

# METROLINK

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**MetroLink  
Archaeological Trial  
Testing Report  
- Lissenhall Area 1**

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# ACS



**METROLINK**



## **MetroLink – Estuary Park & Ride, Lissenhall Little/Balheary Demesne, Swords, Dublin**

### **Targeted Archaeological Test Excavations**

ARCHAEOLOGICAL  
CONSULTANCY  
SERVICES UNIT



Prepared for Jacobs IDOM JV by Donald Murphy

Licence No.: 19E0757

20<sup>th</sup> April 2020

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## PROJECT DETAILS

|                              |   |
|------------------------------|---|
| <b>Project Details</b>       | Targeted Archaeological Test Excavations, MetroLink Licence Area 1: Estuary Park and Ride, Lissenhall Little / Balheary Demesne, Swords, Dublin |
| <b>Site Name</b>             | Area 1: Estuary Park and Ride, Lissenhall Little / Balheary Demesne, Swords, Dublin   |
| <b>Licence Number</b>        | 19E0757   |
| <b>Townland</b>              | Lissenhall Little / Balheary Demesne  |
| <b>Parish</b>                | Swords  |
| <b>County</b>                | Dublin  |
| <b>ITM</b>                   | 718709, 748688  |
| <b>RMP</b>                   | DU011-131—  |
| <b>National Monument</b>     | DU011-081— Lissenhall Bridge  |
| <b>RPS</b>                   | 341   |
| <b>Consultant</b>            | Archaeological Consultancy Services Unit, Unit 21 Boyne Business Park, Greenhills, Drogheda, Co. Louth  |
| <b>Client</b>                | Jacobs IDOM JV on behalf of Transport Infrastructure Ireland  |
| <b>Project Archaeologist</b> | Emer Dennehy, TII   |
| <b>Project Manager</b>       | Donald Murphy   |
| <b>Excavation Director</b>   | Donald Murphy   |
| <b>Site Type</b>             | Enclosure   |
| <b>Report by</b>             | Donald Murphy   |
| <b>Report Status</b>         | Final   |
| <b>Report Date</b>           | 20 <sup>th</sup> April 2020   |
| <b>ACS Ref.</b>              | 1966  |



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## NON-TECHNICAL SUMMARY

This report details the results of Advance Targeted Archaeological Test Excavations at MetroLink Licence Area 1: Estuary Park & Ride, Lissenhall Little/Balheary Demesne, Swords, Co. Dublin (ITM 718709, 748688; Figures 1–2). The site is located in the townlands of Lissenhall Little and Balheary Demesne, west of the R132 road and south of the proposed Swords Western Distributor Link Road. The work was carried out for Jacobs IDOM JV on behalf of Transport Infrastructure Ireland.

There are two Recorded Monuments and Places (RMPs) within or immediately adjacent to the designated area, (RMPs DU011-131---- enclosure and DU011-081---- bridge). RMP DU011-131---- is an enclosure in the townland of Lissenhall Little that was identified by the National Monuments Service through analysis of aerial photography, while RMP DU011-081---- is Lissenhall Bridge National Monument, which crosses over the Broadmeadow River. It also forms part of the boundary between the townlands of Balheary Demesne and Lissenhall Great. This bridge is also a Protected Structure (RPS 341; FCC 2017) and is listed in the National Inventory of Architectural Heritage (Reg. No. 11335019).

This programme of Advance Targeted Archaeological Test Excavations was carried out on foot of a gap analysis by TII, which identified four locations along the MetroLink Preferred Route corridor (Licence Areas 1-4) which had not been subject to previous archaeological investigative works. The assessment site described in this report is located at the proposed Estuary Park & Ride in Lissenhall Little/Balheary Demesne just north of Swords in greenfield lands. The site was subdivided into three separate assessment (Licence) areas – Area 1A in the north-eastern corner, Area 1B along the western side (assessing RMP DU011-131----) and Area 1C in the southern end, 50m to the west of Lissenhall Bridge National Monument.

Prior to this archaeological assessment a geophysical survey were undertaken as a component of advance MetroLink Works, with a portion of the assessment area previously subject to a geophysical and ground penetrating radar (GPR) survey as a component of old Metro North works (Licence 08R0117, Thébaudeau & Harrison 2009; Licence 18R0196, Gimson & Garner 2019). The Advance Targeted Archaeological Test Excavations strategy was designed to assess the archaeological nature of high potential anomalies detected during these earlier surveys. The results of the Advance Targeted Archaeological Test Excavations will inform the MetroLink Environmental Impact Assessment Report (EIAR).

The site was tested by Donald Murphy under licence 19E0738 between the 8<sup>th</sup> and 13<sup>th</sup> January 2020. Thirty-one test trenches were excavated in total with a combined length of 847m. Twenty-two of these were excavated throughout Area 1A (totalling 442m) and nine in Area 1C (totalling 405m).

In Area 1A the advance test excavations confirmed the presence of an enclosure or ring ditch that defined the summit of a small ridge in the southern extent of the testing area. This enclosure was previously identified in the geophysical survey (Gimson & Garner 2019) and was oval in shape measuring 46m NE-SW by 36m NW-SE externally and defined by a single ditch that was located on the break of slope of the low ridge on which the site was located. An additional ditch extended north-westwards from the northern part of the enclosure and may represent an annexe or attached field on the northern slope of the hill. The enclosure was heavily disturbed by an old watermain aligned southwest to northeast that cut through the eastern half of the site. No evidence was recovered during the test excavations for an entrance but there may be a suggestion of one along the west side on the geophysical survey where the ditch appears as a much fainter anomaly. The ditch ranged in width from 0.77m to 1.6m and in depth from 0.38m to 0.65m with only two fills evident. A number of smaller features were also identified in the immediate vicinity of the enclosure including a small charcoal spread, a possible pit and a small narrow linear, but for the most part features were noticeably absent from the interior.

No finds were recovered but a number of the ditch fills were sampled and produced datable material in the form of charcoal and animal bone. A number of other geophysical anomalies not associated with the enclosure were identified throughout the remainder of Area 1A and the test trenches confirmed these not to be of archaeological origin.

No test trenches were excavated in Area 1B (see Section 2.1 above) as the lands were under crop and not available for assessment during the present test excavation phase. All attempts on behalf of TII to arrange access for geophysical survey as a component of MetroLink works have been equally unsuccessful due to crop coverage.

In Area 1C the test trenches were designed to target several geophysical anomalies and also the proximity to two recently identified sites (through aerial photography) just outside the site boundary to the west which consist of a possible tree ring (demesne feature) and possible enclosure. Two ditches were identified within the footprint of the proposed development and produced pottery of 19<sup>th</sup>/20<sup>th</sup> century date. Both are aligned with demesne landscape boundary elements indicated on the first edition 6 inch OS map and later 25 inch OS map and define a tree belt around the demesne. No archaeological features were exposed.

A number of environmental samples from the various ditch fills produced charcoal and animal bone and it is recommended that some of these be radiocarbon dated in order to more fully understand the nature and dating of the features exposed. As the proposed MetroLink project requires significant ground works at this location, all identified features will be directly impacted. Full preservation by record (i.e. archaeological excavation) in advance of construction works commencing will therefore be required in order to mitigate this permanent impact. The particulars of this mitigation measure will, in accordance with the Code of Practice for Archaeology, be set out in a Cultural Heritage Strategy to be agreed between the office of the Minister of Culture, Heritage and Gaeltacht and TII.

## ACKNOWLEDGEMENTS

This report has been prepared by Archaeological Consultancy Services Unit for Jacobs IDOM JV on behalf of Transport Infrastructure Ireland. The excavation was carried out under Licence from the Minister of Culture, Heritage and the Gaeltacht, in consultation with the National Museum of Ireland (NMI).

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## 1. INTRODUCTION

This report details the results of Advance Targeted Archaeological Test Excavations at MetroLink Licence Area 1: Estuary Park & Ride, Lissenhall Little/Balheary Demesne, Swords, Co. Dublin (ITM 718709, 748688; Figures 1–2). The site is located in the townlands of Lissenhall Little and Balheary Demesne, west of the R132 road and south of the proposed Swords Western Distributor Ring Road. The work was carried out for Jacobs/IDOM JV on behalf of Transport Infrastructure Ireland (TII).

There are two Recorded Monuments and Places (RMPs) within or immediately adjacent to the site (RMPs DU011-131---- enclosure and DU011-081---- bridge). DU011-131 is an enclosure in the townland of Lissenhall Little that was identified by the National Monuments Service through analysis of aerial photography, while RMP DU011-081---- is Lissenhall Bridge National Monument, which crosses over the Broadmeadow River. It also forms part of the boundary between the townlands of Balheary Demesne and Lissenhall Great. This bridge is also a Protected Structure (RPS 341; FCC 2017) and is listed in the National Inventory of Architectural Heritage (Reg. No. 11335019).

This programme of advance test excavations was carried out on foot of a gap analysis by TII, which identified four locations along the MetroLink Preferred Route corridor (Licence Areas 1-4) which had not been subject to previous archaeological investigative works. The assessment site described in this report is located at the proposed Estuary Park & Ride in Lissenhall Little/Balheary Demesne just north of Swords in greenfield lands. The site was subdivided into three separate assessment (Licence) areas - Area 1A in the north-eastern corner, Area 1B along the western side (assessing RMP DU011-131----) and Area 1C in the southern end, 50m to the west of Lissenhall Bridge National Monument. Area 1B was under a crop at the time of the advance test excavations and access was therefore not available. Donald Murphy of ACSU undertook the test excavations under licence 19E0757 between the 8<sup>th</sup> and 13<sup>th</sup> January 2020.

### 1.1 Project Description

MetroLink will be a high-capacity, high-frequency rail line running from Swords to Charlemont, linking Dublin Airport, Irish Rail, DART, Dublin Bus and Luas services, creating fully integrated public transport in the Greater Dublin Area. As well as linking major transport hubs, MetroLink will connect key destinations including Swords, Ballymun, the Mater Hospital, the Rotunda, Dublin City University and Trinity College. In addition to the rail line and associated stations, the project also provides for a depot site at Dardistown to stable the MetroLink rolling stock and a Park & Ride facility at Estuary. It is intended that the construction of MetroLink will commence construction in 2021 and will be open for passenger services by 2027.

### 1.2 Planning background

The site of Lissenhall Little and Balheary Demesne has been identified as the location of a MetroLink station and Park & Ride facility to be called Estuary Park & Ride. The works at this location will entail the construction of a viaduct over the Broadmeadow and Ward Rivers, a 3,000 vehicle multi-storey Park & Ride facility, a retained cut metro station, maintenance facilities, turnback facilities, all associated road and rail infrastructure, attenuation tanks, utility diversions, a viaduct over the Broadmeadow and Ward Rivers and hard and soft landscaping necessary for the construction and operation of the project. The archaeological assessment of Estuary Park & Ride also incorporates an underwater (wade) and metal detection survey of the Broadmeadow River under Licence Area 4, which is subject to a separate investigation and archaeological licences. This extends the survey of the river previously for old Metro North (Brady et al 2009)

TII are managing the proposed project on behalf of the National Transport Authority (NTA). An Environmental Impact Assessment Report (EIAR) will be prepared for the project by the project team led by Jacobs IDOM JV and the outputs of this survey will be an input to the EIA process. The EIAR will be submitted as part of a Railway Order application for the project to An Bord Pleanála.

The project is covered by the Code of Practice for Archaeology agreed between the Minister for Arts, Heritage Regional, Rural and Gaeltacht Affairs (now Minister for Culture, Heritage and the Gaeltacht, 'MCHG') and TII (2017) and Emer Dennehy is the nominated Project Archaeologist.

### 1.3 Topography, soils, geology & hydrology

The site is located within the townlands of Lissenhall Little and Balheary Demesne, directly west of the R132 road and south of the proposed Swords Western Distributor Link Road (SWDR; Figure 2). It is proposed that the SWDLR will link the R132 (east of the M1 and north of the Lissenhall interchange) to the N2 via the proposed 'Dublin Airport Box' road network (FCC 2017). The site currently comprises several large greenfields, or parts thereof, used for pasture and tillage, in a low-lying landscape of c. 8m OD, primarily located on the northern side of the Broadmeadow River. The latter flows from Rathoath in County Meath into the sea just northeast of Swords. The underlying geology consists of argillaceous bioclastic limestone and shale, the lower part of the formation is composed of calcareous shales, siltstones and sandstones, and occasional thin limestones at its base. These are followed by cyclical, peloidal and oncolytic, peloidal occasionally nodular micrites and a thin intraclastic anticlinal axis running southwest-northeast is in close proximity to Area 1C. The underlying limestone is covered by deep well drained mineral soils and alluvial mineral soils along the southern extent of site 1C due to its location close to the northern bank of the Broadmeadow River (Geological Survey of Ireland).

### 1.4 Historical background

This historical and archaeological background has been compiled using the Archaeology, Architectural Heritage and Cultural Heritage chapter of the old Metro North Environmental Impact Statement (EIS; CRDS Ltd 2008), the archaeology strategy for Metro North developed by Margaret Gowen & Co Ltd (2008) and the relevant geophysical surveys (Thébaudeau & Harrison 2009; Gimson & Garner 2019), in addition to available literary and cartographic sources.

Evidence for prehistoric activity to the north-east of the site was discovered in 2001 in advance of the construction of the M1 and comprised two rectangular post-built Neolithic houses in the townland of Lissenhall Little (RMP DU012-079001-2-; Licence No. 01E1074, Reilly 2001). They were set c. 9m apart, measured 9m by 5–6m and contained hearths. Ring-ditches to the north (RMP DU011-130----), north-west (RMP DU011-123----) and south-west (RMP DU011-080----) of the site also indicate prehistoric activity in this area. That to the north, in the townland of Lissenhall Little, was identified by the National Monuments Service as a crop mark on an aerial photograph and was subsequently subjected to a geophysical survey (Licence No. 08R0117, Thébaudeau & Harrison 2009) and test excavation (Licence No. 09E0463, Channing 2009) as part of the old Metro North project. The ring-ditch was found to measure 14.9m in external diameter with an associated cremation pit containing charcoal-rich clay and pottery. The ring-ditches to the north-west and south-west, in the townlands of Balheary Demesne and Holybanks respectively, were similarly identified as crop marks on aerial photographs.

In the early medieval period this area formed part of the geographical region of Brega, with a range of sites dating to this period in the environs, including ringforts, dispersed settlement sites and Early Christian ecclesiastical sites. There are relatively few surviving ringforts in north County Dublin due to the intensive cultivation and agricultural activity in this part of the county, which levelled many earthwork sites. They tend therefore to survive as cropmarks, as illustrated in the archaeological desk study undertaken for the EIS (CRDS Ltd 2008). To the west of the site, one such ringfort (RMP DU011-078----) is recorded as a double-ditched subcircular cropmark on an aerial photograph, measuring approximately 40m in diameter and with ditches radiating from the northeastern and southeastern quadrants probably representing an associated field system (RMP DU011-107----). Additional enclosures are recorded to the north-west, east and south-east of the site, in the townlands of Newtown, Balheary Demesne and Lissenhall Great (RMPs DU011-017----;

DU011-121----; DU012-015----). Two of these were also evidenced as cropmarks on aerial photographs, with that in Lissenhall Great named 'site of fort' on the first edition Ordnance Survey (OS) map of 1837; none have visible above ground surface remains. A possible field system (RMP DU011-122----) was also identified in the vicinity of the enclosure at Balheary Demesne. Another enclosure (RMP DU012-012001-), in the townland of Lissenhall Great, was similarly identified as a cropmark, 60m in diameter and with two possible fields (RMP DU012-012002-) attached to the eastern side. Test excavations (Licence Nos 98E0479, Opie 1998; 99E0546, Lynch 1999; 99E0547, Lynch 1999) undertaken in this area in advance of the M1 Motorway, and in the area of enclosure DU012-015----, revealed no finds or features of archaeological significance. Finally, the enclosure (RMP DU011-131----) within Licence Area 1 was also identified as a circular cropmark on an aerial photograph, but when geophysical survey was being undertaken by Earthsound Geophysics in 2019, the area was deemed unsuitable for gradiometer survey due to the presence of crops.

After the conquest by Anglo-Normans in the 12th century, new social structures, agrarian development and settlement centres of religious and secular origin followed. Throughout the medieval period, monastic foundations and individual lordships held large tracts of lands in north Dublin. A period of great flux occasioned by warfare, confiscation and transfer of ownership occurred during the Tudor era and Confederate and Williamite conflicts and the development of demesne properties in subsequent years, all influenced the character and layout of the rural north Dublin landscape, which was also influenced by peacetime economic and agricultural development (Margaret Gowen & Co. Ltd 2008, 4–5).

Lissenhall Bridge National Monument (RMP DU011-081----), also located within Licence Area 1, spans the Broadmeadow River and is directly to the north of Balheary Bridge (RPS 340), which spans the Ward River. Lissenhall Bridge is positioned on the boundary between the townlands of Lissenhall Great and Balheary Demesne. This five-arched bridge is first recorded in this location on the Down Survey map of 1656 (Figure 3) and is also shown on John Rocque's map of 1760 (Figure 4). The latter depicts a single bridge structure crossing both watercourses and a small tributary that diverges southward from the Broadmeadow, while a 'Turnpike' is shown on the northern side of this bridge structure, indicating that the bridge was tolled. The OS first edition map of 1837 (Figure 5) also notes the presence of a turnpike at this location, with a small building situated on the northern side of the river labelled 'Turnpike Gate Lodge'. It is likely that the tolling of Lissenhall Bridge ceased in the latter half of the 19th century and by the third edition OS mapping of 1906 (Figure 6) all reference to a turnpike at this location are gone. By the time of the latter map, Lissenhall Bridge is also no longer illustrated as a single structure that crosses both the Broadmeadow and Ward Rivers, these crossing points having now been demarcated as 'Lissenhall Bridge' and 'Balheary Bridge' respectively. An archaeological assessment (Licence Nos 08D092 & 08R312) of the Broadmeadow and Ward Rivers undertaken in 2008 in advance of the old Metro North confirmed that both bridges had an initial build phase of pre-17th-century date, with Lissenhall Bridge extended to the east and west in the 18th century and Balheary Bridge extended in the 18th and 19th centuries (Brady et al. 2009).

Finally, the site of a holy well (RMP DU012-011----) is located to the northeast of the assessment site. Holy wells are, however, also known to have been a Christian adaptation of the pre-Christian tradition of sacred springs and this particular example was a natural spring (Ó Danachair 1958, 81). The site was marked on the first edition OS map of 1837, and subsequent historical maps, as 'Sunday Well'. While to the southwest of the site there are three cross-slabs (RMPs DU011-157----; DU011-158----; DU011-159----), all removed to this location in the 1980s from the graveyard of Gallen Priory in County Offaly.

## 1.5 Recorded Monuments and Places & Artefacts

There are two RMPs within or adjacent to the test excavation area, an enclosure (DU011-131----) and a bridge (DU011-081----; national monument), with a number of other RMPs located in the surrounding area (Figure 2). These have all been discussed in the preceding section 1.4.

## 1.6 Protected Structures and National Inventory of Architectural Heritage (NIAH)

RMP DU011-081 - Lissenhall Bridge National Monument, which crosses over the Broadmeadow River and forms part of the boundary between the townlands of Balheary Demesne and Lissenhall Great is also a Protected Structure (RPS 341 and is listed in the National Inventory of Architectural Heritage (NIAH Reg. No. 11335019). The adjacent Balheary Bridge on the Ward River is a Protected Structure (RPS 340) and is listed in the NIAH (Reg. No. 11335018).

## 1.7 Previous Archaeological Investigations

A number of archaeological investigations have been carried out in the surrounding area (Figure 2). The details of these investigations, derived from the summary accounts of archaeological excavations in Ireland ([www.excavations.ie](http://www.excavations.ie)) are outlined in Table 1. They demonstrate the overall archaeological potential of the site under study and its surrounding townlands.

Table 1: Previous archaeological investigations in the environs of MetroLink Licence Area 1A-C

| Site                                 | Licence No.       | RMP No.                      | Director(s)     | Investigation type                  | Site type   |
|--------------------------------------|-------------------|------------------------------|-----------------|-------------------------------------|---|
| Lissenhall Little & Lissenhall Great | 98E0479           | DU012-012001- & DU012-015--- | Hilary Opie     | Archaeological testing (boreholes). | No archaeological significance.   |
| Lissenhall Great                     | 99E0546           | DU012-012001-                | Patricia Lynch  | Archaeological testing.             | No archaeological significance.   |
| Lissenhall Great                     | 99E0547           | DU012-015---                 | Patricia Lynch  | Archaeological testing.             | No archaeological significance.   |
| Lissenhall Little                    | 01E1074           | DU012-079001- --- 2-         | Fiona Reilly    | Archaeological excavation.          | Neolithic structures, fence lines and pits.                               |
| Lissenhall Little                    | 00E0953           | N/A                          | Patricia Lynch  | Archaeological testing.             | No archaeological significance.   |
| Lissenhall Little                    | 08E0178           | N/A                          | James Kyle      | Archaeological monitoring.          | No archaeological significance.   |
| Ward River, Balheary Demesne         | 08D0092 & 08R0311 | N/A                          | Rex Bangerter   | Riverbed assessment.                | Weir & associated walling. Five separate sections of river revetment wall |
| Broadmeadow River, Balheary Demesne  | 08D0093 & 08R0312 | DU011-081----                | Rex Bangerter   | Riverbed assessment.                | Lissenhall bridge & culvert   |
| Belinstown & Lissenhall Little       | 09E0463           | N/A                          | John Channing   | Archaeological testing.             | No archaeological significance.   |
| Lissenhall Little                    | 09E0463           | DU011-130----                | John Channing   | Archaeological testing.             | Ring-ditch, linear feature, cremation pit                                 |
| Lissenhall Little & Balheary Demesne | 09E0464           | DU011-081----                | John Channing   | Archaeological testing.             | Structure between Lissenhall Bridge and Balheary Bridge and arch/culvert. |
| Lissenhall Great                     | 11E0059           | N/A                          | Michael Tierney | Archaeological testing.             | No archaeological significance.   |
| Balheary Demesne                     | 13E0370           | N/A                          | Billy Quinn     | Archaeological testing.             | No archaeological significance.   |



Test excavation, as part of the advance works on the proposed route of old Metro North, was carried out in September 2009 on behalf of the Railway Procurement Agency (now TII; Channing 2009; Licence 09E0463). These investigations were carried out in Testing Area 5 (Lissenhall Little). Twenty-two test-trenches were excavated across three fields and one area of archaeological potential was identified. As mentioned above, a ring-ditch (Lissenhall Little 1; RMP DU011-130----) was partially exposed and measured 14.9m in external diameter. The ditch had a maximum width of 3.3m and depth of 1.2m. Nine separate deposits were present in the section. Minute quantities of bone and charcoal were noted. A linear ditch also extended from the eastern portion of the ring-ditch in an east-north-east direction with a gentle curve to the south. The surface fill was indistinguishable from that of the ring-ditch and it had a maximum depth of 0.4m and width of 1.5m. The base of the feature was cut into natural bedrock. A cremation pit comprising a sub-rectangular deposit of black, charcoal-stained silty clay, measuring 0.31m by 0.44m, was also found. Fragments of charcoal and burnt bone were present on the surface and when a pottery fragment was noted the excavation was halted and the feature preserved *in situ*.

Further test excavation in Testing Area 6 (Channing 2009a; Licence 09E0464) was undertaken to the south in 2009, in the footprint of the associated new access road and construction compound for old Metro North. A total of 27 test-trenches were excavated in four fields and one area of archaeological potential was identified between Lissenhall and Balheary Bridges. It confirmed that a continuous structure exists on the eastern side of Lissenhall Bridge, between the two bridges and beneath the modern landscaping in this area. Furthermore, the assessment also confirmed that an arch/culvert pre-dating the existing visible culvert on the western side of the bridge structure exists beneath the road. This may represent a medieval structure that existed between Lissenhall and Balheary Bridge prior to the redevelopment or widening of the road in the late 17th/early 18th century. In 2013, additional test excavations (Quinn 2013; Licence 13E0370) were undertaken in Balheary Demesne, on both sides of the Broadmeadow River, in advance of the proposed Swords Watermain Rehabilitation Project, but nothing of archaeological significance was noted.

In December 2008, an archaeological assessment of the Broadmeadow and Ward Rivers was undertaken by Rex Bangerter of The Archaeological Diving Company Ltd (Brady et al. 2009; Licence 08D0093, 08R0312 (Broadmeadow River) and 08D0092, 08R0311 (Ward River)). This work was also part of the advance works on the proposed route of old Metro North. Three features of archaeological significance were documented as part of the assessment: Lissenhall Bridge (Feature 1), its adjacent single-arched culvert (Feature 2) and Balheary Bridge (Feature 3). In addition, several riverine features of historic interest were documented, including: a weir location and associated walling (Feature 4), five sections of river revetment wall (Feature 5), and a single-arched bridge structure located 91m west of Balheary Bridge (Feature 6).

The results of the assessment work indicated that Lissenhall Bridge, the adjacent culvert and Balheary Bridge form part of the same continuous structure that was built across the Broadmeadow and Ward river channels. John Rocque's map of County Dublin (1760; Figure 4) clearly depicts a single structure and visual inspection confirmed the presence of an earlier build phase (Phase 1) at Lissenhall and Balheary Bridges as well as the associated culvert. This initial build phase forms the middle section of each structure comprising Features 1–3. These mid-sections are aligned with each other, on a north–south axis, and display a similar construction methodology throughout. Later build phases abutted the eastern (downstream) and western (upstream) side of each structure. It has previously been noted that the middle section of present-day Lissenhall Bridge is thought to date to the pre-1600s, a date that can be extrapolated to encompass the mid-sections of the adjacent culvert and Balheary Bridge. A second build phase (Phase 2), dating to the 18th century, was also identified, forming the bridge extensions at Features 1–2 and the downstream extension at Feature 3. A third build phase (Phase 3) is present at Balheary Bridge, the upstream bridge extension being constructed in the 19th century (c. 1850) in response to the collapse or partial collapse of the upstream (Phase 2) bridge extension that preceded it. It is following this 19th-century addition that the three bridge phases that form Feature 3 are collectively named 'Balheary Bridge'. This, in name, partitioned the extended structure that formed Lissenhall Bridge, with Balheary Bridge and Lissenhall Bridge now being clearly marked as separate structures on the OS third edition mapping of 1906–09 (Figure 6).

### 1.7.1 Previous Investigations within Licence Area 1

Between May 2008 and April 2009, a geophysical survey (08R0117) was also undertaken as part of the advance works on the proposed route of old Metro North (Thébaudeau & Harrison 2009). This comprised a detailed gradiometer survey conducted with a sample interval of 0.25m and a traverse interval of 1m using a Bartington GRAD 601-2 dual sensor instrument. This included an area on the western side of Lissenhall Bridge (within Licence Area 1C), where several pit-type responses and short curvilinear trends were identified. No clear archaeological patterns were identified, however, and the area had been disturbed by the insertion of a sub-surface watermain (since upgraded).

In April 2009, a Ground Penetrating Radar (GPR) survey was also carried out in the area between Lissenhall Bridge and Balheary Bridge (Murphy Surveyors 2009). On the southeast side of Lissenhall Bridge a linear anomaly was clearly visible and extended towards Balheary Bridge, over a distance of approximately 30m, disappearing as the embankment material rises over the old road level. This suggested a continuous bridge structure in this area, reinforcing the conclusions drawn during the archaeological assessment of the Broadmeadow and Ward Rivers in 2008.

In 2018, a combination of Magnetic Gradiometer and EMI Apparent Electrical Resistivity survey (18R0196) was undertaken in this area, within Licence Area 1A (Gimson & Garner 2019). The Magnetometer survey (M) was carried out using a LEA MAX Förster gradiometer system and the Electrical Resistivity data (R) was collected using a GF Instruments CMD Mini-Explorer. This work indicated the presence of numerous potential archaeological deposits, including a previously unknown D-shaped enclosure with a series of internal pits, divisions and a possible stone or earthen bank feature (see Figure 7). This enclosure may link to further features to the north, including a zone of raised magnetism and possible pits. Arching ditches, pits and compacted earth or stone features were also noted.

Ditch features representing potential archaeology are denoted by M2, M3, M5–8, M11–13, M15–19, M21–28, R29, R32, R35, R40, R49–52, R54–57, R59, R60, R62, R64, R66 and R70–71. These range in length from 7.8m to 107.5m. M3 may represent an oval-shaped ditched feature, over 20m in diameter, perhaps indicating the presence of a ring-ditch, while M19 represents a sub-oval enclosure measuring 38m NE/SW by 35m NW/SE and appears to be enclosed by M21 around the northwestern half. R52 represents another oval-shaped enclosure, measuring 17m by 10m and with a possible gap in the southwestern side. Some have a highly magnetic signature indicating the presence of burnt or fired deposits, while others may relate to drainage or plough furrows, or previous field divisions. Two possible banks, walls or stone features (M9, R42 and R43), spaced roughly 6m apart, may represent a trackway. Potential pits or post-holes were also evident (M4, M14, M20, R36, R37, R45), while the remaining anomalies comprised compacted earth or stone features (R30, R33, R34, R38, R39, R43, R44, R46–48, R53, R58, R61, R65, R67–69 and R72).

## 2. ARCHAEOLOGICAL TEST EXCAVATIONS

### 2.1 Aims & Objectives

Twenty-four test trenches were originally proposed for excavation across Areas 1A-1C targeting potential features identified by aerial photography for Area 1B, and through the geophysical survey for Areas 1A and 1C (Thébaudeau & Harrison 2009; Gimson & Garner 2019; Figure 7). The test trenches proposed for Area 1B (Test Trenches 15-18) were not excavated as this area was unavailable for testing due to the presence of a crop. In Area 1A proposed Test Trenches 1-4 were targeting a potential oval shaped anomaly but due to overhead wires two longer test trenches (1 and 3) were excavated here instead. An additional seven test trenches (Test Trenches 25-31) were also excavated in Area 1A to confirm the extent of the oval-shaped enclosure and an additional six test trenches (Test Trenches 32-37) were excavated throughout Area 1C after the footprint of the proposed development was increased here.

## Area 1A

The test trenches in Area 1A (Test Trenches 1, 3, 5-14, 22-31) totalled 442m and were excavated in an attempt to target numerous geophysical anomalies identified by Gimson and Garner (2019), such as M13 and M14 (Test Trenches 1–4; Figure 8), which comprised a possible enclosing ditch of archaeological origin with a wide opening on the northern side (max dimensions of c. 16m E–W by 17.5m N–S). Test Trenches 5 and 6 targeted anomalies M15 and M16, which appear to be connected and represent possible ditches or field drains and may also relate to M11 and M12 to the west; M15 is c. 40.5m long north–south and M16 is c. 42.5m long east–west. To the southwest of these, M17 and M18 were targeted by Test Trench 7; M17 is a small arc or curvilinear feature with a diameter of c. 6.6m NE–SW open to the southwest, and M18 is a possible linear ditch, measuring c. 15.6m NW–SE.

The test trenches were also excavated in an attempt to target the geophysical anomalies M19–21 (Test Trenches 8–14), which comprise a sub-oval enclosure ditch (M19), 38m NE–SW by 35m NW–SE, which may be connected to or is dissected by a curving ditch at the northern extent. The sub-oval enclosure sits on top of a topographical rise in the field with a gentle slope down all sides. A large modern sub-surface watermain cuts through the enclosure in a NE–SW direction. The highly magnetic nature of the anomaly M19 suggests it might contain burnt or fired remains. It appears to be enclosed by M21 around the northwestern half and contains M20. M21 comprises a wide ditch or enclosing feature (c.4.5–11.5m wide) that contains a large number of possible pits or post-holes and is likely to be archaeological in origin. A number of possible ditches, pits and post-holes of archaeological or agricultural origin were also recorded. M20 also represents possible pits and post-holes within M19, with an adjacent ditch that may represent an internal division.

Test Trench 22 was excavated to target a linear ditch (M22) extending for a length of 67m in a NW–SE direction, while Test Trench 23 targeted a curvilinear feature representing a possible ditch (M11) that measures c. 18m NW–SE. Geophysical anomalies M23 and M24 were targeted by Test Trench 24; these represent curvilinear dug features measuring c. 8m NW–SE and c. 39m N–S respectively, both with high magnetic signatures that suggest burnt or fired deposits.

## Area 1B

The proposed test trenches in Area 1B (Test Trenches 15-18) were not excavated as the lands were under crop at the time of the advance target test excavations. This area incorporates RMP DU011-131---; an enclosure, in the townland of Lissenhall Little, was identified as a circular cropmark on an aerial photograph, measuring c. 22m in diameter with a possible opening in the east. It was under crop coverage during the old Metro North geophysical surveys, and outside the limits of the associated test excavation scope. All attempts on behalf of TII to arrange access for geophysical survey as a component of MetroLink works have been equally unsuccessful due to crop coverage. The site therefore has not been subject to previous archaeological investigations. The eastern side of the RMP is scheduled to be impacted by an FCC slip road linking the proposed Swords Western Distributor Link Road (which forms the northern boundary of Estuary Park & Ride) with Ennis Road to the south. This slip road is to be constructed along the alignment of the existing 18th century access laneway to Lissenhall Little (RPS 0342; NIAH 11335010) and will define the western boundary of Estuary Park & Ride. TII are to construct a portion of the northern SWDLR and the associated eastern slip road on behalf of FCC as a component of MetroLink works.

## Area 1C

The test trenches excavated in Area 1C (Test Trenches 19-21 & 32-37) totalled 405m in length and targeted several pit type responses and short curvilinear trends identified in the old Metro North geophysical survey (Thébaudeau & Harrison 2009). No clear archaeological patterns were identified, however, and this area was disturbed through the insertion of a large sub-surface watermain, which has since been upgraded. Recent analysis of aerial photographs has also identified two possible circular enclosures and associated field systems directly to the west of Area 1C; though one of these is likely to relate to an 19<sup>th</sup> century demesne landscaping feature. Test Trenches 34

& 35 were excavated parallel to the western MetroLink property boundary close to the possible enclosures to assess whether any archaeological features were present within the project footprint.

## 2.2 Methodology

### 2.2.1 Survey, Excavation and Recording

Test excavation was carried out in accordance with the IAI Code of Conduct for Archaeological Excavation (IAI 2006). The excavation included the creation of a written and photographic record of the archaeology on a feature-by-feature basis using pro-forma record sheets; maintaining daily logs of excavations; and recording stratigraphic relationships and the position and depth of archaeology.

The test trenches were 1.8m wide and excavated to the surface of archaeological deposits or the underlying natural subsoil, whichever was encountered first. Natural sub-soil was exposed in all test trenches excavated.

A 14 ton mechanical excavator with a 1.8m wide ditching bucket was used to assist in the removal of topsoil in horizontal levels of not more than 0.10m in thickness. This work was undertaken under the direct supervision of the excavation director (Donald Murphy), in accordance with all current Health and Safety and regulatory legislation guidelines. All exposed archaeological or agricultural features were identified, cleaned back and tested by hand. In total 847 linear metres of test trench was excavated as instructed by the TII Project Archaeologist.

All features (archaeological or agricultural) revealed were cleaned back and tested by hand using partial excavation and half-sectioning. This work was recorded using detailed written descriptions giving details where applicable of location, composition, shape, dimensions, relationships, finds, samples, cross-references to other elements of the record and other relevant contexts. Supporting records in the form of registers or lists of drawings, photographs and samples were also created and the excavation director maintained a field diary. Where features were found they were recorded three dimensionally using a combination of scale drawings and GPS surveying. Comprehensive plans and cross-sectional drawings were produced at a scale of 1:10, 1:20 or 1:50, as appropriate, and included Ordnance Datum levels. The layout of all test trenches and the locations of any features recorded within them was recorded by competent surveyors using digital survey equipment and results were plotted in ITM. A high-resolution digital camera was used and where appropriate a scale was included.

### 2.2.2 Finds Retrieval and Sampling Strategies

All finds were registered, bagged and temporarily stored on site, in accordance with the Advice Notes for Excavators (NMI 1997/updated 2010) and the Code of Conduct for the Treatment of Archaeological Objects (IAI 2006). All finds are currently being stored at ACSU head office in Unit 21, Boyne Business Park, Drogheda, Co. Louth and will be deposited with the NMI in due course, accompanied by a completed NMI Excavation Finds Register Database for the site.

Palaeo-environmental samples were collected from appropriate contexts for the purposes of RadioCarbon dating and the recovery of non-wood macro plant remains; and the sampling process was implemented in accordance with the TII Palaeo-environmental Sampling Guidelines (McClatchie et al. 2015) and the Institute of Archaeologists of Ireland's Environmental Sampling: Guidelines for Archaeologists (IAI 2007). The overall sampling strategy therefore adopted a systematic approach as defined in the TII guidelines, supplemented with judgement-based sampling.

Post-depositional disturbance of deposits has the potential to re-work deposits and their components and to introduce material into the deposit. As part of a rigorous approach to sampling, site staff identified the extent to which a context was stratigraphically secure prior to taking a sample. Contexts that appeared to have their stratigraphic security significantly compromised through post-depositional disturbance were not sampled. The nature and degree of disturbance and the type of material that samples are designed to retrieve are the key considerations in determining whether a deposit is sufficiently stratigraphically secure to allow sampling. For example, larger

items such as pieces of preserved wood are generally less prone to post-depositional movement than smaller items such as waterlogged or charred plant seeds.

### 2.2.3 Conditions

Weather throughout the test excavation phase was mostly wet but with some short drier periods in between.

### 2.2.4 Constraints on Methods

All appropriate methods were used to mitigate against any potential impacts in advance of any ground excavation and all groundworks were undertaken in compliance with all relevant Construction Health and Safety Regulations. Identified constraints on the archaeological test excavations were as follows:

- (a) All test trenches in Areas 1A and 1C were aligned to avoid a watermain that traverses both areas and cuts through the enclosure in Area 1A.
- (b) Overhead power lines in Areas 1A and 1C prohibited the excavation of test trenches within a 14m wide corridor. In Area 1A this resulted in Test Trenches 1 and 3 being extended and Test Trenches 2 & 4 not being excavated.

## 2.3 Specialist Contributions and / or Consultations

### 2.3.1 Artefacts

The artefacts recovered during the advance test excavations (see Section 4, Table 5) consisted of eight body sherds of white glazed earthenware from the fill of two modern ditches in Area 1C. It is not proposed to carry out any further specialist analysis on the artefacts.

### 2.3.2 Faunal remains

Four separate samples of animal bone were recovered from the sections excavated through ditch fills as indicated below (see Section 5, Table 6). These remains have been examined by faunal remains expert Arlene Coogan and the results included in Table 6. It is not proposed to carry out any further analysis.

### 2.3.3 Human remains

Dr Denise Keating was engaged as part of the project team to attend on site in the event that burials were exposed. Osteo-archaeologist Glenn Gibney was also part of the on-site team but no human remains were exposed

### 2.3.4 Palaeo-environmental remains

Two separate bulk samples were taken from a ditch fill and an isolated charcoal spread (see Section 5, Table 6). All samples were processed by flotation and the two samples produced sufficient quantities of charcoal from which RadioCarbon dates can be obtained. No non-wood plant macro remains were recovered. Suitable charcoal (short-lived species) for dating will be selected by Dr Lorna O'Donnell in advance of any RadioCarbon dating application.

## 3. ARCHAEOLOGICAL EXCAVATION RESULTS

In Area 1A the test trenching confirmed the presence of an enclosure or ring ditch that defined the summit of a small ridge in the southern extent of the testing area and had been detected during the earlier geophysical survey (Figure 7). This enclosure was oval in shape and measured 46m NE-SW by 36m NW-SE externally and was defined by a number of ditches that were located on the break of slope of the ridge (C4, C11 & C14). An additional ditch (C3) extended north-westwards from the northern part of the enclosure and may represent

an annexe or associated field on the northern slope of the hill. A number of smaller features were also identified in the immediate vicinity of the enclosure including a small charcoal spread (C15), a possible pit (C12) and a small narrow linear (C13). A number of the ditch fills were sampled and produced datable material in the form of charcoal and animal bone. RadioCarbon dating of a number of these samples is recommended to determine the dating of these features and to further inform any subsequent excavation phase (see Section 7 below). A number of other geophysical anomalies not associated with the enclosure were identified throughout the remainder of Area 1A and the test trenches confirmed these not to be of archaeological origin.

In Area 1C the test trenches were designed to target several geophysical anomalies and also the proximity to two recently identified enclosures (through aerial photography) just outside the site boundary to the west. Two ditches were identified within the footprint of the proposed development and produced pottery of 19<sup>th</sup>/20<sup>th</sup> century date and are both aligned with demesne landscape boundary elements (i.e. a tree belt) indicated on the first edition 6 inch OS map and later 25 inch OS map. No archaeological features were exposed.

### 3.1 Area 1A

A detailed description of the Area 1A test trenches is provided in Sections 3.1.1 – 3.1.2; a summary of the results is provided in Table 2.

Table 2: Licence Area 1A: Test Excavation Results, Test Trenches 1, 3, 5-14, 22-31

| Test Trench Number | Length (m) | Width (m) | Targeting anomaly /vicinity | Contexts recorded | Archaeology exposed | Description   |
|--------------------|------------|-----------|-----------------------------|-------------------|---------------------|---|
| 1                  | 25         | 1.8       | M12, M13                    | N/A               | No                  | Excavated NE-SW (Figure 8; Plate 1). Topsoil consisted of 0.40m of brown loam onto natural sandy grey boulder clay. No archaeological features exposed. No finds recovered.   |
| 3                  | 10         | 1.8       | M14                         | N/A               | No                  | Excavated NE-SW (Figure 8; Plate 2). Topsoil consisted of 0.50m of brown loam onto natural sandy grey boulder clay. No archaeological features exposed. No finds recovered.   |
| 5                  | 9          | 1.8       | M16                         | N/A               | No                  | Excavated N-S (Figure 8; Plate 3). Topsoil consisted of 0.46m of brown loam onto natural sandy grey boulder clay. No archaeological features exposed. No finds recovered.   |
| 6                  | 10         | 1.8       | M15                         | N/A               | No                  | Excavated E-W (Figure 8; Plate 4). Topsoil consisted of 0.63m of brown loam onto natural sandy grey boulder clay. No archaeological features exposed. No finds recovered.   |
| 7                  | 18         | 1.8       | M17, M18                    | N/A               | No                  | Excavated NE-SW (Figure 8; Plate 5). Topsoil consisted of 0.53m of brown loam onto natural sandy grey boulder clay. No archaeological features exposed. No finds recovered.   |
| 8                  | 24         | 1.8       | M20                         | C3, C7, C8, C9    | Yes                 | Excavated NE-SW (Figures 10, 11, 13; Plates 6-8). Topsoil consisted of 0.50m of brown loam onto natural orange brown boulder clay. Ditch C3 identified in southern end of test trench aligned NW-SE. Filled with C7, C8, C9. No finds recovered.  |
| 9                  | 33         | 1.8       | M20                         | C4, C5, C6        | Yes                 | Excavated N-S (Figures 10, 11, 13; Plates 9-10). Topsoil consisted of 0.50m of brown loam onto natural orange brown boulder clay at north end of test trench changing to grey stony subsoil at s end on ridge. Ditch C4 identified near southern end of test trench aligned E-W. Filled with C5 & C6 and represents part of oval enclosure along with C11 and |

| Test Trench Number | Length (m) | Width (m) | Targeting anomaly /vicinity | Contexts recorded | Archaeology exposed | Description   |
|--------------------|------------|-----------|-----------------------------|-------------------|---------------------|---|
|                    |            |           |                             |                   |                     | C14. Stone filled field drain exposed at north end. No finds recovered.   |
| 10                 | 17         | 1.8       | M21                         | N/A               | No                  | Excavated NE-SW (Figure 8; Plate 11). Topsoil consisted of 0.41-0.88m of brown loam onto natural sandy orange/brown boulder clay and stony subsoil. The topsoil was much deeper at the southwest end at the base of the ridge and shallower on top of the ridge. No archaeological features exposed. No finds recovered.  |
| 11                 | 42         | 1.8       | M20, M21                    | C14, C16,         | Yes                 | Excavated NW-SE on ridge (Figures 8, 10, 11, 13; Plates 12-14). Topsoil consisted of 0.37m of brown loam onto natural grey stony subsoil. Ditch C14 identified near eastern end of test trench aligned NE-SW that represents part of oval enclosure along with C4 and C11. Second ditch C16 exposed further west. No finds recovered.   |
| 12                 | 20         | 1.8       | M20                         | N/A               | No                  | Excavated NE-SW (Figure 8; Plate 15). Topsoil consisted of 0.35m of brown loam onto natural grey brown stony subsoil. No archaeological features exposed. No finds recovered.   |
| 13                 | 11         | 1.8       | M19                         | C11, C12, C13     | Yes                 | Excavated NW-SE on ridge (Figures 8, 10, 11, 13; Plates 16-18). Topsoil consisted of 0.63m of brown loam onto natural grey stony subsoil. Ditch C11 identified near middle of test trench aligned NE-SW that represents part of oval enclosure along with C4 and C14. Small pit C12 identified at east end of test trench. Small narrow linear C13 to west of ditch C11. No finds recovered.                                      |
| 14                 | 23         | 1.8       | M20                         | C14, C15, C19     | Yes                 | Excavated NE-SW on south slope of ridge (Figures 8, 10, 11, 13; Plates 19-21). Topsoil consisted of 0.37m of brown loam onto natural grey stony subsoil. Ditch C14 identified near northern end of test trench aligned NW-SE that represents part of oval enclosure along with C4 and C11. Small charcoal spread C15 identified to south of ditch and field drain C19 identified at south end of test trench. No finds recovered. |
| 22                 | 11         | 1.8       | M22                         | N/A               | No                  | Excavated NE-SW (Figure 8; Plate 22). Topsoil consisted of 0.38m of brown loam onto natural orange brown boulder clay. No archaeological features exposed. No finds recovered.  |
| 23                 | 9          | 1.8       | M11                         | N/A               | No                  | Excavated NE-SW (Figure 8; Plate 23). Topsoil consisted of 0.35m of brown loam onto natural orange brown boulder clay. No archaeological features exposed. No finds recovered.  |
| 24                 | 24         | 1.8       | M23, M24                    | N/A               | No                  | Excavated NW-SE (Figure 8; Plate 24). Topsoil consisted of 0.36m of brown loam onto natural orange brown boulder clay. No archaeological features exposed. No finds recovered.  |
| 25                 | 18         | 1.8       |                             | N/A               | No                  | Excavated NE-SW (Figure 8; Plate 25). Topsoil consisted of 0.44m of brown loam onto natural grey brown stony subsoil. No archaeological features exposed. No finds recovered. Area here partly disturbed by watermain (now defunct).  |
| 26                 | 23         | 1.8       | M19                         | C11               | Yes                 | Excavated NE-SW on ridge (Figures 8, 10, 11; Plates 26-27). Topsoil varying in depth from 0.29m to 0.54m consisted of brown loam onto natural grey stony  |

| Test Trench Number | Length (m) | Width (m) | Targeting anomaly /vicinity | Contexts recorded | Archaeology exposed | Description  |
|--------------------|------------|-----------|-----------------------------|-------------------|---------------------|--|
|                    |            |           |                             |                   |                     | subsoil. Ditch C11 identified at west end of test trench aligned N-S and represents part of oval enclosure along with C4 and C14. No finds recovered.  |
| 27                 | 20         | 1.8       | M19                         | C11, C17, C18     | Yes                 | Excavated E-W on ridge (Figures 8, 10, 11, 13; Plates 28-30). Topsoil varying in depth from 0.36m to 0.60m consisted of brown loam onto natural grey stony subsoil. Ditch C11 identified near west end of test trench aligned N-S and represents part of oval enclosure along with C4 and C14. No finds recovered.                                     |
| 28                 | 23         | 1.8       | M19                         | N/A               | No                  | Excavated NW-SE (Figures 8, 10, 11; Plate 31). Topsoil consisted of 0.42m of brown loam onto natural grey brown stony subsoil. No archaeological features exposed. No finds recovered. This test trench crosses the line of the oval shaped enclosure ditch C11 but despite extensive cleaning, the ditch was not evident within the test trench here. |
| 29                 | 24         | 1.8       | N/A                         | N/A               | No                  | Excavated N-S (Figure 8; Plate 32). Topsoil consisted of 0.47m of brown loam onto natural grey brown stony subsoil. No archaeological features exposed. No finds recovered.  |
| 30                 | 27         | 1.8       | M20                         | C14, C21          | Yes                 | Excavated E-W on ridge (Figures 8, 10, 11; Plates 33-34). Topsoil consisted of 0.40m of brown loam onto natural grey stony subsoil. Ditch C14 identified near eastern end of test trench as a narrow linear aligned N-S that represents part of oval enclosure along with C4 and C11. No finds recovered.  |
| 31                 | 21         | 1.8       | N/A                         | N/A               | No                  | Excavated NE-SW (Figure 8; Plate 35). Topsoil consisted of 0.50m of brown loam onto natural orange brown boulder clay. No archaeological features exposed. No finds recovered.   |

### 3.1.1 Test Trenches 1, 3, 5-7, 10, 12, 22-25, 28-29, 31

Fourteen of the test trenches excavated in Area 1A targeting geophysical anomalies did not identify any archaeological deposits or features (Table 2; Figure 8). All test trenches measured 1.8m in width and varied in length from 9m (Test Trench 5) to 25m (Test Trench 1). Natural orange/brown boulder clay was exposed in the test trenches excavated off the ridge and natural stony grey deposits were exposed on the ridge itself. The topsoil depth in the test trenches varied from 0.35m in Test Trench 23 to 0.88m in Test Trench 10. There was nothing obvious evident in any of the test trenches that would account for the anomalies detected by the geophysical survey and it is likely therefore that they were of geological origin.

### 3.1.2 Test Trenches 8-9, 11, 13-14, 26-27, 30

Eight test trenches were excavated across the top of the small ridge in the southern extent of the testing area to target a possible oval shaped enclosure detected during the earlier geophysical survey (Figures 8, 10, 11 & 13; Table 2). The excavated test trenches all measured 1.8m in width and varied in length from 11m (Test Trench 13) to 42m (Test Trench 11). Natural deposits consisted of a stony grey/brown subsoil in all test trenches and topsoil varied in depth from 0.29m in Test Trench 26 to 0.63m in Test Trench 13.



### 3.1.2.1 The Enclosure

The test trenches confirmed the presence of an oval shaped enclosure enclosing the top of the ridge. The enclosure (represented by C4 in Test Trench 9, C11 in Test Trenches 26, 27 & 13 and C14 in Test Trenches 14, 30 & 11) measures 46m NE-SW by 36m NW-SE externally and 44m by 34m internally. The eastern side of the enclosure is cut through by a now defunct watermain on a NE-SW alignment and this may account for the absence of any evidence for the ditch in Test Trenches 25 and 28. The ditch varies in width from 0.77m at the north end (C4 in Test Trench 9) to 1.60m (C11 in Test Trench 27) at the southern end and in depth from 0.40m at the north end (C4 in Test Trench 9) to 0.65m at the southern end (C11 in Test Trench 27). It appears therefore to be more truncated along the north and the west and better preserved along the south and the east (Figure 10). The ditch is generally u-shaped in profile and is filled with grey brown silty clays (C5-6, C17-18, C21) containing moderate amounts of stone, shell, animal bone and charcoal. In Test Trench 27 the outer edge of the ditch had a noticeable step or ridge at the base. The only feature exposed in the interior of the enclosure was a small narrow linear (C13) just inside the ditch C11 in Test Trench 13. The linear C13 may not even be related to the enclosure and could represent a drain or other agricultural feature; it appears to be on the same alignment as probable cultivation furrows visible at this location in the geophysical survey results (Figure 11). Outside the enclosure a possible pit C12 was exposed in Test Trench 13 and a small charcoal spread C15 was exposed in Test Trench 14. The possible pit C12 was located 2m east of the outer edge of the enclosure ditch and measures 0.95m north-south by 0.81m east-west and was filled with a firm grey clay silt with occasional stone. The charcoal spread C15 in Test Trench 14 measures 0.61m in diameter and 0.06m in depth. A field drain C19 was also located at the southwest end of Test Trench 14 close to the present field boundary. A second stone filled drain was identified at the north end of Test Trench 9.

The oval enclosure is consistent with the geophysical survey results (Figure 11) which also appears to illustrate a much better preserved enclosure to the east, south and southwest with more truncation to the west and north.

### 3.1.2.2 Ditch C3

A second ditch (C3) was exposed in Test Trench 8 running off the northwest end of the enclosure. This ditch was aligned northwest to southeast and measures 2.45m in width and 0.66m in depth. It had a u-shaped profile and was filled with brown silty clays containing animal bone. The ditch corresponds with the geophysical results (Figure 11) which appears to suggest the presence of an arcing ditch that cuts the north end of the enclosure and may represent the southern end of a second enclosure, annex or field. No finds were recovered but suitable samples for RadioCarbon dating were retrieved.

## 3.2 Area 1C

A detailed description of the Area 1C test trenches is provided in Sections 3.2.1 to 3.2.2; a summary of the results is provided in Table 3.

Table 3: Area 1C: Test Excavation Results, Test Trenches 19-21, 32-37

| Test Trench Number | Length (m) | Width (m) | Targeting anomaly | Contexts recorded | Archaeology exposed | Description   |
|--------------------|------------|-----------|-------------------|-------------------|---------------------|---|
| 19                 | 40         | 1.8       | G49               | C22, C23          | No                  | Excavated N-S (Figure 9; Plate 36). Topsoil consisted of 0.60m of brown loam above natural grey/brown stony subsoil. Ditch C22 aligned NE-SW identified near southern end of test trench. Same ditch also exposed in Test Trenches 20 and 21. Aligned with boundary of tree belt shown on first edition OS 6 inch and 25 inch maps (Figure 12). |

| Test Trench Number | Length (m) | Width (m) | Targeting anomaly | Contexts recorded | Archaeology exposed | Description   |
|--------------------|------------|-----------|-------------------|-------------------|---------------------|---|
| 20                 | 37         | 1.8       | G49               | C22, C23          | No                  | Excavated NW-SE (Figure 9; Plate 39). Topsoil consisted of 0.45m of brown loam above natural grey/brown stony subsoil. Ditch C22 aligned NE-SW identified near eastern end of test trench. Same ditch also exposed in Test Trenches 19 and 21. Aligned with boundary of tree belt shown on first edition OS 6 inch and 25 inch maps (Figure 12).  |
| 21                 | 24         | 1.8       | G49               | C22, C23          | No                  | Excavated N-S (Figure 9; Plates 37-8). Topsoil consisted of 0.60m of brown loam above natural grey/brown stony subsoil and brown/orange boulder clay. Ditch C22 aligned NE-SW identified near northern end of test trench. Same ditch also exposed in Test Trenches 19 and 20. Aligned with boundary of tree belt shown on first edition OS 6 inch and 25 inch maps (Figure 12).  |
| 32                 | 63         | 1.8       | N/A               | N/A               | No                  | Excavated roughly NE-SW (Figure 9; Plate 40) close to west boundary to test proximity to a tree ring (shown on first edition OS 6 inch and 25 inch maps) and possible enclosure, both recently identified on aerial photography (Figure 14). Topsoil consisted of 0.60m of brown loam above brown/orange boulder clay. No archaeological deposits or features exposed.  |
| 33                 | 85         | 1.8       | N/A               | N/A               | No                  | Excavated roughly NE-SW (Figure 9; Plate 41) close to west boundary to test proximity to a tree ring (shown on first edition OS 6 inch and 25 inch maps) and possible enclosure, both recently identified on aerial photography (Figure 14). Topsoil consisted of 0.48m of brown loam above brown/orange boulder clay. No archaeological deposits or features exposed.  |
| 34                 | 24         | 1.8       | N/A               | N/a               | No                  | Excavated roughly NE-SW (Figure 9; Plate 42) close to west boundary to test proximity to a tree ring (shown on first edition OS 6 inch and 25 inch maps) and possible enclosure, both recently identified on aerial photography (Figure 14). Topsoil consisted of 0.44m of brown loam above brown/orange boulder clay. No archaeological deposits or features exposed.  |
| 35                 | 27         | 1.8       | N/A               | C24, C25          | No                  | Excavated NE-SW (Figure 9; Plates 43-4) close to west boundary to test proximity to a tree ring (shown on first edition OS 6 inch and 25 inch maps) and possible enclosure, both recently identified on aerial photography (Figure 14). Topsoil consisted of 0.52m of brown loam above brown/orange boulder clay. Ditch C24 aligned NW-SE identified near southern end of test trench. Aligned with boundary of tree belt shown on first edition OS 6 inch and 25 inch maps (Figure 12). Finds from the fill of C24 included white glazed earthenware of 19 <sup>th</sup> /20 <sup>th</sup> century date. Two cast iron water pipes were also exposed mid-way along the test trench (Plate 47). |
| 36                 | 52         | 1.8       | N/A               | N/A               | No                  | Excavated roughly E-W (Figure 9; Plate 45) across a slight ridge in the centre of the testing area. Topsoil consisted of 0.35-0.55m of brown  |

| Test Trench Number | Length (m) | Width (m) | Targeting anomaly | Contexts recorded | Archaeology exposed | Description  |
|--------------------|------------|-----------|-------------------|-------------------|---------------------|--|
|                    |            |           |                   |                   |                     | loam above natural brown/orange boulder clay. No archaeological deposits or features exposed.  |
| 37                 | 53         | 1.8       | N/A               | N/A               | No                  | Excavated roughly E-W (Figure 9; Plate 46) across a slight ridge in the centre of the testing area. Topsoil consisted of 0.60m of brown loam above natural grey brown stony subsoil. No archaeological deposits or features exposed. |

### 3.2.1 Test Trenches 19-21

Three test trenches excavated in Area 1C targeted geophysical anomalies from the old Metro North survey did not identify any archaeological deposits (Table 3; Figure 9). All test trenches measured 1.8m in width and varied in length from 24m (Test Trench 21) to 40m (Test Trench 19). Natural grey/brown stony subsoil or orange/brown boulder clay was exposed in all three test trenches at depths ranging from 0.45m in Test Trench 20 to 0.60m in Test Trenches 19 and 21. There was nothing obvious evident in any of the test trenches that would account for the anomalies detected by the geophysical survey but a ditch C22 was exposed in all three test trenches running on a NE-SW alignment. The ditch measures 1.6m in width and consists of loose brown clay (C23) defined by two narrow bands (one either side) of humic clay full of roots (Plate 38). The feature is on the same alignment as a tree belt and demesne landscaping boundary element shown on the first edition 6 inch map and later 25 inch map (Figure 12). Finds from the fill of the ditch (C23) consisted of white glazed earthenware of 19<sup>th</sup>/20<sup>th</sup> century date. The geophysical anomalies detected during the earlier survey were all within the tree belt area and may have represented tree throws or iron debris within the topsoil.

### 3.2.2 Test Trenches 32-7

Six additional test trenches were excavated in Area 1C in order to fully assess the archaeological potential of the remainder of the area within the footprint of the proposed project and in particular the area along the western site boundary which is very close to two features identified on recent aerial photography, a possible enclosure and probable tree ring (Table 3; Figure 9). All test trenches measured 1.8m in width and varied in length from 24m (Test Trench 34) to 85m (Test Trench 33). Natural orange/brown boulder clay was exposed in Test Trenches 32-6 and natural stony grey deposits were exposed in Test Trench 37. The topsoil depth in the test trenches varied from 0.35m in Test Trench 36 to 0.60m in Test Trenches 32 & 37. The only feature identified was ditch C24 in Trench 35 (Plate 44; Figure 9). The ditch measures 3m in width and consists of loose brown clay (C25) defined by a narrow band on its north side of humic clay full of roots. The feature is on the same alignment as a tree belt and demesne landscaping boundary element shown on the first edition 6 inch map and later 25 inch map (Figure 12). Finds from the fill of the ditch (C25) consisted of white glazed earthenware of 19<sup>th</sup>/20<sup>th</sup> century date. The only other feature of note identified on site was two cast iron water pipes running east-west through Test Trench 35 (Plate 47). These were not disturbed.

## 4. ARTEFACT CATALOGUE

Table 4: List of finds

| Find No.       | Description   | Dimensions       | Fabric                   | Condition  | Relevant Information  |
|----------------|---|------------------|--------------------------|------------|---|
| 19E0757:23:1-5 | 5 Body sherds of glazed white earthenware – 19 <sup>th</sup> /20 <sup>th</sup> century in date. | 30-50mm diameter | White glazed earthenware | Fragmented | Recovered from fill of ditch C22 visible on 25 inch OS map c 1910 |

| Find No.       | Description   | Dimensions       | Fabric                   | Condition  | Relevant Information  |
|----------------|---|------------------|--------------------------|------------|---|
| 19E0757:25:1-3 | 3 Body sherds of glazed white earthenware – 19 <sup>th</sup> /20 <sup>th</sup> century in date. | 35-65mm diameter | White glazed earthenware | Fragmented | Recovered from fill of ditch C24 visible on 25 inch OS map c 1910 |

## 5. ENVIRONMENTAL REGISTER

Table 5: List of samples

| Sample No. | Context No. | Description                                       | Type        | Vol (lt) | Processing                                     | Result  |
|------------|-------------|---|-------------|----------|--|---|
| 1          | C7          | Collected from fill of test slot in ditch C3.     | Animal bone | N/A      | Visual assessment by faunal remains specialist | 6 bones in total, identified as cattle. Includes radius/ulna and phalange                               |
| 2          | C21         | Collected from the fill of C14 in Test Trench 14. | Animal bone | N/A      | Visual assessment by faunal remains specialist | 10 bones in total, identified as cattle and sheep/goat. Includes vertebrae and tibia.                   |
| 3          | C17         | Collected from the fill of C11.                   | Animal bone | N/A      | Visual assessment by faunal remains specialist | 22 bones in total, identified as cattle and sheep/goat. Includes calcaneus, mandible and rib fragments. |
| 4          | C6          | Collected from the fill of C4 in Test Trench 9.   | Animal bone | N/A      | Visual assessment by faunal remains specialist | 2 bones in total, identified as cattle. Includes tooth and ulna.  |
| 5          | C17         | Collected from the fill of enclosure ditch        | Soil sample | 3        | Processed by flotation                         | 10g charcoal recovered. C14 suitable  |
| 6          | C15         | Charcoal Spread                                   | Soil sample | 3        | Processed by flotation                         | 9g charcoal recovered. C14 suitable   |

## 6. DISCUSSION

This programme of Advance Targeted Archaeological Test Excavations was carried out to inform the MetroLink EIAR and to determine the nature and significance of a number of anomalies identified during an earlier programme of geophysical investigation (Thébaudeau & Harrison 2009; Gimson & Garner 2019). The anomalies identified in that survey included possible linear ditches and an oval shaped enclosure in Area 1A. Thirty-one test trenches were excavated in total with a combined length of 847m. Twenty-two of these were excavated throughout Area 1A (totalling 442m) and nine in Area 1C (totalling 405m).

In Area 1A the advance test excavations confirmed the presence of an enclosure or ring ditch that defined the summit of a small ridge in the southern extent of the testing area (Figures 7-8 & 10). This enclosure was previously identified in the geophysical survey (Gimson & Garner 2019). The enclosure was oval in shape and measured 46m NE-SW by 36m NW-SE externally and was defined by a single ditch that was located on the break of slope of the low ridge and identified in seven of the excavated test trenches (C4 in Test Trench 9, C11 in Test Trenches 26, 27 and 13 & C14 in Test Trenches 14, 30 and 11). An additional ditch (C3) extended north-westwards from the northern part of the enclosure and may represent an annexe or attached field on the northern slope of the hill. The enclosure was heavily disturbed by an large watermain aligned southwest to northeast that cut through the eastern half of the site. As a result the enclosure ditch was not evident in Test Trenches 25 or 28, though the earlier geophysical survey results suggest that there should have been some evidence for the ditch in Test Trench 28 (Figure 11). No evidence was recovered during the test excavations for an entrance

but there may be a suggestion of one along the west side on the geophysical survey where the ditch appears as a much fainter anomaly. The ditch through Test Trench 30 and Test Trench 11 on the western side was extremely narrow (0.43m and 0.80m respectively) and appears to have been heavily ploughed out. Elsewhere the ditch ranged in width from 0.77m to 1.6m. Sections excavated through the ditch confirmed that the depth ranged from 0.38m to 0.65m with only two fills and no finds other than animal bone and shell. A number of smaller features were also identified in the immediate vicinity of the enclosure including a small charcoal spread (C15), a possible pit (C12) and a small narrow linear (C13), but for the most part features were noticeably absent from the interior.

A number of the ditch fills were sampled and produced datable material in the form of charcoal and animal bone. RadioCarbon dating of a number of these samples is recommended to determine the date of these features and to further inform both the interpretation of the site and any subsequent excavation phase (Section 7.5). A number of other geophysical anomalies not associated with the enclosure were identified throughout the remainder of Area 1A and the test trenches confirmed these not to be of archaeological origin.

A number of similar enclosures have been identified nearby, mostly through aerial photography. An enclosure measuring 35m in external diameter was identified in Balheary Demesne 0.7km to the west (RMP DU011-0121-0122-). It is similarly located on higher ground and with a number of attached fields to the east and south-east. Less than 500m to the east of the present site in Lissenhall Great townland another enclosure with a diameter of 60m with two possible fields attached to the east was identified (DU012-012001-2). Other enclosures are recorded to the south-east at Lissenhall Great (DU012-015; 642m distant) and to the west at Newtown (DU011-017; 1.1km distant). In Area 1C the test trenches were designed to target several geophysical anomalies and also the proximity to two recently identified sites (through aerial photography) just outside the project boundary to the west which consist of a possible tree ring and possible enclosure (Figure 14). Two ditches were identified within the footprint of the proposed project and produced pottery of 19<sup>th</sup>/20<sup>th</sup> century date. Both are aligned with boundary elements of an 18<sup>th</sup> or 19<sup>th</sup> century landscaping feature associated with Balheary Demesne. This feature is indicated on the first edition 6 inch OS map and later 25 inch OS map (Figure 12) and defined a tree belt around the demesne. No archaeological features were exposed.

As outlined in Section 7.5 two samples from the various ditch fills of the oval shaped enclosure in Area 1A have produced material from which AMS RadioCarbon dates can be procured. In line with the Method Statement for these works, it is proposed that a minimum of two RadioCarbon dates should be obtained for this site in order to more fully understand the nature and dating of the features exposed.

## 7. POST-EXCAVATION PROPOSAL

### 7.1 Artefacts

The artefacts recovered during the excavations are all of 19<sup>th</sup>/20<sup>th</sup> century date and no further specialist analysis is proposed. They are not deemed to be of any significance and following photography for recording purposes, it is recommended that they be discarded.

### 7.2 Faunal remains

The faunal remains recovered during the test excavations were analysed by Faunal Remains Specialist Arlene Coogan (see Appendix 4 below). The remains are not deemed to be of significance and retention has not been recommended other than for RadioCarbon dating purposes

### 7.3 Human remains

No human bone was recovered during the advance programme of test excavations on site.

## 7.4 Palaeo-environmental remains

Two of the environmental samples produced sufficient quantities of charcoal from which RadioCarbon dates could be obtained. Subject to the RadioCarbon dating proposal being approved below, charcoal suitable for dating (i.e. charcoal from short lived species) will be identified by Palaeo-environmental specialist Dr Lorna O Donnell and submitted to the RadioCarbon laboratory. Full charcoal analysis at this advance test excavations stage of the project is likely to contribute very little and is not required.

## 7.5 RadioCarbon Dating Proposal

Table 6: RadioCarbon Dating Proposal

| Sample No. | Context No. | Sample type | Description                                | Weight (g) | Reason for Dating   |
|------------|-------------|-------------|--|------------|---|
| 5          | C17         | Charcoal    | Collected from fill of enclosure ditch C11 | 10g        | Best available sample to date oval shaped enclosure C11/C14 |
| 4          | C6          | Bone        | From fill of ditch C4                      |            | Cattle tooth suitable for dating                            |

Sufficient charcoal was recovered from two features on site, the fill of the oval shaped enclosure ditch C11 and a thin charcoal spread C15. It is proposed to obtain a RadioCarbon date from the ditch fill C17 which would provide a date for the enclosure. It is not proposed to date the charcoal spread (C15) as it was very thin and could be of any date. Animal bone recovered from C6, the primary fill of the enclosure ditch C4 would also provide a date for the north end of the oval shaped enclosure.

## 8. SIGNIFICANCE OF FINDINGS

The following table provides a summary of the significance of the archaeological features identified at MetroLink Licence Area 1: Estuary Park & Ride, Lissenhall Little/Balheary Demesne. This is based on the criteria detailed in the *Guidelines for the Assessment of Archaeological Heritage Impacts of National Road Schemes* (NRA 2005).

Significance: Local

Table 7: Significance of findings

| Existing Status | Condition/ Preservation   | Documentation/ Historic Significance | Group Value | Rarity | Visibility | Fragility | Amenity Value |
|-----------------|---|--------------------------------------|-------------|--------|------------|-----------|---------------|
| None            | Truncated remains of shallow oval-shaped enclosure cut into the natural subsoil | None                                 | None        | Common | None       | High      | None          |

## 9. RECOMMENDATIONS

The construction of the proposed Estuary Park & Ride facility will entail the excavation and construction of viaduct over the Broadmeadow and Ward Rivers, a multi-storey Park & Ride facility, a metro station, maintenance and turnback facilities, all associated road and rail infrastructure, attenuation tanks, utility diversions, and hard and soft landscaping necessary for the construction and operation of the

project. This will entail bulk excavation works, which will result in a direct permanent impact on all sub-surface archaeological remains which are either known to exist or may potentially exist at this location.

Full preservation by record (i.e. archaeological excavation) in advance of construction works commencing will therefore be required in order to mitigate this permanent impact. The particulars of this mitigation measure will, in accordance with the Code of Practice for Archaeology, be set out in a Cultural Heritage Strategy to be agreed between the office of the Minister of Culture, Heritage and Gaeltacht and TII. The proposed mitigation measures will also be addressed in the Cultural Heritage (Archaeology) Chapter of the MetroLink EIAR. The requirement for preservation by record extends to all lands which may be acquired (both temporary and permanent) and impacted at this location in order to facilitate the successful installation of MetroLink.

As Lissenhall Bridge is a National Monument, no MetroLink works (archaeological, enabling or construction) should take place within proximity to this constraint in the absence of obtaining Consent from the Minister of Culture Heritage and Gaeltacht in accordance with Section 14 (2) of the National Monuments Act -1930-2014 (as amended). The TII Project Archaeologist will liaise with the National Monuments Service of DCHG to determine the Ministers requirements in this regard and to obtain Ministerial Consent.

## 9.1 Further Work

It is recommended that two AMS RadioCarbon dates be procured from the results of the test excavations - from ditches C11 (S5) and C4 (S4). Due to the current restrictions as a result of the Covid-19 pandemic, the RadioCarbon dating will be carried out by Beta Analytic in Florida who are still operating normally. Applications for licences to export and alter will be submitted to the Department of Culture, Heritage and the Gaeltacht in advance of submitting the samples. The results of the RadioCarbon dates will be submitted to the relevant authorities upon receipt as a supplementary appendix to this report.

## 10. INVENTORY OF FEATURES

| Context | Type    | Description   | Measurements                     | Associated Cut / Fill                                     | Finds | Samples | Drawings            | Plates     |
|---------|---------|---|----------------------------------|---|-------|---------|---------------------|------------|
| C1      | Topsoil | Topsoil consisting of brown loam representing ploughsoil in both Area1A and 1C  | 0.30-0.60m in depth              | -   | -     | -       | -                   | -          |
| C2      | Natural | Natural deposits varying throughout the site from orange brown boulder clay in places to a very stony grey subsoil on the ridges  | -                                | -   | -     | -       | -                   | -          |
| C3      | Cut     | Cut of ditch aligned northwest to southeast in Test Trench 8 filled with C7, C8 & C9. The ditch measured 2.45m in width and 0.66m in depth. It had a sharp break of slope at the top with steep sides, convex along the south and concave at the north. The break of slope at the bottom was gradual with a slightly rounded base. This ditch extends northwest from the northwest portion of the oval shaped enclosure represented by C4, C11 & C14 and may be contemporary. | 2.45m in width<br>0.66m in depth | C7, C8, C9<br><br>Also may be related to C4, C11 & C14    | -     | -       | Figures 10, 11 & 13 | Plates 7-8 |
| C4      | Cut     | Cut of ditch in Test Trench 9 containing two fills C5 & C6. Represents the northern portion of oval shaped enclosure along with C11 and C14. The ditch measured 0.77m in width at the top and 0.38m in depth. It had a sharp break of slope at the top with slightly convex sides, a more gradual break of slope at the bottom and a relatively flat base.  | 0.77m in width<br>0.38m in depth | C5, C6<br><br>Part of oval enclosure along with C11 & C14 | -     | -       | Figures 10, 11 & 13 | Plate 10   |
| C5      | Deposit | Upper fill of C4 ditch consisting of a firm brown/grey silty clay with occasional stone. 0.26m in depth within ditch C4.  | 0.77m in width<br>0.26m in depth | C4  | -     | -       | Figures 10 & 13     | Plate 10   |



| Context | Type    | Description  | Measurements                             | Associated Cut / Fill | Finds | Samples                        | Drawings        | Plates       |
|---------|---------|--|--|-----------------------|-------|--------------------------------|-----------------|--------------|
| C6      | Deposit | Primary fill of ditch C4 consisting of firm brown/grey silty clay with frequent stone and animal bone. 0.25m in depth within ditch C4  | 0.57m in width<br>0.26m in depth         | C4                    | -     | S4 – Animal bone (2 fragments) | Figures 10 & 13 | Plate 10     |
| C7      | Deposit | Upper fill of ditch C3 in Test Trench 8 consisting of mid brown silty clay with occasional medium sized stones and occasional animal bone. 0.60m in depth within ditch C3  | 2.08m in width<br>0.60m in max depth     | C3                    | -     | S1 – Animal bone (6 fragments) | Figures 10 & 13 | Plate 8      |
| C8      | Deposit | Lower fill of ditch C3 comprising compact orange/brown silty clay with frequent large and medium angular stone. 0.68m in maximum depth within ditch C3   | 2.44m in max width<br>0.68m in max depth | C3                    | -     | -                              | Figures 10 & 13 | Plate 8      |
| C9      | Deposit | Primary basal fill of ditch C3 in Test Trench 8 consisting of mottled grey/brown stony clay with frequent small rounded stone. 0.05m in thickness  | 0.05m in thickness                       | C3                    | -     | -                              | Figures 10 & 13 | Plate 8      |
| C10     | -       | Not used   | -  | -                     | -     | -                              | -               | -            |
| C11     | Cut     | Ditch of oval shaped enclosure in Test Trenches 26, 27 & 13. Contained two fills C17 & C18. The ditch has a sharp break of slope at top and bottom with convex sides and a flat base which is stepped on the east side. The ditch measured 1.60m in width at the top and 0.65m in depth. The upper fill C17 may represent a re-cut of the ditch. | 1.60m in width<br>0.65m in depth         | C17, C18              | -     | -                              | Figures 10 & 13 | Plates 29-30 |

| Context | Type    | Description   | Measurements                        | Associated Cut / Fill | Finds | Samples                          | Drawings        | Plates       |
|---------|---------|---|-------------------------------------|-----------------------|-------|----------------------------------|-----------------|--------------|
| C12     | Pit     | Small possible pit in Test Trench 13 east of enclosure ditch C11 filled with firm grey clay silt with occasional stone and measuring 0.95m north-south by 0.81m east-west   | 0.95m N-S by<br>0.81m E-W           | -                     | -     | -                                | Figure 10       | Plate 18     |
| C13     | Cut     | Narrow linear/possible gully west of enclosure ditch C11 in Test Trench 13 aligned NE-SW. The cut had a sharp break of slope at the top, more gradual at the bottom and a rounded base. Measured 0.53m in width at the top and 0.17m in depth. Filled with C20. | 0.53m in width<br>0.17m in depth    | C20                   | -     | -                                | Figure 10       | Plate 17     |
| C14     | Cut     | Cut of enclosure ditch in Test Trenches 14, 30 & 11. Filled with C21. Cut measures 1m in width at the top and 0.56m in depth.   | 1m in width<br>0.56m in depth       | C21                   | -     | -                                | Figures 10 & 13 | Plates 19-20 |
| C15     | Deposit | Spread of soft black clay/silt with frequent charcoal and occasional small pebbles in Test Trench 14. 0.61m in diameter and 0.06m in depth  | 0.61m in diameter<br>0.06m in depth | -                     | -     | S6 – Environmental (9g charcoal) | Figure 10       | Plate 21     |
| C16     | Cut     | Cut of ditch/drain in Test Trench 11 aligned NE-SW and measuring 1.35m in width. Filled with light brown silty clay. Aligned with a very faint north-south trend on the geophysical survey. Contained snail shell – may represent a later agricultural feature  | 1.35m in width                      | -                     | -     | -                                | Figure 10       | Plate 14     |

| Context | Type    | Description   | Measurements                                 | Associated Cut / Fill | Finds                                | Samples  | Drawings        | Plates   |
|---------|---------|---|--|-----------------------|--------------------------------------|--|-----------------|----------|
| C17     | Deposit | Upper fill of enclosure ditch C11. Dark grey/brown silty clay with occasional small stone, shell (consisting of mussel, cockle & periwinkle), animal bone and fragmented sandstone. 1.6m in width and 0.53m in depth within the ditch. May represent a recut of the ditch C11   | 1.6m in width<br>0.53m in depth              | C11                   | -                                    | S3 – Animal bone (22 fragments)<br><br>S5 – Environmental (10g charcoal) | Figures 10 & 13 | Plate 30 |
| C18     | Deposit | Primary fill of ditch C11. Soft mid grey/brown silty clay with occasional stone. 0.55m in maximum depth within the ditch. Below C17.  | 1.06m in max width<br><br>0.55m in max depth | C11                   | -                                    | -  | Figures 10 & 13 | Plate 30 |
| C19     | Drain   | Narrow field drain at southwest end of Test Trench 14 filled with stone and brown silty clay. Parallel with existing field boundary hedge.  | 0.33m in width                               | -                     | -                                    | -  | Figure 10       | -        |
| C20     | Deposit | Fill of linear/gully C13 in Test Trench 13. Soft mid brown silty clay with occasional stone.  | 0.53m in width                               | C13                   | -                                    | -  | Figure 10       | Plate 17 |
| C21     | Deposit | Fill of ditch C14 in Test Trench 14. Mid brown silty clay with occasional small rounded stones, animal bone and shell (cockle, mussel & periwinkle).  | 1m in width<br>0.56m in depth                | C14                   | -                                    | S2 – Animal bone (10 fragments)  | Figures 10 & 13 | Plate 20 |
| C22     | Cut     | Cut of ditch or hedgerow in Test Trench 19, 20 & 21 in Area 1C aligned NE-SW. Ditch measures 1.6m in width and consists of loose brown clay defined by two narrow bands (one either side) of humic clay full of roots. Feature is on same alignment as a tree belt shown on the first edition 6 inch map and later 25 inch map (Figure 12). | 1.6m in width                                | C23                   | Modern finds recovered from fill C23 | -  | Figures 9 & 12  | Plate 38 |

| Context | Type    | Description  | Measurements  | Associated Cut / Fill | Finds   | Samples | Drawings       | Plates   |
|---------|---------|--|---------------|-----------------------|---|---------|----------------|----------|
| C23     | Deposit | Fill of hedgerow C22 in Test Trenches 19-21. Consists of loose brown clay defined by two bands (one either side) of humic clay full of roots. Modern finds recovered from fill. Feature is on same alignment as a tree belt shown on the first edition 6 inch map and later 25 inch map (Figure 12). | 1.6m in width | C22                   | 5 Body sherds of glazed white earthenware – 19 <sup>th</sup> /20 <sup>th</sup> century in date. | -       | Figures 9 & 12 | Plate 38 |
| C24     | Cut     | Cut of ditch in Test Trench 35 aligned NW-SE and measuring 1.7m in width. Filled with C25. Modern finds recovered from fill. Feature is on same alignment as a tree belt shown on the first edition 6 inch map and later 25 inch map (Figure 12).  | 1.7m in width | C25                   | Modern finds recovered from fill C25  | -       | Figures 9 & 12 | Plate 44 |
| C25     | Fill    | Fill of C24. Consists of loose brown clay, humic in nature and containing roots and modern pottery. Feature is on same alignment as a tree belt shown on the first edition 6 inch map and later 25 inch map (Figure 12).   | 1.7m in width | C24                   | 3 Body sherds of glazed white earthenware – 19 <sup>th</sup> /20 <sup>th</sup> century in date. | -       | Figures 9 & 12 | Plate 44 |

Table 8: Inventory of features

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## 12. EXCAVATIONS BULLETIN

Dublin

MetroLink Area 1 – Estuary Park & Ride, Lissenhall Little/Balheary Demesne, Swords, Co Dublin

19E0757

ITM 718709, 748688

### Enclosure

A programme of Advance Targeted Archaeological Test Excavations was carried out at MetroLink Licence Area 1: Estuary Park & Ride, Lissenhall Little/Balheary Demesne, Swords, Co. Dublin in January 2020. The site is located in the townlands of Lissenhall Little and Balheary Demesne, west of the R132 road and south of the proposed Swords Western Ring Road. The work was carried out on behalf of Transport Infrastructure Ireland as part of the MetroLink programme of archaeological investigations, the results of which informed the preparation of an Environmental Impact Assessment Report for the preferred route.

There are two Recorded Monuments and Places within or immediately adjacent to the designated area, (RMPs DU011-131---- enclosure and DU011-081---- bridge). RMP DU011-131---- is an enclosure in the townland of Lissenhall Little that was identified by the National Monuments Service through analysis of aerial photography, while RMP DU011-081---- is Lissenhall Bridge National Monument, which crosses over the Broadmeadow River. It also forms part of the boundary between the townlands of Balheary Demesne and Lissenhall Great. This bridge is also a Protected Structure (RPS 341) and is listed in the National Inventory of Architectural Heritage (Reg. No. 11335019). Prior to this archaeological assessment a geophysical and ground penetrating radar (GPR) survey were undertaken as a component of advance MetroLink Works (Licence 08R0117, Thébaudeau & Harrison 2009; Licence 18R0196, Gimson & Garner 2019). The Advance Targeted Archaeological Test Excavations strategy was designed to assess the archaeological nature of high potential anomalies detected during these earlier surveys.

The site was tested by Donald Murphy under licence 19E0738 between the 8<sup>th</sup> and 13<sup>th</sup> January 2020. The site was subdivided into three separate areas - Area 1A in the north-eastern corner, Area 1B along the western side (assessing RMP DU011-131----) and Area 1C in the southern 50m west of Lissenhall Bridge National Monument. Thirty-one test trenches were excavated in total with a combined length of 847m. Twenty-two of these were excavated throughout Area 1A (totalling 442m) and nine in Area 1C (totalling 405m). No testing took place in Area 1B as the lands were under crop and not available.

In Area 1A the advance test excavations confirmed the presence of an enclosure or ring ditch that defined the summit of a small ridge in the southern extent of the testing area. This enclosure was previously identified in the geophysical survey (Gimson & Garner 2019) and was oval in shape measuring 46m NE-SW by 36m NW-SE externally and defined by a single ditch that was located on the break of slope of the low ridge on which the site was located. An additional ditch extended north-westwards from the northern part of the enclosure and may represent an annexe or attached field on the northern slope of the hill. The enclosure was heavily disturbed by a large watermain aligned southwest to northeast that cut through the eastern half of the site. No evidence was recovered during the test excavations for an entrance but there may be a suggestion of one along the west side on the geophysical survey where the ditch appears as a much fainter anomaly. The ditch ranged in width from 0.77m to 1.6m and in depth from 0.38m to 0.65m with only two fills evident. A number of smaller features were also identified in the immediate vicinity of the enclosure including a small charcoal spread, a possible pit and a small narrow linear, but for the most part features were noticeably absent from the interior.

No finds were recovered but a number of the ditch fills were sampled and produced datable material in the form of charcoal and animal bone. A number of other geophysical anomalies not associated with the enclosure were identified throughout the remainder of Area 1A and the test trenches confirmed these not to be of archaeological origin.

In Area 1C the test trenches were designed to target several geophysical anomalies and also the proximity to two recently identified sites (through aerial photography) just outside the site boundary to the west which consist of a possible tree ring and possible enclosure. Two ditches were identified within the footprint of the proposed development and produced pottery of 19<sup>th</sup>/20<sup>th</sup> century date. Both are aligned with a demesne landscape boundary element indicated on the first edition 6 inch OS map and later 25 inch OS map and define a tree belt around the demesne. No archaeological features were exposed.

A number of environmental samples from the various ditch fills produced charcoal and animal bone and it is recommended that two of these be RadioCarbon dated in order to more fully understand the nature and date of the features exposed.

*Donald Murphy, Archaeological Consultancy Services Unit Ltd., 21 Boyne Business Park, Greenhills, Drogheda, Co. Louth*

#### **References:**

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## 13. APPENDICES

### 13.1 Appendix 1: List of Plans and Sections

| Plan No. | Type     | Details  | Features   | Scale | Date   |
|----------|----------|--|--|-------|--------|
| 1        | Plan     | Digital survey plan of all features and test trenches        | All  | 1:20  | Jan 20 |
| 2        | Sections | 1:10 Section drawings of excavated sections through features | C3, C4, C5, C6, C7, C8, C9, C11, C14, C17, C18, C21, C22 | 1:10  | Jan 20 |

Table 9: List of plans and sections

## 13.2 Appendix 2: List of Photographs

| Photo No. | Context No. | Description  | Date Taken       |
|-----------|-------------|--|------------------|
| 1-3       |             | Test Trench 6 looking east                               | 8th January 2020 |
| 4-6       |             | Test Trench 5 looking south                              | 8th January 2020 |
| 7         |             | Area of Test Trenches 1-4 before excavation looking west | 8th January 2020 |
| 8-10      |             | Test Trench 7 looking northeast                          | 8th January 2020 |
| 11-12     |             | Test Trench 7 looking southwest                          | 8th January 2020 |
| 13-15     |             | Test Trench 8 looking southwest                          | 8th January 2020 |
| 16-18     |             | Test Trench 9 looking south                              | 8th January 2020 |
| 19        |             | Test Trench 9 looking west                               | 8th January 2020 |
| 20-21     |             | Test Trench 9 looking north                              | 8th January 2020 |
| 22-24     |             | Test Trench 3 looking northeast                          | 8th January 2020 |
| 25-27     |             | Test Trench 1 looking north-east                         | 8th January 2020 |
| 28-30     | C4          | Linear C4 in Test Trench 9 looking west                  | 8th January 2020 |
| 31-33     |             | Test Trench 25 looking northeast                         | 8th January 2020 |
| 34-37     | C3          | Ditch C3 in Test Trench 8 looking west                   | 8th January 2020 |
| 38        | C3          | Ditch C3 in Test Trench 8 looking south                  | 8th January 2020 |
| 39        | C3          | Ditch C3 in Test Trench 8 looking north                  | 8th January 2020 |
| 40-42     |             | Test Trench 10 looking south                             | 8th January 2020 |
| 43-45     |             | Test Trench 24 looking south-east                        | 9th January 2020 |
| 46-48     |             | Test Trench 22 looking south-west                        | 9th January 2020 |
| 49-51     |             | Test Trench 31 looking northeast                         | 9th January 2020 |
| 52-54     |             | Test Trench 28 looking south                             | 9th January 2020 |
| 55-57     |             | Test Trench 29 looking south                             | 9th January 2020 |
| 58-59     | C10         | C10 in Test Trench 29 looking east                       | 9th January 2020 |
| 60-62     |             | Test Trench 12 looking north                             | 9th January 2020 |
| 63-65     |             | Test Trench 26 looking northeast                         | 9th January 2020 |
| 66-67     | C11         | C11 in Test Trench 26 looking east                       | 9th January 2020 |
| 68-69     | C11         | C11 in Test Trench 26 looking west                       | 9th January 2020 |
| 70-72     |             | Test Trench 27 looking east                              | 9th January 2020 |

| Photo No. | Context No. | Description  | Date Taken        |
|-----------|-------------|--|-------------------|
| 73        | C11         | C11 in Test Trench 27 looking southeast              | 9th January 2020  |
| 74        | C11         | C11 in Test Trench 27 looking northeast              | 9th January 2020  |
| 75-77     |             | Test Trench 11 looking west                          | 9th January 2020  |
| 78        | C14         | Test Trench 11 shallow remains of C14 looking south  | 9th January 2020  |
| 79        |             | Test Trench 11 possible drain or ditch looking south | 9th January 2020  |
| 80-81     | C14         | Test Trench 30 c14 looking south                     | 9th January 2020  |
| 82-84     |             | Test Trench 30 looking west                          | 9th January 2020  |
| 85-87     |             | Test Trench 14 looking south-west                    | 9th January 2020  |
| 88-90     | C14         | Test Trench 14 Ditch C14 looking west                | 9th January 2020  |
| 91        | C15         | Test Trench 14 charcoal spread C15 facing east       | 9th January 2020  |
| 92        |             | Test Trench 14 poss drain or furrow C19 facing west  | 9th January 2020  |
| 93-96     | C11         | Test Trench 27 C11 section facing south              | 9th January 2020  |
| 97-98     | C11, C13    | Test Trench 13 C13 and C11 facing north              | 9th January 2020  |
| 99-100    |             | Test Trench 13 facing east                           | 9th January 2020  |
| 101       | C11-C13     | Test Trench 13 C13, C11 and C12 facing west          | 9th January 2020  |
| 102       | C12         | Test Trench 13 pit C12 facing west                   | 9th January 2020  |
| 103       |             | Test Trench 23 looking northeast                     | 10th January 2020 |
| 104       | C13         | Test Trench 13 C13 facing south sectioned 0.20 deep  | 10th January 2020 |
| 105-107   | C11         | Test Trench 27 C11 section post ex facing south      | 10th January 2020 |
| 108-110   | C14         | Test Trench 14 C14 section looking west              | 10th January 2020 |
| 111-113   |             | Test Trench 20 looking northwest                     | 10th January 2020 |
| 114-116   |             | Test Trench 21 looking south                         | 10th January 2020 |
| 117       |             | Test Trench 32 looking north                         | 10th January 2020 |
| 118       |             | Test Trench 33 looking north                         | 10th January 2020 |
| 119       |             | Test Trench 33 looking south                         | 10th January 2020 |
| 120       |             | Test Trench 19 looking south                         | 10th January 2020 |
| 121-122   |             | Ditch in Test Trench 21 looking west                 | 10th January 2020 |
| 123       |             | Safety bunting for ESB lines                         | 13th January 2020 |
| 124-126   |             | Test Trench 34 looking north                         | 13th January 2020 |

| Photo No. | Context No. | Description                                | Date Taken        |
|-----------|-------------|--|-------------------|
| 127-129   |             | Ditch in Test Trench 35 looking south-east | 13th January 2020 |
| 130-131   |             | Ditch in Test Trench 35 looking north-east | 13th January 2020 |
| 132-135   |             | Ditch in Test Trench 35 looking west       | 13th January 2020 |
| 136-138   |             | Test Trench 35 looking south               | 13th January 2020 |
| 139-141   |             | Test Trench 36 looking west                | 13th January 2020 |
| 142-144   |             | Test Trench 37 looking west                | 13th January 2020 |
| 145-148   |             | Slurry spread over Area 1A by farmer       | 13th January 2020 |
| 149       |             | Iron Water pipes In Test Trench 35         | 13th January 2020 |

Table 10: List of photographs

### 13.3 Appendix 3: Metadata to facilitate upload to TII Digital Heritage Collections

|                            |  |
|----------------------------|--|
| <b>Registration Number</b> | 19E0757  |
| <b>Site Name</b>           | MetroLink Licence Area 1: Estuary Park & Ride, Lissenhall Little/Balheary Demesne, Swords, Dublin  |
| <b>Townland URL</b>        | <a href="https://www.logainm.ie/en/17080">https://www.logainm.ie/en/17080</a> ; <a href="https://www.logainm.ie/en/17059">https://www.logainm.ie/en/17059</a>  |
| <b>County</b>              | Dublin   |
| <b>Type of Report</b>      | Archaeological Test Excavations Report   |
| <b>Scheme Name</b>         | MetroLink  |
| <b>Client</b>              | Jacobs IDOM JV   |
| <b>Executive Summary</b>   | <p>A programme of Advance Targeted Archaeological Test Excavations was carried out at MetroLink Licence Area 1: Estuary Park &amp; Ride, Lissenhall Little/Balheary Demesne, Swords, Co. Dublin in January 2020. The site is located in the townlands of Lissenhall Little and Balheary Demesne, west of the R132 road and south of the proposed Swords Western Ring Road. The work was carried out on behalf of Transport Infrastructure Ireland as part of the MetroLink programme of archaeological investigations, the results of which informed the preparation of an Environmental Impact Assessment Report for the preferred route.</p> <p>There are two Recorded Monuments and Places within or immediately adjacent to the designated area, (RMPs DU011-131---- enclosure and DU011-081---- bridge). RMP DU011-131---- is an enclosure in the townland of Lissenhall Little that was identified by the National Monuments Service through analysis of aerial photography, while RMP DU011-081---- is Lissenhall Bridge National Monument, which crosses over the Broadmeadow River. It also forms part of the boundary between the townlands of Balheary Demesne and Lissenhall Great. This bridge is also a Protected Structure (RPS 341) and is listed in the National Inventory of Architectural Heritage (Reg. No. 11335019). Prior to this archaeological assessment a geophysical and ground penetrating radar (GPR) survey were undertaken as a component of advance MetroLink Works (Licence 08R0117, Thébaudeau &amp; Harrison 2009; Licence 18R0196, Gimson &amp; Garner 2019). The Advance Targeted Archaeological Test Excavations strategy was designed to assess the archaeological nature of high potential anomalies detected during these earlier surveys.</p> <p>The site was tested by Donald Murphy under licence 19E0738 between the 8<sup>th</sup> and 13<sup>th</sup> January 2020. The site was subdivided into three separate areas - Area 1A in the north-eastern corner, Area 1B along the western side (assessing RMP DU011-131) and Area 1C 50m to the west of Lissenhall Bridge National Monument. Thirty-one test trenches were excavated in total with a combined length of 847m. Twenty-two of these were excavated throughout Area 1A (totalling 442m) and nine in Area 1C (totalling 405m). No testing took place in Area 1B as the lands were under crop and not available for testing.</p> <p>In Area 1A the advance test excavations confirmed the presence of an enclosure or ring ditch that defined the summit of a small ridge in the southern extent of the testing area. This enclosure was previously identified in the geophysical survey (Gimson &amp; Garner 2019) and was oval in shape measuring 46m NE-SW by 36m NW-SE and defined by a single ditch that was located on the break of slope of the low ridge on which the site was located. An additional ditch extended north-westwards from the northern part of the</p> |

|   |  |
|---|--|
|   | <p>enclosure and may represent an annexe or attached field on the northern slope of the hill. The enclosure was heavily disturbed by an old watermain aligned southwest to northeast that cut through the eastern half of the site. No evidence was recovered during the test excavations for an entrance but there may be a suggestion of one along the west side on the geophysical survey where the ditch appears as a much feinter anomaly. The ditch ranged in width from 0.77m to 1.6m and in depth from 0.38m to 0.65m with only two fills evident. A number of smaller features were also identified in the immediate vicinity of the enclosure including a small charcoal spread, a possible pit and a small narrow linear, but for the most part features were noticeably absent from the interior.</p> <p>No finds were recovered but a number of the ditch fills were sampled and produced datable material in the form of charcoal and animal bone. A number of other geophysical anomalies not associated with the enclosure were identified throughout the remainder of Area 1A and the test trenches confirmed these not to be of archaeological origin.</p> <p>In Area 1C the test trenches were designed to target several geophysical anomalies and also the proximity to two recently identified sites (through aerial photography) just outside the site boundary to the west which consist of a possible tree ring and possible enclosure. Two ditches were identified within the footprint of the proposed development and produced pottery of 19<sup>th</sup>/20<sup>th</sup> century date. Both are aligned with demesne landscape boundary element indicated on the first edition 6 inch OS map and later 25 inch OS map and define a tree belt around the demesne. No archaeological features were exposed.</p> <p>A number of environmental samples from the various ditch fills produced charcoal and animal bone and it is recommended that two of these be radiocarbon dated in order to more fully understand the nature and dating of the features exposed.</p> |
| <b>Site Director</b>                          | Donald Murphy  |
| <b>Archaeological Consultancy</b>             | Archaeological Consultancy Services Unit, Unit 21, Boyne Business Park, Greenhill's, Drogheda, Co. Louth   |
| <b>Report Date of Submission (year/month)</b> | 2020/03  |
| <b>Period 1</b>                               | Unknown  |
| <b>ITM (Northing)</b>                         | 718709   |
| <b>ITM (Easting)</b>                          | 748688   |

Table 11: Report metadata

## 13.4 Appendix 4: Faunal Remains Examination

The animal bone discussed below was recovered during advance archaeological test excavations at MetroLink Licence Area 1: Estuary Park & Ride, Lissenhall Little / Balheary Demesne, Swords, Co Dublin. Four samples of animal bone were recovered from Test Trenches 8, 9 and 14 and analysed by Arlene Coogan MSc.

**Sample 1** was collected from C7 which was the fill of a ditch [C3] in Test Trench 8.

Six bone elements were recovered. The remains were identified as cattle (*Bos taurus*), radius/ulna and a phalange. There were four fragments of unidentifiable bone.

**Sample 2** was collected from C21 which was the fill of ditch C14 in Test Trench 14.

Ten fragments of bone were recovered. The identifiable bone elements were identified as cattle (*Bos taurus*) and sheep/goat (*Ovis aries/Capra hircus*). One cattle vertebra and a sheep/goat tibia were identified.

**Sample 3** was recovered from fill C17 of ditch C11 in Test Trench 27

Twenty-two bones were recovered. The species identified were cattle (*Bos taurus*) and sheep/goat (*Ovis aries/Capra hircus*). The identified bones included calcaneus, mandible fragments and rib fragments.

**Sample 4** was recovered from fill C6 of ditch C4 in Test Trench 9.

Two bones were recovered. Cattle (*Bos taurus*) tooth and ulna were identified.

The animal bone recovered from the site was relatively well preserved, however no taphonomic or pathological markers were identified. The small amount of remains recovered during the advance test excavations does not provide much information into the human/animal interactions at the site. Retention of the bone is not recommended other than for potential RadioCarbon dating of features.

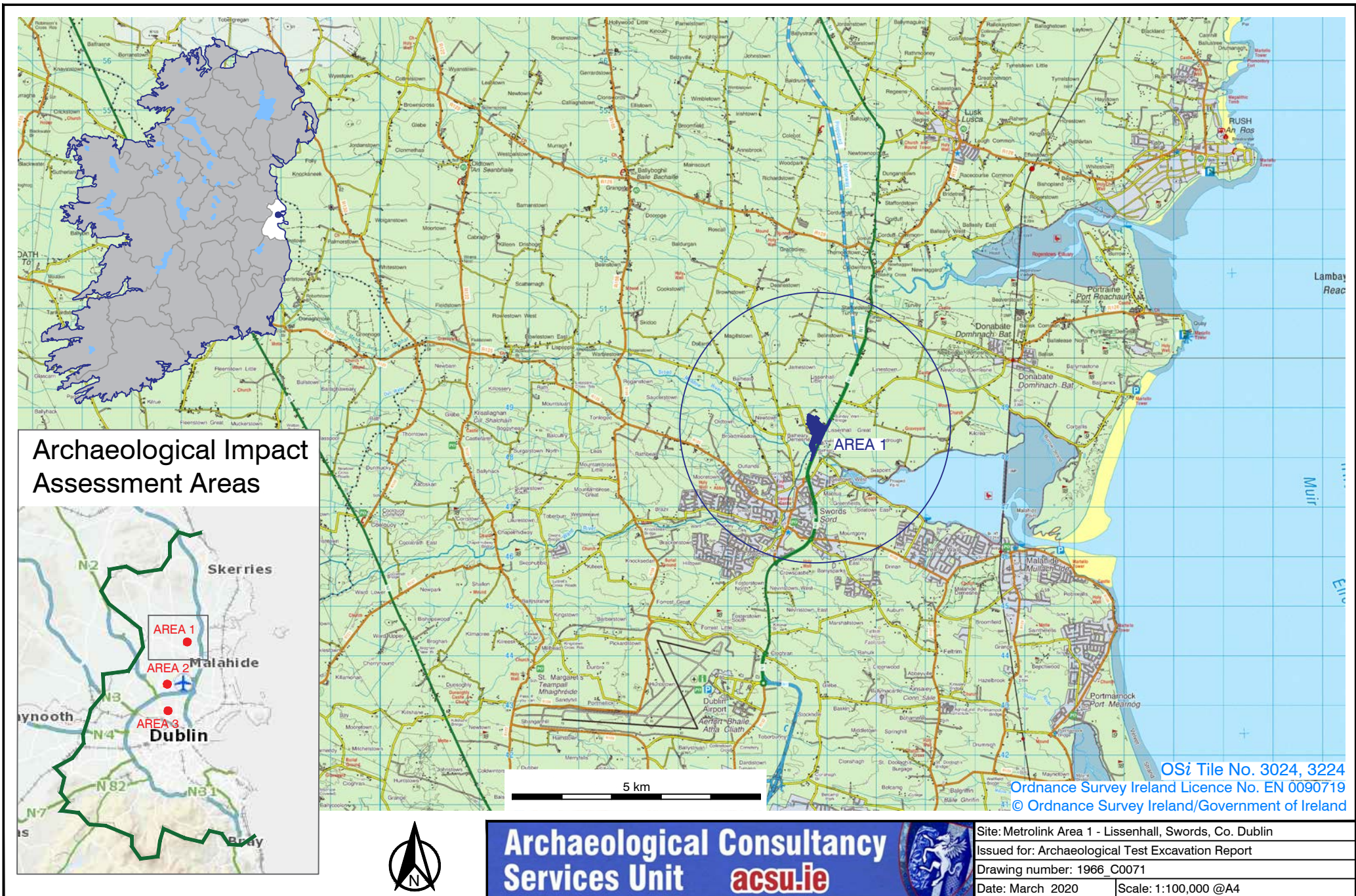


Figure 1: Area 1 - Site location map

**Archaeological Consultancy Services Unit** **acsu.ie**



OSi Tile No. 3024, 3224  
 Ordnance Survey Ireland Licence No. EN 0090719  
 © Ordnance Survey Ireland/Government of Ireland



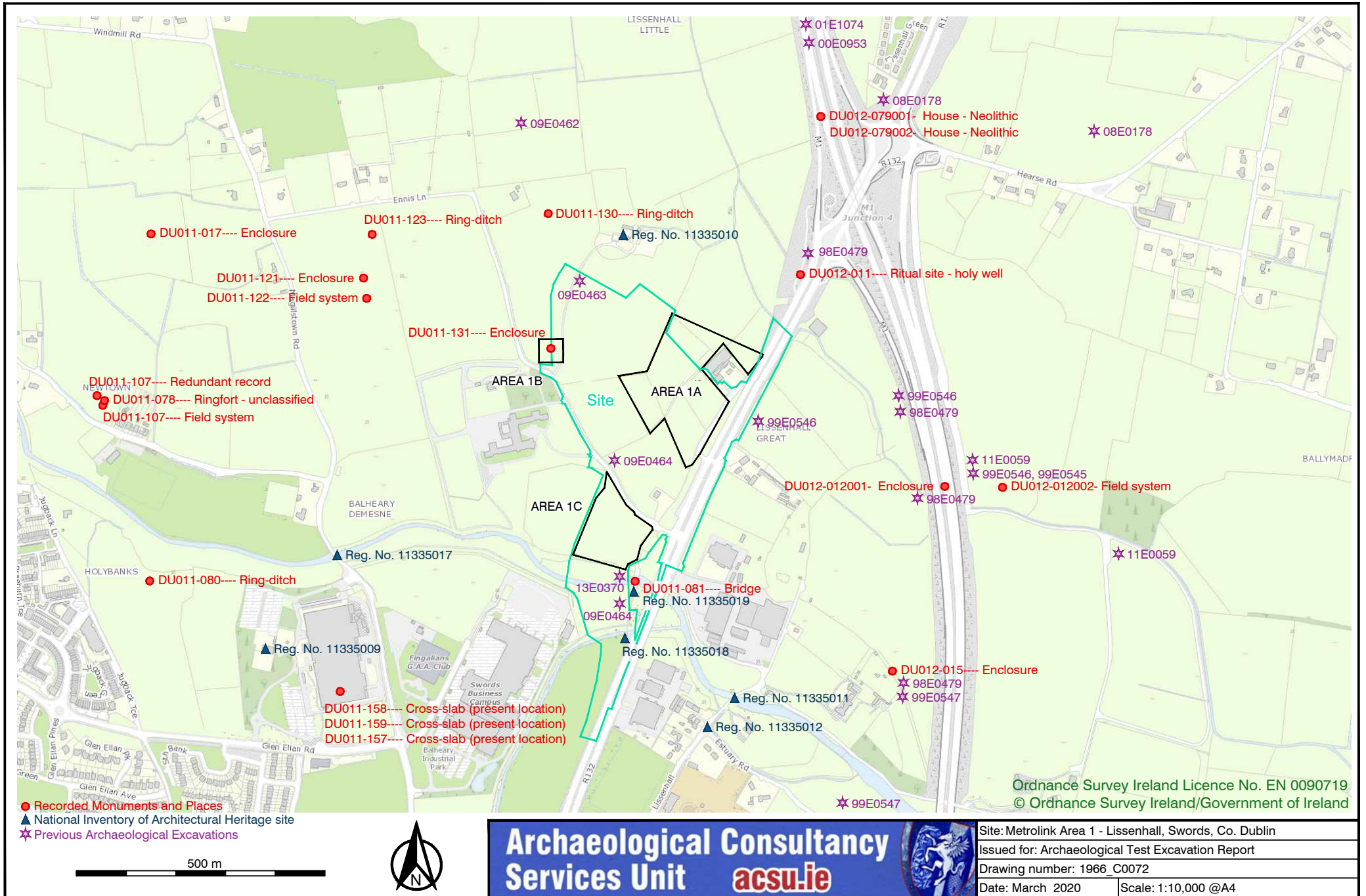


Figure 2: Area 1 - Site Location Map, illustrating proximity of known previous archaeological excavations *Recorded Monuments and Places*

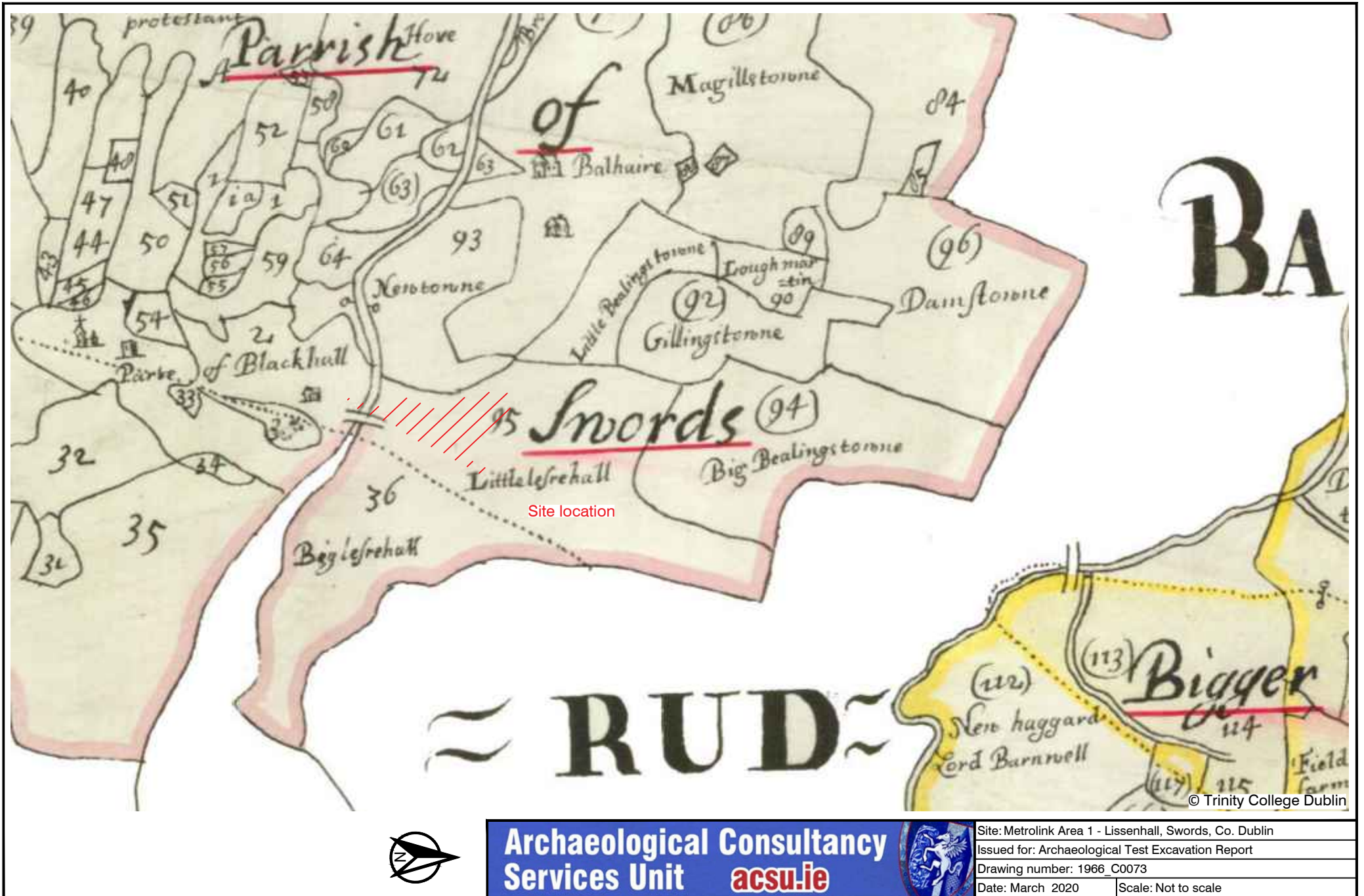
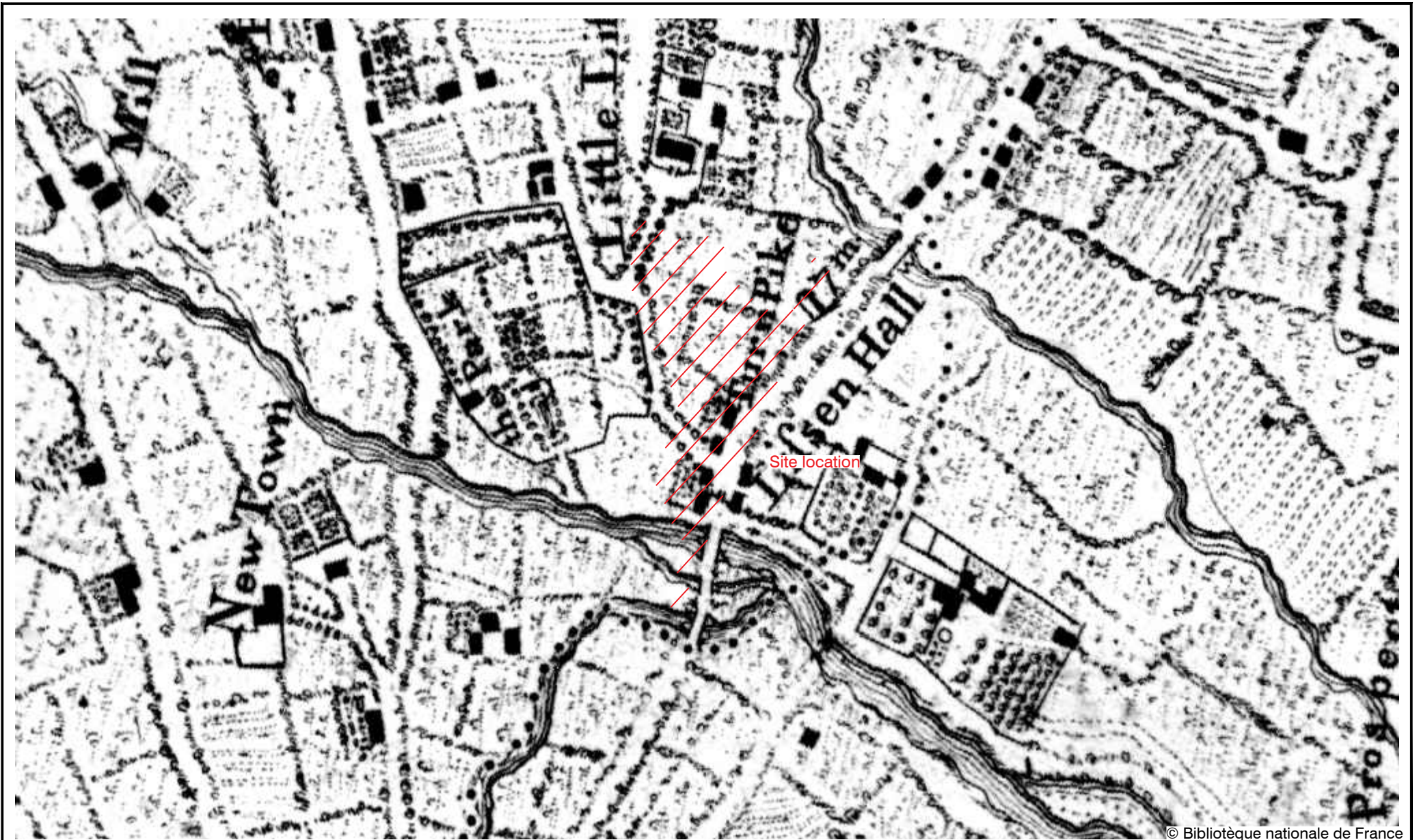


Figure 3: Extract from Down Survey map of County Dublin, barony of Nethercross (1654-56), showing site location



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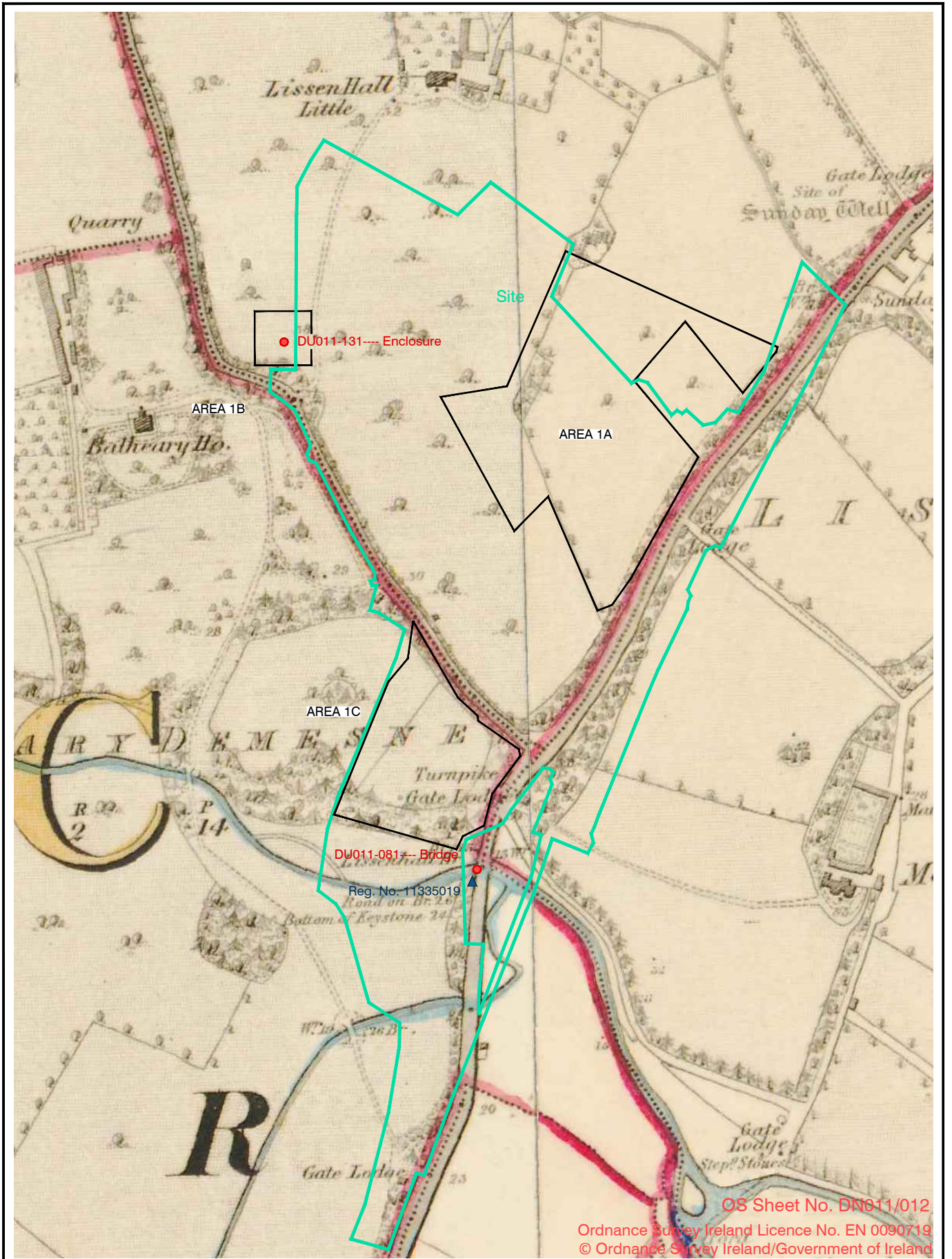


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| Date: March 2020  | Scale: Not to scale |

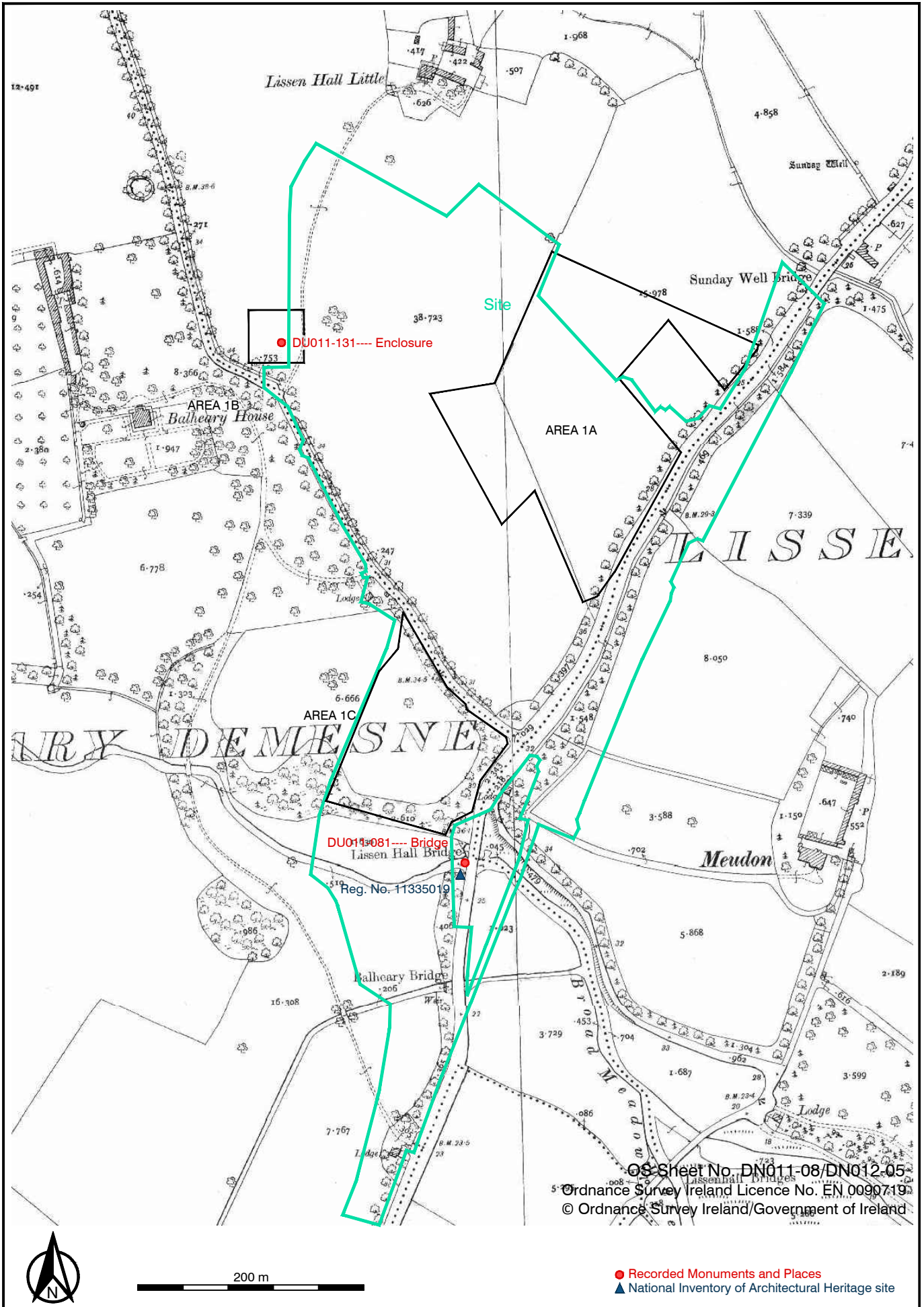
Figure 4: Extract from Rocque's map of Dublin County North East (1760), showing site location



|  |  |                         |
|--|--|-------------------------|
|  | <p>● Recorded Monuments and Places<br/>▲ National Inventory of Architectural Heritage site</p> |                         |
|  | <p>Site: Metrolink Area 1 - Lissenhall, Swords, Co. Dublin</p>                                 |                         |
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Figure 5: Extract from 1st edition Ordnance Survey (OS) 6-inch map (surveyed 1836 - published 1843), showing site location



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 Date: March 2020 | Scale: As scalebar

Figure 6: Extract from 3rd edition Ordnance Survey (OS) 25-inch map (surveyed 1907 - published 1911), showing site location

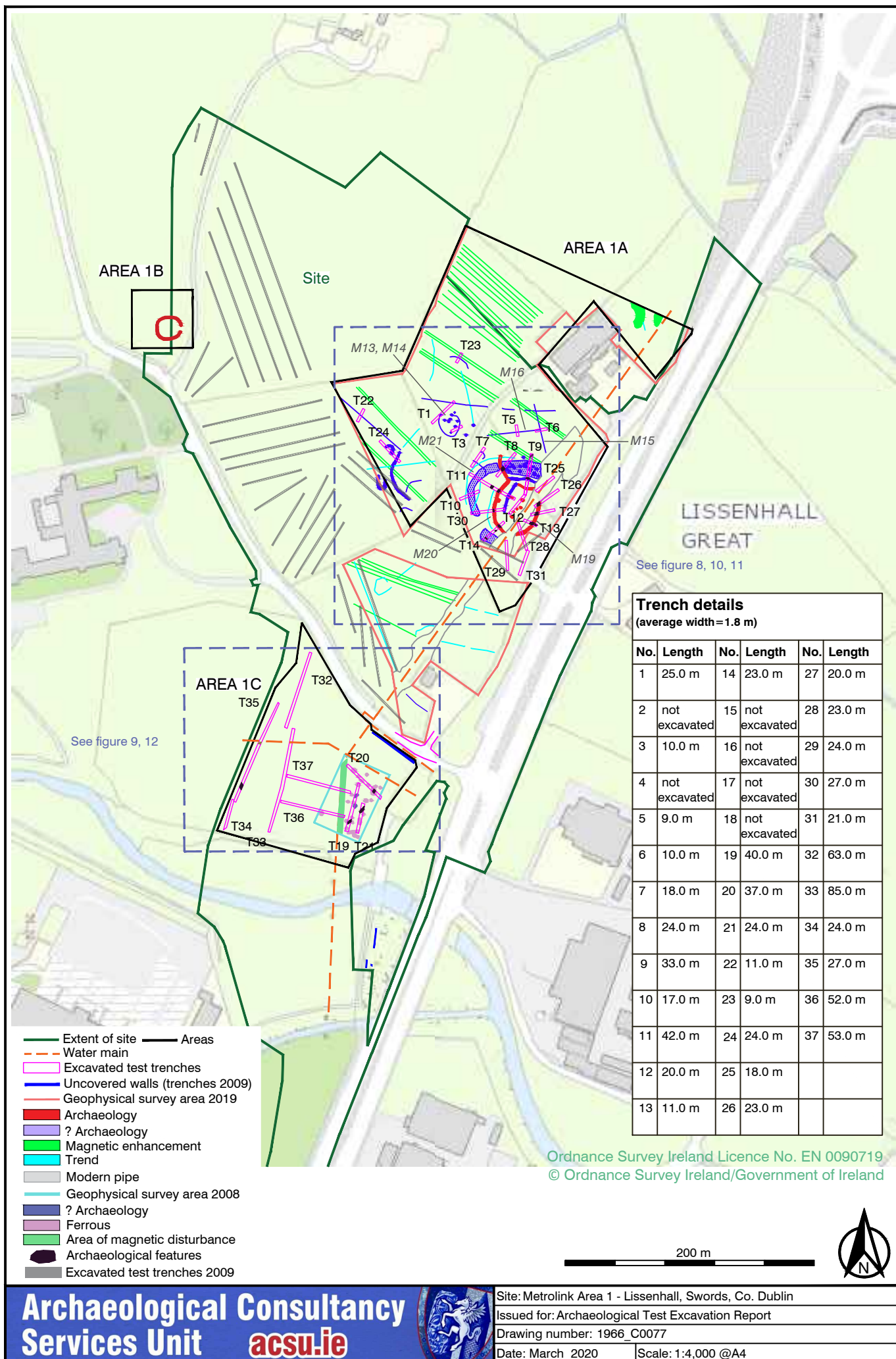


Figure 7: Results of Magnetometer Survey (Thébaudeau & Harrison 2009 and Gimson & Garner 2019), in relation to the location of Test Trenches (Areas 1A and 1C)



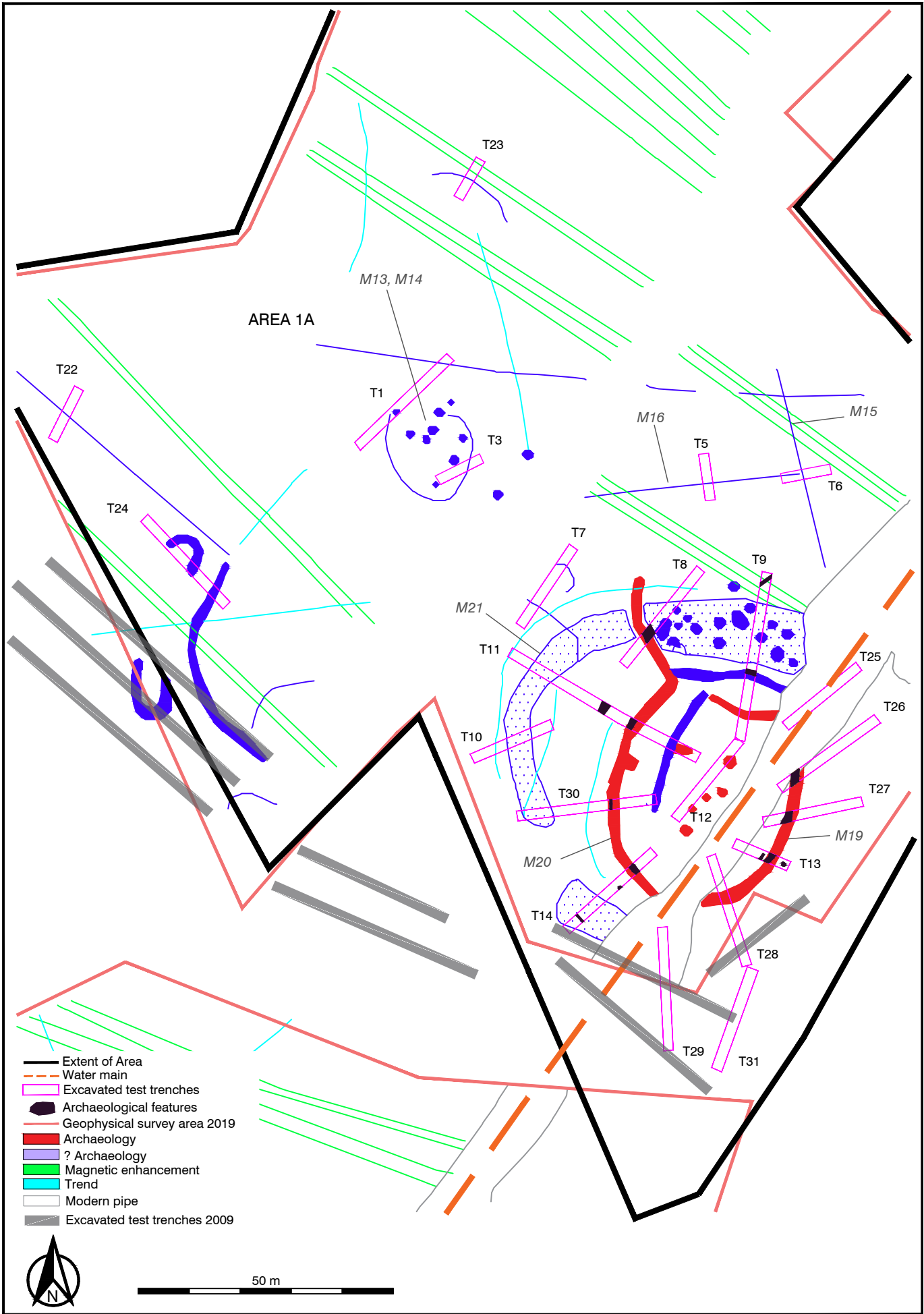


Figure 8: Plan of Area 1A showing location of excavated Test Trenches overlain on geophysical survey data (interpretation image; Gimson & Garner 2019)

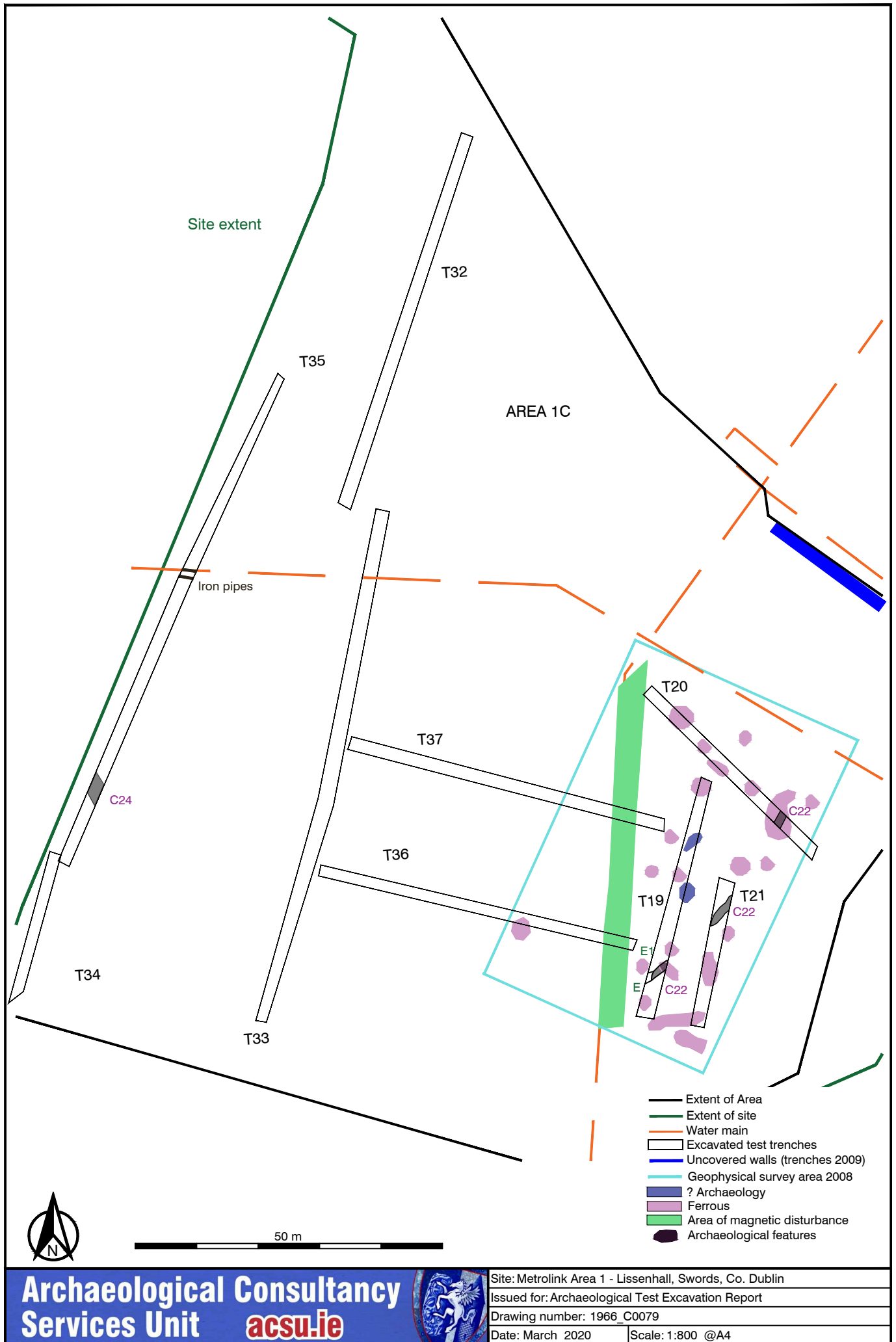
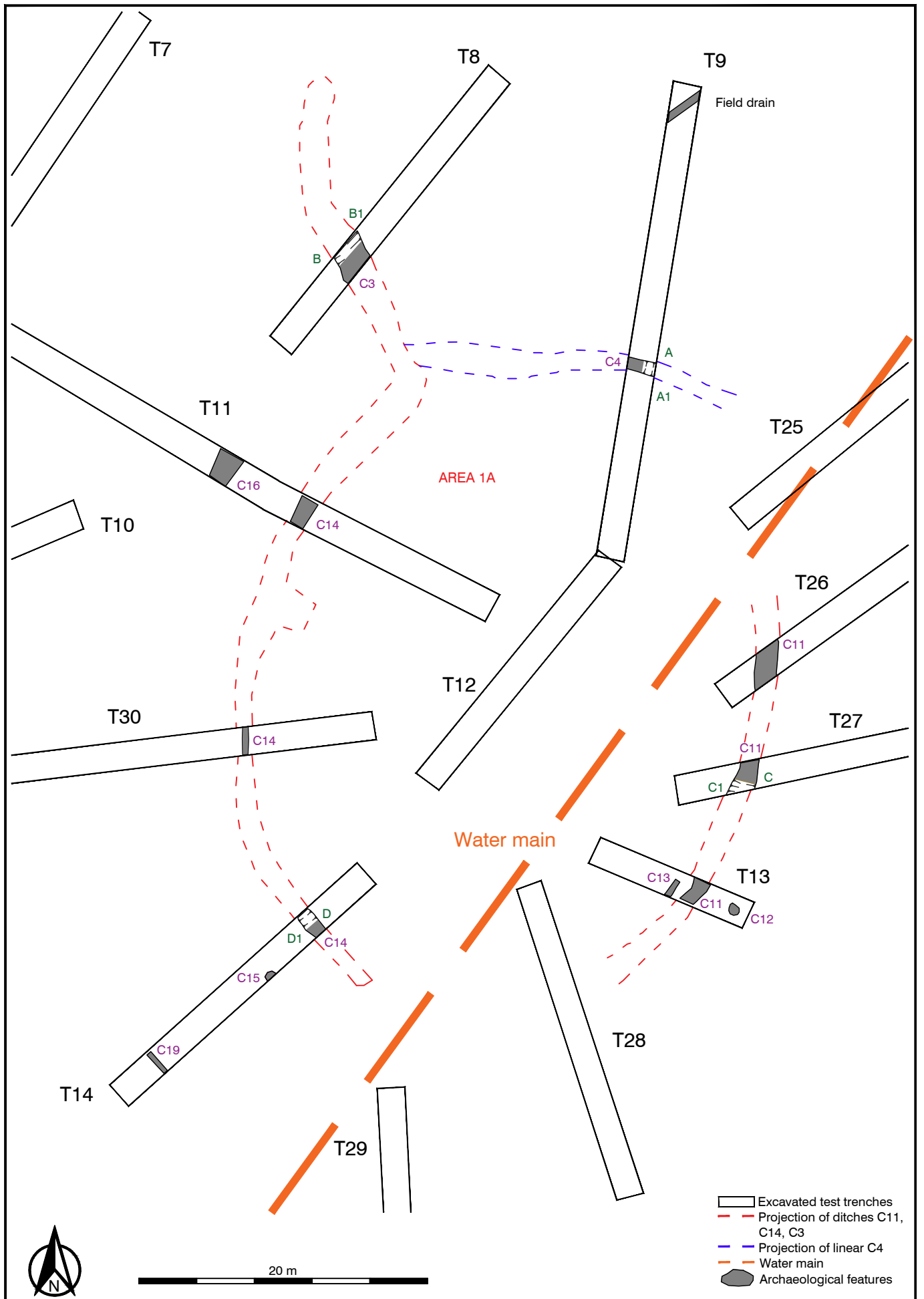


Figure 9: Plan of Area 1C showing location of excavated Test Trenches overlain on geophysical survey data (interpretation image; Thébaudeau & Harrison 2009)










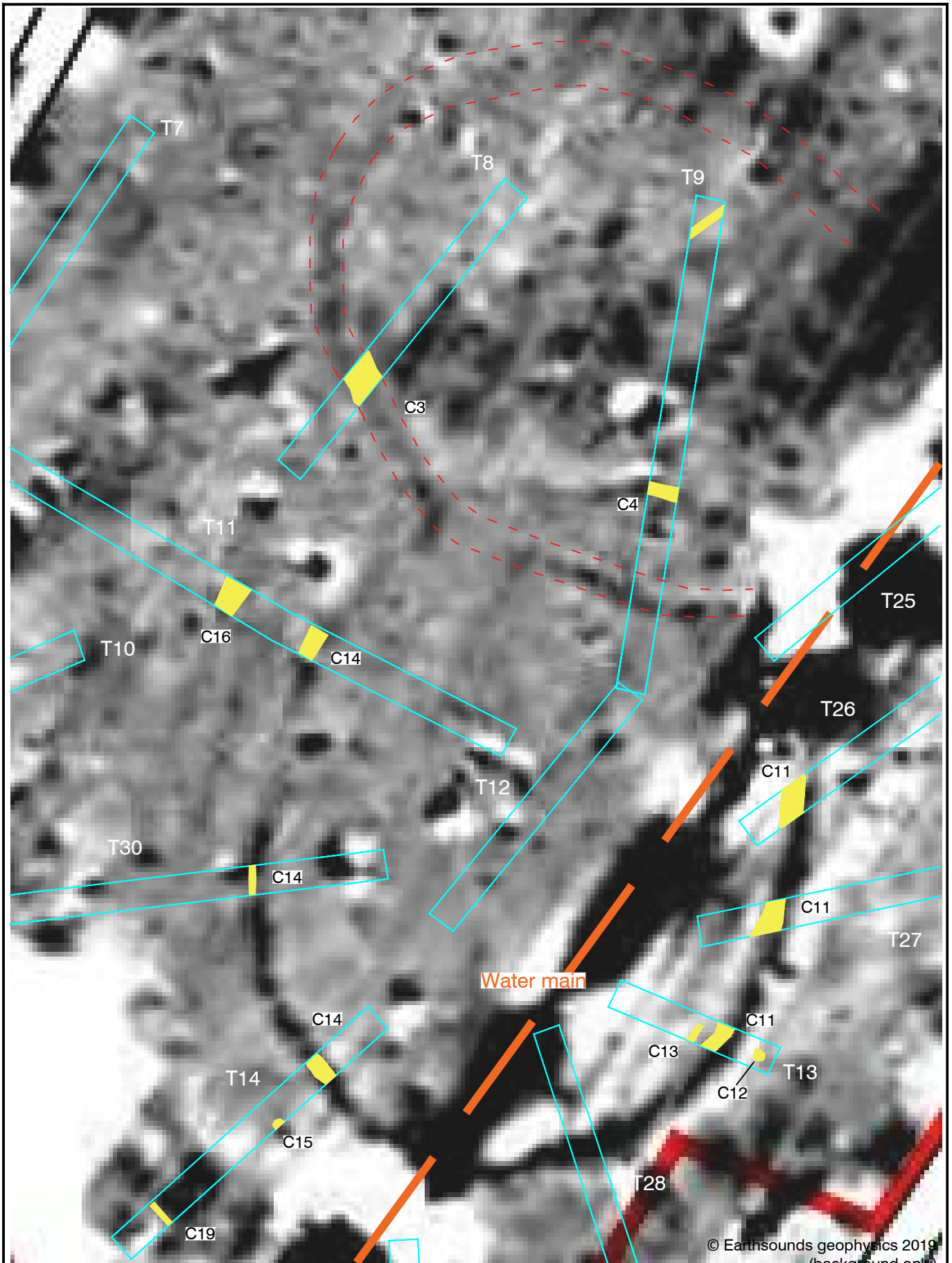
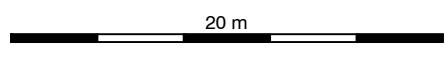
-  Excavated test trenches
-  Projection of ditches C11, C14, C3
-  Projection of linear C4
-  Water main
-  Archaeological features



Figure 10: Area 1A – Detail of Test Trenches containing Archaeological Features



© Earthsounds geophysics 2019 (background only)



- ▭ Excavated test trenches
- ▬ Water main
- ▭ Archaeological features
- - - Projection of possible enclosure

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 Date: March 2020      Scale: 1:350 @A4

Figure 11: Area 1A – Detail of Test Trenches containing Archaeological Features, overlain on geophysical survey results grey scale image; Gimson & Garner 2019)

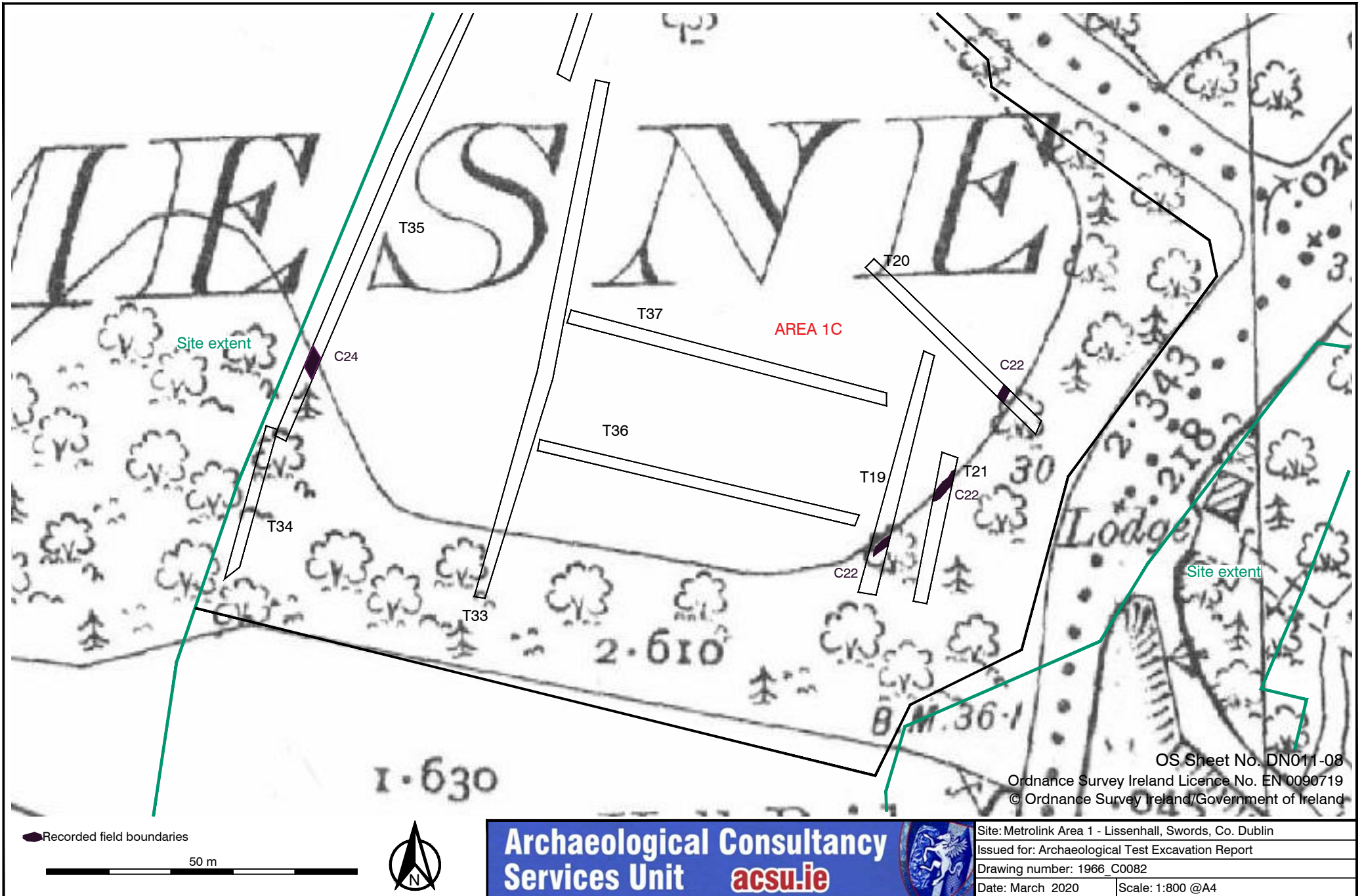
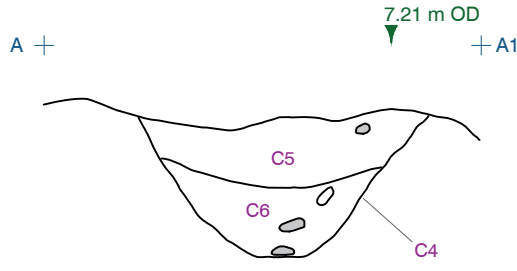
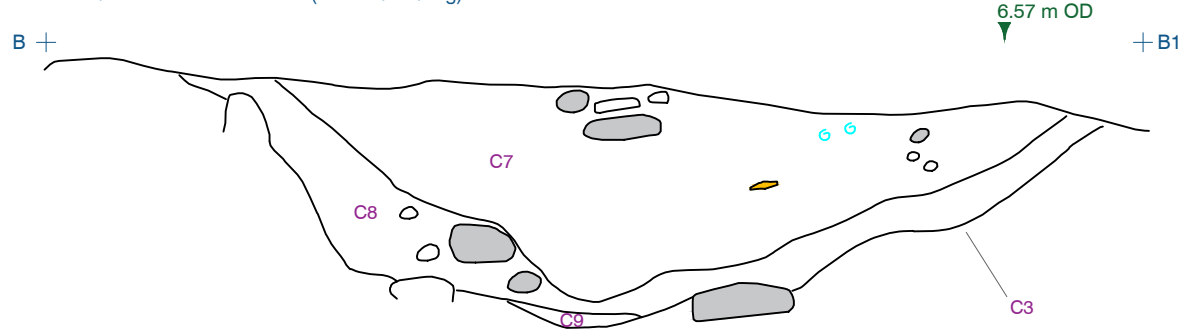


Figure 12: Area 1C – Recorded demesne landscape elements, overlain on the 3rd edition Ordnance Survey (OS) 25-inch map (surveyed 1907 - published 1911)

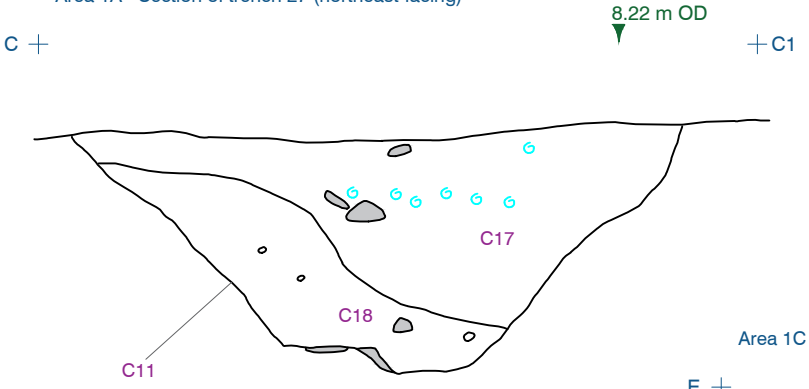
Area 1A - Section of trench 9 (east-facing)



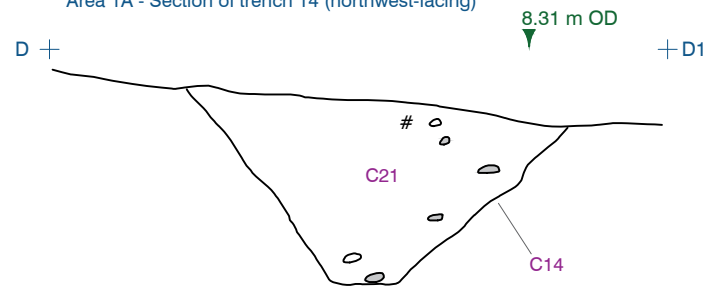
Area 1A - Section of trench 8 (southeast-facing)



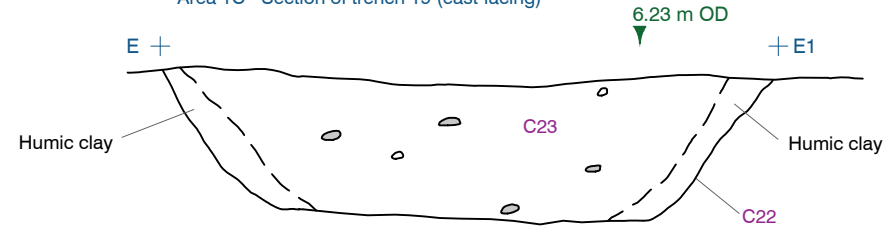
Area 1A - Section of trench 27 (northeast-facing)



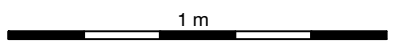
Area 1A - Section of trench 14 (northwest-facing)



Area 1C - Section of trench 19 (east-facing)



- Stone
- # Charcoal
- Shell
- Bone



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| Date: March 2020  | Scale: 1:20 @A4 |

Figure 13: Area 1A and 1C - Sections of Linear C4 and Ditches C3, C11, C14 and C22

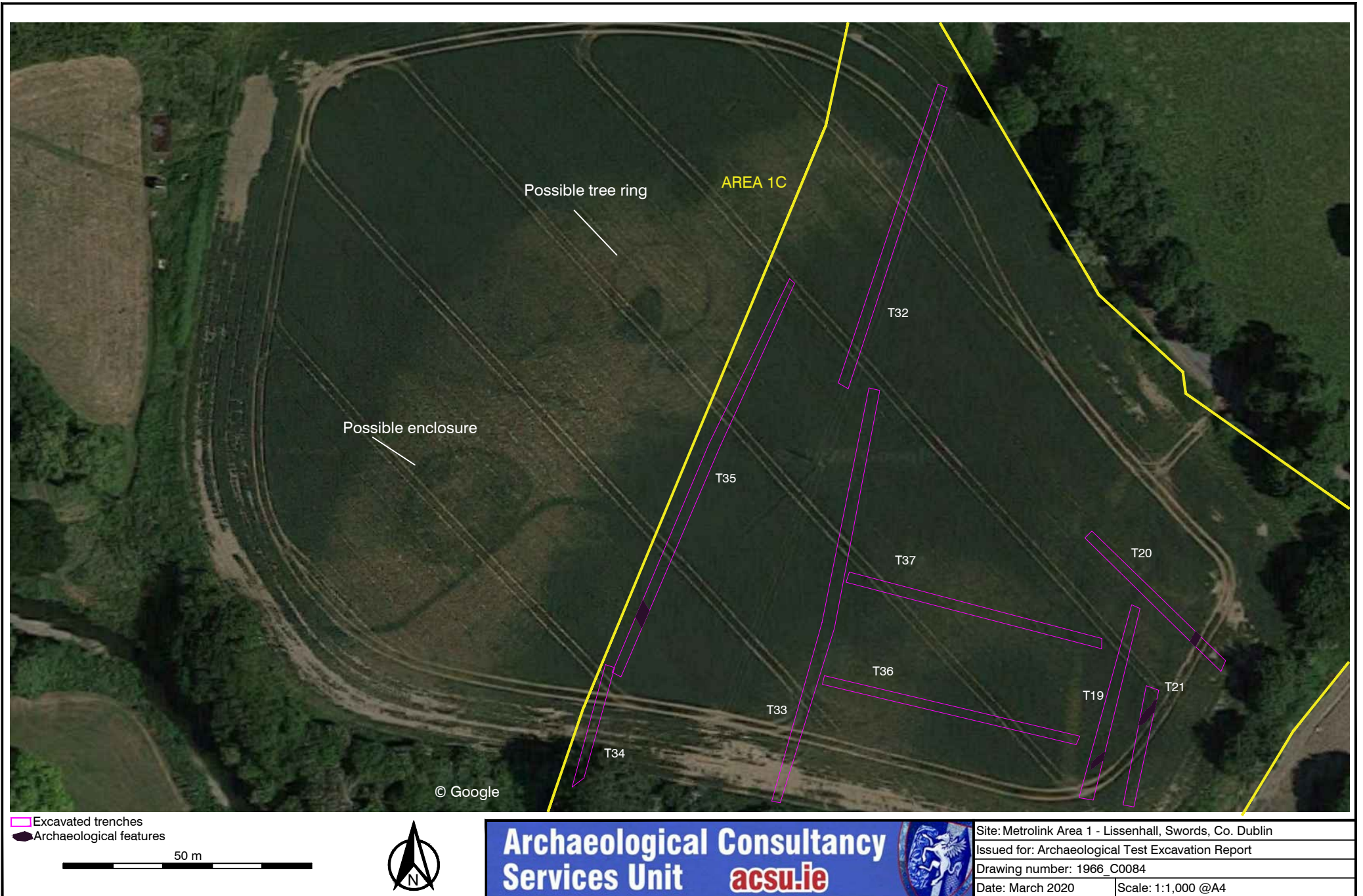


Figure 14: Area 1C – Aerial view showing location of excavated Test Trenches in relation to a possible enclosure and tree ring outside the western boundary of the site



Plate 1: Area 1A: Test Trench 1 facing north-east



Plate 2: Area 1A: Test Trench 3 facing north-east



Plate 3: Area 1A: Test Trench 5 facing south



Plate 4: Area 1A: Test Trench 6 facing east



Plate 5: Area 1A: Test Trench 7 facing southwest



Plate 6: Area 1A: Test Trench 8 facing south





Plate 7: Area 1A: Test Trench 8, Ditch C3 facing north



Plate 8: Area 1A: Test Trench 8, section through Ditch C3 facing west



Plate 9: Area 1A: Test Trench 9 facing south with stone field drain visible in foreground



Plate 10: Area 1A: Test Trench 9, Linear C4 facing west



Plate 11: Area 1A: Test Trench 10 facing south-west



Plate 12: Area 1A: Test Trench 11 facing northwest



Plate 13: Area 1A: Test Trench 11, shallow remains of C14 facing south



Plate 14: Area 1A: Test Trench 11 Possible drain or ditch C16 facing south



Plate 15: Area 1A: Test Trench 12 facing north-east



Plate 16: Area 1A: Test Trench 13 facing east



Plate 17: Area 1A: Test Trench 13, Ditch C11 (right) and linear C13 (left)



Plate 18: Area 1A: Test Trench 13, Pit C12 facing west



Plate 19: Area 1A: Test Trench 14 facing south-west



Plate 20: Area 1A: Test Trench 14, Ditch C14 facing west



Plate 21: Area 1A: Test Trench 14, charcoal spread C15 facing southeast



Plate 22: Area 1A: Test Trench 22 facing southwest





Plate 23: Area 1A: Test Trench 23 facing northeast



Plate 24: Area 1A: Test Trench 24, facing southeast



Plate 25: Area 1A: Test Trench 25 facing north-east



Plate 26: Area 1A: Test Trench 26 facing north-east



Plate 27: Area 1A: Test Trench 26, Ditch C11 facing east



Plate 28: Area 1A: Test Trench 27 facing east with Ditch C11 visible



Plate 29: Area 1A: Test Trench 27, Ditch C11 facing south-east



Plate 30: Area 1A: Test Trench 27, section through C11 facing south



Plate 31: Area 1A: Test Trench 28 facing southeast



Plate 32: Area 1A: Test Trench 29 facing south



Plate 33: Area 1A: Test Trench 30 facing west



Plate 34: Area 1A: Test Trench 30, C14 facing south



Plate 35: Area 1A: Test Trench 31 facing north-east



Plate 36: Area 1C: Test Trench 19 facing south



Plate 37: Area 1C: Test Trench 21 facing south



Plate 38: Area 1C: Test Trench 21, Ditch C22 facing southwest





Plate 39: Area 1C: Test Trench 20 facing northwest



Plate 40: Area 1C: Test Trench 32 facing north



Plate 41: Area 1C: Test Trench 33 facing north



Plate 42: Area 1C: Test Trench 34 facing north



Plate 43: Area 1C: Test Trench 35 facing south



Plate 44: Area 1C: Test Trench 35, Ditch C24 facing north



Plate 45: Area 1C: Test Trench 36 facing north-west



Plate 46: Area 1C: Test Trench 37 facing north-west



Plate 47: Area 1C: Test Trench 35—two iron pipes facing east