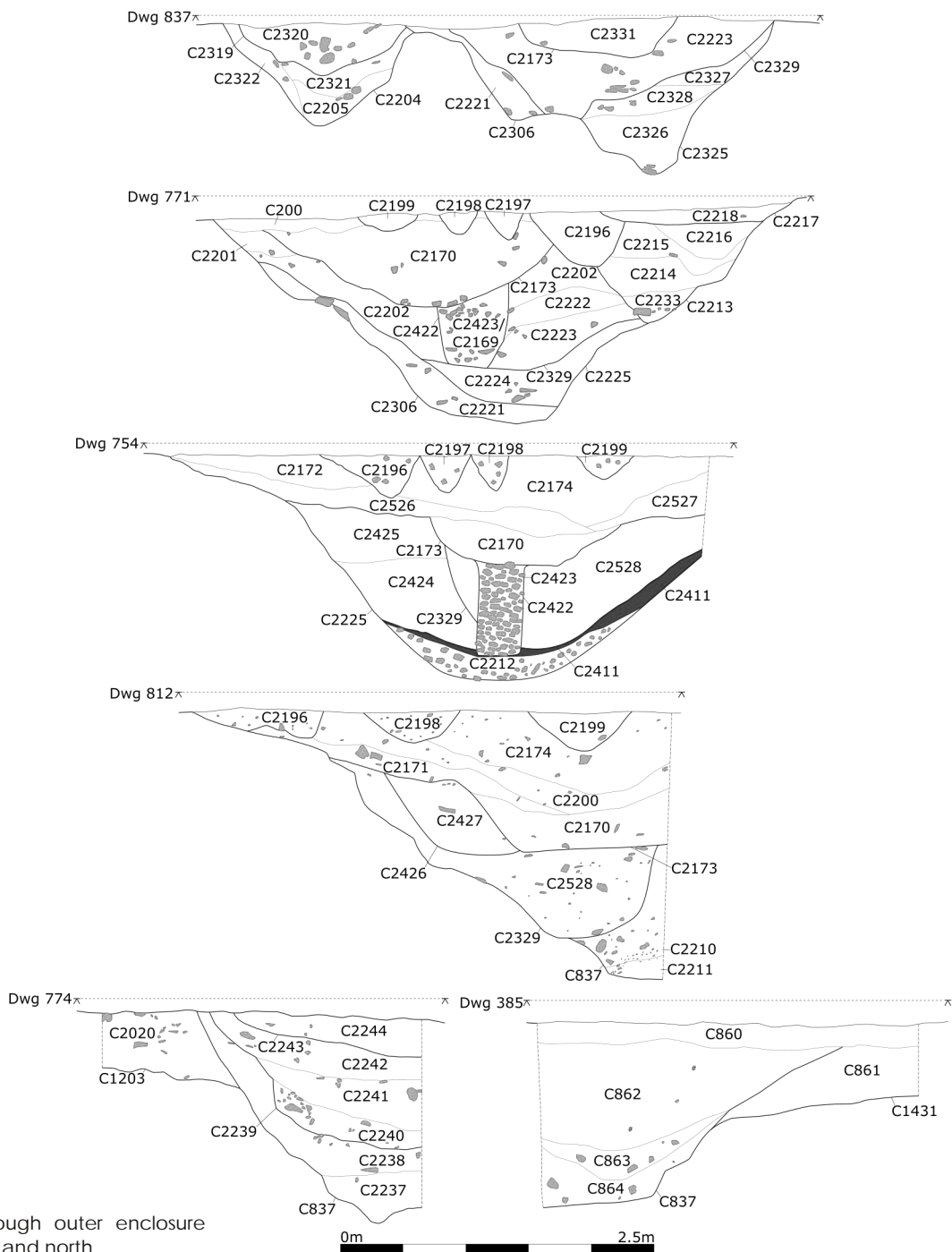
Mid-ex view of junction of annex sub-division ditch C1140/C1203 being truncated by outer enclosure ditch (centre right)

Mid-ex view of outer enclosure ditch truncating western ditch of the northern annex, looking west (bottom)

it turned it to the preserved portion of the site with only the outer edge of the ditch lying within the area of excavation. This was the section of ditch (C837) between the outer enclosure and the northern annex. To the east the latest phases of the eastern ditch of the annex (C1620, C2208, C1159 and C1497) were seen to truncate the upper fill (C2179) along the external edge of the ditch. This does not definitively prove that these phases of the annex ditch post-date the outer enclosure ditch as

contemporary versions of the outer enclosure ditch may have been located within the unexcavated portion of the ditch, however it is possible that the ditch between the enclosure and the annex was allowed to fill up with the eastern side remaining in use for drainage purposes.

To the west a windbreak (Structure 9) associated with Kiln 11 was truncated by a later recut of the outer enclosure ditch (C2239) indicating

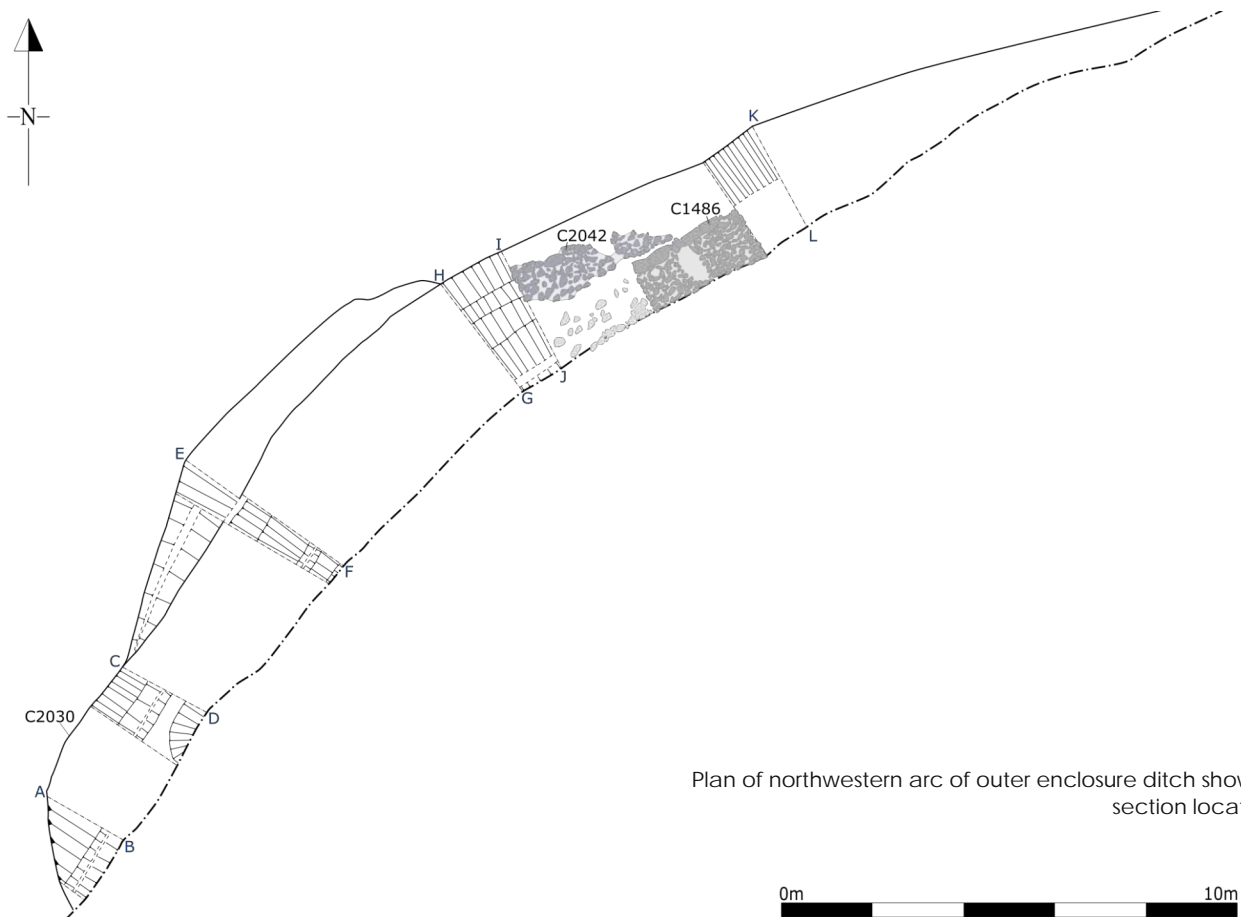


that the enclosure ditch was recut after the windbreak had gone out of use. Only the upper fill was encountered in this section (C2162).

Three phases of the outer enclosure ditch were encountered at its intersection with the ditch sub-dividing the southern and of the annex (C1203/C1140). The outer enclosure ditch truncated Ditch C1203/C1140. Only the outer edge of the earliest cut of the outer enclosure ditch (C837) was encountered and had two fills. The basal fill (C2237) contained occasional charcoal while the overlying fill (C2238) had animal bone inclusions along with a flint flake. The ditch was subsequently recut (C2239), set back slightly further to the south, with the recut have a U-shaped profile along its external edge. Three similar silt-rich fills were identified. The basal fill (C2240) had inclusions of occasional larger stones as well as animal bone and slag. The secondary fill (C2241) had similar inclusions along with a flint core. An iron knife was retrieved from the upper fill (C2242). This recut must have been open while the metalworking was being carried out within the

annex to the north. A final shallow recut (C2243) had a single loosely compacted fill (C2244), which had occasional animal bone and slag inclusions.

At the western end of the annex the outer enclosure ditch (C837) lay within the preserved portion of the site, however the exact boundary of the preservation area was unclear during the stripping and a portion of the preserved area was stripped. This was subsequently covered with a layer of geothermal textile and reinstated, however the opportunity to investigate the junction of the outer enclosure ditch and the western ditch of the annex was taken. A number of pits were noted within the preservation area, but no burials were revealed. The outer enclosure ditch (C837) was seen to truncate the latest ditch (C1431) forming the western side of the annex. Four fills were recorded within the outer enclosure ditch at this point, although the base of the ditch was not reached. The lowest fill encountered (C864) was a plastic water-laid silt with occasional charcoal flecking. It was overlaid by a similar material



Plan of northwestern arc of outer enclosure ditch showing section locations

with inclusions of charcoal, slag and infrequent animal bone (C863). This was overlaid by a substantial backfill deposit of sandier material (C862) with inclusions of frequent animal bone, slag, charcoal and stone possibly relating to an intentional backfilling of the ditch. An iron ring, possibly related to a horse harness was retrieved from this fill. A mixed plough soil (C860) with inclusions of slag and animal bone overlay both the backfilled outer enclosure ditch and the southern end of the annex ditch at this point.

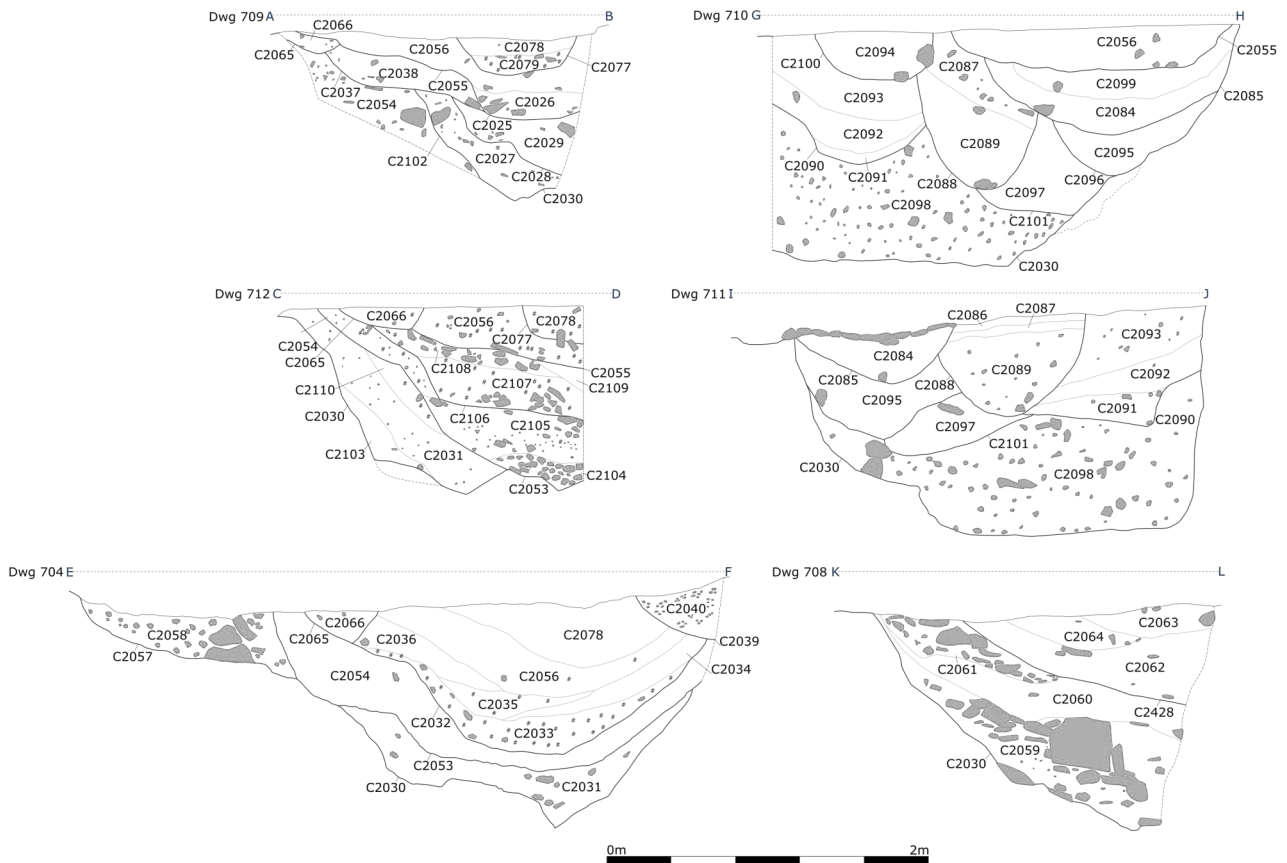
Northwest

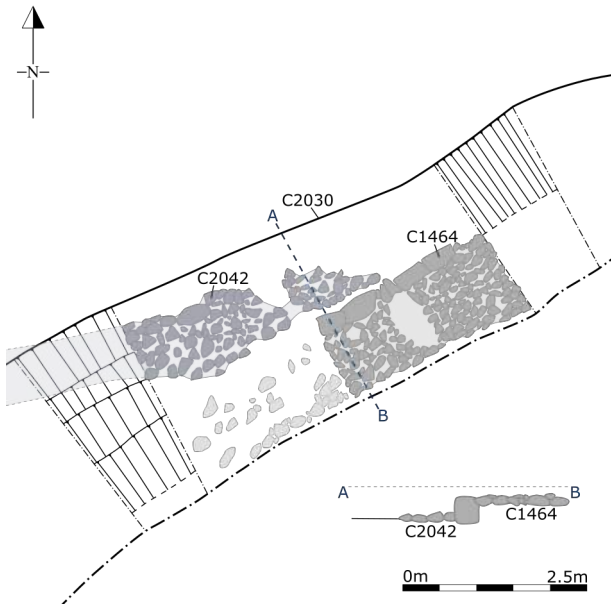
An arcing section of the outer enclosure ditch was encountered to the northwest. The earliest phase of the ditch here (C2030) was a large partially rock-cut U-shaped ditch, the inner side



Mid-ex view of section K-L through C2030 with stony layer C2059 in situ (top) and removed (centre), looking north-east

Sections along northwest arc of outer enclosure ditch (bottom)





of which lay within the preserved portion of the site. There were indications that a gap or entrance was located to the west at the southern end of the arc. This is partially visible in the geophysical survey also (Harrison 2009), which shows another possible entrance to the northwest at the northern end of the arc. This section of the outer enclosure ditch turned in towards the interior at its southern end, appearing to correspond with the break or entrance visible on the geophysical survey. To the south of the gap the two ditches branched away from the outer enclosure ditch, one arcing inwards to connect with the inner enclosure ditch within the preserved portion of the site and the other to the southwest to form the western annex. The latter ditch will be discussed in the western annex section. The fill of the ditch varied slightly as the ditch arced from west to northwest. The basal fill to the northwest (C2059) was a stony layer sloping down for the external side of the ditch, which included some large blocks as well as inclusions of animal bone and burnt bone. This layer was sitting directly over the bedrock. It was overlaid with a silty clay fill (C2060) with inclusions of animal bone and small stones. This was overlaid by a second stony layer (C2061) sloping in from the external



Plan of entrance feature C1464 with schematic section indicating step (top)

View of entrance C1464, looking southeast (centre)

View of entrance C1464, looking northwest (bottom)



Mid-ex view of ditch C2030 beneath entrance structure C1464, looking southwest (top left)



Mid-ex view of section I-J through ditch C2030, looking northeast (bottom left)



Mid-ex view of section G-H through ditch C2030, looking southwest (top right)



Mid-ex view of section E-F through ditch C2030, looking northeast (bottom right)

side. It is possible that the stony deposits along the external side relate to slumping of an external bank. The stones may also relate to a revetting of an associated external bank. Further to the southwest a basal fill (C2103) was a slump of clay along the external side of the ditch. This was overlaid by the main fill of the ditch (C2031/C2098), which was similar to the secondary fill to the north (C2060), a clay-rich water-laid deposit. A slight variation in this fill (C2110) was identified at one point, which contained occasional charcoal flecking and may indicate a dumped deposit within the silting up ditch. A stony deposit (C2104) was present overlying this fill along the base of the ditch to the southwest and may indicate a deposit after a cleaning out event within the ditch.

A masonry entrance feature (C1464/C2041; Structure 19) was constructed over the backfilled ditch towards the northern end. A row of four kerb stones survived along an alignment parallel to the ditch. There was evidence that a further two blocks were originally present. The uncovered section of the entrance structure was 2.1m in width and 1.1m of the length, with the feature continuing into the preserved portion of the site. The kerbstone blocks were roughly rectangular and measured 0.4m 0.3m x 0.28m on average. On the internal side of the kerb a layer of angular stones (C2041) formed a surface running inwards towards the interior of the enclosure. There was no kerbing present along the sides of the surface. At the limit of excavation the surface rose slightly, however the reason for this could not be identified.

As with the portions of the outer enclosure ditch encountered elsewhere a number of recuts were apparent. To the southwest of the entrance the ditch was recut (C2053/C2090/C2101) by another large steep-sided cut with a relatively flat base. The internal



Mid-ex view of section C-D through Ditch C2030, looking northeast (top)

Mid-ex view of section A-B through Ditch C2030, looking northeast (bottom)

edge of the recut ditch lay beyond the limit of excavation. The recut was not visible to the north of the masonry entrance structure. At the southern end of the arc this recutting of the ditch had completely removed the earlier ditch cut. The basal fill to the north (C2091) was a thin band of pale marl. This was overlaid by a silt-rich deposit (C2092/C2097), which was in turn overlaid by a silty clay deposit (C2093), which was the upper fill of the recut at this point. All three fills are indicative of the ditch gradually silting up over time. Further to the south the main fill of the recut (C2054) was similar to the secondary fill further north. A basal fill (C2105) with more frequent inclusions of pebbles and stone was evident at one point but not present elsewhere.

Two recutting events were identified in the immediate vicinity of the entrance (Structure 19). The first of these (C2096) was a narrow channel directly to the north of the entrance and may have been excavated to provide drainage around the entrance. It had a single silt-rich fill (C2095), which had inclusions of frequent animal bone and a small quantity of slag. It was truncated away elsewhere by a similarly shaped recutting event. The second recutting of the ditch (C2088/C2428) was again directly associated with the entrance feature to the north and implies the entrance remained in use at this time. To the east of the entrance feature this recutting (C2428) was broad and shallow. To the front of the entrance and to the west it narrowed and had steeper sides (C2088). It was truncated away by a later recutting of the ditch (C2085) further to the southwest. To the north the basal fill (C2062) was silt-rich with occasional animal bone and small stone inclusions. It was overlaid by a charcoal-rich deposit (C2064), which in turn was overlaid by a thin layer of grittier material (C2063), which was the upper fill. The charcoal-rich material suggests dumping was taking place within the ditch at this point and was not evident further southwest. Within the narrower section of the recut running in front of the entrance (C2088) the basal fill (C2089) was a compact clay with inclusions of small stones, frequent animal bone and rare charcoal and was the same as the basal fill (C2062) to the north. It was overlaid by a pale grey water-laid silt (C2087), which in turn was overlaid by a more mixed silt material (C2086). The fills suggest that dumping took place within the ditch during its initial silting up, with the upper fills relating to water pooling in the partially infilled ditch.

The latest substantial recutting event (C2032) was shallow and narrow to the northeast where it ran to the front of the entrance structure, again indicating this was in use at the time. To the southwest it became wider and deeper, eventually becoming a broad U-shaped ditch similar to the earlier cuttings of the ditch, with steep sides and a relatively flat base. The basal fill of the ditch (C2033/C2084/C2107/C2027) was a dark silt-rich fill with inclusions of animal bone and frequent charcoal, which became more substantial as the ditch widened and deepened. This fill indicated that the ditch was



being used for the dumping of waste at this time. A secondary fill to the south (C2029) in the deepest section of the recut had few inclusions of charcoal or animal bone and may relate to a different material being dumped into the ditch, perhaps from an associated bank. Another deposit along the external side of the ditch (C2108) slightly further to the north was also lighter in colour, though like the basal fill had frequent inclusions of animal bone and charcoal and may have been a mixture of the basal and secondary fills to the south. The next infilling event was the secondary fill to the north (C2099), which was a pale water-laid silt. As the ditch arced around to the southwest a number of variations in this fill (C2034, C2036, C2109 and C2038) were recorded, with a lens of darker stonier material (C2035) present within it at one point. These were all part of the same infilling period. All were pale with high silt content suggesting standing water within the ditch. It was apparent to the south that this phase was associated with a cleaning out event (C2037). A later cleaning out event (C2055/C2025) cut into the silt and was filled with a dark charcoal and animal bone-rich material (C2026), similar to the basal fill of the recut. This became particularly stony

Mid-ex view of Path C2042 running up to entrance C1464 and overlying later ditch recuts, looking northeast (top)

Mid-ex view of Path C2042 with entrance C1464 to left, looking southeast (centre)

Mid-ex view of northwest arc of the outer enclosure ditch, looking southwest (bottom)

to the south. It was overlaid by the main backfilling of the ditch (C2056), a loosely compacted material with occasional animal bone and stone inclusions. A lens of dark charcoal-rich material (C2079) similar to the fill below was present within this fill to the southwest. A mixed upper fill (C2078) was present in some places to the south. This phase may also relate to the shallow extension of the western annex ditch (C552) identified further to the south, which ran towards the outer enclosure ditch at this point. The entrance that was previously present to the north of the western annex would have been closed by this feature, however its shallow nature suggests it was mainly a drainage feature.

A later addition to the entrance saw a roughly laid path of angular and sub-angular stones (C2042/C2058; Path 5) laid down and abutting the kerbing of the entrance and running to the west, which survived for 10.5m. An iron pin was retrieved from the surface. This overlay the backfill of the latest major recutting of the ditch (C2084) and indicated the entrance was still in use for access at the point when the ditch was largely infilled. The path was slightly concave in profile, possibly through use, and petered out to the west, where it was seen to lie within a shallow U-shaped cut (C2057). This may relate to the shallow curvilinear ditch (C2065) that represents the final marking of the outer enclosure ditch in this located, though its size would suggest it was more of a drain than an enclosure ditch at this point. It is possible that Path 5 was related to Path 6 further to the

southwest, which was truncated by the latest phase of the western annex ditch.

Two late shallow cuts (C2065 and C2039) were identified cut into the backfilled ditch. One (C2065) curved around close to the external side of the ditch and may have served as a drainage feature after the enclosure ditch was filled in. It had a single fill (C2066), which was loose and friable. The second (C2039) was of a similar depth and scale and ran near the internal edge of the ditch so was only partially revealed in one section. It had a stony gravel fill and may have been related to later drainage. A small pit (C2100) was uncovered to the west of the entrance cut into the top of the backfilled ditch. It had a single loose fill (C2094). It was unclear whether it related to any of the nearby features.

The proposed new road and footpath at this point were at a higher level than the underlying archaeology and as such it was possible to preserve the remainder of the ditch and entrance in situ. The arcing section of ditch and the entrance structure were covered with a layer of geothermal textile and a layer of fine gravel prior to the construction of the road.



Mid-ex view of northwest arc of outer enclosure ditch, looking southeast. This section of ditch and entrance was subsequently overlaid Terram and gravel and has been preserved in situ beneath the pavement along the inner side of the access road within the development

Section 8 The northern annex

The northern annex ditches

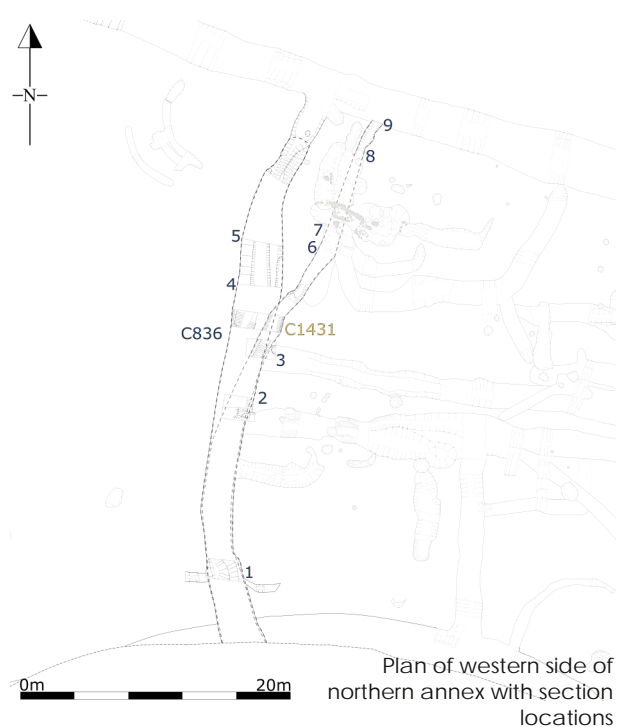
A rectilinear ditched enclosure was identified attached to the northern side of the outer annex. A number of phases of activity were identified within the annex including various phases of sub-division and cereal-drying kilns followed by a significant phase of metalworking towards the end of the annex as a defined space. This was in turn followed by a series of large cereal-drying kilns, which were not enclosed.

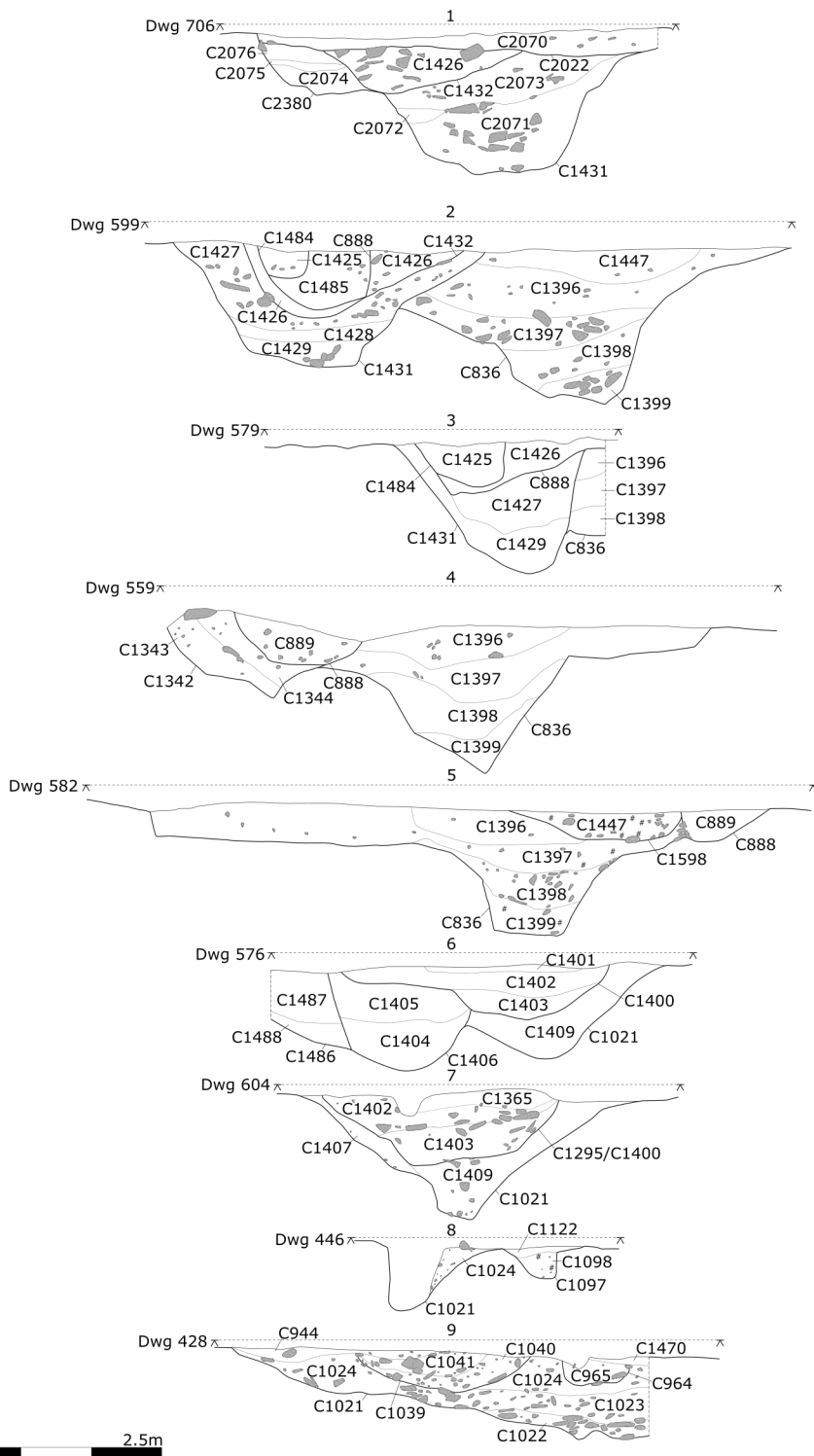
The western side

The earliest phase of the western arm of the annex ditch (C836) ran north-south. A gap was present at the northern end of the ditch between the end of the ditch and the large boundary ditch C800, which is likely to represent an entrance. The ditch was significantly shallower than both the outer enclosure ditch (C837) to the south and later phases of the large boundary ditch C800 to the north, though was similar in depth to the continuation of the boundary ditch to the west beyond the northern annex. The earliest phase of the ditch was rock-cut at the base and north-south orientated. Four fills were recorded within this phase of the ditch. The basal fill (C1399) was relatively silty with occasional stone and is likely to have accumulated naturally within the ditch. It was overlaid by a stonier layer (C1398), which also contained occasional charcoal flecking. This in turn was overlaid by paler, sandier fill with less stone (C1397). This fill extended into a shallow shelf to the west of the ditch possibly indicating it was associated with a recut of the ditch that was broader to the north. The upper undisturbed fill of this phase of the ditch (C1396) related to the final backfilling of this phase of the ditch. This was truncated by a shallow cut (C1598) containing a significant quantity of stone (C1447) to the north near the ditch terminus. This may be an attempt to seal the northern end of the ditch, possibly due to

the presence of Kiln 22 to the north and may represent a work surface or rake-out area.

This phase of the ditch was replaced by a realignment of the western ditch of the annex (C1021/C1408/C1431), which truncated the southern end of ditch C836 and turned slightly inwards to the north, running in a north-northeast to south-southwest direction. As the realigned ditch moved to the north it became shallower, and it terminated just to the south of large boundary ditch C800. The northern end of the ditch was significantly reworked by subsequent kiln activity. The ditch truncated a number of phases of internal subdivision within the annex. To the north it truncated a curvilinear subdivision (C1406) and to the south it truncated ditch C1317), into which the later metalworking area was cut. Its relationship with Ditch C1601 to the north of the metalworking area was unclear, however the secondary fill within the annex ditch (C1428) was similar to the fill (C839) of the internal ditch.





Sections relating to Ditches C836 and C1431



View of northern end of Ditch C836, looking north (top left)

Views of Ditch C836 with C1431 truncating it to left, looking south (centre left and bottom left)

View of Ditch C1431, looking south (top right)

View of Ditch C1431 truncating ditch C1406 to left, looking south (upper centre right)

Views of Ditch C1431 truncating Ditch C836 to right, looking south (lower centre right and bottom right)





View of southern end of Ditch C1431, looking south (top)

View of outer enclosure ditch C837 cutting Ditch C1431, looking west (bottom)

Three fills were recorded within the northern end of the ditch. The basal fill (C1022) was a mixture of boulder clay and frequent large angular stones. As the ditch is rock-cut along this section this is likely to have derived from the initial digging of the ditch and represent bank material deposited in the ditch after it had gone out of use. The secondary fill (C1023) was a compact deposit of stone towards the northern end and may relate to the dumping of material relating to the construction of the nearby kilns into the partially backfilled ditch. The final fill in the northern end of the ditch (C1024) also had frequent stones, possibly also related to the construction of the nearby kilns.

Kilns 16 and 17 directly truncated the ditch, with Kiln 17 running approximately along the line of the ditch. Later Kiln 18 was constructed parallel to the former ditch to the west and Kiln 19 truncated the ditch running perpendicular to it. To the south of Kiln 19 the fill of the ditch (C1409) was similar to the basal fill to the north of the kilns, though less stones were encountered. The ditch truncated an earlier internal subdividing ditch (C1407) to the south of Kiln 19. At the point where the ditch began to truncate the earlier annex ditch two fills were evident, a stony basal fill (C1343) and a siltier upper fill (C1344).

The ditch became deeper to the south where it was truncating the earlier annex ditch. Three fills were evident within this section, with the basal fill (C1429) being similar to the basal fill identified elsewhere in the ditch (C1022, C1343 and C1409). This was overlaid by a less stony fill (C1428) prevalent on the eastern side and along the base at one point. This may be the result of a partial cleaning out of the ditch. The upper fill (C1427) of this section was a mixed backfill with frequent stone in places. A number of colour variations of this fill were recorded (C1461 and C1462). The upper fill appears to be the intentional backfilling of the ditch, possibly with bank material, and the colour variations relate to changes in the subsoil and bedrock dug through to create the bank.

At the southern end of the ditch a deposit of stone (C2071) was present along the eastern side of the ditch at the base and contained a possible rubbing stone. This is similar to the stony basal fill seen further to the north, but was noticeably confined to the eastern side of the ditch. Some slag was retrieved from this fill. It is likely to relate to an associated bank being deposited into the ditch from the east. Overlying this was a fill (C2420) relating to the silting up of the ditch. This may be related to the upper fill further to the north, though it contained very few stones. Along the eastern side of the ditch at the southern end a band of redeposited natural (C2072) was present, which may be the remains of a fill that was partially cleaned out of the ditch. It was overlaid by a pale water-laid silt (C2073/C861) deposit suggesting the final section of the ditch slowly silted up over time. Some slag was retrieved



View of southern end of Curving ditch C1039 to left with stony backfill of Ditch C1431 in centre, looking south (top)

View of Ditch C888 truncating Kiln C806, looking south (bottom)

from this fill along with a fragment of iron. The southern end of the ditch was truncated by the latest version of the outer enclosure ditch indicating that the outer enclosure ditch remained in use after the annex ditch had been filled in.

A relatively short section of ditch (C1039) was uncovered in the northwest quadrant of the annex to the north of Kiln 17. It truncated the northern terminus of the realigned annex ditch (C1021), with its southern terminus located within the fill of the ditch. It curved to the northeast and was truncated by a late recutting (C844) of Ditch C800. Two fills were identified within this section of ditch. The basal fill

(C1040) was extremely rocky and compacted. It was overlaid by a softer fill (C1041) with less stone inclusions. The fill of the ditch appeared to be a dump of broken bedrock. Both this feature and the earlier ditch it truncated were partially rock cut in this area so the fill may be from a dump of associated bank material into the ditch.

At some point Kiln 22 was constructed within the entrance at the northern end of the earlier annex ditch (C836). This may indicate the early version of the annex ditch was becoming defunct, or had already been replaced when the kiln was constructed. The realigned ditch would have placed Kiln 22 on the outside of the annex, similar to the kilns to the east of the annex.

After the two main phases of the ditch had been filled in a later small and shallow ditch (C888/C1432) was cut into it. This was related to the metalworking activity within the southern end of the annex, and may also have formed a boundary for the kiln activity to the north. The ditch was a broad and shallow U-shape in profile, running along the inner side of the earlier annex ditch. To the north it continued across the former entrance and truncated Kiln 22, which had been cut into the entrance. The southern end of the ditch was not identified as it had shallowed out before the junction with the outer enclosure ditch, but this is likely due to scarping in this area. The section of the ditch crossing the entrance to the north was narrower and shallower than elsewhere along the ditch, resembling a drain or gully at this point, which is likely to have been one of its functions. It was also the last feature to define the western limit of the annex. Where it reached Ditch C800 it turned to the west, recutting the line of the ditch and continuing beyond the limit of excavation. At the northern end of the north-south running section the ditch truncated a shallow pit (C833), which would have been located in the northwest corner of the annex.

The fill of the northern section of the ditch (C889/C1395) contained charcoal, but no slag was noted. To the south of Ditch C1601 metalworking waste was present in the ditch fill (C1426), along with animal bone, burnt bone and charcoal. It was similar in shape and fill-

type to the recutting of Ditch C1601 (C823), which contained significant quantities of metalworking residues. These shallow ditches served a waste disposal function during the metalworking phase of the site as well as defining the edge of the annex. A broad shallow ditch (C2080) to the south within the annex appeared to be contemporary with this final recutting of the ditch and may also relate to the metalworking activity. This is the final version of the western side of the annex ditch, originally providing a drainage function, and was also used for waste disposal from the metalworking area. It was not a substantial boundary ditch, but may have served as a marker to the extent of the annex. Once it was infilled, presumably after the metalworking activity had ceased, the western side of the annex was no longer marked by a ditch. A narrow recutting of this ditch (C1463/C1484) was identified in some parts of the ditch, with straight sides and flat base and a loose, frequently stony fill (C1425/C1485), which had occasional slag inclusions. This was the final drainage solution running along the western side of the annex.

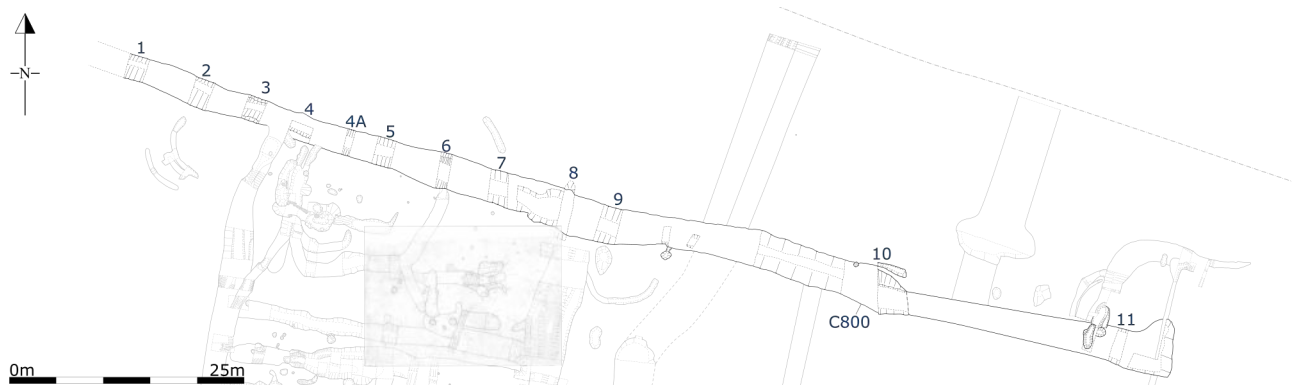
The western annex ditch was always less significant than the other elements of the annex enclosure. This may be because it did not serve a drainage function in its two initial phases, with only the final phase of the ditch likely to have had a drainage function.

The northern side

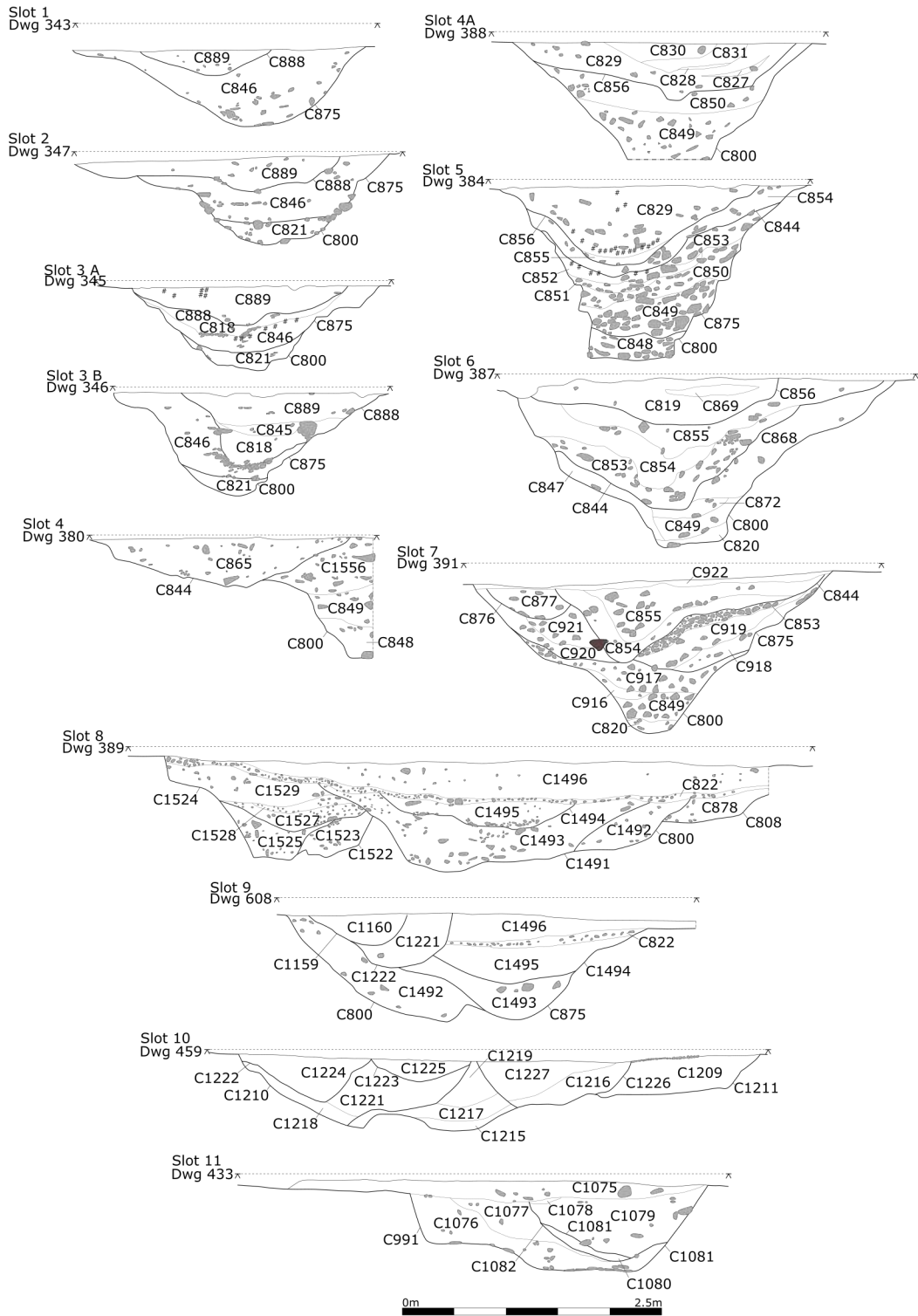
A series of large east-west orientated ditches (C800 etc.) formed the northern end of the northern annex. These ditches extended to the east and west of the annex itself, forming a

boundary associated with the settlement. The majority of features associated with the settlement were located to the south of this boundary with only the processing enclosure relating to Kilns 3 and 4, and Kiln 6 located to the north of this boundary and Paths 1 and 3 extending beyond it. The western end of the ditch was rock cut while the section to the east of the annex was cut through the natural boulder clay until it reached the bedrock outcrop in the far east of the site. A very shallow version of the ditch could be followed crossing the bedrock outcrop in the same alignment, but the ditch was not rock cut and shallowed out at this point. The ditch did not originally connect to the ditch forming the western side of the annex (C836), with the gap at the northern end of the western side representing an entrance. A later repositioning of the ditch forming the western annex (C1021) also stopped to the south of Ditch C800. The ditches forming the eastern side of the annex (C808 and C1103) were connected to the northern boundary ditch and the main drainage was along the eastern side. A late drainage ditch (C888/C1432) was inserted along the western side of the annex after the section of the ditch to the north of the annex had been infilled. An initial context number was taken out for the upper fill of the ditch (C801), however this has since been shown to relate to a number of contexts and the material ascribed to this context can be considered to be a mix of a number of the ditch phases.

The ditch appears to originally have served as a boundary as well as having a drainage function and was recut a number of times. The earliest phase of the ditch (C800) extended both east



Plan of Ditch C800 and location of sections



Sections through Ditch C800 and recuts



Views of western end of Ditch C800, looking west (top, centre and bottom left)

View of western end of Ditch C800, looking east (top right)

View of Ditch C800, looking east. Note the kiln waste deposits at the top (upper centre right)

Views of Ditch C800, looking west. Note the kiln waste deposits within C844 at the top (lower centre right and bottom right)



and west of the annex itself. It was truncated away further to the east, however it is likely to have continued in that direction. As the ditch reached the annex ditch it became deeper and continued at that depth to the junction with the eastern ditch of the annex. It was also narrower than later recuttings of the ditch, surviving as a channel along the base in places.

A single fill (C821) survived within the ditch to the west of the annex. This was a sandy and stony water-laid fill, which was present until the ditch began forming the boundary of the annex. The semi-articulated remains of a cat were retrieved from this fill. A dump of charcoal-rich material was present at the base of this fill in a discrete area to the west, with fragments of superheated clay also recorded from the fill. Along the northern side of the annex the fill changed slightly becoming stonier (C848) and contained animal bone and charcoal flecking. Further to the east the fill (C820) had a higher grey silt content and contained slightly less stone. A small quantity of slag was retrieved from this fill. At the junction with the eastern arm of the annex the fill (C1492) contained less stone, but contained grit and gravel. This fill continued to the west of the junction with more of the cut of the ditch surviving to the south of the later recutting events.

Two phases of an early recutting of the ditch were visible along the northern side of the boundary ditch at the junction with the eastern arm of the annex. A cut on the base of the boundary indicated that part of these two phases of the ditch turned to the south to run down the eastern side of the annex. The continuation of the ditches to the east did not survive. The earliest (C1523) had a single fill (C1523) and extended from the intersection with the ditch forming the eastern side of the annex for 3.2m to the west before being truncated away by a later recutting of the ditch (C875). A second recutting following the same line (C1524) was also present along the northern side of the ditch. This was contemporary with the surviving portion of Ditch C1103, the earlier of the ditches forming the eastern side of the annex. This indicates that earlier versions of this ditch were present and cut away. Four fills survived within this recutting (C1529, C1528, C1527 and C1525),

with charred seeds recorded in the basal fill (C1525). This section of ditch turned to the west also terminating 3.2m west of the junction. This suggests there may have been an entrance in the northeast of the annex at some point, which was later cut away by later recuttings of the ditch.

The first three cuttings of the boundary ditch related to the early line of the ditch running down the eastern side of the annex (C1103).

The next visible recutting of the ditch (C875) extended along the entire length of the boundary. It was slightly broader and shallower at the base, cutting into the northern side of the earlier ditch. At the western end the ditch had a single surviving fill (C846), a water-laid silt deposit becoming stonier to the east. A bone needle was retrieved from this fill along with occasional fragments of animal bone and slag. In the deeper portion of the ditch forming the northern side of the annex the ditch contained a number of stony fills. The basal fill (C849) consisted of abundant stones within a silt matrix. A large iron spike and some animal bones were retrieved from it. The stony basal fill is likely to relate to bank material either slumping or being intentionally pushed into the ditch. A slump of redeposited natural (C916) containing a small quantity of slag overlay this along the southern side of the recut to the north of the northeastern quadrant of the annex. The next fill to the west (C850/C1556) was similar to the basal fill, with slightly less stone content. Further east this was recorded under separate fill numbers as is contained fewer stones (C872 and C917). These secondary fills relate to silting within the ditch after the initial stony fill had been deposited further to the west. The tine from a copper-alloy brooch or buckle was retrieved from these fills. A discrete charcoal deposit (C1618) was identified overlying this north of the northwest quadrant of the annex, which was in turn overlaid by the upper fill of the recut to the west (C868), an intentional backfilling event within the ditch. Further to the east a number of fills (C918 and C919) were recorded along the northern side of the ditch and are variations of the upper fill recorded further west. Slag was retrieved from one of the fills (C918). By the time this phase of the ditch reached the eastern arm of the



View of Ditch C800, looking west. Note the kiln waste deposits at the top (top left)

View of junction of Ditch C800 with Ditch C808, looking southeast. Note the metallated path C822 overlying the backfilled ditch in section (centre left)

View of Ditch C800 beyond northern annex to the east, looking west (bottom left)

View of Ditch C800 beyond northern annex to the east, looking east. Note the metallated path C822 in section being truncated by later drainage (top right)

View of the eastern end of Ditch C800 as it the base rose over the bedrock outcrop to the east, looking north (bottom right)



annex the fill (C1493) had become much siltier. The ditch would have turned to run to the south, though it was not clear which of the phases of ditch to the south it related to. A small pit or channel (C1531) with a single silty fill (C1532) was cut into the southern edge of the ditch at this point, but was not encountered elsewhere. To the east of the annex this phase of the ditch was given a separate context number (C1210) and had two surviving fills (C1215 and C1217), both of which related to natural silting within the ditch.

The next recutting of the ditch (C1494) truncated the southern side of the backfilled annex ditch. It was truncated away by later activity to the west. It curved in a right angle to the south and was associated with the later recutting of the eastern arm of the annex ditch (C808). At the point where the ditch turned to the south a number of variations in fill were noted (C1495, C1534, C1536 and C1538), which relate to this location being the confluence of the section of ditch along the north of the annex and the section of the ditch continuing to the east. A number of additional cuts relating to the fills at the turn in the ditch to the south were noted (C1533, C1535, C1537), however these were the result of



View of metallated path C822 overlying Ditch C800, looking west (top)



Working shot of excavation of sections along Ditch C800, looking east (bottom)

variations in the silting up of the ditch as it gradually filled in. The continuation of this phase of the ditch to the east was also recorded, with the fill (C1495) becoming siltier and containing no finds. This indicates that during this phase the eastern extension of the boundary was allowed to silt up naturally. To the west along the northern side of the annex the basal fill (C920 and C867) was more clayish with some charcoal inclusions, likely to have been deposited into the ditch from the annex. The upper fill (C921) contained a large piece of slag indicating metalworking was taking place within the annex while this phase of the ditch was open. A linear feature (C876) was recorded truncating last surviving portion of the ditch to the west. This had a single fill (C877) with no

inclusions and was cut into the backfill of the ditch after it had gone out of use.

A substantial change occurred after this phase of the ditch had gone out of use. To the east a metallated surface (Path 3; C822/C1212/C976) was constructed across the top of the backfilled ditch running off to the east before turning to the north and continuing beyond the limit of excavation. The path ran to the northeast corner of the annex across the top of the backfilled ditch. A silty clay deposit (C1496) overlay the metallating, which contained fragments of animal bone and occasional slag.

Contemporary with this a large linear dump pit (C844) was dug into the backfilled ditch, running from the end of the path to a point north of the repositioned western ditch of the annex (C1021). The pit had a distinctive initial deposit of stone (C851/C853) along the base and sides, which was more defined to the north of the northwest quadrant of the annex. This may have been an informal stone lining and a small quantity of slag was retrieved from this layer. This pit was used to dispose of kiln waste and is presumably associated with the significant kiln activity (Kilns 16-21) in the northwest quadrant of the annex. A number of fills (C819, C827, C828, C829, C830, C831, C852, C854, C855 and C869) were recorded within the linear pit relating to dumps of kiln waste. Some slag was retrieved from four of these fills also (C819, C829, C854 and C855) and a fragment of copper-alloy tubing was retrieved from one of the fills (C855). Similar copper-alloy tubing was identified recently relating to a necklace associated with a burial in Bettystown, Co. Meath (Garahy 2019, 86). A possible recut (C856) was recorded within the pit, however the nature of the infilling of the pit with waste material from a succession of kilns, presumably localised but spreading out over time, make it impossible to identify a distinct and consistent recut. What can be said however, is that the annex was no longer bounded with a ditch while this final phase of kiln activity was being carried out. A final spread of ashy material (C922) was present across the top of the ditch in places.

A smaller northwest-southeast orientated pit (C833) truncated the northern end of Kiln 22 extending to the west and terminating just to

the east. It was truncated by the latest shallow drain running down the western side of the annex (C888). To the west of the annex this also had a layer of stone along its base, suggesting it relates to the kiln waste pit phase of activity. The fill of the pit (C834/C818/C865) was very similar to some of the fills within waste pit C844, though with a lower charcoal content, suggesting the pit and the large kiln waste pit were open at the same time. Some slag was retrieved from this fill. An upper silt fill (C845) visible to the north was a water-laid deposit. The location of this pit suggests that a gap or an entrance of undug material between the two waste pits was present along the northern side of the annex in the northwest corner at this time.

A later phase of activity was recorded to the east and west of the annex. To the west a shallow flat bottomed channel (C888) recut the section of the boundary west of the annex and turned to run south along the former line of the western side of the annex. To the east a series of later drainage ditches (C1220, C1222, C1226 and C1569) truncated away the metallated path (Path 3). These recut the portion of the ditch to the east of the annex and relate to the final recut along the eastern side of the annex (C1159). They truncated away most of the earlier ditches along the section of ditch between the annex and the processing area making it difficult to follow the continuity of the ditches to the east of this point. They had generally sterile water-laid silt fills (C1219, C1221, C1224, C1227 and C1570) with some more gravelly basal fills (C1218 and C1216).

Beyond the point where Path 3 turned to the north three phases of ditch were identified. The earliest (C1081) may relate to the second phase of the boundary further west (C875), however given the number of recutting events identified within the ditch to the west this cannot be said with certainty. This appears to be contemporary with the ditch (C991) forming the processing enclosure north of the boundary, as the basal fill (C1076) was identical. An upper fill (C1077) was recorded within the ditch also. This was truncated by a recut (C1082), the basal fill of which (C1080) contained moderate quantities of charcoal. This recutting is likely to relate to Kilns 3 and 4 cut into the processing enclosure

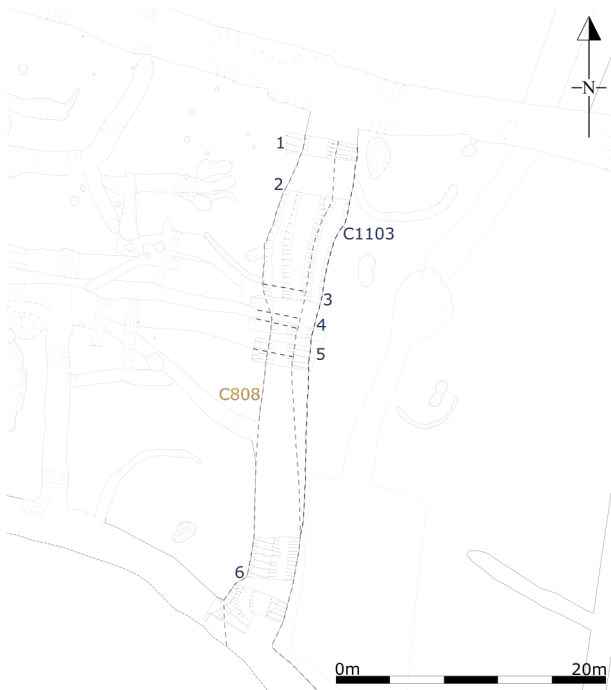
ditch. The upper fill of the recut (C1079) must have been deposited within the ditch after the Kiln 4 had gone out of use as the ditch served as a flue for the kiln and would have been open when they were in use. A pit (C1515) truncated this fill to the west of the kilns. A spread of soft silty clay (C1075) extended across the backfill of the ditch and over the metallated surface within the processing enclosure to the north. The ditch was later recut again by the one of the later series of drainage ditches (C1220, C1222, C1226 and C1569).

A metallated surface (C1003) was identified at the edge of the bedrock outcrop to the east directly along the alignment of the east-west boundary ditch. As the ditch had shallowed out significantly at this point it was impossible to say which phase of the ditch the metallating was associated with or what it represents, though it is likely to be an entrance feature or access point. A layer of plough soil (C1004) overlay the metallating with inclusions of animal bone, burnt bone and post-medieval ceramics.

The eastern side

The eastern ditch of the annex served a drainage function as well as defining the enclosure. As such a connection between the large boundary ditch to the north and the ditch forming the eastern side of the must always have been present while the ditches were intended to act as drainage features. Similarly a connection to the outer enclosure to the south must always have been open to take water away downslope. A number of phases of the eastern annex ditch were identified. The earliest phase was a narrower a shallower ditch (C1103), which was located to the east, being truncated along its western side by the later version of the ditch (C808), which also truncated away the southern end of the ditch. Three phases of the northern boundary ditch related to this phase of the ditch (C800, C1524 and C1522), while later phases of ditch along the boundary truncated it (C875 etc.). The fills were most similar to those in Ditch C1522, which was the last of the three ditches to the north to flow down this phase of the ditch along the eastern side of the boundary.

The basal fill identified within Ditch C1103 was a confined deposit of charcoal and charred



seeds (C1566) along the base and external side of the ditch adjacent to Kiln 8 to the east. This fill is a dump of kiln waste, presumably from Kiln 8, deposited into the ditch and indicates Kiln 8 was in use while this early phase of the annex ditch was active. The main basal fill of the ditch (C1105) was a mottled water-laid silt deposit with occasional inclusions indicating a period when the ditch was open. A slump of sterile material from the external side of the ditch (C1483) was found adjacent to Kiln 8, possibly a slump of subsoil from the side of the ditch or a deposit of subsoil from the digging of a nearby feature. A second charcoal-rich deposit (C1460) was uncovered adjacent to Kiln 8 overlying this fill indicating that the kiln was in use for some time. This was overlaid by another silty clay deposit (C1153) associated with further silting within the ditch.

The next fill within the ditch (C1104) was a deposit of charcoal and charred seeds adjacent to Kiln 9 and appeared to be a dump of kiln waste. This suggests that Kiln 9 was also in use while this early phase of the annex ditch was active. To the south of the kiln the base of the ditch rose up slightly so that this fill formed the basal fill of the ditch. The presence of the kiln waste at a later stage in the infilling of the ditch may imply that Kiln 8 predates Kiln 9. A small slump of redeposited subsoil (C1563) was evident to the south of the kiln overlying the

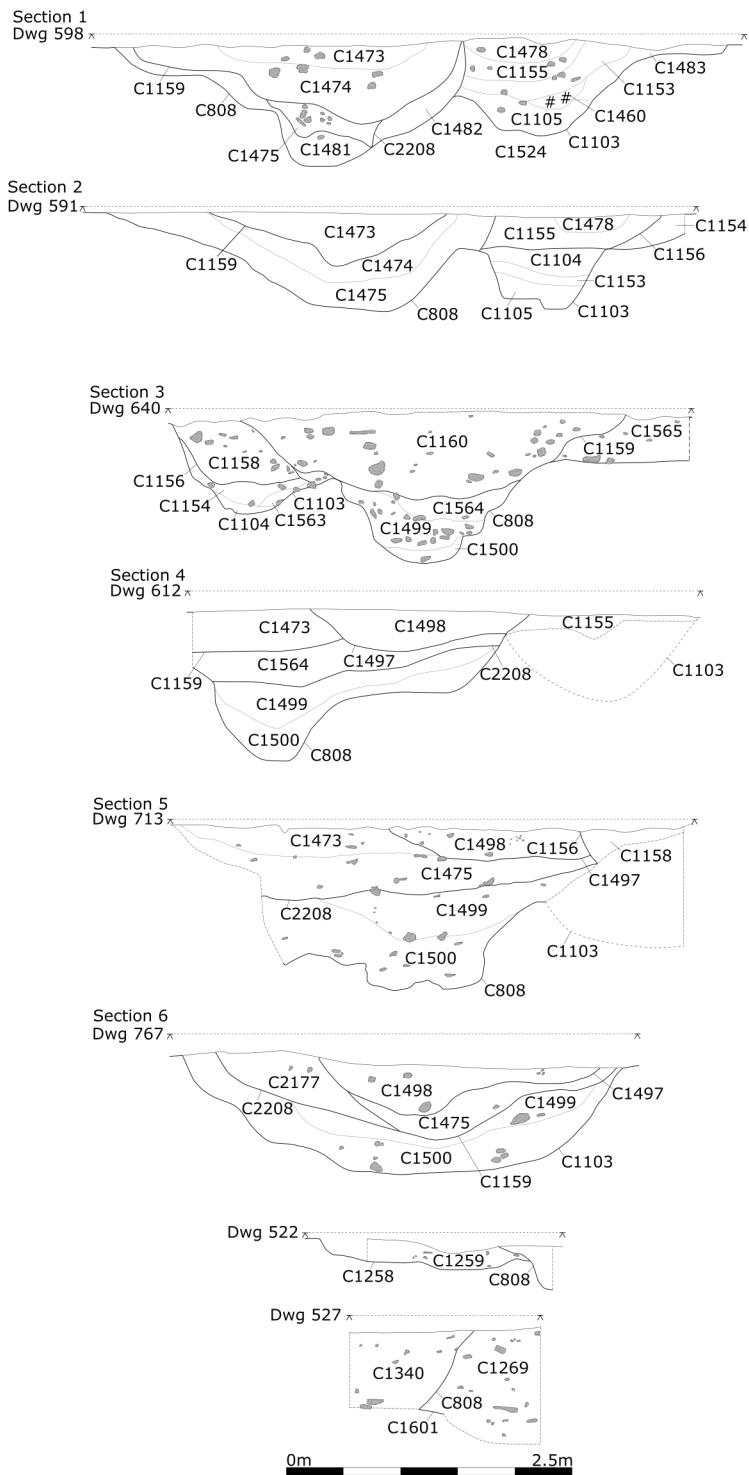


Plan of Ditch C1103 and main recut C808 with section locations (left)

Mid-ex view of Ditch C1103 on left being truncated by Ditch C808 on right, looking south (top right)

Mid-ex view of Ditch C1103 on right being truncated by Ditch C808 on left, looking north (centre right)

Mid-ex view of charcoal and charred seed deposit C1104 within Ditch C1103, looking north (bottom right)



Sections through Ditch C1103 and recuts



Mid-ex view of Ditch C1103 on left being truncated by Ditch C808 on right, looking south (top left)

Mid-ex view of Ditch C808, looking north. Ditch C1103 not yet excavated to right (centre right)

View of intersections of ditches C1601 and C1140 with Ditch C808, looking north (bottom left)

View of intersection of Ditch C1140 with C808, looking north (top right)

View of southern end of Ditch C808, looking north (bottom right)

charcoal layer along the internal side of the ditch, possibly a slump of bank material. This was overlaid by clay deposit (C1154) dumped into the ditch over the charcoal-rich layer adjacent to Kiln 9. This fill appeared to have been dumped into the ditch from the east and may also relate to Kiln 9. It was overlaid by a backfilling event within the ditch (C1155), which contained frequent stones and may represent bank material pushed into the ditch. The final upper fill (C1478) was only present to the north and may be a later drainage feature cut into the top of the backfilled ditch.

To the south of Kiln 9 an east-west orientated

cut (C1156) associated with Ditch C1601 was identified truncating the ditch. This would suggest that the northern end of the annex ditch was allowed to fill in for a period while the southern end was redefined as part of Ditch C1601 and prior to the recutting of the entire ditch (C808). Two fills were identified within the east-west cut. Both fills (C1157 and C1158) of the southern recutting were similar, with the upper fill (C1158) containing some animal bone and being grittier and more friable.

The eastern annex ditch was recut and enlarged (C808) after this, with the new recutting of the ditch positioned slightly to the west of the original ditch. The cut for the ditch was narrow and U-shaped at the base to the north, becoming wider and deeper as it moved south. At its southern end the ditch began to curve to the southwest at the point where it connected with the outer enclosure ditch, however the connection was truncated by later phases of the ditch. This phase of the ditch was contemporary with a sub-dividing ditch within the annex (C1140), and as the two ditches came together the combined ditch was wider further to the south. The basal fill of the ditch (C1481) was a dark silt possibly relating to fill C1493 in the northern side of the annex. A lens of clay with no inclusions (C1482) overlay this and extended along the eastern side of the ditch at the northern end. These were overlaid by a pale gritty silt (C1475/C1500), which was present for the full length of the ditch. This fill was the same as basal fill within Ditch C1140 to the west and contained slag.

The ditch was recut (C1620) giving the ditch a broader, flat base and survived to the south in the deeper section of the ditch. The recut was only present within the annex ditch and the fill (C1499) was not present within Ditch C1140 to the west. The fill was a water-laid silt and the base of the cut was scorched just to the north of the intersection with Ditch C1140. The reason for the scorching was unclear, however slag and animal bone was present within the fill and it is possible a dump of fire waste may have been deposited on the base of the ditch. At the southern end this recut was seen to truncate the outermost phase of the ditches forming the outer enclosure ditch.

Another recut (C2208) was apparent to the south and was associated with a secondary fill within Ditch C1140 to the west. This recutting had a broad flat base and was shallower than the earlier ditch. The fill (C1564/C2177) was a compact silt with few inclusions. It was overlaid at the southern end by a compact metallised surface (C2178/C2334; Path 10), which sloped down into the ditch and is likely to have been an entrance into the annex after the ditch recut had been filled in. It may relate to Path 1, which opened into a broad metallised yard to the east of



Mid-ex view of metallised surface C2334 crossing Ditch recut C2208, looking north (top)

Mid-ex view of metallised surface C822 overlying intersection of ditches C800 and C808 to north, looking east (bottom)

the annex at this point. It was truncated by the later phases of the ditch to the east.

This was truncated by another recut (C1159), which was recorded along the full length of the ditch. At its northern end the fill bore a strong resemblance to those of recutting C1494 of the northern boundary. Two fills were recorded at the northern end. The basal fill was present along the eastern side of the ditch and was a water-laid silt. The overlying fill (C1160/C1340/C1474) was the main fill to the south and was more mixed with occasional stones and had some slag inclusions. Path 3 overlay the northern end of this fill at the junction with the northern boundary ditch. This phase of the ditch truncated a number of

features within the annex, which are likely to have been contemporary with the earlier ditch forming the western annex ditch (C1103). These included Structure 11, a windbreak or fence associated with Kiln 12; Kiln 14 and Ditches C823, C1368 and C1147.

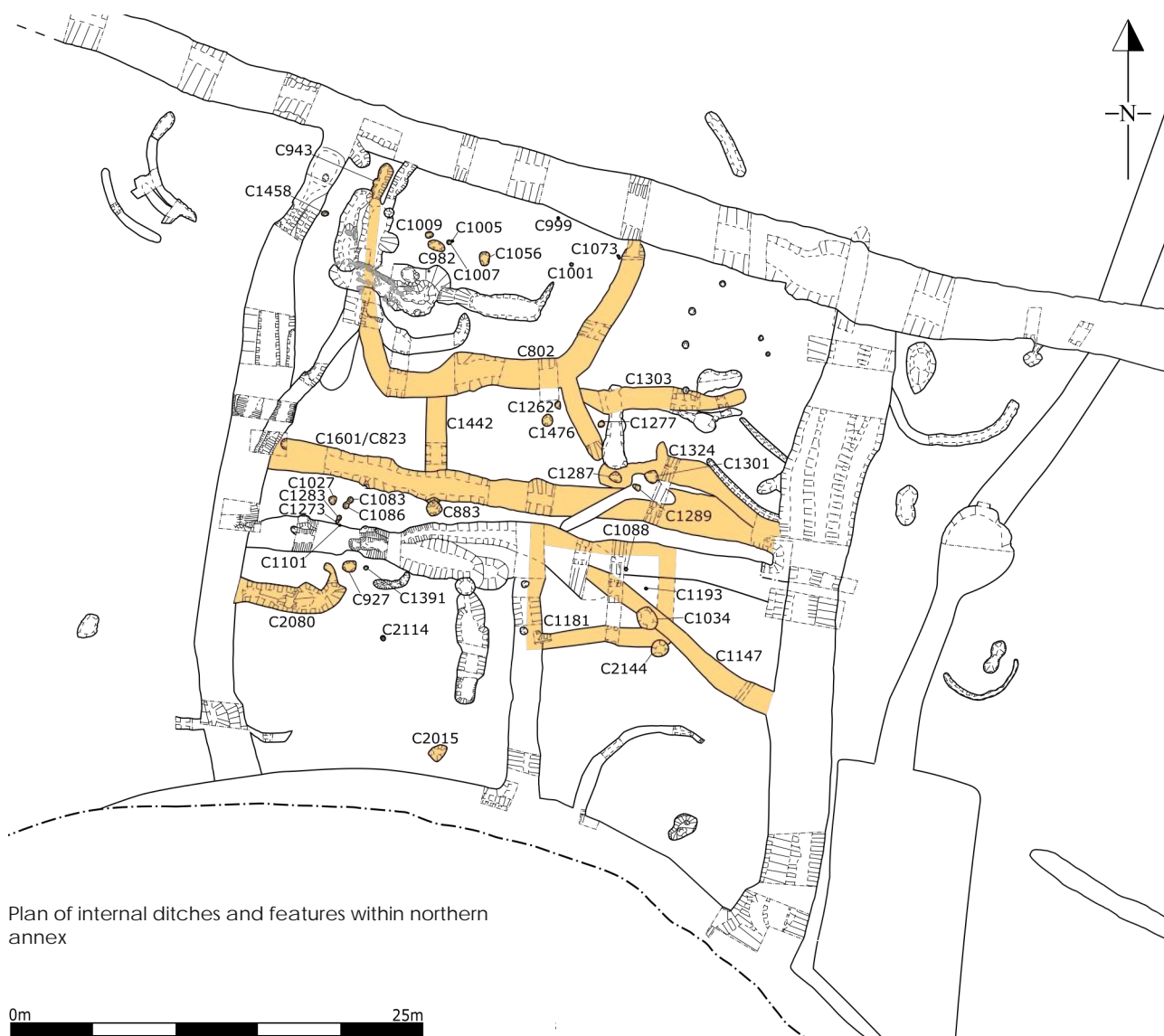
The final recutting of the ditch (C1497) identified ran into the northern end of the ditch from the east, relating to the later drainage ditches (C1220, C1222, C1226 and C1569), which truncated Path 3 to the north. This appears to be a late drainage feature running along the line of the eastern arm of the annex after the ditch forming the northern side of the annex had been completely infilled. The recut was within a smaller U-shaped channel,

generally located towards the eastern side of the earlier ditch. The fill (C1473/C1498) was a water-laid silt with some slag inclusions. At the northern end the ditch had a shallow shelf along its western side, possibly relating to this late shallow recutting of the ditch. At the southern end of the ditch this was recorded as C2175 and had a similar fill (C2176), which contained a small quantity of slag.

Internal ditches

Ditch C1147

One of the earliest ditches within the annex was perhaps not associated with the annex at all. The northwest-southeast orientated ditch



(C1147) was shallow and flat-bottomed ditch and was encountered in the southeast quadrant of the annex. The eastern end of the ditch was truncated by the recut of the eastern ditch of the annex (C808). To the northwest the ditch was truncated a later annex sub-division ditch (C1140) and by the rectangular enclosure (C1181). The northwest end of the ditch was truncated away by the later metalworking activity, however it did not continue along the same trajectory beyond the metalworking area. The ditch did not conform to the orientations of the annex, however the line of the ditch continued beyond the annex to the southeast. This suggests the ditch represents an early boundary within the settlement, possibly predating the annex. Three fills were recorded in the section of the ditch within the annex. The basal fill (C1148) was sterile redeposited natural. It was overlaid by a thin band of stones (C1149) located centrally within the ditch. This was overlaid by the upper fill (C1150), which was similar to the basal fill.

The line of this ditch continued to the east (C2163), which restarted to the east of Path 1. A second break in the line of the ditch was apparent to the northeast of Structures 2-4 after which the ditch recommenced and ran on to the limit of excavation. The southernmost portion was shallow and indistinct due to the bedrock outcrop in that part of the site. The gaps in the ditch appear intentional and the fact that Path 1 passes through one of the gaps suggests these were intended as access points, with the ditch forming a boundary on the site. The ditch does not conform to any of the other boundaries on the site, which is unusual. It is possible that this ditch respects the path rather than the annex ditch.

Within the annex the ditch truncated a pit (C1143). This pit was heavily truncated by later features and represents one of the earlier features in the annex. It had a single fill (C1144), which contained occasional charcoal flecking but no finds. A later plough furrow (C1176/C1196) and a vertical-sided cut (C1179) of probable post-medieval date, both with relatively sterile fills (C1177 and C1180), also truncated the pit. To the east the fill of the plough furrow (C1197) was darker and contained slag, burnt bone and animal bone,



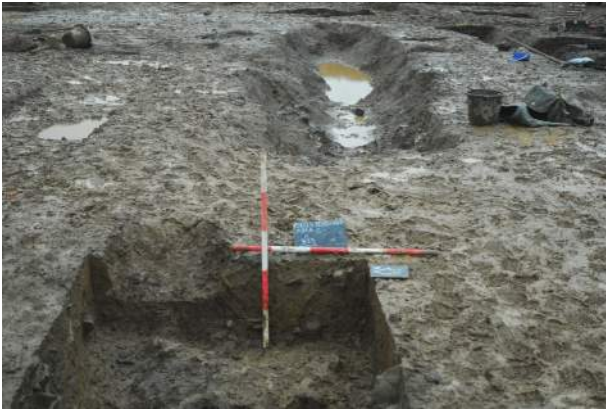
Mid-ex view of Ditch C1147 being truncated by Ditch C1140 to right, looking west (top)

Mid-ex view of Ditch C1147 running up to annex ditch C808, looking southeast (bottom)

which derived from truncating one of the features nearby. The plough furrow also truncated the fill of the rectangular enclosure (C1181).

Sub-division ditch C1601 and recut C823

One of the earliest sub-divisions relating to the annex itself was an east-west orientated ditch (C1601), which split the annex approximately in half. The ditch was associated with and recut the earlier ditch (C1103) enclosing the eastern side of the annex, indicating the northern end of the annex ditch was filled in by this point. This ditch appears to originally have enclosed a smaller space at the southern end of the annex. The ditch was cut by the repositioned annex ditch to the west (C1431) and by the enlarged



Mid-ex view of Ditch C1601 narrowing as it reached western ditch of the annex C1431, looking east (top left)

Mid-ex view of Ditch C1601 with metalworking waste pit C823 cut into the top, looking west (centre right)

View of ditches C1601 to west of waste pit C823, looking west (bottom left)

View of ditch C1601 being truncated by feature C1377, looking west (top right)

View of Ditch C1601 to left being truncated by Ditch C1324, which is truncated by slot trench C1369 to right, looking west (bottom right)

annex ditch to the east (C808). The ditch was narrow to the west and widened as it moved east. The fill of the ditch (C839/C1389/C1269/C1565) contained small amounts of the animal bone. An iron ring was retrieved from this fill. Some slag was also present within the fill, though may be intrusive from the later metalworking waste pit. An upper stony fill (C1367) was present to the west, which may have been laid down over the backfilled ditch to improved access when the metalworking waste pit was dug into the ditch to the east. A similar layer of stone was recorded over the ditch the metalworking features were cut into to the south.

The ditch was recut (C823) along much of its length, with the recut acting as a waste pit for the metalworking activity in the southwestern quadrant of the annex. The recut was widest and deepest to the north of the metalworking area, becoming narrower and shallower to the east. It did not recut the western or eastern ends of the ditch. Due to the high quantity of metalworking waste within the recut of the ditch the western end of the pit was divided into a grid of 14 blocks and reduced layer by



Mid-ex view of metalworking waste pit C823 cut into Ditch C1601, looking east (top)

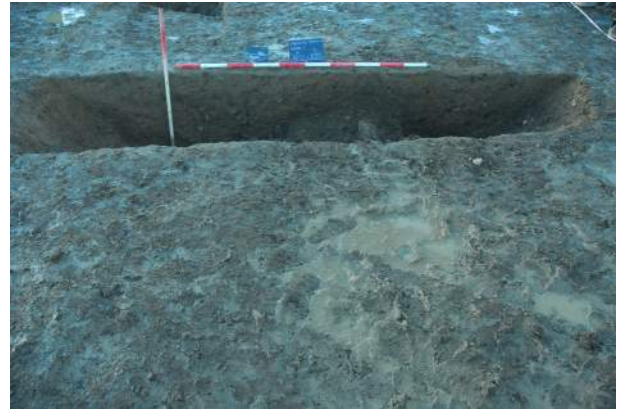
Working shot of semi-articulated dog burial within metalworking waste pit C823, looking north (centre)

Mid-ex view of Pit C883 with edge of waste pit C823 to left, looking east (bottom)

layer in case metalworking features were present cut into the ditch. This did not prove to be the case and the recut was found to contain three main deposits of waste material from the metalworking area to the south. The basal fill (C826) was a gritty sandy clay with frequent metalworking waste and charcoal and occasional animal bone present in the western end of the ditch. It was overlaid by a darker layer (C824) of similar material with abundant metalworking waste, charcoal and occasional animal bone, which was present along the entire length of the recut. Two worked bone handles were retrieved from this fill along with residual flint artefacts and the semi-articulated remains of a dog. This in turn was overlaid by the upper fill of the recut (C832), which was lighter in colour than the fill below and contained slightly less metalworking waste and animal bone. All three of these deposits are directly associated with the metalworking activity being carried out to the south. To the west an additional upper fill (C859) was identified, which contained no metalworking waste and may relate to plough soil settling over the backfilled feature. To the east of the main recut section less metalworking waste was present within the fills and an additional upper clay fill (C1380/C1268) was identified, the result of natural build-up of sediment over the waste deposits.

A sub-circular pit (C883) was identified to the south of the metalworking waste pit. It was steep-sided with a concave base and had two fills. The basal fill (C884) had occasional charcoal flecking while the upper fill (C885) had inclusions of animal bone and slag similar to the material within the metalworking waste pit to the north. A plough furrow truncated the connection between this pit and the metalworking waste pit so a relationship could not be established with certainty. The similarity in fills suggests the pit was used to dispose of metalworking waste also, however its initial purpose was unclear.

Two pits were cut into the top of the backfilled metalworking waste pit to the west, one circular (C857) and the other oval (C1096). The fill of the circular pit (C858) was loose and contained occasional slag, and may be the result of later agricultural activity on the site. The oval pit contained two fills, a basal fill (C1095) with



Mid-ex view of Ditch C835 cutting shallower ditch C802, looking south (top left)

Mid-ex view of Ditch C802 and recut C835, looking north (centre left)

Mid-ex view of curing Ditch C802, looking southwest (bottom left)

Mid-ex view of Ditch C802 to left and Ditch C835 to right, looking west (top right)

Mid-ex view of Ditch C802 to left being truncated by realigned outer enclosure ditch C1431 to right, looking south. Rake out pit C1400 of Kiln C1295 can be seen overlying the ditches (bottom right)

charcoal, animal bone and slag inclusions, and an upper more sterile fill (C1094). This may be a late additional waste pit.

Ditch C802

A curving ditch was uncovered defining the northwestern quadrant of the annex. A number of phases of this ditch were identified. It is likely that a phase of this ditch was associated with the ditch (C1303) enclosing the northeastern quadrant within the annex, however this relationship did not survive as it was truncated by a later ditch (C1476), which was contemporary with the surviving portion of ditch C802 to the east. There was a gap between

the western return of this ditch and the annex ditch to the west. This may have been left as there was an entrance in the annex ditch to the northwest. The later realignment of the annex ditch (C1021) ran right up to and partially truncated ditch C802 cutting off the entrance.

The earliest surviving phase of the ditch (C1490) was identified to the west. This survived along the northern side of the later

recutting events and appears to have been shallower. Two fills survived within the cut. The basal fill (C1199) was a redeposited natural with no inclusions, present along the base and northern side of the cut. This may relate to the slumping of bank material into the ditch. It was overlaid by another sterile fill with a higher silt content (C1198).

The second surviving recut (C802) was U-shaped in profile and enclosed the northwestern quadrant of the annex. At its eastern end the ditch (C802) ran northeast-southwest and terminated 0.5m from the edge of the Ditch C800. It curved around to the west before turning again to the north. It truncated a north-south ditch (C1442), which may relate to the earlier phase of sub-division. It was truncated by the realigned western ditch of the annex (C1021/C1408/C1431) along its western side and northern end. It is possible that it originally ran along the same alignment as Ditch C1021/C1408/C1431 to the north. It was also truncated by a linear pit (C1333) to the west. Two fills were recorded within the ditch. The basal fill (C1187/C1489) was grittier and sandier, possibly due to the sorting of sedimentation within the ditch, and was only present to the south. The upper mottled silt fill (C803/C1188/C1407) was present throughout the ditch and contained rare animal bone inclusions and a small piece of slag.

This was recut by a narrower ditch (C835), which followed the same curving alignment. To the northeast the recut was a narrow slot and extending into the northern boundary of the annex, though it was unclear which phase of the annex ditch it related to. Further to the south it was generally shallower than the earlier cut of the ditch. It had a single silt-rich fill (C882), which became stonier and paler to the west (C1405).

A circular pit (C1106) was cut into the top of the backfilled ditch to the south of Kiln 21. It had a single fill (C1107) with occasional large stone inclusions.

To the south of the southwestern corner of sub-division ditch C802 a north-south orientated pit (C1333) was identified. This partially truncated the sub-division ditch and its

recut (C835). The pit was truncated by the realignment of the western ditch of the annex (C1021/C1408/C1431) to the west. The initial phase of the pit (C1333) had two fills (C1337 and C1338), with the upper fill (C1337) being stonier. The pit was recut (C1334) along its eastern side, with the fill (C1336) containing occasional angular stone. This was cut by the rake-out area (C1400) of Kiln 17. The purpose of the pit was unclear.

An east-west running plough furrow (C1261) partially truncated the southern edge of the ditch to the east.

Ditch C1324

A linear ditch (C1324/C1271) was recorded running east-west to the north and partially truncating Ditch C1601. It was a shallow U-shaped ditch with a narrow slightly deeper channel in the base to the east. It was partially truncated by Kiln 13. The eastern end of the ditch turned slightly to the south before being truncated by a late phase of the eastern ditch of the annex (C1159). The windbreak (C1368) for Kiln 14 to the north truncated the eastern end of the ditch. At the western end of the ditch the base rose up slightly before opening out into a pear-shaped pit (C1501). Some charcoal was evident in the fill (C1502) of the pit, which was originally excavated as a possible fire-pit, however no in situ burning was evident and the feature appears to be linked to the ditch. The purpose of the ditch itself is unclear, however it may have served as a sub-division within the annex. The ditch had two fills. The basal fill (C1272) present in the eastern end of the ditch was a mixed material that appears to contain a large amount of redeposited natural and had inclusions of slag, two iron nails, superheated clay, charcoal and animal bone. This was overlaid by a pale silt (C1325) for much of the length of the ditch, which had inclusions of slag and animal bone and relates to the silting up of the ditch. A piece of worked bone and an iron nail were retrieved from this fill. At the eastern end a slightly different upper fill (C1385) was identified, which was sterile and may have been an intentional blocking of the end of the ditch.

Two pits were cut into the top of ditch C1324. To the west a sub-oval pit (C1287) was



Mid-ex view of Ditch C1324, looking west (top left)

Mid-ex view of Kiln C1341 cutting Ditch C1324, looking east (centre left)

Mid-ex view of slot trench C1369 truncating Ditch C1324, looking west (bottom left)

Mid-ex view of Ditch C1324, looking east (right)

uncovered, which was filled with bright orange metallurgical waste (C1288). A second pit (C1301) was circular in shape containing a similar fill of metallurgical waste (C1302), and partially truncated Pit C1377 to the south. An iron dowel was identified within this fill.

Ditch C1303

A shallow ditch (C1303) was recorded running east-west within the northeastern quadrant of the annex running just to the south of Kiln 12. This ditch turned slightly to the northeast at its eastern end and terminated 3.2m to the west of the annex ditch (C808). At its western end the ditch truncated Kiln 13 before continuing on to

the west, where it was truncated by a later ditch (C1476). A circular posthole (C1306) was cut into the northern side of the ditch and was contemporary with it as both features had the same fill (C1304). This posthole may be part of a post-built structure arcing to the west of Kiln 12. The basal fill of the ditch (C1305) was a silty clay containing infrequent charcoal. It was overlaid by a mixed fill (C1304), which contained occasional charcoal and patches of redeposited natural. This fill was also present within the associated posthole (C1306). The ditch divides the kiln from its associated windbreak (Structure 10), however the same fill (C1310) was identified overlying the backfilled



Mid-ex view of Ditch C1303 with slot trench C1307 to left, looking west (top)



Mid-ex view of Ditch C1303 truncating Kiln C1341, looking east (centre)



Mid-ex view of Ditch C1476 truncating Ditch C1303, looking south (bottom)

ditch and the kiln. This implies that the kiln and the ditch were contemporary for at least part of their lifespan. It would appear that the kiln and windbreak were present first, with the ditch and possible post-built structure being later. This ditch is likely to have formed part of a system of subdivision within the annex relating to an earlier version of Ditch C802 to the west that did not survive.

Ditch C1442

A short shallow north-south orientated ditch (C1442) was identified to the south of Ditch C802 and north of the metalworking waste pit (C823), being truncated by both features. Its relationships with the earlier annex subdivision ditch to the north (C1490) and to the south (C1601) did not survive, though it is likely to have formed part of one of these earlier annex subdivision systems. The ditch had a single stony fill (C1443) with occasional charcoal flecking and slag inclusions.

Ditch C1476

Running from the southeastern turn in Ditch C802 a small ditch (C1476) was uncovered running northwest-southeast. This ditch was contemporary with the ditch subdividing the annex to the northwest (C802) and truncated Ditch C1303 and Kiln 13 indicating it was later in the sequence of subdivision within the annex. The southern end of the ditch petered out before its intersection with Ditch C1324. The ditch had a single fill (C1477) with rare inclusions of animal bone and charcoal and was similar to the fill of Ditch C802 to the north.

Sub-division ditch C1140

A ditch sub-dividing the southern portion of the annex (C1140/ C1203). The north-south section of the ditch was located centrally within the annex, turning at a right angle to the east and joining with the larger recutting of the eastern ditch of the annex (C808). At its southern end it was truncated by the outer enclosure ditch (C837) and the ditch had shallowed out at that point. The ditch appeared to define or enclose the southeastern quadrant of the annex. To the west an additional ditch (C1317) ran in line with the east-west running section enclosing the southeastern quadrant with a 2.3m gap between the ditches representing an entrance. Rectangular enclosure



Mid-ex view of Ditch C1140, looking east (top left)

Mid-ex view of Ditch C1140 being truncated by C842 to left, looking east (centre left)

Mid-ex view of Ditch C1140 being truncated by gully C1181, looking south (bottom left)

Mid-ex view of Ditch C1140, looking south (top right)

Mid-ex view of Ditch C1140, looking south, with stony deposit C2017 visible in section (bottom right)

C1181 was cut into the northwest corner of the space enclosed by the ditch and the linear associated with the metalworking activity to the west (C842) also truncated the ditch.

Within the north-south running section of the ditch six fills were identified. The lower two fills (C2020 and C2021) were both water-laid deposits, with animal bone present in the basal fill (C2020/C1202). This was overlaid by a stony deposit (C2017), which was identified sloping in from the eastern side to the south and forming a slightly less stony band across the base further north before petering out. It is possible this relates to bank material being dumped into the

ditch from the east. This was overlaid with another water-laid deposit (C2018), which in turn was overlaid by a settling of plough soil (C2019) over the backfilled ditch. Some slag was retrieved from this material. At the northwest turn in the ditch a number of additional fills recorded. The basal fill (C1513) contained animal bone and was similar to the basal fill (C2020/C1202) to the south, but was not present along the east-west running section of

the ditch. It was overlaid by a silt deposit (C1512), which was only present at the corner of the ditch. Overlying this was a silt-rich fill with occasional stone and animal bone inclusions (C1141/C1251), which was the same as the secondary fill (C2021) to the south. A stone gaming board was retrieved from this fill. The upper fill (C1511/C1250) also had animal bone inclusions and was truncated by rectangular enclosure ditch C1181. At its eastern end the ditch joined recut C808 forming the eastern side of the annex. The ditch had deepened by this point. The basal fill (C1500) was identified within both ditches and was similar to fill C1141 to the west. There was evidence for two recutting events within the eastern ditch of the annex (C1620 and C2208) before the eastern end of Ditch C1140 was backfilled, with the upper fill (C1564/C2197) shared with the latter recutting event within the annex ditch. This was equated with fill C1511 to the west.

A plough furrow (C1454) truncated the top of the ditch to the east, which had a single fill (C1455) containing animal bone deriving from the fills truncated by the furrow. A second furrow (C1456) with a similar fill (C1457) but no inclusions ran parallel to it to the north.

A short section of ditch (C1267) was identified in line with the north-south running section of Ditch C1140 on the northern side of the metalworking ditch (C842). It was only identified running to the edge of the metalworking waste pit (C823), which was cut into an earlier annex sub-division (C1601). The ditch was truncated at its southern and northern ends by features associated with the metalworking so predates this activity. It is possible it is a north-south running sub-division associated with the earlier sub-division (C1601), however a direct relationship did not survive. Alternatively, another section of ditch (C1324) terminated to the north of the ditch and may be related. Two fills survived within the ditch. The basal fill (C1266/C1542) contained occasional animal bone and charcoal flecking within a silt matrix. The upper fill (C1541) also had inclusions of animal bone within redeposited natural-like material, which may relate to an associated bank being pushed into the ditch after it had gone out of use.

Sub-division ditch C1317

An east-west running ditch (C1317) associated with the sub-division of the southern end of the annex was recorded to the west of Ditch C1140 in line with its east-west running section and is part of the same phase of sub-division. It defined the southeast quadrant of the annex, with a 2.3m gap between this and ditch C1140 being an access point. The ditch sloped down from west to east and rose sharply at its eastern terminus. It was generally steep-sided with a flat base, with the sides being more convex to the east. It was truncated by the latest of the ditches (C1432) forming the western side of the annex. Its relationship with earlier phases of the annex ditch did not survive the truncation. Two stony basal fills of the ditch (C1320 and C1321) were only present in the deeper eastern section of the ditch. The next fill (C1322/C1441) was more clayish and extended across the base of the ditch to the west. A small quantity of slag is recorded from this fill, however it is likely to be intrusive. All three of the basal fills were sterile and a sample taken from the basal fill (C1320) failed to produce any dateable material. The fills of the original cut of the ditch were all similar to redeposited natural with varying degrees of additional silt and may relate to bank material being dumped in the ditch.

A shallower recut with a flat base and steep sides (C1127) was identified truncating the ditch. The eastern terminus of the recut widened out to the north of the earlier ditch. The basal fill of the recut (C1323/C1440/C1235) was a layer of silting up within the ditch, which had occasional animal bone inclusions. A stone gaming piece was also retrieved from this fill. The majority of the later metalworking features uncovered on the site were cut into this level. A paler silt (C1130) overlay this to the east, which was in turn overlaid by a dark silt with inclusions of charcoal (C1129). A fragment of post-medieval pottery retrieved from this fill was intrusive. This is the same event as fill C1439 to the west, however the fill to the west did not contain charcoal and had some animal bone inclusions. It is possible the charcoal evident in the fill to the east (C1129) relates to Kiln 15, which was located to the south of the ditch and was truncated by the channel associated with the later metalworking activity (C1125). Two



Mid-ex view of Ditch C1317 being truncated by recut C1127 and channels C1125 and C842 filled with metalworking waste, looking west (top)

Mid-ex view of Ditch C1317 truncated by channel C842, looking east (upper centre)

Mid-ex view of stone surface C1376 overlying western end of Ditch C1317, looking east (lower centre)

Mid-ex view of Ditch C1317 with stone surface C1376 in section, looking west (bottom)



additional fills survived to the west, the portion of the ditch that saw the least truncation. An additional silt-rich fill (C1438) with inclusions of animal bone was identified which was sealed by a layer of stones (C1376). The stones were angular and sub-angular and covered the western end of the ditch. These may have been laid down to provide a solid surface over the backfilled ditch or as a work surface for the subsequent metalworking activity, which was cut into the ditch. Some slag was retrieved from the stony layer and a furnace (C938) and a small pit (C1381) were cut into it. The stony layer was absent completely where the concentration of metalworking activity was dug into the ditch.



Kilns

Twelve kilns were identified within the northern annex. Six of these were in an intercutting cluster to the northwest, while an additional example was uncovered to the west in what appears to have been a gap in the annex ditch. The remainder were spread more sporadically around the enclosure.

Kiln 11

In the southeast corner of the annex a northeast-southwest orientated figure-of-eight shaped kiln (C2131; Kiln 11) was excavated. The large circular firing chamber was located to the north with the base of the chamber scorched towards the southern end. A depression in the base at the point where the kiln was waisted may be the socket for a baffle stone. The smaller sub-circular southern

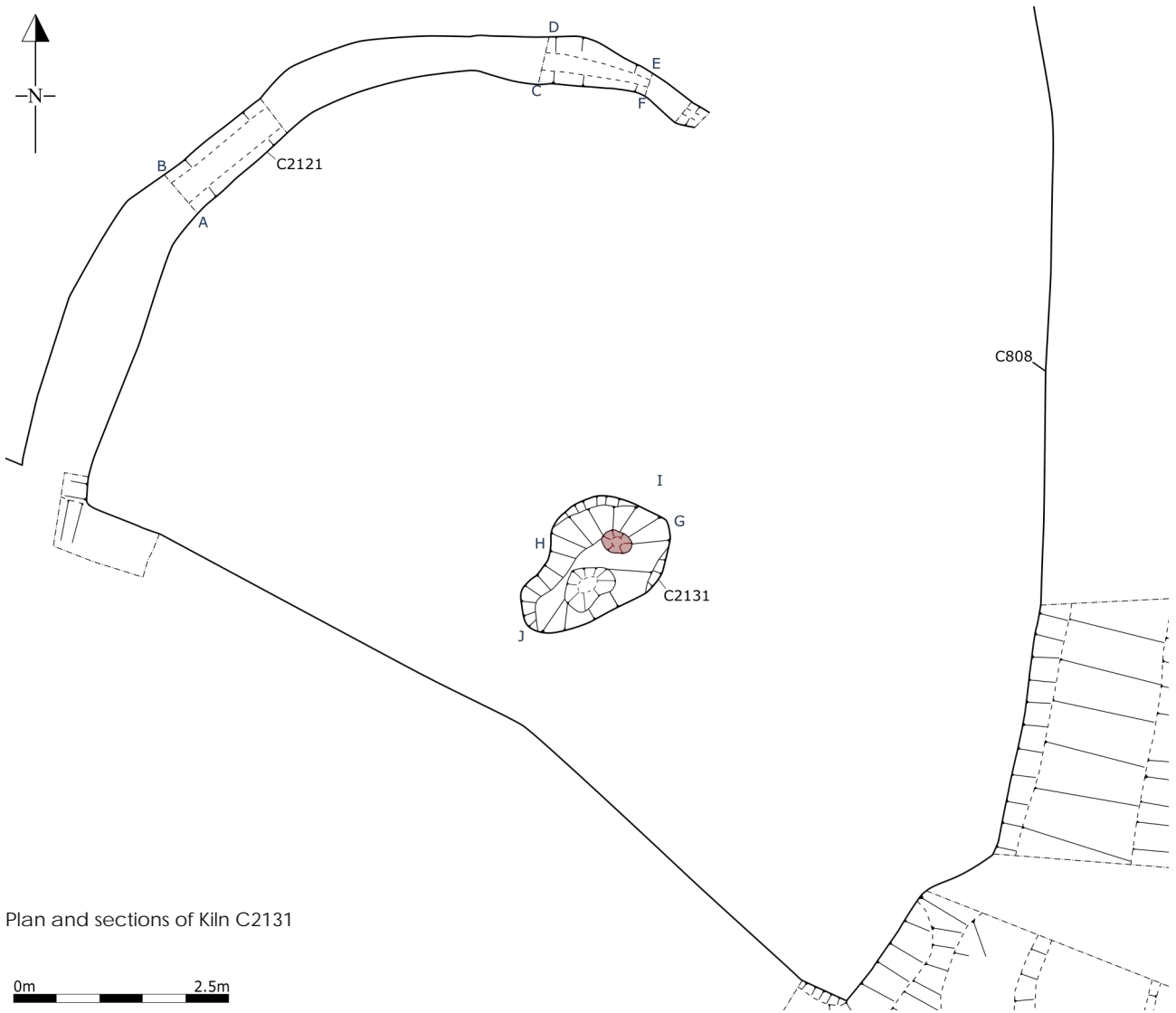




chamber did not exhibit any in situ burning and was not as deep as the northern chamber. The fill (C2157) within the depression at the junction of the two chambers was a charcoal-rich material containing charred seeds, which implies that the depression relates to the kiln rather than an earlier feature. The basal fill (C2133) within the firing chamber to the north was a thin layer of charcoal over the scorched base overlaid by a layer of ash, which partially extended over the fill within the depression to the south. A second surviving firing of the kiln was represented by a layer of charcoal overlying this within the firing chamber and by a less charcoal-rich material along the base of the drying chamber (C2158), which also partially overlay the fill (C2157) within the depression between the two chambers. Burnt bone was retrieved from all three of the lower kiln fills.

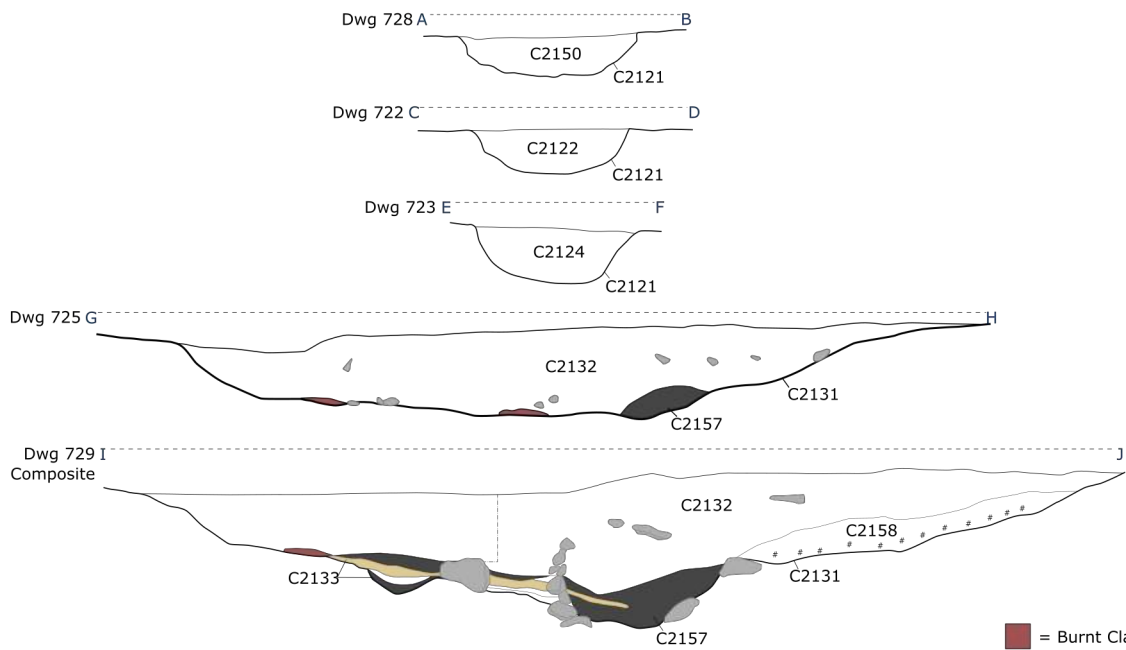
The final fill within the kiln (C2132) related to the backfilling of the feature. It was unclear whether this included kiln superstructure.

Curving in an arc from the west to the north of the kiln a slot trench (Structure 9; C2121) was uncovered. This represents a windbreak associated with the kiln. The western end of the slot trench was deeper than the remainder of the slot trench to the north and east and was given a separate cut number (C2530). This may relate to a deeper cutting of the slot trench for additional support or repair work rather than an earlier feature. The fill of this deeper section (C2160) was well compacted and different to the remainder of the fill within the slot trench. The main fill of the slot trench (C2122/C2124/C2150/C2161) was a water-laid silt likely to have formed after the removal of



Plan and sections of Kiln C2131

0m 2.5m



0m 1m

- = Burnt Clay
- = Ash Layer
- = Charcoal Layer



Mid-ex view of Kiln C2131, looking northwest. Note socket for baffle stone in centre (top)

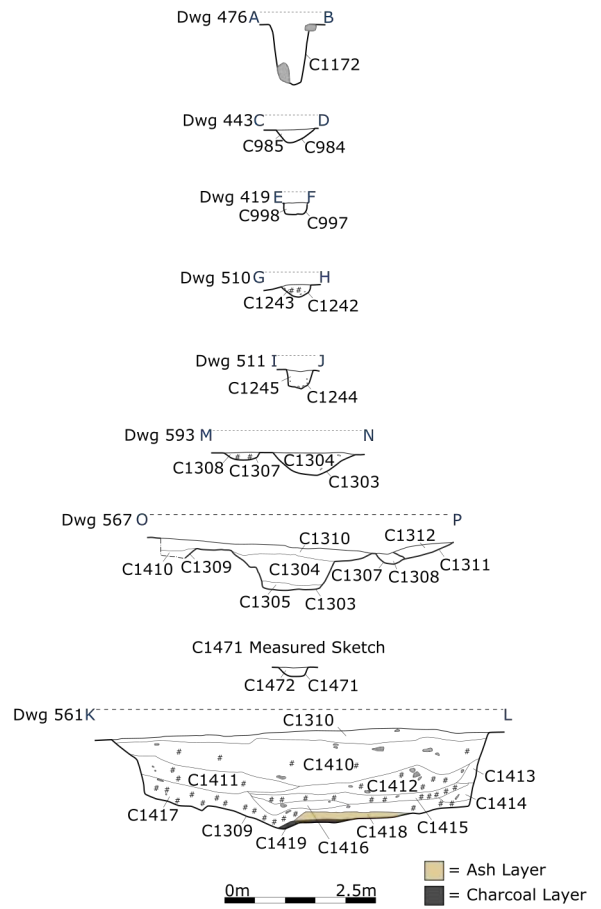
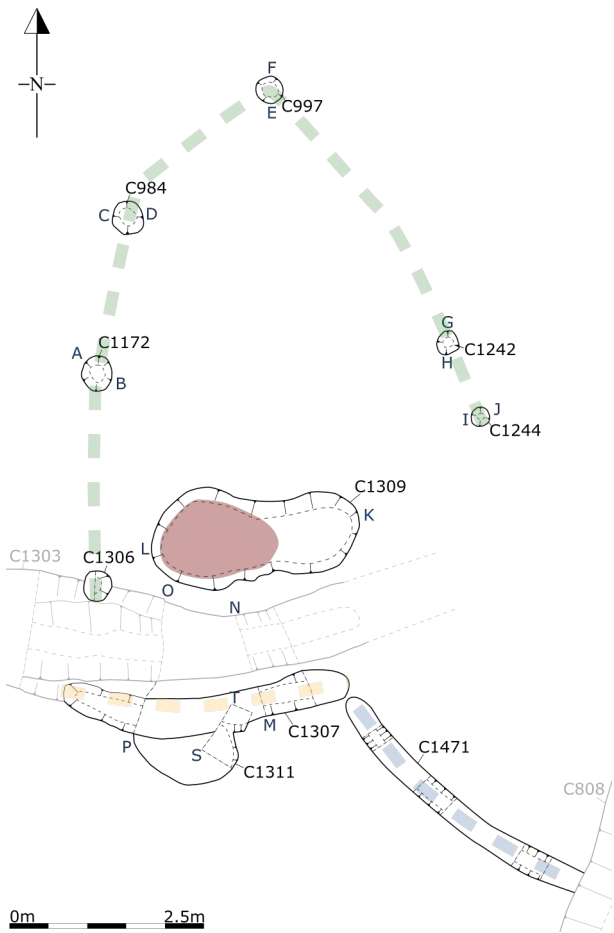
Post-ex view of Kiln C2131, looking northwest (centre)

Mid-ex view of slot trench C2121, looking east (bottom)

the windbreak, with some animal bone retrieved from near the eastern terminus. An ESB pole truncated the western side of the slot trench and the southern end was truncated by the later recut of the outer enclosure ditch (C2239). The surrounding area was sealed by a layer of plough soil (C2159). The presence of the windbreak here implies that the kiln was accessed from the north, with the windbreak effectively providing a small enclosure for the kiln within the southeast corner of the annex.

Kiln 12

In the northeast of the annex an east-west orientated figure-of-eight shaped kiln (C1309; Kiln 12) was uncovered. The kiln was relatively deep with near vertical sides and was not tightly waisted. The firing chamber was to the west with in situ burning evident on the base and sides. The scorching was most intense at the eastern end of the chamber. The firing chamber was deeper and wider than the drying chamber to the east. A depression was apparent in the base of the firing chamber just before the base started to rise up to the drying chamber. This may represent a socket for a baffle stone that was removed prior to abandonment. The basal fill of the kiln (C1419) was a dark charcoal-rich deposit containing charred seeds within the firing chamber. This represents the earliest surviving firing of the kiln. It was overlaid by an ashy layer (C1418), which spread further to the west within the firing chamber. This was overlaid by a lighter fill (C1417) which contained frequent charcoal chunks, animal bone and charred seeds and extended across the entire kiln. The presence of burnt and unburnt bone within this material may indicate it is waste material deposited into the kiln, however it is more likely to be a mixed deposit resulting from a number of firings and cleaning out events. Two fills overlay this within the firing chamber. At the western end a scorched deposit (C1414) was present. This may be burnt kiln superstructure that collapsed into the kiln or a deposit of clay laid down prior to the second surviving firing of the kiln, which was burnt in situ. At the eastern end of the firing chamber a small layer of redeposited natural (C1416) was present. This material was unburnt. It appears to have been used to accentuate the eastern end of the firing chamber making a more defined pit for the next firing. The subsequent firing is



Plan of Kiln C1309 and related structures (top left)

Mid-ex view of Kiln C1309, looking south (centre left)

Post-ex view of Kiln C1309, looking west (bottom left)

Sections of Kiln 1309 and related features (top right)

Pre-ex view of slot trenches C1307 and C1471 being truncated by later agricultural furrows, looking southeast (bottom right)

represented by a mixed layer of charcoal and ash (C1415) within the firing chamber. This was overlaid by a second deposit of scorched material (C1413) at the western end of the firing chamber. Again, this may be burnt kiln superstructure that collapsed into the kiln or a deposit of clay laid down prior to the next surviving firing of the kiln, which was burnt in situ. It was overlaid by a layer of redeposited material (C1412) that extended across the firing chamber. This appears to have been deposited within the kiln to provide a base for the next firing of the kiln. The next fill (C1411) was located within the drying chamber and consisted of a mixed deposit of charcoal, ash, charred seeds and contained some animal bone. This deposit was waste material from the final firing of the kiln that has been mixed through cleaning and clearing out. It appears the firing location for this firing was at the far west of the firing chamber, and was recorded as part of fill C1413. A small patch of charcoal and ash can be seen overlying the redeposited material at this point representing the remains of the firing event. The penultimate fill of the kiln (C1410) represents the backfilling of the kiln after it had gone out of use. Infrequent clumps of burnt clay within this material suggested it included the superstructure for the kiln. The upper fill within the kiln (C1310) was a spread of material which continued beyond the edge of the kiln and also overlaid the fill (C1304) of Ditch C1303 to the south. A sherd of post-medieval ceramic and an iron object were retrieved from this fill indicating it had been disturbed.

To the south of the kiln a slot trench (C1307; Structure 10) was uncovered. This windbreak was not as tightly arced as some of the other examples on the site. This is likely to represent a windbreak for Kiln 12, however it is not clear due to the poor survival of the slot, which does not extend as far as the western end of the kiln. The slot trench had a single fill (C1308), which formed after the windbreak was removed. A possible stone hammer-stone was retrieved from this fill. The slot trench was truncated by a small pit (C1311), the fill of which (C1312) contained infrequent charcoal, slag and animal bone. The purpose of the pit was unclear.

A second slot trench (C1471; Structure 11) almost connected to the eastern end of

Structure 10. It arced to the southeast and was truncated by the annex ditch C808. This slot trench is unusual as it does not relate to a kiln and does not arc sufficiently to indicate it relates to a structure. It appears to be an additional section of fencing used to close the gap between the annex ditch and the kiln. This would have created an unusual 'winged' or double-bowed fence-line around the southern side of the kiln and possibly defined a kiln-related area within the annex enclosure. The fill of the slot trench (C1472) was similar to the fill of the slot trench to the west, with more charcoal flecking evident to the west.

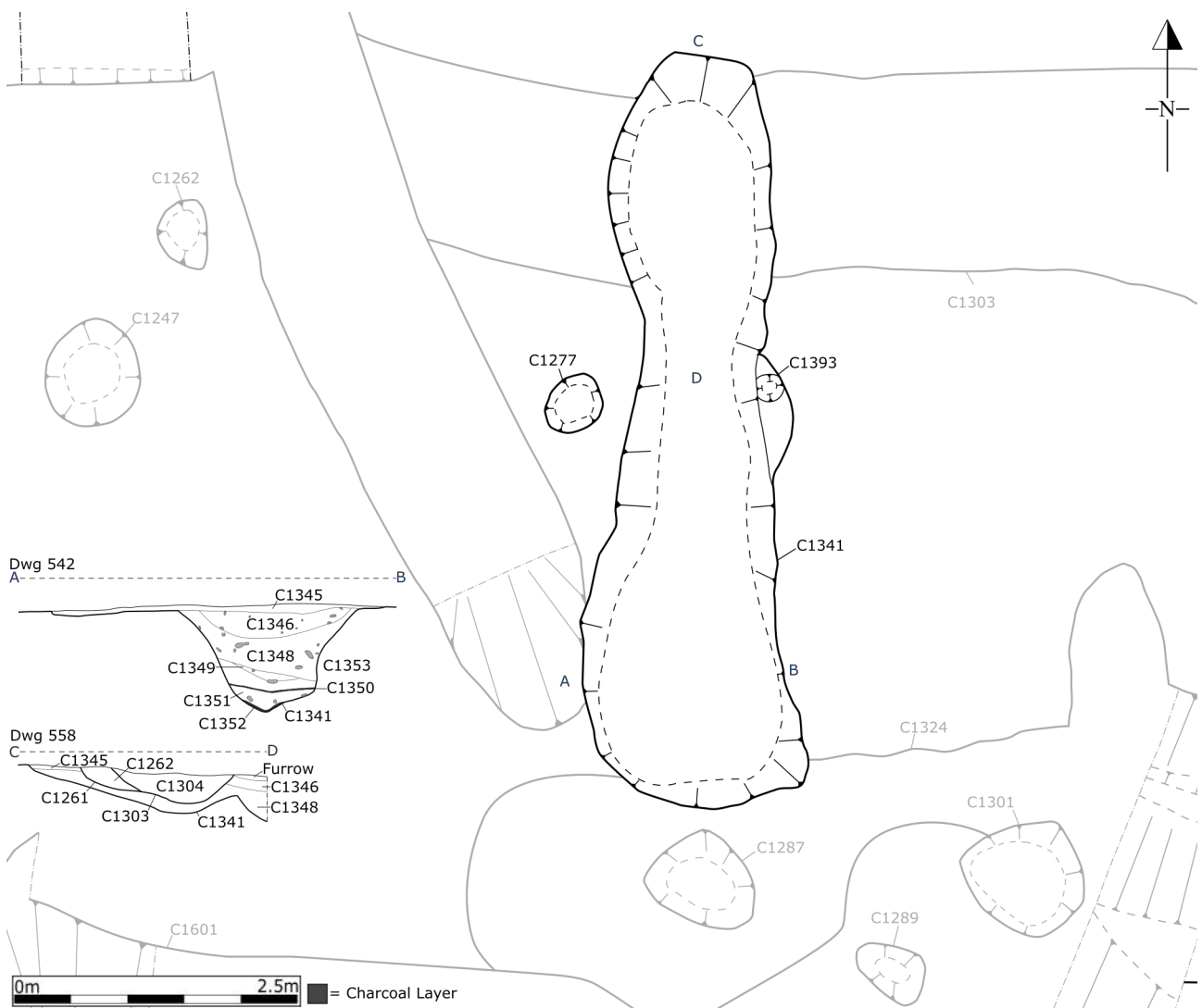
To the west and north of the kiln an arc of postholes was uncovered, which may represent the remains of an additional windbreak structure (Structure 12). To the north a small circular posthole (C997) was uncovered, which had a single fill (C998) with no inclusions. A small sub-circular pit or posthole (C984) was uncovered to the southwest of this, which had a single fill (C985) with no inclusions. A deep posthole (C1172) was uncovered to the south of this and northwest of Kiln 12. It was circular in plan and deeper than the others identified in this part of the site. Two packing stones were present at the base of the posthole, possibly *ex situ* after the removal of the post. The basal fill (C1174) was a silty clay with rare charcoal flecking. The upper fill (C1173) sealed the posthole. This cluster of postholes may be related to each other, with the deep posthole (C1172) suggested to be structural. An additional posthole (C1306) was present to the south, cut into the side of Ditch C1303. The fill of the southern posthole was identical to that of the ditch indicating both were filled at the same time and may be contemporary. As the ditch cuts across the line of the southern windbreak it is possible that the northern example replaced it. To the east a further two postholes were identified that may be related to the structure, possibly forming a northwest-southeast running return. An oval posthole (C1242) was identified 3.86m to the south of ditch C800 and northeast of Kiln 12. It had a single fill (C1243), which contained charcoal flecking. A second posthole (C1244) was uncovered 0.9m to the southeast, which was also oval in plan. This had a similar fill (C1245) to the previous posthole, however charcoal

flecking was not apparent.

Kiln 13

To the west of Kiln 12 and also within the northeast quadrant of the site a large north-south orientated kiln (C1341; Kiln 13) was uncovered measuring 5m in length. To the north the kiln was truncated by a ditch (C1303), which related to subdivision within the northern annex. To the south it truncated ditch C1324. The chamber of the kiln was to the south with a probable flue to the north suggesting it was a keyhole-shaped kiln. The kiln was steep-sided and the base sloped from north to south with a pronounced step down from the flue to the chamber. In situ burning was present along the steeply sloping step in the base at the northern end of the chamber. The basal fill of the kiln (C1352) was a thin charcoal layer within the

southern chamber of the kiln. No seeds were noted, however fragments of superheated clay were retrieved from this fill. The secondary fill (C1351) was a mixed deposit consisting of ash and clay along with fragments of superheated clay and charcoal. This is the result of a cleaning out event within the southern chamber. It was overlaid by another thin layer of charcoal (C1350), also only found within the southern chamber. This also contained fragments of superheated clay and related to a firing of the kiln. It was overlaid by an ash and silt fill (C1353) with occasional charcoal flecking within the southern chamber. The high silt content of this fill may indicate that the kiln was left open after the firing. This was overlaid by a pocket of friable material (C1349) that included superheated clay and charcoal, which was



Plan and sections of Kiln C1341



Mid-ex view of Kiln C1341, looking south (top)

Post-ex view of Kiln C1341, looking north (centre)

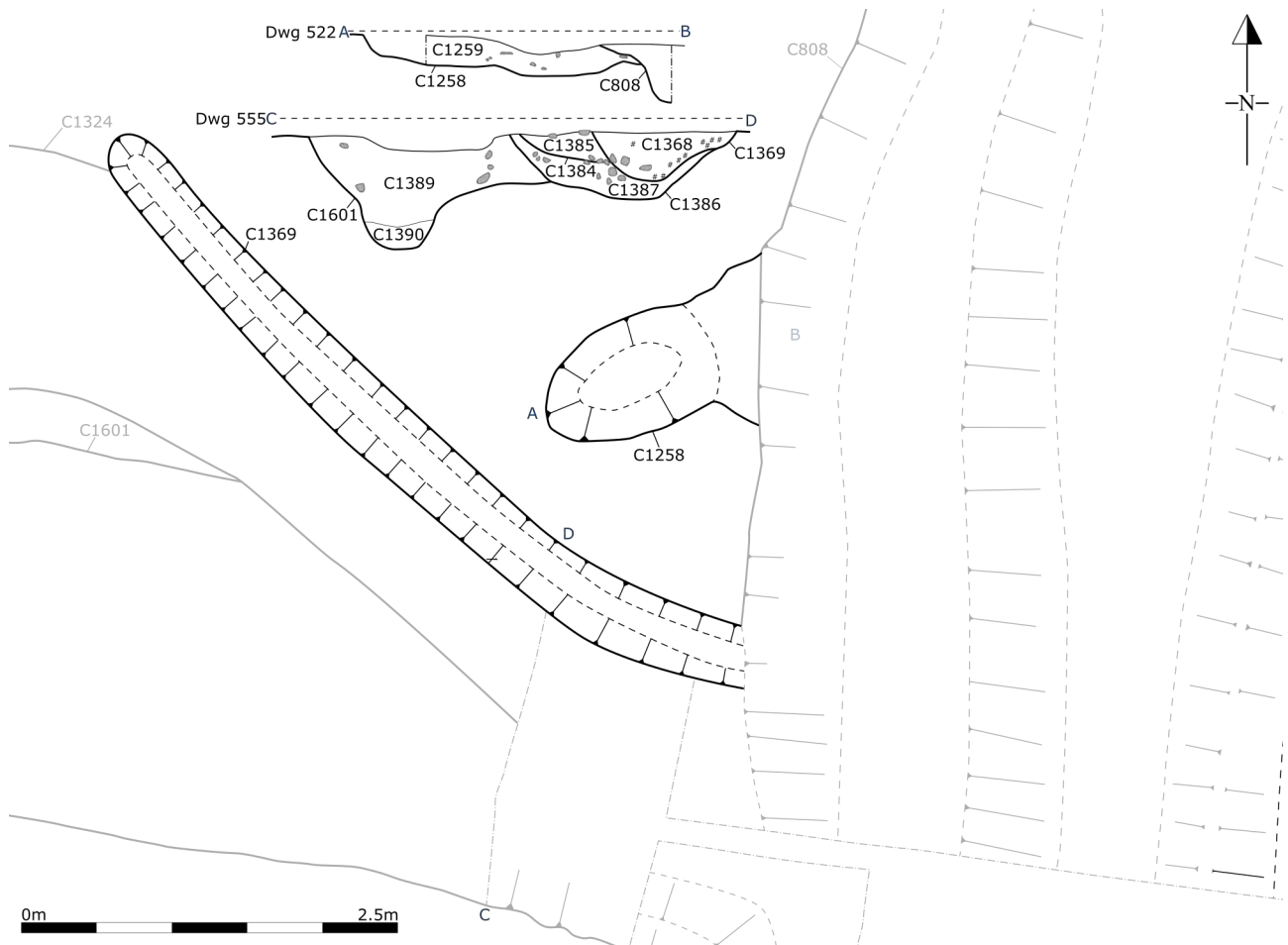
Post-ex view of southern end of Kiln C1341 with posthole C1393 visible in side of kiln, looking east (bottom)

centrally located within the southern chamber. This may relate to a final firing of the kiln but the charcoal content was relatively low so it may indicate a cleaning out event after the final firing. This was overlaid by a backfilling event (C1348) that extended across the full length of the kiln. The penultimate fill (C1347) was a slumped material along the eastern side of the kiln, which contained pockets of superheated clay and charcoal towards the base of the fill. This may be waste material that slumped into the kiln from the east, or an indication of a poorly surviving firing and cleaning out event. The final fill of the kiln (C1346) marked the final backfilling of the feature and contained occasional animal bone and iron slag fragments. A spread of plough soil (C1345) was present overlying the kiln.

A circular posthole (C1393) was cut into the side of the kiln in line with the southern end of the flue of the kiln. It had a single fill (C1394), which contained both charcoal and superheated clay. This suggests it related to the kiln and it is likely to have formed part of the kiln superstructure. The location of this keyhole-shaped kiln with its chamber to the south here is interesting as these are frequently dug into banks. This may suggest that when the kiln was created a bank ran to its south, possibly that associated with ditch C1601 of C1324. Few charred seeds were noted within this kiln and it is possible it may have served a different function.

Kiln 14

At the eastern edge of the annex within the northeast quadrant a truncated probable kiln (C1258; Kiln 14) was uncovered. This feature appeared to be the flue and part of the chamber of a kiln, which was truncated by the recut (C1159) of the annex ditch to the east. The kiln was orientated northeast-southwest and was expanding to the northeast suggesting it may have been a keyhole-shaped kiln located within or against an internal bank associated with the earlier annex ditch (C1103). The cut for the kiln was steep-sided and it sloped down towards the northeast, where the chamber would have been located. No evidence for in situ burning was noted on the base of the feature. A lens of charcoal was present on the base towards the southwest end of the kiln,



Plan and sections of Kiln C1258 (top)



Mid-ex view of Kiln C1258, looking northwest (centre)



Post-ex view of Kiln C1258, looking south (bottom)

with the remainder being filled with a silty material (C1259) that included flecks of charcoal, burnt and unburnt animal bone, slag and a hooked iron object. This material suggests the kiln was used as a waste pit prior to abandonment, and the presence of slag within the fill indicates that metalworking was occurring within the enclosure by the time the kiln had gone out of use. An east-west running agricultural furrow (C1260) containing a sherd of medieval pottery truncated both the kiln and annex ditch to the east.



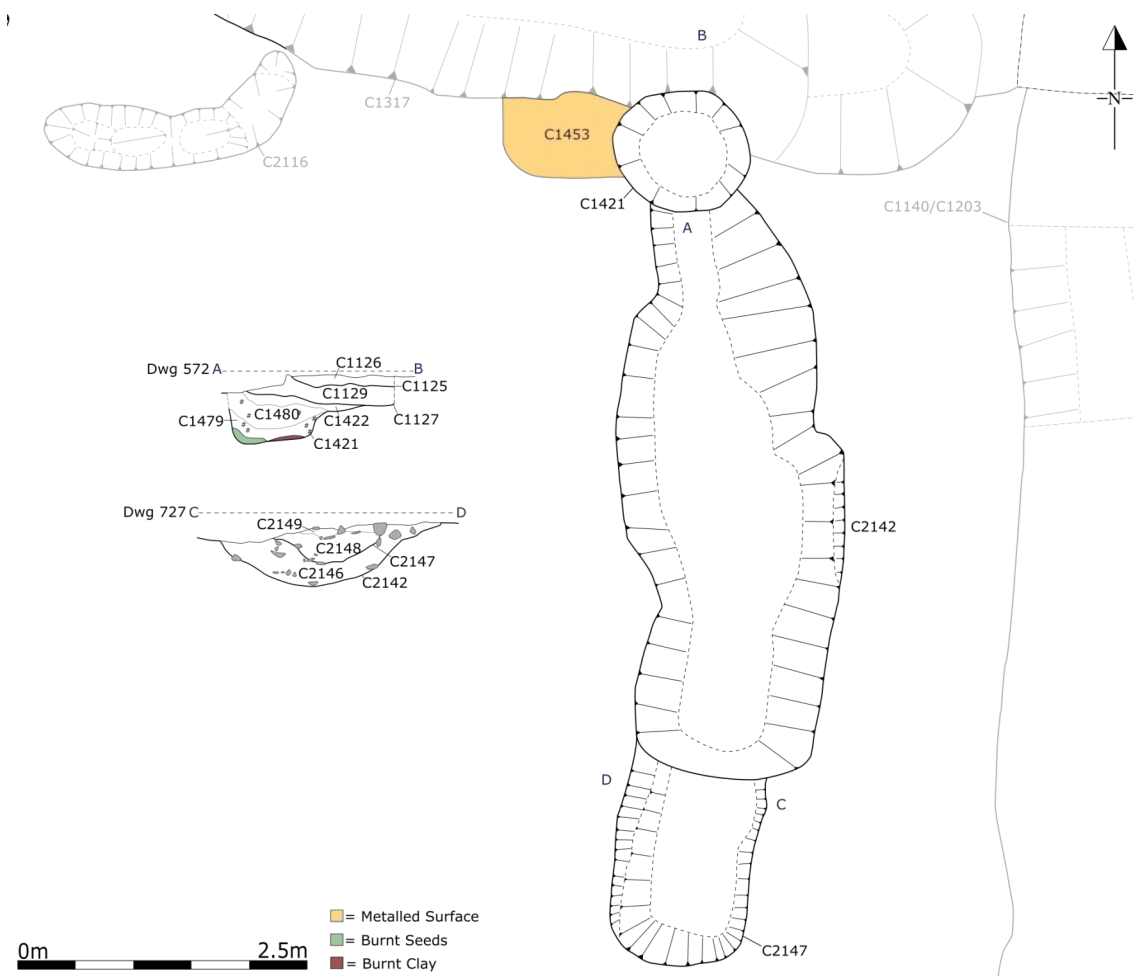
Mid-ex view of slot trench C1369 truncating Ditch C1324, looking west (top)

Plan and sections of Kiln C1421 (bottom)

A shallow curvilinear slot trench (C1369; Structure 15) arced around the southern end of the kiln, truncating a ditch (C1324) to the south and being truncated by the recut (C1159) of the annex ditch to the east. The fill of the slot trench (C1368) contained charcoal, animal bone and a small quantity of slag, similar to the fill of the kiln itself, which implies that this kiln and slot trench were backfilled while the metalworking was underway to the west. The agricultural furrow (C1260) truncating Kiln 14 also truncated the top of the slot trench to the north.

Kiln 15

Within the southwestern quadrant of the annex a truncated north-south orientated kiln was identified (Kiln 15). This was excavated in two stages, with the northern firing chamber (C1421) being in Area C and the southern chamber (C2142) being in Area D. The northern firing chamber was sub-circular and appears to have had a flue to the north that was





Mid-ex view of firing chamber C1421 truncated by Ditch C1127 to right, looking west (top left)

Post-ex view of firing chamber C1421, looking west (centre left)

Mid-ex view of Drying chamber C2142 truncated along the top by linear C2147, looking north (bottom left)

Mid-ex view of drying chamber C2142, looking south (top right)

Post-ex view of metallised surface C1453 to west of firing chamber, looking north (bottom right)

truncated along the northern side by ditch C1127. The base and northern side of the chamber were scorched. The basal fill within the firing chamber (C1479) was a charcoal-rich deposit with a clump of charred seeds along the southern edge of the pit. The charcoal was mixed with ash and represents the last surviving firing of the kiln. It was overlaid by a backfilling event (C1480), which was the main fill within the firing chamber. This was overlaid by a pale silt (C1422), which formed in the depression left by the kiln after it was backfilled. It was truncated on its northern side by the recut ditch associated with the metalworking (C1125). The southern chamber of the kiln (C2142) was

connected to the firing chamber by a narrow flue 0.6m in length. It was truncated by a later linear pit (C2147), however appears to have been sub-rectangular in shape. The fill of the southern chamber (C2146) was similar to the natural subsoil, but had inclusions of occasional animal bone and charcoal flecking. It did not contain obvious charred seeds. The kiln was probably a figure-of-eight shaped kiln, but the exact form was obscured by the later truncation

of the southern chamber.

A shallow linear channel (C2147) truncated the top of the southern chamber and extended to the south of its southern end. This was similar in scale and form to the channels related to the metalworking area to the north. Two fills were identified within the linear. The main fill (C2148) contained occasional slag and animal bone, and charcoal flecking becoming more prevalent to the north. This was overlaid by a layer of stone (C2149), which was used to seal the backfilled feature and provide a level surface and a small quantity of slag was retrieved from the surface.

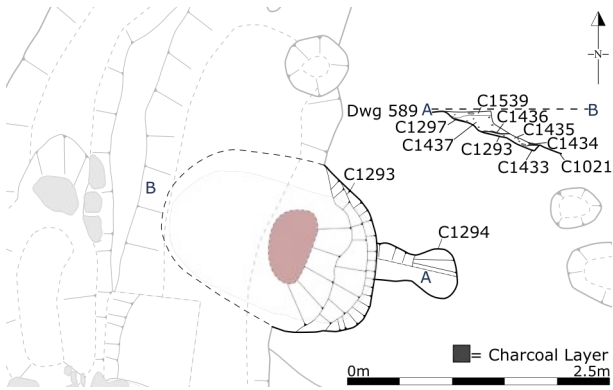
A small metallised surface (C1453) was uncovered to the west of the kiln and was truncated on its northern side by the recut associated with the metalworking (C1125). The metallising stopped c. 0.1m from the edge of the firing chamber, probably to allow for a superstructure associated with the chamber. This was a work surface associated with the kiln.

Kiln 16

A series of kilns were uncovered in the northwest quadrant of the annex. The earliest of these was the truncated bowl of a kiln (C1293; Kiln 16), which was partially rock-cut. The bowl sloped down from east to west, however the remainder of the kiln was truncated by Kiln 17 to the west. A shallow channel (C1294) to the east was identified that may have been a flue, which would suggest the kiln was originally keyhole-shaped. The rock along the base and sides of the kiln was scorched. Six fills were identified within it, with the basal fill (C1433) being a soft grey clay directly overlying the bedrock. This may be a layer of clay added to provide a level base to the kiln as a construction layer over the fractured bedrock. The secondary fill (C1434) was a charcoal-rich deposit containing charred seeds relating to a firing of the kiln. It was overlaid by a thick layer of banded scorched clay and ash (C1435), likely to represent a number of firing events within the kiln. This was overlaid by another charcoal-rich deposit (C1436) containing charred seeds, which in turn was overlaid by another thick layer of ash (C1437). This ash layer also overlaid a thin band of charcoal-rich material (C1297) that overlaid the eastern side of the kiln. It did not connect to

Plan of the six intercutting kilns in the northwest quadrant





Plan and section of Kiln C1293 (top left)

Mid-ex working shot of layered fills within kiln C1293, looking east (bottom left)

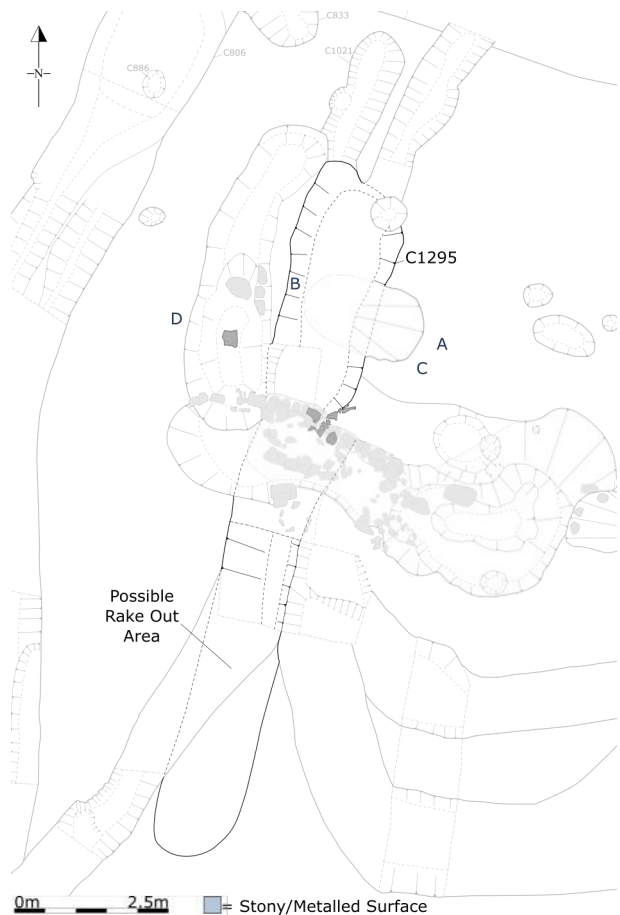
Plan of Kiln C1295 (right)

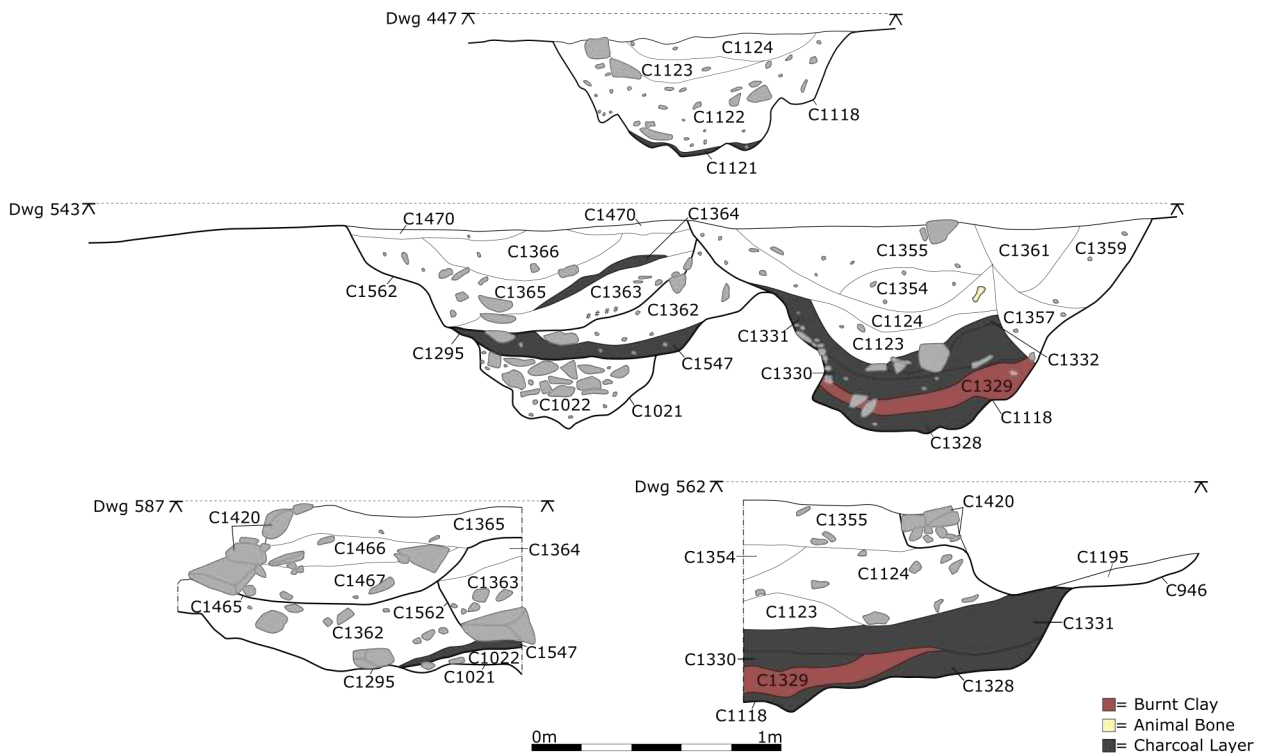
either of the charcoal layers within the chamber though it is more likely to relate to the latter as part of the final firing of the kiln. The final fill within the kiln (C1539) was a layer of redeposited natural used to backfill the kiln. This kiln was truncated by Kiln 17 to the west and also appeared to be truncated by the realignment of the western annex ditch (C1021). This suggests it related to the earlier phase of cereal processing within the annex rather than the later intensification in the northwest quadrant.

Kiln 17

The next kiln in the sequence was a large north-south orientated kiln (C1295; Kiln 17), which was cut into the fill of Ditch C1021. This is the first of a sequence of five intercutting kilns marking an intensification of cereal processing within the northwest quadrant. The kiln appears to have been keyhole-shaped in plan with the chamber to the north and a flue to the south. The kiln was truncated by Kiln 18 to the west and both kilns were truncated by Kiln 19 to the south. A partial stone lining (C1374) survived at the top of the southeast end of the chamber and at the base of the east side of the chamber. The lining at the top of the chamber was truncated by Kiln 19 to the south and robbed out elsewhere. The arc was five stones in length and in some places two courses in height. At the base of the chamber only the lining was only one block in height and it is unlikely that the two sections of lining were originally connected.

The flue (C1400) was identified to the south of Kiln 19, with the basal fill (C1403) being a compact grey and ashy material, which was





Sections relating to the kilns C1295 and C1118

overlaid by a layer of angular stone (C1402/C1335) that continued to the south. The upper fill of the flue (C1401) was a charcoal-rich fill that contained charred seeds and relates to the raking out of the kiln. The relationship between these fills and the fills within the chamber to the north was truncated away by Kiln 19. The flue extended for some distance to the south of the chamber and is likely to also represent a rake-out area.

Within the chamber of the kiln the basal fill was a charcoal-rich layer (C1547), with inclusions of charred seeds. It was overlaid by an ashy layer (C1362) along the western side of the bowl. A cleaning out event (C1562) was recorded partially removing this layer. The next fill (C1363) was a mixed material containing some charcoal and stone, possibly dumped into the chamber to create a new smaller chamber for the next firing of the kiln. This was overlaid by another charcoal-rich layer (C1252/C1364), which survived better to the west due to subsequent cleaning out. This curved up to the top of the kiln to the north and indicated that

the bowl associated with this firing of the kiln was located further south than the previous firing. This was truncated by a cleaning out of the southern end of the kiln (C1465), with the basal fill (C1467) of this event correlating with the basal fill of the flue to the south (C1403) and the secondary fill (C1466) correlating with the stonier fill (C1402) in the flue. The semi-articulated remains of a cat were retrieved from the secondary fill (C1466). The next fill within the kiln (C1365) was another layer of mixed material similar to fill C1363 below, possibly added to create another bowl within the now largely infilled chamber. The final fill of the kiln (C1366) was a pale ashy material without a layer of charcoal below. This may have been dumped in the now abandoned kiln or the kiln may have been used a final time and cleaned out prior to abandonment. Two thin patches of pure ash (C1228 and C1229) overlay this and are likely to be related to the layer above (C1470), a layer of redeposited natural and ash associated with Kiln 19 to the south, possibly a work surface associated with the kiln.



Mid-ex view of kiln C1295 being truncated by Kiln C1118 to right, looking south (top left)

Mid-ex view of kiln C1295 being truncated by Kiln C946 to left, looking west (centre left)

Pre-ex view of stone surface C1402, which formed a rake-out area to the south of Kiln C1295, looking northeast (bottom left)

Mid-ex working shot showing stone lining C1374 curving around southern edge of chamber of Kiln C1295, looking south (top right)

Mid-ex view of stone lining C1374 being truncated by Kiln C946 to left, looking west (bottom right)

Kiln 18

After Kiln 17 had gone out of use, another north-south running keyhole-shaped kiln (C1118; Kiln 18) was created parallel to it to the west and partially truncating it. The flue of this kiln was to the north with the chamber to the south. The kiln was rock-cut and was scorched on the base, with the rock in the sides of the cut whitened from heat. A partial stone-lining (C1139) was present along the sides of the southern part of the flue and within the southern chamber of the kiln. A large stone was present within the chamber along the eastern side where the softer fills of Kiln 17 would have needed additional support. A large baffle stone

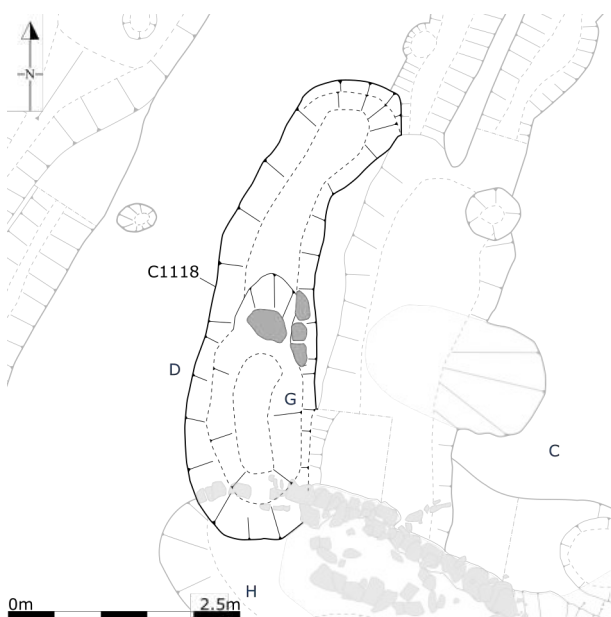
was present at the southern end of the flue with four smaller stones lining the kiln either side of this, with up to two courses surviving.

The basal fill (C1328) of the kiln was within the southern chamber and was a charcoal-rich material containing charred seeds representing the earliest surviving firing of the kiln. It was overlaid by a layer of ash mixed with clay including chunks of burnt clay (C1329), which



Post-ex view of Kiln C1118 with baffle stone and stone lining visible, looking north (top)

Plan of Kiln C1118 (bottom)



may be the remains of collapsed or broken through superstructure mixed with the ash of the previous firing of the kiln. This was overlaid by two firing events (C1330), one of which was mostly cleaned out and only survived along the eastern side of the chamber. The firing events consisted of bands of charcoal-rich material containing charred seeds overlying scorching of the material below and overlaid by a band of pale ash. This was overlaid by a loose ashy layer (C1331) that ran across the whole chamber. Overlying this was the remains of a further two firing events (C1332) surviving on the western side of the chamber with two thin band of charcoal and charred seeds separated by a thin ash layer. This represented the last surviving evidence for firing within the kiln. A burnt piece of sandstone was also present within this layer.

Within the flue the basal fill (C1121) was a thin charcoal-rich layer over the base and ran up to the baffle stone at the southern end of the flue. This may be the result of raking out of the chamber to the south and may also mark the firing location, with only smouldering material moved further into the kiln chamber. It was overlaid by a silty clay fill (C1122) that completely filled the northern end of the flue suggesting the flue may have been shorted for later firings. Immediately to the south of the baffle stone a deposit of charcoal (C1246) representing another fire location and possibly raking out was uncovered. This may relate to the final firing within the kiln as it was overlaid by a thick layer of fine ash, which extended from the firing chamber into the flue. A small quantity of slag was retrieved from this fill. Within the flue it was located in a narrower channel indicating the final version of the flue was narrower and shallower than the original. This was overlaid by a backfilling event (C1124/C996), which completely filled the flue and most of the chamber. A number of large burnt stones were present within this fill to the north, possibly parts of the stone lining ex situ, along with a small quantity of slag. Within the chamber this fill was overlaid by a fine ashy deposit (C1354), possibly a dump of material in the now disused kiln. The upper fill of the kiln (C1355) represents the final backfilling of the southern chamber and contained some possible metalworking waste. The southern edge of this



Mid-ex view of Kiln C1118, looking south (top left)

Mid-ex view of Kiln C1118 with Kiln C1295 to left, looking southeast (centre left)

Post-ex view of Kiln C1293 to left, Kiln C1295 and Ditch C1021 in centre and Kiln C1118 to right, looking south (bottom left)

fill was truncated by Kiln 19.

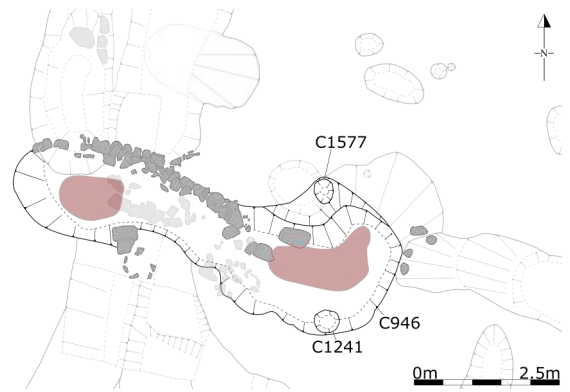
Along the western side of the chamber a number of additional fills were recorded. These were initially recorded as cutting the upper fill of the kiln, however it appears they relate to the kiln itself. The earliest of these (C1357) is a mixture of ash and charcoal, which is the remains of a cleaning out event in the kiln, possibly related to fill C1331. The next is a slump of clay lining along the edge of the kiln (C1359), which consisted of redeposited natural. This originally rested on top of the rock-cut section of the kiln lining the side and is likely to have formed part of the superstructure. It is unclear whether this superstructure would have been replaced frequently or whether this material comes early in the kiln sequence. The final fill (C1361) is a clump of ash similar to C1354, the position of which likely altered as the clay lining slumped into the soft ash fills within the kiln. As with Kiln 17 to the east, the upper fill of the kiln was overlaid by a spread of mixed and mottled ashy material (C1470) associated with Kiln 19 to the south, possibly a ploughed out work surface or spoil heap associated with that kiln.

The flue of the kiln truncated an earlier double posthole (C1097). This posthole had steep, near vertical sides, a relatively flat base and was figure-of-eight shaped in plan. It was filled by a soft clay with occasional charcoal flecking (C1098) and overlaid by the basal fill of the flue (C1122). This was the remains of a posthole for two posts side by side and predated Kiln 18. Another large posthole (C943) was identified to the northeast truncating Ditch C1021 which may be contemporary. These postholes may be the remains of a windbreak or similar structure associated with Kilns 17 or 18.

Kiln 19

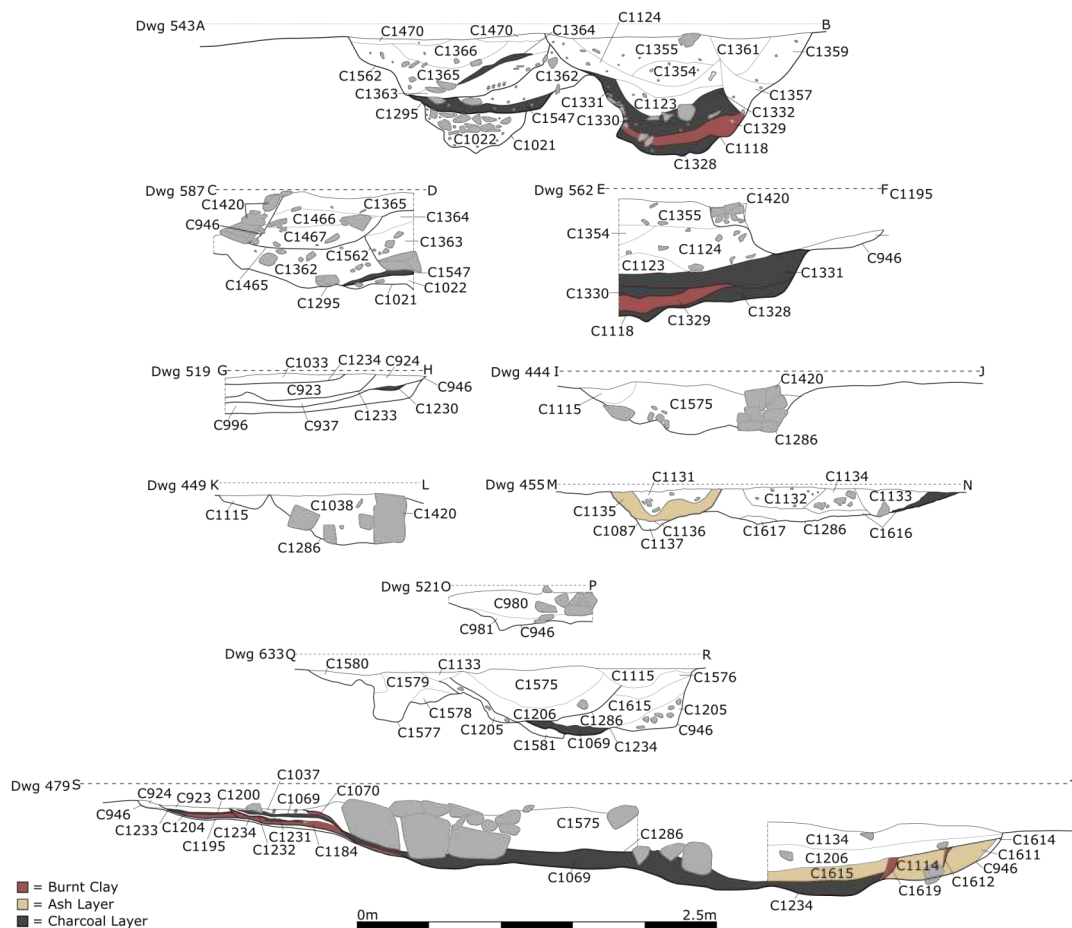
The next kilns in the sequence were two intercutting kilns orientated east-west in approximately the same location, each kiln slightly reworking the previous version. The earliest of these (C946; Kiln 19) truncated the two earlier north-south kilns (Kilns 17 and 18). This kiln had a large stone-lined chamber to the west and a stone lined flue to the east. It was unclear whether it was also associated with a second chamber to the east due to truncation,

however the later kilns that replaced it did. Two sections of stone-lining were associated with the kiln. One section (C1420) was present along the northern side of the flue and chamber and consisted of large angular blocks, occasionally with smaller blocks wedged in between. The lining on the southern side (C1423) was more intermittent, having been truncated by subsequent kilns. One large boulder was present at the junction of the western chamber and the flue and a number of smaller stones were present along the side of the flue itself. Within the flue the stones were positioned on a small shelf at the top edge of the flue cut with the remainder of the side being cut into natural. Some of the stones in the northern lining had been burnt on their internal and upper faces, however as a number of subsequent kilns were on top of this it does not indicate a firing location. A number of stones within the northern lining jutted out to the south at the junction between the western chamber and the flue, possibly acting as baffle stones, however the kiln was too truncated to say this with certainty.



Plan of Kiln C946 (top)

Sections of Kiln C946 and C1286 (bottom)



The fills on either side of these stones within the flue and the chamber were different. Two fills were identified on the base of the chamber. A large spread of clay (C1195) covered much of the base of the cut, particularly over the rock-cut parts of the kiln. This is likely to have been added to give the kiln a uniform base. The clay was lightly scorched on top in places indicating a firing event took place at this level. In the western end of the chamber a charcoal-rich fill (C1230), the remains of an early firing of the kiln, survived overlying the base. The relationship between this and the other basal fill within the chamber did not survive, however this is likely to be the firing event that scorched the initial clay lining. Both of these fills were overlaid by a dark purple scorched silty clay (C937), with inclusions of charred seeds, charcoal and ex situ stones from the lining. This was the remains of the second and more intense firing of the kiln, with the material itself likely to be a burnt version of fill C1230. The last surviving fill within the chamber (C924) was a pale ashy clay with inclusions of burnt clay and charred seeds, which survived around the western arc of the chamber and was truncated away by later kiln cuts elsewhere. This overlay the scorched side of the kiln to the west. The fills within the chamber indicate that firing was taking place within the western chamber during the use of this kiln. The lack of a stone lining to the west may suggest that this section of the firing chamber was an access point or stokehole. This also implies that the kiln was dumbbell-shaped like the subsequent kilns in this location as if the kiln were keyhole-shaped the lining should have extended around the circuit of the chamber unbroken. Within the flue of the kiln a further two fills were identified. The basal fill (C981) was a mottled silty clay and contained occasional ex situ stones from the lining. It was overlaid by a paler silty clay with charcoal flecking (C980), which also contained ex situ stone from the lining. Both of these fills survived on the northern side of the flue with the southern side being truncated away by the later Kiln 20. It is unclear which recutting of the kiln they relate to as they were separated by the later kiln.

A number of cuts and recuts for the eastern chamber of Kilns 19 and 20 were also evident. These are likely to relate to the three phases of



Mid-ex view of Kiln C946 being truncated by Kiln C1286, looking south. The stone lining of Kiln C946 can be seen in the foreground and the stone lining of C1286 in the background to the left (top)

Mid-ex view of west chamber of Kiln C946 showing multiple recuts, looking north (centre)

Mid-ex view of Kiln C946 showing the edge of Kiln C1118, which it truncated, looking south (bottom)

Kiln 19 and to Kiln 20, however an exact correlation between the cuts was not always clear. This is likely due to the lack of enclosing stone lining in the eastern chamber, which had a clay lining during a number of the firing phases. The earliest cut of the eastern chamber corresponds to the initial phase of Kiln 19 (C946). The eastern chamber at this point was sub-oval in plan with a flat base and straight sides. A small band of clay lining (C1614) survived at the eastern end of the chamber. This pale clay did not exhibit scorching. Three fills survive relating to this phase of the kiln, an ashy clay (C1581) along the northern side of the eastern chamber, slumped natural (C1205) along the northern and southern sides of the cut of the eastern chamber, and a dense deposit of charcoal and ash at the eastern end of the chamber (C1611). The depth of this material suggested it resulted from a number of firings of the kiln in this phase.

Two postholes were associated with this early phase of the kiln, one to the north (C1577) and one to the south (C1241) of the eastern chamber. The northern posthole truncated an earlier shallow rock-cut pit (C1551). The pit was sub-oval in plan and had a single fill (C1578/C1580), and was truncated by the posthole at its eastern end. The posthole had a single clay fill (C1579), which was deposited into the socket after the removal of the post. The initial two fills were a packing clay present to the south (C1578) and north (C1580). The posthole was slightly angled to the south, however the angle may have been created by the removal of the post. The southern posthole (C1241) had a single fill (C1613), a dark silt, which formed after the removal of the post. It was heavily truncated by the recutting of the kiln (C1233), with the fill only surviving along the southern side and base of the posthole. The two postholes related to a superstructure for the initial phase of Kiln 19, with the clay lining to the east indicating the superstructure was a composite of wood and clay. The pit truncated by the northern posthole relates to an earlier phase of activity. A number of additional shallow pits are present to the north that may be associated with the pit.

The second phase of Kiln 19 (C1233), involved a bowl-shaped depression cut into the fills of



Mid-ex view of Kiln C946 being truncated by Kiln C1286, looking east. Posthole C1577 can be seen in section to left (top)

Mid-ex view of Posthole C1241 in the side of Kiln C946, looking south (centre)

Mid-ex view of east chamber of Kiln C946 being truncated by Kiln C1286, with Posthole C1241 in foreground (bottom)



Mid-ex view of east chamber of Kiln C946 showing multiple recuts and clay linings, looking north (top)

Post-ex view of Kiln C946, looking east (bottom)



the earlier kiln within the western chamber, which stretched to the edges of the earlier cut to the north and south but not to the west. Within this a firing event consisting of scorched clay (C1204) overlaid by a thin layer of charcoal-rich material (C1200) was identified. This was in turn overlaid by an ashy deposit (C923) with inclusions of burnt clay lining from a superstructure as well as charcoal and charred seeds and related to the firing of the kiln. Within the eastern chamber this phase was associated with a scorched clay lining (C1612), which partially collapsed over the fill of the earlier phase of the kiln to the east. This recutting of the kiln had a slightly shorter eastern chamber and also truncated the backfills of the postholes to the north and south. Two ashy fills (C1114 and C1576) survived within the eastern chamber of this phase of the kiln, one of which contained fragments of super-heated clay. The eastern chamber for this phase remained at the same depth as the earlier phase of the kiln. The scorching of the lining of this phase of the kiln suggests that the kiln was

being used in both directions at this time, with firing occurring in the east and west chambers.

A third recutting (C1234) of Kiln 19 saw the size of the western chamber decreased further, with the recut chamber not reaching the northern or western side, but extending to the southern side of the kiln. The recutting provided a level area within the western chamber that sloped down into the flue to the east. This recutting of the kiln had a number of associated burning events. The first of these (C1184) was a scorched layer along the base of the chamber and into the flue of the recut kiln. This was overlaid by a band of charcoal-rich material (C1232) from a firing of the kiln, which was located in a slight depression at the western end of the recut chamber. This was overlaid by an ashy deposit (C1231), with inclusions of charcoal, which in turn was overlaid by another charcoal-rich layer (C1069) associated with a firing of the kiln. This was overlaid by an intensely burnt layer (C1037) representing at least one and possibly multiple firings of this phase of the kiln. The sub-circular patch of burning gives an indication of the size of the firing chamber during this later phase of the kiln. A separate number (C1070) was given for the scorching within the flue, however this is the same phase as the intense burning within the chamber. A charcoal layer was not present over this, presumably having been cleaned out prior to the abandonment of the kiln. The final fill of the kiln (C1033) was an ashy deposit, presumably the remains of the final cleaning out event within the kiln.

The third phase of the kiln (C1234) also had a narrower eastern chamber than the previous two kiln phases, however the chamber was dug to a deeper level. The orientation of the chamber also appears to have changed slightly, with the upper section of the eastern chamber running further to the northeast. Scorching on the base of the chamber indicated this phase was also used in both directions. The remains of a clay lining (C1619) were also recorded along the eastern end of the chamber. The basal fill within the eastern chamber (C1069) was also present to the west within the flue to the west. It was overlaid by an ashy layer (C1615), which contained lenses of charcoal indicating separate poorly surviving firing events. It also contained

clumps of hardened clay, burnt and unburnt, which were part of a superstructure for the kiln.

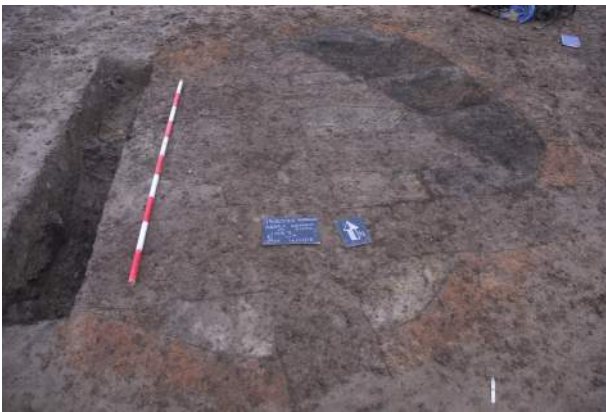
Kiln 20

Once the final recutting of Kiln 19 had gone out of use the kiln was altered significantly. The new kiln (C1286; Kiln 20) was comma-shaped, approximately using the eastern chamber of the Kiln 19. The flue for Kiln 20 cut through the fills in the eastern chamber of Kiln 19, with the new chamber extending to the northeast. The angle of the flue for the new kiln was altered slightly and a new stone lining was inserted along the northern side of the flue (C1279), probably robbing out parts of the stone lining of the previous kiln. The lining survived to two courses in height and comprised mainly of large angular blocks with smaller stone infill. It



Plan of Kiln C1286 (top)

Mid-ex view of Kiln C1286 cut truncating Kiln C946, with baffle stones along flue visible, looking west (bottom)



Mid-ex view of flue of Kiln C1286 with lining surviving to right and shelf where southern lining poorly survived to left, looking west (top left)

Mid-ex view of east chamber of Kiln C1286, with eastern end of Kiln C946 visible in foreground and west end of Kiln C838 to right, looking north (centre left)

Mid-ex view of Kiln C1286 being truncated by Kiln C838 to left, looking west (bottom left)

Mid-ex view of western end of Kiln C1286 with flue excavated and stone lining visible, looking east (top right)

Mid-ex view of Kiln C1286 showing stone lining C1279, looking north (bottom right)

appears to reuse the lining (C1423) along the southern side of the flue of Kiln 19, however this may have been reconstructed during the creation of the new kiln. A steeply sloping cut was made into the fills of the earlier kiln at the western end of the flue, with intense burning at this point suggesting the firing location for the new kiln was within the flue. A series of stones along the base of the cut may have acted as baffle stones. A deposit of mottled ash (C1045) with occasional burnt clay and charcoal inclusions was present at the western end of the flue, the remains of the last firing of the kiln. This merged with a mixed layer of ash and silty clay (C1038) within the remainder of the flue, a

mix of ash and collapsed superstructure. A number of stones from the lining were within this fill suggesting it accumulated as the kiln was falling into disrepair. Along the southern side of the flue an additional fill (C1071) was present and appears to be related to the superstructure overlying the stone lining along the southern side of the kiln, which had slumped into the flue after it had gone out of use. It is likely that the soft ash fill was present already by this time with this slumping of the superstructure pushing it to the north and with additional

material from the superstructure mixing with it to form C1038 to the north.

The stone lining for the flue survived to the edge of the eastern chamber of the earlier kiln, which then turned to the northeast cutting through the fills of the earlier kiln and opening out into a large broad chamber, which was at a higher level than the base of the earlier kiln. The basal fill within the chamber (C1617) consisted of a number of patches of hardened ash on the base of the chamber representing the remains of an early cleaning out event. This was overlaid by a charcoal-rich material (C1616) in the northeastern end of the chamber, where it was the only surviving fill. Further to the west the charcoal layer was overlaid by a layer of ash mixed with charcoal (C1206), with inclusions of

clumps of hardened clay and occasional burnt stone. This fill did not extend the whole way to the northeastern end of the kiln. It was in turn overlaid by a mottled and mixed layer of ash and clay (C1134/C1575), which overlay the rest of the kiln, but again did not extend fully to the northeastern extent of the chamber. A number of plough furrows (C1133, C1115/C1131, C1132 and C1207) truncated the kiln running east-west with a further plough furrow (C1208) cutting the kiln running north-south. Some copper-alloy residue was retrieved from one of the furrows (C1131).

A circular stake-hole (C1275) with a single fill (C1276) was identified in the base of Kiln 20 to the north and may be related to the superstructure associated with the earlier Kiln



Post-ex view of Kiln C1286 with Kiln C838 in background, looking east (top right)

Post-ex view of Kiln C1286, looking south-east (bottom right)

19. It was overlaid by the fill (C1117) of the later kiln.

A spread of ashy clay (C1470) overlying occasional charcoal patches (C1178) was uncovered to the north of Kilns 19 and 20. This layer appeared to be waste ash from the kilns and sealed Kilns 16, 17 and 18.

An east-west running cut (C1486; Structure 17) was identified curving around the southern side of the eastern chamber of Kiln 19 and 20 and may be the truncated remains of a windbreak. It truncated the recut of the annex subdivision ditch (C835) to the west, terminating along the western edge of the backfilled ditch. The recutting of the slot trench made it appear more ditch-like to the west, however it was more recognisable as a slot trench to the east. The terminus of the windbreak to the northeast (C1108) had no in situ burning, however the basal fill (C1110) was a dark charcoal-rich material with two distinct lenses of charcoal present. This contained a piece of slag and animal bone along with charred seeds. It was overlaid a less charcoal-rich material (C1109), though charcoal flecking was still apparent. The east-west running section of the slot lacked definition as it was recut a number of times to varying depths. The eastern end of this section had a single fill (C1487), which was similar to the upper fill (C1109) of the northeast terminus, though no charcoal was apparent. The western end was broader and had two fills, with the basal fill (C1488) being a darker material with occasional stones, relating to the recutting of the slot trench a number of times.

Kiln 21

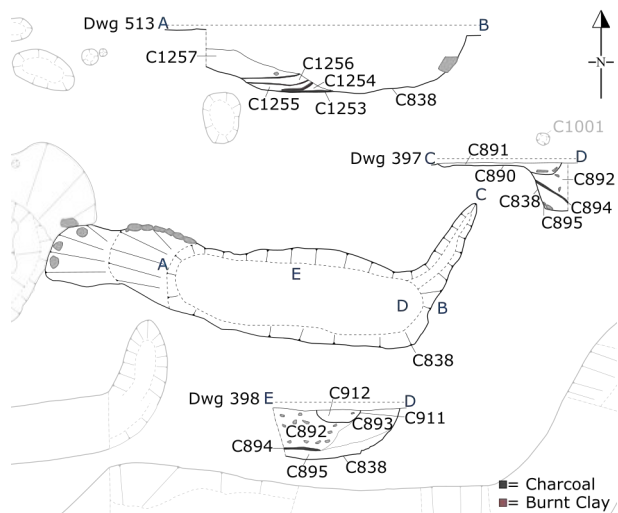
A large kiln (C838; Kiln 21) was located to the east of and partially truncating Kiln 20. This kiln was of substantial proportions, being 6.1m in length and 1m in depth. The kiln was an evolved figure-of-eight shape in plan. A small sub-circular firing chamber (C1087) was located at the western end of the kiln cut into the eastern end of Kiln 20. The base and sides of the firing chamber were lined with plastic-like clay, which was scorched. A sloping flue connected the firing chamber to the large sub-rectangular drying chamber and was partially stone-lined along the northern side. The lining (C1373) was of uncoursed dry stone



Northeast terminus of curvilinear slot C1486, part of windbreak associated with Kilns C946 and C1286, looking east. The southern end was truncated by a plough furrow and continued beyond this point (top)

Slot trench C1486 truncating Ditch C802/C1406 with the southern side of Kilns C946 and C1286 to right, looking west (centre)

Plan and sections relating to Kiln C838 (bottom)





Mid-ex view of flue of firing chamber C1087 of Kiln C838, looking east (top left)

Mid-ex view of firing chamber C1087 to right cutting fills of Kilns C946 and C1286, looking northwest (centre left)

Mid-ex view of multiple ash and charcoal layers within western end of drying chamber of Kiln C838, looking west (bottom left)

Mid-ex view of flue of Kiln C838 with firing chamber C1087 to left and flue to right with stone lining visible, looking north (top right)

Mid-ex view of stone lining C1373 within flue of Kiln C838, looking north (bottom right)

construction and consisted of relatively thin and flat angular stones, surviving up to five stones in height. Three stones were also present along the southern side suggesting a lining had been present here also. The flue sloped at a c. 30-degree angle for 1m before dropping down slightly into the large chamber. The main chamber of the kiln had no obvious subdivision. The northern and southern sides were vertical and partially rock cut. The eastern side was steep-sided with a large boulder resting in the southeast corner, which may also be related to a lining. There was no further evidence for a lining within the chamber, however, and it may also have served as an

access point. The base of the kiln was relatively flat, with the western end being scorched and lying slightly deeper than the eastern end. There appears to have been an emphasis on control with this kiln as the fire was essentially located outside of the main kiln chamber, with smouldering material deposited into the kiln from the firing chamber along the flue, which presumably also served as an access.



Post-ex view of Kiln C838, looking northwest (top)

Post-ex view of Kiln C838 with Kiln C1286 in background, looking west (bottom)



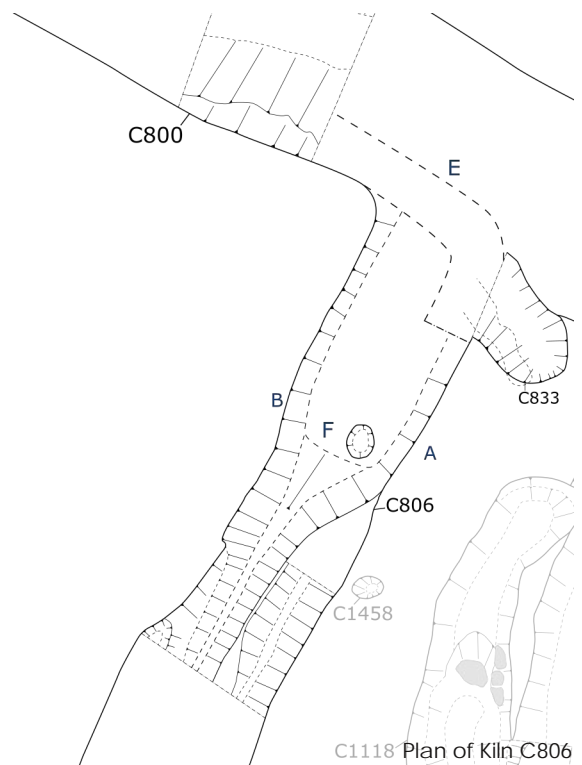
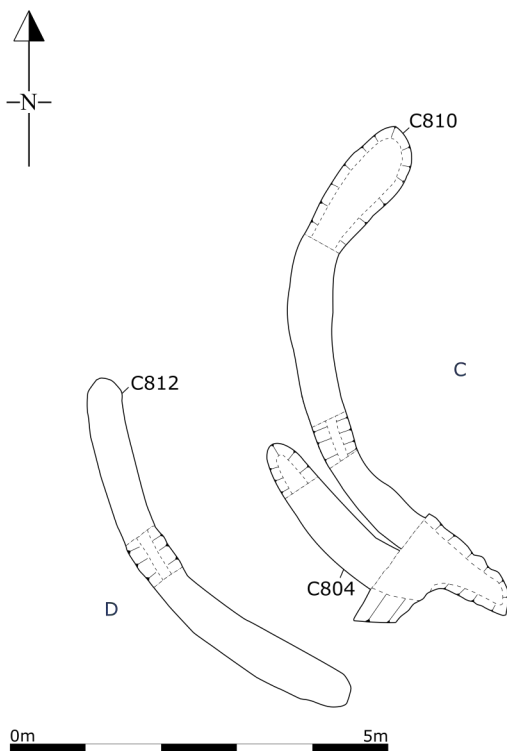
The basal fill (C1137) within the firing chamber (C1087) to the west contained occasional charcoal flecking and is likely to relate to an early cleaning out of the pit. It was overlaid by the scorched clay lining (C1136) of the last phase of use of the firing chamber, which contained two iron objects. A small pocket of ash (C1135) survived within the western end of the firing chamber overlaid by the main charcoal-rich fill (C1117) of the firing chamber, which contained charred seeds. This did not extend into the flue. Need to decide what to do with sample as prob combination of this and Kiln 20. A minimum of four large firing events survived within the western part of the kiln. The basal fill of the kiln (C1253) was a layer of charcoal overlying in situ burning at the base of the western end of the kiln. It was overlaid by a thick ashy deposit (C1254). The top of this deposit was scorched by the second surviving firing event, with a subsequent layer of charcoal and ash (C1255) overlying it. A third firing event (C1256) overlay this, repeating the sequence of scorching of the

ash below followed by a layer of charcoal and a thick layer of ash. This was overlaid by the final surviving firing event within the kiln (C1257), again with the same sequence of scorching, charcoal and thick layer of ash. These fills appear to relate to smouldering material being deposited into the western end of the chamber from the firing chamber during the use of the kiln, which piled up over time. In the eastern end of the chamber the basal fill (C895) was a silty clay deposit, which appears to be a cleaning out deposit associated with the first firings of the kiln. It was overlaid by a charcoal-rich fill (C894), which extended to the edges of the kiln and curved upwards at the edges of the kiln and had inclusions of a small quantity of slag. This appears to relate to the final firing of the kiln (C1257) and suggests that the base of the drying chamber for successive firings of the kiln was cut into the waste from earlier firing events. This was overlaid by a silty clay deposit (C893), which extended over the firing events to the west also. This fill contained chunks of fired clay that may relate to the superstructure of the kiln, particularly to the east. The penultimate fill within the kiln (C892) consisted mainly of stone and was located centrally within the eastern end of the kiln and represents the final backfilling of the large kiln cut. A less stony deposit (C912)

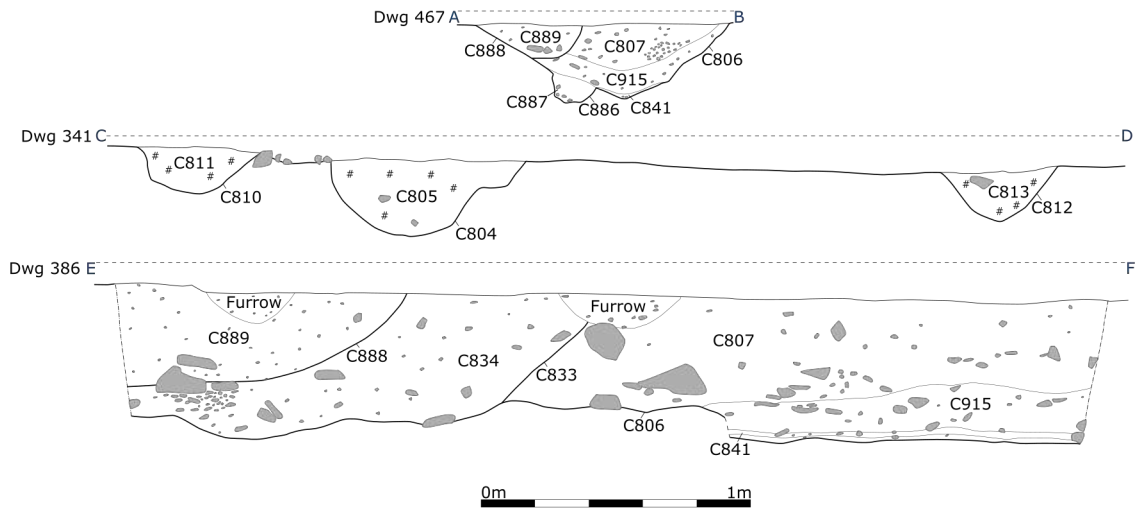
overlay the backfill centrally within the cut but did not extend across the entire kiln, likely to have formed after the backfilling of the kiln settled. A shallow linear feature (C890) was uncovered extending out from the northeast corner of the kiln. This may have been related to the kiln, possibly acting as an additional flue, however the fill (C891) overlay the backfilling of the kiln (C892) suggesting it remained open after the kiln had been infilled, or that it may be a later unrelated feature.

Kiln 22

In the northwest corner of the annex a north-south running kiln (C806; Kiln 22) was identified. This kiln was unusual in that it was directly in line with the ditch forming the eastern perimeter of the annex itself and was located in what appears to have been a former access point or entrance as the ditch terminated to the south of the kiln. The kiln had a squared rock-cut chamber with a probable flue extending to the south. A patch of burnt bedrock on the base was uncovered indicating firing within the kiln. The kiln was truncated by a pit (C833) to the north, which was associated with the waste pit (C844) cut into the northern ditch of the annex, and by a late drainage channel (C888) running down along the western



C1118 Plan of Kiln C806



Sections of Kiln C806 (top)



Mid-ex view of burnt base of Kiln C806, looking west (upper centre)

Mid-ex view of Kiln C806 being truncated by drainage gully C888, looking south (lower centre)

Mid-ex view of flue of Kiln C806 to left with drainage gully C888 to right, looking north (bottom)



side of the annex. The basal fill of the kiln (C841) was a thin deposit of charcoal-rich material along the base of the feature. A small sub-circular pit (C886) was uncovered at the base of the kiln along the east side and was rock-cut. The purpose of this feature was unclear, however it is likely to be contemporary with the kiln. A single fill (C887) was identified within the pit, which was similar to the fill within the kiln itself above it, but more mottled. Overlying the posthole and the basal fill was the main secondary fill (C915) of the kiln, which had moderate inclusions of stone. This fill appeared to relate to the backfilling of the kiln. The upper fill of the kiln (C807) was a well compacted silt deposit with some inclusions of slag, and may indicate a period where the kiln remained open after its initial partial backfilling. This fill was also present within the flue to the south. The kiln predated the intensification of kiln activity to the east within the annex and may be contemporary with the repositioning of the annex ditch (C1021).



Mid-ex view of slot trench C810 being truncated by C804 and curving to northwest, looking west

To the west of the kiln two curvilinear slot trenches were identified (C810 and C812). The northernmost of these (C810; Structure 13) was the best surviving and arced from west to southwest to south and had a single fill (C811). It was truncated at its southern end by a later east-west orientated linear feature (C804). For much of its length this had a single fill (C805), however an additional more charcoal-rich upper fill (C840) was recorded at one point. It is possible this feature represents the partially surviving remains of an additional curvilinear slot trench, or a later agricultural feature. To the south of this a second curvilinear slot trench (C812; Structure 14) was uncovered, which curved in a similar way to the northern example, and also had a single fill (C813). A clay pipe stem was retrieved from this fill and may indicate damage through agricultural activity. At least two of these are windbreaks, with the curve of the two better surviving slot trenches suggests they shielded features to their northeast. The closest kiln was Kiln 22, however it is possible the windbreaks also served the other kilns within the northwestern corner of the annex.

Additional features within the northern annex

A cluster of pits and postholes were uncovered to the north of Kiln 19 and c. 3m south of ditch C800. An oval pit (C982) orientated east-west was excavated with concave sides and a flat base, parallel to Kiln 19 to the south. It had a single fill (C983) that had charcoal inclusions. Two postholes were identified to the north of this, with an additional stake-hole associated with one of them. The small circular posthole (C1009) to the west had three fills. The basal fill (C1013) was darker than the fill overlying it (C1011). This was overlaid by a topsoil-like material (C1012) along the western side of the posthole, which was the result of ploughing. A second circular posthole (C1007) was uncovered to the east, which had a relatively flat base and a single fill (C1008) with no inclusions. A small circular stake-hole (C1005) was uncovered beside the eastern posthole, which was V-shaped in profile and had a single fill (C1006).

Within the northwest quadrant of the annex a further three features were uncovered. A small stake-hole (C999) was uncovered directly to the south of ditch C800, which had a single fill (C1000) and no inclusions. To the southeast of this beside Ditch C802 an oval stake-hole (C1073) of similar dimensions was uncovered, which had a single fill (C1074) of burnt natural, perhaps indicating the stake was burnt and subsequently removed as charcoal was absent from the fill. A small posthole (C1001) was uncovered to the south of the stake-holes, which had a single fill (C1002) and no inclusions.

A large circular posthole (C943) partially truncated the western side of Ditch C1021. A number of stones around the edges of the posthole were noted, possibly packing stones. It was straight-sided with a concave base. The basal fill (C945) was a charcoal-rich material with frequent burnt clay fragments. There was no in situ burning within the posthole so this material is in a secondary position. It is possible it was dumped into the posthole from one of the kilns (Kilns 16-17) to the south when the post was removed. The upper fill (C944) was similar to the fill below but more compacted. A thin spread of this material spread to the north



Post-ex view of posthole C943, looking south (top)

Mid-ex view of fire-pit C1056, looking west (bottom)

of the posthole, presumably disturbed through ploughing, with a plough furrow visible truncating the material.

An oval post- or stake-hole (C964) truncated the northern end of Ditch C1021. The oval shape in plan was created by the removal of the upright, which damaged the northern side of the feature, giving it a more stepped appearance. The other sides were near-vertical. The fill of the feature (C965) was similar to the nearby posthole (943), containing frequent charcoal. It is likely these features relate to one another, possible being part of a structure associated

with the kilns truncating the ditch. The spread of material (C1470) associated with the later east-west orientated Kiln 19 overlay the stake-hole suggesting these features relate to the earlier Kilns 16 and 17.

A sub-circular fire-pit (C1056) was uncovered to the north of Kiln 21 and east of pit C982, which contained three fills. The basal fill (C1060) had inclusions of charcoal and burnt clay possibly from a previous cleaning out of the fire-pit. The secondary fill (C1059) was scorched red and may be the burnt upper portion of the fill below. This was overlaid by the upper fill (C1058), a charcoal-rich deposit. The secondary and upper fills of the pit relate to the last fire within the fire-pit. The fire-pit is located in close proximity to the kilns to the south and may be related in some way.

A sub-circular pit (C1458) was uncovered in close proximity to the kilns in the northwest quadrant of the annex. The fill (C1459) was silty with a layer of charcoal at the top. Too little of the feature survived to indicate a purpose, however it may have been related to the nearby kilns.

A shallow irregular-sided linear pit (C1191) was identified to the north of Ditch C1601. It had a single fill (C1192), which contained a small quantity of slag. This was in turn truncated by an oval pit (C1189), which had a single charcoal-rich fill (C1190). Both features were very poorly surviving and truncated by later ploughing activity.

A shallow sub-circular pit (C1247) was uncovered to the south of the turn in ditch C802. It had a single friable fill (C1248), however too little survived to suggest a function. A circular posthole (C1263) was uncovered closer to the edge of ditch C802, which had a tapered base a possible packing stone along its northern side. This also had a single fill (C1264) and was not clearly associated with any other features.

To the south within the southeast quadrant a number of additional pits were uncovered. A shallow oval pit (C2011) containing a single fill (C2012) with no inclusions was uncovered to the east of Ditch C1140. A second nearby pit



Mid-ex view of pit C2015, looking south (top)

Mid-ex view of pit C2380 to left being truncated by annex ditch recut C1431, looking south (bottom)

(C2013) was similar and contained a similar fill (C2014). Both were orientated north-south. It is possible that these features are non-archaeological, possibly being deeper sections of north-south ploughing.

To the west of Ditch C1140 a large roughly circular pit (C2015) was uncovered containing a single fill (C2016) with inclusions of stone, charcoal, animal bone, slag and burnt bone. The inclusions suggest the pit was used as a waste pit, however whether this was its original purpose is unclear. The proximity of the pit to Kiln 14 to the north may indicate these features are related.

To the northwest of this a circular posthole (C2114) was located centrally within the southwest quadrant of the annex. It contained a single fill (C2115) that had charcoal inclusions near the top. This posthole was quite isolated, which is unusual within the northern annex.

At the western edge of the southwest quadrant another circular pit (C2380) was uncovered, which was truncated along its western side by the latest phase of the ditch forming the western side of the annex (C1431). This pit was along the edge of the annex and in a position where a bank would have been expected, assuming the annex had an internal bank. This may suggest that at some times the bank for the annex was external, or that the pit predates the ditches. Three fills were identified within the pit. The basal fill (C2074) was relatively sterile with occasional small stones, and was overlaid by a charcoal-rich secondary fill (C2075). The upper fill of the pit (C2076) was a silty material suggesting the pit naturally silted up over time rather than being backfilled. As there was no in situ burning it is possible the pit was used as a waste pit rather than as a fire-pit, however there is a lack of additional waste material.

An east-west orientated post-medieval drain (C2022) ran across the southern end of the western ditch of the annex, truncating the latest phase of the ditch (C888/C1432). This was an agricultural drainage feature with a single fill (C2070), which contained slag and animal bone along with post-medieval ceramic. It also truncated a metallised surface (C2023) to the west of the annex.

An S-shaped furrow (C2082) was also identified in the southwest quadrant of the annex truncating the final phase of the annex ditch to the west (C888/C1432). The relationship between this feature and the linear post-medieval drain was unclear as the furrow became too shallow at their intersection, however the features are likely to be broadly contemporary. The furrow had a single fill (C2083), which was sterile.

A shallow probable stone socket (C1277) with a single fill (C1278) was uncovered to the west of Kiln 13.

The metalworking area

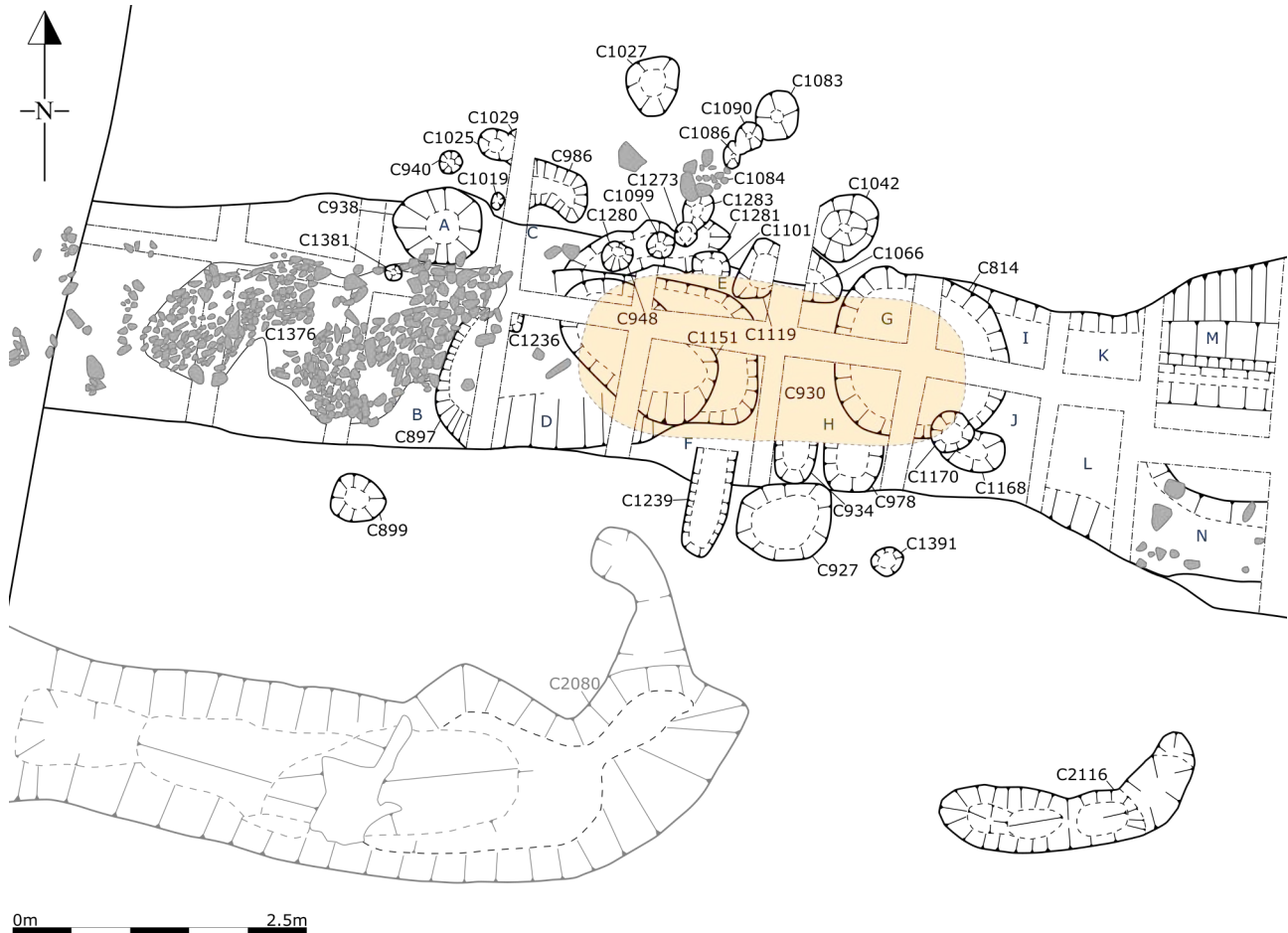
An extensive phase of metalworking was cut into one of the earlier sub-division ditches (C1317) within the southwestern quadrant of the northern annex. The features were mainly cut into one of the fills of the ditch (C1235/C1440/C1323), however later fills of the ditch, which survived to the west, may also have been cut through by the metalworking activity. Some features extended beyond the northern edge of the ditch. A deposit of loose mixed plough soil (C815) overlay the metalworking area and had inclusions of animal bone, slag, medieval and post-medieval ceramics and fragments of iron and copper-alloy. This was a mixed deposit resulting from later agricultural disturbance.

The area was divided into a grid during the excavation to aid excavation and recording. Some of the features uncovered were large and extended into more than one grid, however in cases where possible the features will be described grid by grid.

Furnace	Context	Description
1	C930	Definite, sub oval, collapsed shaft
2	C1151	Definite, sub oval, truncated
3	C938	Definite, bowl-shaped in section, circular in plan
4	C899	Possible, dug out
5	C986	Possible, dug out
6	C948	Definite, circular
7	C1027	Possible, circular
8	C1281	Definite, bowl-shaped in section, circular in plan
9	C1280	Definite, rectangular, poss. Related to C1281
10	C1119	Possible, intercutting bowls?
11	C1099	Possible, scorched base
12	C1101	Possible, scorched base, heavily truncated
13	C1042	Definite, circular, bowl-shaped
14	C927	Definite, circular, bowl-shaped
15	C978	Possible, dug out
16	C814	Possible, large, truncated

Table of furnaces identified within metalworking area (top)

Plan of the features identified within the metalworking area (bottom)





Mid-ex view of grid system being used in metalworking area (top left)

Grids being trowelled back by Ruairi and Lisa to identify features (centre left)

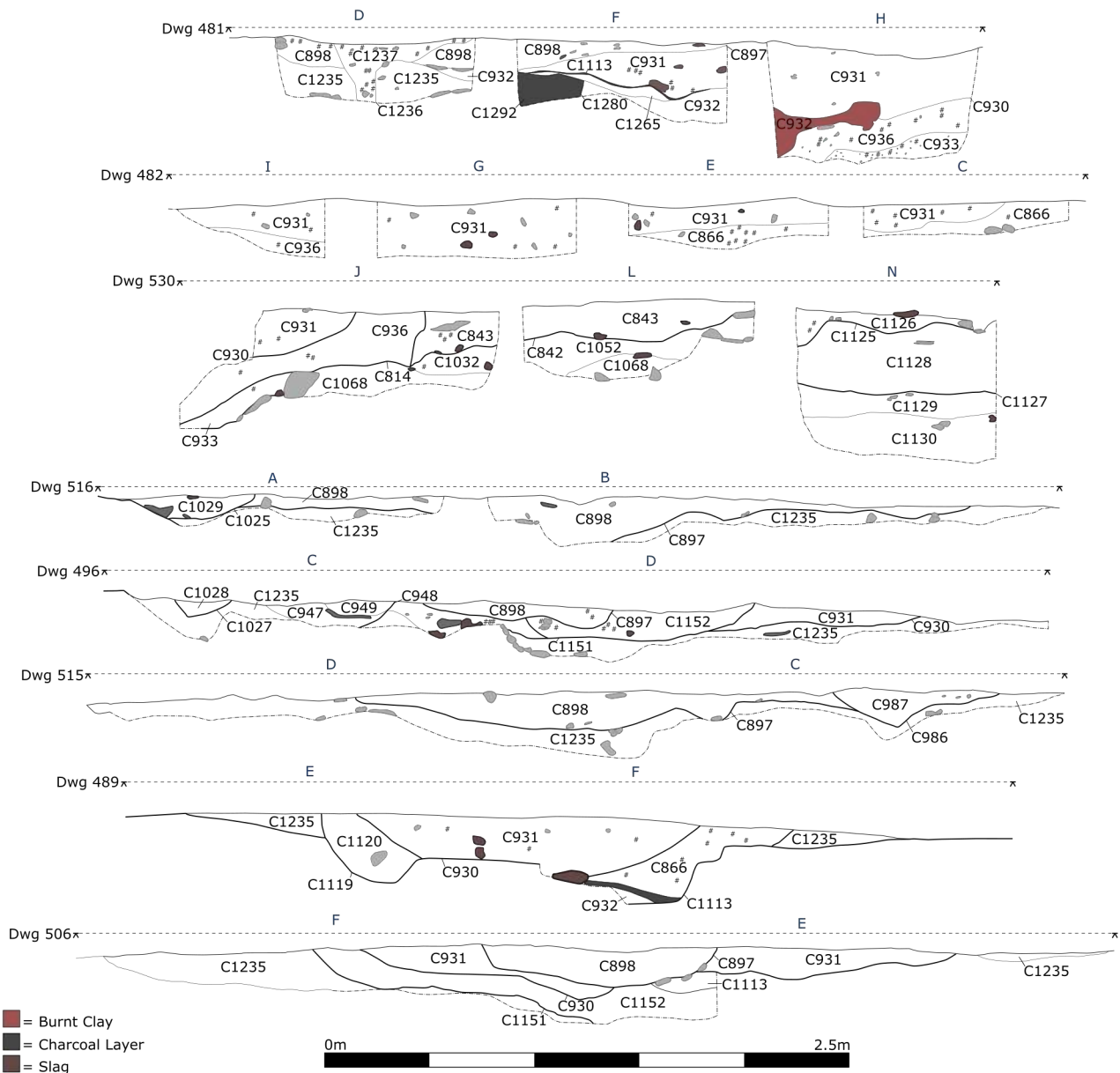
Mid-ex view of metalworking area with waste pit C823 in centreground, looking north (bottom left)



Mid-ex of excavation under way in metalworking area, looking southeast (top right)

Grids being excavated by Sergio and Rene in the metalworking waste pit C823, looking southeast (centre right)

Mid-ex view of metalworking area to right and waste pit C823 to left, looking east (bottom right)



Sections relating to the metalworking area

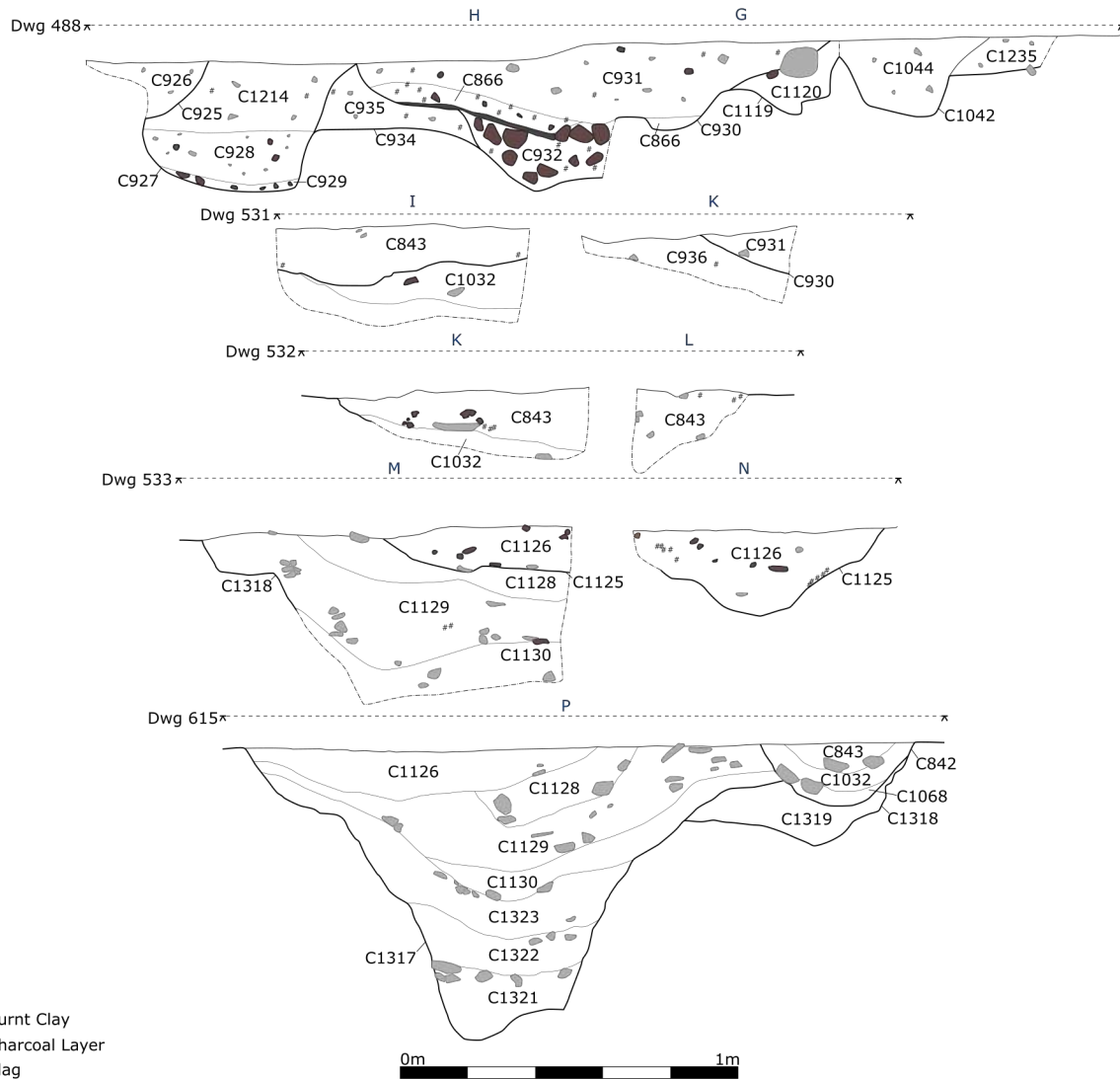
Grid A

A pair of shallow conjoined sub-circular pits (C1025 and C1029) were uncovered in Grid A. Both had flat bases and gradually sloping sides. Both pits were the same depth, with the larger of the two (C1029) located to the east. The fills of both features (C1026 and C1030) were identical and it is likely that they were filled at the same time by the same process. The fills were silt-rich with inclusions of charcoal, burnt clay and slag derived from metalworking waste. There was no evidence of in situ burning within either pit to suggest the features were the remains of furnaces, however they may relate to

structures associated with the metalworking in the vicinity. They were overlaid by the spread (C815) covering the entire metalworking area and contained a large amount of slag.

To the south of these a vertical stake-hole (C1019) was uncovered with a single fill (C1020) containing some charcoal flecking. The fill was magnetic suggesting the stake-hole was filled at the time iron working was taking place on the site.

To the southwest of the conjoined pits another circular posthole (C940) was uncovered. A



Sections relating to the metalworking area

packing stone (C941) was present along the southern side of the posthole with slag present around the stone. The upper fill of the posthole (C942) was a dark silt material with frequent charcoal, slag and rare burnt clay deriving from metalworking waste used to backfill the posthole.

To the south of this a circular pit (C938; Furnace 3) was uncovered. It had straight sides on all side except to the west, where the side was partially undercut, and a flat base. There was no evidence for a lining or significant in situ burning of the sides of the pit. An in situ furnace base (C1300) was present at the base of the pit, which had the appearance of two

furnace bases fused on top of one another. The base of the pit was stained with rust and had been oxidised in the immediate vicinity of the fused furnace bases. This was overlaid by a gritty material (C1291) with frequent charcoal, slag, occasional chunks of burnt clay and a scrap of iron. The material was generally dark in colour, with occasional bright orange mottling. This fill may be the result of the eroding and breaking down of the furnace superstructure in situ, with the gritty material deriving from the broken down shaft of the furnace. The upper fill of the pit (C939) was a soft silt relating to the general metalworking waste used to backfill the features after they had gone out of use. A furnace base was present within the upper level



Mid-ex view of C1025 along baulk with stake-hole C1019 and posthole C940 in background, looking southwest (top left)

Mid-ex view of stacked furnace bases at the base of furnace pit C938, looking west (centre left)

Post-ex view of pit C1381 cut into surface C1376, looking southwest (bottom left)

View of possible furnace pit C899, looking north (top right)

View of Grid A and B prior to removal of the baulk, looking southeast (bottom right)

of the fill along with other fragments of slag, charcoal, iron, burnt clay fragments and angular stones.

A small pit (C1381) with steep sides and a concave base was uncovered to the south of Furnace C938, cut into the stony layer (C1376) sealing the western end of ditch C1317. It had a single fill (C1382), which was not a metalworking-related backfill, though a small quantity of slag was present.

Grid B

A sub-circular pit (C899; Furnace 4) was uncovered at the southern end of Grid B. It was steep-sided with a concave base. Though no in situ burning or scorching was noted, based on the dimensions of the pit it may have been furnace with the furnace base dug out. It had a single fill (C900), which had inclusions of charcoal, slag and burnt clay crumbs. This suggests the pit was used to dispose of waste from the surrounding metallurgical activity after it had gone out of use.



Post-ex view of possible furnace pit C986, looking south (top left)

Post-ex view of possible furnace pit C1027, looking south (centre left)

Post-ex view of furnace pit C948, looking west (bottom left)

View of Grid C prior to removal of the baulk, looking west (top right)

View of Grid DB prior to removal of the baulk, looking west (bottom right)

Grid C

Within Grid C a number of features were uncovered. To the north a double pit (C986; Furnace 5) was uncovered that had the appearance of two conjoined pits orientated east-west, however the fill (C987) within both ends of the pit was the same. There was no surviving in situ burning evident on the base or sides of the pit. This feature may be the remains of two furnace pits that were subsequently dug out. The fill within the pit was a charcoal-rich material with inclusions of small fragments of

burnt clay furnace lining, animal bone and slag. A large slag furnace base was present at the top of the fill over the western side of the pit. The fill suggested the pit was used as a waste pit after it had gone out of use.

To the southeast a shallow sub-circular pit (C948; Furnace 6) was uncovered, associated with a sub-rectangular patch of scorching (C947) to the north. The scorching had embedded slag and partially extended over the upper fill of the small pit. The pit had a single



Mid-ex view of Grid D prior to removal of the baulk with posthole C1236 and pit C897 visible in section, looking north (top left)

Mid-ex view of Grid C and D prior to the removal of the baulks, looking southeast (bottom left)

Mid-ex view of Grid E prior to the removal of the baulks, looking south (top right)

Post-ex view of stake-hole C1273, looking west. The edge of furnace pit C930 can be seen to left (bottom right)

fill (C949), which consisted of a charcoal-rich material with pockets of ash overlying a scorched base. Small quantities of burnt and unburnt animal bone were present within the fill of the pit along with slag. This feature is likely to be related to the surrounding metalworking activity, perhaps a smithing hearth or the base of a furnace pit.

At the northern end of Grid C a sub-circular pit (C1027; Furnace 7) was uncovered. The pit had an irregular base, becoming deeper to the west. The pit was covered by a large stone, with the charcoal-rich fill (C1028) being revealed once the stone was removed. The fill had inclusions of charcoal and slag, typical of the metalworking features in the vicinity. While in situ burning was not identified this feature may be the remains of a furnace pit where the slag pit at the base was dug out. The stone overlying the pit had a level upper surface and may have served as an anvil stone.

Grid D

A shallow linear pit (C897) orientated east-west truncated the top of furnace pit C930. It had a relatively flat base and a single silt-rich fill

(C898), which had infrequent inclusions of charcoal, slag, a scrap of copper-alloy, animal bone and burnt clay. These may have originated in the fills of the metalworking features below as this feature post-dated the metalworking activity within the annex.

The western end of pit C897 was truncated by a sub-circular posthole (C1236), which was funnel-shaped in profile with convex sides narrowing towards a flat base. The posthole also truncated to western end of furnace C930. The

posthole had a single fill (C1237), which had inclusions of frequent charcoal and burnt clay and occasional slag. The inclusions within the fill are likely to have originated in the metalworking features below with the posthole relating to activity post-dating the metalworking activity on the site.

Grid E

A circular stake-hole (C1273) was excavated in the northern end of Grid E cut into the backfill (C1440) of the underlying ditch (C1317). Two stones were present at the top of the stake-hole to the north, which may have been used to add support. The fill within the stake-hole (C1274) consisted of burnt waste material including charcoal and fragments of burnt clay. This indicates the stake was removed and the stake-hole filled with waste material from the metalworking activity carried out in the vicinity.

A sub-oval pit or posthole (C1283) was uncovered to the north of stake-hole C1273 within Grid E, partially overlaid by scorching C947 to the east. It had a shallow concave profile and a single fill (C1284), which had

inclusions of frequent charcoal and burnt clay crumbs. A number of stones were evident along the southern side of the cut and filling the northern side of the cut, forming a more confined area to the south. It is possible that the stones represent packing stones for a post located towards the southern end of the feature.

Mid-ex view of bases of furnace pits C1099 and C1101, looking west (top left)

Mid-ex view of furnace pit C1280, looking north (bottom left)

Mid-ex view of furnace pit C1280 with furnace pit C1281 in the base, looking west (top right)

Mid-ex view of furnace pit C1281, looking west (bottom right)



In the southwest corner of Grid E two shallow pits were identified. Only the scorched base of the northern pit (C1099; Furnace 11) survived, however based on the dimensions of the scorching it may represent the truncated remains of a furnace. The southern pit (C1101; Furnace 12) was truncated to the south by furnace C930. This also had a scorched base and though the surviving portion of the feature had a narrow base, it may be the bottom of a furnace with a concave base. It is interesting to note that some of the earlier possible furnaces were not as deep as the later examples, with the deeper furnace pits perhaps representing an attempt at further control of the metal production with more protection for the wind.

Beneath these a sub-circular bowl-furnace pit (C1281; Furnace 8) was uncovered within Grid E cut into the backfill (C1440) of the underlying ditch (C1317). The basal fill of the furnace pit (C1285) was a charcoal-rich soft, sticky clay formed from non-oxidising heat on the underlying clay-rich fill of the ditch. This provided in situ evidence of furnace usage. It was overlaid by a gritty coarse sand with some oxidisation (C1282), which also contained a small quantity of slag. This may be remains of a furnace shaft that was left to erode in situ, with the sand being the inclusions that were within the clay shaft of the furnace, some of which were oxidised.

This was truncated to the southeast by a shallow sub-rectangular pit with rounded corners (C1280; Furnace 9). This may be the remains of a smithing hearth, or be the cut of a work area, with a furnace at one end. The pit was orientated east-west and the base sloped gently to the west. In the southern end of the pit the base of a furnace was uncovered, which was interpreted as being contemporary with the pit. The furnace pit to the south had three fills. The basal fill (C1313) was a gritty coarse sand containing some vitrified material and micro slag, with limited oxidisation due to a reduced heating environment. It was overlaid by an oxidised layer of silty clay (C1314) with occasional charcoal flecking. This was in turn overlaid by a layer of furnace waste (C1315) including frequent charcoal and micro slag. It is possible that these three fills represent the remains of a bowl furnace later truncated by a



Post-ex view of possible intercutting furnace pit C1119, looking south (top)

Mid-ex view of pit C1083, posthole C1086 and broken grinding stone C1084, looking southeast (centre)

smithing hearth. This fill overlying this (C1292/C1175) was a charcoal-rich silt with few additional inclusions and was concentrated over the furnace. This appears to be waste fuel from the furnace. The remainder of the pit was filled with a mixed deposit (C1270/C1238) of dark charcoal-rich bands with slag inclusions, with thin bands of paler ash running through the fill suggesting a number of dumping events.

A figure-of-eight shaped pit (C1119; Furnace 10), perhaps formed from two intercutting pits or postholes, was uncovered along the western side of Grid E. The fill (C1120) was a gritty material with gravel inclusions, similar to pit C1066 to the east, with rare slag and charcoal, unlike some of the other features in the vicinity. It was truncated along its southern side by furnace pit C930. The general dimensions suggest this may be a dug out furnace pit, however this is uncertain.

A shallow circular pit (C1083) was located centrally within Grid E. It had a single fill (C1093), which had inclusions of burnt clay and stones. The purpose of the pit was unclear. It was truncated to the southwest by a circular posthole (C1090), which tapered to a narrow base. Two fills were identified within the posthole. The basal fill (C1091) contained rare charcoal flecking while the upper fill (C1092) contained frequent charcoal along with a fragment of furnace lining and slag. These fills accumulated after the removal of the post. The posthole truncated an earlier posthole (C1086) located to the southwest. There was no direct relationship between the shallow pit and the earlier posthole. The earlier posthole was circular in plan and a dug to a similar depth as the later example, though had a slightly smaller diameter. It had a single fill (C1085), which contained some charcoal, animal bone and slag, which is likely to have accumulated or have been dumped in the posthole after the removal of the post. Immediately to the southwest of the earlier posthole a cluster of fragments of heat-shattered granite grinding stone or quern stone (C1084) were uncovered. These were sitting directly over the underlying ditch fill and at the base of the disturbed layer (C815), which overlay the metalworking area and were not within a cut.

Grid F

A sub-oval furnace pit (C1151; Furnace 2) was uncovered within Grid F, which partially truncated the upper fill (C1270/C1238) of the furnace to the north (C1280). The base of the furnace was circular in plan and U-shaped in profile, located off-centre within the cut to the north. The southern side of the furnace sloped more gently and was scorched. The northern side of the furnace was truncated away by a



Mid-ex view of Furnace C1151 with Furnace C930 to right, looking north (top)

Mid-ex view of Furnace C1151, looking west (bottom)

later furnace (C930). It contained a single fill (C1152), which was a dark, friable fill with inclusions of burnt clay, slag and charcoal from metallurgical waste.

The largest metalworking furnace on the site (C930; Furnace 1) was a substantial pit, which was oval in plan and orientated east-west measuring 3.75m x 2.22m. The base of the furnace was located east of centre with the eastern side sloping more steeply down to the base than the western side, with both sides being slightly convex in profile. The northern and



Mid-ex view of Grid F with charcoal C1113 visible within Furnace C930 and Furnace C1151 to left, looking north (top left)

Mid-ex of Furnace C930 prior to the removal of the baulks, looking northwest (top right)

Mid-ex view of Furnace C930 with burnt clay from possible collapsed shaft visible in section, looking north (centre left)

Mid-ex view of Furnace C930 within Grid F, looking east (centre right)

Mid-ex view of Furnace C930 in Grid F and H, looking west (bottom left)

Working shot of Furnace C930 after the removal of the baulks with burnt clay C1265 visible in centre, looking west (bottom right)



Mid-ex view of Furnace C930 following the removal of the baulks, looking north (top left)

Mid-ex view of Furnace C930 in Grid F and H following the removal of the baulks, looking west (centre left)

Fragment of glass bangle retrieved from Furnace C930 (bottom left)



Mid-ex of eastern end of Furnace C930 truncating probable furnace C814, which truncated channels C842 and C1125 to the right, looking north (top right)

Mid-ex view of shallow cut C1239, looking east (centre right)

Mid-ex working shot of Grid H showing deep deposit of C866 at east end of Furnace C930, looking northwest (bottom right)



Mid-ex view of probable furnace C1042, looking west (top left)

Mid-ex view of pit C1066, looking west (centre left)

Post-ex view of furnace pits C1119 and C1042 and pit C1066, looking west (right)



southern sides were also slightly convex. The base of the furnace was sub-circular in plan and bowl-shaped. The furnace was one of the latest in the metalworking area and truncated a number of the earlier metalworking features in the immediate vicinity (C814, C1119, C1066, C1273, C1101, C934, C1168, C1170 and C1151). Along the base of the furnace to the north a deposit (C1100) of bright orange scorched material was identified, possibly the remains of the clay lining of the furnace. The basal fill (C932) was located within the bowl-

shaped base of the furnace and consisted of a slaggy mass with burnt clay and frequent charcoal in a sandy matrix. Two flint flakes were retrieved from this fill. It was partially overlaid by a layer of burnt clay (C1265), which extended over the western side of the furnace. This appeared to be the collapsed remains of the superstructure or shaft of the furnace, and had some slag inclusions. Overlying this was a thin spread of charcoal-rich material (C1113) with slag inclusions and fragments of copper-alloy residue. This was overlaid by a deeper charcoal- and slag-rich layer (C866), which deepened to the east within the main part of the bowl. A small fragment of Type 2 Bii Romano-British glass bangle (Alexandra Guglielmi pers. comm. 2018) was retrieved from this fill. A piece of corroded iron with copper residue was also retrieved from the fill along with two corroded iron objects and a scrap of copper-alloy. The upper fill of the furnace (C931) was a compact silt with inclusions of burnt clay, slag and charcoal. Fragments of



Mid-ex view of Furnace C927 to left truncating pit C934 in centre, with Furnace C930 to right. Furnace C978 is in foreground, looking west (top)

Mid-ex view of Furnace C927 to left truncating pit C934 in centre, with Furnace C930 to right. Furnace C978 is in foreground, looking northwest (centre)

Post-ex view of Furnace C927, looking west (bottom)



copper-alloy, iron objects and a possible residual flint arrowhead were retrieved from this fill. This appears to relate to the levelling and collapse of the furnace.

A shallow north-south orientated cut (C1239) was located directly to the south of the deeper part of the furnace and appeared to be radiating out from it, perhaps indicating a work area relating to the furnace. The fill (C1240) was charcoal-rich and had infrequent slag inclusions.

Grid G

A probable sub-circular bowl furnace (C1042; Furnace 13) was uncovered in the northern end of Grid G. It was steep-sided with a relatively flat base. Two fills were identified within the pit, with the basal fill (C1044) being a dark sandy silt with inclusions of charcoal and slag, possibly introduced into the pit after it had gone out of use. The upper fill (C1043) was a soft clay-rich fill and may have been dumped into the pit to seal it.

A second pit (C1066) was located directly to the south, however there was no stratigraphic relationship between the two pits. It was slightly smaller than the pit to the north. It had a concave base and steep sides. One fill (C1067) was identified within the pit, a gritty silt with inclusions of animal bone and slag, with appears to have accumulated in the pit after it had gone out of use. The southern edge of the pit was truncated by furnace C930.

Grid H

A heavily truncated pit (C934) was uncovered within Grid H. It was truncated to the north by furnace pit C930, to the south by furnace pit C927 and to the east by pit C978. The pit had a flat base and was sub-rectangular in plan, however the original shape was difficult to discern due to later truncation. It had a single fill (C935), which had frequent inclusions of slag and micro slag and rare animal bone. A short iron pin or tack was retrieved from the fill. The pit was filled with waste material from the surrounding metalworking, however its original purpose was unclear.

Truncating the pit to the south was a circular furnace pit (C927; Furnace 14) with steep sides and a roughly flattened base. There was



Pre-ex view of double posthole C1168, looking north (left)

Mid-ex view of Furnace C814 cutting channels C842 and C1125 to right and being cut by later Furnace C930 to left, looking north (top right)



Post-ex view of postholes C1168 and C1170, looking west (bottom right)



evidence for non-oxidising heat within the pit as the edges had been burnt to a grey colour. Two fills were recorded within the pit. The thin basal fill (C929) consisted of gravel-like micro-slag with some larger pieces also present. This was overlaid with a backfill material (C928) containing burnt clay, charcoal and occasional slag. The upper fill of the pit (C1214) was a loose material containing occasional charcoal and rare slag. The primary fill may relate to the

removal of the furnace base after the firing of the furnace with the upper fill being a backfill accumulating in the pit or being intentionally deposited there after it had gone out of use. A shallow east-west orientated plough furrow (C925) with a single fill (C926) truncated the southern side of the pit.

A sub-oval pit (C978; Furnace 15) was located to the west, also truncating pit C934 and truncated by furrow C925 to the south and by the test trench from the 2009 investigations to the north. It had steep sides and a concave base. There was no evidence for in situ burning, however the feature may be a dug out furnace. The fill (C979) was a loose dark material with inclusions of slag, which is likely to have been introduced into the pit after it had gone out of use. When the pit was removed a sub-circular posthole (C1391) with vertical sides and a concave base was identified beneath it. It had a single fill (C1392), which was loosely compacted and contained a small piece of slag.

Grid I

One of the later metalworking-related features (C814; Furnace 16) was identified in Grid I and J. It had a near-vertical side to the east, where it

cut through the metalworking waste fills of channel C842 indicating the feature was late in the sequence of metalworking on the site. The western end was completely truncated away by Furnace C930 so the full extent and nature of cut C814 was unclear. The base was flat to the east and began to slope down to the west before being truncated by Furnace C930. It is possible it was the cut of one of the furnace pits truncated by C930. It had two fills, a lower fill to the west (C933), which contained some slag and was heavily truncated by furnace C930, and an upper silt-rich fill (C936), which had only occasional charcoal flecking and slag inclusions, indicating the feature was not backfilled with metalworking waste.

Grid J

A double posthole (C1168) was uncovered within the southern end of Grid J. It had steep sides and a flat base. No differentiation could be made in the fill (C1169), which contained occasional charcoal and a small quantity of slag, and was similar to an additional posthole to the north. The posthole to the north (C1170) was circular in plan and contained a single fill (C1171), which also had charcoal flecking. Both postholes were truncated by furnace pit C930.

Other features in the metalworking area

Channels C842 and C1125

A shallow channel (C842) associated with the metalworking activity was cut into the top of the backfilled ditch C1317 to the east. This ran to the east of the metalworking area and split into two shallow channels. The northern channel (C842) was U-shaped in profile and ran to the east along the northern edge of the earlier ditch (C1317). It turned slightly to the southeast, and became broader and shallower at its terminus. It truncated Ditches C1140 and C1147 at its eastern end. A basal fill (C1249/C1514), only found at the eastern end of the recut, was a dark charcoal-rich material with one animal bone and one charred seed noted. This formed the only fill of the channel at its eastern terminus. No slag was retrieved from this fill, which suggests the earliest phase of the channels may have predated the



Mid-ex view of channel C842 with slag visible in section, looking west (top)

Mid-ex view of channel C842 cutting Ditch C1140. The channel terminated just east of this point, looking west (centre)

Mid-ex view of channel C842 cutting ditch C1140 as it turned to the east, looking north (bottom)



Mid-ex view of channel C1125 to left and C842 to right truncating Ditch C1317 and its recut C1127, looking west (top left)

Mid-ex view of channel C1125 to right and C842 to left truncating Ditch C1317 and its recut C1127, looking east. The terminus of C1125 is visible (bottom left)

Mid-ex view of channel C1125 to left and C842 to right truncating Ditch C1317, looking west. The metalworking area is covered due to poor winter digging conditions, looking west (top right)

Mid-ex view of channel C842 cutting Ditch C1317, looking east (bottom right)

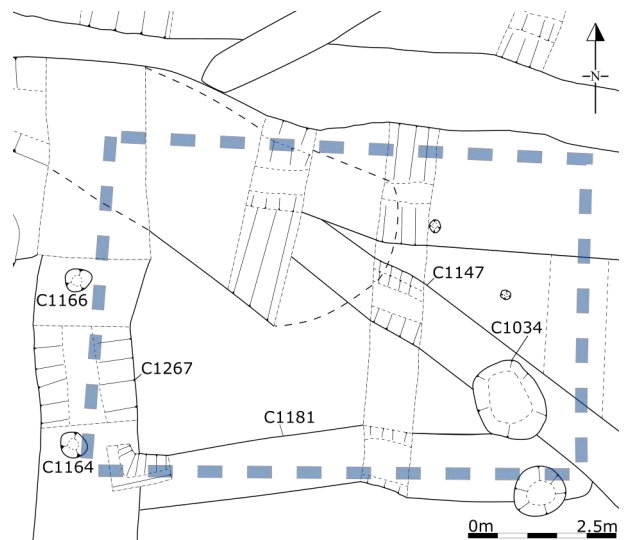
metalworking. The basal fill for the majority of the recut (C1068/C1138) was a silty material with occasional inclusions of slag and charcoal. A piece of possibly worked bone was retrieved from this fill. This appeared to have been a water-laid deposit and was built up in the channel while the metalworking area to the west was active. It was overlaid by a dark deposit (C1032), which had frequent inclusions of slag and charcoal along with an iron object and occasional stone, which was a dump of waste material from the metalworking area. This was the main deposit of metalworking waste within the channel and did not extend to the terminus of the channel to the east. The upper fill (C843) was a mixed deposit with occasional slag, charcoal and stone, similar in colour to the basal fill. A cross-inscribed stone was retrieved from this fill along with an iron nail. It may have formed through a combination of the ditch silting up and some dumping of waste from the metalworking area. It extended to the west as the two channels converged and was truncated by one of the later large metalworking features (C814).

The southern branch (C1125) ran along the southern side of the earlier ditch (1317). It was shallower than the northern branch and had a broad flat base. It shallowed out to the east before the edge of Ditch C1140. Two fills were identified within the cut. The earlier fill (C1128) was paler and located along the northern side of the cut and had inclusions of slag, frequent charcoal and small stones. It is likely to be contemporary with the basal fill (C1068) in the

northern channel. The upper fill (C1126) contained more charcoal and slag, being identical to the secondary fill (C1032) within the northern branch. It also had animal bone inclusions and a possibly dressed masonry fragment, and represents a dump of material from the metalworking area into the shallow channel. The northern branch appears to have been open for a longer period of time than the southern channel. Neither channel have definitive functions as they do not continue away to the east or south to suggest they relate to drainage. They clearly related to the metalworking and may be associated with access or storage. Once their initial purpose had been achieved both branches were backfilled with waste material from the metalworking area. Interestingly, as the western end of the channels was truncated by C814, a probable furnace cut, the metalworking activity was carrying on after the channels had been completely backfilled.

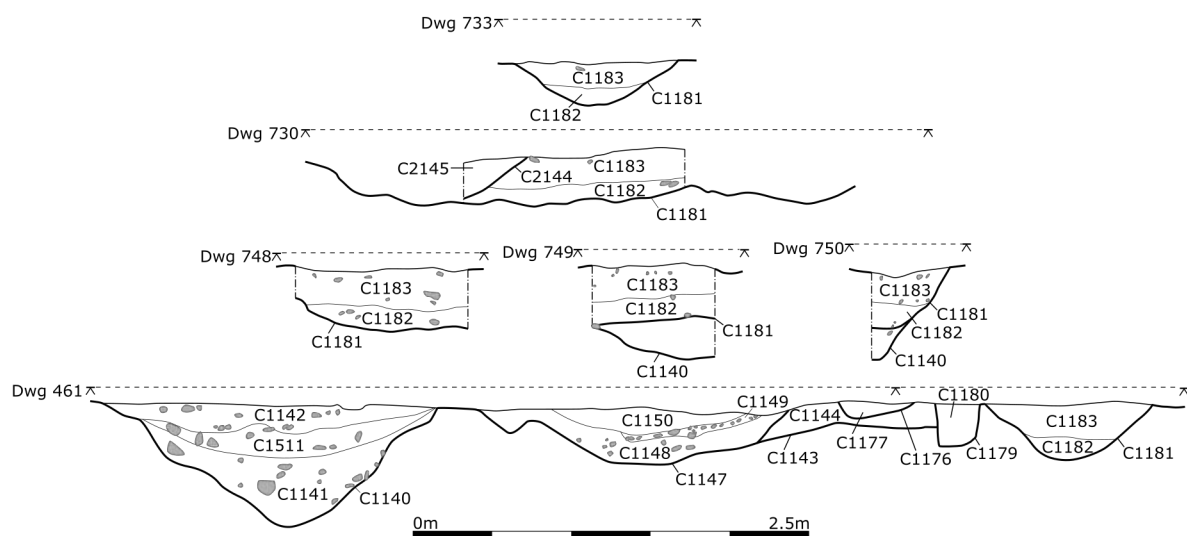
Gully C1181

A shallow U-shaped gully (C1181) defining a rectangular space measuring c. 6.9m x 3.1m was uncovered in the northeast corner of the area defined by Ditch C1140. The gully was cut into the top of Ditch C1140 to the north and west. It also truncated Ditch C1147 and was truncated by the cut (C842) associated within the metalworking area. Two fills were identified within the gully. The basal fill (C1182) was relatively sterile while two amber beads and slag was retrieved from the upper fill



Plan (top) and sections (bottom) relating to probable drip gully C1181

(C1183/C1201/C1142), one to the west and one to the north, along with animal bone. The purpose of this enclosure was unclear however it is cut into the same annex sub-division ditches as the metalworking area to the west. Two probable postholes were identified along the western side of the gully. The larger of the two (C1164) was located to the south and was oval in plan with a flat base. The second posthole (C1166) was located 1.06m to the north was circular in plan. Both postholes were a similar depth and their fills (C1165 and





Mid-ex view of gully C1181, looking east (top left)

Mid-ex view of gully C1181 cutting Ditch C1140, looking south (bottom left)

Pre-ex view of southwest corner of gully C1181, looking north (top right)

Mid-ex view of gully C1181, looking north (bottom right)

C1167) were also similar. While no further evidence for uprights were encountered the gully may represent the remains of the drip gully of a structure (Structure 18), with the postholes representing an entrance to the west.

Two features were identified within the rectangular enclosure. An oval-shaped pit (C1034) likely to have been a fire-pit was located in the southeast corner of the enclosure, cut into the backfill of Ditch C1147. It had two fills, with the basal fill (C1035) being a mixed scorched fill with charcoal inclusions from the cleaning out of the pit, with inclusions of iron fragments, a possible stone toggle and two flint flakes. The upper fill of the pit (C1036) also had charcoal and slag inclusions.

A small shallow posthole or stake-hole (C1193) was uncovered to the north of this, which was V-shaped in profile and had a single fill (C1194) with no inclusions.

An oval waste pit (C2144) was cut into the southeast corner of the gully. It was relatively shallow and broad with a concave base. The fill

(C2145) had frequent charcoal inclusions along with slag, animal bone, flint an iron nail and a fragment of lignite bracelet.

A small shallow pit (C1088) was cut into the northern side of the gully. It had a single loose fill (C1089).

A north-south running plough furrow (C1582) truncated part of the western side of the cut along the western side of the enclosure.



Mid-ex view of Ditch C2080, looking west (top left)

Post-ex view of Ditch C2080, looking west (bottom left)

Post-ex view of Ditch C2080, looking east (top right)

Copper-alloy strap end or fixing retrieved from Ditch C2080 (bottom right)

Ditch C2080

A broad and shallow linear cut (C2080) was uncovered to the south of the metalworking area. The eastern end of the feature curved at nearly 90-degrees to the north, however the feature petered out to the north of this. To the west the feature truncated the boundary ditch (C1431) and was contemporary with the later shallow channel forming the western annex boundary (C888/C1432). Three fills were identified within the feature. The basal fill (C2125) was a backfilling event with no evidence of the feature being left open and silting up. An iron knife was retrieved from this fill along with some animal bone. This was overlaid by two separate deposits (C2081 and C2126) of dark metallurgical waste material, which would have been part of the same fill originally. Both fills contained animal bone and slag while a copper-alloy fixing or strap end decorated with a marigold motif was also retrieved. The upper fill indicates that like a number of other shallow channels in the vicinity it was used to dispose of the waste from the metalworking. The original function is somewhat unclear. It may have been dug as a linear waste-pit, as seen to the north of the

metalworking area (recut C823 in Ditch C1601), though the basal and most substantial fill did not contain metallurgical waste. Another possibility is that it was an extraction pit for clay to produce the superstructures of the furnaces to the south.

Feature C1377

A later feature (C1377/C1559) truncated the backfilled pit (C823) cut into the ditch. This had an expanded pit-like form to the northeast with

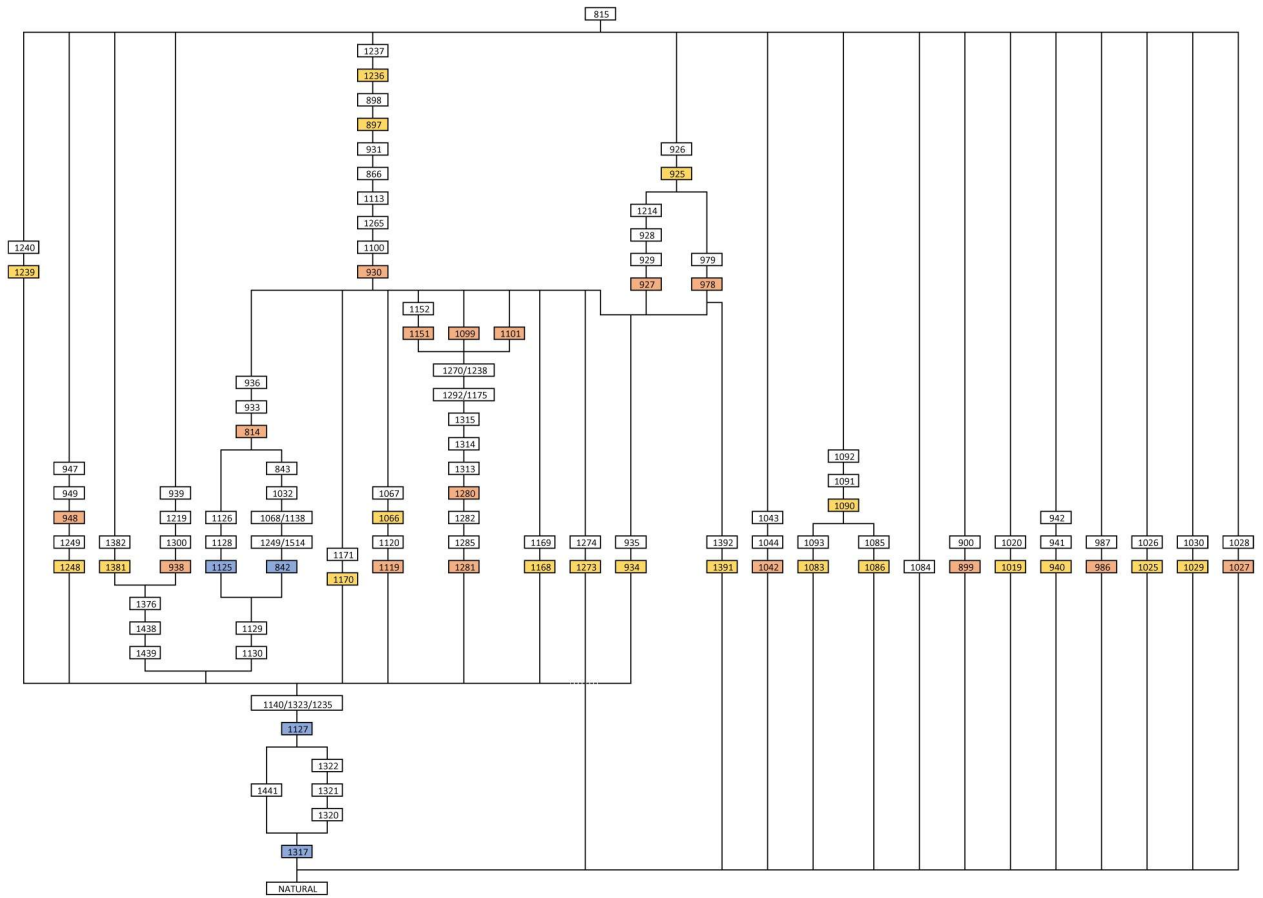


a shallow concave base. To the southwest a narrow channel extended out from the pit towards the edge of recut C842, which was associated with the metalworking activity to the southwest. In form the feature resembled a shallow keyhole-shaped kiln, however this was uncertain due to the heavy intercutting in this part of the site. The basal fill within the pit portion of the feature (C1379) was a reddened and scorched material, and had inclusions of charcoal, animal bone and slag. An iron bracket or fixing was retrieved from this fill. It was overlaid by a dark grey silt (C1378), which was quite friable and had inclusions of charcoal, bone and slag. A fragment of copper-alloy with a small rivet hole was retrieved from this fill within the channel section of the feature. Two fills were recorded within the flue or channel to the southwest, a basal charcoal-rich layer

(C1561), which was overlaid by an ashy deposit (C1560). This feature may have been involved with the metalworking activity further to the west, or be the poorly surviving remains of a kiln.

Structure 16

A short curving slot trench (C2116; Structure 16) was identified to the south of Ditch C1317 and the metalworking activity in the southwest quadrant of the annex. The western portion of the slot was deeper and more defined, and as the slot curved to the north it petered out. The fill (C2117) had some light scorching on the top and contained flecks of charcoal, but no finds. Given its location this may relate to activity in the metalworking area, perhaps being the remains of a windbreak associated with it.



Matrix for metalworking area (top)



Mid-ex view of feature C1377 cutting Ditch C1601, looking west (top left)



Post-ex view of short slot trench C2116 with Ditch C1317 in background, looking north (bottom left)

Mid-ex view of feature C1377 truncating Ditch C1601 before turning to the southwest, looking east (right)



Section 9 Unenclosed features to west

A small number of features were identified in the unenclosed space to the west of the northern annex. This was in contrast with the significantly more frequent features in the unenclosed space to the east of the annex.

Northwest

The majority of the features encountered were pits. A circular fire-pit (C2002) was uncovered west of the southern end of the annex with a scorched base. The base of the pit was cut into the soft underlying bedrock. It had a single fill (C2003), which had frequent charcoal near the base. A second slightly larger fire-pit (C2004) was identified nearby. Scorching was again identified on the base of the pit. Bedrock was not present on the base. The pit had a single fill (C2005) with occasional inclusions of burnt clay. Further to the west an additional pit (C2006) was uncovered. This may also have been a fire-pit, with frequent charcoal chunks present in the upper part of the basal fill (2007). Some scorching was present at the base to the southeast. An upper fill (C2008) survived along the eastern side of the pit that also had occasional charcoal inclusions. The pit was truncated by a shallow linear feature (C2009), which terminated within the pit. The linear continued to the north before petering out. It had a single fill (C2010), which had inclusions of charcoal and frequent angular and rounded stones to the south at the terminus. This may be a later drainage feature that truncated the earlier fire-pit.

A narrow east-west orientated linear gully (C2068) was identified running to the west of the annex ditch. It did not extend to the edge of the annex ditch and had a single stony fill (C2069), possibly representing a drainage feature. A double or figure-of-eight shaped pit (C2024) was uncovered at the western end of the linear orientated northwest-southeast. The fill of the pit (C2067) had inclusions of frequent charcoal flecks and pebbles, with larger



Plan of the unenclosed features to the west



Mid-ex view of pit C2002, looking northwest (top left)

Mid-ex view of pit C2004, looking northwest (centre left)

Mid-ex view of pit C2006 to left being truncated by linear C2009 to right, looking north (bottom left)

Post-ex view of pit C2024 and metallised surface C2023, looking south (top right)

Mid-ex view of intercutting pits C2046, C2044 and C2049, looking west (bottom right)

stones around the edges of the pit. A metallised surface (C2023) was present along the sides and partially on the base of the double pit and represents an associated work surface. The pit and linear appeared to be related to one another, however it was unclear what the original function of the features was. A later east-west orientated agricultural ditch (C2022) truncated the southern side of the metallising. This also truncated the annex ditch to the east. The fill of the ditch (C2070) contained inclusions of animal bone, slag and post-medieval pottery, with some of this material likely to derive from features truncated by the ditch.

Three shallow curvilinear pits were clustered near the preserved central portion of the settlement. The northernmost pit (C2046) was linear and orientated northeast-southwest. The base and sides were irregular due to the feature being cut into a natural bedrock outcrop. The basal fill (C2048) was a silt-rich material and was overlaid by a more clay-rich fill (C2047), neither of which contained any finds. A similar pit (C2044) located slightly further to the south truncated this. It was similar in size and shape to the earlier pit. It had a single fill (C2045), which had occasional charcoal and animal bone inclusions. A third pit (C2049) was identified further to the south and was also partially

truncated by the later pit (C2044). This pit was orientated east-west unlike the northern two pits, which curved to the northeast at their eastern end. The basal fill (C2051) contained occasional charcoal flecking. The secondary fill (C2050) also had charcoal inclusions. An upper fill (C2052) survived to the south and had frequent inclusions of burnt bone, occasional charcoal and occasional slag. The purpose of these three pits was unclear, however they would have been located directly to the north of the outer enclosure ditch. As the two larger pits appear to run down from the northeast and curve to avoid the ditch, the outer enclosure ditch is likely to have been in place when the pits were created.

Southwest

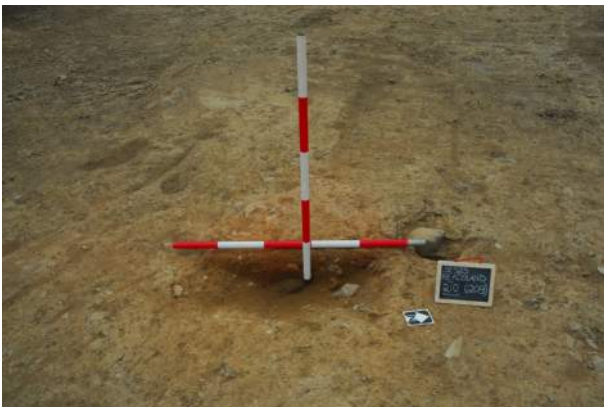
The features identified to the west and southwest of the early medieval settlement mainly consist of small fire-pits and patches of scorching suggestive of ploughed out fire-pits, along with later agricultural activity.

Pits

To the east of the post-medieval ditch (C207) a sub-oval irregular pit (C210) was uncovered. The base of the pit was heavily scorched. The fill (C209) was a mixture of burnt clay and charcoal. This was the base of a fire-pit with intense burning, however it had been largely ploughed out.

A small sub-circular pit (C394) was uncovered further to the east. It was concave in profile and had a single fill. The fill (C395) was a silt-rich material with scorching on the top indicating the feature had been fired at some point. Some possibly worked chert was retrieved from this fill. This is likely to be the remains of a fire-pit.

A sub-oval pit (C384) was uncovered to the southwest of the junction between Ditches C422 and C205. It was shallow with steep sides and a flat base. Parts of the base of the pit were scorched indicating the pit was a fire-pit. The basal fill (C385) was a charcoal-rich material overlying the scorching towards the southern end of the pit. The remainder of the pit was filled by a well compacted backfill material



Mid-ex view of pit C210, looking west (top)



Mid-ex view of pit C394, looking south (centre)



Mid-ex view of pit C384, looking east (bottom)

(C386) with frequent charcoal inclusions. This appeared to have been deposited in the pit intentionally rather than accumulating gradually over time. It may have been used to douse the fire within the pit.

To the west of the western annex a sub-oval pit (C532) was uncovered, which was partially rock-cut. The basal fill (C534) was a mixed material along the eastern side of the pit. It was sterile and appeared to be a slump of natural within the pit. The upper fill (C533) had occasional inclusions of charcoal and animal bone. The pit was truncated by a later northwest-southeast orientated shallow linear feature (C535), which appeared to be a plough furrow. The plough furrow had a different orientation to the predominant post-medieval north-south and east-west system and may predate this system. It had a single fill (C536), which had no inclusions.

A shallow oval fire-pit (C623) was also uncovered to the west of the western annex. The base of the pit was scorched while the natural beyond the edge of the pit had also been heat-affected. A single charcoal-rich fill (C624) was identified within the pit.

An irregular sub-oval pit (C418) with steep sides and a tapered base was uncovered to the west of the southern annex ditch (C205). It was partially rock-cut. The fill (C419) was a soft silt-rich material, generally sterile with light charcoal flecking at the top. This was interpreted as a probable stone socket.



Mid-ex view of pit C532, looking north (top)

Mid-ex view of fire-pit C623, looking north (upper centre)

Mid-ex view of scorching C373, looking north (lower centre)

Mid-ex view of scorching C396, looking east (bottom)



Scorching events

A sub-oval spread of scorched natural (C373) was identified to the east of the post-medieval ditch, again likely to be the remains of a ploughed-out fire-pit.

Another patch of scorching (C396) was identified further to the northeast. Burnt clay with some charcoal was present within the spread, which had an uneven and puck-marked base. This patch of scorching may relate to the burning of vegetation.



Mid-ex view of Ditch C207, looking north

Ditch C207

A north-south orientated post-medieval ditch was recorded to the west of the site. It ran from the southern limit of excavation to the western limit of excavation. It was U-shaped in profile and had a single fill (C208) with inclusions of animal bone, post-medieval ceramics and glass. The ditch was visible on the 2009 geophysical survey (Harrison 2009) and is depicted on the Ordnance Survey mapping.

Furrows and agricultural features

A series of north-south orientated plough furrows (C388) were visible to the east of the post-medieval ditch (C207). Only the base of the furrows survived but based on their orientated, parallel to the post-medieval ditch, they are likely to relate to agricultural activity during that period.

Section 10 The western annex

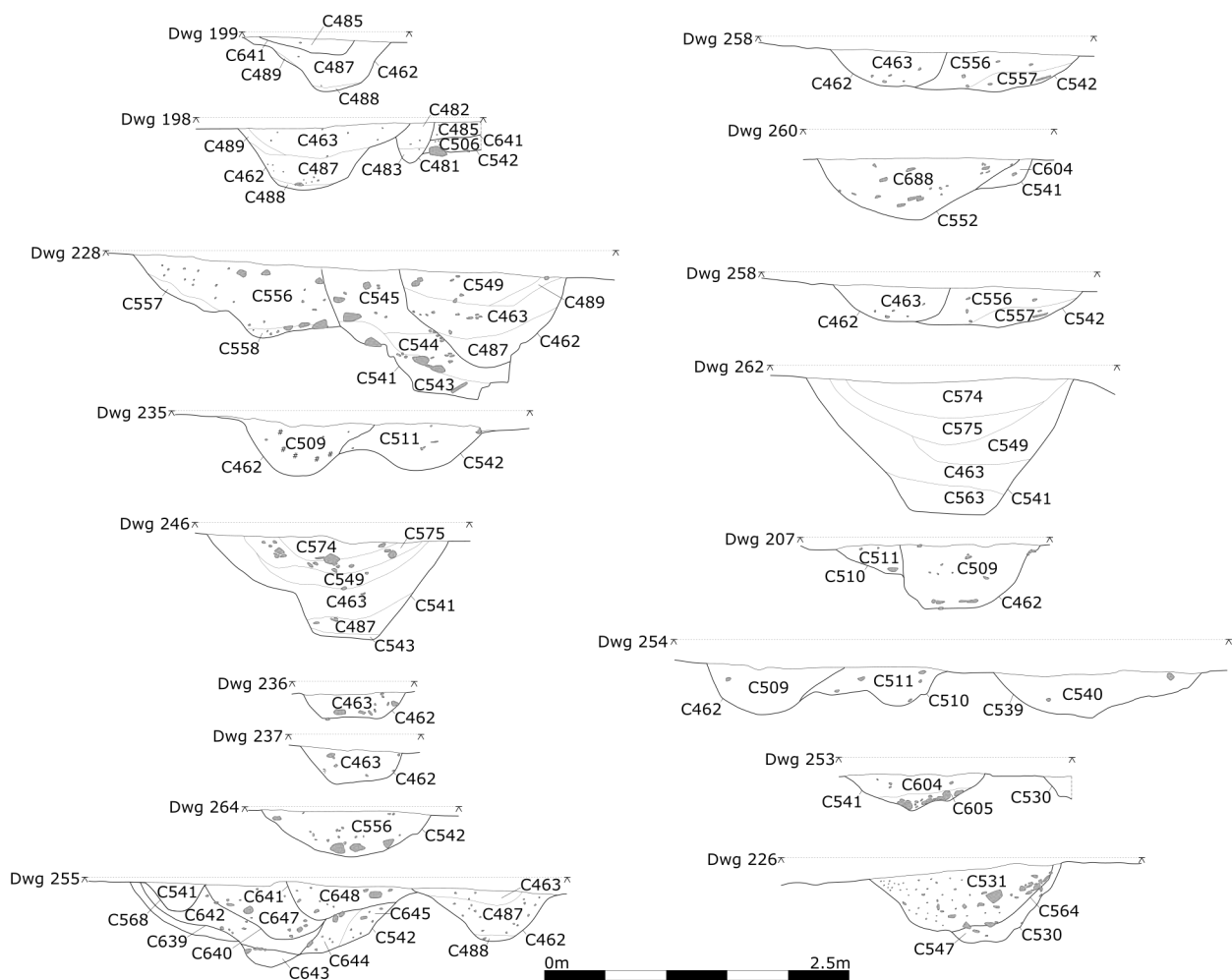
A small crescent-shaped enclosure was uncovered to the west of the outer enclosure. It arced out from the outer enclosure ditch to the north at the point where the outer enclosure ditch turned in to the interior to join with the inner enclosure ditch. A sequence of three main ditches formed the western boundary of the enclosure, with each new cutting of the ditch slightly increasing the internal size of the western annex.

Ditch C542

The earliest of the ditches (C542/C510) was orientated east-northeast to west-southwest at its southern end and ran for a distance of 7.5m before turning sharply to run to the north-northwest. The section to the north of the turn was the widest and deepest section of the ditch and it gradually shallowed before terminating to the north at a rounded terminus. This may



Plan of the annexes to the west, south and east



Sections for Ditches C542 and C541

indicate a gap in the enclosure ditch, however a continuation of the ditch further to the north was not identified. It is possible the ditch was only defining the entrance to the south of the annex at this point. The southern arm of the ditch was rock-cut making the base and sides uneven, however the western arm indicated the ditch had a concave profile with a flat to concave base.

The earliest fills identified within the ditch were patches of pale silt along the base or sides. This was identified in a number of places and given separate numbers (C557, C558 and C645). They may be the remains of an early silt deposit cleaned out of the ditch and were mostly sterile, though occasional animal bone was retrieved from one of the fills (C558). The sterile upper surviving fill within the north-south section of the ditch (C644) was evident along the western side. It may also derive from a cleaning out event, or the slumping of material from the

external side of the ditch. The upper surviving fill of the ditch (C511/C556) was a silt fill and had inclusions of animal bone and slag. A chert arrowhead was retrieved from this fill, likely to derive from a feature truncated by the annex ditch.

A shallow deposit of charcoal (C512) was identified overlying this fill at the limit of excavation leading to the preserved portion of the site. The deposit extended beyond the edge of the ditch to the south and may relate to the base of a later feature that was largely ploughed out.

The ditch was recut (C641) along the north-south section of the ditch with the recut being concave in profile and generally of a similar depth to the original cut apart from to the north of the bend where the recut deepened. The basal fill of the recut (C643) was a soft silt with occasional small stone inclusions. It was



Aerial view of sections through the western annex ditches, looking east (top)



Mid-ex view of northern terminus of Ditch C542, looking south (centre)

Mid-ex view of Ditch C541 on the left truncating Ditch C542 on the right, looking north (bottom)



overlaid by a paler silt (C642). No finds were identified within the fills of the recut.

A possible pit (C640) was cut into the western side of the ditch along the north-south running section to the north of the bend. The basal fill (C646) was a silt-rich material with occasional charcoal inclusions. It was overlaid by another silt-rich fill with occasional inclusions of animal bone and frequent stone (C647). The upper fill (C648) was present along the western side of the pit and was a soft silt. The fills suggest the pit gradually filled in over time.

A north-south running gully (C568) was identified truncating the ditch to the east of pit

C640. The sides of the slot were near-vertical and the base concave. It had a level base resulting in the northern end of the slot being significantly deeper than the southern end. A single fill (C569) was recorded within the gully, a pale silt with occasional animal bone inclusions. The purpose of the gully was unclear though the level base would suggest it was an intentional feature as opposed to agricultural truncation.

Structure 25

A spread of soft silt-rich material (C485) with inclusions of animal bone and charcoal was identified overlying the backfilled east-west section of Ditch C542, extending beyond the edges of the ditch. It was truncated by a short curvilinear slot trench (C481; Structure 25) orientated northeast-southwest was identified at the limit of excavation leading to the preserved portion of the site and truncating the northern side of Ditch C542. The northern side of the slot was truncated by the second phase of the western annex ditch (C541). The slot was U-shaped in profile and steep-sided. The basal fill (C483) was a pale silt and was overlaid by a darker silt-rich material (C482) suggesting the feature had silted in slowly over time. The spread overlying the ditch may be the remains of up cast from the second phase of the western annex ditch (C541), possibly the base of a bank. Given its location along the northern side of the entrance to the south of the annex the slot trench may have defined the entrance after the initial phase of the western annex ditch had filled in and before the excavation of the second, and it could have formed the slot trench for a fence structure or palisade.

Ditch C541

The western annex ditch was subsequently recut and moved slightly. The east-west running section of the second phase of the annex was positioned slightly to the north of the earlier ditch while the north-south running section was positioned further to the west and extended further to the north than the earlier ditch. As with the earlier ditch the southern end was shallower and rock-cut. The cut was steep-sided with a flat to concave base and the ditch was generally deeper than the earlier phase of the



Mid-ex view of slot trench C481 in section to right with Ditch C541 to left, looking east (top)

Mid-ex view of Ditch C541 to left truncating Ditch C542 in centre, with ditch C530 to right, looking west (centre)

Mid-ex view of southwest corner of Ditch C541 with scorching visible along external side, looking northwest (bottom)

annex ditch. This earliest cutting of the ditch was not identified at the point where the ditch ran into the preserved area to the east, having been cut away by a later recut. The external side of the ditch was scorched at the point where the ditch turned to the north, however no fills relating to the burning event were identified. This suggests that prior to the silting up of the ditch the sheltered base was used for additional purposes, however the evidence for what these purposes were has not survived subsequent recutting. The ditch substantially truncated the east-west running section of the earlier phase of the western annex ditch (C542) as well as the southern end of a shallow north-south ditch within the annex (C598).

The basal fill of the ditch (C543/C488) was a soft silt deposit with very frequent small angular stones. Some larger stones were noted along the inner side. It was overlaid by a silt-rich deposit (C544) with few inclusions. The upper fill (C489/C545) was a silt-rich material with animal bone and stone inclusions, which survived along the side of the ditch in places where not truncated away by later recutting. These fills indicate gradual silting within the ditch.

The ditch was subsequently recut (C462) by a steep-sided and concave based cut. This recut was identified throughout the length of the ditch. The basal fill of the recut (C463/C509) was a dark water-laid silt with frequent charcoal and rare animal bone and slag inclusions. A decorated copper-alloy ring-pin and an iron knife were retrieved from this fill. A lens or slump of soft silt-rich material (C572) with frequent stone inclusions was present along the internal side of the ditch at one point. This may relate to a slumping of bank material, or be the remains of a cleaning out event. The upper surviving fill of this section (C487) was again a dark silt-rich material with frequent charcoal and rare animal bone and stone inclusions. All the fills of this recut are indicative of the ditch gradually silting up over time, with some suggestion of having been cleaned out or maintained.

The third recutting of this phase of the ditch (C697) was identified along the north-south running section of the ditch. This may not be a true recutting event, but marked a significant



Mid-ex view of Ditch C541 with part of Ditch C542 visible to left, looking south (top)

Mid-ex view of Ditch C541 with stony upper fill C574 visible, looking north (centre)

Mid-ex view of Ditch C541 with stony upper fill C574 visible, looking south (bottom)

change in the filling of the ditch. This phase only appeared as a recutting in one section and this may be due to the shifting of the soft silty material below due to the deposition of the heavier later deposits. It is also possible that some cleaning out of the second recutting of the ditch (C462) had taken place prior to this event. The fills above this point were related to the excavation of the new enlarged annex ditch to the west and appeared as an inversion of the natural ground. The basal fill (C549) was a mottled material with frequent small and mid-sized stones, a redeposited subsoil deposit. It was overlaid by a sandier and stonier deposit (C575), a mixture of subsoil and broken bedrock. An iron knife was retrieved from this fill. The upper fill (C574) was predominantly a layer of broken angular bedrock and was most prevalent where the bedrock was higher within the enlarged annex ditch to the west (C530). All three of these layers relate to the excavation of the new annex ditch to the west. The upper fill of bedrock would have had the added benefit of sealing the soft silt deposits within the earlier annex ditch.

Two fills were identified within the ditch to the north. The ditch had largely shallowed out by this point and the fills were very compacted, making it difficult to identify which phase of the ditch to the south they related to, however they were most similar to the fills of the earlier cutting of the ditch. The basal fill (C605) was a stony and gritty fill, not as silty as the basal fill (C543/C488) to the south, however this may be due to the differential drainage within the ditch and water being more free-flowing higher up the slope. The upper fill (C604) can be equated to the upper fill of the initial phase of the ditch to the south (C489/C545), being a compact silt-rich material with fewer stones. It had inclusions of slag and animal bone. The two later recutting events within the ditch were not identified at the northern end, which indicates that this part of the site was more heavily impacted by subsequent ploughing and levelling activity.

Ditch C530

The third phase of the western annex ditch (C530) was the largest. The southern section of the ditch (C539) was straight and orientated



Mid-ex view of Ditch C541 with stony upper fill C574 visible, looking south (top)

Mid-ex view of Ditch C541, looking south (centre)

Aerial view of sections through the western annex ditches, looking southeast (bottom)

west-southwest to east-northeast. It defined the northern side of an entrance into the interior of the settlement. After a distance of 8.7m it turned sharply to the northwest and proceeded to arc around gradually to the north and northeast before terminating at the northern end of the annex. The northern terminus may correspond with the entrance to the annexed space and may also relate to another entrance into the interior at the northern end of the annex. The ditch was V-shaped in profile to the north becoming more U-shaped to the south. The ditch was significantly wider and deeper along the arcing section to the west, where it was also rock-cut. A slight step in the base was present at the southern end of the western arc, which was deeper than the east-west section. A second step in the base 1.9m in length was seen slightly further to the north where the base of the ditch was seen to rise up by c. 0.2m for a short distance, possibly offering an informal crossing point into the annex. This phase of the ditch was located further to the south and west of the earlier cuttings of the annex ditch, only cutting the second phase of the ditch (C541) to the north.

The ditch truncated the fill (C604) of the second phase of the western annex ditch (C541) to the north. A posthole (C611) located along the internal side of the ditch was also truncated by the ditch. The southwest corner of the ditch cut through a metallised surface (C476/C513; Path 6).

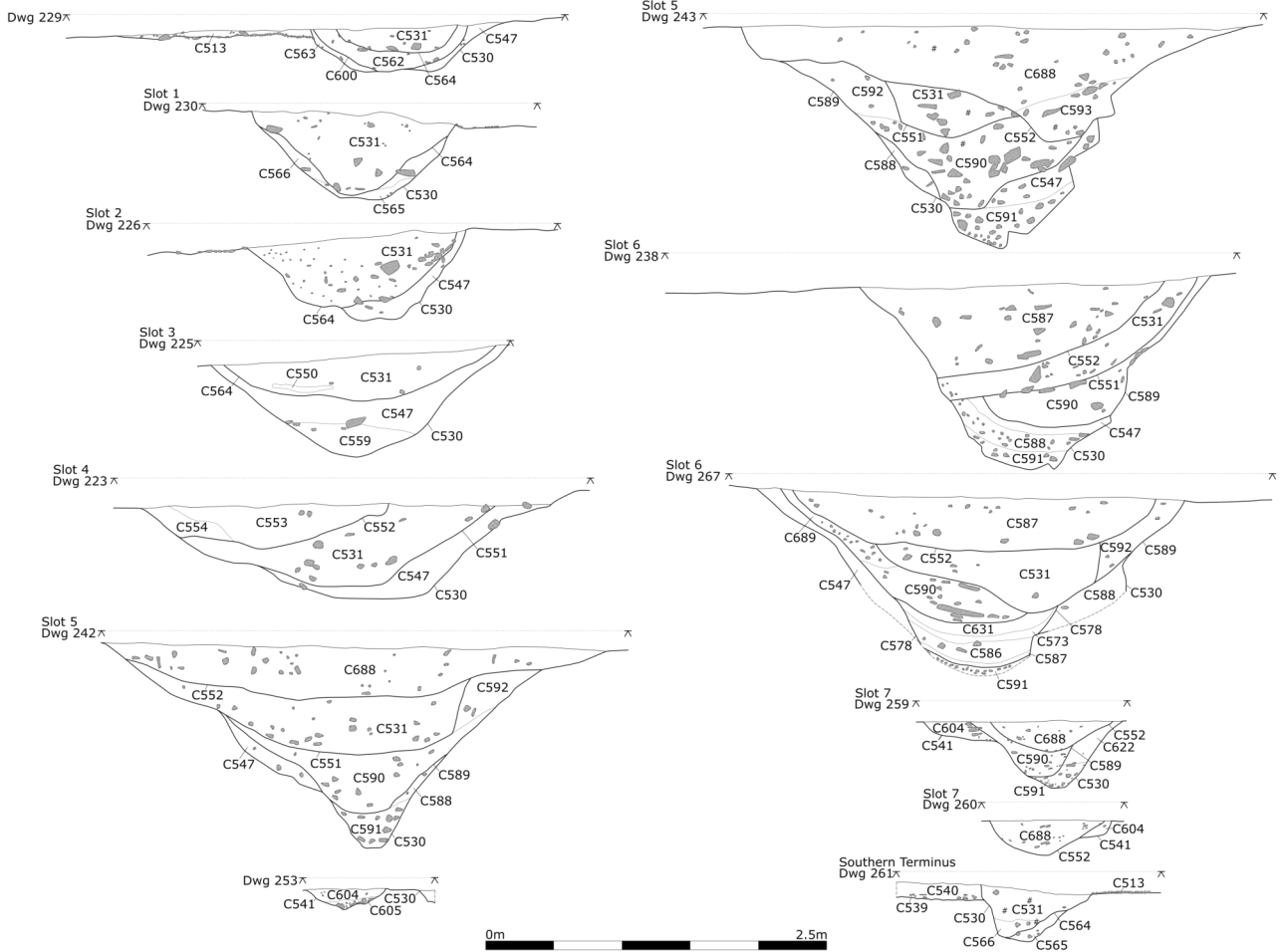
The earliest fill of the ditch (C591) was present to the north and along the base of the deeper section of the ditch. It consisted of frequent angular stones in a soft silt matrix and had occasional animal bone inclusions. An inverted cow skull was found at the interface between this fill and the subsequent recut c. 1.6m to the north of Pit C578. A variant of the fill (C559/C565) was encountered towards the southern end of the western arc, which had fewer large stones. It was overlaid by a water-laid silt fill (C547/C590/C622) which had inclusions of animal bone, rare charcoal and slag. Along the east-west section of the ditch this fill (C596) had frequent inclusions of animal bone and charcoal. A thin band of silt (C597) underlying this along the northern side of the cut represented the remains of an earlier



Mid-ex view of step in base of Ditch C530, looking northwest (top left)

Mid-ex view of Ditch C530 truncating Path C513, looking south (centre left)

Mid-ex view of Ditch C530, looking south (bottom left)



Ditch C530 sections (top)

Team beginning of excavation of Ditch C530, looking southeast (centre left)

Mid-ex view of Ditch C530 at the limit of excavation leading to the central portion of the settlement, looking east (bottom left)

Mid-ex view of the southwestern corner of Ditch C530, looking south (centre right)



Mid-ex view of Ditch C530, looking north (top left)

Mid-ex view of Ditch C530, looking north (bottom left)

Mid-ex view of posthole C578 within Ditch C530, looking south (top right)

Mid-ex view of Ditch C530, looking southwest (bottom right)

cleaning out event. A sub-circular spread of charcoal (C526) partially overlay the northern side of this fill and continued to the north to overly the fill (C511) of the earliest phase of the annex ditch (C542).

An oval pit (C578) was cut into base of the partially infilled ditch to the west of the cistern. The pit was cut into the silt fills along the base. It did not extend beyond the stony basal fill (C591). The pit was steep-sided and had a slightly concave base. The base and sides of the pit were scorched with the pit representing the remains of a fire-pit within the ditch. The basal fill (C587) was a charcoal-rich material with occasional burnt stone inclusions relating to the use of the fire-pit. It was overlaid by a silt layer (C586) with occasional charcoal flecking, indicating water ingress into the fire-pit. This was overlaid by another charcoal-rich layer with occasional burnt stone and clay fragments indicating the fire-pit was used at least twice. The upper fill of the pit (C631) was an intentional backfill material resembling a mixture of the fill of the ditch below the pit and the surrounding natural. The presence of the fire-pit within the ditch indicates it was

maintained and cleared out, at least for a period, and that the ditch was being used for various functions, not just serving a drainage and boundary function.

The ditch was subsequently recut along its entire length (C551/C564). The recut was shallower than the original cut except along the east-west section, where it was positioned slightly to the south but was the same depth as the original cut. The recut was deeper and steeper sided to the exterior along the western arc of the ditch. The recut was largely filled with a silt-rich deposit (C531), which had

inclusions of animal bone and slag. Fragments of a bone comb, a stone gaming piece, an iron knife and an iron strike-a-light were also retrieved from this fill. A variant of this containing more frequent stone (C562) was evident towards the south of the arc. A lens of charcoal-rich material (C550) was present within the fill along the external side of the ditch at one point. It was not associated with in situ burning and related to dumping of burnt material into the ditch as it silted up. A lens of grittier material (C592) had slumped into the ditch from the exterior at a separate point to the west, possibly relating to a slump of bank material. Along the east-west section the fill (C540) was a less well-compacted silt suggesting it was not as water-logged as along the western arc. This may be due to the underlying bedrock at this point. Rare inclusions of animal bone and charcoal were recorded along this section.

The final recutting of the ditch (C552) recut the northern end of the ditch and petered out approximately mid-way along the western arc. It is possible the recut originally continued further to the south and was ploughed out beyond this point, however the recut had narrowed significantly at its southern end and appeared to be terminating intentionally. The southern end also deviated from the line of the original ditch protruding slightly to the west of the original ditch. To the north the recut was generally a broad, concave cut, which continued beyond the terminus of the earlier ditch running to the northeast. It continued to the outer enclosure ditch as a narrowing channel, possibly relating to a late cleaning out (C2037) of the latest cutting of the outer enclosure ditch. This may indicate that by this time the entrance at the northern end of the western annex was no longer in use, however it may also represent a simple drainage solution. The fills of the recut were largely consistent. To the south the basal fill (C554) was a sterile deposit along the external side of the ditch, possibly representing slumped bank material. A clay-rich material (C593) was identified filling a concave hollow in the base of the recut to the west. This related to a deeper section of the recut where water pooled and which silted up differently to the remainder of the ditch. To the north of the annex a sandy basal fill (C632) was identified relating to the differing sedimentation along the

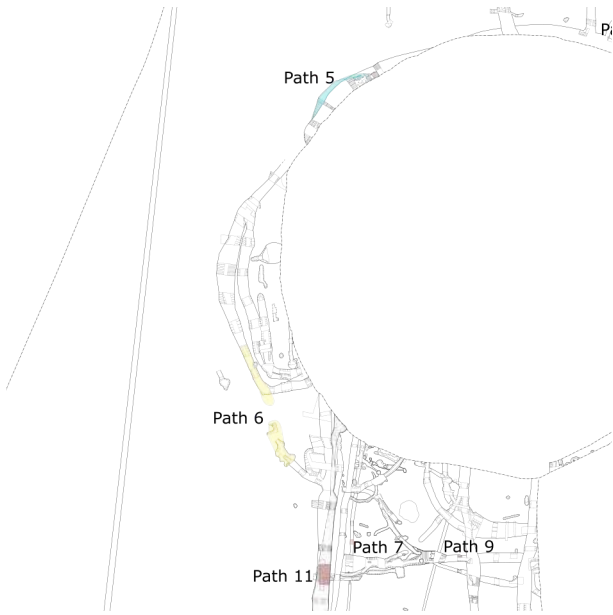
length of the ditch. The main fill of the recut varied along its length. To the south (C553) was a mottled backfill with occasional animal bone inclusions and rare charcoal. A plough furrow (C561) truncated the top of the fill at this point. Further to the north where the cut was deeper the fill (C688) had frequent inclusions of small stones, animal bone and charcoal flecking. A semi-articulated small mammal burial was retrieved from this fill.

A shallow east-west running furrow (C537) with a single fill (C538) partially truncated the southern side of the east-west running section of the ditch. An iron nail and medieval pottery were retrieved from the fill of the furrow. A broad, shallow cut (C633) truncated the ditch to the north. Upon investigation this was found to be the base of the plough soil with the material above it (C634) containing post-medieval pottery and glass.

Metalled surface C476/C513

A linear metalled surface (C476/C513; Path 6) was identified to the south of the western annex and was orientated northwest-southeast. The surface was slightly concave and set directly onto the underlying natural. In places it incorporated and was constructed around higher bedrock outcrops. The surface was truncated to the north by the third phase of the western annex ditch (C530) and to the south by the terminus of the curvilinear ditch (C442) forming the southwestern annex. It corresponded with the probable entrance gap between these two ditches, however it continued beyond the entrance both to the north and south. The metalling was most substantial at the southern end of the entrance gap between the western and southwestern annexes and is likely to be related to the entrance. The northern section narrowed and may relate to a path (Path 5) leading from the entrance to the north around the second phase of the western annex ditch (C541).

A layer of trample (C475) was present over the surface, which may have been disturbed through ploughing. Two plough furrows (C477 and C478) orientated north-south truncated the trample over the metalling. A gap in the surface



Location of Path 6, C513/C476 (left)

Mid-ex view of Ditch C530 truncating northern end of metallated surface C513, looking south (top right)



Mid-ex view of terminus of Ditch C442 truncating metallated surface C476, looking northeast (centre right)



Mid-ex view of metallated surface C513, looking east (bottom right)



between the northern section of the metalling (C513) and the southern section (C476) may relate to additional erosion through use of the entrance.

Spread C610

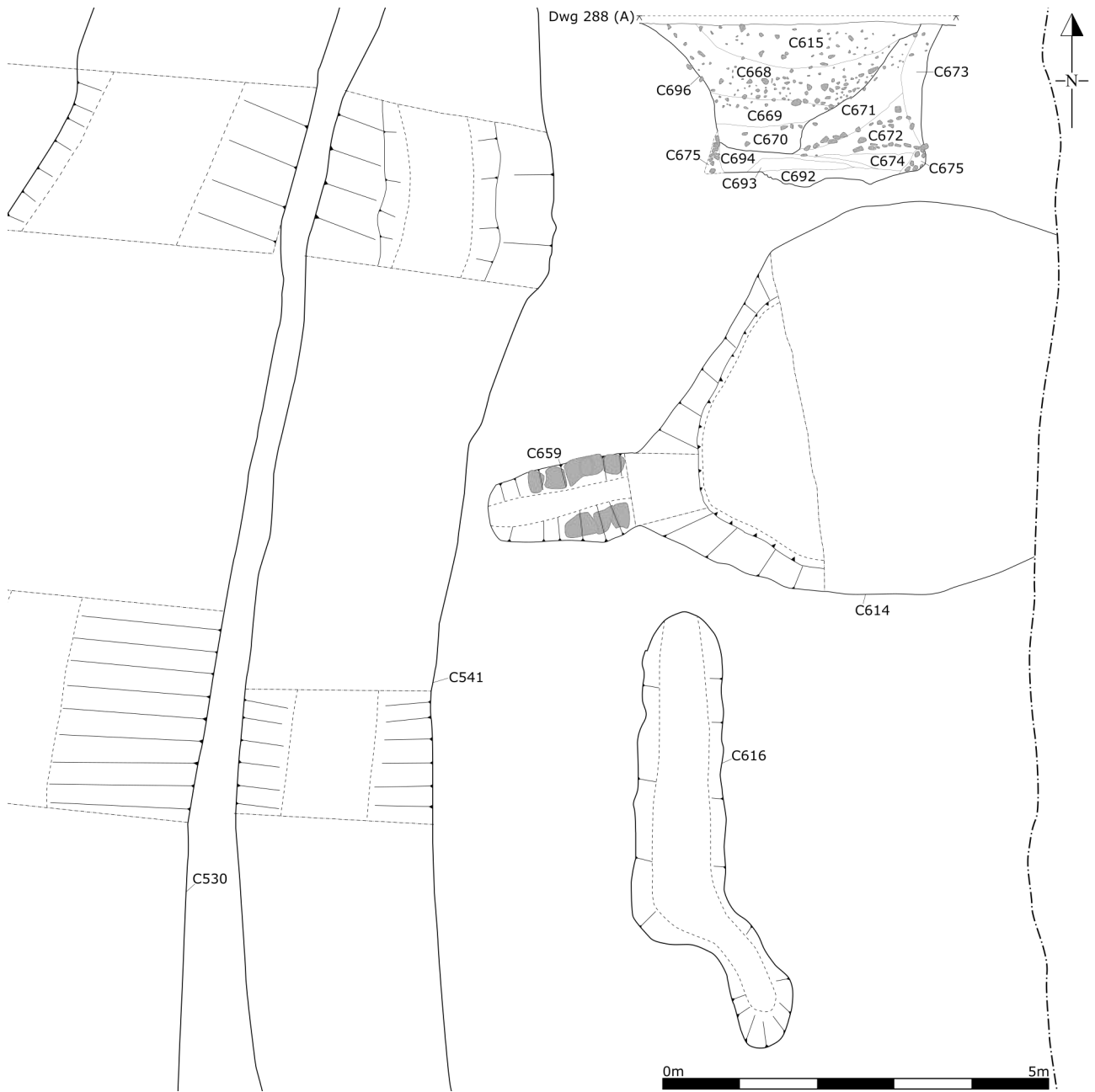
A spread of material (C610) was identified to the south of the western annex ditches at the northern limit of excavation. This occupied the probable entrance between the western and southwestern curvilinear annex ditches and contained occasional animal bone inclusions. While it is possible it represents a deeper and more compacted section of plough soil it may also represent a layer of trample associated with the entrance.

Features in the western annex

A small number of features were identified within the western annex.

Cistern C614

A large rock-cut sub-circular pit was identified towards the northern end of the annex. It was steep-sided and had a relatively flat base, both of which were slightly uneven due to the pit being rock cut. A sticky plastic clay (C675) was present around the edges of the pit and was used to seal the uneven rock-cut edges of the pit. Given its large size, at 4.9m in width and 1.87m in depth, and the sealing of the lower parts of the pit, this is likely to have served as a



Plan and section of cistern C614 (top)

Mid-ex view of cistern C614 and channel C659, looking west (bottom left)

Mid-ex view of cistern C614, looking south (bottom right)





Aerial view of cistern C614, looking southeast (top)

Mid-ex view of cistern C614, looking east (top right)

Mid-ex view of stone-lined channel C659 leading in to cistern, looking north (bottom right)



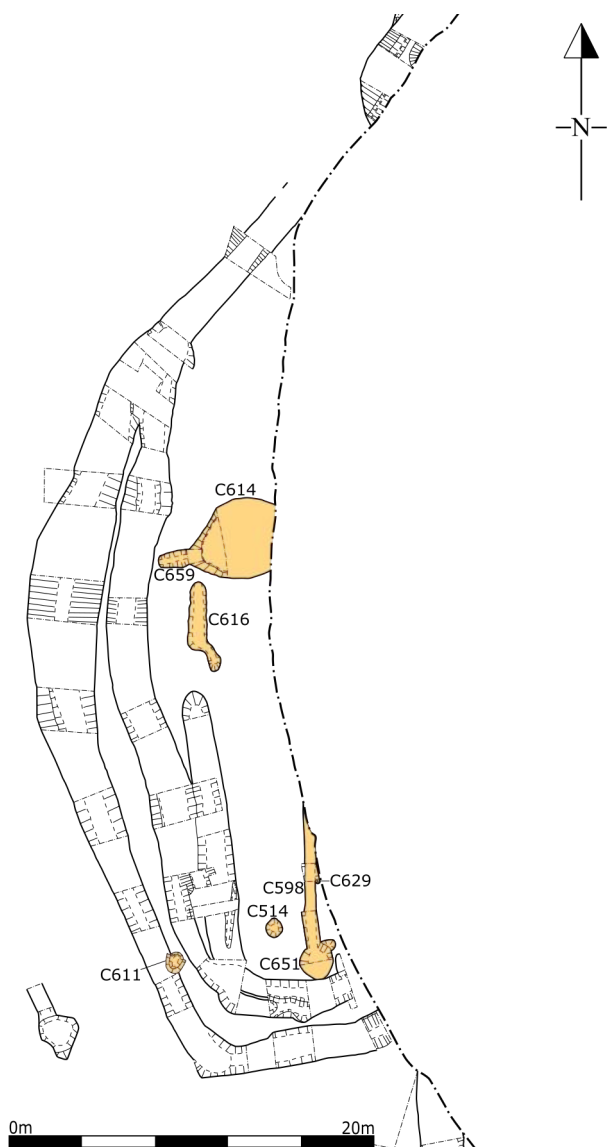
broken bedrock, flecks of charcoal and fragmentary animal bone. It was overlaid by a sterile gravelly clay (C693), which in turn was overlaid by another paler gravel-rich fill (C694). The next fill (C674) was clay-rich and had occasional animal bone inclusions. It was confined to the southern end of the cistern. The next fill (C672) was very similar but was more brownish in colour. Overlying this was a slumped deposit (C693) along the southern side of the cistern, which may relate to a partial collapsing of the subsoil along that side. This had partially compressed the fill below (C672), pushing it further to the north. The final fill within this phase of the cistern (C671) was predominantly a silt deposit and suggests the cistern was allowed to fill in for a period.

The cistern was subsequently recut (C696) with the recut being slightly smaller, cut into backfill in the northern end of the pit. The recut was funnel-shaped in profile with a narrow flat base and convex sides. The basal three fills of the cistern (C670, C669 and C668) were all stony clays of varying shades and stone content and appear to relate to the backfilling of the feature as opposed to its use. The final fill (C615) covered the whole of the cistern cut and is likely to have accumulated over the cistern as settling took place after it was backfilled.

cistern or well. Only one half of the well was excavated as the eastern edge lay within the preserved portion of the site.

The basal fill of the cistern (C692) was a thin layer of dark silt-rich material with inclusions of

A short channel (C659; Structure 20) ran towards the cistern from the west, which sloped



Plan of features within western annex (left)

Mid-ex view of posthole C611, looking north (top right)

Mid-ex view of pit C616, looking south (bottom right)

down towards the cistern and was related to it. It was located centrally along the length of the cistern. Both sides of the channel were lined with stone (C661) at the shallower western end. The northern lining partially survived to two courses in height while the southern side was shorter and one course in height. To the east of the stone lining there was a steep step down in the base of the channel of 0.13m with the base gradually sloping off towards the cistern beyond that point. The channel was filled with a loose clay (C660) with occasional animal bone inclusions, which was in turn sealed by the same layer (C615) that covered the cistern. The semi-articulated remains of a sheep foot were retrieved from the fill of the channel. The channel appears to have drained into the cistern.

The purpose of the cistern is unclear. It is possible it was intended as a water source for the settlement, however the channel draining into the cistern from the east would suggest the water would not have been intended for drinking. It may have been a water supply for animals, or for gardening/agricultural purposes. It is also possible that the pit may have served as a cess pit, however the fills of the pit would not imply this. Similar pits are known from medieval Dublin relating to tanning (Giacometti 2020, in press.), however there is no indication from the fills of the pit to indicate that it served this function. The best interpretation at present is as a non-drinking water supply.

Aerial view of western annex, looking north



Posthole C611

An oval posthole was uncovered along the internal side of the latest western annex ditch (C530) and was partially truncated along its eastern side by the ditch. The posthole was funnel-shaped in profile and deeper and wider than the burnt post-pipe. The basal fill (C612) was a redeposited natural with occasional charcoal flecking. Centrally located within the post-hole a charcoal-filled post-pipe (C613) was evident, with the post being rectangular in plan and flat bottomed, and orientated north-south. Scorching of the edge of the underlying packing material along the east side of the post indicated the post was burnt in situ. The post was located along the east side of the metallised surface (C513) and beside the rise in the base of the later western annex ditch and may relate to either of these. It is also possible it may relate to a cluster of other pits and postholes (C629, C651 and C640) at the southern end of the annex.

Pit/ditch C616

A north-south orientated shallow linear pit/ditch (C616), roughly in line with the terminus of the earliest enclosure ditch of the annex (C542) to the south, was uncovered to the south of the cistern. The northern end of the pit gradually rose up and petered out, with the pit mainly forming a concave profile. At the southern end a narrow channel ran out from the pit to the southeast before terminating. There

was no differentiation in the fill between the main body of the pit and the channel. The pit had a single fill (C617), which had inclusions of occasional charcoal chunks, animal bone, and a chert arrowhead. The pit most likely relates to an additional section of the early phase of the western annex ditch (C542), with the remainder having been ploughed out. If this boundary did continue to run to the north at a shallower depth it would have encountered the cistern and channel suggesting these are not contemporary, however as there was no direct connection this cannot be certified. The presence of the arrowhead may imply the feature is prehistoric in date, however it is more likely this find is residual and relates to a feature truncated by the pit.

Pit C651

A circular pit (C651) was uncovered directly to the north of the southern arm of the western annex ditch (C542). It was steep-sided with a flat base and had a single fill (C652), which had rare animal bone inclusions. The pit was truncated by a north-south orientated linear ditch (C598) which was truncated by a recutting (C462) of the second phase of the western annex ditch (C541) to the south and continued into the preserved portion of the site to the north. The ditch may have connected with the ditch C541 or C542 to the south as it did not continue beyond the line of the annex ditches. It had a single fill (C599), which had inclusions

of animal bone and charcoal, the charcoal becoming more prevalent to the north. A clay pipe stem was also retrieved from the fill. A sub-circular pit (C629) partially truncated the eastern edge of the ditch near the northern end. The fill of the pit (C630) had some charcoal and stone inclusions.

Pit C514

A shallow sub-circular pit (C514) was identified in the southwest corner of the annex. It had a single fill (C515) with occasional stone and charcoal inclusions. The purpose of the pit was unclear.



Mid-ex view of Ditch C598 truncating pit C651, looking south (top)



Mid-ex view of pit C629 truncating ditch C598, looking south (centre)

Aerial view of western annex, looking east (bottom)



Section 11 Early features to south

A number of features at the southern end of the early medieval settlement were cut by the annex enclosure, and may originally have been located in unenclosed ground to the south of the settlement.

Pits

Pit C381

A large shallow pit (C381) was located at the southern end of the southwest annex and was partially truncated by the western section of the ditch (C442). It was also truncated by the southern rectilinear annex ditch (C376) to the east. It was sub-oval in plan and had gently sloping concave sides and an uneven rock-cut base. The purpose of the pit was unclear.





Mid-ex view of Pit C381, looking south (top left)

Mid-ex view of Pit C381, looking east (bottom left)

Mid-ex view of Pit C649 being truncated by Ditch C436, looking northeast (top right)

Post-ex view of Pit C649 with Ditch C436 continuing beyond, looking southwest (bottom right)

The basal fill (C375) was sterile with frequent angular stones, likely to derive from the underlying bedrock, and was only identified to the north. Two sherds of post-medieval ceramic were retrieved from the fill indicating it had been disturbed. It was overlaid by a sand-rich deposit (C507) with occasional inclusions of animal bone and charcoal along with frequent stones. A sherd of possible prehistoric ceramic was retrieved from this fill. The upper fill (C508) was a deposit of small stones with some animal bone inclusions, which sealed the pit. Plough soil (C284) was found to overlie this.

Pit C649/C457

A sub-rectangular pit (C649) was uncovered to the south of the southwest annex ditch (C436), and was truncated by it. The pit was also truncated by the slot trench (C402) of Structure 21. The pit was steep-sided with a relatively flat base with a slightly deeper oval area in the southwest corner of the pit. It had a single fill (C650), which had occasional charcoal flecking and animal bone inclusions.

Pits C211, C226 & C203

A large sub-circular pit (C211) was uncovered at the southern limit of excavation, immediately to the east of Ditch C201. It was steeply sloping on its northern and eastern side and gently sloping on its southern and western side. It had a single fill (C212), which was compact and contained frequent stone including a number of pieces of struck flint as well as rare animal bone, charcoal flecking and a tiny piece of slag. A second sub-circular pit (C226) was located immediately to the east of the pit. It was steep-sided with a concave base and continued



Mid-ex view of Pits C211 and C226, looking south (top left)

Mid-ex view of Ditch C201 with pit C203 to right, looking south (bottom left)

Mid-ex view of Kiln C331 being truncated by Ditch C317, looking northwest (top right)

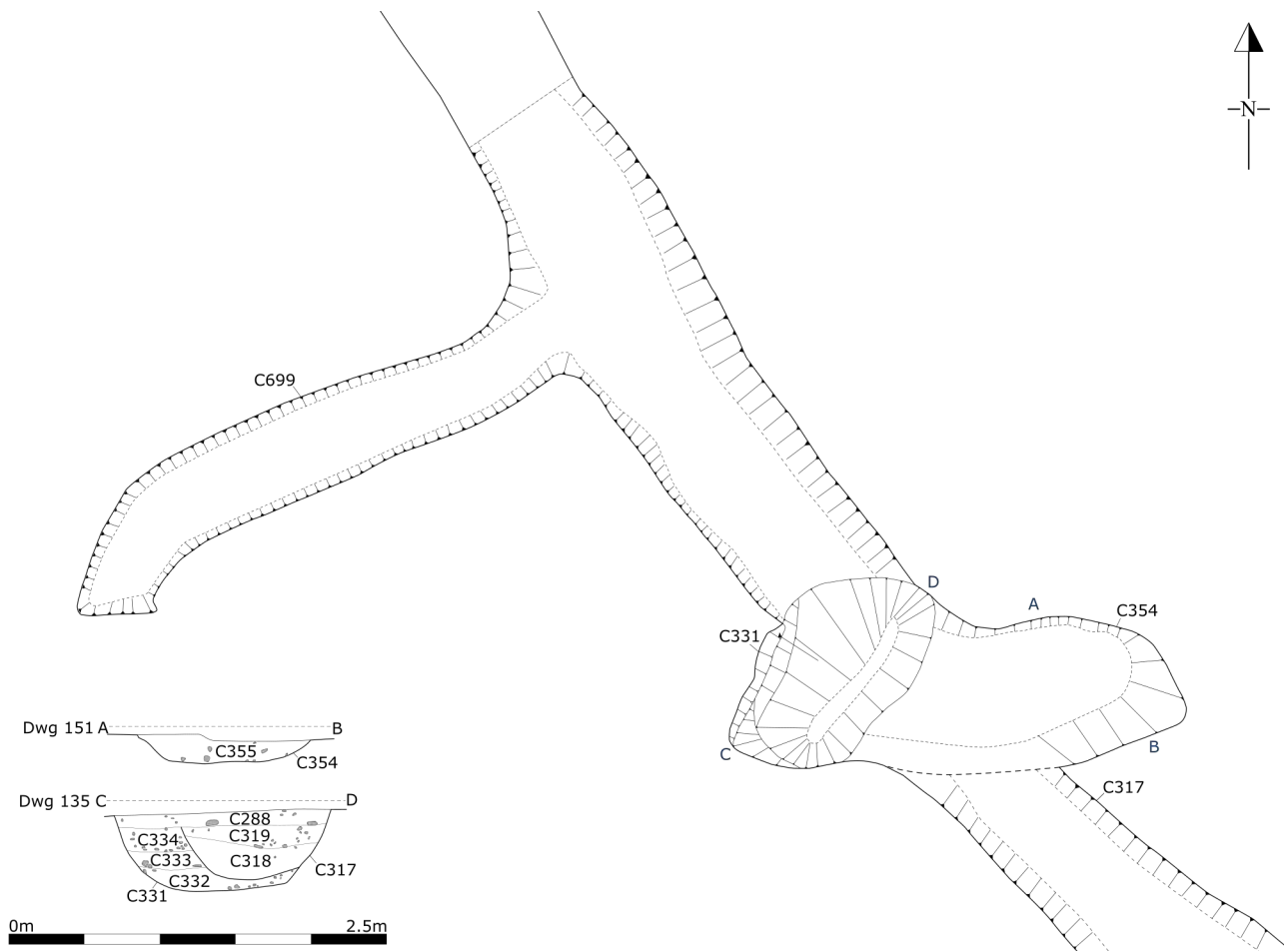
Mid-ex view of Kiln C331 with Ditch C317 removed, looking northwest (bottom right)

beyond the limit of excavation. The fill of the pit (C240) was similar to the fill of the pit to the west and had inclusions of stone, slag and charcoal. Both pits were located under the existing hedgerow along the northern side of the road and a modern service trench was located immediately to the south running parallel to the road. The presence of slag in the eastern pit suggests they relate to the early medieval phase of activity on the site, while the struck flint may indicate residual prehistoric activity.

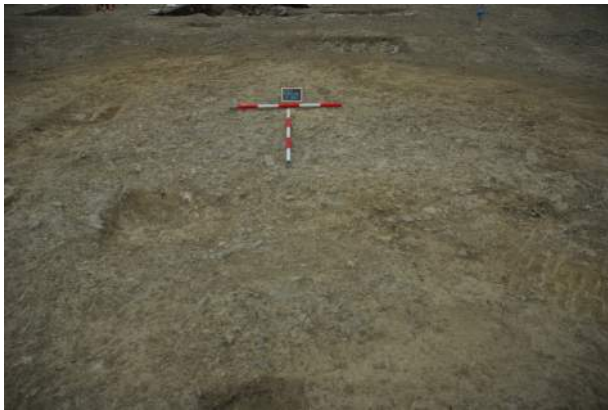
An irregular pit or patch of disturbance (C203) was uncovered to the west of Ditch C201 along the southern limit of excavation. It had a relatively flat base and partially truncated the western side of the ditch. The pit has a single fill (C204), which had inclusions of rare animal bone and one sherd of medieval pottery as well as frequent angular stone. This pit was also located directly below the former hedgerow and it is possible all three pits relate to a much later phase of activity relating to the creation of the hedgerow.

Kiln C331

An east-west orientated figure-of-eight shaped kiln (C331/C354; Kiln 23) was uncovered within the southern rectilinear annex. It was partially rock-cut and was truncated by one of the southern curvilinear annex ditches (C317) indicating it predated that phase of annexation. The firing chamber was located to the west. It was sub-oval in plan and had near-vertical sides. It was heavily truncated by Ditch C317. The drying chamber was located to the east and was originally recorded under a separate number



Plan and sections of Kiln C331 (top)



Post-ex view of metallised surface C279, looking south (centre)

Post-ex view of Ditch C317 with slot trench C699 visible to right, looking southeast (bottom)



(C354). It was shallower than the firing chamber and sub-oval in plan with more concave sides. Some scorching (C389) was evident on the base of the firing chamber with the rock-cut base of the drying chamber also being whitened from heat.

Three fills were identified within the firing chamber, with an additional fill recorded in the drying chamber. The basal fill within the firing chamber (C332) was an ash-rich deposit with

inclusions of charcoal chunks and charred seeds relating to the use of the kiln. It was overlaid by a scorched layer of silt (C333) with charcoal flecking, which related to a secondary firing of the kiln. This was overlaid by a stony sterile backfill (C334), which was deposited into the kiln cut as an intentional backfilling event. The fill within the drying chamber (C355) was similar to this material and is likely to relate to the same backfilling event.

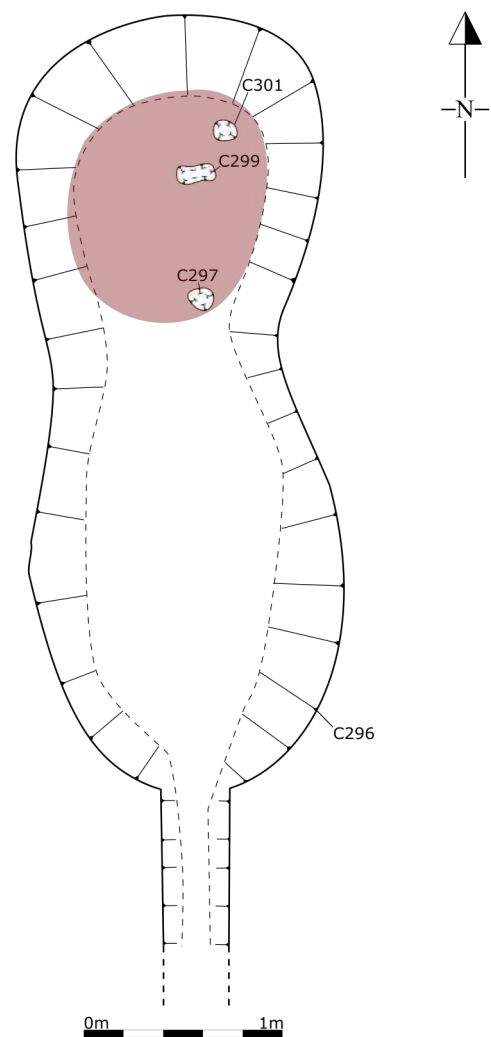
A patch of scorching with frequent charcoal flecking on the surface (C357) was recorded to the north of the drying chamber. This material also contained a small quantity of burnt bone. Given its proximity to the kiln it is likely to be related, possibly a dump of kiln waste or the base of a truncated waste pit associated with the kiln.

A short curvilinear slot trench (Structure 23; C699) to the northwest of the kiln may be the remains of an associated windbreak. The slot trench had steep, near-vertical sides and a concave base. The slot terminated to the southwest and arced slightly along its length. The northeastern end was truncated by the last phase of the southern curvilinear annex ditch (C317). Two fills were identified within the slot trench, which were identical with the fills of the curvilinear ditch truncating it. This suggests the windbreak was removed and remained open when the annex ditch was created, silting up at the same time as the ditch itself.

A large shallow sub-circular pit (C279) was also identified within the southern rectilinear annex. The base of the pit was lined with a metallised surface (C276). This was overlaid by a mixed deposit (C278), which had inclusions of clay pipe, medieval and post-medieval ceramics and an iron nail. The overlying fill derived from later plough-soil, however the underlying shallow pit and metallised surface may be earlier in date. The pit was in close proximity to Kiln C331. Similar broad shallow pits with metallised bases were identified during excavation in Alexander Reid, Co. Meath in 2016 (McGlade 2017) and were interpreted as being the base of threshing pits. The metallised base would have acted as a solid working surface and would have allowed for easier cleaning of the pit.

Ploughed out kiln C296

The base of a ploughed-out figure-of-eight shaped kiln (C296; Kiln 25) orientated north-south was uncovered towards the southeast of the site. The remains of the kiln consisted of a large figure-of-eight shaped patch of scorching with a flue to the south sitting directly over bedrock. Very little of this feature survived. This may be because of the underlying bedrock, with the kiln being largely above ground. Some dumps of charred seed and charcoal within the ditch to the east further suggest a kiln had been present in the vicinity.



Plan of ploughed out Kiln C296



Mid-ex view of ploughed out Kiln C298, looking west (top left)



Detail of burnt natural bedrock at northern end of ploughed out Kiln C296, looking west (bottom left)



Mid-ex view of southern end of gully C201, looking south (top right)



Mid-ex view of central portion of gully C201, looking south (bottom right)

was tapered to a point and angled to the southwest. It was similar in size to the central double stake-hole, with the southern example being slightly larger. The fill (C302) was similar to the fill of the other stake-holes. The purpose of the stake-holes was unclear, however they may have related to the superstructure of the drying chamber of the kiln, or have sub-divided the chamber.

Gullies

A number of possible stake-holes were identified in the base of the northern chamber and were sealed by the scorching at the base of the chamber. The southernmost of these (C297) was small and sub-oval in plan. It tapered to a point at the base and appeared to be a stake-hole. The fill (C298) had occasional charcoal and burnt clay flecking. To the north of this a double stake-hole (C299) was uncovered consisting of two similarly sized stake-holes side by side orientated east-west. Part of the bedrock outcrop into which the stake-holes were cut separated the lower portion of the stake-holes. The fill of both (C300) was a silt-rich material with occasional charcoal flecking. The northernmost stake-hole (C301)

A small north-south running gully (C201) was identified running parallel to the western ditch of the southern rectilinear annex. The gully appeared to be a drainage feature and was generally U-shaped in profile with steep sides and a concave base. Three fills were identified within the gully, with the basal fill (C438) being a pale sterile silt, which was apparent in the northern end of the gully. It was overlaid by a sandier deposit with inclusions of occasional animal bone (C202), which was present along the full length of the gully. A silt-rich upper fill was identified to the north (C466), which had occasional charcoal flecking.



Mid-ex view metallated surface C289 crossing gully C201, looking north (top left)

Mid-ex view of gully C201 being truncated by Ditches C399 and C436, looking west (centre left)

Mid-ex view of southern end of gully C214, looking north (bottom left)

Mid-ex view of gully C214, looking north (top right)

Mid-ex view of gully C214 being truncated by Ditch C285, looking west (centre right)

Mid-ex view of gully C214 being truncated by Ditch C285, looking east (bottom right)

A short section of metallated surface (C289; Path 7) overlay the gully at the southern end of the rectilinear southern annex and is likely to represent a crossing point over the gully. The metallating was overlaid by a soft silt with rare charcoal and animal bone inclusions, similar to the upper fill to the north (C466). The metallating was slightly concave with a dip along the centre line. The gully was an early feature in the southern end of the site and was truncated by the curvilinear southwestern annex ditch (C436), the rectilinear southern annex ditches (C285 etc.) and by the slot trench (C402) of Structure 21. It was also truncated by additional probable early medieval features (C420, C654

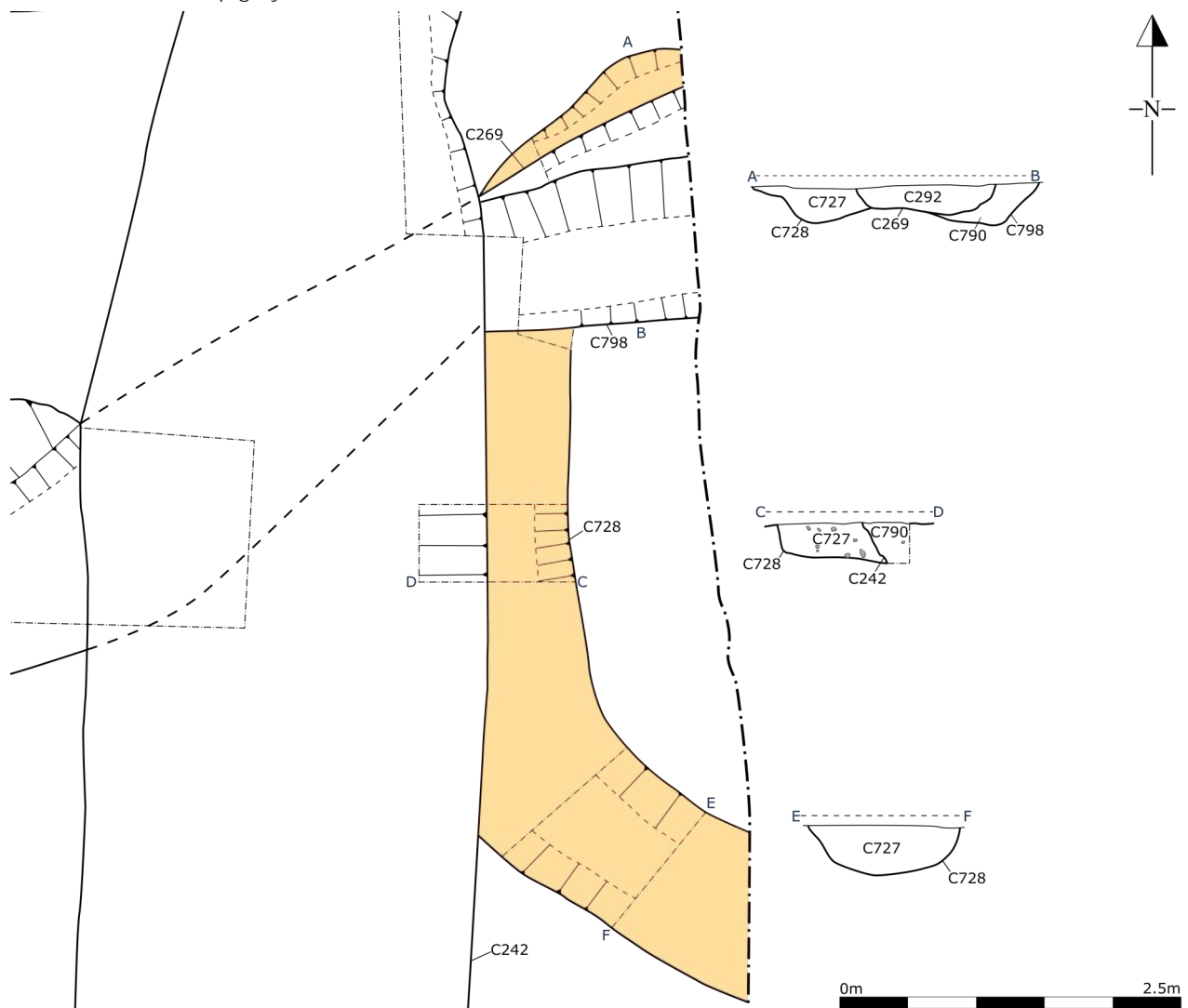
and C678) as well as by later post-medieval activity (C339, C653 and C656).

A shallow gully (C214/C263/C711) orientated approximately north-south was identified at the southern end of the field. The gully was concave in profile with shallowly sloping sides. The base undulated over the underlying bedrock. The relationship with Ditch C218 was not identified as both features were too shallow at their intersection. The feature had a single silt-rich fill (C215/C264/C710) with occasional animal bone inclusions and post-medieval ceramics, with the latter appearing to be intrusive. The feature was truncated by both the curvilinear (C269) and the rectilinear annex ditches (C285) indicating it was early in the evolution of the southern portion of the site, perhaps relating to gully C201, which also predated the southern annexes.

Curvilinear gully (Structure 24)

A semi-circular area defined by a shallow gully (C728; Structure 24) was uncovered to the east, continuing beyond the limit of excavation. It was truncated to the west by the earliest (C242) of the series of early north-south ditches and to the north by an associated drainage ditch (C798) and by the latest phase of the curvilinear southern annex (C269). The gully had steep sides and a flat base. The gully had a single fill (C727), a dark silt-rich material with rare animal bone and charcoal inclusions. Occasional flat stones were identified along the base of the gully to the north. The gully does not represent a slot-trench, however it may be the drip gully of a circular structure that did not survive later ploughing. The internal diameter of the gully was 4.85m, indicating a structure was somewhat smaller than this. This structure would have

Plan and sections of drip gully C728





Mid-ex view of drip gully C728, looking northwest (top)

Mid-ex view of drip gully C728 being truncated by Ditch C242 to left, looking north (centre)

Annotated mid-ex view of drip gully C728 being truncated by Ditch C269 and continuing beyond the limit of excavation to the east, looking east (bottom)

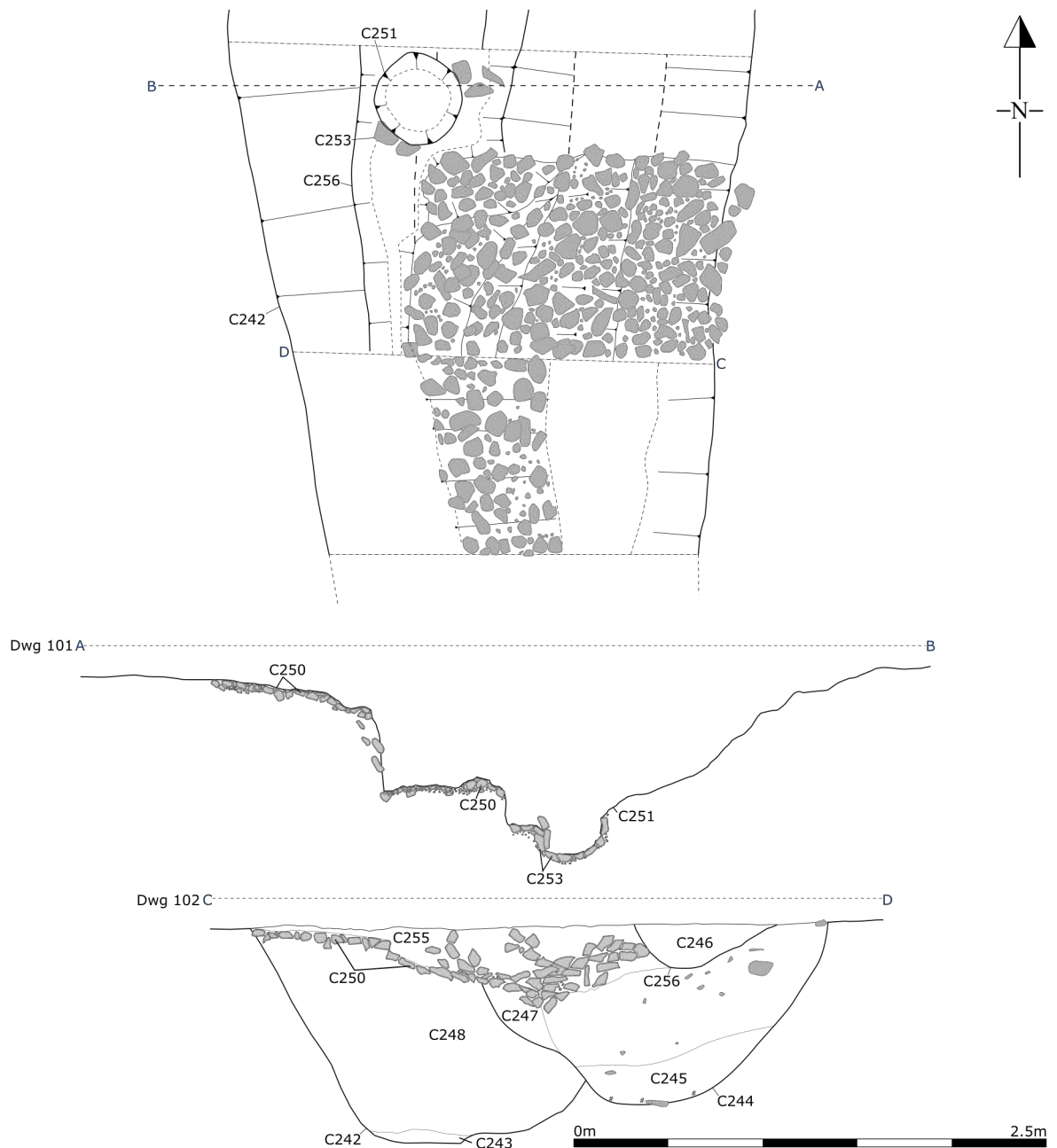
been early in the life of the settlement. It cannot be tied to any of the later phases of annexation and may have been located in unenclosed ground to the south of the settlement.

Early drainage ditch

A series of north-south orientated ditches and recuts were identified to the east of the southern part of the site. The ditches continued beyond the limit of excavation to the north and south. The geophysical survey (Harrison 2009) indicated that to the north the ditch ran towards the southernmost point of the arc of the inner enclosure ditch within the preserved portion of the site. It is possible that the ditch originally acted as a drainage feature associated with the inner enclosure ditch and was infilled prior to the subsequent phases of annexation to the south.

The initial cutting of the ditch (C242/C795) was located to the east and was partially rock cut to the south. It was generally U-shaped in profile. The base of the ditch was partially stone-lined (C265) to the south. The lining appeared to derive from the bedrock through which the ditch was cut, however it was intentionally placed along the base, presumably to prolong its longevity or to aid its drainage function. The basal fill of the ditch to the north (C757/C789) was a silt-rich material with rare charcoal flecking. A stone gaming piece was retrieved from the fill. Further to the south the fill (C243/C258) had more frequent charcoal inclusions indicating that waste from nearby fire-related features was being dumped into the ditch at this point. A thin band of charcoal and charred seeds (C306) was recorded overlying this fill along the southern half of the ditch. This fill related to kiln waste being dumped into the ditch and may have derived from Kiln 26 (C296), a ploughed-out kiln located to the west of the ditch. The upper surviving fill of the ditch (C248/C756) was a backfill deposit with occasional small stones and rare animal bone inclusions.

A shallower recut (C257/C787) was identified cut centrally within the fill of the ditch to the south. This was not identified at the northern



Plan of metallised surface C250 crossing ditches C242 and C244

end of the ditch, having been truncated away by the later recut (C244). The recut was shallow and U-shaped in profile with steep sides and a concave base. The fill of the recut to the south (C249) was a silt-rich material with rare charcoal and small stone inclusions. Further to the north the fill (C790) was paler and sandier, though this was due to different sedimentation patterns as the recut silted up.

The terminus of a ditch, or the western portion of a pit (C735) was identified cut into the top

of the recut (C257) of Ditch C242 to the north, continuing beyond the limit of excavation to the east. The feature respected the later recutting of the ditch (C244), which lay to the west, suggesting the ditch or its later recut (C256) were present when the feature was in use. The feature had steep, near-vertical sides to the north and west, being slightly gentler to the south. The fill (C734) had occasional charcoal flecking and stone along with rare animal bone.

The north-south ditch was subsequently recut



Mid-ex view of southern end of Ditches C242 and C244, looking north (top left)

Mid-ex view of Ditches C242 and C244 showing bedrock forming divide between the two ditches, looking west (centre left)

Mid-ex view of Ditches C242 and C244 within initial strip for Area A showing distance to annex ditch C220, looking west (bottom left)

Mid-ex view of Ditches C242 and C244, looking north (top right)

Mid-ex view of Ditches C242 and C244, looking north (centre right)

Mid-ex view of Ditch C244 towards northern end, looking south (bottom right)

and shifted slightly to the west of the original ditch. The recut (C244/C760) was similar in size and shape to the earlier ditch. The basal fill (C260) was a charcoal-rich silt identified at the southern end of the ditch. This may relate to further dumping from the nearby kiln, though no seeds were noted in the fill. This was overlaid by a silt-rich deposit (C245), which was very similar to the basal fill of the earlier cutting of the ditch and represents the gradual silting up of the recut. To the north a number of slight variations of the fill were noted (C759, C793 and C794), however these are all part of the same phase of silting up. Occasional animal bone inclusions were present along with



Mid-ex view of northern end of Ditch C244 with pit C720 to left, looking north (top left)

Mid-ex view of semi-articulated bone within northern end of Ditch C244, looking north (centre left)

Mid-ex working shot of sections excavated along Ditches C242 and C244, looking south (bottom left)

Mid-ex view of metallised surface C250 crossing ditches C242 and C244, looking south (top right)

Mid-ex view of posthole C251 cutting metallised surface C250, looking north (centre right)

Mid-ex view of metallised surface C250, looking east (bottom right)

infrequent charcoal and flecks of burnt clay. The next fill (C247) within the ditch was a pale silt-rich material with animal bone inclusions, slag and frequent small pebbles. Again, slight variations of colour and texture were noted to the north (C758), which were related to this phase of silting within the ditch.

At the southern end of the site a cobbled surface (C250; Path 8) was uncovered overlying the three early phases of the ditch. The surface was identified to the east of the ditches, crossing the ditches from east to west. The surface sloped down while crossing the ditches, with the dip likely to relate to the settling of the

underlying silts. The surface used larger stones than those used by the other pathways on the site and can be seen as cobbling rather than metalling. A thin layer of sand (C255) was identified beneath the cobbles representing a bedding material. The pathway was 1.1m in width and stretched for 2.2m across the ditches. The western end of the surface was truncated by a late ditch (C256/C762) running along the same alignment as Ditch C244.

A large posthole (C251) also truncated the northern side of the surface. The posthole was cut into the base of Ditch C244 and was sub-circular in plan. It had a flat base and steep, near-vertical sides. The fill (C252) was a loose backfill. A number of stones (C253) present in the fill to the east may have been packing stones.

The final recutting of the ditches (C256/C762) must have occurred significantly later. Both the curvilinear and rectilinear southern annex ditches truncated the earlier phases of the ditch to the north and were subsequently filled in prior to the insertion of the final recut. As such, this could be seen as a separate later ditch. However, it does follow the alignment of Ditch C244 and likely served the same function – draining water from the inner enclosure ditch or from other features to the north. The southern end of the ditch truncated the cobbled pathway crossing the earlier ditches and began to turn to the southeast at its southern end. The ditch was shallower than the earlier ditches, U-shaped in profile with a concave base. The ditch had a silt-rich fill (C246/C761) with occasional animal bone inclusions.

Ditch C391

A length of linear ditch (C391) was uncovered running parallel to the rectilinear annex ditch to the southwest. It was cut by ditch C343 along its northern edge and so predates the rectilinear southern annex. It had a single fill (C392) with rare charcoal flecking and occasional animal bone.

Section 12 The southwest annex

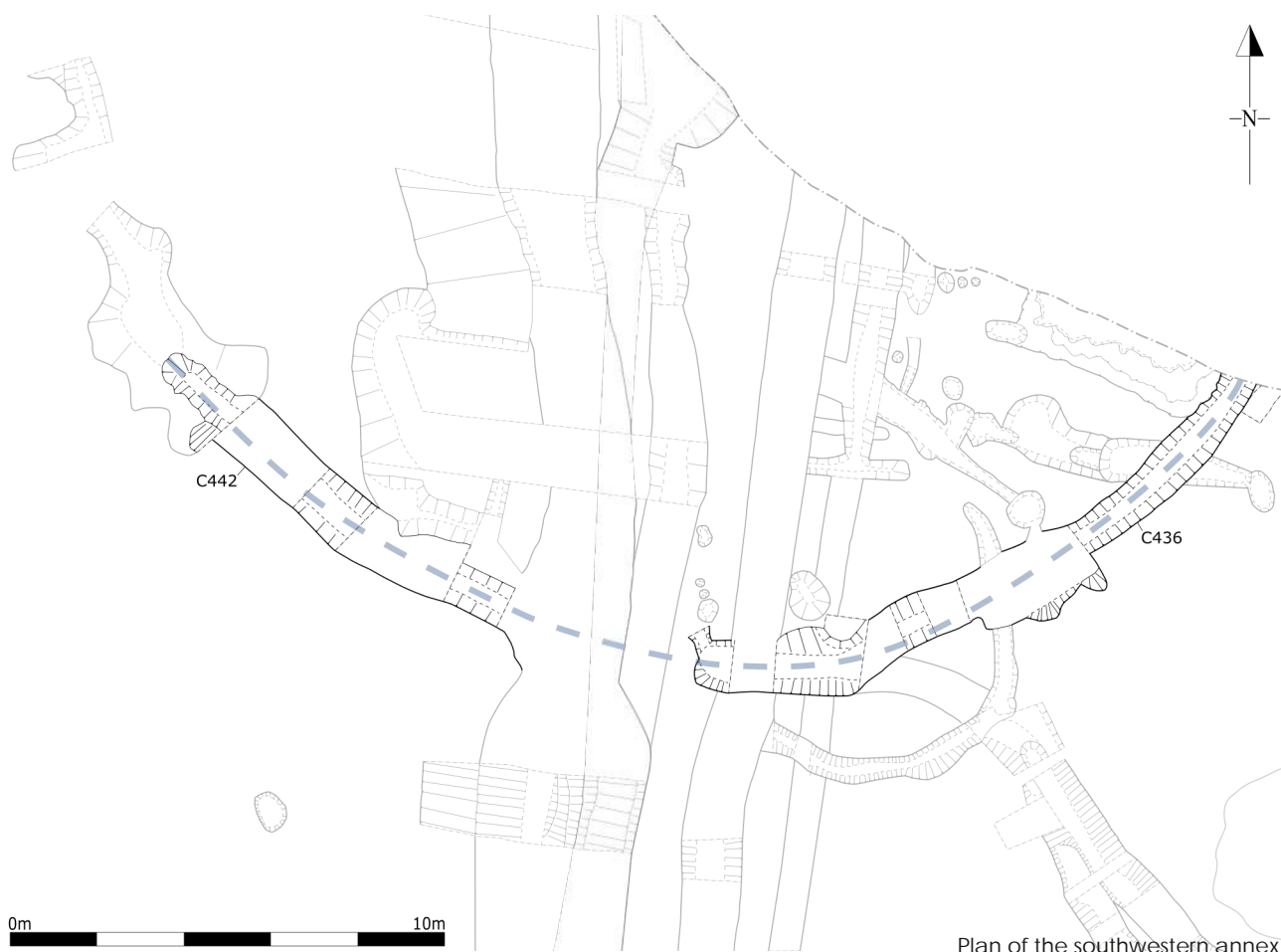
A curvilinear ditch defined a space to the south of the western annex and is interpreted as an additional annex. This annex was defined by ditches on all sides except to the north, where instead it was defined by the route of one of the main entrances leading into the central enclosure.

Many of the features identified within the southwest annex related to later phases of activity. It may have been an enclosed space at the side of the entrance, perhaps acting as a corral, paddock or animal enclosure. An enclosure (Structure 5) identified to the east of the eastern entrance to the settlement was also largely devoid of internal features and may have

served a similar function. It is equally possible that features originally within the enclosure have not survived or that they were located at the northern end of the enclosure beyond the limit of excavation.

Western arc

The southwest annex ditch was in two sections separated by a gap or entrance. The western section (C442) arced from the northwest to the south and was truncated by both phases of the southern rectilinear annex to the east. The northern end of the ditch was partially rock cut. The ditch was U-shaped in profile with steep





Mid-ex aerial view of the southwest annex ditches, looking northeast (top)

Mid-ex view of Ditch C442, looking northwest (centre)

Mid-ex aerial view of southwest annex, looking north (bottom)



sides and a concave base. The northern terminus of the ditch tapered and rose up gently. The eastern end of the ditch was truncated by the later phase of the southern rectilinear annex (C205). The ditch truncated the southern end of a large shallow pit (C381) and the southern end of Path 6 (C476/C513).

The basal fill of the ditch (C443) was a silt-rich deposit with frequent stone inclusions at the base. A fragment of a juvenile human skull was recovered from the base of the fill 5.57m from the terminus. Frequent inclusions of animal bone were also retrieved from the fill. This was overlaid by a sandier silt material (C444/C571), with occasional animal bone and charcoal inclusions.

The subsequent recutting of the ditch (C445) was narrower and shallower than the earlier ditch. It was concave in profile and had a concave base. A number of stones were present along the base of the recut to the north. The basal fill of the recut (C446) was a sterile silt-rich material. The upper fill of



Mid-ex view of Ditch C442, looking west (top left)

Mid-ex view of terminus of Ditch C442, looking east (centre left)

Mid-ex view of terminus of Ditch C442 truncating metallised surface C476, looking northeast (bottom left)

Mid-ex view of Ditch C442, looking west (top right)

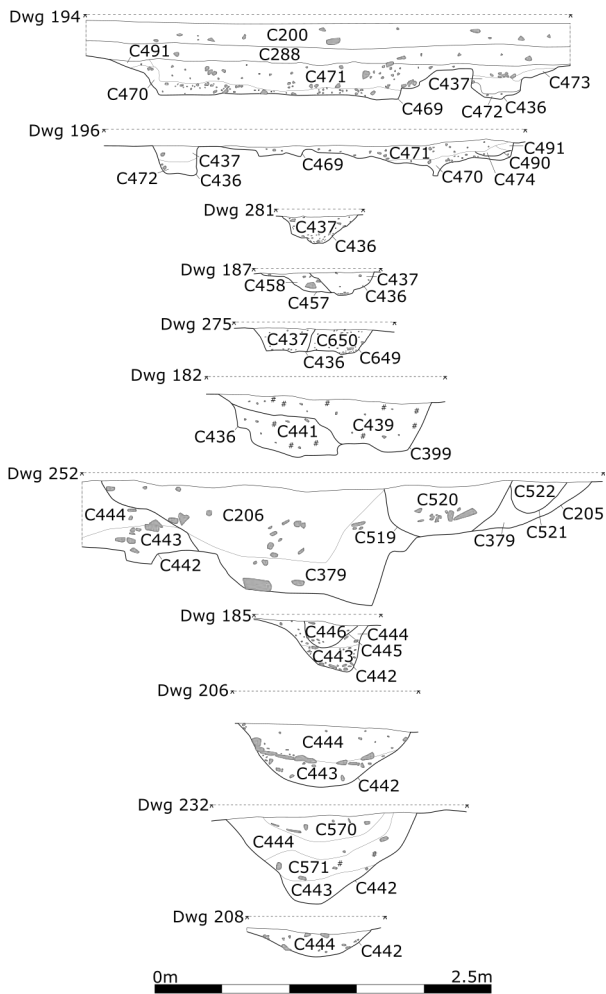
Mid-ex view of Ditch C205 truncating east end of Ditch C442, looking north (bottom right)

the recut (C570) did not extend into the northern end of the ditch. It was a silt-rich fill and contained frequent stones and animal bone. A rectangular stone tool, possibly used in weaving or leatherworking, was retrieved from this fill.

Eastern arc

The continuation of the southwest annex ditch (C436/C440) was identified within the southern rectilinear annex also. The western end of this section of the ditch was truncated away by a later curvilinear feature (C399/C434), however

it did not extend beyond the terminus of that ditch to the west. This indicated that there would have been a gap or entrance in the southwest annex ditch to the south, which was mostly truncated away by the later southern rectilinear annex ditches. The eastern section of the annex ditch curved from the south to the east and northeast, continuing into the preserved portion of the site. It was generally U-shaped in profile and steep-sided with a flat base, which widened towards the north. The ditch truncated a large pit (C649) to the



southeast and a linear gully (C201) to the south. It was truncated by Kiln 24 (C682) to the north, by a curvilinear ditch (C399) to the south, by Structure 21 (C402) to the south, as well as by a post-medieval ditch (C366) to the west.

The basal fill of the ditch (C472) was a water-laid deposit to the north and contained a possibly polished bone object. A step in the rock-cut base at this point appeared to cause a slight obstruction causing heavier water-borne particles to settle here. This was overlaid by the main fill of the ditch (C437/C441) a silt-rich deposit with inclusions of frequent animal bone, charcoal, a possible hone stone and occasional small stones. A small compact deposit (C473) partially overlay this fill on the external side of the ditch to the north. The northern end of the ditch was also overlaid by a spread of the upper fill (C471) of the large rock-cut pit (C469) at the northern limit of



Sections of Ditches C442 and C436 (left)

View of Ditch C436 at limit of excavation leading to preserved area with Pit C369 to left, looking north (top right)

Mid-ex view of terminus of Ditch C436, looking east (centre right)

Mid-ex view of Ditch C436, looking southwest (bottom right)

excavation. This indicated that the ditch had been infilled prior to the pit and suggests it relates to an earlier phase of activity.

Outer ditch

A poorly surviving outer southwestern annex ditch was recorded to the east and south of the annex. It did not survive to the west of the later rectilinear annex ditch. The ditch survived in two sections, one to the northeast (C715) and one to the south (C405). The northeastern arc of the ditch (C715) was shallow and rock cut with a relatively flat base and steep sides. The ditch truncated the earliest phase of the southern curvilinear annex (C709/C770). It was truncated by the second phase of the southern curvilinear annex ditch (C705) and by ditch C271, which possibly formed a late elongated annex. This section of the ditch terminated to the south at a squared, steep-sided terminus and did not have a relationship with the latest phase of the southern curvilinear annex (C317) or the rectilinear annex ditch.

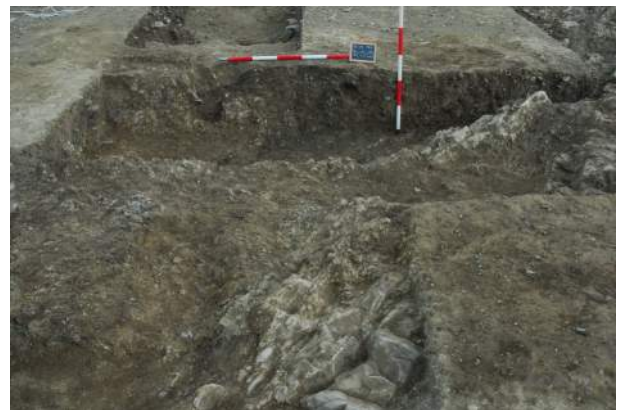


The basal fill of the ditch (C718) had occasional inclusions of stone and charcoal flecking. It was overlaid by a stony deposit (C716) with occasional animal bone inclusions. The upper fill (C731) was silt-rich deposit with frequent stone inclusions and occasional animal bone and charcoal. The high stone content in the fills may indicate the deposition of bank material into the ditch, or the backfilling of the ditch with material excavated from other features.

Mid-ex view of Ditch C405 to the south of southern rectilinear annex ditches, looking west (left)

Mid-ex view of Ditch C405 with posthole C358 visible cut into side and southern rectilinear annexes visible beyond, looking north (top right)

Post-ex view of southwest terminus of Ditch C715, looking southwest (bottom right)



The southern section of the ditch (C405) survived shallowly along the northern side of the rectilinear southern annex ditches and more substantially to the south. A gap representing an entrance was present between the terminus of Ditch C715 and the end of Ditch C405, however the northwest end of Ditch C405 did not have a defined terminus and shallowed out. The deeper southern arc of the ditch was U-shaped in profile with a concave base. As it arced to the west the ditch was truncated by the rectilinear annex ditch (C285), later Ditch C205 and by post-medieval ditch C366. It was not identified beyond Ditch C205, possibly terminating or shallowing out beyond this point. The basal fill (C406) was a silt-rich material with frequent stone inclusions and was overlaid by a less stony deposit (C407), which contained a piece of burnt flint.

The ditch truncated a short earlier east-west running ditch (C343), which followed the same line as the southwest end of the ditch. The earlier ditch shallowed to the east and was truncated by a later pit (C351). The basal fill of the earlier ditch (C404) was a silt-rich material only present in the deeper western section of the ditch. It was overlaid by a stonier deposit (C344).

A posthole (C410) was identified at the base of the cut as it curved to the north of the rectilinear annex ditches. The posthole was sub-circular in plan and rock cut. It had a single silt-rich fill (C411), which was overlaid by the fill of the curvilinear.

A shallow sub-oval pit (C380) was cut into the fill of ditch C405 from the south. The pit was concave in profile and orientated north-south. The fill of the pit (C368) had moderate inclusions of charcoal. A spread of charcoal-rich material (C422) was identified to the west of the pit and may have been associated. Charred seeds were noted in this material suggesting the pit may have been related to kiln activity, either in the disposal of kiln waste or being the remains of a ploughed-out kiln. The location of the pit, immediately to the south of the annex ditch, may have been an attraction as the kiln could have been dug into an associated bank.

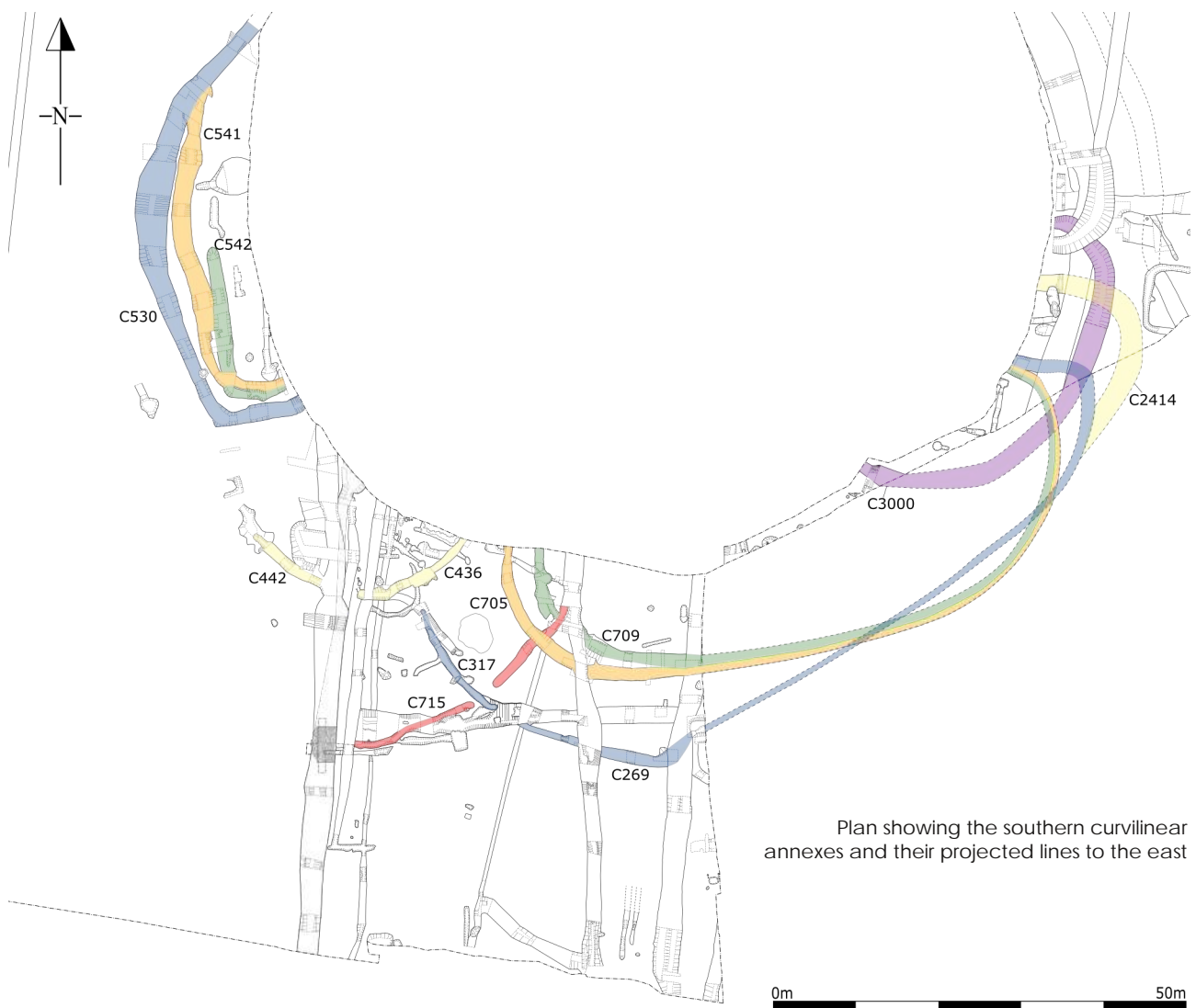
A posthole (C358) was cut into the spread of burnt material to the west. Four packing stones were evident within the posthole, which had two fills. The basal fill (C423) was a sandy deposit and may relate to packing material. It was overlaid by a looser backfill (C359), which formed after the removal of the post.

It should be noted that the relationships indicated by the outer southwest annex ditch were difficult to identify due to the shallow nature of the cuts in places, however the two sections of the cut appear to be related and to be in the correct location for an outer arc of the annex. The stratigraphy suggests that this outer ditch was added after the initial southern curvilinear annex was abandoned and before the second southern curvilinear annex ditch was created. It may have been a short-lived component as the third phase of the curvilinear southern annex ditch respected the line of the inner southwestern annex ditch suggesting this was still in use at that time.

Section 13 Southern curvilinear annex

A series of ditches were identified creating two concentric curvilinear southern annexes, one larger than the other. A third inner ditch was also identified, which was not concentric. It was unclear whether the ditches were contemporary, however as seen with the western annex it is more likely than one replaced the other rather than both being open at the same time. It is possible that these relate to two curvilinear ditches (C2271 and C2184) identified to the east, which ran beyond the limit of excavation. The innermost of the ditches to the east

(C2271) was the earliest and was truncated by the outer arcing ditch (C2184). The latter ditch was in turn truncated by the eastern annex ditch (C2204), indicating these small curvilinear annexes were early in the evolution of the settlement. A third ditch to the east (C2414) may also form part of the southern curvilinear annexes, however a turn in this ditch to the south was not identified as the ditch was truncated by the eastern annex ditch (C2204) and a later post-medieval ditch.





Mid-ex aerial view of the southern curvilinear annex ditches, looking west (top)



Mid-ex aerial view of the southern curvilinear annex ditches, looking north (bottom)

Ditch C770

Three main phases of the southern curvilinear annex were identified. The earliest of these was the innermost ditch (C770), which arced from eastern limit of excavation running west and curving to the northwest where it continued into the preserved portion of the site. The ditch was steep-sided and had a concave base, being U-shaped in profile. At points where the ditch was cutting through the bedrock the base was more uneven. The ditch truncated the north-south running ditches to the east (C242 and C244) and was truncated along its southern side by later recuttings of the southern curvilinear annex ditch. The ditch had a single fill (C776), which had occasional animal bone and charcoal inclusions.

The ditch was recut by a broader and shallower ditch (C779), which truncated the southern side of the earlier cut. The recut had concave sides and a flat base. A single fill (C780) was identified within the recut, which had inclusions of animal bone and charcoal. Only one cut was identified at the northern limit of excavation (C709), which was more truncated. This may relate to either the earlier cut or the recut of the ditch. This section had a single fill (C708) with occasional animal bone inclusions.

A sub-rectangular pit (C733) orientated north-south cut through the western side of the ditch to the north. The pit had straight sides and a flat base. It had a single fill (C732), which was a silt-rich deposit with frequent stone. The



Mid-ex view of Ditch C709, looking southeast (top left)



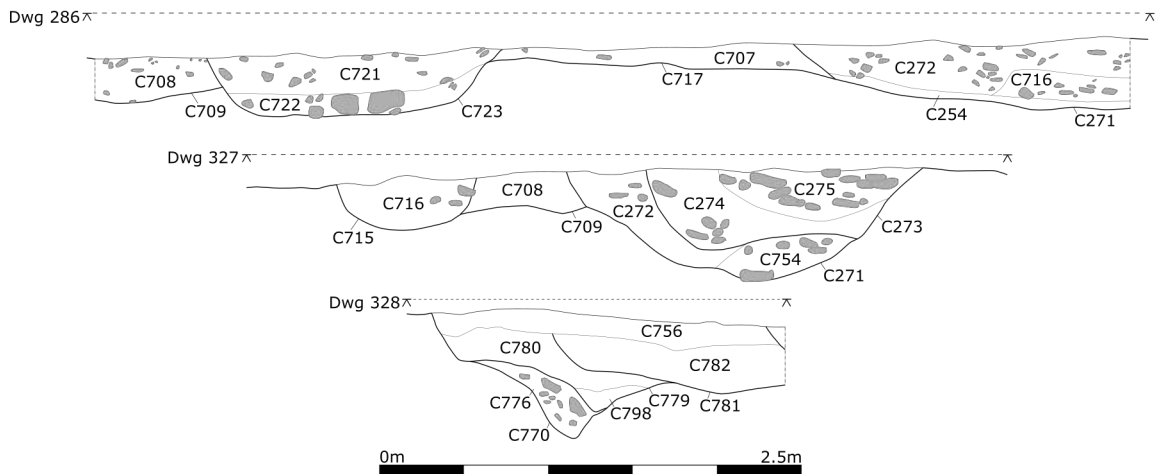
Mid-ex view of Ditch C770 with recut C779 in centre and Ditch C705 to the right, looking east (top right)



Mid-ex view of ditch C770, looking west (centre left)

Mid-ex view of Ditch C770 being recut at intersection with Ditch C242, looking west (centre right)

Ditch C770 sections (bottom)





northern end of the pit was truncated by a later pit (C723), which also truncated the curvilinear annex ditch (C709) and ditch C701 to the west. The later pit (C723) was sub-rectangular in plan with rounded corners. It was rock cut with steep sides and a flat base, and was orientated east-west. The basal fill of the pit (C722) was a pale silt with rare stone inclusions, and had a cache of animal bone, which was centrally located within the pit. The upper fill of the pit (C721) contained more frequent stone. It was similar to the fill of the ditch into which the pit was cut and is likely to be a backfill material. A possible recut within the pit was recorded (C796), however this related to the fill (C797) in the centre of the pit having been disturbed by a plough furrow (C717). The pit appeared to have been a waste pit.



Ditch C781

The southern curvilinear annex was subsequently enlarged slightly with the annex ditch following a similar route to the south but extending further to the west at its northern end. The earliest version of this phase of the ditch (C781/C705) was located slightly further to the south of the earlier phase of the ditch, and was steep-sided with a flat base. The ditch became shallower to the northwest suggesting the ditch was more heavily truncated at this point. The ditch had a stone lining (C698) on its northern side along the southern arc. The stones were angular and were not laid in a clear order. The remains of a bonding agent was noted between the stones. The basal fill of the ditch (C783) was a dark silt-rich material with infrequent animal bone and occasional charcoal inclusions. This was paler in colour to the north

Mid-ex view of Ditch C709 being truncated by pit C723, looking north (top left)

Mid-ex view of northern end of Ditch C705, looking southeast (top right)

Mid-ex view of Ditch C705 running across image and cutting Ditch C715 with C715 visible in centre, looking south (centre right)

Mid-ex view of Ditch C271 truncating Ditch C705, looking south (bottom right)



Mid-ex view of Ditch C781 cutting Ditch C770, looking east (top left)



Mid-ex view of Ditch C781 cutting Ditch C770, looking west (bottom left)

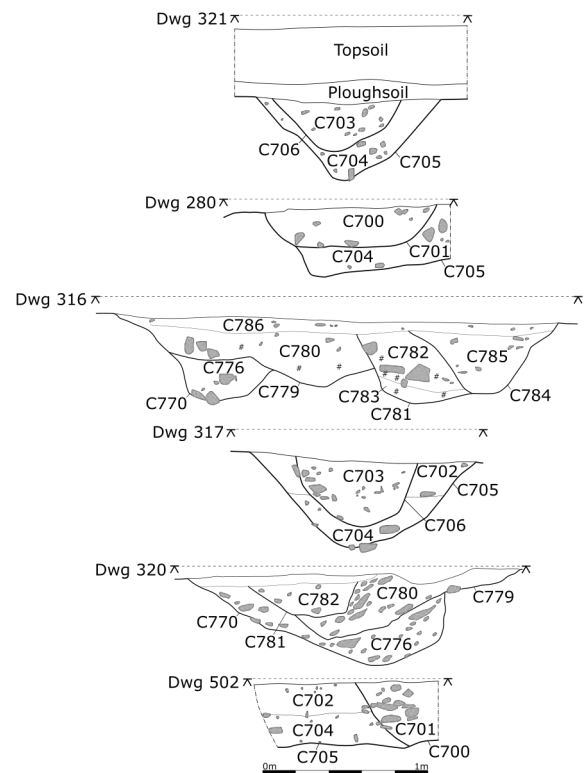


Mid-ex working shot of Ditches C709 and C705 curving to the east, looking southeast (top right)



Mid-ex view of Ditches C709 and C705 curving to the east, looking southeast (centre right)

Sections of Ditch C705/ C781 (bottom right)



and was recorded under a separate context number (C704). It was overlaid by a paler material with occasional inclusions of animal bone, including a cow skull (C702/C782). This fill also had inclusions of occasional charcoal and rare burnt bone.

The ditch was subsequently recut (C706/C784) with the recut being U-shaped in profile with a flat to concave base. The recut became



Mid-ex view of Ditch C317, which terminates to the left and is truncated by Ditch C399 through the centre. The remainder of Ditch C317 continues in the background, looking southeast (top left)

Mid-ex view of Ditch C399 truncating Ditch C317, looking southeast (centre left)

Mid-ex view of Ditch C317, looking southeast (bottom left)

Mid-ex view of intersection of Ditches C317 to left and C285 to right. The relationship did not survive due to shallowness of Ditch C317 at this point, looking east (top right)

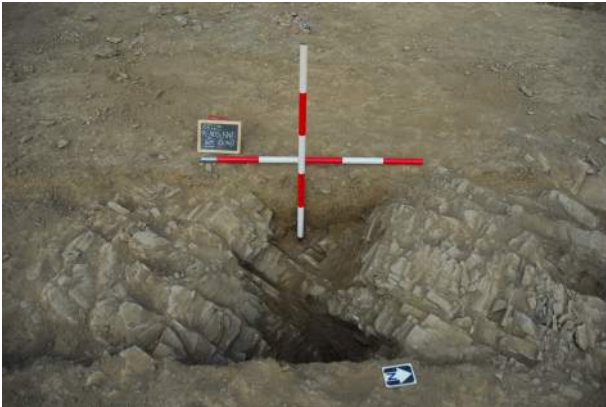
Mid-ex view of Ditch C317, looking southeast (bottom right)

shallower and narrower to the northwest, again indicating more substantial truncation through ploughing at this point in the past. The fill (C703/C785) of the recut had occasional inclusions of animal bone, charcoal and stone. It was overlaid by a disturbed plough soil horizon (C786) to the south.

The second phase of the southern curvilinear annex ditch truncated the latest phase of the southwest annex (C715) and was truncated by a small curvilinear ditch to the north (C701) and by the possible eastern ditch of the last rectilinear southern annex (C271).

Ditches C269 and C317

The southern curvilinear annex was subsequently enlarged further, for a third time, with the new ditch enclosing more ground to the south and west. The arc of the latest phase of the southern curvilinear annex survived in two sections (C317/C294 and C269). The ditch shallowed at the junction with the series of ditches relating to the rectilinear annex (C285), with the relationship impossible to discern in



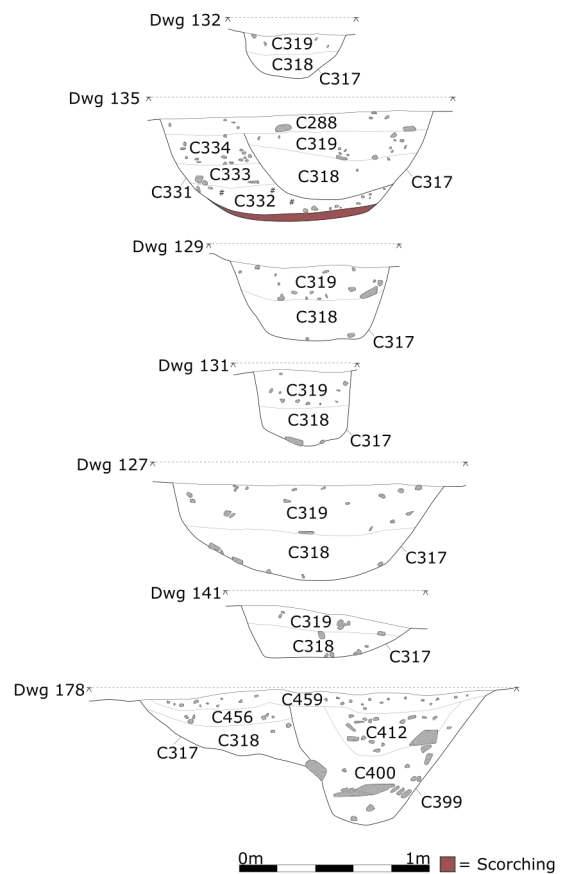
Mid-ex view of Ditch C269, looking west (top left)

Mid-ex of Ditch C269 to left being truncated by Ditch C271, looking north (centre left)

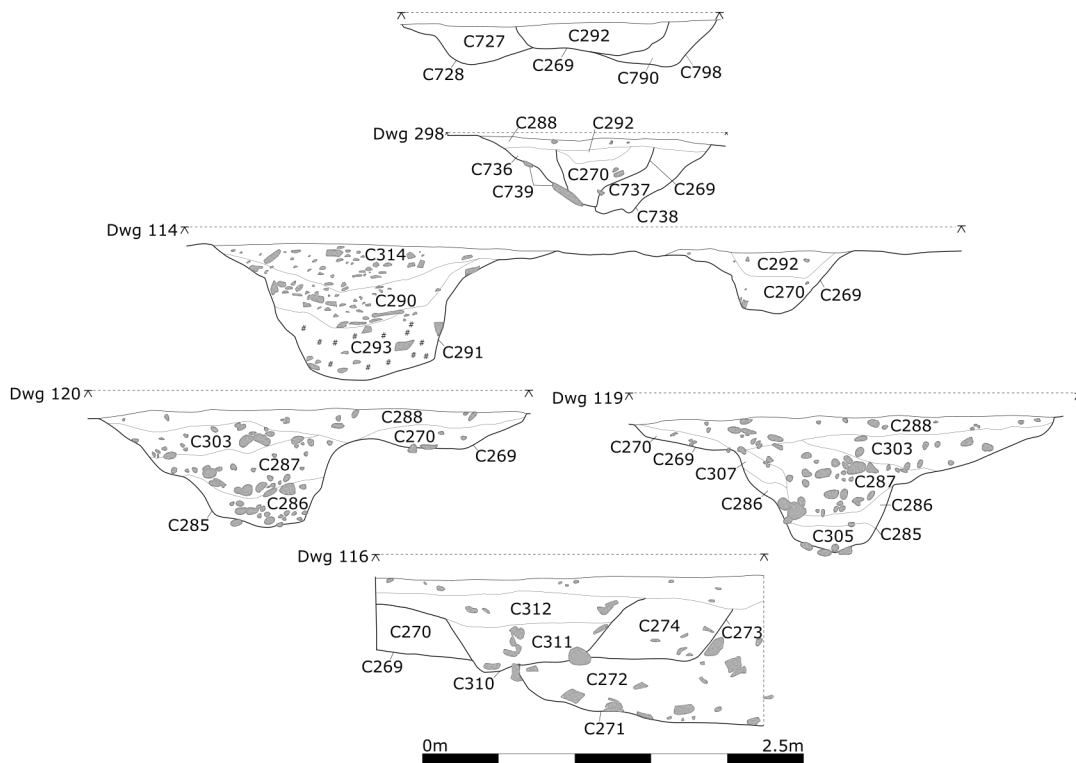
Mid-ex view of Ditch C269 with broken bedrock placed as an informal lining along northern side, looking east (bottom left)

Mid-ex view of Ditch C269 truncating Ditches C242 and C244 with edges spraypainted due to poor light conditions, looking west (top right)

Mid-ex view of Ditch C269 truncating Ditch C244 and Ditch C798 near eastern limit of excavation, looking southwest (centre right)



Sections relating to Ditch C317 (bottom right)



Sections relating to Ditch C269

the arid conditions of the summer. The earliest phase of the ditch (C738) survived to the south with the cut for the ditch being V-shaped in profile and rock cut. A stone lining (C739) was present along the northern side of the ditch with the stones ranging from 420mm x 360mm x 100mm to 230mm x 100mm x 40mm in size. The stones were fractured and were similar to the underlying bedrock, possibly used as an informal lining due to the stone being available when the ditch was created. Overlying the stones along the northern side of the ditch a compact clay fill (C736) with no inclusions was recorded, which may also relate to the lining. The surviving fill along the southern side of the ditch (C737) was a silt-rich deposit and had inclusions of occasional stone and charcoal flecking.

As only one cut was identified to the north it must be contemporary with the recutting of the ditch to the south (C269). The northwestern end of the ditch (C294/C317/C424) terminated 2.5m from the edge of the ditch forming the southwest annex (C436), with the terminus having near-vertical sides. This suggests the curvilinear annexes to the south, southwest and west were contemporary. The gap between the

northwest terminus of Ditch C317 and the southwest annex appears to define an entrance, with a gap also present to the north between the southwest annex ditch and the earlier two phases of the southern curvilinear annex ditches (C770 and C781). The northern section of the ditch truncated Kiln 23 (C331) and its associated windbreak (C699). The slot trench of the windbreak had the same fills as the ditch indicating the structure was removed and remained open when the ditch was created and silted up with the same material and at the same time. The northern end of the ditch was truncated by a later curvilinear ditch (C399), which also truncated the ditch forming the southwest annex (C436).

The northern section of the ditch had three fills. The basal fill (C318) was a silt-rich deposit identified in the southern end of the ditch and had no inclusions. It was overlaid by a silt-rich material (C426/C455/C319/C295), which had a concentration of charcoal at the top of the fill at the terminus, possibly relating to dumping from nearby features. Rare animal bone inclusions were also recorded within the fill to the north while medieval ceramics and an iron nail were also retrieved, and may be intrusive.



The upper fill (C425/C456) was again a water-laid silt deposit with inclusions of occasional animal bone, charcoal and burnt stone, with charcoal and was identified in the northern end of the ditch. A broken copper-alloy pin was retrieved from the fill.

A recut of the southern arc of the ditch (C269) was identified to the south of the rectilinear southern annex ditches (C285 etc.). The southern recut was generally U-shaped in profile with a flat to concave base. The ditch truncated the two early north-south ditches to the east (C242 and C244) and began to arc to the north before running beyond the limit of excavation. It also truncated a possible drip gully (C728) to the east and was truncated by a north-south orientated ditch (C271).

The basal fill of the southern section (C270) was a silt-rich material with stone inclusions. A number of medieval and post-medieval ceramics were identified at the top of this fill and may be intrusive from the plough-zone horizon. It was overlaid by a sandier fill (C292), which also had stone inclusions and was truncated away as the ditch arced to the north. The plough soil horizon (C288) overlay this.

Pre-ex view of Ditch C2184 being truncated by post-medieval ditch C2213, looking west (top left)

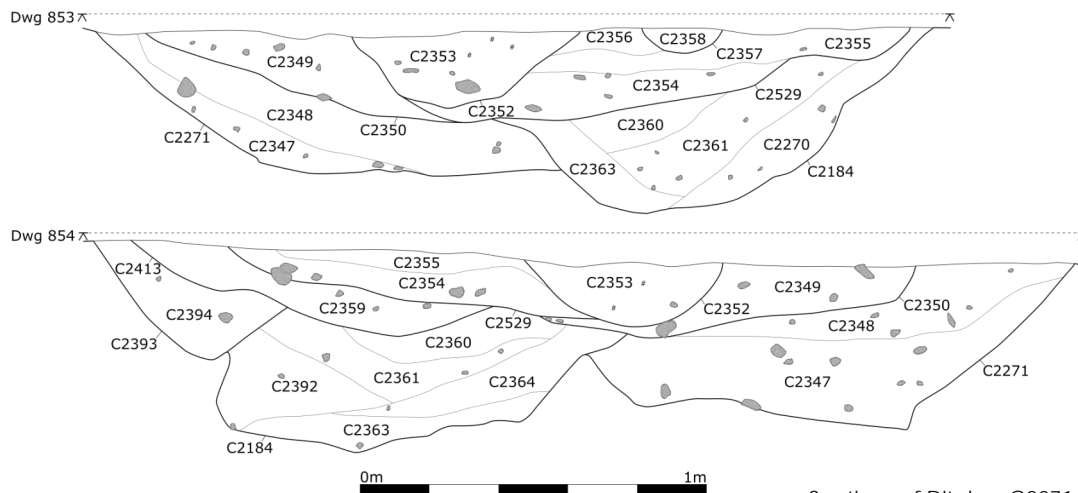
Mid-ex view of Ditch C2184 being truncated by Ditch C2204, looking south (bottom left)

Mid-ex view of Ditch C2184 cutting Ditch C2271, looking west (top right)

Mid-ex view of C2184 cutting Ditch C2271, looking east (bottom right)

The eastern returns

To the east two ditches relating to the curvilinear southern annexes were identified. A third further to the north (C2414) may also be related, however a southern return to the ditch did not survive later truncation. Both of these turned in towards the interior at the same point. This may indicate an entrance existed to the north at this point. The earliest of the ditches (C2271) ran out from the preserved interior curving to the southeast, where it was truncated



Sections of Ditches C2271 and C2184

by post-medieval ditch C2013 at the southern limit of excavation. The basal fill (C2347) was a mottled silt with occasional stones and rare animal bone inclusions. It was overlaid by a similar material (C2348), which was paler and had less stone and no bone inclusions. Both fills appeared to have formed through natural silting within the ditch.

The ditch was subsequently recut along its northern side (C2184), with the recut extending further to the east. This ditch was truncated by the eastern annex ditch (C2204) to the east. The recut ditch (C2184) had a more U-shaped profile. A number of slightly overlapping silt-rich deposits (C2270, C2361, C2360, C2363, C2364 and C2392) were present within the ditch and may represent seasonal variations or partial cleaning out events within the ditch. At its western end the fills were clearer with three layers of silts evident (C2251, C2252 and C2245). Some slag was retrieved from this material with the semi-articulated remains of a dog retrieved from one of the layers (C2245). A layer of trample (C2250) was also recorded on the base of the ditch at this point, which was a mixture of the fill above (C2251) and the natural. The main basal fill (C2251) continued below the cut of Ditch C2204 indicating it originally continued beyond the line of the outer enclosure ditch, beyond the limit of excavation.

A small cut (C2393) was apparent along the northern side of the later ditch with a single silt fill (C2394). Too little of this cut survived to say whether it was another channel of the ditch or a

feature cut into the top of the backfilled ditch.

A broad shallow recut (C2350/C2413) truncated the top of both ditches. This phase of the ditch truncated the eastern annex ditch (C2204) and represents the latest surviving element of the southeastern outer enclosure ditch. It had a redeposited natural fill (C2359) along the base to the north, possibly relating to slumping of bank material. The upper fill to the south (C2349/C2249) was a silt-rich material and contained frequent animal bone, which continued to the east as the main fill of the ditch. A sherd of post-medieval ceramic was retrieved from this fill. It was overlaid to the north by a silt deposit (C2354), which in turn was overlaid by a similar but darker silt deposit (C2355/C2356), with these fills representing settling of topsoil-type material over the feature after it had gone out of use. An iron object was retrieved from this fill. This phase of the ditch may relate to the outer enclosure ditch to the north, which also truncated the eastern annex ditch.

A shallow channel (C2352), U-shaped in profile, was cut into the top of the backfilled ditch. The fill of the channel (C2353) was a dark silt with inclusions of charcoal, slag and occasional burnt clay and may relate to a later feature cut into the ditch located further to the west within the area preserved in situ. A plough furrow (C2357) with a single fill (C2358) containing inclusions of charcoal and animal bone was also recorded truncating the ditches, with the finds deriving from the fills truncated by the furrow.

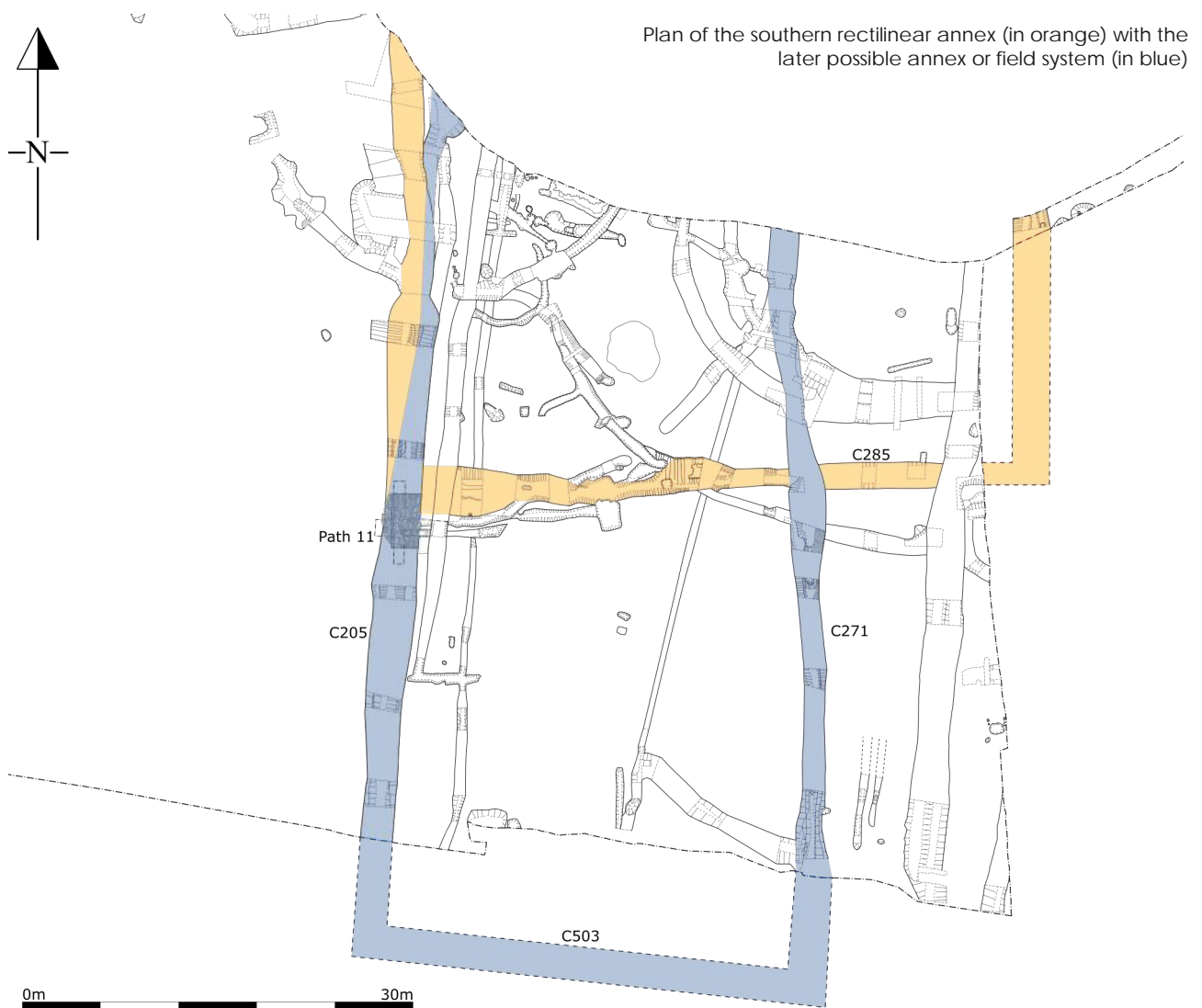
Section 14 Southern rectilinear annex

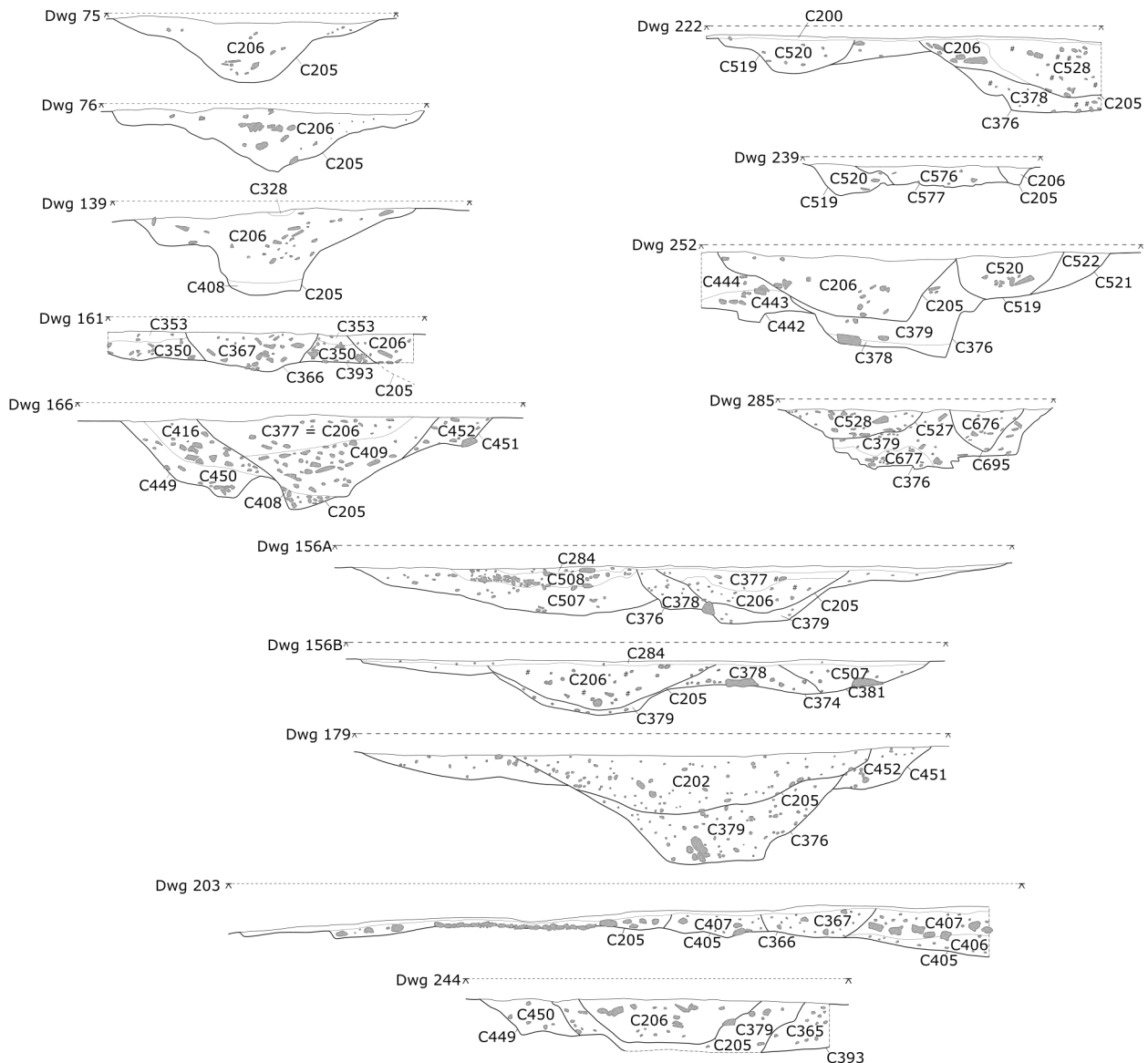
The southern curvilinear annex appears to have been replaced with a rectilinear annex enclosure, however the relationships were tenuous as the intersection of the curvilinear and rectilinear ditches to the south was too sun baked to truly identify the relationship and a later ditch truncated the intersection to the west. The geophysical survey suggested that the western side of this annex ran up to the southern side of the western annex. The eastern ditch of the annex was not identified with certainty as the return lay beyond the limit of excavation,

however it is likely that Ditch C3034 may relate to the annex based on the number of recuts and the orientation of the ditch.

West side

The rectilinear annex ditch was recut numerous times. A number of early cuttings of the ditch were identified along the western side of the ditch, which were truncated by later phases of the ditch, as well as by the later north-south





Sections relating to the west side of the southern rectilinear annex



ditch (C205) running along the same alignment. To the south an early cutting of the ditch (C449) was identified slightly to the west of the later recutting events. It was U-shaped in profile with a concave base. The basal fill (C417/C450) was a silt-rich fill with frequent animal bone along the base of the ditch. Three sherds of post-medieval ceramic were recorded from this fill, however this is an error. It was overlaid by a stony deposit (C416), which appears to have been the backfill of the ditch. This section of ditch was identified from the connection with the east-west running series of the ditches running to the north for a short distance. Further to the north it was truncated away by the later recuttings of the ditch.

In the central and northern sections of the western boundary the earliest surviving ditch (C376) had convex sides and a flat base. The ditch truncated the western ditch (C442) of the southwestern annex as well as Pit C381. The basal fill of the ditch (C378) was a water-laid silt with inclusions of animal bone and charcoal. A stony fill (C677) was present along the base at the northern limit of excavation. It was not evident elsewhere and may have been a localised slump. The upper surviving fill was a sandier silt (C379) with animal bone inclusions. The relationship between Ditch C376 and C449 was not identified due to later truncation, however both relate to the many recutting events of the rectilinear southern annex.



Mid-ex view of southwest corner of rectilinear annex being truncated by Ditch C205, looking north (top left)

Mid-ex view along sections through western ditch of the rectilinear annexes, looking south (upper centre right)

Mid-ex views of Ditch C205 truncating earlier rectilinear annex ditch, looking south (upper centre left), north (lower centre left), south (bottom left) & north (top right)

Mid-ex view of Ditch C205 truncating intersection of Ditches C376 and C442, looking north (lower centre right)

Mid-ex view of Ditch C519, looking south (bottom right)

Another early phase of the ditch was identified to the north (C521). This section of ditch ran along the eastern side of the later ditches and was truncated along its western side by another phase of the rectilinear annex ditch (C519). Both fills of the ditch (C522 and C523) were silt-rich with varying quantities of small stone and sand inclusions.

The latest phase of the western side of the southern rectilinear annex ditch (C519) truncated ditches C376 and C521. It was a narrow U-shaped cut where it survived to the north and was truncated by Ditch C205 to the south. The ditch appeared to terminate to the south of the limit of excavation, however it had

become very shallow at this point and it is possible the terminus is a step in the base at this point with the continuation to the north having been truncated away. The fill of the ditch (C520) was a silt deposit and contained rare charcoal flecking and occasional animal bone. A deposit of charcoal (C584) was present within the ditch in line with the southern curvilinear annex ditch (C442). Ditch C519 ran along the edge of the projected western line of Structure 21 and is likely to post-date it, with the structure relating to an earlier variation of the rectilinear annex.

At the northern limit of excavation leading to the area preserved in situ a cut (C579) was



Mid-ex vertical aerial view of southern rectilinear annex, looking east (top)

Mid-ex oblique aerial view of southern rectilinear annex, looking east (bottom)

identified to the north of the terminus of Ditch C519. Both features were truncated by a later agricultural feature (C577). Only the southern end of feature C579 was identified, however it may relate to a continuation of ditch C519. The southern end of the cut was curved and concave. The basal fill within the cut (C585) was a compact material with rare animal bone inclusions. The upper fill (C580) was stony. Neither fill resembled the fill within C519 to the south.

Another section of early ditch (C451) was identified to the south of the curvilinear annex along the eastern edge of the ditch. This may be the eastern edge of ditch C519 or C521. The fill (C452) was a dark water-laid silt, most resembling the fill of the later Ditch C519. It was truncated along its western side by Ditch C205.

South side

The southern section of the annex ditch also exhibited numerous recutting events indicating the annex was active for a substantial period of time. An early section of the ditch (C430) was identified along the northern side of the east-west series of ditches forming the annex. It was not visible further to the east and had a very similar fill (C431) to the basal fill of the later sections. This fill was cut by the recut of the north-south section of the ditch to the west (C376) and may be contemporary with the earlier version of the western side (C449) of the annex. A later recutting of the ditch (C393) truncated the relationship between this phase and the main phase of the ditch (C285).

The main cut of the southern side of the rectilinear annex ditch was recorded under a number of context numbers (C285/C291/C321/C345) but will be referred to as Ditch C285. It was rock-cut, U-shaped in profile and was deeper to the east.

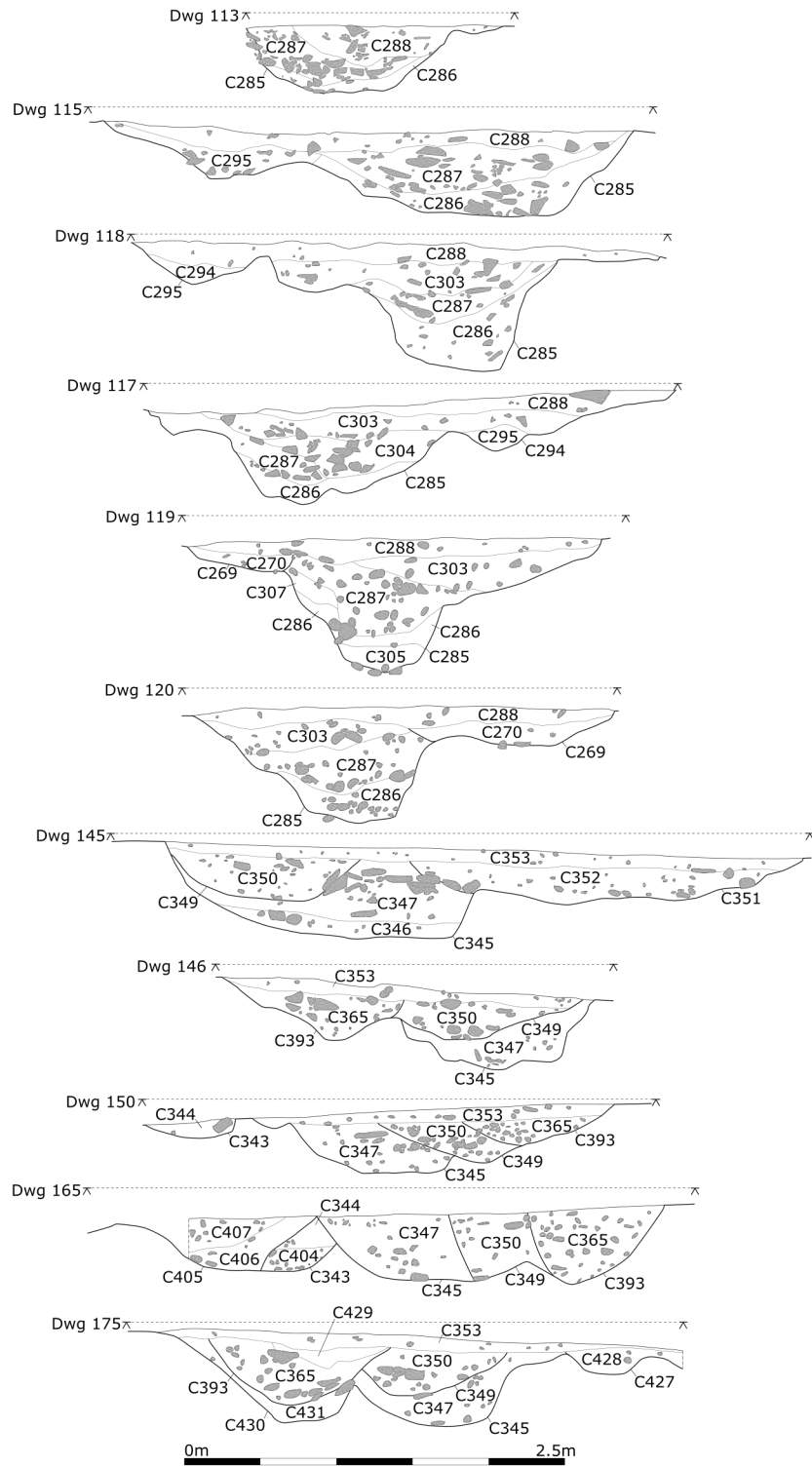
A number of intermittent patches of basal fill were identified within the ditch. In a deeper section of the central section of the ditch a dark silt-rich fill (C305) with occasional stone inclusions was identified. Further to the west a different fill (C346), also with occasional stone



Mid-ex view of western end of southern side of the rectilinear annex with multiple recuts visible, looking west (top)

Mid-ex view of western end of southern side of the rectilinear annex with multiple recuts visible, looking east (centre)

Mid-ex view of southern side of the rectilinear annex with multiple recuts visible. The rectilinear annex truncated Ditch C405 to left, which related to the outer southwestern annex, looking west (bottom)



Sections relating to the southern side of the southern rectilinear annex



Mid-ex views of southern side of rectilinear annex, looking east (top left and upper centre left), west (lower centre left) and east (bottom left). Pit C351 can be seen truncating the ditch in the upper centre left image and the intersection with Ditch C317 in the bottom left image

Mid-ex views of southern side of rectilinear southern annex, looking west (top), east (upper and lower centre right), and west (bottom right)

inclusions, was identified. To the east the basal fill (C755) was similar to the patches to the west and had occasional animal bone inclusions. These fills represent the survival of earlier cleaning out events within the ditch. The next major fill (C286/C293/C322/C347) was identified along the fill length of the ditch. It had occasional animal bone concentrations indicating dumping taking place within the ditch at certain points. The fill also became more charcoal-rich to the east. An upper sterile clay fill (C307) was identified along the southern side of the ditch at one point and may relate to the slumping of bank material or be the surviving remains of a backfill that was subsequently removed elsewhere.

A recut (C349) was identified truncating the ditch above this point. This was also rock-cut and U-shaped in profile. A band of stone (C348) was evident at the base of the cut along the central portion of the ditch. This became more extensive to the east (C287), with inclusions of frequent animal bone, along with a fragment of bone comb, lignite bracelet, an iron knife and a piece of slag. To the west the deposit of stone (C290) was partially faced along its northern side and appeared to represent a collapsed wall or pier. It is possible that the stony deposit was revetted here or that there was a crossing point, with the faced section of the stone deposit representing a support (Path 9). An upper fill of the recut (C350), which was the only fill present within the ditch to the west, had frequent stone inclusions and occasional animal bone.

A later recutting of the ditch (C393) ran along the northern side of the earlier ditches to the west and along the top of the ditch elsewhere. It was U-shaped to the west but was influenced by the stony backfill of the earlier recutting of the ditch further to the east. This phase of the ditch was truncated by Ditch C205 to the west, as well as by post-medieval ditch C366. The fill of the ditch (C365/C304/C314/C387) was silt-rich with frequent small stone inclusions and occasional animal bone and charcoal flecking and rare slag. An upper stonier deposit (C303) containing some slag was identified along one part of the ditch to the east while a less stony upper fill (C429) was identified to the west.



Mid-ex view of Structure C290 within ditch to east, which appears to be the remains of a pier or support for a wooden crossing point, looking east (top)

Mid-ex view of Structure C290 within ditch to east, which appears to be the remains of a pier or support for a wooden crossing point, looking west (centre)

Mid-ex view of face of Structure C290 within ditch to east, which appears to be the remains of a pier or support for a wooden crossing point, looking south (bottom)

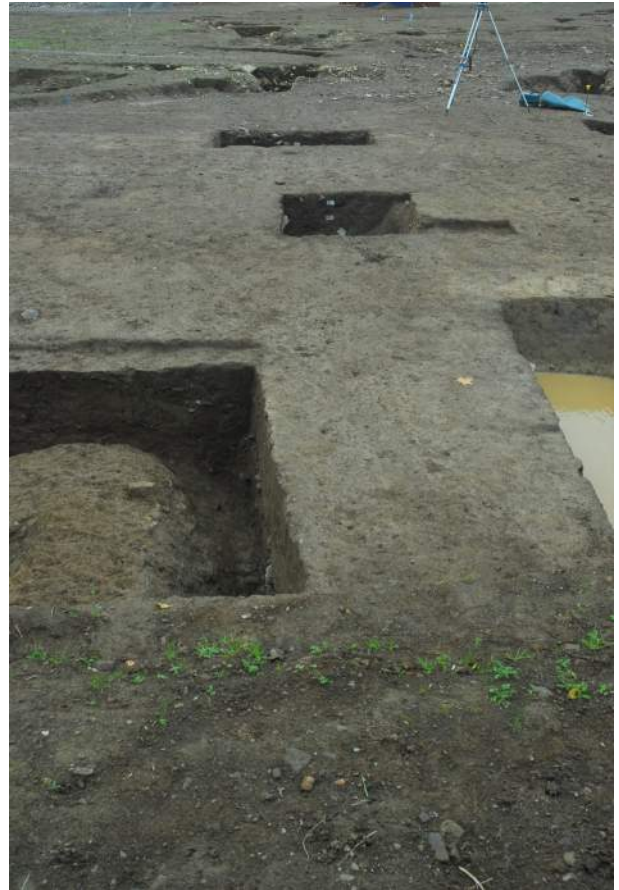


Post-ex view of Pit C351, looking east (top left)

Post-ex view of Pit C351, looking north (centre left)

Removal of the baulks along the southern side of the rectilinear annex, looking southwest (bottom left)

Mid-ex view along the southern side of the rectilinear annex showing the ditches truncating Ditch C242 and C244, looking west (right)



A shallow recut (C427) was uncovered truncating the southern edge of the ditches to the west. It had a single stony fill (C428) and was in turn truncated by a possible plough furrow (C432), the fill of which (C433) was largely sterile.

To the south of the series of ditches and truncating the first two phases of the ditch a sub-rectangular pit (C351) was uncovered. The pit also truncated the early linear C343, which was not identified beyond the pit to the east. The pit had rounded corners, concave sides and a flat base. A single fill was identified within the pit (C352), which had occasional animal bone inclusions and rare slag. The fill of the pit had inclusions of medieval and post-medieval ceramics and clay pipe stem fragments indicating it had been disturbed by previous agricultural activity. A waste core from the manufacture of a shale bracelet was also retrieved from this pit.



Mid-ex aerial view of western end of southern rectilinear annex, looking west (top)

Mid-ex aerial view of southern rectilinear annex, looking east (bottom)



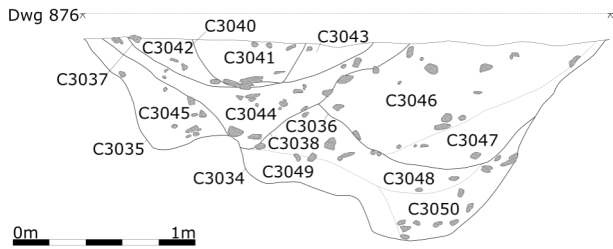
A layer of plough soil (C284/C288/C353) was identified overlying all of the features in this area. This layer contained some early medieval artefacts including a bone pin and an iron knife indicating the disturbance of the underlying archaeology by the later agricultural activity.

East side

The return of the eastern side of the rectilinear annex ditch lay beyond the eastern limit of excavation, however a series of ditches orientated north-south were identified in Area E, which are likely to represent the return. Four phases of ditch were identified here. The earliest phase was a small U-shaped ditch

(C3035) to the east. This had a single fill (C3045), a water-laid silt with inclusions of animal bone and stone.

The ditch was later recut and enlarged (C3034), the eastern edge of which truncated the earlier cut. The western side of the new ditch was steep, while the eastern side was slightly stepped. It is probable that the stepped appearance of the eastern side related to an additional recut that had not survived. The basal fill of the recut (C3049) was a relatively sterile slump along the eastern side of the ditch. This was overlaid by a water-laid silt (C3050) with frequent stone and occasional animal bone, along with a small quantity of slag. This was overlaid by a stonier material (C3048) with



Section of Ditch C3034 (top left)

Mid-ex view of Ditch C3034, looking south (bottom left)



Mid-ex view of Ditch C3034, looking northeast (right)

occasional animal bone, which may relate to the backfilling of the ditch, possibly with bank material.

A later recutting of the ditch along its western side (C3036) was evident, the recut being U-shaped in profile and containing two fills. The basal fill of the recut (C3047) contained frequent charcoal and occasional animal bone within a water-laid silt. The upper fill (C3046) was similar with a slightly different colour and also contained charcoal and animal bone. These fills suggest this phase of the ditch gradually silted up over time.

The final version of this section of the southern rectilinear ditch was a shallow recutting to the east. Two phases of this were apparent, one being a shallow cut slightly

further to the west (C3039) with a pale clay fill (C3043) that had occasional animal bone inclusions. This may be the same as the cut (C3037) set further to the west, however the fill to the west (C3042), which was a darker material with inclusions of stone and animal bone. A plough furrow (C3040) ran through the centre of the later recut, the fill of which (C3041) contained animal bone likely to derive from the ditch.

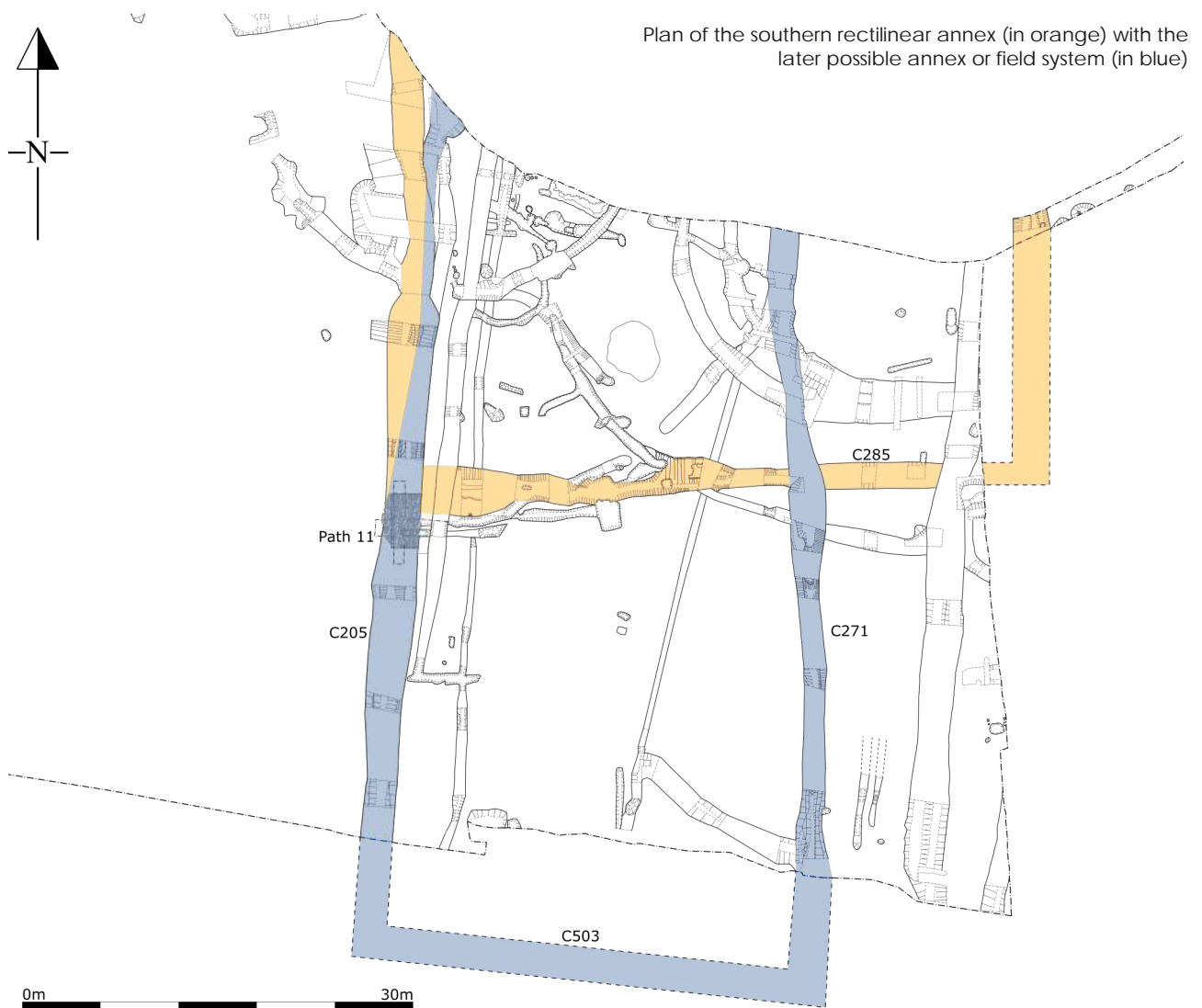
It is likely that at some point an entrance was present between the eastern return of the rectilinear enclosure and the eastern annex ditch (C3000) to the east.

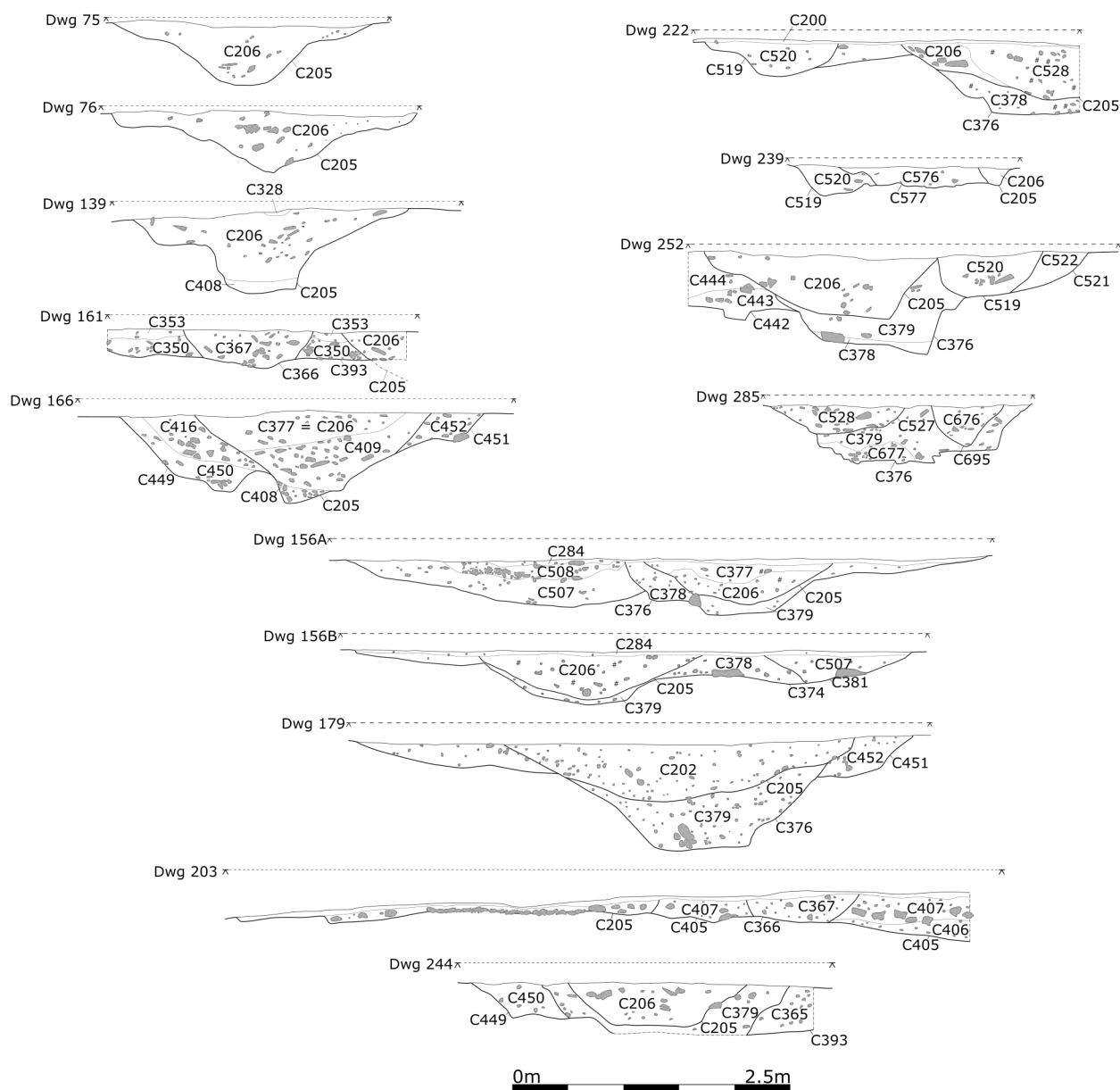
Section 15 Later rectilinear field system

A later field system was identified, and it truncated the southern annexes. This was represented by two north-south orientated ditches (C205 and C271), which truncated the rectilinear southern annex ditch. It is possible that these relate to a late elongated southern annex. The geophysical survey (Harrison 2009) indicated that the ditches did not continue through the central enclosure to the north, and the central enclosure may have survived above ground when they were created.

Ditch C205

The western ditch of the possible elongated southern annex (C205) ran from the southern site boundary to the limit of excavation of the preserved portion of the site. The northern end of the ditch followed the same alignment as the western side of the earlier southern rectilinear annex and truncated it. To the south of the annex the ditch was generally broad. The shape and depth varied due to the underlying bedrock, though the ditch was generally U-shaped.





Sections for Ditch C205

To the north two fills were identified within the lower section of the ditch that did not extend to the south. The basal fill (C408) was a silt-rich deposit evident along the deeper section of the ditch from the south of the curvilinear annex to the south of the rectilinear annex. It was overlaid by a stony deposit (C409) with rare animal bone and charcoal inclusions. A distinct layer of stone was evident overlying this fill in places. The upper fill of the ditch (C206/C377) was identified along the full length of the ditch and related to the backfilling of the ditch. It had occasional animal bone inclusions, including a dog skull, along with a glass bead fragment, an iron knife, iron slag, two fragments of possible

bone handle and an iron nail. A spread of material mottled with red scorching and containing charcoal flecks (C328) was identified over the ditch fill to the south of the junction with the rectilinear annex ditches and may be the base of a later fire-pit.

At the northern limit of excavation the ditch forked into two smaller channels (C527 and C695). The westernmost branch (C527) was broader and had a similar form to the remainder of the ditch to the south. The eastern branch (C695) was a narrower U-shape in profile. Both branches were cut into the fill (C379) of the earlier rectilinear annex ditch. It is possible that



Mid-ex view of southern end of Ditch C205, looking south (top left)

Mid-ex view of Ditch C205, looking north (centre left)

Mid-ex view of Ditch C205, looking north (bottom left)

Mid-ex view of Ditch C205 truncating Ditch C449, looking south (top right)

Mid-ex view of Ditch C205 to north of junction with Ditch C442 and truncating Pit C381 to right, looking south (centre right)

Mid-ex view of northern end of Ditch C205, looking north (bottom right)

the eastern channel is a contemporary drainage feature running into the ditch obliquely. The fills of both channels (C528 and C676) were identical and were continuations of fill C206 as it became stonier to the north. An iron knife was recovered from one of the channels (C527).

At the junction of the ditch with the rectilinear annex ditch a deposit of stone (C505; Path 11) was uncovered overlying the ditch. The layer included angular and sub-angular stones and may have been an informal metalled surface thrown down over the junction of the backfilled ditches, which may have been a soft point within the field. This was overlaid by plough soil.



View of cross-section revealing metallised surface C505 overlying intersection of Ditch C205 and the rectilinear southern annex, looking east (top)

View of cross-section revealing metallised surface C505 overlying intersection of Ditch C205 and the rectilinear southern annex, looking north (bottom)

A shallow shelf was identified along the western side of the ditch to the south of the junction with the curvilinear annex ditches. This scarped section may have been the location of a bank associated with the later ditch and was filled with a similar material to the ditch (C206).

A shallow north-south running linear (C577) was identified running between and partially truncating ditches C205 and C519 at the northern end of the site. This appeared to be a late agricultural feature and may relate to post-medieval ditch C366 to the east.

Ditch C220/C271

A series of ditches were identified forming the possible eastern side of the annex. The earliest of these (C220/C271) was a rock cut ditch with steep sides, generally U-shaped in profile. The base varied from flat to concave depending on the underlying subsoil or bedrock. The ditch truncated all phases of the curvilinear and rectilinear southern annex ditches. To the south it was truncated by a linear pit associated with metalworking waste (C225/C235) and by a later ditch (C218).

The basal fill of the ditch to the south (C223) was a silt-rich deposit with occasional stone inclusions. A separate isolated deposit of charcoal (C224) was identified on the base of the ditch also and did not have a direct relationship with the basal fill elsewhere. This appeared to be a discrete dumped deposit. A separate discrete deposit of ash (C337) was identified on the base of the ditch further to the north. A patch of sterile sand (C754) was identified along the base to the north. The main basal fill to the north (C272/C313) was a stony deposit with occasional animal bone inclusions. A sherd of medieval pottery was also recorded from this fill however appears intrusive. A variation of the fill (C752) was identified to the north but was found to be part of the same fill. This section of the ditch was rock cut so the fill may relate to the ditch being backfilled with bank material.

A secondary fill of the ditch to the south (C221) was another silt-rich deposit, which had inclusions of occasional animal bone, slag, charcoal and stone. The tip of a copper-alloy pin was also retrieved from this fill. A further section of this fill was identified to the north at the widest part of the ditch where it survived along the eastern side of the ditch.

A linear pit feature (C225/C235) truncated the eastern side of the ditch. The linear had expanded termini to the north and south, which ran beyond the edge of the ditch to the east. The southern end of the pit was truncated by a later ditch (C218) and the western side was truncated by a recutting of the north-south ditch (C233). The fill of the feature (C229/C236) had frequent inclusions of



Mid-ex view of southern end of Ditch C220/C271, looking north (top left)

Mid-ex view of Ditch C220/C271, looking north (centre left)

Mid-ex view of Ditch C220/C271, looking south (bottom left)

Mid-ex view of Ditch C271, looking north (top right)

Mid-ex view of Ditch C271 truncating Ditch C269, looking north (centre right)

Mid-ex view of Ditch C271 truncating Ditch C285, looking north (bottom right)

charcoal, slag and animal bone. This may represent a small-scale metalworking area, consisting of two furnaces with an interconnecting channel, however this was not clear due to the later truncation. It is also possible the feature was a waste pit, though no other metalworking features have survived in the southern end of the site.

A final recutting of the ditch (C233/C273/C310) narrowed to a channel truncating the western side of the ditch to the south and broadened to the full width of the earlier ditch to the north. The base of the recut to the north occasionally narrowed to a narrow channel along the western side of the earlier



Mid-ex view of southern end of Ditch C271, looking north (top left)

Mid-ex view of Ditch C271 truncating Ditch C709, looking north (centre left)

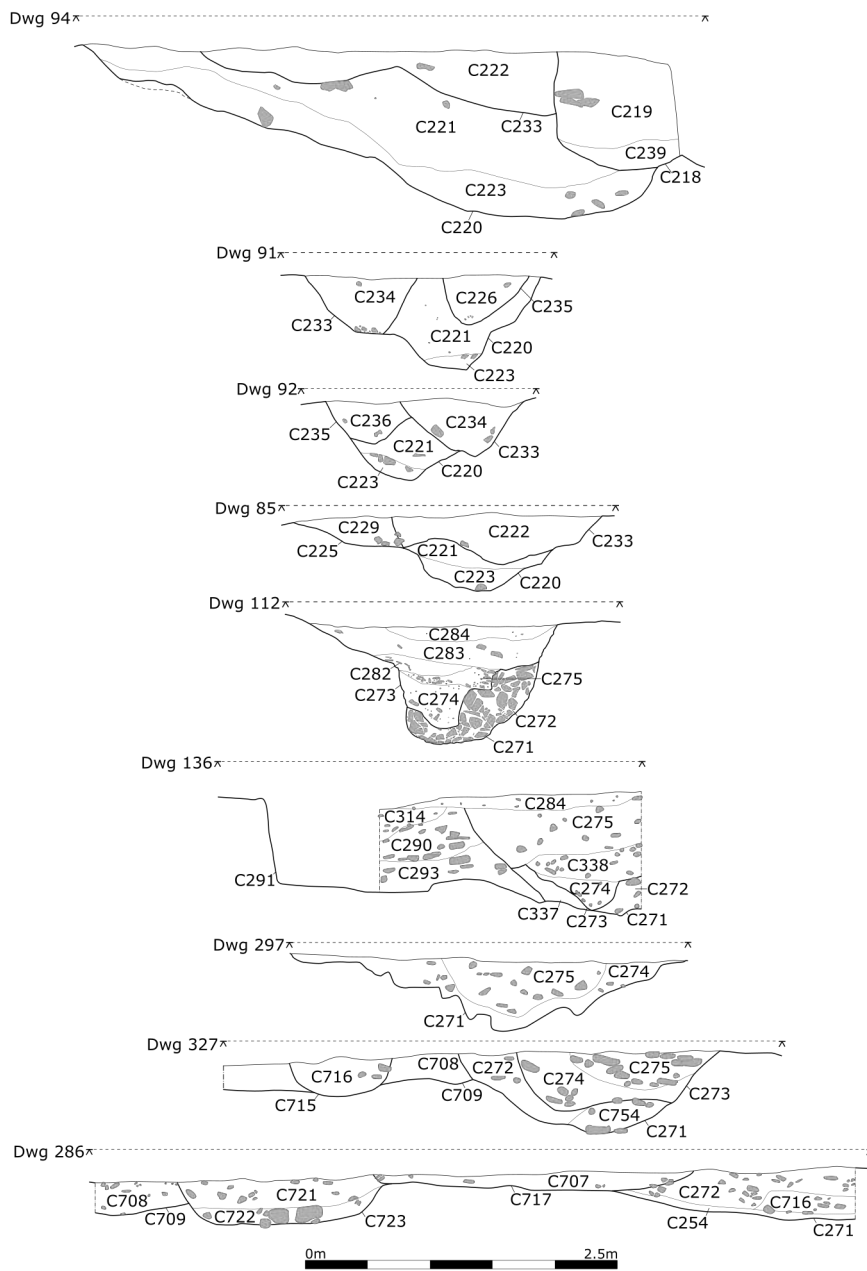
Mid-ex view of Ditch C271 truncating Ditch C709, looking south (bottom left)

Mid-ex view of metalworking pit C225/C235 truncating Ditch C220/C271, looking south (top right)

Mid-ex view of metalworking pit C225/C235 truncating Ditch C220/C271, looking south (bottom right)

ditch also, with the upper portion of the recut expanded to the full width of the earlier ditch. To the south it had a single fill (C234), which was a pale silt with occasional stone inclusions. In the vicinity of the earlier metalworking pit (C225/C235) some slag and animal bone was retrieved from the fill, likely to have originated within the earlier feature, and was given a separate number (C222). A number of additional fills were identified within the deeper section of the recut to the north. Three layers of silt-rich fills with varying inclusions of charcoal and stone (C274, C275 and C282) were identified along the base of the recut to the north in the central section, which merged into

a single layer further north (C311). Medieval ceramics were identified in these silts. They were overlaid by a silt-rich deposit (C283/C312) with occasional animal bone and stone inclusions, which in turn was overlaid by a plough soil deposit (C284). This final recutting of the ditch may be a medieval drainage feature.



Sections for Ditch C271

Ditch C503

An east-west orientated ditch (C503) was identified during the excavation of a service trench across the Drumree Road to the south of the Phase 2 field. It was of a similar size and shape to the north-south ditches and may have formed the southern boundary of the enlarged rectilinear annex, or the roadside end of the field system. The northern edge of the ditch was 0.5m to the north of the existing kerb-line along the Drumree Road. The ditch was steep-sided with a flat base and was sloping from west to east. A single silt-rich fill (C504) was identified within the ditch with occasional stone inclusions along with fragments of snail shell. The upper portion of the ditch had been truncated by road gravels and a water pipe truncated the southern edge of the ditch.



Working shot of service trench excavated across Drumree Road, with ditch C503 surviving in section below road gravels, truncated by a water pipe to the right (top)

Aerial view of southern part of early medieval settlement, looking east (bottom)



Section 16 Features to south

Outside annexes to southeast

A number of features were identified to the south and east of the rectilinear southern annex. Some of these may be within a later rectilinear annex defined by ditches C205 and C271, however it is not certain that these ditches form an annex enclosure. These features may have been unenclosed.

Pit and stake-hole cluster

An oval pit (C769) orientated east-west was uncovered beside the eastern limit of excavation. It was steep-sided with a flat base. Two fills were identified within the pit. The basal fill (C771) had occasional charcoal inclusions and was compact. The upper fill (C768) was charcoal-rich with occasional animal bone inclusions. No scorching was apparent to suggest the pit was used as a fire-pit, though the fill indicated that fire-related activity was taking place nearby.

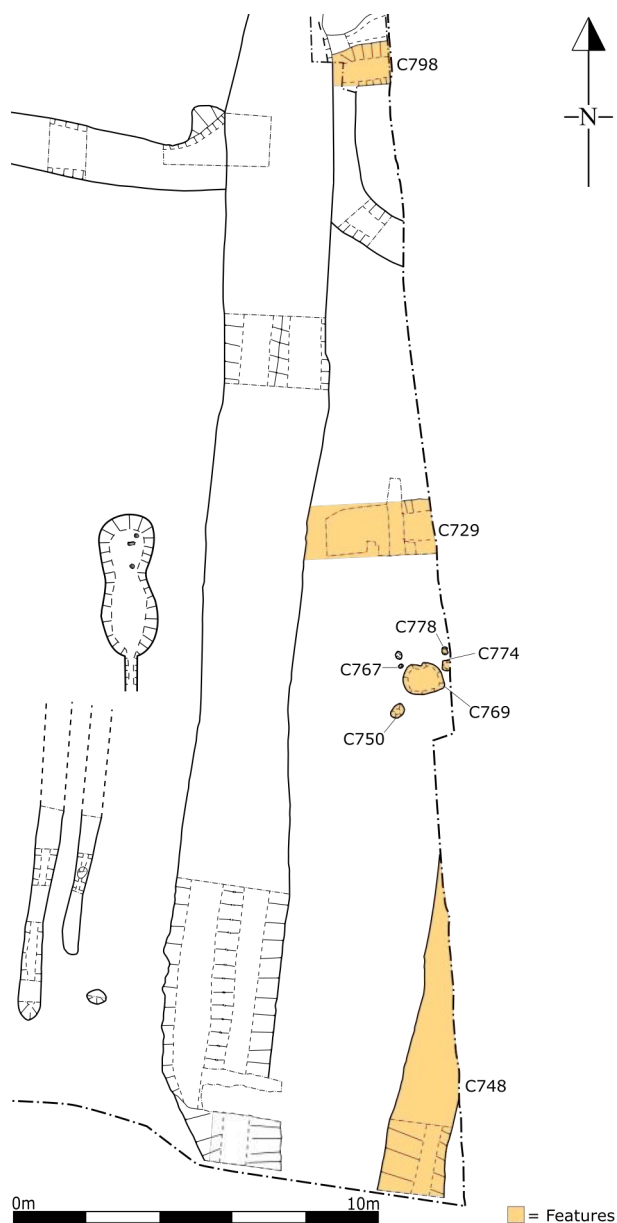
A number of postholes were recorded surrounding the pit. To the southwest an oval possible posthole (C750) was uncovered with steep sides and a concave base. It had a single fill (C751), which had occasional charcoal flecking.

To the northwest of the pit a small possible posthole (C767) was uncovered. The posthole was rectangular in plan and generally steep-sided with a flat base. The fill (C766) was sterile and it is possible the feature is non-archaeological.

To the northeast of the pit another small shallow posthole (C774) was uncovered, which extended beyond the limit of excavation. The posthole was concave in profile with steep sides and a flat base. The basal fill (C775) had occasional charcoal flecking but was largely sterile and may relate to packing material. The upper fill (C773) was charcoal-rich with

inclusions of occasional small stones and fragments of burnt bone. This appeared to be a fill deposited in the posthole after the removal of the post.

Plan of unenclosed features to southeast





Mid-ex view of pit C769, looking east (top left)

Mid-ex view of posthole C774, looking east (centre left)

Post-ex view of pit C769 and associated postholes, looking east (bottom left)

Mid-ex view of Ditch C729 with pit C742 cutting it in foreground and pit C746 in background, looking west (top right)

Mid-ex view of Ditch C723 being cut by pit C742, looking east (bottom right)

A second posthole (C778) was recorded to the northeast, north of post C774 and extending beyond the limit of excavation. This posthole was circular in plan, concave in profile, with steep sides and flat base. The fill of the posthole (C777) had occasional charcoal flecking.

The pit and postholes were heavily truncated and a purpose was not identified.

Ditches

An east-west orientated ditch (C729) was identified to the east of the early north-south ditches and was truncated by the first recutting (C257) of the ditches. It is likely to have been contemporary with the earliest of the ditches. The ditch had a stepped side to the north and a relatively flat base. The basal fill of the ditch (C726/C792) was a water-laid deposit with occasional stones and rare charcoal flecking. It was overlaid by a similar but darker deposit with occasional stone inclusions (C753/C791).

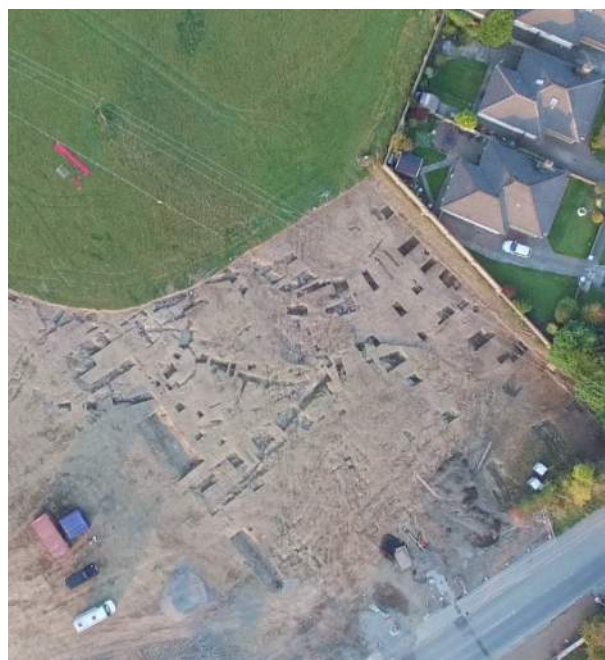
A small east-west orientated linear (C798) was identified running into the ditch from the east and continuing beyond the limit of excavation. It truncated the northern end of the drip gully (C728) of Structure 24. It had identical fills to the earlier phases of the north-south ditch and is likely to be contemporary. The junction between the ditch and the north-south ditches was truncated by the latest phase of the southern curvilinear annex ditch (C269).



Mid-ex view of ditch C798 on left being truncated by Ditch C269, looking west (top)

Mid-ex view of Ditch C748, looking north (centre)

Aerial view of southern side of early medieval settlement, looking northeast (bottom)



A shallow concave linear ditch (C748) was uncovered in the southeast corner of the site and continued beyond the limit of excavation to the south and east. The ditch was orientated north-northeast to south-southwest and had a single fill (C749) with occasional slag inclusions. It was unclear which phase of activity the ditch related to, however the form and orientation was similar to post-medieval drainage ditch C366 to the west.

Pits

An oval pit (C742) was cut into ditch C729 at the limit of excavation to the east. The pit had convex sides and a concave base. The basal fill (C788) was a dark silt with occasional charcoal inclusions. It was overlaid by a charcoal-rich deposit (C772) with inclusions of animal bone. The upper fill (C744/C745) was similar to the basal fill of the pit and contained occasional charcoal flecking and animal bone and rare slag. A stone gaming piece and some slag were also retrieved from this fill. A deposit of stone (C743) overlay the pit. The stones were not in any particular order and may have been used to backfill the pit. The pit may have been a waste pit.

A second shallow pit (C746) with a stony fill (C747), similar to the backfill of Pit C742, was uncovered to the west of the pit. This pit was also cut into the backfill of the ditch. This may also have been a waste pit, or have been used for stone clearance.

Features within southern annexes

A number of phases of annexation were identified at the southern end of the early medieval settlement. For the purposes of the stratigraphic report the features identified within the large rectangular southern annex have been grouped together. Where possible features were assigned to one of the annex phases.

Possible kiln C516/C682

An east-west orientated linear pit was identified to the east of Structure 21 at the northern end of the annex. An associated fire-pit (C516) was located at its eastern end suggesting the pit may have been a cleaned-out kiln (Kiln 24). The fire-pit was shallow and oval in plan with scorching at the base. The elongated pit to the west (C682) may be the remains of the drying chamber. The main section of the pit was 4.6m in length and up to 1.05m in width, narrowing



Features within the southern curvilinear and rectilinear annexes

at the intersection between the two pits or chambers. A shallow shelf along the western end of the pit measuring 1.6m x 1.6m may have been a working area or access point. The north and south sides of the drying chamber were steep while the base of the pit gradually stepped down from west to east, rising again at the junction with the fire-pit. No scorching was present on the base or sides of the linear chamber. The linear chamber truncated a pit to the west (C625) and the southwest annex ditch (C436). A posthole (C627) was located directly to the west of the kiln, also truncating pit C625, and may be related.

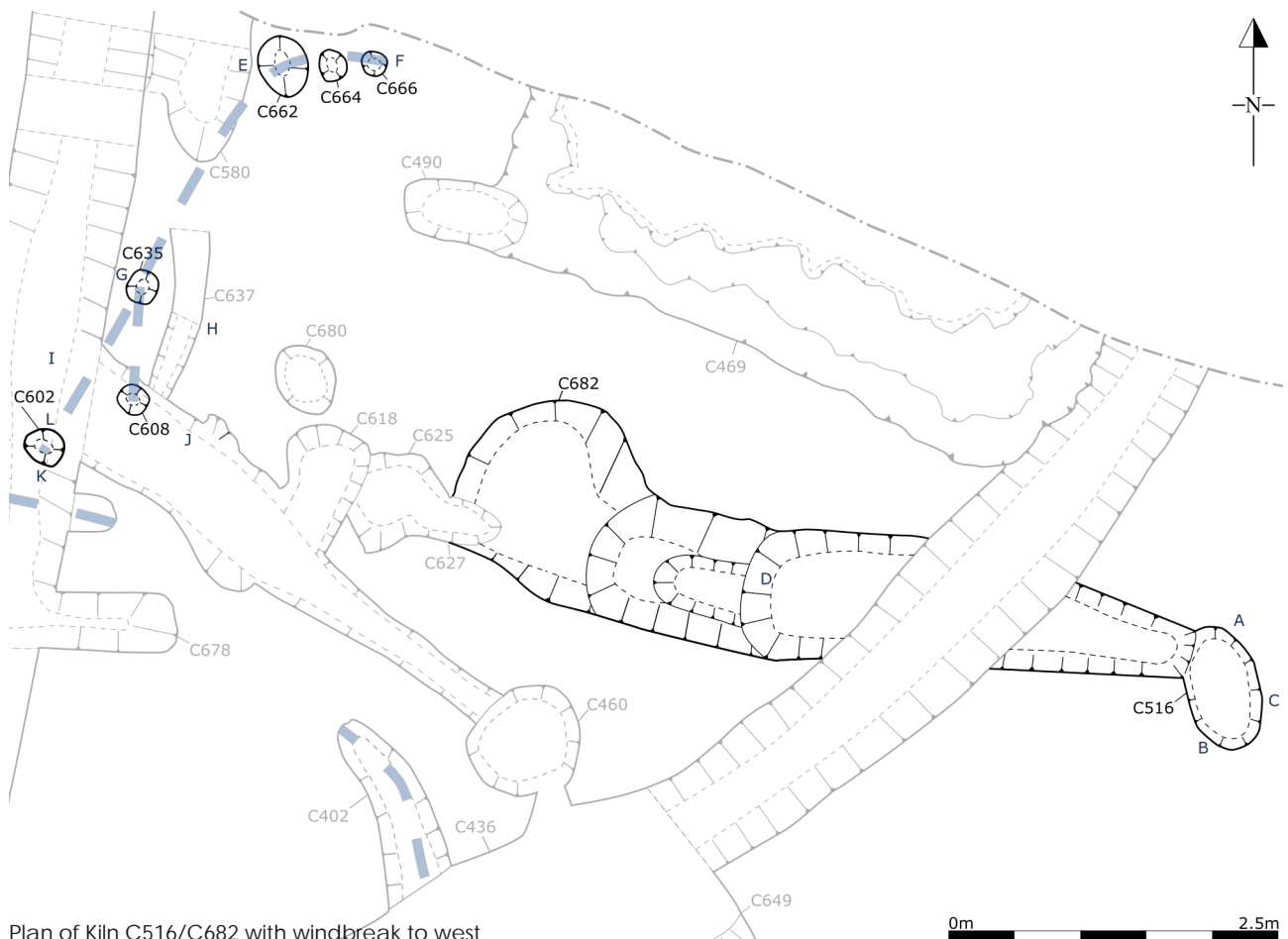
Three fills were identified within the linear chamber. The basal fill (C685) was only identified in the eastern end overlying where the kiln was rock-cut. This may have been used to seal or smooth out the base of the kiln over the bedrock. The main lower fill of the kiln (C684) was a silt-rich material with inclusions of occasional charcoal flecking and animal bone.

The upper fill (C683) was a loose material with inclusions of frequent charcoal flecking and animal bone. It also partially overlay the fill of the firing chamber to the east (C517), and was very similar to one of the fills (C471) of the large rock-cut pit (C469) to the north. The fill of the fire-pit (C517) was a dark charcoal-rich material.

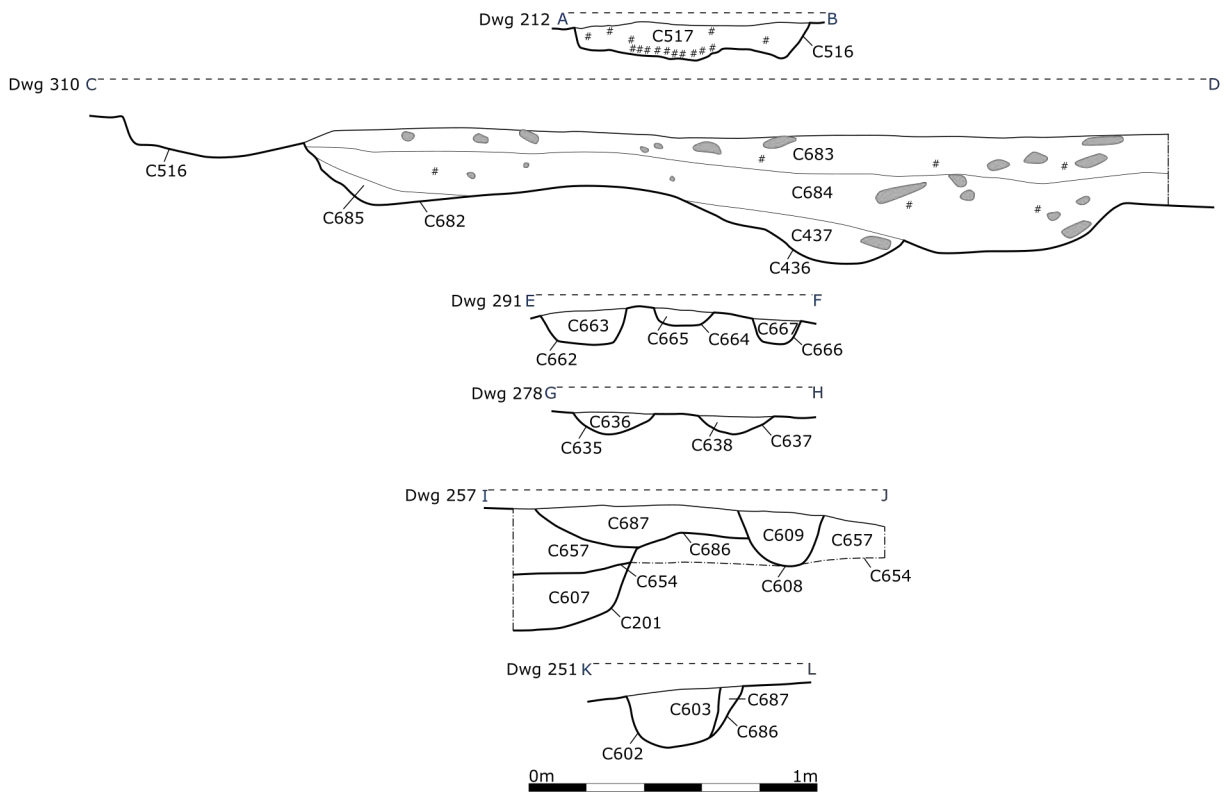
This feature is tentatively identified as a kiln, however no charred seeds were initially evident within the samples taken. The form however is kiln-like and the size is comparable with the ploughed out kiln (Kiln 25) to the south. It is possible it represents the remains of a cleaned out evolved figure-of-eight shaped kiln.

Rock-cut pit

To the north of Kiln 24 at the northern limit of excavation a large rock-cut pit (C469) was uncovered. The northern portion of the pit lay within the preserved portion of the site. The sides of the pit were uneven due to being cut



Plan of Kiln C516/C682 with windbreak to west



Sections for Kiln C516/C682 (top)



Post-ex view of firing chamber C516 with drying chamber C682 outlined in background, looking west (centre right)



Pre-ex view of kiln C516/C682 to right with pit C469 mid-ex to left, looking east (centre left)



Mid-ex view of drying chamber C682, looking south (bottom right)

Pit-ex view of firing chamber C516, looking west (bottom)

through stratified bedrock. The base of the pit was along one of the bedrock plains and was flat.

The basal fill of the pit (C470) had occasional charcoal and animal bone inclusions. The upper fill (C471) was richer in charcoal and had frequent inclusions of animal bone and angular stone. This fill spread out from the edge of the pit and overlay the curvilinear southern annex ditch (C436) to the east and pit C490 to the west. It was identical to the upper fill (C683) of the possible kiln (Kiln 24) to the south.

The purpose of the pit was unclear as it continued beyond the limit of excavation, however similarity between the upper fill of possible Kiln 24 and the upper fill of the pit suggests these features were being filled in at the same time. The rock-cut pit may be a waste pit associated with the kiln.

Structure

A circular structure (Structure 21) measuring 6.8m in diameter was identified in the northwest portion of the southern annex. It was defined by two sections of slot trench to the north, east and south and by four postholes to the west. An entrance was located to the northeast. The western side of the structure was in close proximity to the western ditch of the rectilinear southern annex (C521), which may have influenced the decision to use postholes along the western side of the structure. It is also possible the slot trench continued to the west and was removed by the latest phase of the rectilinear annex ditches (C519). The southern and eastern side of the structure was defined by a curvilinear slot trench (C402). The slot trench truncated a number of features including the southern curvilinear annex ditch C436, ditch C399, gully C201 and posthole C601. It had steeper sides along its internal edge and had a concave base. The slot trench formed an arc defining the southern and eastern sides of a structure and terminated to the northeast, with the terminus representing a northeast-facing entrance measuring 1.4m in width.

The structure was less clear to the north. The most likely component of the northern side of the structure was a shallow curvilinear slot (C464), which was seen to curve to the

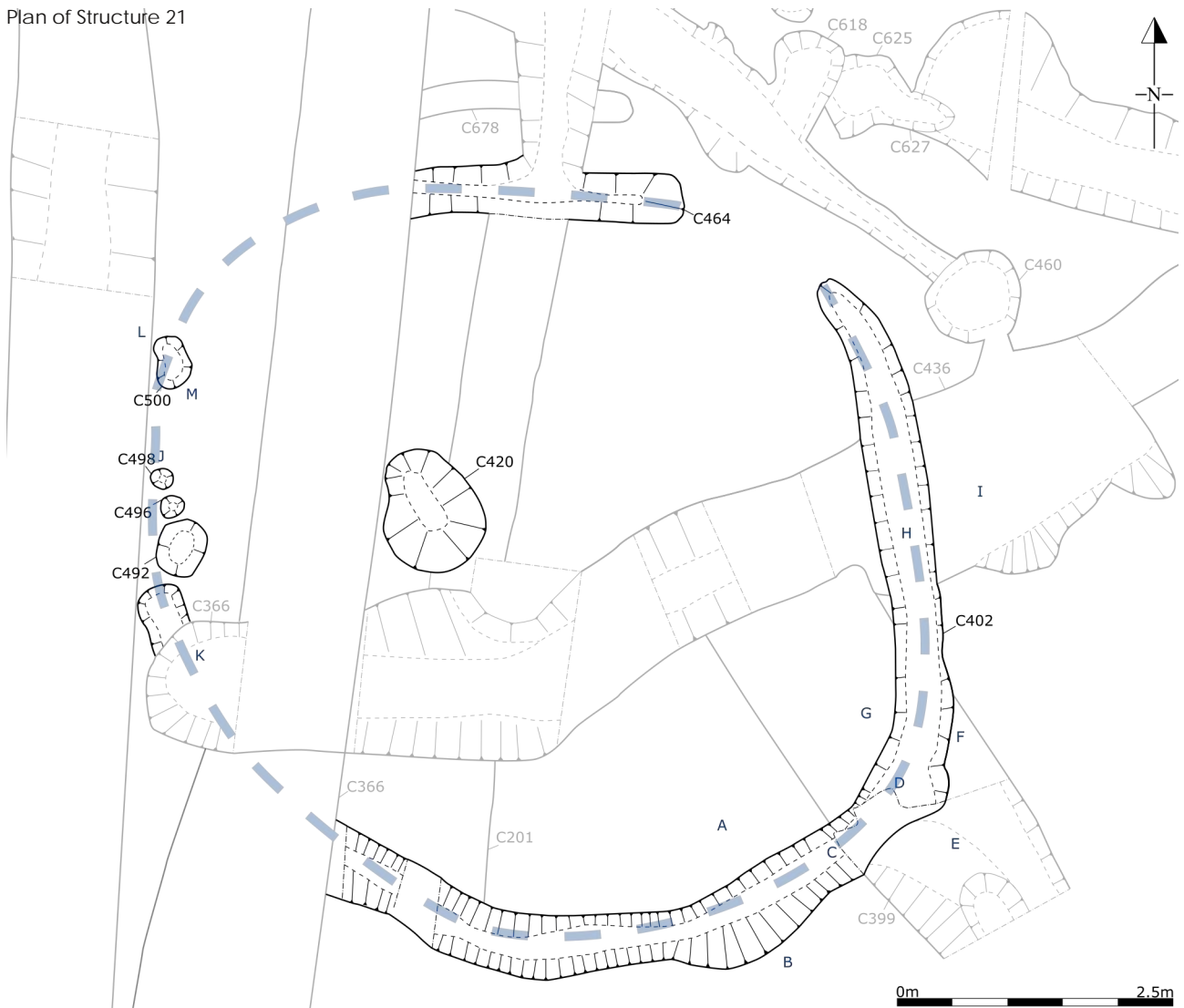


Mid-ex view of kiln C516/C682, looking southwest (top)

Mid-ex views of pit C469, looking north (upper centre) and east (lower centre)

Mid-ex aerial view of pit C469 against baulk to top and Structure 21 in centre (bottom)

Plan of Structure 21



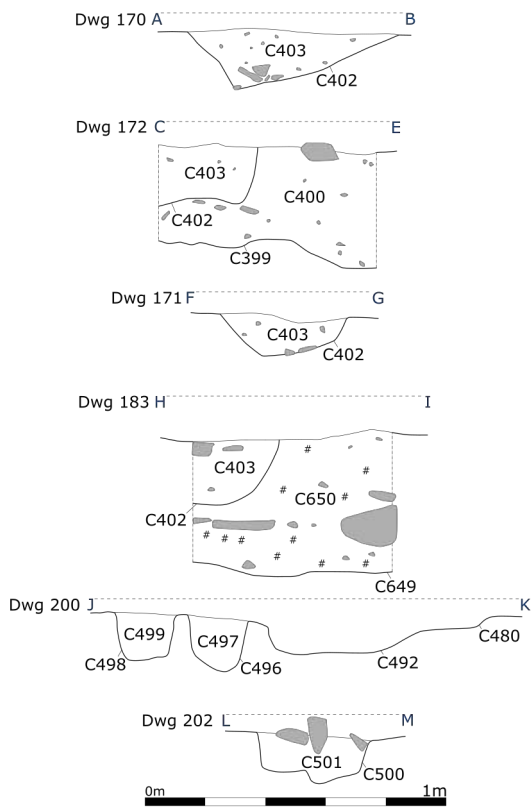
southwest at its western end. The slot was shallow and concave in profile with a fill (C465/C467) similar to the fill of the slot trench to the south with charcoal flecking noted, though no animal bone was present.

To the west both sections of slot trench were truncated by a north-south orientated post-medieval ditch (C366) and by a shallow plough furrow (C480), which ran parallel and to the west of the ditch. The northern slot trench was not identified to the west of the furrow having been truncated away by this point. The southern slot trench was identified to the west of the furrow though had also largely petered out. An arc of three posts were identified along the western side of the structure, possibly forming part of the structure along this side. The southernmost posthole (C496) was circular in plan with vertical sides and a concave base. It had a single fill (C497), a silt-rich material with

occasional small stones and rare animal bone, which accumulated after the removal of the post. Just beyond this the latest of the rectilinear annex ditches (C519) ran along the projected western extent of the structure and is likely to post-date it, with the structure relating to one of the earlier phases of the rectilinear annex ditch, which were located further to the west.

Another similarly sized posthole (C498) was uncovered 0.06m to the northwest of this. It was also circular in plan with vertical sides and a concave base. The fill (C499), similar to the southern posthole, was silt-rich and had light charcoal flecking accumulating after the removal of the post.

The northern posthole (C500) was located 0.8m to the north and was possibly the remains of a double posthole, being figure-of-eight shaped in



Sections relating to Structure 21 (top left)

Post-ex view of western side of slot trench C402, looking south (centre left)

Mid-ex view of slot trench C402 in background with postholes C496 and C498 in foreground, looking southeast (bottom left)

Mid-ex view of slot trench C402 truncating ditch C399, looking north (top right)

Mid-ex view of slot trench C464 cut by C201 to left and furrow C678 to right cutting C201, looking west (centre right)

Mid-ex view of slot trench C464 and furrow C678, looking north (bottom right)



Post-ex view of postholes C500, C498 and C496 with pit C492, looking east (top left)

Mid-ex view of pit C496, looking southeast (centre left)

Mid-ex view of pit C420, looking east (bottom left)

Mid-ex view of pit C460, looking west (top right)

Post-ex view of curvilinear feature C654, looking southeast (bottom right)

plan. The sides were near-vertical and the base concave. A number of stones were present within the posthole, particularly to the north, and may have been packing stones. The main fill of the posthole (C501) was again a similar material to the fills of the other postholes.

Within the structure two pits were identified. To the west a shallow sub-circular pit (C492) that was steep-sided with a flat base was uncovered. The southern side of the pit was truncated by the later furrow C480. The posthole had a single

fill (C493), a silt-rich material with rare charcoal and occasional stone suggestive of a gradual silting up of the pit. The pit was in close proximity to the projected line of the wall of the structure to the west.

The second pit (C420) was located west of centre within the structure and was a shallow sub-oval cut with a flat base. As with the slot trench it truncated curvilinear annex ditch C399 and linear gully C201. It had a single fill (C421), which had occasional charcoal flecking and



Post-ex view of Structure 21, looking south (top)

Post-ex view of Structure 21, looking southwest (centre)

Post-ex aerial view of Structure 21, looking south (bottom)

animal bone inclusions. The pits may have served a storage function within the structure.

An east-west orientated linear cut (C678) with a flattened concave base and steep sides was identified just to the north of the structure. It truncated the north-south gully (C201) and was truncated by the post-medieval ditch (C366) to the west, suggesting it may be a later agricultural feature. The basal fill was a compact silt-rich material (C468) and was overlaid by a similar but less compact material with occasional charcoal flecking (C679).

To the north of the structure a curvilinear feature was identified (C654). Initially this was interpreted as being part of the structure, however it is out of alignment with the rest of the structure and runs across the entrance to the northeast. It was generally wider than the slot trench of the structure and had a concave profile. It is possible it relates to an associated drip gully, however it was not identified elsewhere around the structure. As with the structure, it truncated linear gully C201. It had a single fill (C657), a silt-rich material with occasional charcoal flecking. The gully was recut (C686) for at least some of its length to the north with the fill (C687) of the recut being a different silt-rich deposit with occasional charcoal flecking. The terminus of the gully to the east was truncated or recut by a shallow pit (C460), which was circular in plan with a relatively flat base. The fill of the pit (C461) was similar to the fill of the recut of the gully to the north, however the two did not connect. It is possible the recut of the gully and the pit at the terminus are parts of the same redefining event. The gully was truncated by post-medieval ditch C366 to the west and was not identified beyond that point. It was also truncated by two

pits (C618 and C620), while two postholes relating to Structure 21 were cut into the fill of the recut.

To the southeast of the curvilinear feature a linear feature (C453) was identified. The feature was very shallow and poorly surviving, but as it was in line with the curvilinear feature the two may be related. The feature appeared to be the concave base of a larger feature and the width is comparable to the curvilinear feature to the northwest. The fill (C454) was charcoal-rich and had animal bone inclusions as well as one piece of possibly worked chert.

Windbreak or screen

To the north of Structure 21 an arc of postholes (Structure 22) were identified which may relate to a porch or screen associated with the structure. The arc defined the western side of the space with no elements identified to suggest the space was enclosed to the east. The northern end of the arc continued into the preserved portion of the site. The structure may relate to Structure 21 to the south, or to Kiln 24 to the east.

Six postholes were identified. To the north three of the postholes in close proximity to one another (C662, C664 and C666) aligned east-west were uncovered. The size of the postholes decreased from west to east, however the depths were relatively consistent. The fills of the postholes (C663, C665 and C667) were identical, with rare charcoal flecking and no additional inclusions.

To the southwest of these another posthole was identified (C635), which was similar in size to the western post to the north (C662). It had a single fill (C636), which had inclusions of charcoal and burnt bone.

Two southern postholes were identified, both cut into the recut (C687) of the curvilinear gully (C654) north of the structure. To the west a circular posthole (C602) with similar dimensions to postholes C635 and C662 was identified. It was deeper than the two other postholes as it was cut through fill at the intersection of gullies C201 and C654. It had a single fill (C603) with occasional charcoal inclusions. The eastern posthole (C608) was of similar dimensions and



Mid-ex view of postholes C662, C664 and C666, looking north (top)

Post-ex view of pits in vicinity of curvilinear feature C654, looking southeast (bottom)

was also deeper than the postholes cut into natural. It had a single fill (C609) with occasional charcoal flecking. This posthole lined up with the entrance of Structure 21 better than the western posthole, however it is unclear whether the structures were contemporary. The two southern postholes may also have provided additional stability at the end of the windbreak.

A cluster of five pits were identified in the space screened by Structure 22 to the north of Structure 21. Two of these (C618 and C620) to the south were cut into the possible drip gully (C654) of Structure 21. The southernmost pit (C620) was sub-circular in plan with steep sides

and a flat base. It had a single fill (C621). Directly to the north of this a sub-oval pit (C618) was uncovered, also with steep sides and a flat base. The fill (C619) was identical to that of the southern pit.

To the north of this a sub-circular pit (C680) was uncovered, which was more concave in profile. It had a compact fill (C681) with inclusions of occasional animal bone and charcoal.

To the east an irregular pit (C625) was uncovered directly beside pit C618) but with no direct relationship. The fill of the pit (C626) had occasional charcoal flecking and was partially truncated by Kiln 24 (C682) to the east. A posthole (C627) was also cut into the pit immediately to the west of the kiln. The posthole was circular in plan and concave in profile with a single fill (C628).

To the north a steep-sided oval pit (C490) with a flat base was uncovered. It was truncated by a large rock-cut pit (C469) along its northern side. It had a single fill (C474) with few inclusions, which was disturbed by later animal burrowing activity (C491).

Rubbish pits

A row of three rubbish pits (C2398, C3016 and C3051) were partially excavated along the southeastern boundary of the site within the area defined by the southern curvilinear annex ditches, with the remainder of the pits continuing beyond the limit of excavation. All three pits had slightly concave bases and sides. The northeastern pit (C2398) had a single fill (C2399), which contained occasional animal bone and stones. The central pit (C3016) also had a single fill (C3017) which contained occasional animal bone as well as a dump of unsorted stone centrally located at the base of the fill. This pit was the largest and deepest and it truncated a circular posthole (C3018), which was located slightly to the west on the base of the pit. The posthole had a single fill (C3019), with occasional small stones that may have been packing stones. The southwestern pit (C3051) was 0.4m away from the central pit, however its fill (C3052) was more sorted and it did not contain similar quantities of stone or animal bone. Given the similarity of form it is likely to



Mid-ex view of pit C2398, looking south (top)

Mid-ex view of pit C3016, looking south (centre)

Mid-ex view of pit C3015, looking south (bottom)



Mid-ex view of pits C2398, C3016 and C3051 with ditch C3034 in background, looking southwest (top left)

Pre-ex view of pit C3002 cut by gully C3008, looking south (top right)

Post-ex view of posthole C3008 beneath gully C3008 with pit C3002 to left, looking southwest (bottom right)



could not be ascertained, however it was truncated by a linear gully (C3004) to the west and by a recut of the eastern annex ditch to the east (C3028). It had a single fill (C3003), which was rich in charcoal, though no in situ burning was noted within the pit.

have served a similar function, however it may have been filled in a slightly different way or with a different material. All three pits were located between two large ditches (C3000 and C3034), which formed the eastern and southern rectilinear annexes, with the pits possibly located within the southern curvilinear annex.

Postholes

To the west of the eastern annex ditch (C3000) and southwest of the central enclosure a cluster of features was uncovered. The earliest of these was an irregular pit at the limit of excavation (C3002) and a posthole (C3008). Only a small amount of the pit was exposed and its function

Two postholes (C3008 and C3022) were identified to the west of the ditch. Another posthole (C3026) was identified cut into the eastern side of the eastern annex ditch (C3000). The postholes were circular or sub-circular and steep-sided. The one identified in the side of the ditch (C3026) was narrower and deeper than the others. This posthole may have required a greater depth to hold the post firm as it was cut partially into the ditch side. All three had single fills (C3009, C3023 and C3027) with occasional charcoal flecking. The postholes to the west of the ditch are not aligned on the ditch and the three posts themselves do not form a straight line. However, only a narrow strip was excavated along this section of the site and it is possible that more postholes survive beyond the limits of excavation. Given the proximity to the ditch it is intriguing to consider whether they relate to a structure crossing the ditch.



Post-ex view of postholes C3022 and C3008, looking north (top)

Mid-ex view of Ditch C3000 with posthole C3026 to left, looking east (centre)

Post-ex view of posthole C2026 in side of ditch C3000, looking east (bottom)



A short linear gully (C3004) truncated part of one of the postholes (C3008) to the west of the ditch. It had a single fill (C3005) that contained nothing to indicate a function, and it continued beyond the eastern annex ditch (C3000) as well as the kiln (Kiln 1) and linear feature (C3006) to the northeast, perhaps indicating the orientation of features in this part of the outer enclosure was influenced by the orientation of the eastern annex ditch.

Other pits

A shallow rectangular fire-pit (C320) was uncovered in the southern half of the annex to the west. It was rock cut with steep sides, which were scorched. The base was relatively flat, though slightly uneven due to being rock cut. The fill (C315) was charcoal-rich and loose, relating to the use of the fire-pit, and had inclusions of burnt stone and an iron nail.

A small oval pit (C382) was located to the south of this. It was U-shaped in profile with a single fill (C383). The fill was loosely compacted and contained frequent small angular stones with three larger stones present c. 120mm in diameter. This feature may be a stone socket.

A shallow sub-circular pit (C397) was uncovered to the south of the rectilinear southern annex. It was cut into the underlying bedrock and had a relatively flat base. The fill of the pit (C398) was loosely compacted with angular stone inclusions and was sterile. This feature may have been a natural depression in the bedrock, however it was regular in plan suggesting it had been intentionally cut.

Two sub-rectangular rock-cut pits were identified to the south of the rectilinear southern annex. The western pit (C329) had near-vertical sides on three sides with the western side sloping at a c. 45-degree angle following a vein of the underlying bedrock. The fill of the pit (C330) contained frequent rounded stones and occasional animal bone. The rounded stones in the fill were not related to the underlying bedrock. The eastern pit (C335) was similar to Pit C330 though slightly shorter. It also followed a seam in the bedrock along its western side. The fill of the pit (C336) was a mixed material with inclusions of rounded and angular stone, animal bone and

occasional charcoal flecks. Both pits were overlaid by a spread of mixed material (C316), which had inclusions of post-medieval ceramics, medieval ceramics, slag and iron. This material appeared to be the base of the plough soil that had gathered in a hollow in the bedrock. The two pits may relate to sections of bedrock that were clipped in ploughing.

A small oval-shaped pit (C237) with concave sides and a flat base was identified to the east of the possible metalworking feature (C235) cut into ditch C220. It had a charcoal-rich fill (C238) with inclusions of animal bone, slag and a possible crucible fragment. The pit was small and did not have a clear purpose, but may have been used as a waste pit. The fill further indicated that metalworking was taking place in the vicinity.

A sub-oval probable fire-pit (C371) was uncovered to the northwest of Kiln C331. The pit was concave in profile and did not have a scorched base. The fill (C372) was charcoal-rich with inclusions of animal bone and burnt clay to the west. This may be the remains of a small waste pit or a fire-pit.

A small sub-circular patch of scorching (C413) to the east of Pit C351 was uncovered. The regular shape of the feature suggested it was the remains of a truncated fire-pit and charcoal was embedded in the scorched base of the pit.

A truncated pit or posthole (C601) was uncovered to the east of and truncated by the slot trench (C402) of Structure 21. The posthole was located immediately east of the line of curvilinear ditch C399, however the relationship between the two features was removed by the later slot trench. The posthole had a flat base and steep, near-vertical sides and a single charcoal-rich fill (C479). No scorching was evident along the base or sides of the feature to suggest in situ burning. The feature may have been used as a waste pit, or be the base of a truncated posthole, with the post being removed prior to abandonment.

A pit (C280) was located to the east of the metal surface (C289) overlying gully C201. The pit was orientated east-west and sub-rectangular in plan. The fill of the pit extended



Post-ex view of pit C382, looking south (top)

Post-ex view of rock-cut pit C329 and C335, looking west (centre)

Mid-ex view of pit C237, looking south (bottom)

out from the pit to the south for c. 0.5m. The main body of the pit was linear and deepened to the east. The fill (C281) had occasional charcoal flecks with occasional animal bone. The pit may relate to later agricultural activity.

A small spread of charcoal (C401) located to the west of and partially truncated by Ditch C399 may be the base of a truncated pit. The spread had some inclusions of animal bone and a flint flake and represents a waste deposit.

A sub-circular fire-pit (C730) was uncovered to the west of the early north-south ditches (C242 and C244). The pit lay within the rectilinear and curvilinear southern annexes and may relate to either phase. The base of the pit was heavily scorched. The basal fill of the pit (C725) was charcoal-rich with frequent burnt bone inclusions. The upper fill of the pit (C724) was an ashy material with frequent charcoal. The pit was the remains of a fire-pit, likely to have been used for cooking. The northern end of the pit was truncated by a slightly larger oval pit (C720), which was steep-sided with a flat base. The fill of the later pit (C719) had frequent charcoal inclusions along with burnt and unburnt animal bone, and slag. This appears to have been a waste pit.

A small circular pit (C740) was uncovered to the west of pits C720 and C730, also within the curvilinear and rectilinear southern annexes. The pit was shallow, concave in profile with a concave base. It had a single fill (C741), which had inclusions of animal bone and burnt stone. This appeared to be the remains of a truncated waste pit.

A linear pit (C765) was uncovered at the southern end of the inner curvilinear annex. The pit was orientated approximately east-west and expanded at both termini, narrowing along the central section. The pit was deeper to the west, rising up to the east. It is possible the feature represents two pits that appeared connected due to later plough disturbance, however the fill was consistent throughout. The fill (C764) contained frequent stones and a number of large animal bones as well as smaller animal bones. A fragment of iron was also retrieved from the fill. Like pits C740 and C720 to the north, the pit appears to have served as a



Mid-ex view of pit C601 truncated by slot trench C402, looking north (top)

Post-ex view of pit C730, looking west (centre)

Post-ex view of pits C720 and C730 to right, looking west (bottom)

waste pit.

Other ditches

A curvilinear ditch (C399/C434) that truncated the southern curvilinear annex ditch and the southwest annex ditch was identified toward the north of the southern annex. It also truncated a small spread of charcoal (C401) located along its western side at one point as well as the early north-south gully (C201). It was truncated by the slot trench (C402) of Structure 21. The western end of the ditch was also truncated by post-medieval ditch C366 and by furrow C480. The purpose of this ditch was unclear as it arcs in the opposite direction to the earlier annex ditches and did not continue to the southeast or west. The western end terminated at a similar point to the eastern arc of the southwest annex ditch and as such would line up with the remainder of that ditch to the west. It is possible that the western section of the southwest annex remained in use when this ditch was created with the two forming an incomplete boundary to the southwest of the settlement. The ditch was concave in profile and partially rock cut. It petered out to the southeast and may originally have continued in that

direction. The northwest terminus of the ditch was steep-sided. The basal fill of the ditch (C412/C439) was a silt-rich material with occasional inclusions of angular stone and charcoal and a small quantity of slag. The upper fill (C400/C435) was a sandy material with inclusions of occasional stone, animal bone and charcoal. The presence of a sandy layer as the top fill indicates that water was not free-flowing through the ditch while it was filling up and heavier sediment particles were settling within the ditch.

Aerial view with Ditch C399 and curvilinear annex ditches annotated, looking west (top left)

Mid-ex view of Ditch C399, looking northwest (bottom left)

Mid-ex view of Ditch C399, looking southeast (top right)

Mid-ex view of Ditch C399 truncating Ditch C317, looking southeast (bottom right)



A shallow north-south orientated post-medieval agricultural ditch (C366/C341), which ran from the limit of excavation to the south to the preserved portion of the site to the north, was uncovered in the western side of the annex. It truncated Structure 21 (C402) as well as curvilinear ditch C399 and a number of other features. The linear was concave in profile and had a single fill (C367/C342), which contained rare animal bone and charcoal flecking along with a post-medieval clay-pipe stem. A shallow sub-circular cut (C369) was identified along the eastern side of the ditch and had a single fill (C370). It is likely that this feature represents a stone socket created during the creation of the agricultural drainage ditch.

Two shallow north-south orientated linear ditches were identified in the southern half of the annex to the east. The western ditch (C227) was more substantial and was generally concave in profile. It ran for 6m and shallowed out in the bedrock outcrop to the north. It had a single silt-rich fill (C228) with rare animal bone and slag inclusions. This was encountered further to the north and recorded under a separate number (C308), where it had inclusions of burnt stone indicating it had truncated a fire-related feature. The eastern ditch (C231) was shallower and may be the remains of a plough furrow. The fill of the feature (C232) contained a single sherd of medieval pottery. Again, this was also encountered further to the north (C309) where it contained frequent scorched material. A spread of burnt material (C230) with evidence for scorching was present overlying the fill of the furrow. These features may relate to medieval agriculture, with the western linear being a drainage feature. The scorched material associated with the linears may derive from the ploughed-out kiln (C296).

A shallow linear ditch (C581) was identified to the east of and parallel to gully C201. Only a short length of the feature survived within the site, however it was seen to continue into the preserved portion of the site to the north. It was U-shaped in profile, with the base and sides uneven due to being rock cut. It was wider than the later plough furrows and was truncated by an east-west running furrow (C594). The base of this ditch was identified further to the south and recorded under a separate number (C637)

as a possible furrow, however this is not the case. The fill of the ditch (C581/C638) contained occasional charcoal flecking to the north where it was more substantial. It is probable it relates to agricultural activity post-dating the early medieval settlement.

A short linear ditch (C391) was identified running parallel to and just south of the rectilinear southern annex (C285). The ditch was partially rock cut and U-shaped in profile. It terminated to the east and west and was partially truncated by curvilinear feature C405.

A shallow east-west orientated post-medieval ditch (C414) was identified overlying the bedrock outcrop to the south of the rectilinear southern annex. The ditch was ephemeral suggesting a considerable level of ground reduction had taken place in this part of the site even since the post-medieval period. Medieval and post-medieval ceramics were retrieved from the fill (C415) of the ditch. The ditch petered out to the east and west. Another section of ditch (C339) was identified further to the west along the same alignment and with the same orientation. This was part of the same ditch. It truncated the early medieval gully C201 and terminated to the west of the southern annex ditch (C205). This section of the ditch had a single fill (C340), which had inclusions of animal bone, charcoal, occasional burnt stone and burnt clay along with a possible rubbing stone. These are likely to derive from features truncated by the ditch. The terminus of the ditch was truncated by a north-south running ditch (C341), which corresponds with post-medieval ditch C366 to the north.

A small curvilinear ditch (C701) was identified at the northern limit of excavation and continued into the preserved portion of the site. It had a single fill (C700), with frequent stones and a small quantity of slag. The ditch truncated the first and second phases of the southern curvilinear annex ditch (C705 and C709) and was truncated by pit C723. The continuation of the ditch beyond pit C723 was not identified, which may imply it was related to the earlier pit C733 to the south, which was also cut into Ditch C709 and cut by pit C723. The fill of the linear had frequent angular stones in a silt-rich matrix and was similar to the fill of Pit



C733. A posthole (C713) was identified cut into the base of the ditch in its southwest corner and was truncated by it. The posthole was concave in profile and had a single fill (C712), which resembled redeposited natural.



Mid-ex view of ditch C581, looking north (top)

Mid-ex view of ditch C391, looking east (centre)

Mid-ex aerial view of southern part of site, looking north-east (bottom)





Mid-ex view of Ditch C218 truncating Ditch C220, looking south (top)

Mid-ex view of Ditch C218, looking southeast (centre)

Mid-ex view of Drain C216 with gully C214 to right, looking north (bottom)

Later agricultural features

Ditch C218

A northwest-southeast orientated ditch (C218) was uncovered at the southern end of the field and truncated the late rectilinear annex ditch (C220). The ditch was rock cut and relatively shallow. It was a broad U-shape in profile with steep sides and a flat base. The relationship with linear C214 could not be established as both features were too shallow at their intersection. This ditch post-dated the settlement and related to later agricultural activity.

The basal fill of the ditch (C239) was a silt-rich material with inclusions of animal bone, slag and charcoal, which may have originated in the metalworking pit (C235) truncated by the ditch to the southeast. The upper fill of the ditch (C219) also contained animal bone and slag inclusions, and a sherd of medieval pottery.

An alignment of stone (C213) was identified running parallel to the ditch along its southern side. They appeared to be the remains of a field drain cut into the fill of the backfilled ditch and had been subsequently been truncated away elsewhere through ploughing.

Drain C216

A short steep-sided linear drain (C216) orientated north-south was identified at the southern end of the site at a slight angle to ditch C214, which it partially truncated. The drain terminated to the north and continued beyond the limit of excavation to the south. The fill of the drain (C217) was a silt and had occasional stone inclusions.

Drain C261

A north-south orientated drain (C261) was identified along the same alignment as Drain C216 further to the north. The drain was similar in width to the southern drain but was shallow and largely truncated away through ploughing. The drain truncated the rectilinear southern annex ditches (C285 etc.). A single fill (C262) was identified within the drain, which contained post-medieval ceramic and a clay pipe stem. This appears to relate to the same drainage system as Drain C216 to the south.

Agricultural furrows

Two east-west orientated agricultural furrows (C653 and C656) were identified directly to the north of Structure 21. The fills of both furrows (C690 and C691) were sterile. The presence of the furrows here indicates the impact ploughing has been having on the site and may explain why the northern end of the structure was so poorly surviving. An additional parallel furrow (C594) was identified further to the north.

Two north-south running furrows (C361 and C3636) were identified truncating the plough soil (C353) overlying the series of ditches subdividing the southern annex (C285, C345 etc.). Animal bone was retrieved from the fill of one of the furrows (C362) and an iron knife was retrieved from the underlying plough soil (C353) along with animal bone, an iron nail, a struck flint and post-medieval pottery. This indicates the impact ploughing had on the features in this part of the site.

Mid-ex aerial views of southern end of Phase 2, looking southeast



Section 17 Summary of phasing

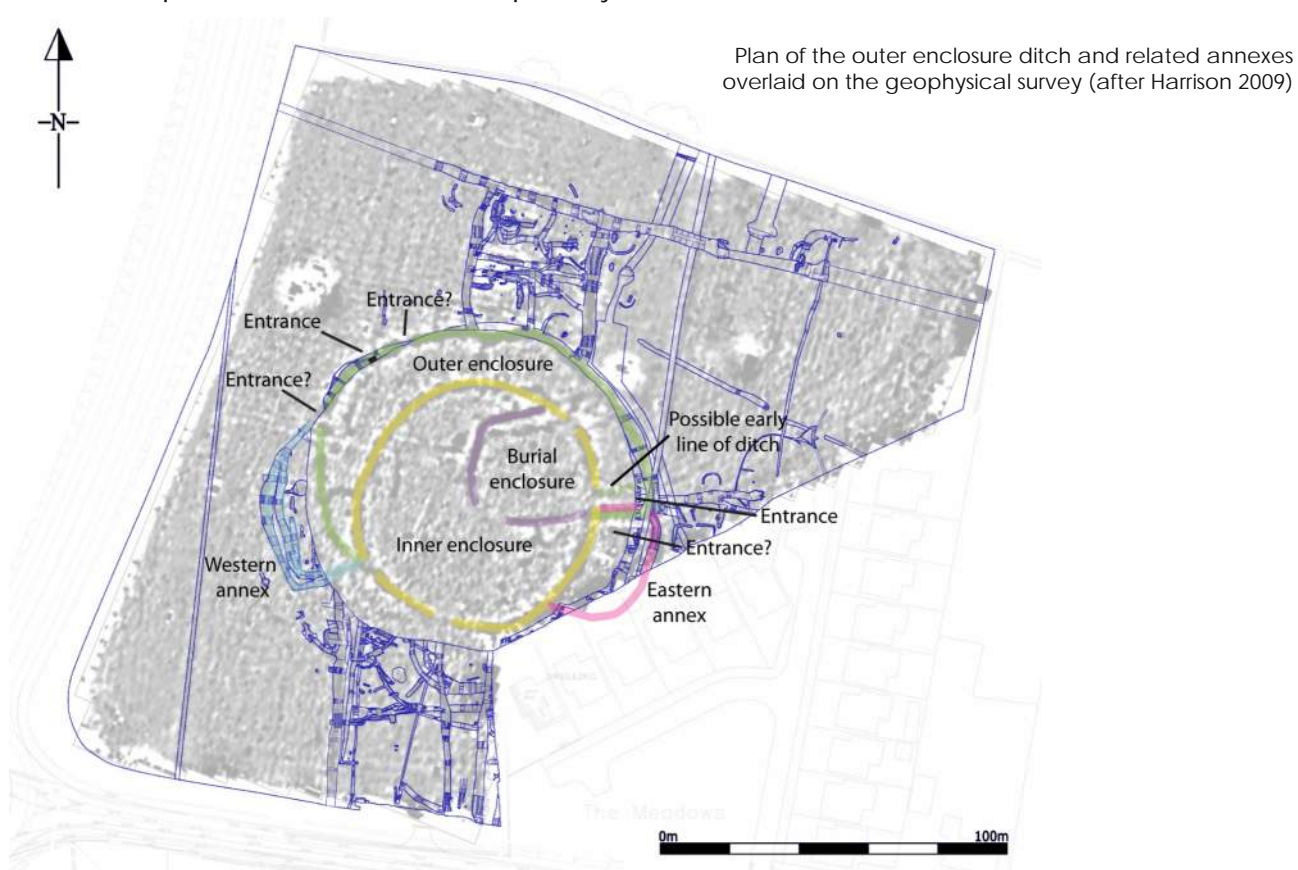
Phases of the outer enclosure

The earliest phase of the outer enclosure was not concentric to the central enclosure of the settlement, and formed a crescent-shaped enclosure to the north.

A masonry entrance was identified crossing the outer enclosure ditch to the northwest, which post-dated the earliest phase of the outer enclosure ditch. A number of later recuttings of the ditch were identified to the northwest that retained the entrance, indicating it was in existence for an extended period of time. A path was later added running towards the entrance from the west.

It is likely that another entrance was present to the east, which did not survive within the excavation portion of the site. A pathway

running in toward the interior suggesting an entrance was previously located along the eastern side of the outer enclosure, however it was truncated by later phases of the outer enclosure ditch. The latest phases of the outer enclosure ditch truncated the eastern annex ditch, though it is likely that an earlier version of the outer enclosure was contemporary with the eastern annex, with the eastern entrance located between them. The northern annex was closely associated with the outer enclosure ditch and they were contemporary for part of their lifespan. The western arm of the northern annex went out of use before the outer enclosure ditch, however the eastern arm remained in use after the outer enclosure ditch had partially filled in, with the eastern side of the annex and the outer enclosure likely serving a drainage function as the settlement itself went out of use.



The annexes

There is evidence to suggest that the area to the south of the central enclosure was not enclosed initially. The earliest phases of annexation to the south appear to be the series of curvilinear annex enclosures to the west, southwest, south and east. There is some indication that some of these were extant at the same time. The western annex had three phases of expansion with the annex ditch shifted to the west with each expansion. The southern end of the annex appeared to bound another entrance into the interior of the settlement. A large cistern was located within this annex.

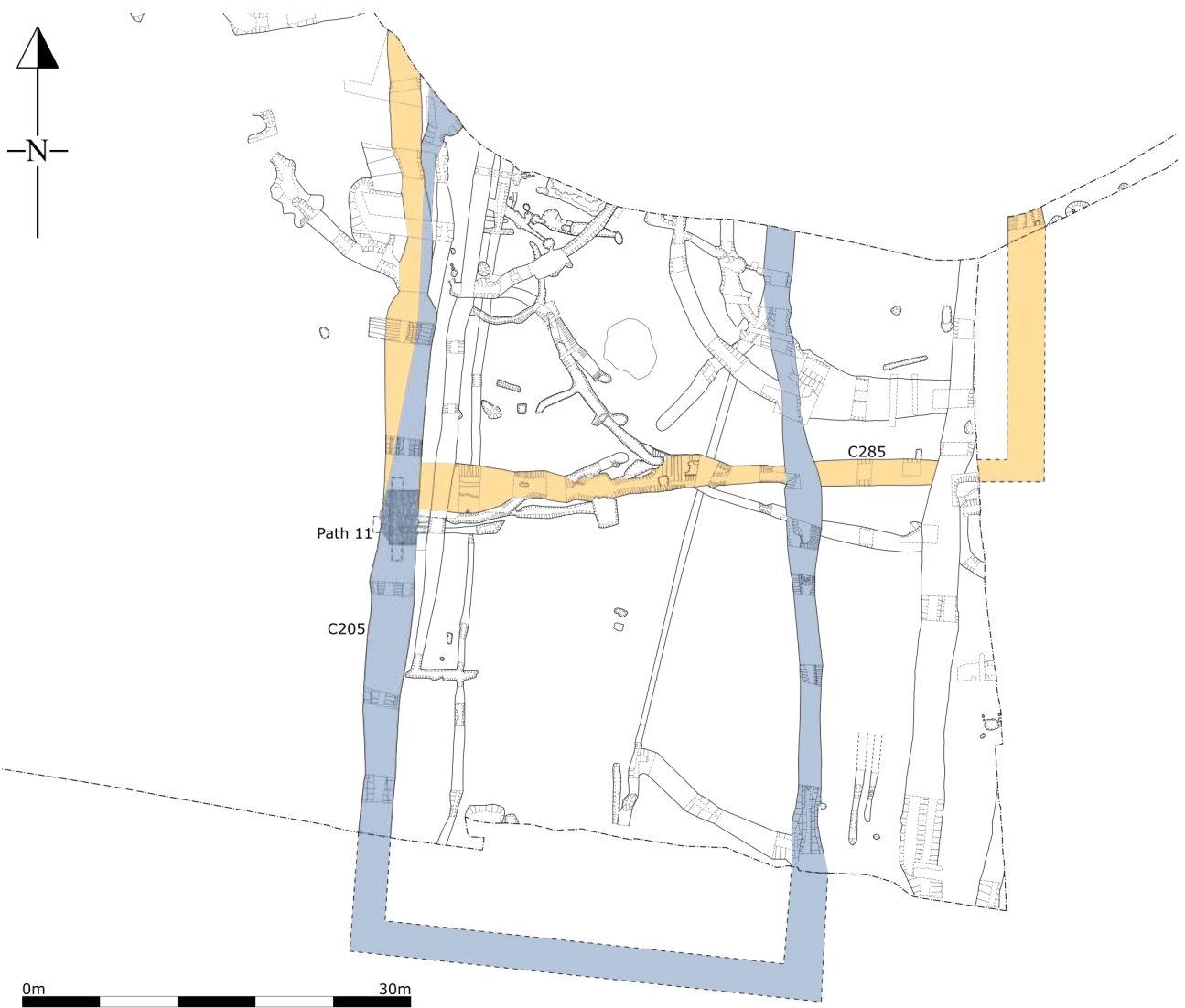
The southwestern annex ditch was in line with the largest expansion of the western annex ditch and may be contemporary with this latest version of the western annex. Both ditches truncated a metallised pathway that was curving around the western side of the settlement. No major features were identified within the southwest annex, which was positioned beside one of the entrances to the central enclosure and it may represent an animal enclosure.

Another series of curvilinear ditches defined a southern annex, which appeared to be related to the western and southwestern annexes. To the east the returns of these ditches appear to have been truncated by the eastern annex ditch. To the west the outermost of the ditches respected the southwestern annex ditch suggesting they were present at the same time.

A rectilinear annex ditch was also identified to the south. Its relationship with the curvilinear annexes was unclear as there was later truncation at both intersections, however the initial interpretation was that the rectilinear annex replaced the curvilinear enclosures. A kiln and circular structure was located within the rectilinear enclosure and truncated the curvilinear annex ditch, which is a further indication that the rectilinear annex is later.

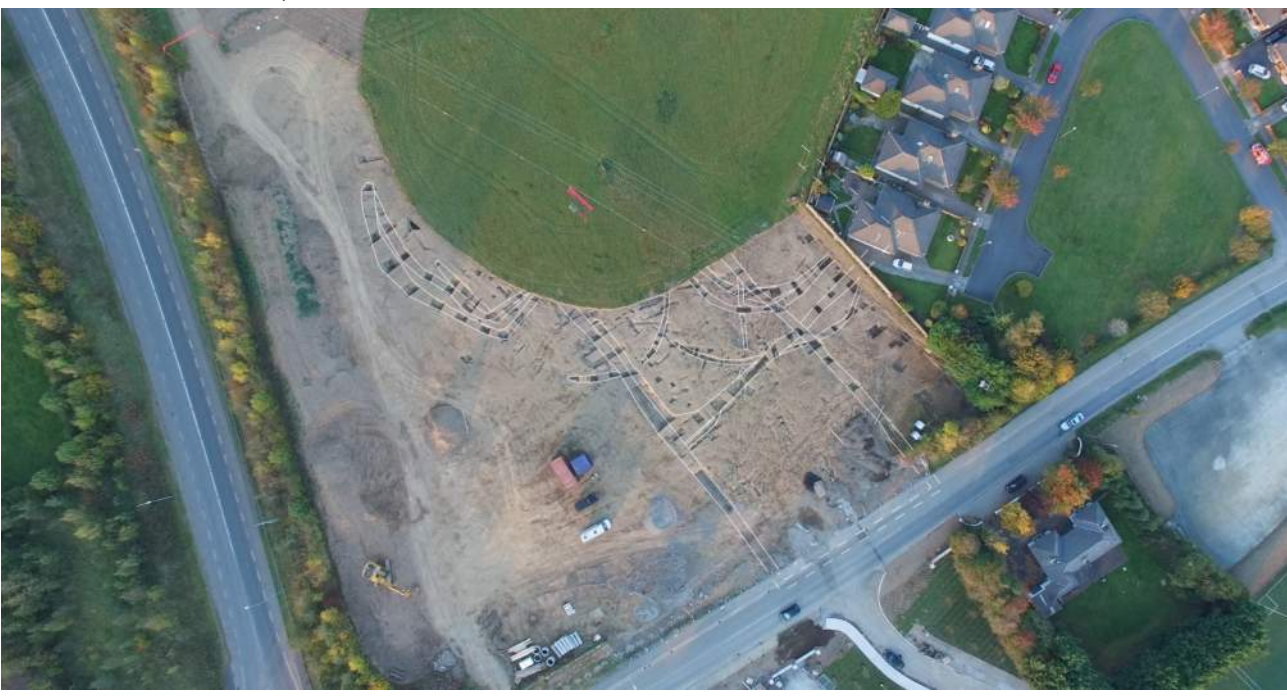
Three later ditches may have formed a larger rectilinear annex or later field system to the south. A small-scale metalworking area was identified within one of the ditches and frequent animal bone was encountered, indicating the settlement was still active when





Rectilinear annexes to south and proposed continuations (top)

Aerial view of the southern portion of the site with annexes outlined (bottom)



the ditches were in use. One of the ditches was recut during the medieval period, presumably becoming part of the field system being laid down over the now abandoned settlement.

Phasing within northern annex

There were a number of phases of internal division within the northern annex. The earliest surviving sub-division was possibly a simple east-west subdivision (C1601), which may have shortened the annex for a period. The annex may not have been subdivided initially as two kilns along the external side of the annex to the east appear to have predated the earliest subdividing ditch. It is possible however that earlier sub-divisions were present and have not survived or were replaced by the later ditches.

A number of curvilinear sub-division ditches were identified in the northern end of the annex, which appear to have evolved over time. The earliest of these (C1490) enclosed a space to the northwest, which was subsequently heavily reused by later kiln activity. A ditch cutting the earlier sub-division (C1324) may be related to this, creating another enclosure to the northeast. This phase may relate to the earliest cereal-processing within the annex, where a kiln was located within each quadrant of the annex.

Two kilns truncated this phase of ditches to the east indicating an expansion of kiln activity for a period, however the kilns were truncated by an additional curvilinear ditch and the enlargement of the eastern ditch of the annex ditch indicating they went out of use prior to the defining of the annex. The northern curvilinear sub-divisions were also no longer extant when the western ditch of the annex was repositioned.

This was replaced to the south by two ditches (C1140 and C1317), which divided the southern portion of the annex in half and separated them from the northern portion of the annex. A kiln was located in both of these sub-divisions, however it is unclear whether they are contemporary. This phase of sub-division would have created two smaller rectangular enclosures to the south and a larger one to the north and were contemporary with the redefining and enlargement of the annex

ditches. The ditches forming the southern sub-divisions became the site of significant metalworking activity, with a number of dump pits dug into former sub-division ditches in the vicinity, after which a substantial phase of cereal processing took place within the northwest quadrant.



Proposed phase 1 of northern annex (top)

Proposed phase 2 of northern annex (bottom)





Proposed phase 3 of northern annex (top)

Proposed phase 4 of northern annex (bottom)





Proposed phase 5 of northern annex (top)

Proposed phase 6 of northern annex (bottom)



Section 18 Discussion

A substantial early medieval settlement was uncovered during the excavation of the northern end of the Readsland development site. Evidence for prehistoric activity, as well as a medieval field system and laneway, were found in the southern end of the site. The discussion of these findings below is preliminary, and post-excavation analyses and radiocarbon dating is ongoing.

Prehistoric activity

Cremation activity

Although cremation as a burial rite in prehistoric Ireland is well-documented, the pyres upon which cremations were burnt are less frequently identified within the archaeological record (Cooney 2017, 120). This may be because they left little sub-surface trace and were largely above-ground constructions. Criteria have been suggested for the identification of pyre features archaeologically. Arcini (2005, 70-1, cited in Geber 2009, 222) defines them as

sometimes only 'slightly discoloured sooty patches, oval or round in shape with a diameter of about 0.5m' in which possibly some burnt bone might be found. McKinley (1997) adds that some evidence for in situ burning must be present for the feature to be interpreted as a pyre.

Two cremation pyres were identified at Readsland. The larger was represented by a large spread of lightly scorched material



Mid-ex view of excavation of pyre C175, looking northwest (top)

Mid-ex view of pyre C175 with curvilinear ditch C181 and medieval field boundary C186 truncating it, looking southwest (bottom)

Mid-ex view of sampling underway in pyre pit C142, looking southwest (top)

Plan of pyre pit C142 (bottom)



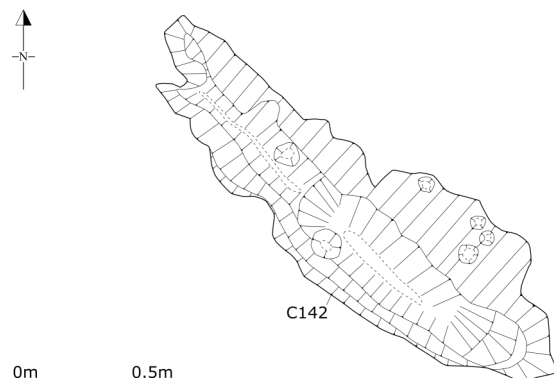
measuring c. 14m by 4m with rare patches of in situ burning beneath. The spread contained very rare charcoal, however once an initial inspection was carried out small fragments of cremated bone were visible throughout. The lack of charcoal suggests the pyre site was left open after the cremation had taken place and had been gone through to remove the majority of the bone. Flint artefacts were retrieved from the spread, and from features truncating the spread, and may initially have been deposited with the body during cremation. It will be interesting to see if evidence for scorching on these artefacts can be identified. Alternatively, some of the artefacts may have been deposited after the pyre had been extinguished during the collection of the bone for burial. One of the artefacts retrieved from beside the pyre was a hollow scraper, which may indicate a Late Neolithic or Early Bronze Age date, however further examination of the lithic assemblage and radiocarbon dating will be carried out to confirm this.

Two small cremation pits nearby similarly contained very little cremated bone. It is possible the bone was being gathered and disposed of in another way, perhaps ground down or scattered in a specific location. Another possibility is that small quantities of bone were deposited in a number of places, or that pits containing more substantial cremation deposits lie beyond the limit of excavation in the immediate vicinity of the pyre.

The pyre and nearby cremation pits were

located on the crest of a low rise within a wetland environment. The location may have been desirable for burial or cremation-related activity during the prehistoric period, as similar environmental and topographic locations were chosen for sites such as the Early Neolithic cremation pit and Bronze Age ring barrow at Clonard, Co. Meath (McGlade 2019). Grogan (2005, 142) has proposed that the concentration of ceremonial enclosures and burial monuments such as barrows along river floodplains, areas unfavourable for settlement sites, reflects a division of the landscape into domestic and ritual spheres.

A shallow sub-oval pit measuring 3.6m by 1m with in-situ burning on its base was situated on the lower-lying ground next to the larger pyre. The upper fill of the pit was a cremation-related deposit, which included burnt and unburnt bone along with rare charcoal and a large hollow scraper. This pit may also have functioned as a pyre. A pit cluster in the vicinity



of the smaller pyre may have contained additional cremation pits, and again did not contain complete cremations.

Elsewhere pyre sites have been infrequently recognised, which makes comparison challenging. Waddell (1998, 156) notes that at Cloghskelt, Co. Down a thick black deposit containing minute fragments of burnt bone was uncovered in the vicinity of a flat cemetery, and was interpreted as the remains of a pyre. In other cases, the pyre was preserved by subsequently being covered, such as at Carrowbeg North, Co. Galway which survived beneath a barrow mound (Willmot 1939, cited in Cooney 2017, 120). In some cases a shallow pit may have been dug beneath the pyre to aid with combustion, and these have been identified at Middle Bronze Age cemeteries such as at Templenoe in Co. Tipperary, where it was suggested they represent remnants of possible pyres (Geber 2009, 223). Two large shallow pits interpreted as pyre pits were uncovered during excavations in Kilgobbin, Co. Dublin in close proximity to burial monuments. One was located beside a group of Early Bronze Age pits containing token cremation deposits and the second was associated with Iron Age reuse of an earlier Bronze Age barrow and contained a cache of fractured quartz (McGlade 2018, 30). At Rockfield, Co. Kerry, a Late Bronze Age/Early Iron Age pit with two channels cut into the base with evidence for intensive scorching was interpreted as a crematorium or pyre (Collin 2003). Becker (2004, 15) has argued that some sites previously interpreted as burial sites with token quantities of cremated bone should be reinterpreted as pyre sites.

The interpretation of the larger spread uncovered at Readsland as a pyre conforms with the criteria set out by Arcini and McKinley, though it is significantly larger than their examples. There was no evidence for a shallow underlying pit to aid combustion, however the location of the pyre on the crest of a rise may have been naturally aerated enough not to require this. The size of the heat-affected spread of the pyre initially suggested the pyre location may have been used numerous times. An initial inspection of the bone (J. Geber pers. comm. 2018) indicated that both human and animal bone was represented within the spread.

It was also noted that bone fragments were concentrated along the western side of the spread, which may indicate that the cremation pyre was located to the west with the less heat-affected and bone-rich portions resulting from later spreading of the material. It is possible that the spread represents a large pyre for the cremation of one or more individuals with animal (or food) offerings. The location for the pyre may have been selected for its proximity to the wetlands and have been an important component of the burial ritual. The second smaller pyre pit to the northeast also conforms with the criteria set out by Arcini and McKinley, with the pit functioning as a shallow cut beneath the pyre itself to aid combustion. This may have been necessary given the location of the smaller pyre in a lower-lying position.

Prehistoric burial in the surrounding area

No other pyre sites have been identified in the wider locality, though a cremation burial is known from Drumree 1 to the southwest, which returned a date of 2120–1780 BC (Schweitzer 2008b; Chapple 2018). Other features nearby included a burnt spread, kilns, fire bowls, postholes and stakeholes (Schweitzer 2008b, 1).

Burial monuments dating to the Bronze Age have been identified in the surrounding area. At Johnstown 4 a Late Bronze Age ring-ditch, which continued in use until the Early Iron Age, was associated with pits, a single lithic artefact, and small pottery sherd of middle to late Bronze Age domestic ware (Elder & Ginn 2009c, 2ff.). Samples from this site ranged in date from 407-208 BC to 968-801 BC (ibid. Appendix 9; Chapple 2018). At Knocks 1 a sub-circular ring-ditch, originally constructed in at least eight segments, was later dug through to create a penannular enclosure (Elder 2009, 3f.). Radiocarbon dating from the enclosure produced a date of 929-802 BC in the Late Bronze Age (ibid., Appendix 4, Chapple 2018). A large number of lithic artefacts, including a flint hollow based arrowhead fragment were recovered during the excavation (ibid., Appendix 2). The Johnstown 4 and Knocks 1 ring-ditches were particularly large, between 19-35m in diameter (Elder & Ginn 2009c, 5), suggesting this location had a particular significance during the Bronze Age.

Interestingly, all of these sites were located around the lower-lying wetlands at Knocks and the floodplain of the Skane River, and were in close proximity to one another and to the pyres and cremation pits at the southern end so the Readsland site. This location appears to have been used as a place of burial throughout the prehistoric period.

Prehistoric activity has also been identified at Lagore Crannog. This included evidence for human sacrifice dating to the Early Bronze Age, a second phase in the Early Iron Age, and a final phase in the early medieval period. This suggests that the later royal residence was deliberately situated at a place embedded in prehistoric ritual and cultic meaning (Newman 2011, 29).

The human sacrifices at Lagore and the ring-ditch monuments at Johnstown and Knocks show that a variety of burial types were used during the prehistoric period in the vicinity of the Readsland pyres. It is hoped that the post-excavation analysis of the pyres and cremations from Readsland will add significantly to our understanding of the prehistoric burial practices in the area.

Fulachtai fia

Two separate fulacht fiadh sites were identified to the south, close to wetland areas. Fulachtai fia are associated with the heating of water in pits or troughs using heated stones. They are amongst the most common prehistoric

archaeological features in Ireland (Hawkes 2015; 2018, 1; Quinn & Moore 2009, 43). These sites primarily date from the Bronze Age but there are examples from the Neolithic and medieval period. The typical fulacht site consists of a mound of burnt, cracked stone and charcoal-rich soil, the central feature of which is a trough that is often clay, stone or wood-lined. In the past, a common belief was that the trough was used for boiling water in order to cook meat. More recently, as the number of sites excavated has increased allowing for additional study, alternative uses such as tanning, bathing, beer and textile production have been posited (Dennehy 2005, 5; Quinn & Moore 2009, Hawkes 2018, 155-186, Brown et al. 2016, 285-6).

The eastern fulacht trough (C15) at Readsland had evidence for a lightweight lining. The western fulacht fiadh had a number of simple pits with no evidence for a lining. In both cases the associated spread of burnt stone was poorly surviving. The western fulacht fiadh site may continue beyond the limit of excavation as it lay at the edge of the stripped section for the service trench within Field 6. No finds were identified associated with either fulacht site.

The eastern fulacht fiadh at Readsland can be defined as a Type 1 burnt mound site, being a mound with single trough (Hawkes 2018, 111). The burnt mound was poorly surviving. The trough measuring 1.2m by 0.9m was originally plank lined, which is the most common method



Post-ex view of fulacht trough C15, looking south

of trough lining in prehistoric Ireland, especially in the Middle-Late Bronze Age (*ibid.*, 74). The planks have not survived in this instance, however the posts that would have held them in place are represented by postholes along the base of the trough. An example of this form of fulacht trough was uncovered at Cooksland 2 nearby where three small spreads of burnt stone overlay a rectangular wood-lined trough and several intercutting pits. Two of the pits returned radiocarbon dates of 2565-2366 cal. BC and 2463-2145 cal. BC (Linnane 2008b; Baker 2005, 5-8; Baker 2007), demonstrating that this fulacht originated in the late Neolithic period. This form of fulacht trough was also uncovered at Clonard, Co. Meath, which returned a radiocarbon date in the Late Bronze Age (McGlade 2019), indicating wood-lined troughs were used over an extended period of time.

associated with the hot water produced in the trough. During the 2009 testing a further two pits containing burnt mound material were encountered and excavated at Readsland (Hession & Moriarty 2009, 30). The test trench extended beyond the limit of the 2018 excavation in Field 6 and suggests the western fulacht complex is more extensive, and likely to stretch to the west of the development site. The western fulacht bore a strong resemblance to the Early Bronze Age example at Leshamstown 1 (Schweitzer 2008a, 1), which was dated to 2131-1886 BC and 2010-1696 BC, in the Early Bronze Age (*ibid.*, Appendix 4; Chapple 2018). Though the trough and spread at Leshamstown were more substantial than at Readsland, the cluster of additional features and overall form is similar.

The western fulacht fiadh at Readsland can be defined as a Type 2 burnt mound site, being a complex burnt mound (Hawkes 2018, 111). These sites are usually represented by several troughs and many associated pits (*ibid.*). The western fulacht fiadh had one simple unlined trough containing layers of burnt mound material as well as several additional pits. The additional pits may have been used for different activities



Post-ex view of western fulacht fiadh area, looking northwest (top)



Post-ex view of western fulacht fiadh area, looking south (bottom)

Other fulacht fiadh sites are known from the local area. Two troughs dating from 2340–2060 BC and 2460–2140 BC in the late Neolithic and Early Bronze Age periods were uncovered at Roestown 1 to the north (Cagney & Ginn 2009, 2; Chapple 2018). Several spreads of burnt mound material were uncovered beside the Early Bronze Age cremation pit at Drumree 1 (Schweitzer 2008b). A disturbed sub-rectangular pit containing fire-shattered stones, a kiln and pit were uncovered at Cooksland 1 and tentatively dated to the Bronze Age (Linnane 2008a, 1-3). A number of Middle to Late Bronze Age wells were identified at Johnstown 1, one of which produced a date of 1408-1132 BC (Elder & Ginn 2009a, 17), while an Iron Age burnt mound dating to 401-206 BC was also uncovered on the site (ibid., 16). Slightly further afield, Early Bronze Age fulachta fia were uncovered during the excavations at Killeen Castle returning radiocarbon dates of 2064-1913 BC and 2348-2139 BC (Baker 2009, 203).

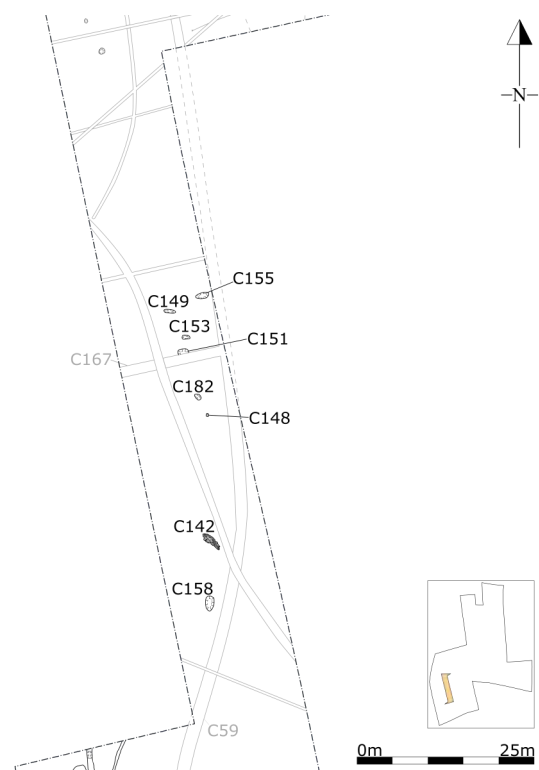
As demonstrated by the varying radiocarbon dates above, local fulachta fia sites were in use during a long period in prehistory. Environmental analysis and radiocarbon dating of the material from the two fulachta fia at Readsland will provide additional information, and it will be of particular interest to consider whether they were contemporary with the cremation pyres.

Prehistoric pit clusters

Two clusters of prehistoric pits were identified in the southern end of the development site. The southern cluster was associated with the smaller pyre pit and two token cremation pits, and is likely to be contemporary with the pyre. A large hollow scraper was retrieved from the pyre pit, with this form of flint artefact dating to the Late Neolithic period (Sharpe pers. comm. 2018). The second cluster was identified within Field 5 to the northeast, and a second hollow scraper was retrieved from one of the pits.

Pit clusters are frequently dated to the Late Neolithic to Early Bronze Age, as at Kilgobbin, Co. Dublin, and Rathmullen 12, Co. Meath, both of which were associated with the deposition of large quantities of broken pottery

and flint tools (Carlin 2011). While earlier examples of pit clusters are known (McLaughlin et al. 2016), their association with flint hollow scrapers at Readsland suggest a Neolithic or Early Bronze Age date. The pit clusters at



Plan of the pit cluster in Field 6, which included pyre pit C142 and two possible cremation pits C155 and C151 (top)

Hollow scrapers retrieved from the Field 5 and Field 6 pit clusters (bottom)

Readsland did not contain ceramics. It is possible that the pit clusters at Readsland were used for the intentional deposition of objects, perhaps as offerings, with the flint tools being the only surviving examples.

The early medieval settlement

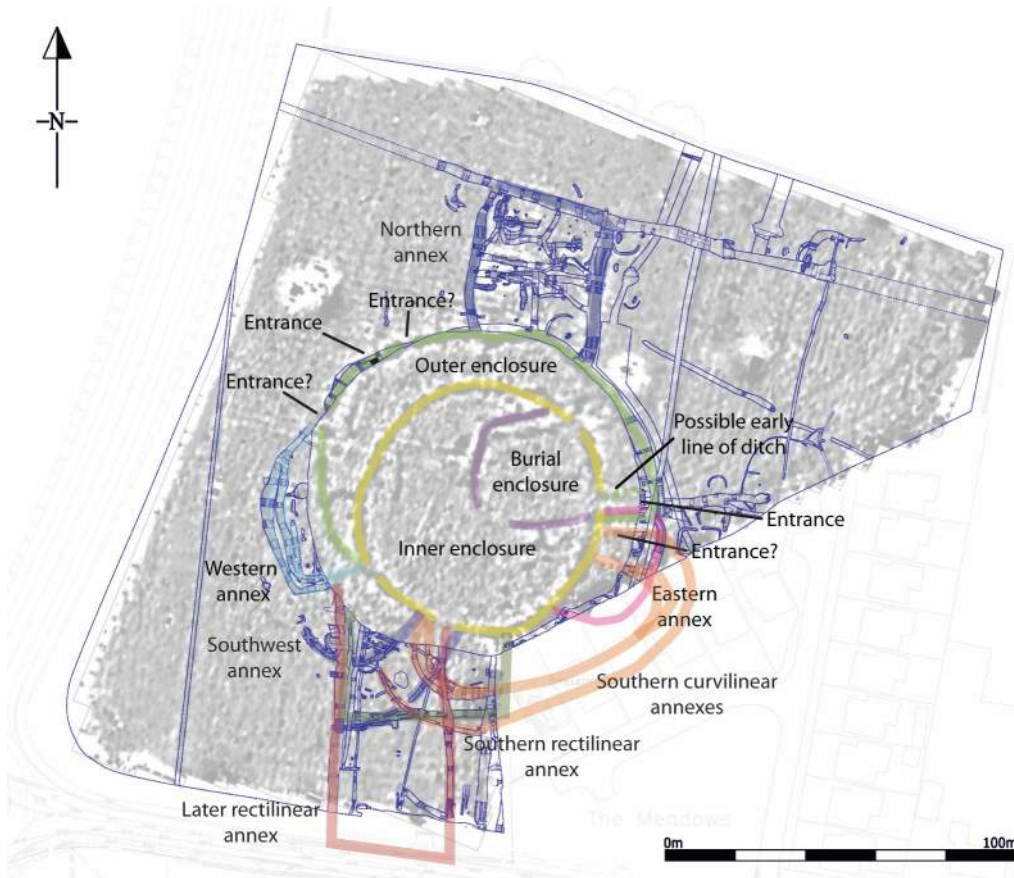
Introduction

A large early medieval settlement enclosure measuring 68m in diameter was identified within the northern part of the site during a geophysical survey in 2009 (Harrison 2009). It was subsequently archaeologically tested and found to be defined by a ditch measuring 3-4m in width and 0.54m in depth (Hession & Moriarty 2009, 16). An outer enclosure was also identified during the 2009 testing. The 2018-9 excavation has shown that the outer enclosure was not concentric to the central enclosure, and measured c. 84m by 96m.

The 2009 investigations also identified a smaller sub-circular enclosure measuring 38m by 34m within the northeast of the central settlement

enclosure. This was defined by a ditch measuring 2.6-3.5m in width and a minimum of 0.8m in depth (Hession & Moriarty 2009, 18). An extensive burial ground of east-west oriented extended inhumations was identified within – and confined to – this smaller sub-enclosure (ibid., 32). These burials were preserved in situ during the 2009 testing and 2018-19 excavation and have not been dated.

A redesign of the proposed development allowed the central settlement enclosure and burial ground to be preserved in situ (Gowan 2012). Thus the excavation carried out in 2018-9 investigated the portions of the site beyond the outer enclosure ditch. Numerous annexes beyond the outer enclosure were identified and excavated, both curvilinear in form (to the west, southwest, south and east) and rectilinear (to the north and south). It is unknown what settlement evidence survives within the remainder of the central enclosure, though one possible kiln was identified within the outer enclosure and a curvilinear slot trench was identified within the burial enclosure (Hession and Moriarty 2009).



Plan of early medieval settlement with the various associated enclosures highlighted

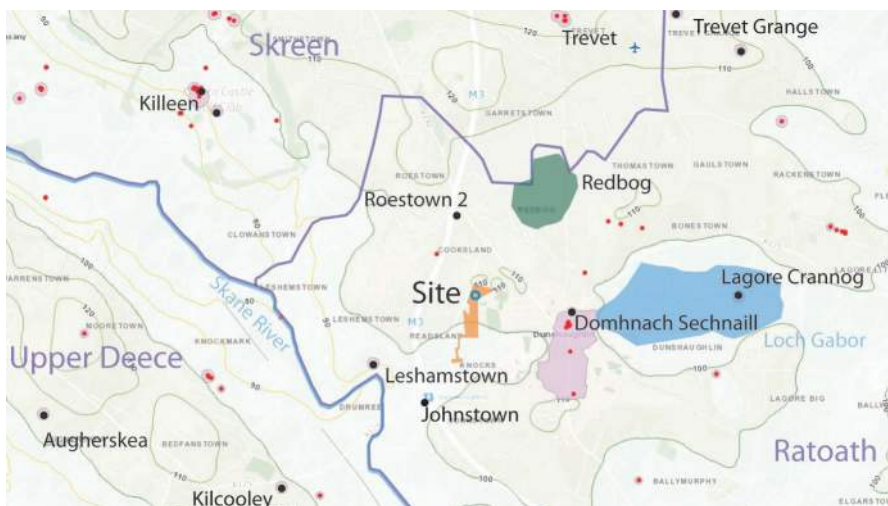
Both curvilinear and rectilinear outer annexes were identified at Readsland. The curvilinear annexes are comparable to those at many other early medieval sites, such as Raystown (Seaver 2016), Alexander Reid (McGlade 2017), Killeen (Baker 2008) and Ratoath (Wallace 2010), while rectilinear annexes are known from Colp West, Dowdstown, Baronstown, Boyerstwon 3 and Ratoath, amongst others (Kerr et al. 2010, 91-2). These were used for growing crops and vegetables, enclosing animals, and for processing and industrial activities. Rectilinear annexes have been suggest to relate to cereal and vegetable cultivation as these were invariably planted in rows (ibid.). The northern annex at Readsland was utilised for iron production and cereal drying.

The early medieval settlement enclosure at Readsland appears to have been abandoned by the Anglo-Norman period. Following the granting of the liberty of Meath to Hugh de Lacy in 1172, he established his stronghold at Trim and divided up the remainder of the territory (Graham 1975, 226). De Lacy retained the area around Dunshaughin for himself as a seignorial manor, fortifying it with a motte to the south of the town. Given that the area have been the seat of indigenous power in the region prior to the arrival Anglo-Normans it may have been advantageous to maintain a hold over this particular part of the new territory. It is also interesting that the former name of Lagore was superseded by Ratoath for the new barony, possibly reflecting the decline of the former Irish royal site, or an intentional break with the

old Irish traditions by the incoming Anglo-Normans.

Kingdom of Lagore & status of Readsland

During the early medieval period the settlement at Readsland lay within the kingdom of Brega, which extended from the Liffey and Tolka rivers in the south to the River Dee in Louth (Eogan 2012, 695). A dynastic quarrel between the Sí 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 2.5km to the east of the Readsland settlement, and North Brega ruled from Knowth and Rath Airthir beside Teltown (ibid.). A further split in South Brega occurred in the late 8th century, with a rival royal site and lineage rising in Galtrim to the west of the study area. The boundary between these split territories may have followed the Skane River west of the settlement at Readsland. The first historical reference to the kingdom of Lagore was in the 7th century and the last king recorded was in AD 969. Following this South Brega appears to have split into a number of petty kingdoms, with the settlement at Readsland lying within the territory of the Clann Chernaig Sotail, which approximately corresponded with the baronies of Lower Deece and Ratoath. By the 11th century the Mac Gilla Sechnaill descendants of the Sí nÁedo Sláine had established themselves in a sub-kingdom approximately coterminous with the baronies of Upper Deece and Ratoath, which Bhreathnach (1999b, 4) suggests was in the vicinity of the ecclesiastic settlement.



Site highlighted in orange with the other early medieval sites in the vicinity labelled

Perhaps the late flurry of activity at Readsland is associated with this political dynasty.

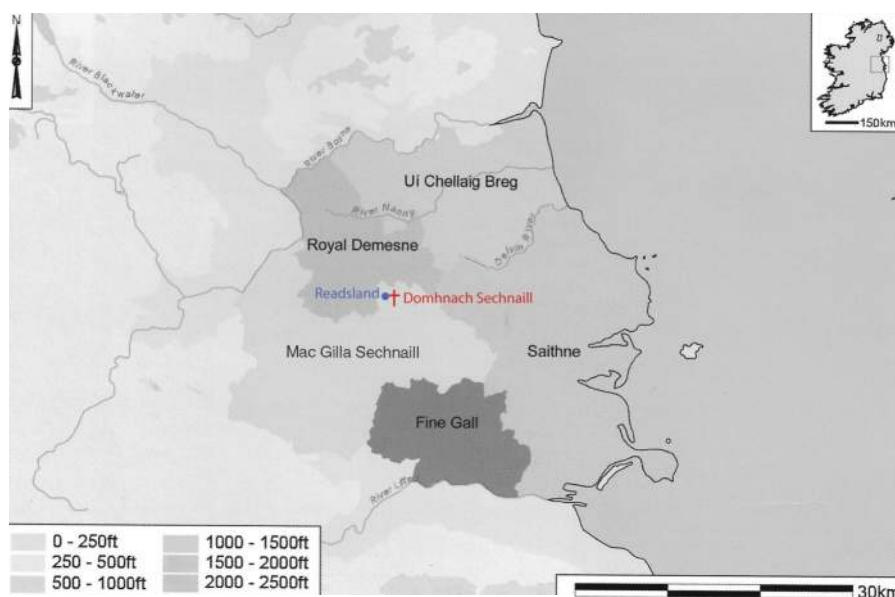
Evidence for the 'royal' nature of the crannóg at Lagore derives primarily, though not exclusively from annalistic evidence. As opposed to being a "seat of kingship", Warner suggested that Lagore formed part of a "wider royal complex" (1994, 65). This suggests that the enclosures surrounding Readsland were part of an archaeological landscape connected to Loch Gabor, perhaps providing hospitality, shelter or defence, growing food or providing resources for the royal site (O'Sullivan et al., 2007, 36; O'Sullivan 1998, 136; 2004, Vol. 1, 7-67; Bradley 1982-3 etc.).

O'Sullivan (1998, 137) argued that even royal crannóg sites were only occupied at certain times of the year. The surrounding ringforts could represent a strategic base of royal sites for occupation when the crannóg was not in use. The king of a túath could have more than one residence, which "facilitated the king's movement even around a small kingdom, making him more accessible" (Charles-Edwards 2000, 258).

There is no evidence that Readsland functioned as a royal site in the Lagore kingdom, nevertheless evidence was found during the excavation that the occupants of Readsland were of high status. Finds such as brooches and decorated ring-pins as well as items indicative

of foreign contacts or suggestive of gift exchange uncovered at ringforts may indicate a settlement of higher status, possibly that of a prosperous farmer or the nobility (O'Sullivan et al. 2008, 69). Evidence for non-ferrous metalworking or glass working may also be uncovered at such sites, which tend to be occupied for a longer period of time than ringforts of lower status (ibid.). At Readsland a decorated ring-pin, Norse hand-bell and amber beads were retrieved indicating high-status artefacts and foreign connections, and while the evidence for non-ferrous metalworking was sparse, spills of copper-alloy were identified in a number of places on the site to indicate it was also taking place.

The internal dimensions of ringforts range from 15.5m to 75m in diameter with the vast majority being under 44m in diameter (Stout 1994, 15). The dimensions for the residence of a tribal king are given as 42.56m in the early Irish law tracts, though Stout notes that approximately 18% of the ringforts in Rathcroghan, Co. Roscommon match or exceed this figure (ibid., 113). The central enclosure at Readsland has an internal diameter of 68m, which is well above average, and the outer enclosure measures c. 83.5m by 95.7m. When compared to a number of enclosures from the vicinity, the Readsland enclosure is notably large in comparison with the circular enclosures, such as Baronstown (32m) and Collierstown Phase 3 (40m). The two earlier enclosures associated



The petty kingdoms of Southern Brega from c. AD 950-1180 with Readsland and Dunshaughlin depicted, after Bhreathnach 1999b

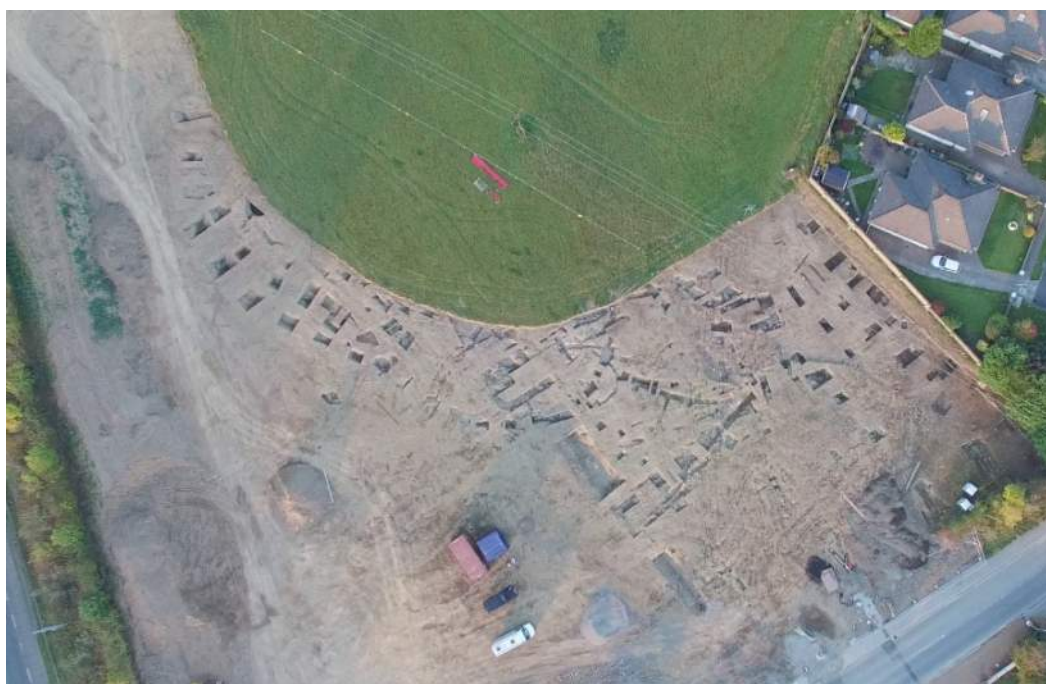
with Johnstown 1, Co. Meath were sub-oval measuring 59m in diameter and c. 53.5m in diameter (Clarke and Carlin 2008, 58).

The D-shaped enclosures at Roestown 2 measuring 76m by 53m and at Castlefarm measuring 90m by 65m are larger, and this conforms to a pattern of non-circular enclosures generally being larger than ringforts (O'Sullivan et al. 2008, 77). The later D-shaped enclosure at Johnstown 1, Co. Meath, measured 47.5m by 61m. The scale of the central enclosure at Readslane, at 68m combined with that of the outer enclosure measuring c. 83.5m by 95.7m, is certainly comparable with the largest enclosures in the vicinity, and would have been an imposing intervention in the first millennium landscape.

The closest early medieval settlement to the site was uncovered at Roestown 2 to the north. E Ware pottery sherds and bone motif pieces were recovered from the earliest phase of Roestown 2 (O'Hara 2009, 64-5). Both of these were identified during the excavations at Lagore Crannog, also indicating a connection between these settlements. Ingot moulds, a crucible fragment and the bone motif pieces recovered from Roestown 2 also indicate fine copper-alloy metalworking was taking place, with the remains of a circular structure suggested to be a

workshop (O'Hara 2009, 66), which is not represented at Readslane. While the central enclosure and much of the outer enclosure at Readslane were not excavated it is interesting to note the lack of diagnostically early artefacts from the excavation of the outer enclosure ditch and annexes. This may indicate the settlement at Readslane is later, or was significantly smaller prior to the 8th-9th century, which seems to be the first period represented in the artefactual assemblage. Of course this picture may change when radiocarbon dates have been returned. The early medieval settlement is located within an unusual strip of Roestown, which runs between the townlands of Cooksland to the north and Readslane to the south. This may relate to the connection between the settlement uncovered here and that of Roestown 2 to the north. The northern slope of the ridge upon which the Readslane settlement has not yet been investigated, it is possible that these two sites form components of a more extensive settlement and were intrinsically connected.

The early ecclesiastic site of Domhnach Sechnaill was located where the current Church of Ireland in Dunshaughlin stands presently, c. 850m east of the settlement at Readslane. It was reputedly founded by Secundinus or Sechnaill in about AD 443, whose death was



Mid-ex aerial view of the southern portion of the early medieval settlement, looking north

recorded in the Annals of the Four Masters in AD 447. Archaeological investigations in the vicinity of the ecclesiastic site have uncovered at least two enclosing ditches (Rice, 18E0488, Excavations Ref. 2018:472). One of these was excavated (Simpson 2005) and found to date originally to AD 785-975, with a later recut in AD 1010-1165. A roundhouse was identified within the outer enclosure, which dated to AD 615-705, and a nearby industrial area was dated to AD 680-790, both of which confirm that the site was occupied prior to the creation of the outer enclosure. There is no direct evidence to suggest that the settlement at Readsland was connected to the ecclesiastic territory of Domhnach Sechnaill, indeed the presence of a separate burial ground at Readsland would suggest it was not primarily an ecclesiastic holding, however this monastery would have had significant influence in the region.

Cemetery settlement

The presence of a graveyard within the settlement means the Readsland site can be added to the growing corpus of early medieval cemetery settlement sites. The burial areas on other cemetery settlements are generally located within the inner enclosure, though sometimes not central within it (O'Sullivan et al. 2008, 178), as is the case at Readsland where the burial enclosure is in the northeast of the central enclosure. Other cemetery settlements in Brega include Augherskea, Castlefarm, Colp West, Johnstown, Killeen Site B, Knowth Site M, Ratoath, Raystown, Rossnaree and Ninch (Seaver 2016, 163). Of these, Readsland, Raystown and Ratoath all lie within the probable boundaries of Lagore kingdom (ibid., 5).

Because the Readsland burials have not been dated, we do not know whether they predated the settlement. If they did, the settlement may have developed around a *ferta*. These were circular ditched enclosures that have their origins as burial sites in the prehistoric period, but continued as ancestral burial sites into the early medieval period (O'Sullivan et al. 2008, 160). O'Brien (1992) has highlighted that, prior to the 8th century, burial at the monastic centres was reserved for clerics, patrons and individuals of high status and burials for other people was tolerated at non-ecclesiastical sites

until the 8th century, and prior to this (O'Brien forthcoming, cited in Clarke and Carlin 2008, 79).

Coyne (2010, 88) notes the location of the cemetery settlement site at Corbally near the barony boundary, an aspect which is echoed at Knoxpark, Co. Sligo, located on a tribal boundary. The settlement at Readsland was also located near a barony boundary on the south-facing crest of a hill with impressive views over the low-lying land to the south and west. Charles-Edwards (2000, 175) has highlighted the strong connections between ancient burial places in the early medieval period and boundaries. The barony boundary to the west, which follows the Skane River, is likely to have been a more ancient territorial division, and would have been overlooked by the site at Readsland. The location of the site at Roestown 2 overlooking the territorial boundary of lands associated with Tara might suggest that the settlement may have been occupied by noblemen with responsibility for protecting the border of the kingdom (*aire forgill*) or raiding neighbouring *tuatha* (*aire deso*) (O'Hara 2009, 58). The site at Readsland, with its clear views to the south and west may also have served a similar function, as it overlooked the territorial boundary of the Skane River.

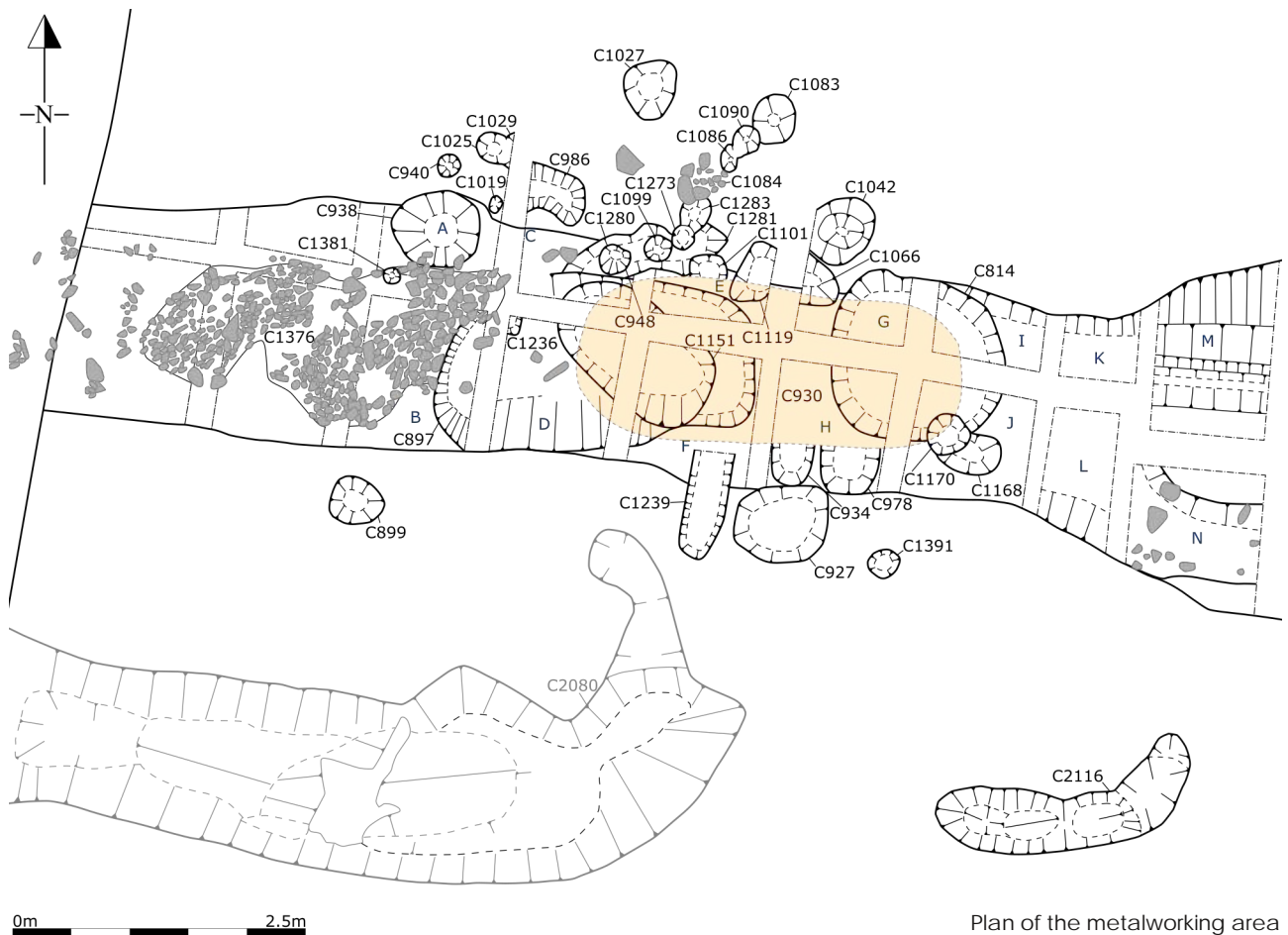
Cemetery settlements tend to produce a large quantities of animal bone, which has led to the suggestion of feasting as part of the burial ritual at these sites (ibid.). A large quantity of bone was retrieved during the excavation at Readsland, however there is also a strong indication that the site was occupied over a long period of time and was used extensively for production. The daily needs of the workers for these secular activities may account for a substantial amount, if not all, of the bone recovered. Cemetery settlements have also produced evidence for extensive ironworking (Johnstown 1, Co. Meath; Clarke and Carlin 2008) and cereal processing (Raystown; Seaver 2016; Johnstown 1, Co. Meath, Clarke & Carlin 2008, 73; Corbally, Co. Kildare, Tobin 2003, 36; Coyne 2010, 84; and Rosepark, Glebe South and Darcystown, Co. Dublin (Carroll 2008, 103-4), both of which were identified at Readsland.

Óenach

The lands to the west of Dunshaughlin have been suggested to be the location of an Óenach site (Carty & Gleeson 2013, 48). According to Byrne (1973), an 'Óenach was an important event in the calender of a rural society, and was at once political assembly, market-fair (the sense of Modern Irish aonach), and an occasion for general jollification. It corresponds very closely to the Scandanavian and Icelandic Thing. Games and horse-racing were an essential element of the óenach. There is little doubt that these were funerary in origin, and that the 'fair' was held on the site of an ancient tribal cemetery'. Carty and Gleeson (2013) note a reference to an Óenach in the vicinity of Domhnach Sechnaill, which reputedly disturbed the saint with the clamour of the games. They place the location of the games further to the west on the opposite side of the Skane River in Knockmark parish, noting a number of early medieval burial grounds in the vicinity.

The burial ground and settlement at Readsland can now be added to this early medieval

landscape. If the settlement at Readsland formed part of the Óenach landscape referred to in the early texts, its proximity to Domhnach Sechnaill would have meant that games carried out here would have been audible from the ecclesiastic site, perhaps providing more annoyance than if located further to the west. The burial ground may also have ancient roots important to the community. The multiple entrances to the settlement and pathways leading to and around it may also indicate it was a place of gathering. As pointed out in relation to the 27 kilns uncovered in the vicinity of the cemetery settlement at Corbally, Co. Kildare (see Tobin 2003, Coyne 2010, 84), also located in close proximity to an Óenach site, one of the key aspects of these gatherings was feasting. This will be considered further when environmental analysis of the charred seeds from the kilns at Readsland has been carried out, particularly whether there is evidence for germination indicating beer production. Indeed, the excessive production towards the end of the site may imply large meetings of people, perhaps at times of unrest or in advance of war.



Iron production

A substantial iron production site was uncovered within the northern annex of the settlement. The metalworking post-dated a number of phases of activity within the annex and was cut into a former sub-division ditch. The presence of an ironworking area within or associated with a ditch is a recurring phenomenon, with examples known from Rathgall, Co. Wicklow and Clogher, Co. Tyrone, where they were dug into earlier prehistoric ditches, and from Alexander Reid, Co. Meath, Lowpark, Co. Mayo and Woodstown, Co. Waterford, where they were dug into earlier medieval ditches (Wallace and Anguilano 2010, 75; McGlade 2017).

The metalworking phase appears to have been associated with a lack of maintenance to the annex ditches, which began to fill in during the period the metalworking was taking place. By the time the large-scale cereal processing to the northwest was underway, which post-dates the metalworking, the annex was no longer defined by ditches and was largely unenclosed. It is possible that some metalworking was still taking place during the final period.

Metalworking sites need to be close to resources of raw materials, such as clay for furnace lining, wood for charcoal and an ore source. At Readsland the ore source is likely to have been bog ore, with an expanse of bogland to the north of the site at Redbog. Good communication links between the site and the source of the ore would have been important, with Path 1 possibly providing this link. Patches of dense marl clay were identified within the natural towards the east of the site, though no evidence for its extraction survived within the excavated area. It is likely that a clay source was present in the vicinity. There are historical references to an ash wood in the vicinity of Dunshaughlin in the early 17th century, which may be of some antiquity



Mid-ex view of metalworking area in foreground with waste pit C823 in centre, looking north (top)

Mid-ex view of metalworking area to right with waste pit C823 to left, looking east (centre)

Mid-ex view of waste pit C823, looking east (bottom)



(Morrin 1880, 3). It is likely that more extensive woodland cover was present during the early medieval period. Features that were not encountered during the excavation were charcoal production pits. Charcoal production must have taken place closer to the source of the wood, with the charcoal then delivered to the site. It is possible that some of the long linear pits that were used to dispose of waste were originally used for the storage of ore and charcoal.

The features within the metalworking area were frequently intercutting, however it was possible to identify six bowl furnaces (Furnace 2, 3, 6, 8, 13 and 14), which appeared to be the earlier furnaces in the area. These are the base of shaft furnaces, which would have been used for iron smelting. Numerous bowl-shaped furnace bases were identified within the nearby waste pits, which would relate to these features. A further seven probable bowl furnaces were identified (Furnaces 4, 5, 7, 10, 11, 12, and 15), which appeared to be the remains of furnaces after the furnace base was dug out.

Post-ex view of furnace pit C938, looking west (top left)

Mid-ex view of furnace C930 in Grid F with scorched clay layer visible in section representing collapsed shaft or base of smithing hearth at west end of pit, looking north (bottom left)

Mid-ex view of furnace C1042, looking south (top right)

Mid-ex view of furnace C930 with sections of scorched clay visible in centre and western end of pit in background. Furnace C1119 can be seen to left and furnae C1151 to left (bottom right)

Three larger pits were also identified (Furnace 1, 9 and 16). These were larger and deeper cuts, cutting through earlier metalworking features. In the case of Furnace 9, the base of the cut sloped down to a shallow bowl-shaped depression within the sunken area. This may represent a smithing hearth. A similar arrangement was apparent for Furnace 1, the last furnace in the area. This pit was a broad



oval cut with a furnace base at one end. A heavily burned layer of clay to the west may be the remains of a collapsed furnace shaft or the scorched base of a smithing hearth. It partially overlay the slag within the pit, perhaps indicative of reuse. The area to the east of the scorched clay was backfilled with furnace waste but was open during the use of the feature. The third (Furnace 16) was largely truncated away by the latest furnace, but had straight sides and a flat base which was sloping downwards towards a probable dished depression at the point of its truncation. These probable smithing hearths appear to be located within sunken work areas, possibly similar to the sunken areas at Lowpark, Co. Mayo, providing better insulation for the hearths and improving the ability to control airflow within the hearths (Wallace and Anguilano 2010, 76). The darkened space would have been advantageous as smiths used the colour of the heated metal and the flame to indicate when the metal was ready for hammering or welding (*ibid.*). The sunken areas at Readsland were not as large as those uncovered at Lowpark, however appear to have had a similar function.

A number of large linear pits were cut into backfilled features in the immediate vicinity for the disposal of metalworking waste, with the most substantial of these located just to the north of the metalworking area. This waste pit was filled with numerous furnace bases dug out of the furnace pits within the metalworking area. Fragments of tuyères were identified within the metalworking waste assemblage, as well as slag relating to primary and secondary smithing (Brendan O’Neill pers. comm. 2019).

This intense period of iron production at the site was clearly later in the evolution of the site. There is a strong indication that the ditches enclosing the annex were largely allowed to fill in at the time with the later cereal processing being largely unenclosed. Interestingly, Hencken (1950, 8) believed the increase in iron working and decrease in bronze-working in the later phases of Lagore Crannog represented a shift from ‘the arts of peace to the arts of war’, precipitated by the Viking invasion. While further analysis and radiocarbon dating is required to expand on this further it is clear that the iron output from the site at this time would



Plan showing the location of the northern metalworking area in relation to the other possible metalworking areas on the site

have been substantial and that it marks a distinct change in the economy of the settlement.

Additional metalworking evidence was identified on the site. To the south of the settlement two circular pits connected by a linear channel were identified. This was cut into a ditch which formed the latest rectilinear annex or field system to the south. These appeared to be furnace pits, possibly bowl furnaces. The purpose of the interconnecting channel was unclear. The features all had the same fill, which contained frequent metalworking waste. This metalworking area is likely to be the source of the metalworking waste retrieved from the southern end of the site.

To the east of the central enclosure a metalworking waste pit was identified at the

edge of the preserved portion of the site. A kiln (Kiln 2) was located in the immediate vicinity. While no metalworking features were identified within the excavated area it is likely that metalworking was taking place nearby. The features were located within the eastern annex, which also contained a second kiln. As seen in the northern annex, kilns and metalworking furnaces can be located near one another, with some desire to keep these dirty and dangerous activities away from the main settlement.

Evidence for non-ferrous metalworking on the site was scant, however spills of copper-alloy were noted in a number of places on the site. A number of these were from the metalworking

Mid-ex view of waste pit C823 with numerous furnace bases visible in section, looking north



area within the northern annex, with scraps of sheet copper-alloy also noted. This is likely to relate to artefacts being produced on the site. Another spill was identified on the metallised surface of the processing enclosure to the northeast while further scraps were retrieved from the kiln beside the waste pit in the eastern annex. It appears that small-scale non-ferrous metalworking was being carried out on the site, possibly in conjunction with the ironworking.

It has been postulated in the past that iron production in early medieval Ireland was carried out as non-specialist subsistence or as specialist production, either at a permanent ironworking centres under the patronage of the noble or ecclesiastic classes, or by itinerant smiths travelling between settlements (see Carlin 2008). The blacksmith was held in high esteem according to the early medieval law texts (*ibid.*, 110). However, the archaeological evidence suggests that while the most senior blacksmith may be connected to the patronage of the nobility or the church, the skills of many farmers would have extended to smithing (*ibid.*, 112). This may well be the case for the two smaller metalworking areas to the south and east of the settlement at Readsland, however the substantial upturn in iron production evidenced in the northern annex implies output over and above the requirements of the settlement itself.

While some metalworking was taking place on many early medieval settlement sites, large-scale metalworking sites are not as common in the archaeological record. Large-scale metalworking was taking place at the ecclesiastic sites, such as

Clonmacnoise, Co. Offaly, Nendrum, Co. Down, Armagh, Co. Armagh, Ballyvourney, Co. Cork and Reask and Illaunloughan, Co. Kerry (Stevens 2010, 93). One of the largest quantities of metalworking waste recorded came from the ecclesiastic site at Clonfad, Co. Westmeath, where 1.5 tonnes of slag was retrieved (*ibid.*), however larger quantities were present and unrecorded from other ecclesiastic sites excavated in the past (Brendan O'Neill pers. comm. 2019). Some large metalworking sites have also been identified on secular sites also, such as Johnstown 1, Co. Meath and Lowpark, Co. Mayo. The metalworking being carried out at Clonfad and Lowpark was largely smithing, while Johnstown was largely smelting with some smithing. At Readsland both smithing and smelting are represented. It is hoped that the post-excavation analysis of the metallurgical waste assemblage from the site will give us a more complete picture of the metalworking carried out here.

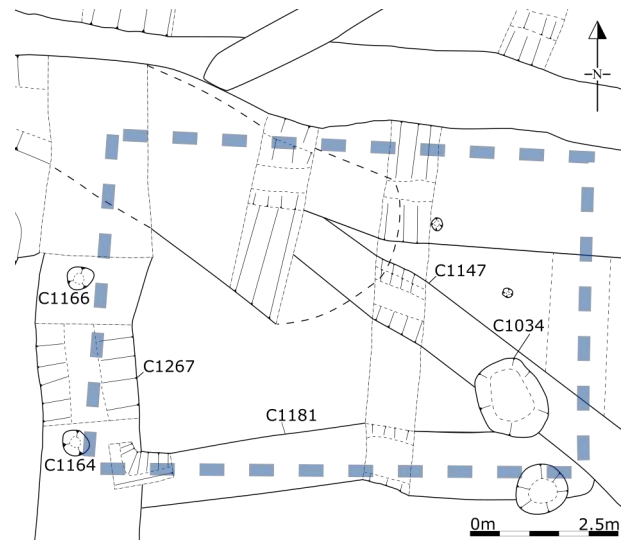
Two tonnes of slag were retrieved from the site at Johnstown 1, with seven metalworking areas identified, four of which post-dated the latest enclosure of the site (Clarke and Carlin 2008, 75). The relatively small number of identified furnaces at Johnstown combined with the large quantity of slag led to the suggestion that the furnaces were reused, while the longevity of the site may go some way towards explaining the volume of metalworking waste (Clarke and Carlin 2008, 75). At Readsland the main metalworking area within the northern annex appears to have been a sustained event. The small metalworking area at the southern end of the site is likely to be later. A third metalworking

area may have been present within the eastern annex, located within the preserved portion of the site. These two areas are likely to have been small-scale metalworking sites, similar to those uncovered on many early medieval settlements, usually seen as non-specialist subsistence (Carlin 2008, 108). Additional metalworking was carried out within Structure A in Phase 1 further south, relating to later the medieval period, and again was small in scale. Over a tonne of metallurgical waste was retrieved during the excavation and was retained for post-excavation analysis. The scale of the metalworking activity in the northern annex would suggest a large surplus was being produced and would have been an important part of the economy of the settlement. Control of this production and securing of the supply of raw materials would have been an essential task, and is highly likely to have been directed from the ecclesiastic settlement at Domhnach Sechnaill or by Lagore itself.

Smithy

The remains of a rectangular structure orientated east-west was also uncovered in the vicinity of the metalworking area within the annex. It was the only building identified within the annex and appeared to be contemporary with the metalworking activity. Scant remains of the structure survived, consisting of a rectangular gully measuring c. 6.9m x 3.1m with two postholes to the west suggesting an entrance along that side. The area enclosed by the gully measured 21.39m², which would be reduced further if the gully represents the remains of a drip gully. This is comparable in size to the Type 2 houses from Hiberno-Norse Dublin (Wallace 1992a, 14-5), however these usually had their entrances in the side walls.

A pit was located within the structure along with two small postholes and a large anvil stone was uncovered *ex situ* in its immediate vicinity. It is possible this represents a structure associated with the metalworking being carried out on the site, possibly a forge or smithy. Part of one of the channels associated with the metalworking truncated the western side of the structure at some point, suggesting the structure was not in use throughout the metalworking phase within the annex.



Plan of gully defining rectangular possible smithy structure to east of metalworking area

Structures associated with metalworking have been identified at other early medieval settlement sites, such as Killickaweeny, Co. Kildare, where a sub-rectangular structure with rounded corners was uncovered, defined by a gully that may have held a wattle wall was uncovered, which dated to AD 670-940 (Walsh 2011, 314-6). The structure was large, measuring 9m x 7m, enclosing a space of 63m² and was orientated northeast-southwest, which was associated with metalworking, with its form influenced by Hiberno-Norse architecture (*ibid.*, 317). A circular structure c. 4m in diameter identified at Roestown 2 to the north of the site was suggested to be a workshop for non-ferrous metalworking (O'Hara 2009, 66). As with the sunken work areas identified at Lowpark (see above) a darkened space was required for smithing and may have been provided at Readsland by the smithy. The late probable smithing hearths cutting into the earlier metalworking features on the site indicate smithing moved closer to the primary metalworking site at a later point, which corresponds with the evidence for the structure being truncated by some of the metalworking activity after it had gone out of use.



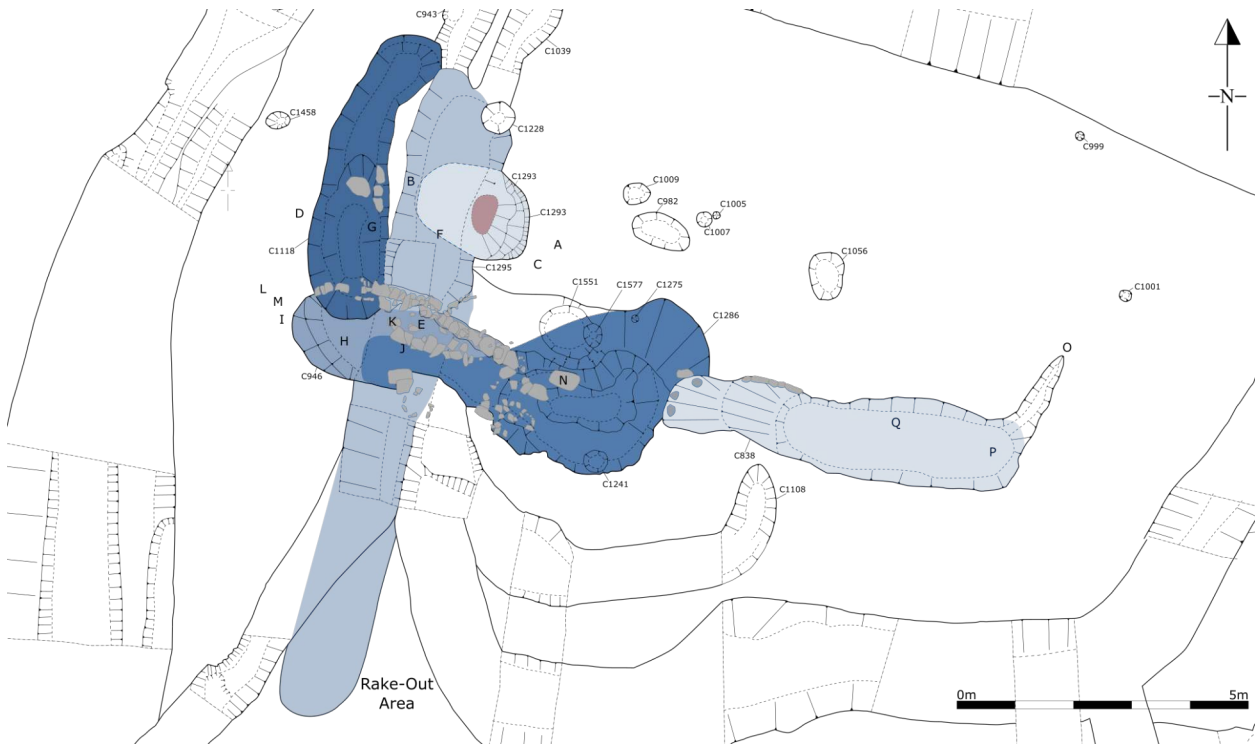
Plan showing kiln locations

Cereal processing

A significant number of cereal-drying kilns were uncovered during the excavation. Twenty-five kilns were excavated during the excavations at Readland in 2018/9 with an additional kiln identified within the outer enclosure during the testing in 2009 (Hession & Moriarty 2009). Fourteen of the kilns had associated windbreaks. A building within the southern rectilinear annex was located in close proximity to a kiln and may represent a barn. While kilns are frequently identified on early medieval settlement sites it is clear that the residents of Readland were particularly concerned with cereal processing, investing in additional construction and increasing the size and potential output over time.

The stratigraphy of the site indicates that not all of these kilns were in use at any one time. It is possible the isolated kilns to the northeast were early (Kilns 5 and 6), given their smaller size and remove for the main settlement. A small processing enclosure and two associated kilns (Kilns 3 and 4) were also located to the northeast of the settlement at a similar distance. The earlier of the two was of a similar size to the other isolated kilns to the east and may also be early, however the later kiln was large and more complex, perhaps coming later in the site sequence. An additional kiln (Kiln 7) to the west of the processing enclosure was clearly overlaid by Path 3 so predates the intense kiln activity in the northwest of the annex.

To the south two kilns can possibly be dated to



Plan showing the intensification of kiln activity in northern annex (top)

Table of kiln details (bottom)

Kiln No.	C#	Shape	Total Length	Max Depth	FC Length	FC Width	DC Length	DC Width	Flue Length	Flue Width	Lining/baffle stones	Associated Structure?
Kiln 1	C3010	Figure-of-8	1.90m	0.23m	1.02m	1.035m	0.84m	0.42m	n/a	n/a	n/a	n/a
Kiln 2	C2276	Figure-of-8	1.98m	0.43m	0.92m	1m	1.06m	1.07m	1.17m	0.22m	n/a	n/a
Kiln 2	C2402	recut	3.38m	0.45m	1.78m	1m	1.63m	1.37m	2.55m	0.67m	Stone lining C2379 & possible baffle stones	n/a
Kiln 3	C1503/ C1506	Figure-of-8	2.75m	0.31m	0.41m	1.02m	1.23m	1.09m	n/a	n/a	n/a	Windbreaks C1509, C993?
Kiln 4	C1517/ C1555	Figure-of-8	5.56m	0.77m	2.83m	1.18m	2.73m	1.58m	n/a	n/a	Stone lining C1548, clay lining C1530	Windbreaks C1509, C993?
Kiln 5	C950	Keyhole	1.42m	0.40m	1.42m	0.87m	n/a	n/a	n/a	n/a	n/a	n/a
Kiln 6	C957	Keyhole	2m	0.24m	0.89m	0.80m	n/a	n/a	1.10m	0.88m	n/a	n/a
Kiln 7	C1211	Figure-of-8	5.74m	0.36m	0.5m	0.5m	3.26m	1.3m	n/a	n/a	n/a	n/a
Kiln 8	C901	Pear	3.14m	0.43m	1.44m	1.40m	n/a	n/a	1.7m	0.58m	n/a	Windbreak C825
Kiln 9	C1031	Keyhole?	2.32m	0.42m	0.998m	1.17m	n/a	n/a	1.33m	1.18m	n/a	n/a
Kiln 10	C2151	Figure-of-8	2.10m	0.15m	0.95m	0.87m	1.16m	0.82m	n/a	n/a	n/a	Windbreak C1185
Kiln 11	C2131	Figure-of-8	2.00m	0.36m	1.00m	1.44m	0.92m	0.77m	n/a	n/a	baffle stone removed	Windbreak C2121
Kiln 12	C1309	Figure-of-8	2.72m	0.80m	1.62m	1.34m	0.51m	1.05m	n/a	n/a	baffle stone removed	Windbreaks C1307 & posthole windbreak C1172, C984, C997, C1242, C1244
Kiln 13	C1341	Keyhole	5.01m	0.94m	2.87m	1.31m	n/a	n/a	2.14m	1.03m	n/a	n/a
Kiln 14	C1258	Keyhole	1.55m	0.20m	0.31m (truncated)	1.12m	n/a	n/a	1.43m	0.77m	n/a	Windbreak C1369
Kiln 15	C1421	Figure-of-8	5.91m	0.60m	0.87m	1.16m	4.12m	1.7m	0.72m	0.33m	metalled surface C1453	n/a
Kiln 16	C1293	Keyhole?	2.19m	0.42m	1.02m (truncated)	1.59m	n/a	n/a	0.78m	0.46m	Clay lining C1433	n/a
Kiln 17	C1295	Keyhole	11.58m	0.7m	4.01m	1.73m	n/a	n/a	7.57m	1.25m	Stone lining C1374	n/a
Kiln 18	C1118	Keyhole	5.1m	0.84m	2.89m	1.39m	n/a	n/a	2.21m	1.19m	Stone lining & baffle stone C1139	n/a
Kiln 19	C946	Barbell?	7.6m	0.58m	2.35m	1.51m	3.65m	2.36m	1.6m	0.93m	Stone lining & baffle stones C1420 & C1423	Superstructure postholes C1577, C1241; windbreak C1486
Kiln 20	C1286	Comma Evolved	5.95m	0.59m	3.38m	3.54m	n/a	n/a	2.57m	0.88m	Lining and baffle stones C1279 & reuse of	Windbreak C1486
Kiln 21	C838	figure-of-8	6.32m	1m	1.96m	1.01m	4.27m	1.52m	0.98m	1.16m	Stone lining C1373	n/a
Kiln 22	C806	Keyhole	6.70m	0.55m	3.33m	1.85m	n/a	n/a	3.37m	0.89m	n/a	Windbreaks C804, C812
Kiln 23	C354	Figure-of-8	2.86m	0.52m	1.03m	1.59m	1.88m	1.28m	n/a	n/a	n/a	C699
Kiln 24	C516/ C682	Evolved figure-of-8	6.36m	0.45m	0.94m	0.51m	4.6m	1.26m	n/a	n/a	n/a	Posthole windbreak C602, C608, C635, C662, C664 and C666
Kiln 25	C296	Figure-of-8	5.28m	0.10m (truncated)	2.26m	1.57m	1.75m	1.54m	0.78m	0.38m	n/a	n/a

early in the life of the settlement. One (Kiln 25) was largely ploughed out, but kiln waste associated with it was identified within the ditch predating the southern annexes. The second kiln (Kiln 23) was truncated by the southern curvilinear annex ditch. A dished area beside this kiln, which had a metallised base may be the remains of a threshing pit, with similar examples identified at Seamount, Malahide and Alexander Reid, Co. Meath (McGlade 2017).



Three probably contemporary kilns (Kilns 8-10) were located to the east of the northern annex. Kiln waste deposit within the earliest of the annex ditches adjacent to the kilns suggest these were early kilns, predating the earliest surviving phase of sub-division within the annex. Within the annex itself four kilns (Kiln 11, 12, 15 and 16) may be early. They each appear to be located in a separate quadrant of the annex, suggesting the annex may at one point have been divided into four plots, each with its own kiln.



Two kilns (Kiln 13 and 14) within the annex post-dated some of the internal sub-divisions. One of these was truncated by a later annex sub-division ditch while the other was truncated by a later recutting of the annex ditch itself indicating these did not relate to the latest phase of kiln activity within the annex. However their location within the northeastern quadrant may indicate a period of increased cereal processing in that location.



Mid-ex view of kiln C901, one of the smaller and possibly earlier kilns to east of northern annex (top)

A kiln located within the early entrance to the annex to the northwest (Kiln 22) may also be an early kiln, which had a similar relationship to the annex as the three kilns to the east once the annex ditch was moved.

An intensification of cereal processing took place towards the end of the use of the settlement, which coincided with the abandonment of the northern annex as an enclosure. The

Mid-ex view of kiln C1517, which truncated a smaller earlier kiln (Kiln 3). The later kiln was larger and more evolved with both clay and stone linings present (centre). Detail of stone lining arcing around the end of the drying chamber. Originally a gap would have been present in the lining to allow hot air to flow (bottom)



abandonment of the annex appears to have started during the earlier metalworking phase, with the ditches filling in during the lifespan of the metalworking area. The kiln area located in the northwest corner of the former annex saw five successive kilns created (Kilns 17, 18, 19, 20 and 21), which became larger over time. A substantial waste pit relating to the kilns was dug into the backfilled annex ditch to the north at this time also.



Two kilns (Kilns 1 and 2) were located within the eastern annex, which also had evidence for small-scale metalworking. This is likely to have taken place prior to the large iron production in the northern annex. The eastern annex bounded the pathway associated with the structures to the east so these kilns may be of a similar date.

A final kiln to the south (Kiln 24) truncated one of the curvilinear annex ditches and may have been associated with the circular structure nearby.



Mid-ex view of recut kiln C2402 with its stone lining, within the eastern annex, looking north. The original kiln here, C2276, was also smaller (top)

Mid-ex view of kilns C946 and C1286, looking east. These large kilns within the northwest quadrant of the northern annex are representative of the increasing cereal processing being undertaken (centre)

Post-ex view of kiln C838, the latest and largest of the kilns within the northern annex, with kilns C946 and C1286 in the background (bottom)



Charred seeds from one of the kilns within the northern annex

Early medieval kilns show a gradual progression in shape from small earth-cut keyhole and oval kilns, followed by figure-of-eight-shaped structures, until these were gradually replaced by larger keyhole- and L-/comma-shaped stone-built kilns (Kerr et al., 2010, 97). The kilns at Readsland varied in size and shape. The kilns to the east and the earlier kilns to the south were generally smaller, while the latest kilns to the north and the kiln associated with the structure to the south were significantly larger. Kilns usually range in size from 1.2m to 8.5m with the majority ranging from 1.2-4m in length (Monk & Kellaheer 2005, 81). Twelve of the Readsland kilns were over 4m in length with all of the later kilns being larger and more complex than the earlier examples.

The kilns to the north suggest a significant increase in the output of processed grain from the site. This was the final activity within the northern annex, and possibly the settlement itself. It also marks a shift from iron production to food production at the settlement. It is likely to have been associated with milling, which may have been taking place nearby, possibly to the north along Path 3. A further assessment of what this meant for the settlement will be made after post-excavation analysis and dating has been completed.

The extensive remains uncovered at Raystown, Co. Meath included five cereal drying kilns and up to eight watermills, but no metalworking (Seaver 2016, 168). The scale of the cereal processing at Raystown was well beyond the

mere subsistence requirements of an extended family and its dependants, and is suggested to have served as a processing centre, providing services to other farmsteads within a larger secular or ecclesiastic estate (ibid.). At Johnstown 1, Co. Meath six cereal-drying kilns were identified as well as a very extensive iron production site active throughout the use of the burial ground (Clarke and Carlin 2008, 73). Corbally, Co. Kildare produced 27 kilns in the vicinity of a cemetery settlement site (Tobin 2003, 36; Coyne 2010, 84). At Rosepark, Co. Dublin eleven kilns were identified with at least five more from neighbouring Glebe South and Darcystown (Carroll 2008, 103-4). The majority of the kilns were early, with ten dating to the 3rd-5th century, two to the 5th-7th century and possibly four to the 11th-13th century (ibid.). At many early medieval sites the number of kilns present would imply more subsistence production. As with Raystown, the final stages of the settlement at Readsland display an increase in cereal output at a greater level than required by the residents of the settlement. Watermills are absent at Readsland, and must have been situated nearby. Later watermills are known in the vicinity, with 17th century mills recorded to the southeast and west and 19th century mills to the southwest and northwest, any of which may have been located on the site of earlier mills.

Grain store or barn

A structure identified within the southern rectilinear annex was associated with a post-built windbreak and a large kiln. The early



Aerial view of Structure 21, possible grain barn, in centre with kiln to left (top)



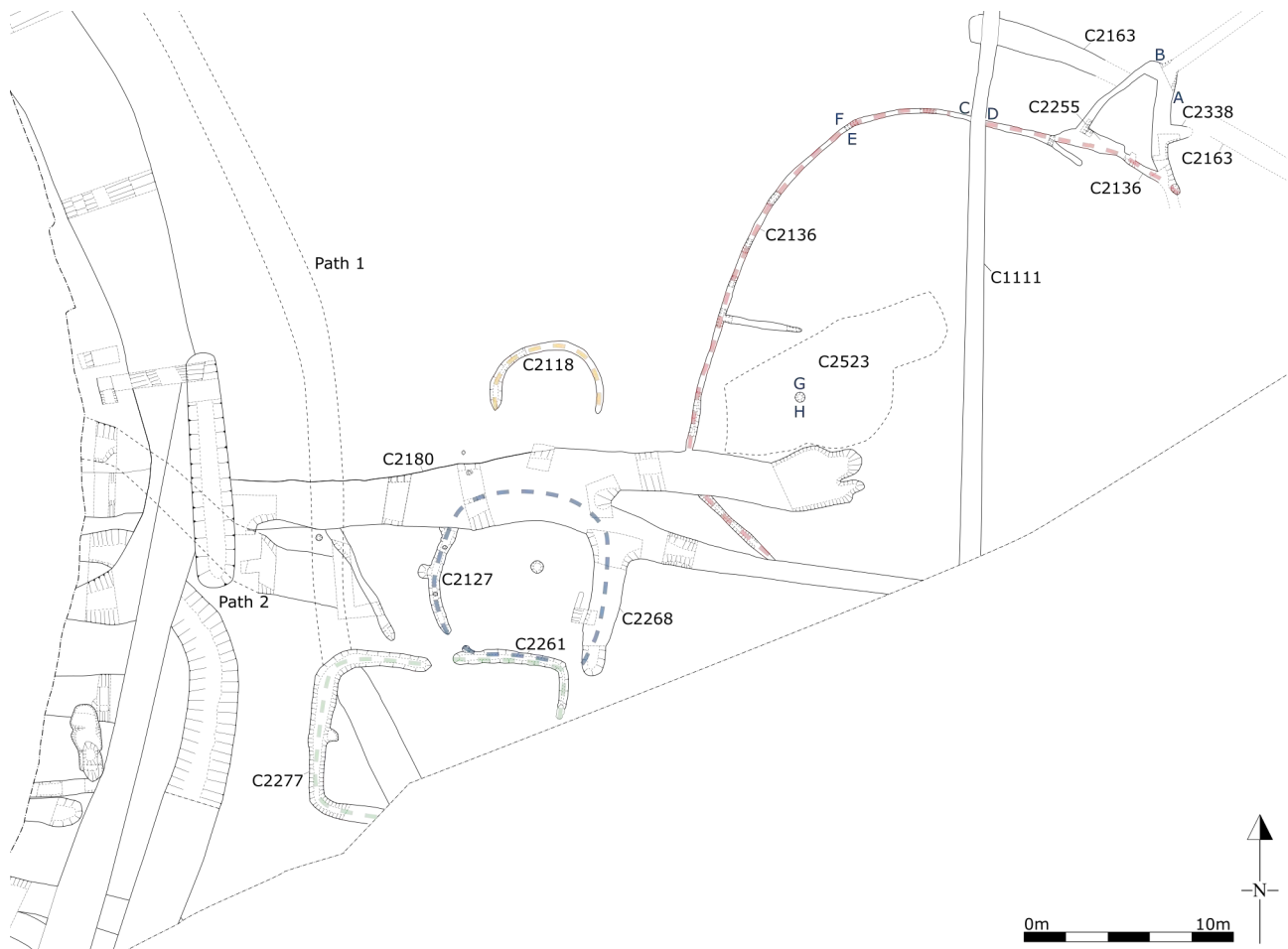
Post-ex view of Structure 21, possible grain barn, looking south (bottom)

medieval law texts indicate that a barn to store grain after it had been threshed, dried and winnowed was owned by wealthy farmers, such as the bóaire, and was found near his house (Kerr et al 2010, 89). While the sources suggest these were located near the house of the farmer, Kelly (1997, cited in Kerr et al. 2010) suggests it was most likely located outside the enclosure in an area known as the airlise which translates to the area in front of the les or fort. While other examples of buildings that have been interpreted as granaries and were post-built structures with raised floors, the structure at Readsland was more oval in plan, though the western and northern sides of the structure were problematic. It is likely the remains relate to the deeper surviving elements of the structure, which may have been a double walled roundhouse. It is possible a non-invasive method of raising the floor level of the structure was used. A circular structure was identified within an annex at Alexander Reid,

Co. Meath, which was closely associated with a nearby kiln (McGlade 2017) and may also have been a granary or barn. At Ballymacash, Co. Antrim outbuildings were identified that appear to have been used to process and store grain (Jope & Ivens 1998, cited in Kerr et al. 2010, 22).

Structures to the east

Frequently there are little physical remains of buildings on early medieval settlement sites, despite clear evidence indicating people carried out all of their daily activities there (Seaver 2016, 165). This includes Raystown, Castlefarm, Baronstown, Dowdstown, Roestown 2, all in County Meath, where only two buildings have been identified (ibid.). This phenomenon is echoed in the analysis carried out by the Early Medieval Archaeology Project (EMAP) which revealed that of the 31 early medieval



Plan of Structures 2, 3 and 4 with paddock (Structure 5) to the east

settlements excavated in Meath, evidence for buildings only survived at nine sites (Kerr et al. 2010).

It is intriguing, therefore, that five buildings are represented at Readsland (building here refers to a roofed structure, as opposed to a fence or palisade). These include a figure-of-eight shaped building to the east, two rectangular structures (to the east and north) and two sub-circular buildings to the south. The presence of buildings outside a main enclosure is rare, but documented (e.g. McSparron 2007, cited in Kerr et al. 2010, 26; McGlade 2017). The easternmost Readsland structures lie in unenclosed ground, while the others are in outer annexes of the settlement. Agricultural truncation is frequently held responsible for the poor survival of buildings on early medieval sites, however at Readsland numerous buildings

survived despite extensive truncation by agricultural activity.

Two buildings were identified to the east of the outer enclosure associated with a path (Path 2). The similarity in the widths of their entrances, which also faced one another, suggests they are broadly contemporaneous, however the circular building may be earlier. Just east of these two buildings was a metalled yard surrounded by a fence-line (Structure 5). This appears to represent an enclosed yard or paddock, and its location close to the eastern entrance into the main enclosure may indicate it was a paddock for horses or animals of those visiting the settlement.

The figure-of-eight shaped building (Structures 2 & 3) was formed by two conjoined circular slot trenches with an entrance and large central

posthole in the larger chamber. The larger of the two chambers (Structure 3), at 7.25m in diameter, fits within the range of roundhouses of the early medieval period, which usually range from 6-8m in diameter (Lynn 1994, 91). The smaller chamber to the north (Structure 2) has the correct proportions to be a 'backhouse'. Examples of these are known from Newtown, Co. Limerick (Coyne 2011, 109), Deer Park Farms, Co. Antrim (Lynn and McDonnell 2011) and Lisleagh 1, Co. Cork (Monk 1995, 107).

The substantial multi-phase rectangular building (Structure 4) was defined by a gully, and had no internal posts. A shallow pit associated with the earlier phase of the building, located mid-way along the western gable side, may represent a post pad for a structural element to the building. The size of the rectangular building measured 10.7m in length and 6.75m in width, giving an internal area of c. 72m². This is comparable with some of the largest Type 1 houses from Viking Dublin, for example FS 35 (Wallace 1992b, 120), FS 97 (ibid., 171) and FS 108A (ibid., 181). The lack of internal postholes may suggest a truss option was used with the roof support tied into the slot trench (Wallace 1992b, 82). Rectangular buildings in early medieval Ireland were generally approximately the same size as roundhouses at 6-7m in length (Lynn 1994, 92). The average lengths of the Type 1 houses from Viking Dublin was 7.52m, with an average floor area of 39.77m², though the three largest had floor areas between 67m² and 69m² (Wallace 1992a, 10). It should be noted, however, that Type 1 houses tended to have entrances in either end and were sub-divided into three longitudinal strips, with bedding and seating areas on either side of a central 'nave' (ibid.). There was no evidence for internal division within the building at Readsland, and the doorway was located along the side wall. This is comparable to the arrangement of Type 2 houses



Post-ex view of Structures 2, 3 and 4, looking south (top)

Post-ex view of paddock Structure 5, looking east (centre)

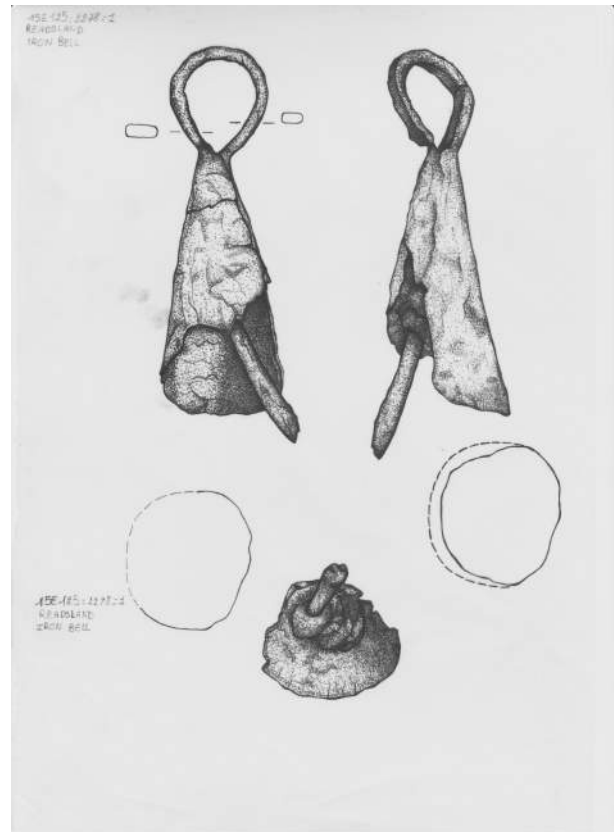
Post-ex view of Structure 4, looking south (bottom)

from Dublin, which are considerably smaller.

The size of the rectangular building at Readsland is greater than that of other excavated examples of wooden churches in Ireland (O'Sullivan et al. 2008, 130). As highlighted by Giacometti (2018), early medieval wooden churches generally did not have rounded corners. A rectangular structure with rounded corners measuring 8.73m by 6.13m and an internal floor space of 51m² was uncovered in Carrickmines Little, Co. Dublin (Giacometti 2018, 9). It was orientated east-west and was earlier than Irish Viking-influenced buildings, as it was dated to the 7th-9th century (ibid.). Numerous postholes were identified within the interior indicating structural supports and internal divisions. The structure did not appear to be domestic due to a lack of domestic artefacts and waste. The presence of rounded corners and the location of the doorway suggested the building was not a church, and, given its location next to a spring, and based on historical research, the excavator suggested it could be a baptistery (ibid., 24).

It is generally thought that a change in the use of roundhouses to rectangular houses occurred in Ireland after about AD 800 (Kerr et al., 2010, 21). The presence of the iron hand-bell of Scandinavian type, likely to date to the 9th or 10th century (Cormac Bourke, pers. comm. 2018), within the slot trench of the rectangular structure suggests it dates from the time that rectangular houses were in use, and emphasises a connection with Viking Dublin. Rectangular structures of early medieval date have been excavated elsewhere in Ireland, such as at Reask, Co. Kerry, where three examples are present, the largest of which measured 15.9m by 4.27m internally (O'Sullivan et al. 2008, 141). At Church Island, Co. Kerry a rectangular structure at the edge of the island was suggested to be a guest-house (O'Kelly 1959, 126).

Three rectangular buildings dating to the 11th-12th century were uncovered at Cherrywood, Co. Dublin, all large in size. The largest measured 17.5m by c. 6.3m giving an internal floor space of c. 109.81m². The next structure measured 8.15 by 5.4m giving an internal floor space of 41.89m² while the third measured 9.4m by 5.3m, with an internal floor space of



Preliminary illustration of iron bell from rectangular structure

49.82m² (Ó Néill 2006, 72-9). The structures were identified by post settings, with the entrances for the two smaller examples in the gables and the entrance in the larger example was not in the gable walls. The scale of the larger building led to the suggestion that it was the remains of a longhouse, while the other two structures are likely to be Dublin-Type houses, though not identical. The settlement, which was located on an earlier circular cemetery enclosure, was interpreted as a rural Viking or Hiberno-Norse settlement (ibid., 86).

Other examples of rectangular structures with similarities to Dublin Type 1 houses have been identified in the vicinity of other seats of early medieval power, such as at Knowth, Co. Meath (Eogan 1977), a direct competitor of Lagore for the kingship of South Brega, and at Togherstown (McAlister and Praeger 1929-31) in the vicinity of Uisneach, which was a royal centre of the Southern Uí Néill (Schot 2011,

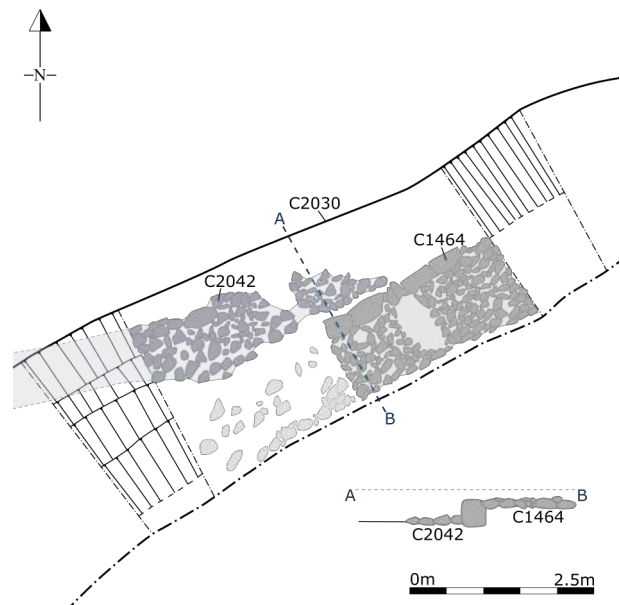
87). The use of Hiberno-Norse building styles shows how influential the connection with the Viking world became as the early medieval period progressed. Besides from the early raids, the Hiberno-Norse communities in Dublin and beyond in the Viking world formed alliances and married into many of the powerful families of the east, including in Brega. The rulers of North Brega and South Brega were allied to and fighting against the Vikings at various times. The last king of Lagore, Beollán (Bjólán) mac Ciarmaic, died in AD 969 and was a Norse-Gaelic king who married Cadlinar (Kaðlín) Hrólfsdóttir, daughter of Rollo, the first ruler of Normandy (Hudson 2005, 64). This shows the powerful and widespread connections the ruler of Lagore had at this time, but also indicates the level of control the Vikings had gained over Lagore by this time. As such, the presence of Viking-influenced architecture and artefacts at the site is unsurprising.

The presence of these two buildings outside of the enclosed space of the settlement is rare in an Irish context, and very interesting. They are clearly connected to the main settlement, with Path 2 leading from the structures in through the entrance in the outer annex ditch into the main settlement, yet they are positioned beyond the outer settlement enclosure. The two buildings, one in the traditional Irish-style and one perhaps Scandinavian-influenced, located at the entrance to the settlement with a metalled and fenced yard beyond, hint at something that was part of the settlement, but separate. Could these two buildings have mediated the boundary between the settlement and the wider

community, perhaps as a hostel or guest-house for those visiting the settlement? Was the rectangular structure a religious building associated with the burial ground, and if so, why would it be outside of the settlement enclosure? Were there other activities that needed to be carried out at a remove from the main settlement? Or certain people that were not allowed to enter? Were the structures related to Óenach gatherings?

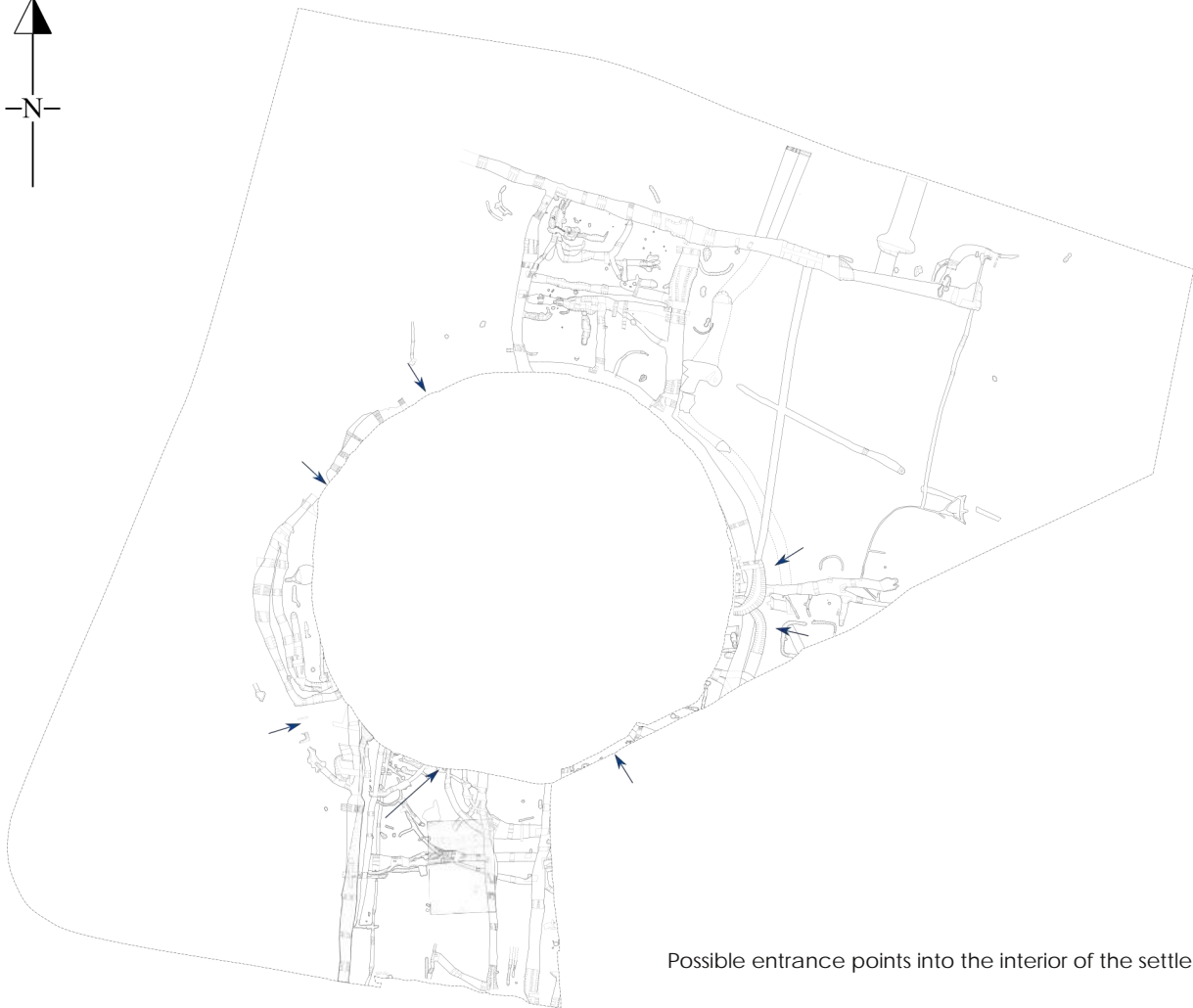
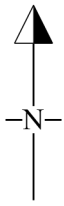
Connectivity & communication

The site at Readsland was well served by pathways connecting it to the wider community and within the settlement itself. A number of entrances and access points were also identified or implied. Some of the entrances were



Plan of entrance structure crossing outer enclosure ditch to northwest (top)

View of entrance structure crossing outer enclosure ditch to northwest, looking southeast (bottom)



Possible entrance points into the interior of the settlement



represented by undug sections of boundaries and gaps, such as in the northern annex where an entrance originally appears to have been present to the northwest and another related to later sub-division ditches within the annex itself. Elsewhere entrances were inferred by paths or crossing points. Crossing points were identified associated with both the northern and southern rectilinear annexes. Two entrances were identified in relation to the outer enclosure, one to the northwest and one to the east. The example to the northwest was of masonry construction with a step leading to a rough stone platform running in towards the preserved portion of the site. The entrance was constructed on a backfilled earlier phase of the ditch so was not an original feature. A number of later recutting events respected the entrance while a later pathway also ran up to it indicating it remained in use for an extended period of time. The presence of the step would suggest it

was intended for pedestrian traffic. To the east a pathway ran in towards the interior of the settlement from the cluster of buildings to the east. This represents another access point, likely to have run between the eastern annex ditch and an earlier phase of the outer enclosure ditch, and may well have accessed the central enclosure. As it was defined by the large annex ditches it may have been one of the major access points to the settlement.

Further access points were inferred by returns of various annexes. The southern end of the ditches defining the western annex all appear to respect an access point running into the central enclosure. The geophysical survey also shows a possible entrance along the central enclosure at this point (Harrison 2009). The gap between the eastern end of the southern rectilinear annex and the eastern annex may also have been an access point. To the east the latest phase of the

outer enclosure ditch cuts across the former entrance and it is possible the entrance shifted to the south of its new return. A kiln located within the eastern annex lay within the space where this repositioned entrance is suggested, which had been sealed with flat stones to avoid it becoming an obstacle.

Other access points may have been present at the northern end of the western annex and through the gaps left in the southwest and southern curvilinear annexes. A number of postholes along both sides of the eastern annex ditch to the south may relate to a bridge-type crossing, however as these were identified close to the limit of excavation the full extent was not revealed. Whether these related to the annexes themselves or also continued to access the interior of the settlement is unclear.

The presence of numerous entrances at the site is interesting and suggests that those dwelling at the site were more interested in connectivity than defence. This suggests a level of confidence in their security from attack. No gate features were identified, though these may be present further into the settlement within the preserved portion of the site. The palisade structure and pathway to the east of the settlement within the eastern annex may have been a defensive feature near the eastern entrance, however too little of this structure survived to indicate its full form.

Numerous examples of complex entrances have been uncovered on Irish early medieval sites, while other sites had more basic entrances (see Kerr et al. 2010, 61). A rough stone surface with an associated pivot stone indicating the presence of a gate was identified at Alexander Reid, Co. Meath at the entrance to the enclosure (McGlade 2017). At Roestown 2 to the north of the site the original entrance must have been a bridged crossing point, which was later replaced by a 2m wide causeway consolidated by a layer of tightly packed stone secured within a revetment of large, angular limestone boulders (O'Hara 2009, 66). This is very reminiscent of the northwest entrance at Readsland, though a short bridge would also have been required here, possibly an added security measure, though equally, perhaps a necessary drainage solution.

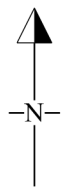
Pathways

A number of paths were identified at Readsland. The longest path (Path 1) was metalled, and ran along the eastern side of the outer enclosure and northern annex, continuing beyond the limit of excavation to the north and the southeast. Given the orientation of the path it is possible it connected the Readsland settlement with a site uncovered at Roestown 2 to the north and to the ecclesiastic settlement of Domhnach Sechnaill, and Lagore Crannog to the east. This path appears to have been in use for some time and predated the structures to the east of the settlement.

A widened yard was identified along the path to the east of the northern annex measuring c. 16m by 9m. A metalled crossing point (Path 10) over the largely infilled annex ditch connected the yard to the annex and may be related to the metalworking activity. It may have provided access for the provision of raw materials and for the distribution of finished objects. It is likely that bog ore was the main raw material used in the production of the iron on site, which may have come from Red Bog to the north. This suggests the path remained in use into the period when metalworking was taking place within the northern annex, and also suggests the structures to the east post-date the metalworking and the pathway.

A second metalled path (Path 2) was identified running from the cluster of structures to the east of the settlement to an entrance leading into the interior of the outer annex. Based on the geophysical survey, this pathway was running directly towards the burial ground in the northeastern end of the central enclosure. It is unknown whether the structures and the burial ground are contemporary, however the rectangular structure and pathway post-date Path 1, or at least its southern progression.

A third metalled path (Path 3) was identified to the north and post-dated the northern annex ditches. It appears to relate to the intensification of cereal production in the northwest of the former annex, presumably relating to its distribution network. Interestingly no expression of this path was identified leading south or east indicating a change in how the site was connected to other places in the vicinity.



The position of the northern route of the path also changed, moving further to the east. This may be to avoid something beyond the site to the north that now created an obstacle, or because the destination for the processed seeds was different.

To the west two sections of path (Paths 5 & 6) were identified. The northern section of path (Path 5) ran up to the entrance crossing the outer enclosure ditch and post-dated a number of phases of the ditch. The southern section of path (Path 6) was truncated by the southwest annex ditch and the latest phase of the western annex ditch. This path may originally have curved around the western side of the settlement, perhaps on the outside of the earlier phases of the western annex.

A short section of path (Path 4) was identified running alongside a palisade fence and was

truncated by the southern curvilinear annex ditches indicating it was early in the development of the settlement. The remainder of the paths (Path 7-11) identified on the site were inferred by crossing points over ditches. Most of these crossing points were defined by metalling or cobbling, and in one instance by a masonry pier (Path 9) suggesting a wooden crossing. One of these (Path 11) may post-date the settlement.

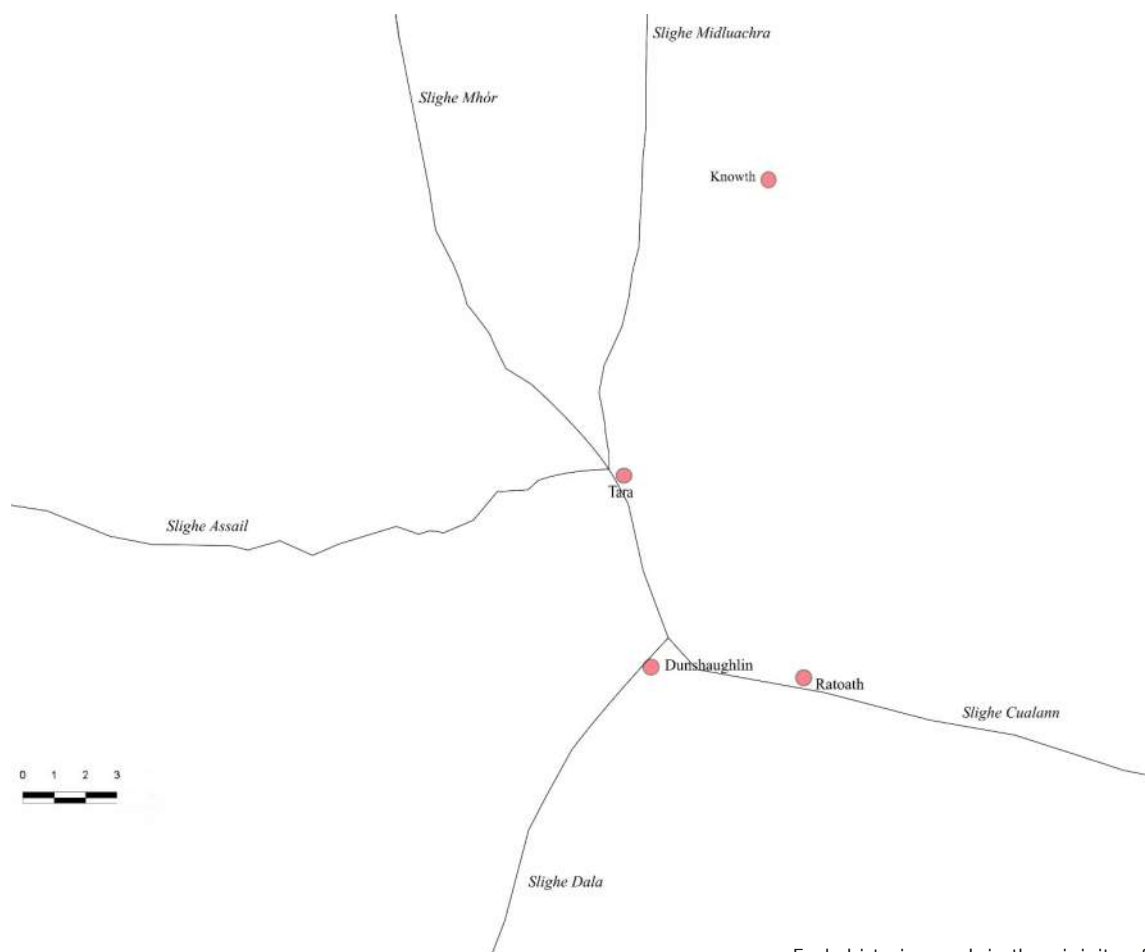
Pathways are not commonly found at cemetery settlements. Where areas of cobbling or metalling are identified these are usually interpreted as work surfaces or yards (Kerr et al., 2010, 63). Seaver (2016, 22) records the presence of metalled yards during the excavations at Raystown and draws a parallel to a similar sunken metalled yard at Harlockstown, Co. Meath, which he interpreted as hardstanding for livestock. There was no

evidence for any of the metallated paths or yards at Readsland being sunken. It is likely that the metallated yard bounded by the fence-line (Structure 5) east of the settlement was used for animal containment, though whether for livestock or horses is unclear. The apparent association of this enclosure with the structures and the entrance to the central enclosure beyond may point to the latter.

Paths and tracks dating to the early medieval period have been uncovered at other early medieval settlements during this period, such as at Ballynagallagh, Co. Limerick, where two phases of trackway were uncovered (Cleary 2006, 33). Paths have also been identified at the early medieval ecclesiastic sites, such as Clonfad and Portmahomack (Stevens 2010, 91). Heavily truncated pathways were also identified at Roestown 2 (O'Hara 2009, 64), though were not identified running beyond the limit of the site.

Wider connections?

Stout (1997, 129) has emphasised the importance of routeways adjacent to ringforts and has suggested that proximity to such routeways increased land value. At Readsland at least two of the paths continued beyond the limits of the settlement and are likely to represent routeways within the wider community. Two of the ancient routeways of Ireland, the Slighe Dala and the Slighe Cualann, are reputed to have passed in the vicinity of Dunshaughlin. Seaver notes (2016, 7) that an east-west route running along the Broad Meadow River from Swords through Greenoge and Dunshaughlin and on to Trim was followed by Prince John as Lord of Ireland in 1185, with this route possibly representing part of one of the earlier slighe, presumably the Slighe Cualann. The proximity of this major routeway to the settlement at Readsland would have greatly improved its ability to trade and access goods from further away.



Early historic roads in the vicinity of the site

Mid-ex aerial view of cistern, looking southeast (top)

Mid-ex view of cistern, looking east (bottom)



Water collection

A large rock-cut pit in the western annex has been interpreted as a cistern. Some attempt to line the lower portion of the pit with clay suggests it was intended to hold water. The cistern was recut with a funnel-like shape at a later point before being backfilled. A short partially stone-lined channel ran into the cistern from one side, possible for the collection of water. This would suggest that the water collected within the cistern was not fresh and would not be ideal for human consumption, though there may have been no recognition of such a sanitary concern by the early medieval residents. Water within the cistern may have been collected for use in industrial activities carried out at the site, for human consumption, or for animals.

Wells or cisterns are not frequently identified on early medieval settlements but are more common on ecclesiastic settlements and

cemetery settlements, where they appear to have been used for industrial rather than domestic functions (Kerr et al. 2010, 65). At Killickaweeny, Co. Kildare a well was identified close to a metalworking area (Walsh 2008, 39). A funnel-shaped pit was also identified, which may have provided a source of water (ibid.). Wells have been uncovered at a number of cemetery settlements, such as Faughart Lower, Co. Louth, Castlefarm, Co. Meath and Ninch, Co. Meath (Kerr et al. 2010, 67). Wells at these settlements were utilised for domestic drinking water and/or industrial or craft purposes. The latter was most likely at Castlefarm where eight large unlined wells were discovered, which may have related to textile production on site (O'Connell 2009, 51). Wells were probably required at larger cemetery settlement and ecclesiastic sites to supply drinking water to larger numbers of people (Kerr et al. 2010, 67). The cistern at Readsland is not in close proximity to the metalworking activity in the northern annex. It may have served as a general



Annotated aerial image showing the location of the skull fragment retrieved in relation to the burial area within the central enclosure

water supply for the settlement, with its isolation in the western annex perhaps intended to avoid contamination from other activities.

Treatment of the dead

Lack of burials

Perhaps one of the more interesting findings of the excavation related to what was not found. Only a handful of fragments of human bone were recovered during the excavation. As known from the testing programme, human burials are present within a separate burial enclosure within the central enclosure of the settlement. These burials clearly did not extend beyond the central enclosure. A human skull fragment was retrieved from the base of one of the outer enclosure ditches to the southwest. This may suggest that human burial was taking place prior to the creation of this phase of the outer enclosure ditch. It does not, however, suggest that burial had been going on long enough for some of the bone from burials to become displaced, as the skull fragment was found in isolation and very so few human bones were retrieved elsewhere to suggest the burial ground was disturbed. The confinement of the burials to the interior of the site implies that a specific location was used for burial within the

settlement, and the burial took place while the settlement was still in use (or at least while its form was still visible) and not after its abandonment. This is unlikely to be a later burial ground, however it is unclear without radiocarbon dating or further investigations whether the burial ground was established at the beginning of the settlement, or before.

Deposition of human skull

The deposition of the fragment of human skull in the base of the southwestern annex ditch may have been an intentional action. Votive offerings such as these are known from other early medieval sites, for example at Donacarneý Great a large fragment of human skull was identified at the base of a kiln and was suggested to be an intentional deposit (Giacometti 2010).

It is possible that as only a fragment of the skull was retrieved here its presence here may be accidental. If accidental it would imply that burial had been going on within the site for a considerable period, long enough for a burial to be interred, to decay, potentially forgotten about and later disturbed. However, human remains were not frequently encountered within the bone assemblage during the excavation, only being identified in four contexts. This would

suggest the burials within the site were contained and not frequently truncated by later activity.

It is interesting that the portion of the skull present was from the top and back of the skull. Sixteen occipital bones from the back of the skull were uncovered at Lagore, mostly from the portion of the settlement outside of the palisade to the northeast. The lack of additional skeletal elements to these individuals has led to the suggestion that this specific body part was selected and removed from individuals and brought to Lagore (Carty and Gleeson 2013, 39). This act of mutilation may relate to human sacrifice, judicial killings, or the deposition at Lagore of parts of those killed in battle (ibid.). The skull fragment uncovered at Readsland was also at the edge of the early medieval settlement, though in the southwest. It is possible the skull represents an intentional deposit and is tied into the practices being carried out at Lagore, further emphasising the connection between the settlement at Readsland and Lagore.

Artefactual indications

A number of artefacts were uncovered during the excavation of the settlement which give some initial indications to the dating of the site and its possible phasing.

Southern curvilinear annex ditches

A bone pin with a rectangular head with a circular perforation with three incised dots above was retrieved from the second phase of the southern curvilinear annex ditch, which has parallels with examples from High St. and Fishamble St. in Dublin, with the Fishamble St. example coming from a late 10th century context, though it fits into Boyle's Class 2b which could be dated to the 7th-9th century (Riddler and Trzaska-Nartowski 2019a).

The southwest annex ditches

A bone comb was retrieved from the southwest annex ditch and has parallels from Dublin and dates to around the first half of the 11th century (Riddler and Trzaska-Nartowski 2019a).



Selection of bone pins and needles from the site (top)

Stone leatherworking platform (bottom)

An unfinished bone skate was retrieved from the fill of the outer southwestern annex ditch. No other examples of these are known from Meath, however some are known from Hiberno-Norse Dublin (Riddler and Trzaska-Nartowski 2019a).

A stone leather-working platform was retrieved from the southwest annex ditch, which are known from late prehistoric to early medieval contexts (Riddler and Trzaska-Nartowski 2019b). An example from an early medieval context was uncovered at Garryduff, Co. Cork (Fig. 17, No. 502, O'Kelly and Stelfox 1962-4, 87). Another is represented in the Hiberno-Norse assemblage from Woodstown, Co. Waterford (McNamara 2005, 125).

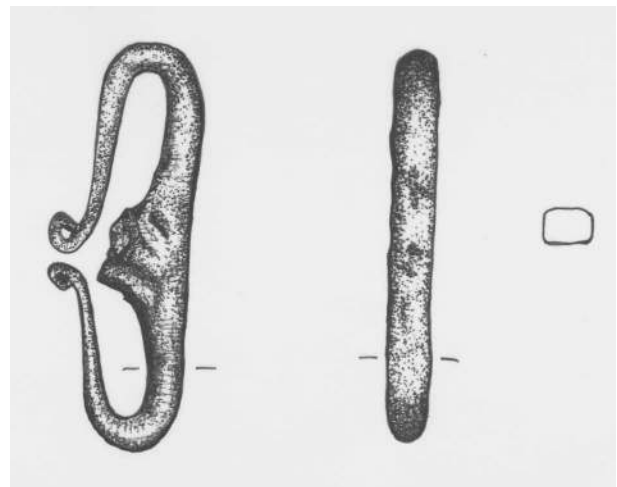


Western annex ditches

A Hiberno-Norse ring-pin was recovered from the second expansion of the western annex ditch. According to Fanning's typology (1994, 26) it is a ringed polyhedral-headed pin with a twin-link motif on one side and a saltire on the other. This has comparanda at Killeen Site B, Co. Meath (Baker 2010, 15), Lagore crannog, Co. Meath (Hencken 1950, 73), Fishamble St., Dublin (Steinforth 2018, 86) as well as Cronk Mooar, Isle of Man (ibid.). A date in the late 9th-10th century has been suggested for the latter two (ibid.). This suggests that the settlement was in contact with Viking Dublin in and around the 10th century, and also indicates that a later expansion occurred after this period. It is also interesting to note the presence of identical pins from Lagore and Killeen, both of which are in close proximity to the site.

An iron strike-a-light was retrieved from the latest phase of the western annex ditch also, with identical examples known from Birka, Sweden and Irish Hiberno-Norse sites.

A bone comb was retrieved from the latest phase of the western annex ditch, which is a rare form with just five parallels, all from Dublin, which date to around the first half of



Copper-alloy ring-pin from western annex (top)

Preliminary illustration (centre) and image (bottom) of strike-a-light from western annex

the 11th century (Riddler and Trzaska-Nartowski 2019a).

Southern rectilinear annex ditches

The earliest bone comb was retrieved from the rectilinear southern annex ditch, which belongs to Dunlevy's Class D and dates to the 8th-10th century (Riddler and Trzaska-Nartowski 2019a). Examples of this type of comb are known from Lagore and Roestown 2, which are in close proximity to the settlement at Readsland, as well as at Raystown and Knowth, also in Co. Meath (ibid.).

Gaming board in the northern annex

A small palm-sized disc-shaped stone with a six by six grid of roughly incised lines was retrieved from the fill of the annex sub-division ditch to the east of the metalworking area. Gaming boards with simple roughly inscribed grids have been identified on a number of sites, such as Deer Park Farms, Co. Antrim (Lynn and McDonnell 2011, 246), and Garryduff, Co. Cork (Fig. 19, No. 605, O'Kelly and Stelfox 1962-4, 91), which also had a six by six lattice. The game played on the board is likely to have been fidchell or brandub, a variant of taefl, and is likely to be pre-Viking in date (Riddler and Trzaska-Nartowski 2019b).

An unshaped mudstone slab from Lagore also appears to have a poorly surviving grid etched on it (Fig. 92, No. 1492, Hencken 1950, 176). Three stone gaming boards were uncovered at



Bone comb retrieved from the southwest annex (top)

Bone comb retrieved from the western annex (upper centre)

Bone comb retrieved from the southern rectilinear annex (lower centre)

Stone gaming board from the northern annex with hand for scale (bottom)

Roestown 2, though these appear to relate to a different game to the Readsland example. Two of the Roestown 2 boards came from mid-late 7th century deposits (O'Hara 2009, 73) The third, which related to the game merels, came from a later deposit, yet was identical to an example from Fishamble St. in Dublin dating to the 9th century.

Metalworking area

A bone handle retrieved from the metalworking waste pit in the northern annex and is 10th century or later (Riddler and Trzaska-Nartowski 2019a).

A circular stone motif-piece divided into four quadrants by an incised cross with a number of additional small crosses and other marks incised in each quadrant was uncovered within the fills of the channel associated with the metalworking activity. No obvious parallels are known for this, though similarly subdivided stones were uncovered at Nendrum monastery, Co. Down (Riddler and Trzaska-Nartowski 2019b). This is likely to reflect the Christianity of the settlement and burial ground at Readsland and may also suggest its association with Domhnach Sechnaill.

An iron pick was retrieved from the top fill of the northern annex ditch. This may have been used in the metalworking site, possibly to break up ore.



Bone handle retrieved from the metalworking area (top)

Iron pick retrieved from northern annex ditch (upper centre)

Fragment of glass bangle retrieved from metalworking area (lower centre)

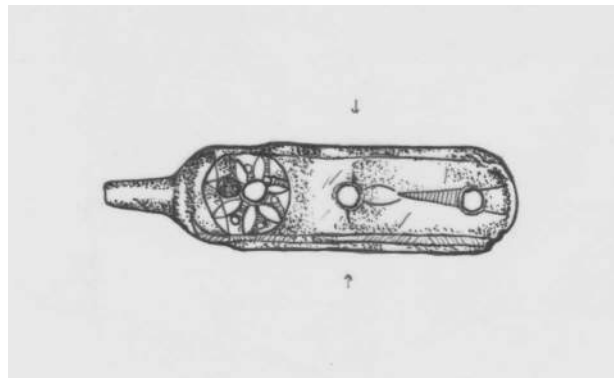
Stone motif-piece retrieved from the metalworking area (bottom)

Two fragments of amber beads were retrieved from the fill of the drip gully of a possible rectangular structure in close proximity to the metalworking area, which may have been an associated workshop. Amber beads were also identified at Lagore (Hencken 1950, 151).

A tiny fragment of glass bangle was retrieved from one of the furnace pits in the metalworking area. The bangle decoration is identical to a Type 2 Bii Romano-British glass bangle, which date from the 1st-2nd century AD (Ivleva 2018, 1). This is significantly earlier than the expected usage of the metalworking furnaces at Readsland. An identical fragment was retrieved from Lagore Crannog (Fig. 70, No. 578, Hencken 1950, 146), which was an unstratified find. It is possible that the tiny decorative fragment from Readsland was intended for reuse as a decorative insert or mount on one of the objects being created at the site. This would imply that finished high-status pieces were being created at the site. The presence of a similar artefact from Lagore underlines the connection between the sites. A reinterpretation of the dating for Lagore crannog now suggests that there were significant phases for use prior to the establishment of the early medieval settlement there, with evidence for human sacrifices dating to the Bronze and Iron Ages (Newman 2011, 29). It is possible therefore that the glass bangle may have originated at Lagore and relate to an earlier phase of activity at that site, and was transported to Readsland for use in the metalworking being carried out there.

A large stone block was uncovered during the stripping of the site to the south of the metalworking area in the vicinity of the rectangular structure. It was no longer in its original position when recognised. It appears to be an anvil stone, with a similar example identified at Alexander Reid, Navan (McGlade 2017). A second possible broken anvil stone was recovered from the metalworking area itself. Stone anvils have also been identified at Clogher, Co. Tyrone, Rathgurreen, Co. Galway, Caherconnell, Co. Clare and Cahircalla More, Co. Clare (Carlin 2008, 109-10).

A copper-alloy strap end with decoration including a marigold was retrieved from the



Copper-alloy strap end found in waste pit within metalworking area (top)

Preliminary reconstructive illustration of strap-end without bend (bottom)

waste pit to the south of the metalworking area. This has distinctive decoration and it is hoped parallels will be identified during the post-excavation works.

Later annex to the south

A fragment of green glass bead with herringbone painted yellow decoration retrieved from Ditch C205 was of Irish manufacture, dating to the second half of the first millennium AD (Coyne 2011, 109). Comparisons are known from Deer Park Farms, Co. Antrim (Lynn and McDonnell 2011, 331), Reask, Co. Kerry and Newtown, Co. Limerick (Coyne 2011, 109). The example from Deer Park Farms was retrieved from a Phase 9, dating to c. AD 770-890 (Lynn and McDonnell 2011,

234). Another similar bead was retrieved from a souterrain dating to the 8th century or later at a cemetery settlement site at Rosepark, Balrothery, Co. Dublin (Carroll 2008, Pl. 46, 80; 97-8).

Stone discs

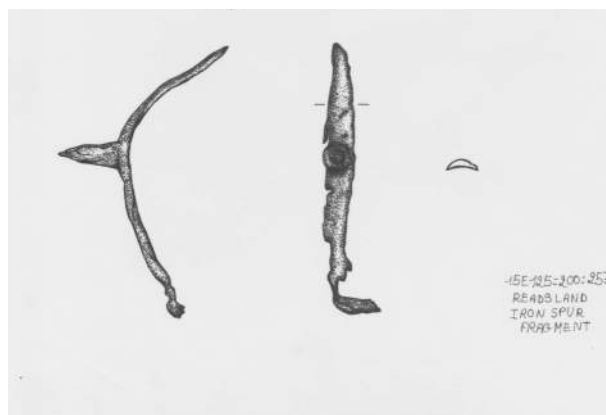
A number of stone discs were retrieved from the site from the site. These regularly turn up on Irish early medieval sites and have also been identified on prehistoric sites dating from the Bronze Age onwards (O'Brien 2010, 21). They have been interpreted as pot lids, gaming pieces and as devotions (Riddler and Trzaska-Nartowski 2019b). They would appear to be too large for an indoor board game, but may have been used outside. Another suggestion is that they may be incomplete spindle-whorls that have yet to be perforated (O'Brien 2010, 22). They may also have functioned as counters. The discs at Readsland were recovered from across the site and are likely to relate to different phases of the sites evolution. One was retrieved from the fill of the ditches predating the southern annexes, one from the fill of a pit truncating the ditches, one from the latest phase of the western annex ditch and one from the fill of the sub-division ditch within the northern annex. The latter was found within the same ditch as the small gaming board,

Equestrian artefacts

An iron ring and copper-alloy disc may be components of horse harness, while an iron spur is a clear indication of equestrian activity at the site.

Jet-like bracelets

Two fragments of lignite bracelet were identified in the site, one within the southern rectilinear annex ditch and another in a pit associated with the possible smithy structure in the metalworking area to the north. A rough-out core from the manufacture of a bracelet was also retrieved from a pit truncating the southern rectilinear annex ditch. The core indicated that the manufacture of this form of personal adornment was taking place on site. Lignite or jet-like bracelet fragments have been found on many early medieval sites, with over 25% of the examples known from Ireland coming from Meath (Stevens 2019). Within the immediate vicinity of the site they have been



Stone discs recovered across the site (top)

Copper-alloy disc, possibly from horse harness (centre)

Preliminary illustration of iron spur (bottom)



Rough-out core from lignite bracelet manufacture (top left)

Lignite bracelet fragments (bottom left)

Iron hand-bell (right)



has 9th-10th parallels, such as the example found near Stange in Norway, now in the Kulturhistorisk museum in Oslo (Museum No. C33572).

Artefactual implications

The artefact assemblage leads to a number of questions. The gaming board within the northern annex sub-division is suggestive of early (pre-Viking) activity. This implies the northern annex was integral to the settlement prior to the later phases of increased production. The evidence from the southern annexes however is somewhat different. Most of the artefacts identified to the south appear to relate to later activity, while the buildings to the east also appear late in date. This may imply significant alterations were taking place in the latter centuries of the early medieval period and Hiberno-Norse period on the site and that the settlement was simpler and smaller prior to this point. This will be assessed further when radiocarbon dates are returned.

Conclusion

The long-lived and partially bivallate ringfort at Readsland would have been a substantial

identified at Roestown 2 (O'Hara 2009, 68) and frequently at Lagore (Hencken 1950, 150). Manufacturing cores have been identified previously at Knowth and Colierstown, and an incomplete bracelet from Ross 2, all in Co. Meath (Stevens 2019). Another possible jet-like bracelet rough-out was retrieved from Lagore (Fig. 92, No. 1679, Hencken 1950, 176).

Bell in the rectangular structure to the east

A conical iron hand-bell with elongated clanger was recovered from the slot trench of the rectangular structure to the east of the settlement. It was not of the form that was produced in Ireland during the early medieval period, such as those manufactured at Clonfad 3, Co. Westmeath (Stevens 2010), which were more rectangular. This Scandinavian hand-bell or bjelle form is unknown in Britain or Ireland (Cormac Bourke pers. comm. 2019), however

settlement in the landscape of Lagore. Its location along the same ridge of high ground as the ecclesiastic site of Domhnach Sechnaill, and inter-visibility with that site, may suggest a connection between them. The ecclesiastic site was originally close to the lakeshore of Lagore, further reinforcing the proximity of Readland to the seat of power at Lagore Crannog. The early medieval settlement uncovered to the north at the Roestown 2 are also indicative of significant occupation during this period, and there are correlations in the artefact assemblages from Roestown, Readland and Lagore. The large scale of the substantial processing and production activities excavated at Readland demonstrate that the settlement produced an excess to what would be required by the settlement itself. The Readland settlement, which would have been under the control of Lagore, may have served as an intermittent land-based residence for the kings of Lagore, or their kin. During its lifespan, the settlement at Readland was extensively expanded and enlarged with numerous ditched enclosures added. In the later phases of the settlement an increase in the production output appeared to have outweighed the need for enclosed spaces and marked a distinct change from the earlier evolution of the settlement. Based on the artefactual evidence the latter period of production may correspond with the period when the site lay within the territory of the Mac Gilla Sechnaill family, who had their caput in the vicinity of Domhnach Sechnaill.

Anglo-Norman change

Medieval field system

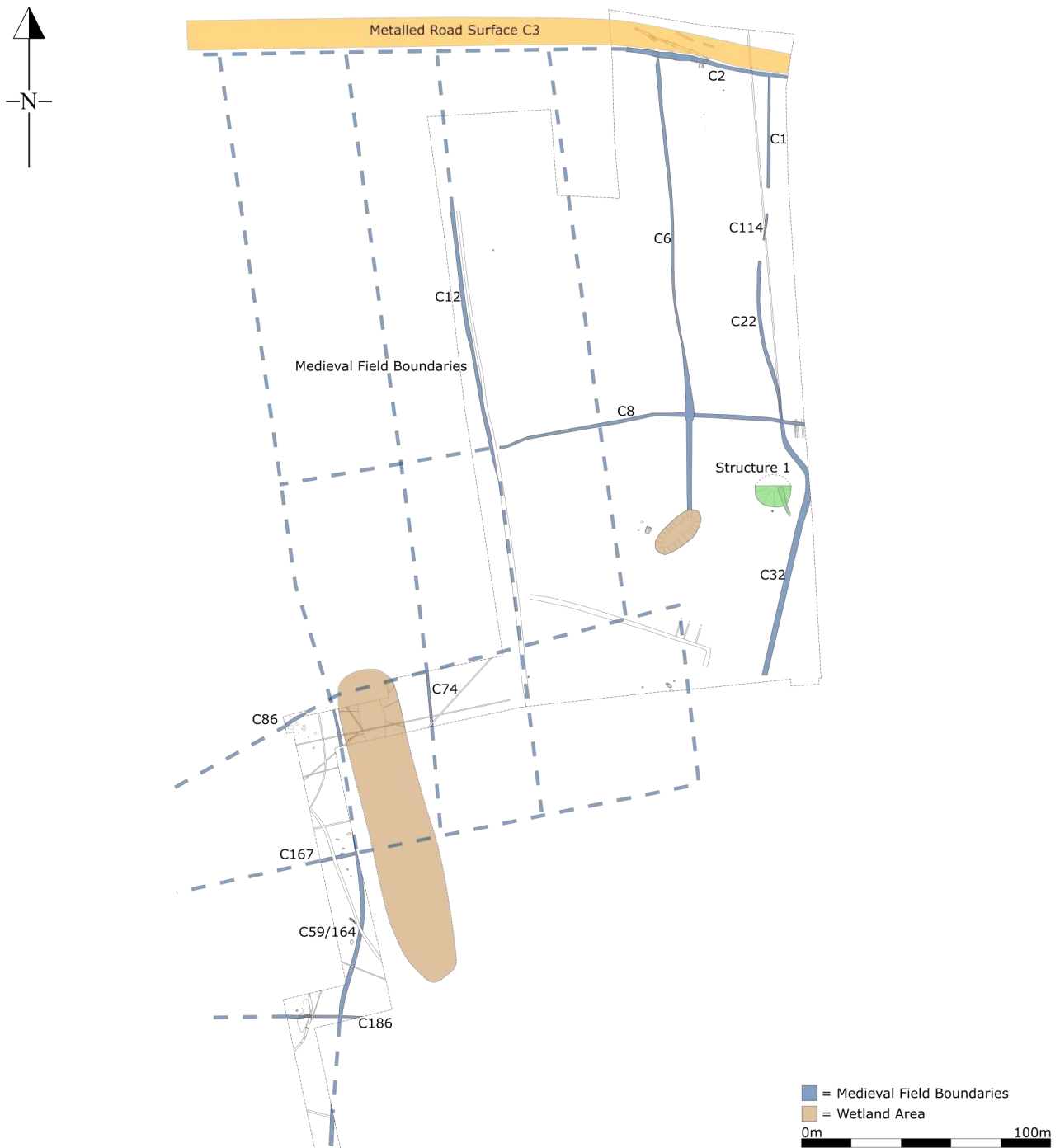
The layout of the medieval field boundaries in the south of the development site (Phase 1) suggests the fields were long and linear, and were connected to a roadside ditch at their northern ends. The ditches to the far south (Field 6), in the vicinity of the former wetlands are less uniform, suggesting the linear field arrangement present along the roadside broke down the further away from the road the fields were situated. The size of the fields also decreased further from the road, and the presence of cross-ditches increased. The fields along the roadside to the north were approximately one acre plots organised in long narrow strips. There are references to large open medieval field systems broken down into strip-holdings, with some tenants acquiring strips of land scattered throughout many fields (Murphy and Potterton 2010, 293). This would allow tenants to have access to a variety of land, with three-field system crop rotation being carried out on manorial lands of the Anglo-Normans (ibid., 292).

Medieval Structure

The scant remains of a possible medieval structure (Structure A) were identified at the eastern end of the site. The surviving remains comprised a dished semi-circular area measuring c. 14m in length, and a drain exiting the eastern end of the structure and running towards a medieval field ditch. Interestingly, the medieval field boundary ditch to the east bends around



Post-ex view of medieval laneway, looking east



Plan of medieval features identified in Phase 1

the structure, implying the location was already occupied when the field system was created. The compact fill within the cut for the structure, which is likely to represent a beaten earth floor, contained frequent iron fragments and artefacts along with occasional medieval pottery. This would appear to be the remains of a medieval workshop, possibly of a blacksmith. It may have had earthen walls or a lightweight

super-structure that has left no archaeological trace.

A 13th century blacksmith's forge was identified at Cookstown, Co. Meath facing on to a medieval laneway (Clutterbuck 2009, 31). The forge at Cookstown was defined by a shallow gully and did not appear to have been roofed or walled (ibid.). It had an earthen floor surface

and contained a shallow trough located off-centre within the metalworking area. A rectangular structure, possibly a workshop, adjoined the metalworking area (ibid.). The structure at Readsland is less-well defined, however the quantity of iron artefacts and the presence of iron slag within the floor of the structure suggest that it may also have served as a forge. An above-ground trough may have been present with the metal drain used to dispose of the water after. Further analysis of the artefact assemblage from the structure may help in understanding its function and date.

Medieval laneway

The laneway at the northern end of the Phase 1 fields appears to have been an earlier alignment of the road from Dunshaughlin to Killeen or Drumree. The medieval field system to the south respects the line of the road and is likely to have been informed by it. It is unclear when the laneway was shifted further to the north to the location of the existing road. It is possible extant remains of the southern annexes of the settlement initially caused the road to run around them, however as these filled in and their memory faded the road was shifted to the north.

Section 19 Post-excavation analysis

Metallurgical analysis

An extensive phase of post-excavation analysis is underway with the key aspect being the Early Medieval Iron Crafts project, a research project being carried out on the metallurgical waste assemblage from the excavation by Brendan O'Neill in UCD. This research will focus on examining the evidence for the stages of iron making/working, how different stages spatially interact with one another, how they interact with the work area, and whether there is anything that would help date the stages of this craft or activity on the site more accurately. It will also explore the scale of craft and the relationship between this site and others.

This will provide a new picture of daily life in early medieval Ireland, answer long held questions about how people interacted with crafts and provide the basis for seminal publications on this topic. By combining this detailed understanding for what was taking place on this site and the technologies being used with better dating evidence, this project will be able to refine the characterization of early medieval Ireland presented above. This will allow us to assess whether technological sophistication pre or post-dates the arrival of Scandinavian settlers to the island and, consequently, whether they were the driving force for supposed changes in craft practices. This has the potential to alter how we see this period, and will also set the benchmark of standard for future analysis of other similar sites excavated from this period (and others) in Ireland and abroad.

Environmental analysis

The analysis of the environmental remains from the site is being carried out by Lorna O'Donnell. This will also be used to identify samples suitable for radiocarbon dating.

Bone analysis

Emily Murray is carrying out the analysis of the animal bone assemblage for the site, while Jonny Geber is analysing the cremated and unburnt human remains.

Artefact analysis

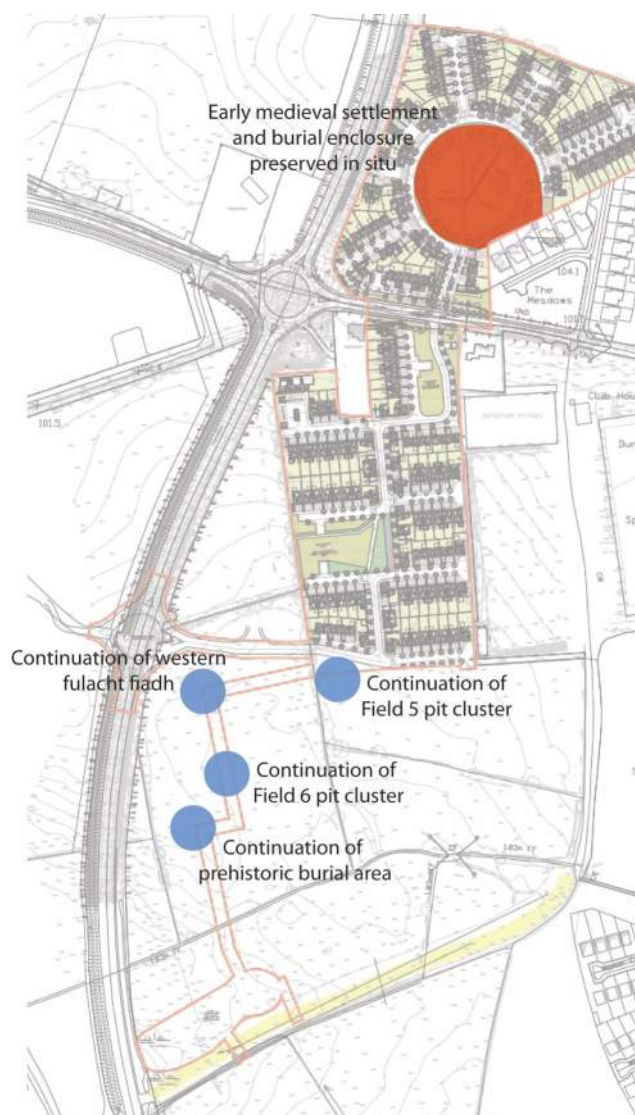
A number of specialists are involved in the artefactual analysis for the site including Ian Riddler and Natasha Trzaska-Nartowski (worked bone and stone artefacts), Paul Stevens (jet-like bracelets), Mags Mannion (Glass beads and bangle), Cormac Bourke (metal artefacts), Niamh Kelly (ground stone), Sean Sharpe (lithics), Eoin Grogan (prehistoric pottery), Claire McCutcheon (medieval pottery) and Antoine Giacometti (post-medieval pottery).

Section 20 Recommendations

Everything within the outer enclosure ditch of the early medieval settlement excavated at Readsland has been preserved in situ within the development. This includes the central enclosure and the burial enclosure with significant human remains identified during the 2009 testing programme (Hession & Moriarty 2009). It is recommended that the settlement enclosure and burial site are added to the files of the Recorded Monuments and Places to improve their protection.

The extents of the western fulacht fiadh, the prehistoric burial area and the pit cluster in Field 6 continued beyond the limit of excavation. This area is proposed for development in the future and the remainder of these areas fully excavated in advance of groundworks for the next phase of the development.

Two human bones were retrieved from the previous testing on the site in 2009 (Hession & Moriarty 2009) from within the central enclosure in the vicinity of the burial enclosure. It would be beneficial to carry out radiocarbon dating on the bone in the future to understand whether the burial site associated with the settlement pre- or post-dates the activity excavated in 2018-2019 at the settlement. This may give an understanding of how the settlement developed over time.



Development plan with area recommended to be added to the files of the RMP in red and areas where archaeology continued beyond the limit of excavation in blue

References

- Archdall, M. 1873 *Monasticon hibernicum: or, A history of the abbeys, priories, and other religious houses in Ireland; interspersed with memoirs of their several founders and benefactors, and of their abbots and other superiors, to the time of their final suppression.* Dublin.
- Baker, C. 2005 Section 1A Archaeological Final Report, Cooksland, Co. Meath. Licence No. 02E0641. Site ref. 1A/20/1, Gas Pipeline to the West. Unpublished report courtesy of Margaret Gowen and Co.
- Baker, C. 2007 No. 1442. Cooksland, Fulacht fia, in E. Grogan, L. O'Donnell & P. Johnston (eds.) *The Bronze Age landscapes of the Pipeline to the West: an integrated archaeological and environmental assessment.* Wordwell Ltd., Bray, p. 323.
- Baker, C. 2008 *The archaeology of Killeen Castle, Co. Meath.* Wordwell Ltd., Dublin.
- Baker, C. 2010 Occam's Duck: three early medieval settlement cemeteries or ecclesiastical sites? in C. Corlett & M. Potterton (eds) *Death and burial in Early Medieval Ireland in the light of recent archaeological excavations.* Wordwell Ltd., Dublin, pp. 1-21.
- Becker K. 2014 Token explanations: Rathgall and the interpretation of cremation deposits in later prehistoric Ireland. *Archaeology Ireland*, 28(1), pp.13–15.
- Berry, H.F (ed.) 1914 *Statute rolls of the parliament of Ireland, first to the twelfth years of the reign of King Edward the fourth.* Dublin.
- Best, R.I., O. Bergin & M.A. O'Brien (eds.) 1954 *Book of Leinster, formerly Leabar na Núachongbála,* first edition Dublin.
- Bhreathnach, E. 1999a Columban Churches in Brega and Leinster: Relations with the Norse and the Anglo-Normans, *The Journal of the Royal Society of Antiquaries of Ireland*, 129, pp. 5-18
- Bhreathnach, E. 1999b Authority and supremacy in Tara and its hinterland c. 950-1200, in *Discovery Programme Report 5*, pp. 1-24.
- Bhreathnach, E., 2004 Medieval sub-kingdoms of Brega: the kingships of Calatrium, Déssi Breg, Mugdornae Breg and Uí Maic Uais Breg, in A. Mac Shamhráin (ed.) *The Island of St Patrick.* Four Courts Press, Dublin, pp. 38-51.
- Bieler, L. 1956 St. Secundinus and Armagh, *Seanchas Ardmhacha: Journal of the Armagh Diocesan Historical Society*, 2.1, pp. 21–7.
- Bieler, L. 1979 *The Patrician Texts in the Book of Armagh.* Dublin Institute for Advanced Studies, Dublin.
- Bradley, J. 1982-3 Excavations at Moynagh Lough, Co. Meath 1980-81. Interim Report, *Ríocht na Míidhe*, 7 (2), pp. 12-3.
- Brown, A.G., Davis, S.R., Hatton, J., O'Brien, C., Reilly, F., Taylor, K., Dennehy, E., O'Donnell, L., Bermingham, N., Mighall, T., Timpany, S., Tetlow, E., Wheeler, J. & Wynne, S. 2016 The environmental context and function of burnt mounds: new studies of Irish fulachtaí fiadh, *Proceedings of the Prehistoric Society*, 82, pp. 259-290. Published online 17/8/2016, doi:10.1017/ppr.2016.7
- Brown, J. 1784 *Reports of cases, upon appeals and writs of error in the high court of parliament from the year 1701 to the year 1779.* E. Lynch, Dublin.
- Burke, Sir B. 1912 *Genealogical and heraldic history of the landed gentry of Ireland.* Harrison and Sons, London.
- Cagney, L. & Ginn, V. 2009 Report on the archaeological excavation of Roestown 1, Co. Meath. Unpublished Stratigraphic Report courtesy of

ACS Ltd.

Carlin, N. 2008 Ironworking and production, in N. Carlin, L. Clarke & F. Walsh (eds.) *The archaeology of life and death in the Boyne floodplain: the linear landscape of the M4*. NRA Scheme Monographs 2. The National Roads Authority, Dublin, pp. 87-112.

Carlin, N. 2011 *A proper place for everything: the character and context of Beaker depositional practice in Ireland*, Vol. 1. PhD thesis submitted to University College Dublin.

Carney, J. 1955 *Studies in Irish Literature and History*. Dublin.

Carroll, J. 2008 *Archaeological excavations at Rosepark, Balrothery, Co. Dublin*. Judith Carroll & Co., Dublin.

Carty, N. 2015 'The Halved Heads': Osteological Evidence for Decapitation in Medieval Ireland, *Papers from the Institute of Archaeology*, 25(1): 1, pp. 1-20.

Carty, N. and Gleeson, P. 2013 Kingship, violence and Loch Da Gabhor: royal landscapes and the production of authority in early medieval Brega, *Ríocht na Midhe*, 24, pp. 29-72.

Chapple, R.M. 2012 Cherrymount crannog, Fermanagh, *Archaeology Ireland*, 26 (3), pp. 10-12.

Chapple, R.M. 2018 *Catalogue of Radiocarbon Determinations & Dendrochronology Dates* (March 2018 release). Oculus Obscura Press, Belfast.

Charles-Edwards, T.M. 2000 *Early Christian Ireland*. Cambridge.

Clarke, H. 2002 *Irish Historic Towns Atlas No. 11, Dublin Part I, to 1610*. Royal Irish Academy, Dublin.

Clarke, L. & Carlin, N. 2008 Living with the dead at Johnstown 1: an enclosed burial, settlement and industrial site, in N. Carlin, L. Clarke & F. Walsh (eds.) *The archaeology of life and death in the Boyne floodplain, the linear landscape of the M4*. NRA Scheme Monographs 2. National Roads Authority, Dublin, pp. 55-86.

Cleary, R. 2006 Excavations of an early medieval period enclosure at Ballynagallagh, Lough Gur, Co. Limerick, *Proceedings of the Royal Irish Academy: archaeology, culture, history, literature*, 106C, pp. 1-66.

Clutterbuck, R. 2009 Cookstown, Co. Meath: a medieval rural settlement, in C. Corlett & M. Potterton (eds.) *Rural settlement in medieval Ireland in light of recent archaeological excavations*, pp. 27-48. Wordwell Ltd., Dublin.

Cogan, Rev. A 1862 *Cogan, Rev. A. The Diocese of Meath: Ancient and Modern*. Volume 1. Dublin.

Cogan, Rev. A. 1867 *The Diocese of Meath: Ancient and Modern*. Volume 2. Dublin.

Collins, T. 2003 An Excavation of a Crematorium at Rockfield, Co. Kerry, *The Journal of the Kerry Archaeological and Historical Society*, 2, pp. 43-54.

Comber, M. 1997 Lagore Crannog And Non-Ferrous Metalworking In Early Historic Ireland, *The Journal of Irish Archaeology*, 8, pp. 101-114.

Cooney, G. 2017 Pathways of the dead in the Middle and Late Bronze Age in Ireland, in J.I. Cerezo-Román, A. Wessman & H. Williams (eds.) *Cremation and the archaeology of death*. Oxford University Press, Oxford, pp. 117-129.

Coyne, F. 2010 Corbally, Co. Kildare: the results of the 2003-4 excavations of a secular cemetery, in C. Corlett & M. Potterton (eds.) *Death and burial in early medieval Ireland in light of recent archaeological excavations*. Wordwell Ltd., Dublin, pp. 77-90.

Coyne, F. 2011 The 'plectrum-shaped enclosure' at Newtown, Co. Limerick: new site type or new site shape?, in C. Corlett & M. Potterton (eds.) *Settlement in early medieval Ireland in the light of recent archaeological excavations*. Wordwell Ltd., Dublin, pp. 107-112.

Dennehy, E. 2008 A Hot Property: The Morphology and Archaeology of the Irish Fulachta Fiadh, *Journal of the Kerry Archaeological and Historical Society, Series 2*, 8, pp. 5-27.

Duffy, S. 2005 *Medieval Ireland: An Encyclopedia*.

Routledge Ltd., New York & London.

Elder, S. 2009 Report on the archaeological excavation of Knocks 1, Co. Meath. Unpublished Stratigraphic Report courtesy of ACS Ltd.

Elder, S. & Ginn, V. 2009a Report on the Archaeological Excavation of Johnstown 3, Co. Meath. Unpublished Final Report courtesy of ACS Ltd.

Elder, S. & Ginn, V. 2009b Report on the Archaeological Excavation of Johnstown 3, Co. Meath. Unpublished Final Report courtesy of ACS Ltd.

Elder, S. & Ginn, V. 2009c Report on the archaeological excavation of Johnstown 4, Co. Meath. Unpublished Stratigraphic Report courtesy of ACS Ltd.

Elder, S. & O'Hara, R. 2009 Report on the archaeological excavation of Rath Hill 1, Co. Meath. Unpublished Stratigraphic Report courtesy of ACS Ltd.

Eogan, J. 1977 The Iron Age and Early Christian settlement at Knowth, in V. Markotic (ed.) *Ancient Europe and the Mediterranean: studies presented in honour of Hugh Hencken*. Arris & Phillips Press, Warminster, pp. 69-76.

Eogan, J. 2012 The archaeology of Knowth in the first and second millennia AD. Excavations at Knowth 5. Royal Irish Academy, Dublin.

Erlington, C.R. & J.H. Todd (eds.) 1847-64 James Ussher – The whole works, 17 vols, Dublin.

Fanning, T. 1994 Viking Age ringed pins from Dublin. *Medieval Dublin Excavations 1962-81, Series B, Vol. 4*. Dublin.

Flanagan, D. 1984 The Christian impact on early Ireland: placenames evidence, P. Ní Chatháin & M. Richter (eds), *Ireland and Europe, the early Church*. Stuttgart, pp. 25-51.

Flood, W.H.G. 1905 Glascarrig Priory, County Wexford, *The Journal of the Royal Society of Antiquaries of Ireland, Fifth Series*, 35 (2), pp. 164-170.

Fredengren, C. 2002 Crannogs: a study of peoples interaction with lakes, with particular reference to Lough

Gara in the north-west of Ireland, Wordwell Ltd., Bray.

Garehy, N. 2019 Preliminary excavation report, Donacarney Great, Co. Meath, 2019 Season, 19E0077. Unpublished excavation report courtesy of Archaeology Plan.

Geber J. 2009. The human remains, in M. McQuade, B. Molloy & C. Moriarty (eds.) *In the shadow of the Galtees. Archaeological excavations along the N8 Cashel to Mitchelstown Road Scheme, NRA Scheme Monographs 4*. National Roads Authority, Dublin, pp. 209–40

Giacometti, A. 2010 Preliminary excavation report, Donacarney Great, Bettystown, Co. Meath. Licence No. 07E451. Unpublished excavation report courtesy of Arch-Tech Ltd.

Giacometti, A. 2018 Final excavation findings, Brighton Road, Foxrock, Dublin 18, 15E087. Unpublished report courtesy of Archaeology Plan.

Gilbert, J.T. (ed.) 1889 Register of the abbey of St. Thomas the Martyr. Dublin.

Gleeson, P., 2012 Constructing Kingship in Early Medieval Ireland: Power, Place and Ideology, *Medieval Archaeology*, 56, pp. 1-31.

Gowan, M. 2012 Archaeological addendum report regarding the revised design scheme layout for a residential development at Roestown, Readsland and Knocks, Dunshaughlin, Co. Meath. Unpublished report courtesy of Margaret Gowan & Co. Ltd.

Graham, B.J. 1975 Anglo-Norman Settlement in County Meath, *Proceedings of the Royal Irish Academy: Archaeology, Culture, History, Literature*, 75, pp. 223-249.

Greene, David (ed.) 1975 *Fingal Rónáin and other Stories*. Dublin. (first edition 1955).

Grogan, E. 2005 The North Munster Project. Volume 1: The Later Prehistoric Landscape of South-East Clare. *Discovery Programme Monograph 6*. Wordwell Ltd., Bray.

Gwynn, E. 1991 *The Metrical Dindshenchas, Volume 4*, Second reprint [x + 474 pp.] Dublin.

(first published 1906, reprinted 1941).

Harrison, D. 2009 Geophysical survey report, lands at Roestown, Readsland & Knocks, Dunshaughlin, Co. Meath, Licence 09R0089. Unpublished report courtesy of Margaret Gowan & Co. Ltd.

Hawkes, A. 2015. Fulachtaí fia and Bronze Age cooking in Ireland: reappraising the evidence, *Proceedings of the Royal Irish Academy*, 115, pp. 1-31.

Hawkes, A. 2018 *The archaeology of prehistoric burnt mounds in Ireland*. Archaeopress Publishing Ltd., Oxford.

Hayes-McCoy, G.A. 1964. *Ulster and other Irish maps, c. 1600*. Dublin.

Healy, J. 1908 *History of the Diocese of Meath*, Volume 1. Meath.

Hencken, H. O'Neill 1950 Lagore crannóg: an Irish royal residence of the 7th to 10th centuries, A. D. With sections by Liam Price and Laura E. Start, and 19 plates and a pedigree of Aed Slane, *Proceedings of the Royal Irish Academy*, 53C, pp. 1-247.

Hession, J. & Moriarty, C. 2009 *Archaeological assessment and impact statement, Roestown, Readsland and Knocks townlands, Dunshaughlin, Co. Meath, 09E214*. Unpublished report courtesy of Margaret Gowan & Co. Ltd.

Hudson, B. 2005 *Viking Pirates and Christian Princes: Dynasty, Religion, and Empire in the North Atlantic*. Oxford.

Jaski, B. 2000 *Early Irish kingship and succession*. Dublin.

Joyce, W. 1921 *The Neighbourhood of Dublin: Its Topography, Antiquaries and Historical Associations*. Dublin.

Kelly, E. P. 2006 *Kingship and sacrifice: Iron age bog bodies and boundaries*. *Archaeology Ireland Heritage Guide No. 35*, National Museum of Ireland.

Kelly, F. 1995 *A guide to early Irish law*. Dublin. (first published 1988, reprinted 1991)

Kelly, F. 2000 *Early Irish farming: the evidence of the law-texts*. Dublin (first published 1997, reprinted 1998).

Kerr, T.R., Harney, L, Kinsella, J, O'Sullivan, A., & McCormick, F. 2010 *Early medieval dwellings and settlements in Ireland, AD 400-1100, Vol. 1 text*. Early Medieval Archaeology Project (EMAP) report on the Heritage Council INSTAR Programme. University College Dublin and Queens University Belfast.

Kinahan, G.H. 1866–9 *On a crannoge in Lough Naneevin*. *Proceedings of the Royal Irish Academy*, 10, pp. 31–3.

Koch, J. (ed.) 2006 *Celtic Culture: A Historical Encyclopedia, Volume I, A-Celti*, Santa Barbara.

Lennon, C. 2008 *The parish fraternities of County Meath in the late middle ages*, *Records of Meath Archaeological and Historical Society*, 19, pp. 85-101.

Linnane, S. J. 2008a *Report on the archaeological excavation of Cooksland 1, Co. Meath*. Unpublished Stratigraphic Report courtesy of ACS Ltd.

Linnane, S. J. 2008b *Report on the archaeological excavation of Cooksland 2, Co. Meath*. Unpublished Stratigraphic Report courtesy of ACS Ltd.

Linnane, S. J. 2008c *Report on the archaeological excavation of Roestown 4, Co. Meath*. Unpublished Stratigraphic Report courtesy of ACS Ltd.

Lynn, C.J. 1983 *Some 'early' Ring-forts and Crannogs*, *Journal of Irish Archaeology*, 1, pp. 47-58.

Lynn, C. 1994 *Houses in rural Ireland, A.D. 500-1000*, *Ulster Journal of Archaeology*, Third series, 57, pp. 81-94.

Lynn, C. & McDowell, J.A. 2011 *Deer Park Farms, the excavation of a raised rath in the Glemarm Valley, Co. Antrim*. The Stationary Office, Northern Ireland Environmental Agency.

MacCotter, P. 2005 *Functions of the Cantred in Medieval Ireland*, *Peritia*, 19, pp 308–32.

MacCotter, P. 2008 *Medieval Ireland: territorial,*

political and economic divisions. Dublin.

MacShamhráin, A. 2004 Church and dynasty in Early Christian Brega: Lusk, Inis Pátraic and the cast of Máel-Finnia, king and saint, in A. Mac Shamhráin (ed.) *The Island of St Patrick*. Four Courts Dublin, pp. 125-139.

Mannion, M. 2013 *An examination of glass beads from early medieval Ireland*, PhD thesis, NUI Galway.

McAlister, R.A.S. & Praeger, R.L. 1929-31 The excavation of an ancient structure on the townland of Togherstown, Co. Westmeath, *Proceedings of the Royal Irish Academy*, 34C, pp. 54-82.

McGlade, S. 2017 Preliminary excavation report, Site D, Alexander Reid, Navan, 16E449. Unpublished report courtesy of Archaeology Plan.

McGlade, S. 2018 Final excavation report, Landsdown Old Wesley Grounds, Kilgobbin, Co. Dublin, 14E339. Unpublished report courtesy of Archaeology Plan.

McGlade, S. 2019 Final report, Excavations at Clonard, Balbriggan, 15E586. Unpublished report courtesy of Archaeology Plan.

McKinley, J.I. 1997 The cremated human bone from burial and cremation-related contexts, in P. Fitzpatrick *Archaeological excavations on the route of the A27 Westhampnett Bypass, West Sussex, 1992*, Vol. 2 pp. 55-73. *Wessex Archaeology Report 12*. Wessex Archaeology, Salisbury.

McLaughlin, T.R., Whitehouse, N.J., Schulting, R.J. et al. 2016 The Changing Face of Neolithic and Bronze Age Ireland: A Big Data Approach to the Settlement and Burial Records, *Journal of World Prehistory*, 29, pp. 117–153. Available online at <https://doi.org/10.1007/s10963-016-9093-0>, accessed 11/03/2020.

McNamara, S. 2005 Woodstown 6: the finds, in *Recent archaeological discoveries on the National Roads Schemes 2004*. Monograph Series No. 2. National Roads Authority, Dublin, pp. 125-130.

Mills, J. & McEnery, M.J. (eds.) 1916 *Calendar of the Gormanstown register*. Dublin.

Monk, M. 1995 A tale of two ringforts: Lisleagh I and II, *Journal of the Cork Historical and Archaeological Society*, 100, pp. 105-16.

Monk, M.A. & Kellagher, E. 2005 An assessment of the archaeological evidence for Irish corn-drying kilns in the light of the results of archaeological experiments and archaeobotanical studies, *The Journal of Irish Archaeology*, 14, pp. 77-114.

Morrin, J. 1862 *Calendar of the Patent and Close Rolls of Chancery in Ireland*, Vol. II Dublin.

Morrin, J. 1880 *Calendar of the Patent Rolls of the Chancery of Ireland 1 James I.-22 James I.* Dublin.

Morris, H. 1938 The Slighe Cualann, *The Journal of the Royal Society of Antiquaries of Ireland*, 8 (1), pp. 113-129.

Murphy, M. 2008 Digging with documents: late medieval historical research on the M3 in County Meath, in J. O'Sullivan & M Stanley (eds), *Roads, Rediscovery and Research*. Archaeology and the National Roads Authority Monograph Series No.5. National Roads Authority, Dublin, pp. 95-115.

Murphy, M. & Potterton, M. 2010 *The Dublin Region in the Middle Ages, Settlement, Land-use and Economy*. A Discovery Programme Monograph. Four Courts Press, Dublin.

Newman, C. 2011 The sacral landscape of Tara: a preliminary exploration, in R. Schot, C. Newman & E. Bhreathnach (eds) *Landscapes of Cult and Kingship*. Four Court Press, Dublin, pp. 22-43.

Ní Bhrolcháin, M., 2006 The Tara-Skryne or the Gabhra valley in early Irish literature, *Ríocht na Midhe*, 17, pp. 1-15.

O'Brien, E. 1992 Pagan and Christian burial in Ireland during the first millennium A.D.: continuity and change, in N. Edwards & A. Lane (eds.) *The Early Church in Wales and the West: recent work in Early Christian archaeology, history and place-names*. Oxbow Press, Oxford, pp. 130–7.

O'Brien, R. 2010 Spindle-whorls and hand-spinning in Ireland, in M. Stanley, E. Danagher

- & J. Eogan (eds.) *Creative minds, Archaeology and the National Roads Authority Monograph Series No. 7*. National Roads Authority, Dublin, pp. 15-26.
- O'Connell, A. 2009 Excavations at Castlefarm – director's first findings, in M.B. Deevy & D. Murphy (eds.) *Places along the way, first findings on the M3*. NRA Schemes Monographs 5. National Roads Authority, Dublin, pp. 43-56.
- Ó Cróinín, D. 2008 *A New History of Ireland: Prehistoric and early Ireland*, first published 2005 (Oxford).
- O'Donovan, J. (ed. & tr.) 1856 *Annals of the Kingdom of Ireland, Volume 1*, 2nd ed. Dublin.
- O'Donovan, J., J.H. Todd & W. Reeves (eds. and trs.) 1864 *The martyrology of Donegal: a calendar of the saints of Ireland*. Dublin.
- O'Dowd, M. 1984 Irish concealed lands papers, in *The Hastings Manuscripts in the Huntington Library, San Marino, California, Analecta Hibernica*, 31, pp.1-192.
- O'Flynn, E. 2011 *The organisation and operation of Uí Neill kingship in the Irish midlands: Clann Cholmáin c.550-916*, Thesis, Trinity College Dublin.
- O'Hara, R. 2009 Report on the archaeological excavation of Roestown 2, Co. Meath. Unpublished Stratigraphic Report courtesy of ACS Ltd.
- O'Kelly, M. J. & Stelfox, A.W. 1963 Two Ring-Forts at Garryduff, Co. Cork, *Proceedings of the Royal Irish Academy: Archaeology, Culture, History, Literature*, 63 (1962 - 1964), pp. 17-125.
- O'Meara, J.J. (tr.) 1982 *Giraldus Cambrensis, Topographia Hibernica, The History and Topography of Ireland*. New York.
- O'Neill, M., 2002 *The Medieval Parish Churches in County Meath*, *The Journal of the Royal Society of Antiquaries of Ireland*, 132, pp. 1-56.
- Ó Néill, J. 2006 Excavation of pre-Norman structures on the site of an enclosed early Christian cemetery at Cherrywood, Co Dublin, in S. Duffy (ed.) *Medieval Dublin VII. Four Courts Press, Dublin*, pp. 66-88.
- O'Rahilly, T. F. 1942 *The Two Patricks: A Lecture on the History of Christianity in Fifth-Century Ireland*. Dublin.
- Orchard, A. (ed.) 1993 'Audite omnes amantes': a hymn in Patrick's praise, D. Dumville, N., & L. Abrams (eds.), *Saint Patrick, AD 493–1993, Studies in Celtic History* 13. Woodbridge, pp. 153–173.
- O'Sullivan, A. 1998 *The archaeology of lake settlement in Ireland*. Discovery Programme Monographs 4. The Royal Irish Academy, Dublin.
- O'Sullivan, A. 2004 *The Social And Ideological Role Of Crannogs In Early Medieval Ireland*, PhD thesis, 2 vols, Dept of History, NUI Maynooth.
- O'Sullivan, A. & Breen, C. 2007 *Maritime Ireland; an archaeology of coastal communities*, Tempus Ltd., Stroud.
- O'Sullivan, A., Sands, R. & Kelly, E.P. 2007 *Coolure Demesne crannog, Lough Derravarragh, Co. Westmeath: a crannog and its landscapes*. Wordwell Ltd., Bray.
- Petrie, G. 1845. *The ecclesiastical architecture of Ireland, anterior to the Anglo-Norman invasion*. Dublin.
- Platt, C. 1969. *The Monastic Grange in Medieval England: A Reassessment*. London.
- Powers, N. 2004 *Augherskea: Report on human remains excavated from site 1A/23/1 during the BGE Gas Pipeline project August - November 2002*. Unpublished report courtesy of Margaret Gowen and Co Ltd.
- Prendergast, F. 1997 *The Down Survey of Ireland, Survey Ireland*, 14, pp. 43-52.
- Quinn, B., & Moore, D. 2009 'Fulacht fiadh' and the beer experiment, Stanley et al. (eds) *Dining & Dwelling*. NRA Monograph Series No. 6. The National Roads Authority, Dublin, pp. 43-53.

- Raftery, J. 1981 Concerning Chronology, in D. Ó Corráin *Irish Antiquity*. Cork, pp. 82-90.
- Riddler, I & Trzaska-Nartowski, N. 2019a Readsland, Co. Meath (15E125), Objects of antler and bone. Report prepared for Archaeology Plan.
- Riddler, I & Trzaska-Nartowski, N. 2019b Readsland, Co. Meath (15E125), Objects of stone. Report prepared for Archaeology Plan.
- Schot, R. 2011 From cult centre to royal centre: monuments, myths and other revelations at Uisneach, in R. Schot, C. Newman & E. Bhreathnach (eds.) *Landscapes of cult and kingship*. Four Courts Press, Dublin, pp. 87-113.
- Schweitzer, H. 2008a Report on the archaeological excavation of Leshamstown 1, Co. Meath. Unpublished Stratigraphic Report courtesy of ACS Ltd.
- Schweitzer, H. 2008b Report on the archaeological excavation of Drumree 1, Co. Meath. Unpublished Stratigraphic Report courtesy of ACS Ltd.
- Schweitzer, H. 2008c Report on the archaeological excavation of Johnstown 2, Co. Meath. Unpublished Stratigraphic Report courtesy of ACS Ltd.
- Scott, B. 2005 *The Dissolution of the Religious Houses the Tudor Diocese Meath*, *Archivium Hibernicum*, 59, pp. 260-276.
- Seaver, M. 2016 *Meitheal. The archaeology of lives, labours and beliefs at Raystown, Co. Meath*. TII Heritage 4. Transport Infrastructure Ireland, Dublin.
- Simington, R.C. (ed.) 1940 *The Civil Survey A.D. 1654-56 county of Meath*, vol. 5 with returns of tithes for the Meath baronies. Dublin.
- Simpson, L. 2005 The ecclesiastic enclosure at Dunshaughlin Co. Meath: some dating evidence, in T. Condit T. & C. Corlett (eds) *Above and Beyond: essays in memory of Leo Swan*. Wordwell Ltd., Bray, pp. 227-238.
- Stevens, P. 2010 For whom the bell tolls: the monastic site at Clonfad 3, Co. Westmeath, in M. Stanley, E. Danagher & J. Eogan (eds.) *Creative minds, archaeology and the National Roads Authority Monograph Series No. 7*. National Roads Authority, Dublin, pp. 85-98.
- Stevens, P. 2019 Excavations (15E0125): 2018-19 Readsland td., Co. Meath. Jet-like jewellery report. Report prepared for Archaeology Plan.
- Stout, M. 1997 *The Irish Ringfort*. Four Courts Press, Dublin.
- Stout, M. 2017 *Early Medieval Ireland 431-1169*. Wordwell Ltd., Dublin.
- Tobin, R. 2003 Houses, enclosures and kilns: excavations at Corbally, Co. Kildare, *Archaeology Ireland*, 17 (3), pp. 32-7.
- Veach, C.T. 2009 A question of timing: Walter de Lacy's seisin of Meath 1189-94, *Proceedings of the Royal Irish Academy: Archaeology, Culture, History, Literature*, 109C, pp. 165-194.
- Wallace, A. Excavation of an early medieval cemetery at Ratoath, Co. Meath, in C. Corlett & M. Potterton (eds.) *Death and burial in early medieval Ireland in the light of recent archaeological excavations*. Wordwell Ltd., Dublin, pp. 295-308.
- Wallace, A. & Anguilano, L. 2010 Iron-smelting and smithing: new evidence emerging on Irish road schemes, in M. Stanley, E. Danagher & J. Eogan (eds.) *Creative minds, archaeology and the National Roads Authority Monograph Series No. 7*. National Roads Authority, Dublin, pp. 69-84.
- Wallace, P.F. 1992a *The Viking Age buildings of Dublin, Part 1: text*. Medieval Dublin excavations 1962-81, Series A, vol. 1. Royal Irish Academy, Dublin.
- Wallace, P.F. 1992b *The Viking Age buildings of Dublin, Part 2: illustrations*. Medieval Dublin excavations 1962-81, Series A, vol. 1. Royal Irish Academy, Dublin.
- Walsh, F. 2011 An early medieval enclosed farmstead at Killickaweeny 1, Co. Kildare, in C. Corlett & M. Potterton (eds.) *Settlement in early medieval Ireland in the light of recent archaeological excavations*. Wordwell Ltd., Dublin, pp. 313-330.
- Warner, R. 1994 *On Crannógs and Kings (Part*

1), *Ulster Journal of Archaeology*, Third Series, 57, pp. 61-69.

Warner, R. B. 1985–6 The date of the start of Lagore, *The Journal of Irish Archaeology*, 3, pp. 75-7.

Wright, J. 1898-1905 *The English Dialect Dictionary*, 6 vols. Henry Fowde, G.P. Pulmans and Sons, London and New York.

White, N.B. 1943 *Extents of Irish monastic possessions, 1540-1541, from manuscripts in the Public Record Office*, London. Dublin.

Wolf, A. 2005 'Amlaíb Cuarán (fl. c. 940-981)', S. Duffy (ed.) *Medieval Ireland: An Encyclopedia*. New York/London, pp. 24-26.