

Report on Archaeological Testing and a Preliminary Architectural Heritage Survey at Rathgowan, Mullingar, Co. Westmeath



Archaeological
Management Solutions

PART 1 – ARCHAEOLOGICAL INFORMATION



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The results, conclusions and recommendations contained within this report are based on information available at the time of its preparation. Whilst every effort has been made to ensure that all relevant data have been collated, the author and AMS accept no responsibility for omissions and/or inconsistencies that may result from information becoming available subsequent to the report's completion.

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Summary

This updated report describes the results of archaeological testing and a preliminary architectural heritage survey undertaken at a proposed development site at Rathgowan or Farranshock and Sarsanstown townlands on the western outskirts of Mullingar town in Co. Westmeath. The testing was carried out by Zbigniew Malek of Archaeological Management Solutions (AMS) between 26–29 October 2021. A site visit by Jon Stirland of the National Monuments Service (NMS) was undertaken on 28 October 2021.

The development site adjoins a recorded archaeological monument, listed on the Sites and Monuments Record (SMR) and Record of Monuments and Places (RMP) as a ringfort, in Sarsanstown (WM019-046). The monument is partly defined by the hedgerow that was a townland boundary between Sarsanstown and Rathgowan in the nineteenth and the early-twentieth century, in the west of the Site. This monument's Zone of Notification (ZoN) extends into the western extent of the proposed development Site.

The testing follows an Archaeological Assessment by AMS in 2021, which was undertaken to support a planning application for the proposed Strategic Housing Development (SHD) on the Site. The recommendations in the Archaeological Assessment included an architectural heritage survey, archaeological testing in advance of development and archaeological monitoring (Marshall & Rice 2021, 28–29). The proposed development Site was also subject to a geophysical survey (20R0256) in November 2020 during which several anomalies of archaeological potential were identified (Leigh 2020).

The archaeological testing consisted of 76 test trenches totalling 1,718 linear metres. This is the equivalent of 5.1% of the available testing area of the proposed development Site which measures 6.06 hectares. The proposed programme of test-trenching, totalling 1,683 linear metres (O'Hora 2021), was enhanced to recognise the extent of the features and to secure safe conditions for groundworks. The targeted test-trenching focused primarily on anomalies highlighted in the geophysical survey outside of the ZoN associated with the ringfort (WM019-046). The testing was carried out under the direct and continuous supervision of a Site Director (Zbigniew Malek), accompanied by a supervisor, a site assistant and a surveyor, in order to identify any subsurface archaeological remains that may have survived.

As a result of the archaeological testing and a preliminary architectural heritage survey, three areas of archaeological and historical potential were identified and recorded as Archaeological Areas (AA) 1–3: a post-medieval vernacular house and outbuilding (AA1), an isolated pit with *in-situ* burning (AA2), and a group of two charcoal-production kilns and a posthole (AA3). These sites will be impacted by the proposed development and construction works on site will result in the total removal of these sites. Therefore, the three sites are recommended for full archaeological excavation and recording in advance of construction. Archaeological excavation and architectural heritage survey involve preservation by record through appropriate rescue excavation of archaeological features or deposits and appropriate documentation of architectural structures so as to mitigate impacts on the archaeological and historical remains.

The testing also revealed numerous post-medieval/modern features of an agricultural nature including field boundary ditches, field drains and agricultural furrows. These features are not considered to be of archaeological interest and have been adequately recorded.

This report has been updated on receipt of a revised development description (detailed in Part 2 of this report) and updated site layout plan (Figure 2), received from the client on 16 June 2022 in advance of their planning submission. The updates received do not have any material change in the impacts or recommendations put forward in the previous version of this report (submitted 24 January 2022).

It is recommended that no building works, drainage features or landscaping works are undertaken within an exclusion zone defined by the ZoN for the ringfort and that this buffer zone will be permanently fenced-off prior to groundworks commencing and defined by a line of trees within the finished development. It is also recommended that any site preparation groundworks such as topsoil clearance, or other intrusive activity on the site, should be monitored by a licence-eligible archaeologist under a licence issued by the NMS of the Department of Housing, Local Government and Heritage.

All recommendations are subject to the approval of the NMS and the Director of the National Museum of Ireland (NMI). Proposed mitigation measures should comply with the *National Monuments Acts 1930 to 2014*. Preservation by record should be undertaken under the existing licence (21E0518) issued under Section 26 of the *National Monuments Act 1930* (as amended) and be in accordance with the *Framework and Principles for the Protection of the Archaeological Heritage* (DAHGI 1999).

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Abbreviations and Definitions

Abbreviation	Definition
AA	Archaeological Area
AMS	Archaeological Management Solutions
DAHGI	Department of Arts, Heritage, Gaeltacht and the Islands
HEV	Historic Environment Viewer
ITM	Irish Transverse Mercator
MLAP	Mullingar Local Area Plan
NIAH	National Inventory of Architectural Heritage
NMI	National Museum of Ireland
NMS	National Monuments Service
OS	Ordnance Survey
RMP	Record of Monuments and Places
RPS	Record of Protected Structures
SHD	Strategic Housing Development
SMR	Sites and Monuments Record
ZoN	Zone of Notification

Coordinate System

All grid coordinates in this report use the Irish Transverse Mercator (ITM) coordinate reference system unless otherwise stated.

1 Introduction

This report describes the results of archaeological testing and a preliminary architectural survey in the townlands of Rathgowan or Farranshock and Sarsanstown, Mullingar, County Westmeath (Figure 1 and Figure 3). The testing was undertaken on behalf of DSPL Ltd and was carried out under the archaeological supervision of the Site Director Zbigniew Malek of AMS between 26–29 October 2021.

This report has been updated on receipt of a revised development description (detailed in Part 2 of this report) and updated site layout plan (Figure 2), received from the client on 16 June 2022 in advance of their planning submission. The updates received do not have any material change in the impacts or recommendations put forward in the previous version of this report (submitted 24 January 2022).

The testing follows an Archaeological Assessment prepared by AMS which was undertaken to support a planning application for the proposed Strategic Housing Development (SHD) on the Site. The recommendations in the Archaeological Assessment included an architectural heritage survey, archaeological testing in advance of development and archaeological monitoring (Marshall & Rice 2021, 28–29). The proposed development Site was also subject to a geophysical survey (20R0256) in November 2020 during which several anomalies of archaeological potential were identified (Leigh 2020; Figure 8 and Figure 9).

The preliminary architectural heritage survey of the remains of a stone wall were carried out in order to identify its nature, extent, date and significance. This was supported by one of the targeted test trenches to confirm previous analysis based on historical mapping (Marshall & Rice 2021).

The development site adjoins a recorded archaeological monument, listed on the Sites and Monuments Record (SMR) and Record of Monuments and Places (RMP) as a ringfort, in Sarsanstown (WM019-046). The monument is partly defined by the hedgerow that was a townland boundary between Sarsanstown and Rathgowan in the nineteenth and the early-twentieth century, in the west of the Site. This monument's Zone of Notification (ZoN) extends into the western extent of the proposed development Site (Figure 6 and Figure 7; Plate 1).

The archaeological testing consisted of 76 test trenches, totalling 1,718 linear metres (Figure 7). The original proposed programme of test trenching as detailed in the method statement (O'Hora 2021), totalling 1,683 linear metres, was enhanced to recognise the extent of the features and to secure safe conditions for groundworks. The testing area is the equivalent of 5.1% of the available area of the proposed development site which measures 6.06 hectares. The targeted test-trenching focused primarily on any anomalies highlighted in the geophysical survey, although not within the ZoN associated with the ringfort (WM019-046) (Figure 8 and Figure 9).

The testing works were carried out under licences 21E0518 (testing) and 21R0203 (metal detection) as issued to Niall O’Hora and transferred to Zbigniew Malek by the National Monuments Service (NMS) of the Department of Housing, Local Government and Heritage in consultation with the National Museum of Ireland (NMI). A site visit by Jon Stirland of the NMS was undertaken on 28 October 2021. For further information regarding the background to the investigations, see Part 2 of this report (21E0518X).

2 Receiving Environment

The following sections are extracted from the Archaeological Assessment prepared by AMS (Marshall & Rice 2021).

2.1 Site Location Overview

The proposed development Site, which encompasses an area of 60,600m² (i.e., 14.9745 acres or 6.06 hectares), is located in Rathgowan or Farranshock and Sarsanstown townlands in Mullingar, County Westmeath (Figure 3). The site is in pasture with spoil heaps of materials from previous groundworks and is liable to heavy waterlogging. The site encompasses five fields sub-divided by a series of hedgerows and tree-lined boundaries (Figure 6).

2.2 Description of Proposed Works

For further information regarding the description of the proposed works, see Part 2 of this report (21E0518X).

3 Archaeological and Historical Background

An archaeological assessment for the proposed development in Rathgowan, County Westmeath was compiled by AMS to support a planning application. This assessment comprehensively sets out the receiving archaeological and historical environment of the area. Information presented below is extracted from this report (Marshall & Rice 2021, 11–16).

3.1 Archaeological Background

3.1.1 Prehistoric Period

The County Heritage Plan for Westmeath 2018–2023¹ recognises that the county has a wealth of prehistoric archaeological monuments including the royal site of Uisneach, prehistoric barrow burials, wooden trackways such as the Bronze Age road at Mayne, and various types of earthworks dotted throughout the landscape. Many prehistoric artefacts have been found, from early stone tools dating from the Mesolithic period to Bronze Age gold ornaments. The National Museum of Ireland (NMI) database records (Table 4) list no artefacts from the townlands of Rathgowan or Farranshock, or from Sarsanstown. However, a range of artefacts from the vicinity of Mullingar, including prehistoric stone axes, gold ornaments and bronze spearheads, are recorded by the NMI.²

A small number of recorded prehistoric sites are recorded in the vicinity of the Site, although none are located within the Study Area. The site of a former Standing Stone (WM019-089003) 1km to the east of the Site is recorded in the east of the Study Area. Standing Stones are usually Bronze Age in date, but the SMR records the following for this feature: “It is possible that this standing stone was not a prehistoric monument but the remains of a 19th century War Department Boundary Stone marking out the boundary of the military property belonging to Columb Barracks” (SMR WM019-089003).³

The nearest recorded prehistoric monuments to the Site are a complex of monuments including an enclosure (WM018-085002) and a pair of barrows or burial sites (WM018-085001, WM018-085003) on a low rise in Walshestown South, 2.6km to the northwest of the Site, and a large mound barrow

¹ <http://www.westmeathcoco.ie/en/ourservices/planning/conservationheritage/heritageplan/> [Accessed: November 2021].

² It must be noted the provenance of older finds from the nineteenth and early twentieth centuries may simply give some findspots as ‘Mullingar’ or ‘near Mullingar’ and it is unknown how far away from the Site some of these were discovered or even whether they were in their original locations. Thus, while these artefacts are from the wider area and similar materials could potentially be present on the Site, there is limited accurate information on findspots.

³ <https://maps.archaeology.ie/HistoricEnvironment/>

(WM019-030) 2.3km to the north of the Site in Irishtown.⁴ The area was clearly in use for burial during the prehistoric period and was likely settled, although no houses of this date have been identified in the area to date.

As outlined above, the Site has some water-logged low-lying areas with peat and this is a typical location for *fulacht fiadh* or burnt mound sites. These monuments are comprised of a trough or pits, and/or a spread of burnt stone and charcoal, often without artefacts and they date mainly to the prehistoric period. There is potential for such archaeology on the Site, as well as possible burials or pits as found in archaeological investigations locally (Guinan 2004).

3.1.2 Medieval Period

There are records of an early medieval ringfort named *Dun Bri* in the vicinity of Mullingar (Delaney 2006) although Mullingar's foundation as a town is thought to date to the twelfth century. Conall mac Suibhne, a seventh-century King of Mide, held the land of Mullingar on which there was a fort. A number of artefacts of this date found in Mullingar give support to the suggestion of a secular early medieval residence in the area (as cited in WM019-089 SMR entry).

It is believed that Mullingar was the chief manor of William le Petit, who was granted the manor of Magheradernon by Hugh de Lacy. The parish church (WM019-089016) of All Saints seems to date to the late twelfth century and William le Petit was granted a four-day fair at Mullingar in 1207. These two features indicate that there was a nucleated settlement here from the beginning of the thirteenth century. The foundation, however, of the Augustinian (WM019-089009) and Dominican (WM019-089004) priories c.1227 and c.1237 respectively reflects significant activity in the second quarter of the thirteenth century. No early charters are known but a mention of the provost and bailiffs in 1297 indicates that the town corporation was in existence by this date (WM019-089 SMR entry). The extent of the manorial holding is not known, and it is unclear if it could have incorporated the Site as part of the manor outfields.

Mullingar town's urban boundary lies to the east of the Site and its smaller historic core, lying outside the Study Area, is a recorded archaeological monument (WM019-089) and as an Historic Town its defences, including the walls and gates, are also a National Monument.

The medieval monuments in the historic town of Mullingar consisted of an Anglo-Norman motte and bailey castle (WM019-089005), a stone castle known as Mullingar Castle (WM019-089001), All Saints' Parish Church (WM019-089016) and graveyard (WM019-089017), St Mary's Augustinian Priory

⁴ <https://maps.archaeology.ie/HistoricEnvironment/>

(WM019-089009), Holy Trinity Dominican Priory (WM019-089004), a Frankhouse (WM019-089027) belonging to the Knights Hospitaller, numerous urban castles (WM019-089001; WM019-089010; WM019-089029; WM019-089030; WM019-089032; WM019-089040-048), a town gaol (WM019-089007), a sessions house (WM019-089039), a bridge (WM019-089015) [Morans Bridge] over the River Brosna, a watermill (WM019-089006) known as the Mote Mill and a tucking mill called Francis's Mill (WM019-089033). The motte and bailey castle were constructed close to the fording point (WM019-089014) over the River Brosna. The location of a medieval road or 'way' passing through the area known as 'Bohyrbuy' [*Boher Bui*, Yellow Road] has not been identified (WM019-089 SMR entry).

3.1.3 *Post-Medieval to Modern Period*

The town had a difficult existence during the fifteenth and sixteenth centuries. For instance, in 1484 Mullingar was burned by the Gaelic Uí Maine and in 1475 the townspeople had to buy off Aodh Rua O Domhnaill in order to prevent him from burning it. The date of the construction of the first bridge (WM019-089015) is unknown but in 1569 'the bridge of Mullingar' is referred to as being 'near the churchyard'. In 1572 Mullingar was plundered and burned by the Clanricard Burkes. A highway called 'Bater Sedgre' in or near Mullingar, mentioned in 1573, cannot be identified today. In 1575, the town was devastated by plague and plundered and burned by Aodh MacUidir and Cormac O'Neill in 1587 (WM019-089 SMR entry).

The seventeenth century, however, was a period of prosperity for Mullingar. A reference to the 'West Gate' in a land grant of 1609 suggests that town defences (WM019-089035) had been constructed around Mullingar during the late sixteenth century. The extent of the defences is difficult to gauge but it is likely that their boundary was formed by the River Brosna on the east, by the line of Bishop's Gate Street and Friar's Mill Road on the north and by the boundary of the parish churchyard on the south. The motte and bailey (WM019-089005) may have been linked to the defences but it is not certain. The western boundary of the town is conjectural but the SMR entry suggests that the Square possibly formed the western limit of the defended town (WM019-089 SMR entry). These defences are therefore not expected to extend into the Study Area.

The 1656 Down Survey map of Co. Westmeath⁵ depicts Mullingar as an oval-shaped fortified town standing on the banks of the River Brosna. In 1661, Sir Arthur Forbes was granted the castle, two now dissolved monasteries and the town of Mullingar as a manor. In 1667, the confirmation of a land grant to Sir Arthur Forbes under the Acts of Settlement and Explanation listed in the town of Mullingar (WM019-089) a mount which was the remains of the Anglo-Norman earth and timber castle (WM019-

⁵ <http://downsurvey.tcd.ie/index.html> [Accessed: November 2021]

089005), a number of castles (WM019-089001; WM019-089010; WM019-089029; WM019-089030; WM019-089032; WM019-089040-048), three mills (WM019-089006; WM019-089033; WM019-089038), a Dominican abbey (WM019-089004), an Augustinian abbey of Canons Regular (WM019-089009) and a Session House (WM019-089039) (WM019-089 SMR entry).

The historic town of Mullingar was described in 1682 by Sir Henry Piers, who recorded the existence of an over-shaft mill (WM019-089006), two other mills (WM019-089033; WM019-089038), two monasteries (WM019-089009, WM019-089004); one of these stood in the east end of the town, the other on the west end of the town. Also, some 'castles' (WM019-089001; WM019-089008; WM019-089010; WM019-089029; WM019-089030; WM019-089032) which likely include tower houses or fortified houses in the area, a gaol (WM019-089007) a session house (WM019-089039) and a church (WM019-089016). He noted that the 'whole town and commons' was 'given in fee to the Right Hon. The Lord of Granard and his heirs, the ancient corporation is dissolved, and the whole town and liberties, with other his lordship's lands in this county are by his majesty erected into a manor' (WM019-089 SMR entry).

In 1682, Piers indicates that it was a thriving town in which many of the old buildings were either restored or replaced. In 1690, during the Williamite Wars, earthwork fortifications were constructed around the historic town (WM019-089) of Mullingar. These fortifications may have incorporated the earlier town defences (WM019-089035) dating from the late sixteenth century (Andrews & Davies 1992, 10). In 1691, new fortifications were constructed around the town which may have included the construction of a star-shaped fort around All Saints' parish church (WM019-089016) and graveyard (WM019-089017) as shown on a map of Mullingar dating from 1691 (WM019-089 SMR entry).

The historical background of the Mullingar Local Area Plan 2014–2020 notes that in 1806, a transport revolution was brought to the town with the completion of the Royal Canal, followed by the railway in 1848. In 1858, Lord Greville purchased Mullingar town and his family remained as landlords of Mullingar until the 1920s.

Nineteenth-century Mullingar was an important military centre and many British army regiments were stationed in the town, presumably at the barracks on the west side of the town which is located within the Study Area. The original barracks were built in 1814 to accommodate 1,000 soldiers and it is likely that the majority of these were housed in these two barrack buildings. It was originally named Wellington Barracks, like many of the barrack complexes built in Ireland at the time. During the First World War, the town was a major military training depot (MLAP 2014, 11). The barracks was renamed Columb Barracks in 1922 after it was handed over by the British to the fledgling Irish State on

independence.⁶ The barracks has numerous historically significant connections, being named after Patrick Columb, a member of the National Army who was killed on Mary Street, Mullingar, in 1922.⁷

3.2 Recorded Archaeological Sites

There are no recorded archaeological sites within the footprint of the proposed development; however, there is one recorded monument located adjoining it. Sarsanstown ringfort (WM019-046) lies on the west side of the Site and its ZoN extends c.30m into the western portion of the Site (Figure 3). The Sarsanstown monument is recorded as an almost circular earthen-banked ringfort, with its morphology in line with other recorded examples and in an area adjacent to a number of other known medieval ringforts. However, it is in poorly drained land which may not have been suitable for occupation, suggesting that it could perhaps have been an agricultural enclosure of similar form and unknown date.

The site of a former standing stone (WM019-089003) is located 760m east of the proposed development, within modern Mullingar town (Figure 3). This standing stone is recorded as likely to have been erected in the nineteenth century as a boundary marker associated with the barracks, and when first recorded was not in its original location. Military archive plans⁸ of the barracks show the original locations of nineteen boundary stones located both around the barracks walls and stretching northwards into fields along the line of a sewage system. The stone is therefore regarded as built heritage; it will not be included on the next revision of the statutory RMP.

Table 1: Recorded archaeological sites within a 1km radius of the proposed development.

SMR No.	Classification	Townland	ITM_E	ITM_N
WM019-046	Ringfort	Sarsanstown	641819	753298
WM019-089003	Standing stone	Mullingar	642900	753343

⁶ https://en.wikipedia.org/wiki/Columb_Barracks [accessed 12 February 2021]

⁷ <https://www.buildingsofireland.ie/buildings-search/building/15310007/columb-barracks-ashe-road-mullingar-mullingar-countywestmeath#:~:text=The%20site%20for%20the%20barracks,in%20these%20two%20barrack%20building> [Accessed: November 2021]

⁸ <http://mpdsearch.militaryarchives.ie/> Plan AD119275-009 [Online: Accessed 05.07.21].

3.3 Recorded Built Heritage Sites

There are no previously recorded built heritage sites located within the Site. Forty-three built heritage sites fall within the 1km Study Area (Table 2; Figure 3). All are recorded by the National Inventory of Architectural Heritage (NIAH), with many of the buildings in Columb Barracks also being included on the statutory Register of Protected Structures (RPS) for County Westmeath. The nearest are Rathgowan House (NIAH Reg. No. 15310001) and Barrack View (RPS No. 019-020; NIAH Reg. No. 15310002). Rathgowan House in Brackagh townland, lies c.140m northwest of the site. The name might suggest it is an estate house and its owners once controlled the lands of Rathgowan; however, the records show this is a small house built in suburban style c.1920 and it appears to have no relation to the Site other than forming part of its local setting. Barrack View is a house c.250m to the east of the Site dated to 1870–1900. It is not currently shown on the Historic Environment Viewer or the NIAH Building Survey (Figure 3).

The remaining recorded built heritage sites are not related to the Site and are concentrated in and around Columb Barracks on the western outskirts of Mullingar town, located c.460m to the east of the Site (Figure 3). These include the barracks gateway, boundary walls, internal buildings such as barracks buildings, a chapel, gym, house and a well. Just outside the barracks walls lie a milepost and a post-box recorded by the NIAH (Table 2).

The Archaeological Assessment report (Marshall & Rice 2021) noted that unrecorded potential architectural heritage may be present on the site as partial remains of a stone wall are present in the location where two small vernacular buildings and an avenue leading from the R393 road to the north are visible on OS mapping (Figure 4 and Figure 5).

Table 2: Recorded built heritage sites within the study area (NIAH)

NIAH Reg. No.	RPS No.	Name (if known)	Importance Rating	Original Use
15310001	N/A	Rathgowan House	Regional	House
15310002	019-020	Barrack View	Local	House
15310003	019-021	Columb Barracks	Regional	Barracks
15310004	N/A	Butler's Public House	Local	Public house
15310005	019-022	N/A	Regional	Post box
15310006	019-023	N/A	Local	Monument
15310007	019-024	Columb Barracks	Regional	Barracks
15310008	019-025	St Colman's chapel	Regional	Church/chapel
15310009	019-026	Columb Barracks	Regional	Building misc; rectory/glebe/vicarage/ curate's house

NIAH Reg. No.	RPS No.	Name (if known)	Importance Rating	Original Use
15310010	019-027	Columb Barracks	Regional	Gates/railings/walls
15310011	019-028	Columb Barracks	Regional	Guard house
15310012	019-029	Columb Barracks	Regional	Barracks; building misc
15310013	019-030	Columb Barracks	Regional	Officers' mess
15310014	019-031	Columb Barracks	Regional	Tank/silo
15310015	019-032	Columb Barracks	Regional	Prison/jail
15310016	019-033	Columb Barracks	Regional	Well
15310017	019-034	Columb Barracks	Regional	Barracks
15310018	019-035	Columb Barracks	Regional	Barracks
15310019	019-036	Columb Barracks	Regional	Sports hall/centre/gymnasium
15310024	019-039	N/A	Regional	House
15310025	019-040	N/A	Regional	House
15310026	N/A	N/A	Local	House
15310026	N/A	N/A	Local	House
15310027	N/A	N/A	Local	House
15310027	N/A	N/A	Local	House
15310028	N/A	N/A	Local	House
15310028	N/A	N/A	Local	House
15310028	N/A	N/A	Local	House
15310028	N/A	N/A	Local	House
15310028	N/A	N/A	Local	House
15310028	N/A	N/A	Local	House
15310028	N/A	N/A	Local	House
15310028	N/A	N/A	Local	House
15310028	N/A	N/A	Local	House
15310028	N/A	N/A	Local	House
15310028	N/A	N/A	Local	House
15310029	019-041	N/A	Local	Vent pipe
15310030	N/A	Valley Cottages	Local	House
15310030	N/A	Valley Cottages	Local	House
15310030	N/A	Valley Cottages	Local	House
15310030	N/A	Valley Cottages	Local	House
15310224	N/A	McKeown Terrace	Regional	House
15310225	N/A	McKeown Terrace	Regional	House
15310231	019-211	N/A	Regional	Milestone/milepost
15310232	019-212	23 Patrick Street	Regional	House

3.4 Previous Archaeological Investigations

Previous archaeological investigations have taken place within the proposed development site (Table 3). These works occurred in 2004 and comprised test-trenching (04E0980; Guinan 2004) (Figure 7).⁹ These works identified three areas of burning, two of which were non-archaeological in nature. The third area was an isolated, shallow cut feature filled with charcoal-stained soil, mixed with sandstone and limestone pebbles. A total of eight trenches were mechanically investigated across the test area.

A geophysical survey was carried out under licence 20R0256 by J. M. Leigh Surveys Ltd on the site in November 2020 on behalf of AMS and DSPL Ltd for the proposed SHD development (Leigh 2020). A gradiometer survey covered an area totalling c.1.5 hectares across two discrete areas: Area A was located adjacent to the recorded ringfort (WM019-046) within its ZoN and Area B was located in the southern portion of the site, adjacent to a housing estate (Figure 8 and Figure 9). The total area covered by the geophysical survey was 24.75% of the Site's total area of 6.06 hectares. Ground conditions were not conducive to the full Site being surveyed.

In Area A, a number of short linear responses were recorded adjacent to the recorded ringfort; however, there was no clear archaeological pattern and these may represent agricultural activity of unknown date. In Area B, further likely agricultural activity was represented by short linear responses indicative of ploughing and drainage features. A notable trend running through the east of Area B did not appear to be associated with the background agricultural responses and may represent a former field division or other linear feature. A short linear response located at the western extent of Area B had a magnetic signature indicative of a ditched feature and was considered to be of potential archaeological interest (Figure 9, Feature 4).

In the wider environs, two other archaeological investigations have been carried out within a 1.5km radius of the site (Table 3). In the townland of Rathgowan, pre-development testing was carried out on the site of a proposed housing development on the northwest edge of the town, to the north of the Site and comprised the excavation of 43 trenches (06E0953, Delaney 2006).¹⁰ A pit feature was uncovered during testing and was excavated along with two further pit features under an extension to licence 06E0953. It seems likely from the evidence that the pits date from the Late Bronze Age or Iron Age and that one of the pits was used to carry out cremations, with the burnt bones deposited in the other two pits. Archaeological test-trenching was also undertaken at the site of a proposed

⁹ <https://excavations.ie/report/2004/Westmeath/0012853/> [Online: Accessed 05.07.21].

¹⁰ <http://excavations.ie/report/2006/Westmeath/0016835/> [Online: Accessed 05.07.21].

housing development, off Ashe Road, Mullingar, Co. Westmeath. Twelve test trenches were excavated and a possible prehistoric pit was discovered (20E0255).¹¹

Table 3: Archaeological investigations carried out within 1.5km of the proposed development.

Licence No.	Site Type	Townland	Licensee
04E0980	Isolated, shallow cut feature filled with charcoal-stained soil	Farranshock/Sarranstown (sic), Co. Westmeath	Bernard Guinan,
06E0953	Pit feature	Rathgowan, Co. Westmeath	Dominic Delaney, Dominic Delaney & Associates
06E0953 ext.	Pit features	Rathgowan, Co. Westmeath	Dominic Delaney, Dominic Delaney & Associates
20E0255	Pit, possibly prehistoric	Ashe Road, Mullingar	Padraig Dunne, John Cronin & Associates

3.5 Topographical Files

Due to Covid-19 restrictions a physical search of the Topographical Files in the Antiquities Division of the NMI in Kildare Street could not be undertaken by the author. As is current practice, a search request was forwarded to the NMI Duty Officer for the preparation of the Archaeological Assessment in October 2021 (Marshall & Rice 2021, 36–37).

The following townlands were assessed, which occur within a 1.5km radius of the site: Rathgowan or Farranshock, Sarsanstown, Mullingar.

No finds are listed as deriving from Rathgowan or Farranshock, or Sarsanstown townlands. Some artefacts with a find spot listed only as ‘Mullingar’ appear on the list but could have been found in any part of the town (Table 4). One bronze spearhead, likely of prehistoric date, is noted to have been found ‘near the barracks’, which is assumed to be Columb Barracks located c.0.7m to the east of the site on the edge of Mullingar town.

Table 4: Finds registered in the Topographical Files of the NMI

NMI Reg. No.	Description	Townland
1000:1886	Battle axe	Mullingar
1874:89	Dress- fastener	Near Mullingar
1884:10	Bracelet	Near Mullingar
1884:11	Finger ring	Near Mullingar

¹¹ <https://excavations.ie/report/2020/Westmeath/0030053/> [Online: Accessed 16.07.21].

NMI Reg. No.	Description	Townland
1884:6	Torc	Near Mullingar
1884:7	Lunula	Near Mullingar
1884:8	Ear-spool	Near Mullingar
1884:9	Ear-spool	Mullingar
1929:277	Torc	Mullingar
1931:Wk213	Bell	Mullingar (Nr.)
1932:6569	Axehead	Mullingar
1932:Wk214	Bell	Mullingar (Nr.)
1934:135	Ardshare	Mullingar
1938:9638	Spoon	Near Mullingar
1941:504	Stone	Mullingar
1948:65	Bead	Mullingar
1968:267	Spearhead	Near the barracks
1968:308	Axehead	Near Mullingar
1968:314	Axehead	Near Mullingar
1968:330	Axehead	Near Mullingar
1968:338	Axehead	Near Mullingar
1968:346	Axehead	Near Mullingar
1968:351	Axehead	Near Mullingar
1968:366	Axehead	Mullingar
1968:374	Tool	Mullingar
1968:376	Whetstone	Mullingar
1982:30	Tool	Patricks St., Mullingar
1984:106	Stone	Near Mullingar
1995:70	Human Remains	Mullingar
2004C1:927	Coin	Mullingar
2005C4:23	Pipe	Mullingar
2005C4:24	Pipe	Mullingar
2005C4:25	Pipe	Mullingar
2005C4:26	Object	Mullingar
2011:281	Human Remains	Mullingar
2011:282	Object	Mullingar
3487:W33	Shoe	Austin Friars Street., Mullingar
5477:W330	Ringed Pin	Austin Friars Street., Mullingar
7605:W86	Ornament	Mullingar

NMI Reg. No.	Description	Townland
E499:492	Button	Lough, Tuitestown, Mullingar
E499:513	Button	Tuitestown Lough, Mullingar
R2351	Sword	In Neighbourhood of Mullingar
R2352	Sword	In Neighbourhood of Mullingar
R2353	Sword	In Neighbourhood of Mullingar
R2354	Sword	In Neighbourhood of Mullingar
R2355	Sword	In Neighbourhood of Mullingar
R2471	Spearhead	Bog of Curraghmore, Near Mullingar
R2912	Ornament	Mullingar
R341	Shoe	Bog of The Great Down, 4 Miles East of Mullingar
RIA1898:40	Spearhead	Baltrasna Bog, three Miles from Mullingar
SA1913:117	Razor	Near Mullingar
SA1913:119.1	Seal Matrix	Mullingar
X2100	Axehead	Mullingar
X2101	Palstave	Mullingar
X2102	Palstave	Mullingar
X2103	Rubber	Mullingar

3.6 Cartographic Analysis

3.6.1 *Down Survey Map of the Barony of Moyashell and Maherdernon (c.1656)*

Mullingar is depicted as an oval-shaped fortified town standing on the banks of the River Brosna with the placenames ‘Rathgowe’ and ‘Sarsonstown’ shown to its southwest; the placename ‘Farransollot’ may refer to Farranshock. Two areas immediately surrounding the town are noted as commons land.¹²

3.6.2 *John Rocque’s Map of Ireland (1790)*

The town of Mullingar is depicted as ‘Mullengar’ on the John Rocque *Map of the Kingdom of Ireland, divided into Provinces, Counties and Baronies* [Northern Section].¹³

3.6.3 *First-Edition Ordnance Survey Six-inch Map (1838)*

The first-edition six-inch Ordnance Survey (OS) map for the area dates to 1838¹⁴ and shows Rathgowan townland extending to the north and south of the modern R393 road (Figure 4). Its boundary on the west side, where it adjoins the ringfort (WM019-046), does not appear to have changed since this

¹² <http://downsurvey.tcd.ie/down-survey-maps.php> [Online: Accessed 05.07.21].

¹³ <https://libguides.ucd.ie/findingmaps/mapshistireland> [Online: Accessed 05.07.21].

¹⁴ Sheet WM019, surveyed 1836, published 1838

date. A total of six buildings line the R393 road and two buildings that appear to be a small vernacular house and outbuilding are shown in the western extent of the Site, accessed by an avenue leading southward from the R393 road. The Site is divided into small fields, all of which appear to be pasture and are not indicated on mapping as marshy or wetland, despite the known presence of peat and waterlogged land on the Site today. A narrow road or path leads southeast from the vernacular house avenue, cutting across the fields towards the town boundary, which was once following the line of a road at this point. The remainder of the townland is agricultural land in fields. The urban extent of Mullingar town adjoins the east side of Rathgowan and covers a portion of the southeast of the Site. The barracks on Ashe Road is shown as a rectangular walled compound of buildings at this time, although it is surrounded by fields as the town does not fill its urban extent. An area of commons is shown to the north of the barracks.

3.6.4 Second-Edition Ordnance Survey 25-inch Map (1913)

The 25-inch map dates to 1913¹⁵ and shows Rathgowan House was built to the north of the R393, with a laundry building then located to the northwest of the Site, which is no longer extant (Figure 5). Otherwise, the same field divisions depicted on the 25-inch map remain on the Site; however, Mullingar has an expanded town footprint with new buildings between the military barracks and the Site. During the twentieth century, a bend on the R393 road just northwest of the Site was straightened. The nineteenth-century field boundaries have been removed to create larger fields and new housing and roads have been constructed; the area to the east of the Site has been developed as the town of Mullingar expands.

3.7 Other Sources

Columb Barracks was a British military barracks before being handed over to the Irish State on independence in the early twentieth century. There appear to be local beliefs that land adjacent to the barracks holds buried ordnance and that some munitions were buried on a nearby landed estate after independence, although there are no reliable sources quoted for these suspicions.¹⁶

Military archives for the barracks include an undated Ordnance Survey plan (AD119276-02) of an extension to Mullingar rifle range, which was located on open ground in Marlinstown Bog, Clongawney and the Downs c.1.8km east of Mullingar town.¹⁷ In the same collection, a 1917 ground plan of the

¹⁵ Sheet WM019-09, surveyed 1911, published 1913

¹⁶ <https://erinascentantwordpress.wordpress.com/2016/07/01/bloodshed-in-mullingar-civil-war-begins-in-co-westmeath-april-1922/> [Accessed: November 2021]

¹⁷ <https://www.militaryarchives.ie/en/home/> [Accessed: November 2021]

barracks (AD119275-009) notes a 'Drill Field' as an 'Area of War Department Property' on the south side of the barracks walls.

There are no records of associated ordnance grounds surrounding the barracks although the surrounding lands of similar military installations, such as at Athlone, would have been used for such activity. It is unknown whether such lands adjacent to the barracks were also used for firearms training or could hold unrecorded unexploded ordnance (UXO) but it may be an issue to consider for the Site, and contact should be made with the barracks, who may have an archivist who could advise if necessary.

4 Methodology

4.1 Aim of Archaeological Test Excavations

The key aim of the archaeological test excavations was to ascertain the existence, location, nature, character, extent, date and significance of whatever archaeological features or deposits may be present within the Site boundary. The investigation's main aim, in seeking to build on the results of the geophysical survey (Leigh 2020) and shed further light on the buried archaeological environment, is to inform any further archaeological mitigation that may be required prior to development works commencing.

4.2 Aim of Preliminary Architectural Heritage Survey

The key aim of the preliminary architectural heritage survey was to investigate the nature of an extant stone wall in the location where two small vernacular buildings and an avenue leading from the R393 road to the north are visible on OS mapping (Figure 4 and Figure 5). Prior to the survey it was questionable if the wall remains related to these buildings or if the avenue was walled and partially survived (Marshall & Rice 2021, 24).

4.3 Archaeological Test Excavation Strategy

Archaeological testing comprised c.5.1% of the total site area (6.06 ha) and trenches targeted anomalies that were identified through the geophysical survey (Leigh 2020), as well as investigating areas where no geophysical responses were highlighted or adjacent to an extant stone wall. The test excavations consisted of 76 test trenches totalling 1,718 linear metres.

4.4 Excavation Methods

The trenches were dug by a 13-tonne tracked excavator equipped with a toothless ditching bucket working under the direct and continuous supervision of the excavation director. The excavated trenches were 1.8m in width. The location of each trench was 'set-out' in advance by the project surveyor using GPS survey equipment.

All testing works were carried out to best practice and in adherence with relevant guidelines and standards, including *Framework and Principles for the Protection of the Archaeological Heritage* (DAHGI 1999a), *Guidelines on Archaeological Excavation* (DAHGI 1999b) and *Advice Notes for Excavators* (NMI 2010).

Where necessary, test trenches were extended/widened, and/or additional test trenches were excavated. Where potential archaeologically significant features or structures were identified, these were cleaned and tested by hand. The areas/sites were assessed and recorded in accordance with the

method statement for the works. A full list of features is included in the appendix. Trenches were backfilled when the relevant excavation and recording was complete.

Reporting is in line with the standards set out by the NMS in their *Guidelines for Authors of Reports on Archaeological Excavations* (DEHLG 2006).

4.5 Finds Retrieval and Sampling Methods

Every effort was made to ensure the highest possible level of identification and retrieval of archaeological objects from all periods during the test excavations. Provision was made for the use of a metal detector to scan *in-situ* archaeological deposits and spoil during testing, where deemed appropriate (this was carried out under Licence No. 21R0203). However, no archaeological objects were found during metal detecting.

All objects found on spoil heaps, including those relating to relatively recent structures and historical events were collected and photographed.

No environmental or bulk soil samples were retrieved from any archaeological contexts for subsequent environmental analysis and radiocarbon dating. Two small burnt bones retrieved from the topsoil in trench T31, overlying an agricultural furrow, were not suitable for further analysis, due to its preservation condition and dimensions.

4.6 Constraints on Archaeological Methods

Testing was not undertaken within the Zone of Notification (ZoN) associated with the ringfort (WM019-046). Portions of test trenches T10, T12 and T33, initially proposed in the Method Statement, were not entirely excavated due to previously made ground overlying topsoil, up to 1.4m in depth. Prior to excavation of trenches T11 and T12, the ground was checked with an appropriate C.A.T. detector by a trained person in order to localise potential unmarked services or buried ordnance.

4.7 Safety, Health & Welfare at Work

All archaeological works were carried out in accordance with the current *Safety, Health and Welfare at Work (Construction) Regulations* (2013). A Health and Safety plan – a project specific Risk Assessment Method Statement – was in place at the commencement of on-site services.

Archaeological test excavations were carried out in line with AMS's 'Safe Operating Procedures for COVID-19' (Hardy 2021). This document has been prepared with reference to Government of Ireland, HSE, HSA, CDC and WHO guidance and guidelines, and drawing on the Construction Industry Federation's (CIF) *Construction Sector C-19 Pandemic Standard Operating Procedures*. The control measures set out in the Safe Operating Procedure aim to provide a safe working environment for all

staff members and any essential visitors. AMS management monitored the implementation of these Safe Operating Procedures in tandem with site-specific health and safety procedures.

5 Results

The development site was divided into four excavation areas based on the previous geophysical survey within the site (Leigh 2020; Figure 8). Area A was located in the northern portion of the field adjacent to the recorded ringfort (WM019-046); Area B was located in the southern portion of the same field, adjacent to a housing estate; Area C was located in the northeastern portion of the development site; and Area D was located in the southeastern portion of the Site.

Targeted testing within these areas revealed numerous post-medieval/modern features of an agricultural nature. The locations of these features were recorded, and a portion were investigated to verify their nature and clarify the correspondence with the geophysical survey readings. However, being features of no archaeological interest, the focus of these results is on the areas identified for further investigation.

Testing revealed three distinct areas of archaeological potential within the site (AA1–3). Trenches were extended or added where necessary to follow or fully expose features identified at these locations. These areas consisted of a post-medieval house and outbuilding (AA1), an isolated pit with *in-situ* burning (AA2), a group of two charcoal-production kilns and adjacent posthole (AA3).

Following initial investigation by hand to establish the nature and extent of these sites, they were recorded and georeferenced, then covered with heavy-duty polythene (1200 gram) and completely backfilled.

5.1 Area A and Area B

Area A was located in the northern portion of the field adjacent to the recorded ringfort (WM019-046) and to the north of the two vernacular buildings and associated avenue. Area B was located in the southern portion of the same field, to the south of the two vernacular buildings and associated avenue. This entire field is situated within Sarsanstown townland (Figure 8 and Figure 9; Plate 1). However, in the nineteenth and early-twentieth century, it was part of Rathgowan and Farranshock townland. During the test excavation works, 22 test trenches were opened across Area A (trenches T31, T32, T35, T37–T41, T41.1, T42–T47, T57–T62 and T33 (in the field adjacent to the east), and 31 test trenches in Area B (T13–T30, T34, T36, T48, T48.1, T49, T63, T64, T67, T68, T13.1, T14.1, T22.1, T48.1 and T68.1) (Figure 8 and Figure 9).

Area A to the north of the former avenue was waterlogged, and trenches began filling up with water immediately. The stratigraphic sequence in Area A comprised 0.35–0.7m of peat overlying the natural subsoil which consisted of light greyish white silt (in trenches T42, T44 and T45) or mid grey gravelly clayey silt (in trenches T37, T42, T43, T46, T47 and T61). The stratigraphic sequence in Area B to the

north of the former avenue comprised a topsoil of dark greyish brown clayey silt, measuring 0.2–0.6m in depth, overlying the natural subsoil which comprised mid greyish and brownish yellow gravelly clay.

5.2 AA1: Two Post-medieval Buildings (Area to expose: 30m x 25m)

According to the historical maps, two buildings that appear to be a small vernacular house and outbuilding are shown within this area, accessed by an avenue leading southward from the R393 road (Figure 4 and Figure 5; Plate 2). One test trench (T41) was set up across the building C.1 and preliminary architectural analysis was carried out of extant wall of the second building C.2.

5.2.1 *Building C.1, orientated northeast–southwest*

The building C.1 was rectangular in plan and had overall external dimensions of c.13.8m northeast–southwest by c.6.2m northwest–southeast and was adjacent to a stony bank at the northwestern side (Figure 8; Plate 2 and Plate 3). The northeastern portion of this building survived above the ground level; however, it was obscured by vegetation. Trench 41 was targeted to investigate these remains.

In the eastern edge of Trench 41, a portion of a stone wall was found, that along with other surviving walls possibly created a northeastern room (c.6.2m by 5.5m externally). This wall was orientated northwest–southeast and measured 1.4m in length by 0.45m in width by max. 0.3m in depth (Plate 3). The wall comprised of roughly hewn angular limestone blocks and stones (sample dimensions 45cm by 23cm; 32cm by 10cm), bound with a lime mortar mixed with small, rounded pebbles. The wall rested on a stone wall footing that measured min. 2.0m by 0.6m by min. 0.2m in height. In a hand-dug trench (Trench 41.1) 3.25m adjacent to the southeast of the wall, steps comprised of stones and bricks were found (Plate 3). The uncovered structure measured 1.4m northeast–southwest by 1.4m northwest–southeast externally, and 1.0m in width internally. The steps were built with red and yellow bricks (sample dimensions 20cm by 10cm by 6cm; 22cm by 12cm by 6cm), two slabs (sample dimensions 50cm by 30cm by 5cm), and were revetted on both sides by rough rectangular stones. In Trench 41 to the southeast of the building, remnants of a rough metalled yard were found, while to the northwest there was waterlogged peat. Three sherds of modern porcelain were recovered from topsoil in Trench 41 (Plate 20).

5.2.2 *Building C.2, orientated northwest–southeast*

The building C.2 was rectangular in plan and had overall external dimensions of c.10.5m northwest–southeast by c.5.1m northeast–southwest (Figure 8; Plate 2 and Plate 4). The extant wall was identified as the remains of the southern gable wall and measured 2.68m in length by 0.50m in width by 1.55m in height. The wall was coursed of random rubble, and larger stones were combined with smaller stones to bring the horizontal course to regular intervals (ranging 0.4m, 0.33m and 0.27m in

thickness) (Plate 4). It was formed by a double wythe of roughly hewn angular limestone blocks, flat angular stones, and small angular stones (sample dimensions 50cm by 30cm by 18cm; 35cm by 15cm by 8cm); (Plate 5). The wall was bound with a lime mortar mixed with small, rounded pebbles.

Associated with the buildings was an embanked avenue with a drainage ditch at each side depicted on the historical maps (Figure 4 and Figure 5). This avenue is still visible on the ground and ditches C.5 and C.6 were found in trenches T.34 and T37–40 (Appendix 1.1). In trench T40, a rectangular pit C.4 with an animal skeleton was discovered (Figure 8). It was located within the avenue, between two drainage ditches C.5 and C.6, and c.10m to southwest of Building 1; and most likely represents a farm animal that was discarded in the pit. A heel pad and a possible knife associated with the farm were recovered from topsoil in trench T40 (Plate 19).

5.3 AA2: An isolated pit C.13 (Area to expose: 20m x 10m)

An isolated pit C.13 of archaeological potential adjacent to a field drain C.12 was found in Trench 17 (Figure 9). Pit C.13 measured 2.7m by 1.4m by 0.2m in depth within the trench limit, and according to geophysical survey results it was subcircular in plan. The single fill of the pit comprised mid greyish brown clayey silt with moderate small to medium sub-angular and sub-rounded stones. A patch of charcoal-rich deposit that was sitting at the eastern side of pit C.13 overlaid red scorched natural subsoil, indicating *in-situ* burning (Plate 7 and Plate 8). Evidence of *in-situ* burning also occurred in the western terminus of a shallow ditch C.14, orientated east–west, and situated c.18.0m east of pit C13 (Plate 9 and Plate 10).

The geophysical survey results indicate that pit C.13 corresponds with potential archaeology and a similar, potential archaeological feature is located c.5.0m to the west (Figure 9). Field drain C.12 corresponds both with potential archaeology and a linear magnetic trend (No. 5), and ditch C.14 possibly corresponds with the same magnetic trend (Figure 9).

5.3.1 Post-medieval/modern agricultural features

Three field drains C.3 in T44, C.7 and C.8 in T34 were found throughout Area A. Drain C.3 was filled with peat and medium sized stones, while drains C.7 and C.8 were filled with small stones (Plate 6). Drain C.7 corresponds with response No. 2 recorded in the geophysical survey (Figure 8).

A number of post-medieval field boundary ditches, field drains and a series of agricultural furrows representing previous land division and agricultural activity were identified within Area B. Field boundary ditch C.23 (see appendix) was found in test trenches T62, T48, T22 and T24 (Figure 9). It corresponds with trend No. 3 recorded in the geophysical survey, and was shown on the first-edition

six-inch OS map (dated 1838) and in the second-edition 25-inch OS map (dated 1913) (Figure 4 and Figure 5).

The boundary ditch C.23, with adjacent bank along the western side, is visible on the ground as a shallow linear depression. In the southwestern corner of this area, two ditches C.15 and C.17 were recognised in T13, T14 and T14.1, representing a field boundary depicted only on the historical map (dated 1838) (Figure 4 and Figure 5; Plate 11 and Plate 12). Ditch C.15 corresponds with trend No. 3 and potential archaeological feature recorded in the geophysical survey (Figure 9). Other linear responses (No. 4, 6–8) that have a magnetic signature indicative of ditched or drainage features were targeted in test trenches T.13, T.15, T17–19, T22, T24 and T25 respectively. These ditches, along with previously unrecognised features in the geophysical survey formed a post-medieval field system not shown on the historical maps. It was represented by sets of two parallel ditches C.9 and C.22, C.26 and C.27, C.29 and C.30 or short single ditches C.16, C.24 and C.28 (Figure 9; Plate 13 and Plate 14), and a series of field drains (C.10–C.12, C.18, C.20, C.21, C.25) (Figure 9; see appendix).

Ditch C.28, highlighted in the geophysical survey as a short potential archaeological feature (No. 8), was identified in T25 and in additional test trenches T67 and T68 to the east (Figure 9). It was linear in plan and measured min. 25.0m in length by 0.8m–3.3m in width and 0.9m in depth. The cut comprised a shallow section along the southern side (measuring 0.3m in depth) with the northern side measuring 0.9m in depth. It had very steep sides and a flat base. A single fill was identified which comprised mid greyish brown clayey silt with moderate small sub-angular and sub-rounded stones (Plate 13 and Plate 14). Ditch C.16, highlighted in the geophysical survey also as a potential archaeological feature (No. 4), was identified in T13.

A series of agricultural furrows oriented north-northwest–south-southeast was found in test trenches T27–T32, T57, T59, T60 and T62 located to the southeast, south and southwest of the buildings. The dimensions of these features ranged from 0.4m to 0.6m in width and from 0.05m to 0.08m in depth. In T31 two small pieces of burnt bone were recovered from the topsoil overlying an agricultural furrow. However, the bones were not suitable for further analysis, due to preservation condition and dimensions. This area was further examined and no potential archaeological finds, features or deposits were noted. It was noticeable, however, that a field to the southeast of the two buildings, and to the east of field boundary C.23 was subject to heavy ploughing. In the next field to the west of field boundary C.23, only a single agricultural furrow or drain C.19 was recognised in T15 (Figure 9).

Clay pipe fragments (bowl and stem) were recovered from the topsoil of T21. A modern porcelain sherd, with trademark stamp *BELLEEK*, was found on a spoil heap from T18 (Plate 19 and Plate 20).

5.4 Area C

Area C was located in the northeastern portion of the development site, within Rathgowan or Farranshock townland, and was targeted by 20 test trenches T1–T10, T10.1, T51–T56 and T65–T66. Archaeological Area 3 (AA3) comprised a group of two adjacent charcoal-production kilns C.33 and C.35, and a possible posthole C.34, which were found in T51, T65 and T66 (Figure 7 and Figure 10; Plate 15–Plate 17).

The stratigraphic sequence in these trenches comprised topsoil of dark greyish brown clayey silt, and measured 0.2m–0.6m in depth, overlying the natural subsoil, consisting of a mid-greyish and brownish yellow gravelly silty clay.

5.5 AA3: Group of two charcoal-production kilns C.33 and C.35, and a posthole C.34 (Area to expose: 15m x 15m)

Charcoal-production kiln C.33 was elongated in plan and measured 4.0m in length (northeast–southwest) by 1.1m in width (northwest–southeast) by min 0.09m in depth (Figure 10; Plate 16). The fill of this feature comprised mid greyish brown clayey silt. It was overlying a dark blackish grey charcoal-rich deposit consisting of moderate flecks of charcoal, and occasional small to medium sub-angular stones. There was a charcoal-rich deposit and red scorched natural subsoil at the western edge, indicating intensive *in-situ* burning, localised in the southwestern terminus of the feature. Possible stone lining was placed along the northeastern edge (Plate 16).

Located 0.3m to the west of and adjacent to charcoal-production kiln C.33 was possible posthole C.34 (Figure 10). It was subcircular in plan and measured 0.26m (north–south) x 0.22m (east–west). The fill of this feature comprised mid brownish grey clayey silt with occasional charcoal flecks (Plate 16).

Charcoal-production kiln C.35 was located 2.0m to the southeast of charcoal-production kiln C.33, and was cut by an agricultural furrow C.36 (Figure 7 and Figure 10). It was sub-oval in plan and measured 0.96m (east–west) by 0.5m (north–south). The fill of this feature comprised mid greyish brown clayey silt. It was overlying a dark blackish grey charcoal-rich deposit with occasional small to medium sub-angular stones (Plate 17).

5.5.1 Post-medieval/modern agricultural features

Two field boundary ditches C.31 and C.32 were identified in test trenches T3 and T4 (Figure 7 and Figure 10). These parallel ditches represented a field boundary as depicted on the first-edition six-inch OS map (dated 1838) (Figure 4). This boundary was later moved to the northwest as shown on the second-edition OS 25-inch map (dated 1913) (Figure 5).

A series of agricultural furrows oriented east–west, that measured from 0.4m to 0.6m in width, were found in test trenches T1–T9, T51–T54 and T56.

5.6 Area D

Trenches T11, T12 and T12.1 were situated in the southeastern portion of the proposed development site, within Sarsanstown townland. As noted above, in the nineteenth and early-twentieth century it was part of Rathgowan and Farranshock townland. This area was the subject of previous groundworks, including an access road and services. Test trenches were localised in areas not investigated during previous archaeological testing in 2004 (04E0980, Guinan 2004) (Figure 7).¹⁸

Test trench T11 was localised within undisturbed ground (Figure 7; Plate 18). The stratigraphic sequence in this trench comprised a topsoil of dark greyish brown clayey silt, measuring 0.2–0.3m in depth, overlying the natural subsoil of mid greyish and brownish yellow gravelly clay. T12 was situated within made ground, at the depth of 0.9–1.3m. No natural subsoil level was reached and for safety reasons it was discontinued. An additional trench (T12.1) was dug out to a depth of 1.4m and a surface of the buried topsoil was reached. No potential archaeological finds, features or deposits were noted in T11, T12, and T12.1.

¹⁸ <https://excavations.ie/report/2004/Westmeath/0012853/> [Online: Accessed 05.07.21].

6 Discussion

As a result of the archaeological testing and a preliminary architectural heritage survey, three areas were identified as being of archaeological and historical potential. These were recorded as Archaeological Areas (AA) 1–3: a post-medieval vernacular house and outbuilding (AA1), an isolated pit with *in-situ* burning (AA2), and a group of two charcoal-production kilns and a posthole (AA3).

The two buildings C.1 and C.2 (AA1) accessed by an embanked avenue C.5 and C.6 and field boundaries C.15, C.17, and C.23 are depicted on the first-edition six-inch OS map (dated 1838) and on the 25-inch OS map (dated 1913). Parts of the stone walls are extant above ground level and are covered by vegetation; and it is very likely that entire foundations, and a metalled yard are preserved below the topsoil. Building C.1 correlates with the house marked (*a*) in plot 3 on the Griffith's Valuation map (published 1854) and Building 2 correlates with a perpendicular outbuilding. The farm was leased from *Smith* (no forename) to a tenant *Patrick Burn* and it comprised: *House, offices, and land*.¹⁹ The term *House* covered all buildings used permanently as dwellings; *office* was used to describe farm outbuildings such as a stable, turf shed, cow barn, corn shed, or piggery.²⁰ Nowadays, this farm lies within Sarsanstown townland, but in the nineteenth and early-twentieth century this was part of Rathgowan and Farranshock townland.

An isolated pit C.13 (AA2) with *in-situ* burning was identified in T17. It corresponds with a circular feature highlighted as a potential archaeological feature on the geophysical survey. A similar, potential archaeological feature is located c.5.0m to west of pit C.13. The date of pit C.13 is unknown as no artefacts were recovered.

A group of two charcoal-production kilns C.33 and C.35, and a possible posthole C.34 (AA3), were found in T51. These kilns were elongated and sub-oval in plan respectively, and comprised charcoal-rich deposits. The date of charcoal-production kilns C.33 and C.35 is not known as no artefacts were recovered.

Charcoal-production kilns date from later prehistory to post-medieval times, with a peak in the medieval period. They are found throughout Ireland. Critical to achieving the high temperatures necessary in metalworking and other crafts such as enamelling, many high-status and mundane

¹⁹ <http://www.askaboutireland.ie/griffith-valuation/index.xml?action=doNameSearch&PlaceID=1377851&county=Westmeath&barony=Moyashel%20%20magheradernon&parish=Mullingar&townland=Rathgowan,%20or%20farranshock> [Online: Accessed 1.11.21]

²⁰ <http://www.askaboutireland.ie/reading-room/history-heritage/irish-genealogy/understanding-the-valuation/> [Online: Accessed 1.11.21]

objects could not have been produced without charcoal; it was also an important domestic fuel.

The earliest recorded examples date to the Bronze Age. Most were small and oval/sub-oval in shape (average 1.0m x 0.7m x 0.25m) (e.g. Claregalway, Co. Galway [Walsh & Ó Maoldúin 2018] and Carrigatogher 2, Co. Tipperary [McLeod 2009]). Charcoal production appears to increase in the Iron Age (e.g. Barnasallagh 1, Co. Laois [Lennon 2008]; Caherabbey Lower, Co. Tipperary [McQuade *et al.* 2009; see also O'Donnell 2018]) and the earlier part of the early medieval period, with greater frequency of rectangular/sub-rectangular forms (e.g. Hardwood 3, Co. Meath [Murphy 2004]; Kenny 2010, 111–12).

However, the majority of pit kilns date from the ninth to thirteenth century AD, with rectangular and sub-rectangular shapes the most prevalent (Kenny 2010, 109). These pits are larger on average (2.42m x 1.17m x 0.24m) than circular (1.39m x 1.22m x 0.33m) or oval types (1.7m x 1.13m x 0.16m) (e.g. Kilcotton 1, Trumra 3, Co. Laois [O'Neill & Kane 2008]), which tend to have sloping sides and flat or concave bases; rectangular pit kilns generally have steep sides and flatter bases (Kenny 2010, 106). Round pits were most common in the fifteenth to seventeenth centuries. The drivers of these diachronic shifts remain unclear. From late medieval times, mound kilns became more widespread, often associated with large-scale metalworking (e.g. Cummeengeera, Co. Cork [Healy 1972; O'Sullivan & Downey 2009]).

An isolated, shallow cut feature filled with charcoal-stained soil mixed with sandstone and limestone pebbles was found during previous archaeological testing in 2004 (04E0980, Guinan 2004). This feature was localised c.200m to the south-southeast²¹ of the group of charcoal-production kilns (AA3). Its function and date are not known as no artefacts were recovered and no radiocarbon dating was undertaken at the time of reporting.

The testing also revealed numerous post-medieval/modern features of an agricultural nature including field boundary ditches, field drains and agricultural furrows.

²¹ This feature was found 2m from the eastern end of Guinan's Trench II. See 2004 testing layout in Figure 7.

7 Conclusions and Recommendations

Three areas of archaeological and historical potential (AA1–3) were identified by the advance test excavation: a post-medieval vernacular house and outbuilding (AA1), an isolated pit with *in-situ* burning (AA2), and a group of two charcoal-production kilns and a posthole (AA3). These sites will be impacted by the proposed development and construction works on site will result in the total removal of these sites. Therefore, the three sites are recommended for full archaeological excavation, architectural heritage survey and recording in advance of construction. Excavation and architectural heritage survey involve preservation by record through appropriate rescue excavation of archaeological features or deposits and appropriate documentation of architectural structures so as to mitigate impacts on the archaeological and historical remains.

The testing also revealed numerous post-medieval/modern features of an agricultural nature including field boundary ditches, field drains and agricultural furrows. These features are not considered to be of archaeological interest and have been adequately recorded.

It is recommended that no building works, drainage features or landscaping works are undertaken within an exclusion zone defined by the Zone of Notification (ZoN) for ringfort WM019-046 and that this buffer zone should be permanently fenced-off prior to groundworks commencing and defined by a line of trees within the finished development.

It is also recommended that any site preparation groundworks such as topsoil clearance, or other intrusive activity on the site, should be monitored by a licence-eligible archaeologist under the existing licence (21E0518) issued by the NMS of the Department of Housing, Local Government and Heritage. This would ensure that in the event of further archaeological remains being identified during the course of licensed archaeological monitoring, this active licence could be upgraded to allow for appropriate mitigation subject to approval from the NMS in conjunction with NMI.

All recommendations are subject to the approval of the NMS and the Director of the NMI. Proposed mitigation measures should comply with the *National Monuments Acts 1930 to 2014*. Preservation by record should be undertaken under the existing licence (21E0518) issued under Section 26 of the *National Monuments Act 1930* (as amended) and be in accordance with the *Framework and Principles for the Protection of the Archaeological Heritage* (DAHGI 1999).

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Figures

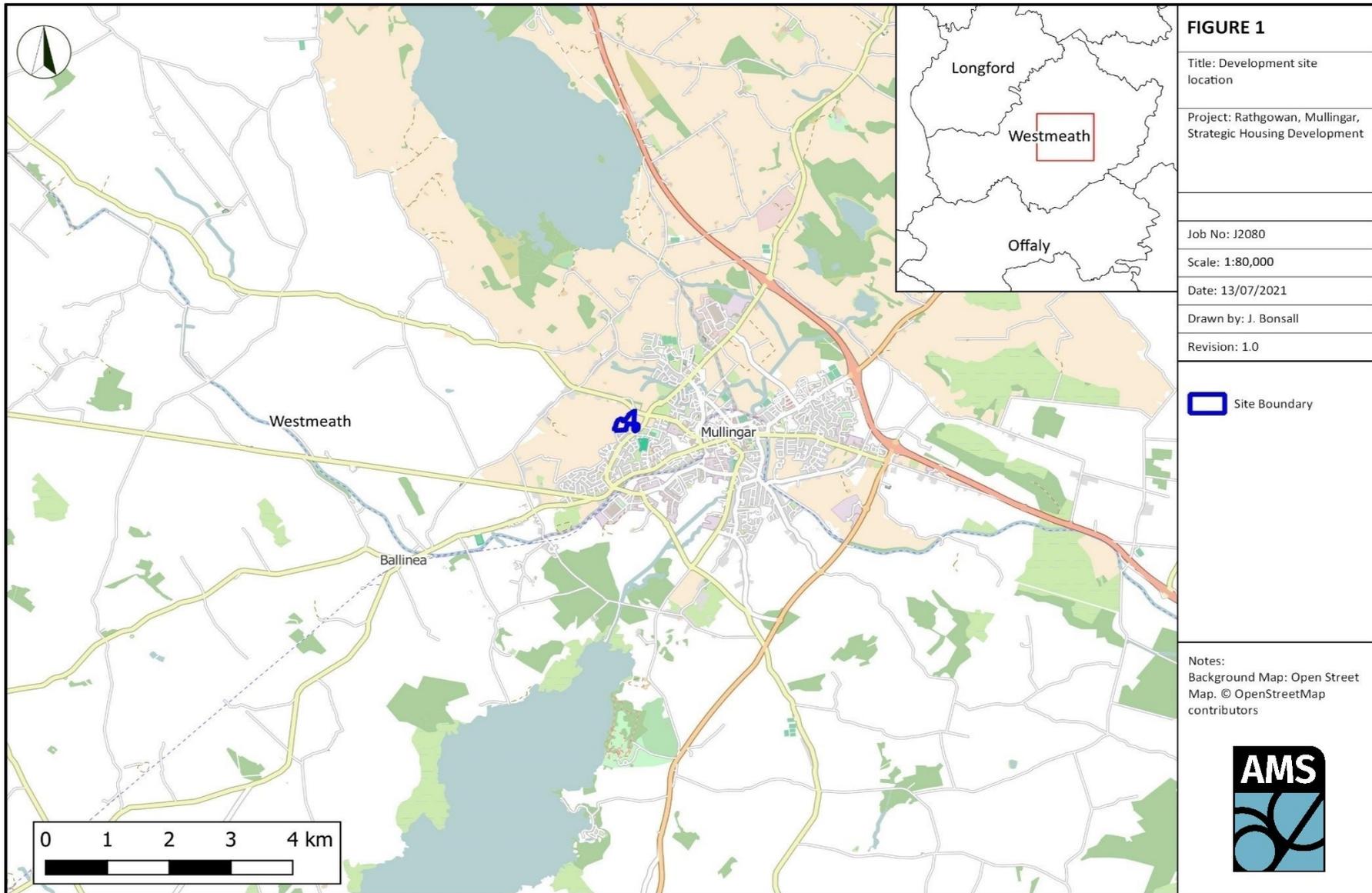


Figure 1: Development site location.



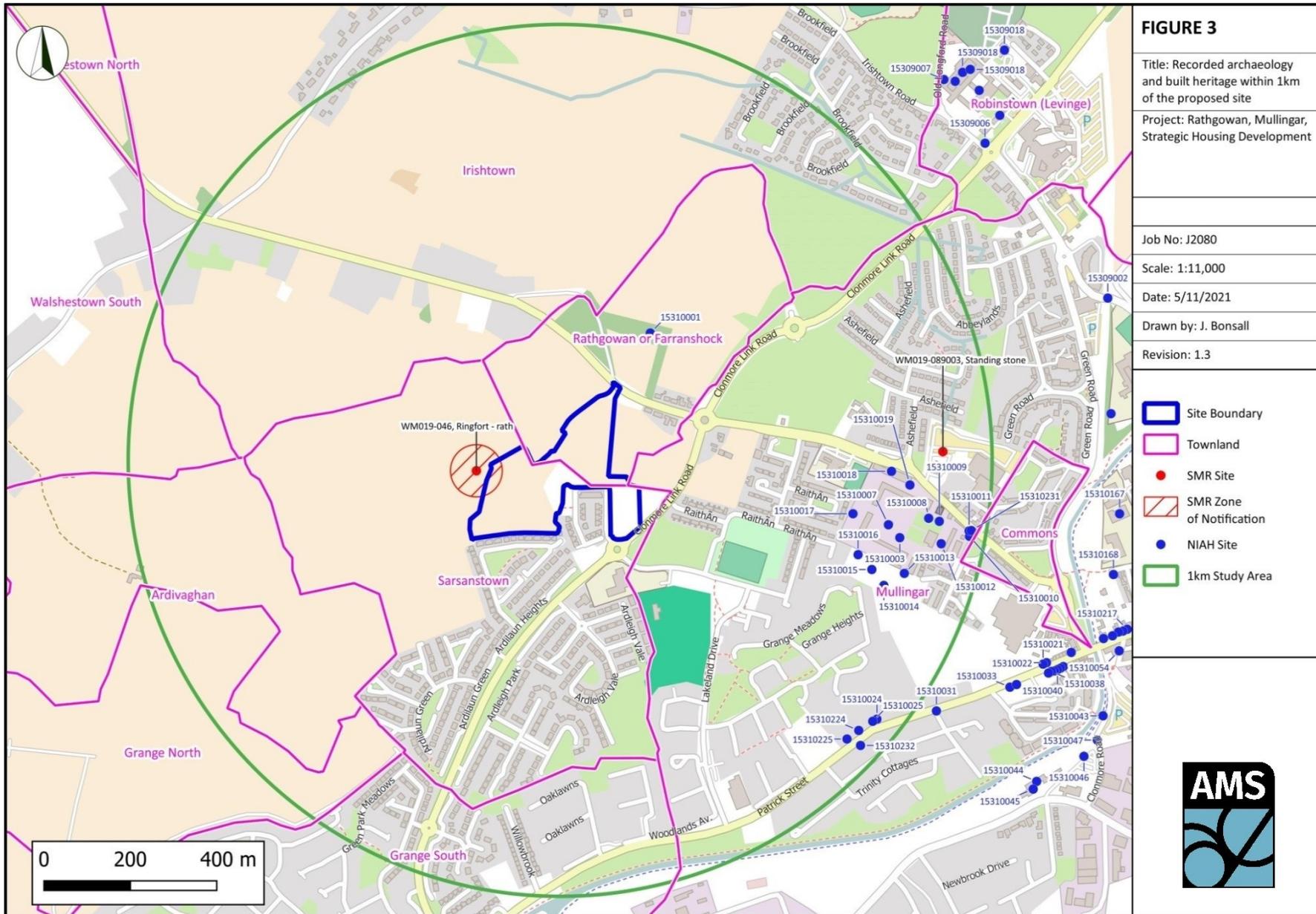


Figure 3: Recorded archaeology and built heritage within 1km of the proposed site.

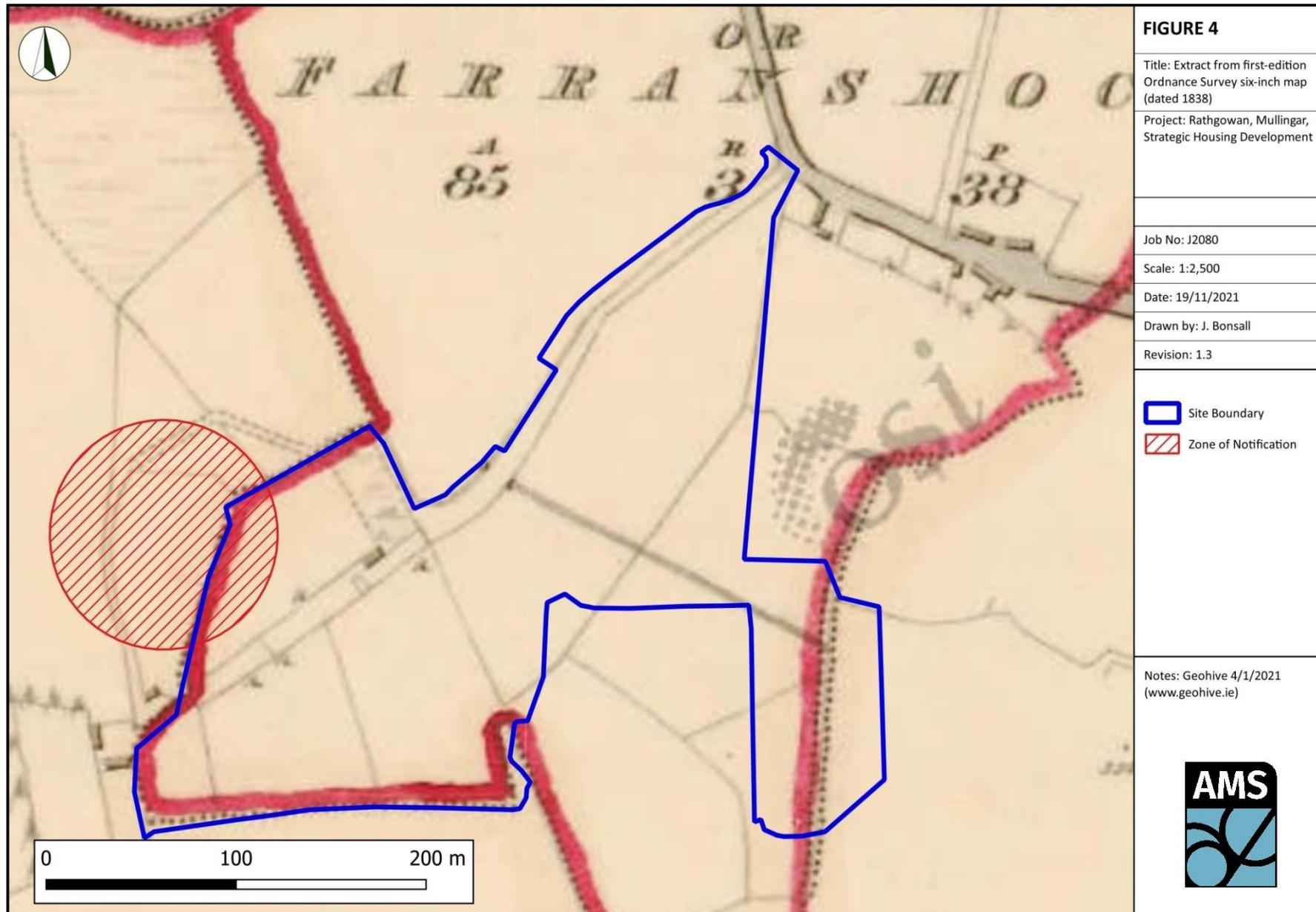


Figure 4: Extract from first-edition six-inch Ordnance Survey map (dated 1838).

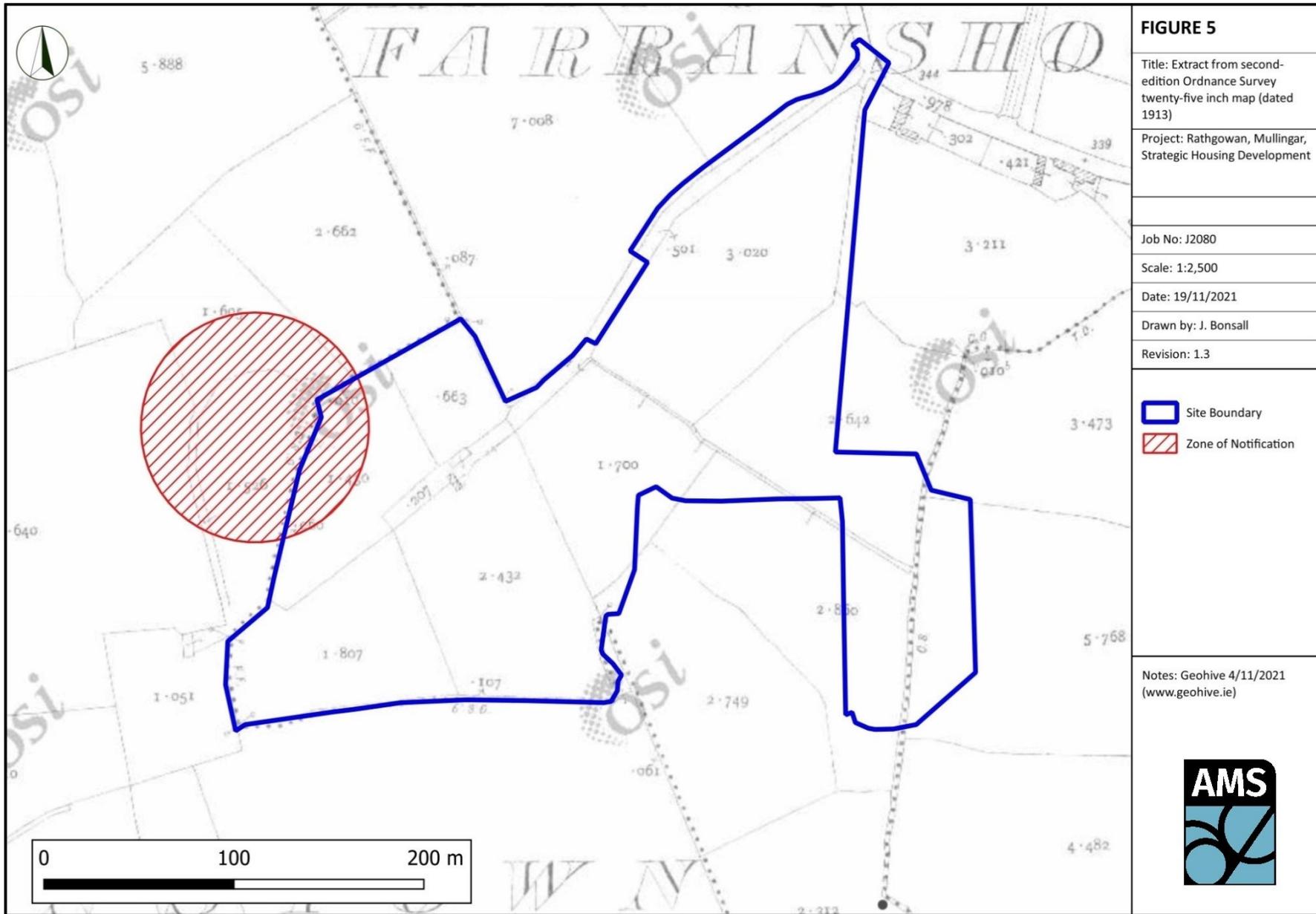


Figure 5: Extract from second-edition Ordnance Survey twenty-five inch map (dated 1913).



Figure 6: Aerial Photography of site (taken from heritagemaps.ie)

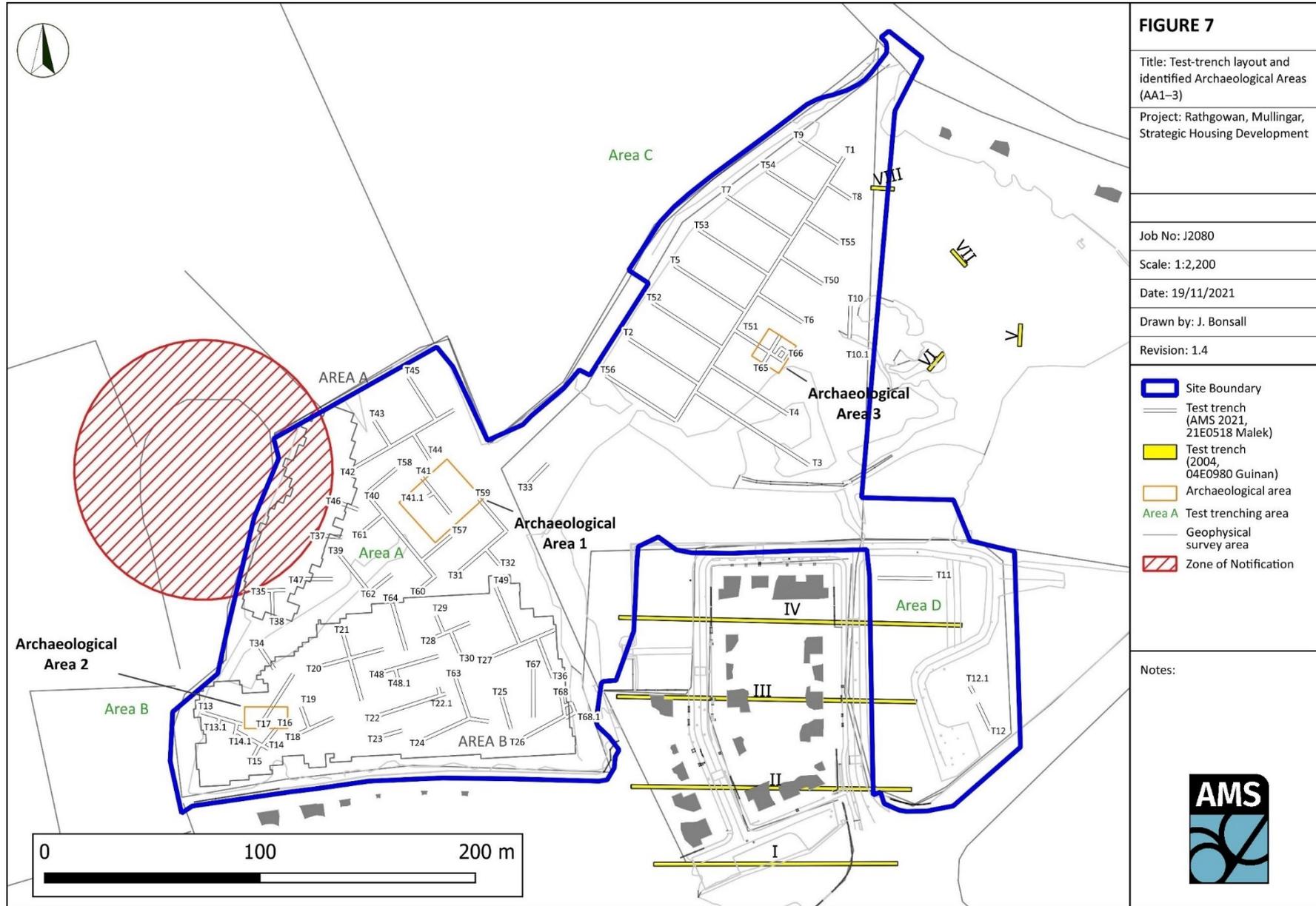


Figure 7: Test trench layout and identified Archaeological Areas (AA1-3).

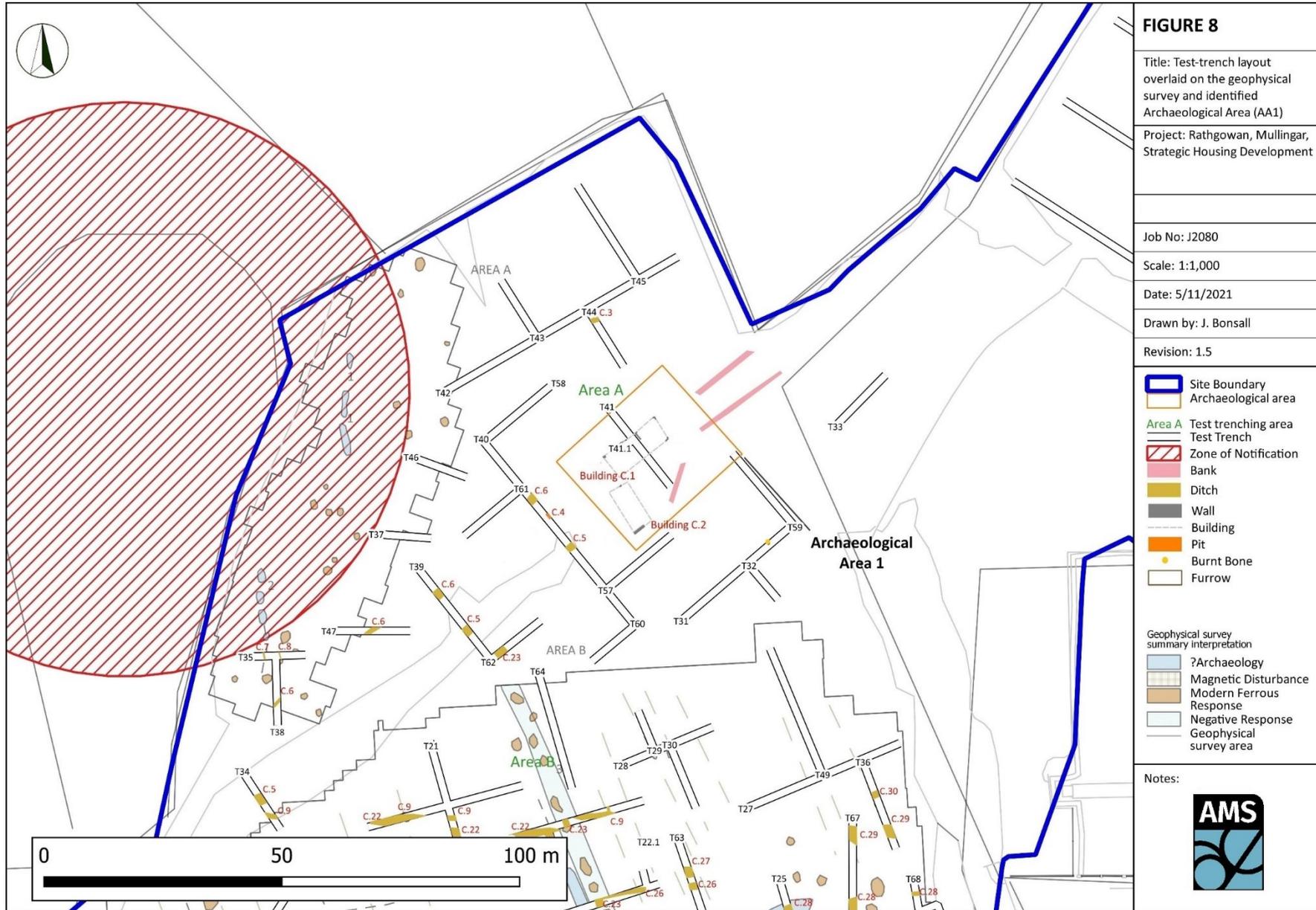


Figure 8: Test trench layout overlaid on the geophysical survey and identified Archaeological Area (AA1) (J. M. Leigh Surveys Ltd 2020).

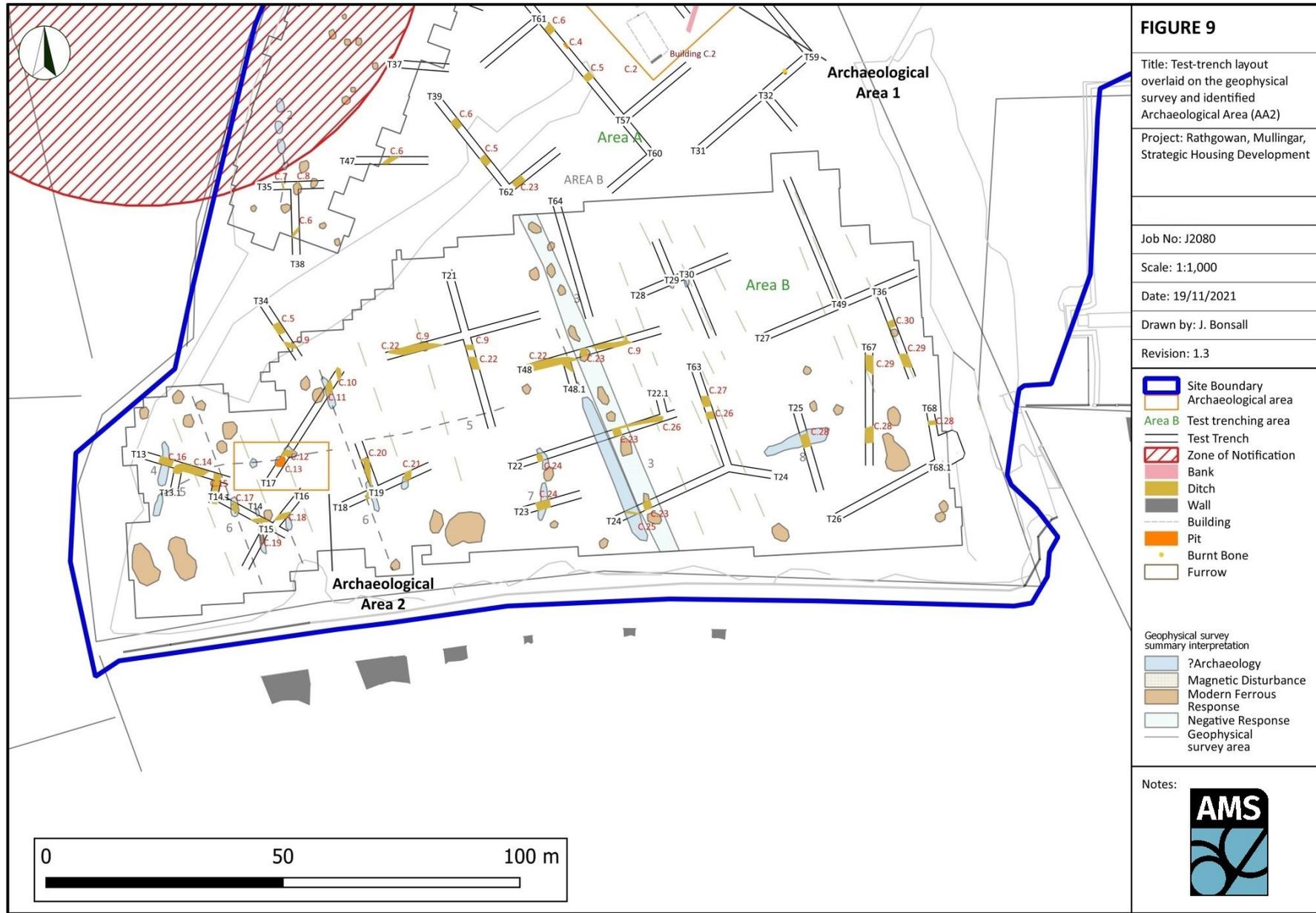


Figure 9: Test trench layout overlaid on the geophysical survey and identified Archaeological Area 2 (AA2) (J. M. Leigh Surveys Ltd 2020).

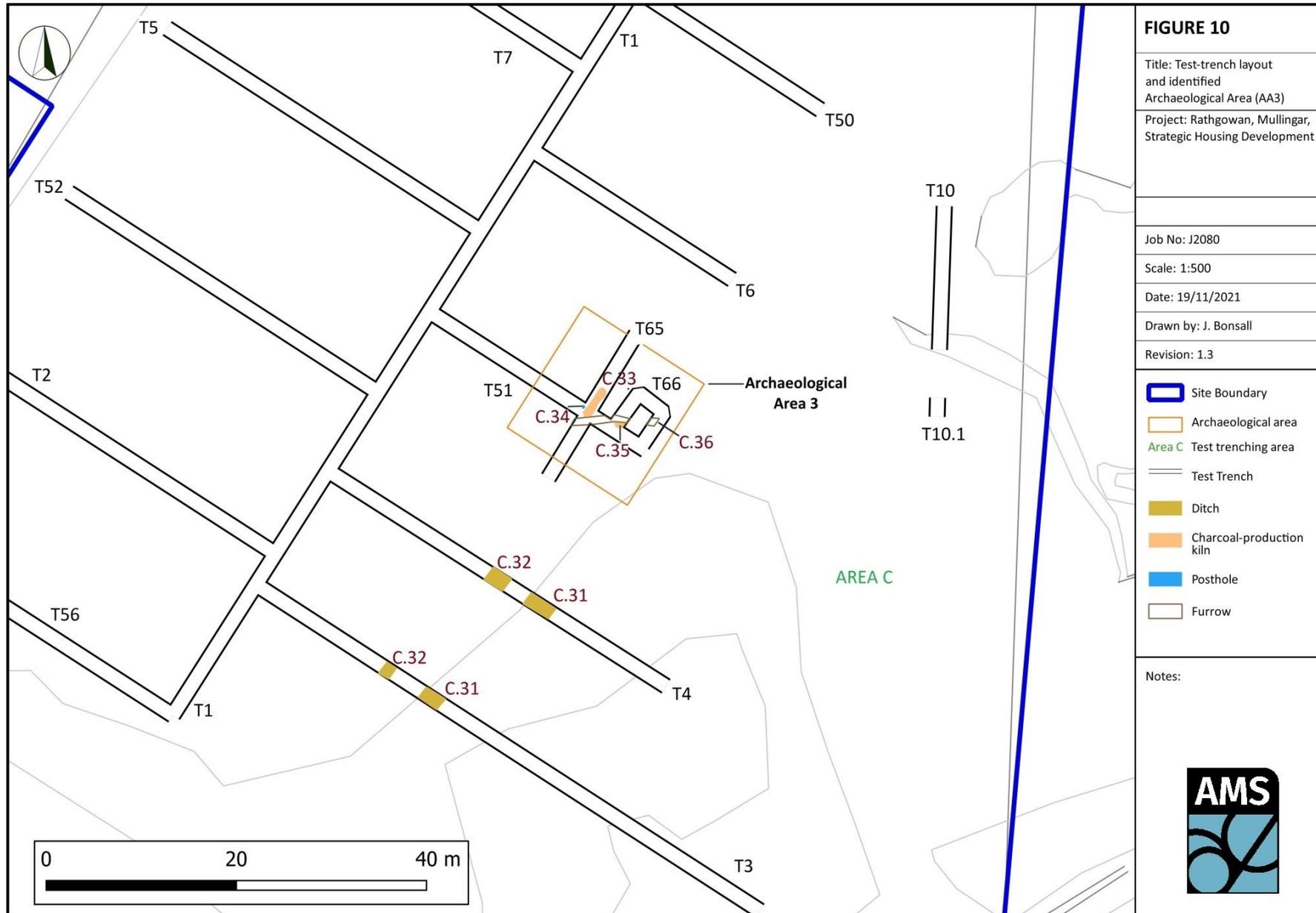


Figure 10: Test trench layout and identified Archaeological Area (AA3).

Plates



Plate 1: Area A, overview of the ringfort (WM019-046) and Zone of Notification, looking northwest.



Plate 2: Archaeological Area 1, view of Building 2, Building 1 and bank, looking north (Scale: 1m x 2).



Plate 3: Archaeological Area 1, view of steps associated with Building 1, looking northeast (Scale: 1m x 2).



Plate 4: Archaeological Area 1, view of the southern gable wall of Building 2, looking north-northwest (Scale: 1m x 2).



Plate 5: Archaeological Area 1, cross section of the southern gable wall of Building 2, looking southwest (Scale: 1m x 2).



Plate 6: Area A, T35 and T38, view of field drains C.7 and C.8, looking southeast (Scale: 1m x 2).



Plate 7: Archaeological Area 2, T17, view of pit C.13 with *in-situ* burning, looking west-northwest (Scale: 1m x 2).



Plate 8: Archaeological Area 2, T17, view of pit C.13 with *in-situ* burning, looking east-northeast (Scale: 1m).



Plate 9: Area B, T13 and T13.1, view of ditch C.14, looking east-southeast (Scale: 1m x 2).



Plate 10: Area B, T13 and T13.1, view of terminus of ditch C.14, with *in-situ* burning, looking west-southwest (Scale: 1m).



Plate 11: Area B, T13 and T14.1, view of field boundary ditch C.15, looking south-southwest (Scale: 1m x 2).



Plate 12: Area B, T13 and T14.1, view of field boundary ditch C.15, looking north (Scale: 1m).



Plate 13: Area B, T25, view of ditch C.28, looking west-northwest (Scale: 1m x 2).



Plate 14: Area B, T25, view of ditch C.28, looking north-northwest (Scale: 1m x 2).



Plate 15: Area C, T51, overview of the natural subsoil, looking southeast (Scale: 1m x 2).



Plate 16: Archaeological Area 3, T51 and T65, view of charcoal-production kiln C. 33 and posthole C.34, looking northeast (Scale: 1m x 2).



Plate 17: Archaeological Area 3, T51, view of charcoal-production kiln C.35, looking northwest (Scale: 1m x 2)



Plate 18: Area D, T11, overview of the natural subsoil, looking east (Scale: 1m x 2).



Plate 19: Topsoil finds: a heel pad in T40, clay pipes in T21 (Scale: 10cm, 20cm).



Plate 20: Topsoil finds: sherds of modern porcelain in T18 (left) and in T41 (Scale: 10cm, 20cm).

Appendix: Catalogue of Primary Data

Table 5: List of Contexts

Context	Type	Trench	Description	Dimensions (m)
C.1	Stone building	T41 AA1	Remains of a house. Rectangular in plan. The northeastern portion of this building survived above the ground including possibly a northeastern room (measuring c.6.2m by 5.5m externally). A wall recorded in Trench (T)41 was composed of roughly cut angular limestone blocks (sample dimensions 45cm by 23cm; 32cm by 10cm), bound with a lime mortar mixed with small rounded pebbles. The wall rested on a stone wall footing, that measured min. 2.0m by 0.6m by min. 0.2m in depth. Associated with the building were steps comprised stones and bricks measured 1.4m NE–SW by 1.4m NW–SE externally, and 1.0m in width internally. The steps were built with red and yellow bricks (sample dimensions 20cm by 1cm by 6cm; 22cm by 12cm by 6cm), two slabs (sample dimensions 50cm by 30cm by 5cm), and revetted on both sides by rough rectangular stones	c.13.8 (NE–SW) x 6.2 (NE–SW)
C.2	Stone building	N/A AA1	Remains of an outbuilding. Rectangular in plan. A part of the southern gable wall survived above the ground (measured 2.68m in length by 0.50m in width by 1.55m in height). The wall was coursed random rubble, and larger stones were combined with smaller to bring horizontal course to regular intervals (ranging 0.4m, 0.33m and 0.27m in thickness beginning at the ground level). It was formed by a double wythe of roughly hewn angular limestone blocks, flat angular stones, and small-size angular stones (sample dimensions 50cm by 30cm by 18cm; 35cm by 15cm by 8cm). The wall was bound with a lime mortar mixed with small rounded pebbles.	c.10.5 (NW–SE) x 5.1 (NE–SW)
C.3	Field drain	T44	Linear in plan. Not tested. Fill comprised dark blackish brown peat with moderate medium sub-rounded stones.	1.8 (NE–SW) x 0.6 (NW–SE)
C.4	Pit	T40	Rectangular in plan, with an animal skeleton. Not tested. Fill comprised dark greyish brown clayey silt.	1.5 (NW–SE) x 0.6 (NE–SW)
C.5	Field boundary ditch	T34, T39, T40	Linear in plan. Gradually sloping sides. Flat base. Single fill comprised dark blackish brown peat with moderate medium sub-angular and sub-rounded stones, occasional brick fragments.	c.80.0 (NE–SW) x 1.4–2.6 (NW–SE) x 0.3–0.5

Context	Type	Trench	Description	Dimensions (m)
C.6	Field boundary ditch	T38, T39, T40	Linear in plan. Gradually sloping sides. Flat base. Single fill comprised dark blackish brown peat with moderate medium sub-angular and sub-rounded stones.	c.70.0 (NE-SW) x 0.5-2.6 (NW-SE) x 0.17-0.5
C.7	Field drain	T35	Linear in plan. U-shaped profile. Single fill comprised frequent small angular and sub-angular stones.	1.8 (N-S) x 0.4 (E-W) x 0.2
C.8	Field drain	T35	Linear in plan. U-shaped profile. Single fill comprised dark greyish brown clayey silt with frequent small to medium angular stones.	1.8 (NNW-SSE) x 0.4 (ENE-WSW) x 0.2
C.9	Field boundary ditch	T20, T21, T34, T48	Linear in plan. Parallel to C.22. Possibly the same as C.30 in T36. Gradually sloping sides. Flat base (in T34) and concave base (in T21). Single fill comprised mid greyish brown clayey silt with moderate small to medium sub-angular and sub-rounded stones.	c.50.0 (E-W) x 1.1 (N-S) x 0.20-0.33
C.10	Field drain	T17	Linear in plan. Gradually sloping sides. Flat base. Single fill comprised mid greyish brown clayey silt with moderate small to medium sub-angular and sub-rounded stones.	2.8 (N-S) x 1.1 (E-W) x 0.18
C.11	Field drain	T17, 19	Linear in plan. Gradually sloping sides. Flat base. Single fill comprised mid greyish brown clayey silt with moderate small to medium sub-angular and sub-rounded stones.	2.6 (N-S) x 1.4 (E-W) x 0.3
C.12	Field drain	T17	Linear in plan. Adjacent to pit C.13. Gradually sloping sides. Concave base. Single fill comprised mid greyish brown clayey silt with moderate small to medium sub-angular and sub-rounded stones.	2.5 (E-W) x 1.4 (N-S) x 0.4
C.13	Pit	T17 AA2	Sub-oval in plan. Adjacent to a field drain C.12. Gradually sloping sides. Flat base. Single fill comprised mid greyish brown clayey silt with moderate small to medium sub-angular and sub-rounded stones. Lens of charcoal at the eastern side, measuring 0.5m in length by 0.2m in width by 0.1m in depth. It was overlying red scorched ground indicating <i>in-situ</i> burning.	2.7 (NE-SW) x 1.4 (NW-SE) x 0.2
C.14	Ditch	T13, T13.1	Linear in plan. Western terminus in T13 and T13.1 Gradually sloping sides. Flat base. Single fill comprised mid greyish brown clayey silt with frequent small to large sub-angular and sub-rounded stones. Lens of charcoal measuring 0.2m in length by 0.14m in width by 0.1m in depth at the southern side overlying red scorched ground indicating <i>in-situ</i> burning.	7.0 (E-W) x 1.95 (N-S) x 0.18

Context	Type	Trench	Description	Dimensions (m)
C.15	Field boundary ditch	T13, T14, T14.1	Parallel to C.17. Shallow along the western side, measured 0.13m in depth. Gradually sloping side, flat base. Deeper, V-shaped along the eastern side. Steep sides, concave base. The lower fill in the deeper portion comprised mid yellowish grey clayey silt with moderate small sub-angular stones. The upper fill comprised mid greyish grey brown clayey silt with moderate small sub-angular and sub-rounded stones.	5.0 (N-S) x 1.4 (E-W) x 0.13–0.38
C.16	Field boundary ditch	T13	Field boundary ditch. Not tested. Fill comprised mid greyish brown clayey silt with frequent small to large sub-angular and sub-rounded stones.	1.8 (N-S) x 3.0 (E-W)
C.17	Field boundary ditch	T14	Linear in plan. Parallel to C.15. Not tested. Fill comprised mid greyish brown clayey silt with moderate small sub-angular and sub-rounded stones.	1.8 (N-S) x 1.3 (E-W)
C.18	Field drain	T14, T16	Linear in plan. Not tested. Fill comprised mid greyish grey brown clayey silt with moderate small sub-angular and sub-rounded stones.	8.0 (E-W) x 0.8–1.4 (N-S)
C.19	Agricultural furrow	T15	Linear in plan. Perpendicular to C.18. Not tested. Fill comprised mid greyish brown clayey silt.	3.0 (SSE-NNW) x 0.6 (ENE-WSW)
C.20	Field drain	T18, T19	Linear in plan. Running from south to north, and turns west at right angle. Gradually sloping sides. Concave base. Single fill comprised mid greyish brown clayey silt with moderate small sub-angular and sub-rounded stones.	7.0 (N-S) x 1.3 (E-W) x 0.2
C.21	Field drain	T18	Linear in plan. Not tested. Fill comprised mid greyish brown clayey silt with moderate small sub-angular and sub-rounded stones.	1.9 (N-S) x 1.4 (E-W)
C.22	Field boundary ditch	T20, T21, T48	Linear in plan. Parallel to C.9. Possibly the same as C.29 in T36 and T67. Not tested. Fill comprised mid greyish brown clayey silt with moderate small sub-angular and sub-rounded stones.	c.35 (WNW-ESE) x 2.6 (E-W)
C.23	Field boundary ditch	T22, T24, T48, T62	Linear in plan. Steep sides. Concave base. Fill comprised mid to dark greyish brown clayey silt with moderate small sub-angular and sub-rounded stones.	c.75.0 (NNW-SSE) x 1.2–2.6 (ENE-WSW) x 0.70
C.24	Field drainage ditch	T22, T23	Linear in plan. Gradually sloping sides. Flat base. Fill comprised mid greyish brown clayey silt with moderate small sub-angular and sub-rounded stones.	11.0 (N-S) x 1.2–2.6 (E-W) x min. 0.26

Context	Type	Trench	Description	Dimensions (m)
C.25	Field drain	T24	Linear in plan. Not tested. Fill comprised mid greyish brown clayey silt with occasional small sub-angular and sub-rounded stones.	3.1 (WNW–ESE) x 0.6 (ENE–WSW)
C.26	Field boundary ditch	T22, T63	Linear in plan. Gradually sloping sides. Flat base. Fill comprised mid greyish brown clayey silt with occasional small sub-angular and sub-rounded stones.	20.0 (E–W) x 1.0–1.5 (N–S) x 0.2
C.27	Field boundary ditch	T63	Linear in plan. Gradually sloping sides. Flat base. Fill comprised mid greyish brown clayey silt with occasional small sub-angular and sub-rounded stones.	1.8 (E–W) x 2.5 (N–S) x 0.3
C.28	Field boundary ditch	T25, T67, T68	Linear in plan. Very steep sides. Flat base. Shallow along the southern side, measured 0.3m in depth. Single fill comprised mid greyish brown clayey silt with moderate small sub-angular and sub-rounded stones. Maximum dimensions in T25 and T67, minimum in T68. Not continuing to west in T24 or T63.	25.0 (E–W) x 0.8–3.3 (NE–SW) x 0.9
C.29	Field boundary ditch	T36	Linear in plan. Parallel to C.30. Possibly the same as C.22 in T20, T21 and T48. Shallow along the southern side, measured 0.22m. Gradually sloping sides, flat base. Deeper along the eastern side. Steep sides, concave base. Single fill comprised mid greyish brown clayey silt with moderate small sub-angular and sub-rounded stones.	11.0 (E–W) x 3.0 (N–S) x 0.5
C.30	Field boundary ditch	T36	Linear in plan. Parallel to C.29. Possibly the same as C.9 in T20, T21, T34, and T48. Gradually sloping sides. Flat base. Single fill comprised mid greyish brown clayey silt with moderate small to medium sub-angular and sub-rounded stones.	1.8 (E–W) x 1.4 (N–S) x 0.2
C.31	Field boundary ditch	T3, T4	Linear in plan. Parallel to C.32. Not tested. Fill comprised dark greyish brown clayey silt with moderate small to medium sub-angular and sub-rounded stones.	18.0 (NE–SW) x 2.4–3.2 (NW–SE)
C.32	Field boundary ditch	T3, T4	Linear in plan. Parallel to C.31. Not tested. Fill comprised dark greyish brown clayey silt with moderate small to medium sub-angular and sub-rounded stones.	18.0 (NE–SW) x 1.3–2.6 (NW–SE)
C.33	Charcoal-production kiln	T51, T65 AA3	Elongated in plan. Fill comprised mid greyish brown clayey silt overlying dark blackish grey charcoal-rich deposit with moderate flecks of charcoal, and occasional small to medium sub-angular stones. Charcoal-rich deposit and red scorched natural subsoil, indicating <i>in-situ</i> burning, localised in the southwestern terminus of the feature. Possible stone-lining along the northeastern edge.	4.0 (NE–SW) x 1.1 (NW–SE) x min. 0.09

Context	Type	Trench	Description	Dimensions (m)
C.34	Posthole	T51 AA3	Located 0.3m to west of C.33. Subcircular in plan. Not tested. Fill mid brownish grey clayey silt with occasional charcoal flecks.	0.26 (N-S) x 0.22 (E-W)
C.35	Charcoal-production kiln	T51, T66 AA3	Sub-oval in plan. Cut by C.36. Not tested. Fill comprised mid greyish brown clayey silt overlying dark blackish grey charcoal-rich deposit with occasional small to medium sub-angular stones.	0.96 (E-W) x 0.5 (N-S)
C.36	Agricultural furrow	T51, T65, T66 AA3	Linear in plan. Cut C.35. Not tested. Fill comprised mid greyish brown clayey silt.	7.5 (E-W) x 0.5 (N-S)