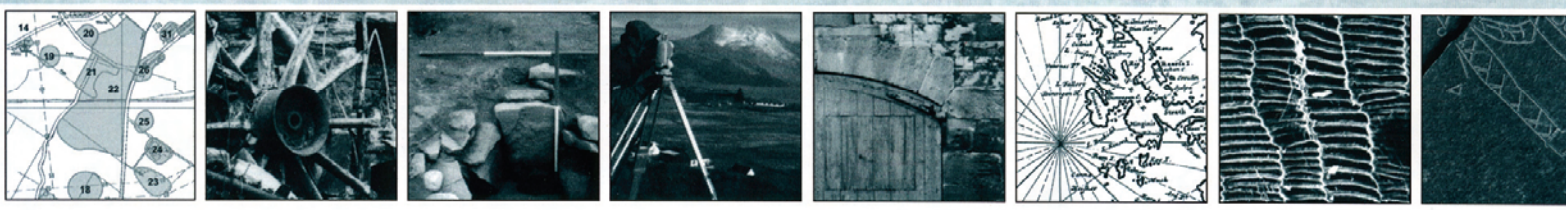

Assessment Report on the Results of Metro North Advance Archaeological Test Trenching, Testing Area 6, Lissenhall Little and Balheary Demesne townlands, Co. Dublin, RPA ref: (MN101) Lissenhall to Fosterstown

Excavation Licence Number: 09E464
Director: John Channing
Report Author: John Channing and James Hession
Project Code: RPMN08
Client: Railway Procurement Agency RPA 7120_5
Townlands: Lissenhall Little
Ordnance Datum: 12 m
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HEADLAND ARCHAEOLOGY Ltd

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SUMMARY

Metro North is a light rail project, the route of which will run along a proposed 18 km corridor, from Belinstown in North County Dublin, through Dublin Airport, to the City Centre at St. Stephen's Green.

Headland Archaeology (Ireland) Ltd. was commissioned by the Railway Procurement Agency (RPA) to carry out advance archaeological testing of the proposed Metro North scheme. For the purposes of archaeological assessment the Metro North route has been sub-divided into fourteen Testing Areas, TA 1–14. This report outlines the results of Advance Archaeological Test Trenching undertaken in Testing Area 6 Lissenhall Little and Balheary Demesne townlands (MN101), Co. Dublin on the footprint of the Metro North alignment, Lissenhall stop, associated new access road and construction compound (Compound 2 Option 1). It also includes the testing results on the area located between Lissenhall and Balheary Bridges (09E464; Figures 1-3).

The programme of advance archaeological testing for Metro North was carried out following a series of non-invasive archaeological investigations including an Environmental Impact Assessment (EIA; CRDS Ltd. 2008), the preparation of an Archaeological Strategy Document (Margaret Gowen & Co Ltd. 2007) and a programme of geophysical survey (08R0117; Thebaudeau and Harrison 2009).

The Balheary Demesne and Lissenhall Little townland boundary (HC#414) is located immediately west of Testing Area 6, Sub-area 14 (CRDS Ltd. 2008, 451). The geophysical survey noted a limited number of features of archaeological potential and numerous ferrous and increased magnetic responses within this Sub-area, including several possible linear features (G44-8 Thebaudeau and Harrison 2009, 25-26). Lissenhall Bridge (HC#11), consisting of a 5-span bridge of medieval origin (Margaret Gowen & Co. Ltd. 2008), is located within Sub-area 35. The ground penetrating radar (GPR) survey carried out within this Sub-area revealed a wall to the south of Lissenhall Bridge, with a further possible wall to the east (G50, Thebaudeau and Harrison 2009, 25 and 26; Welsh 2009).

The advance archaeological testing for Testing Area 6 (09E464) was carried out on the 22 September 2009. Access was later granted to Sub-area 35, which was tested on 28 and 29 January 2010. A total of 27 test trenches were excavated in the four fields within Testing Area 6. A total of 1372.8 linear metres were excavated comprising 10.3% of the total Testing Area. This figure is slightly reduced from the amount of trenching originally proposed due to the presence of overhead powerlines.

No archaeological features were identified in Sub-areas 14 and 15 during the course of testing. The features of archaeological potential within these Sub-areas noted in the geophysical survey were identified as the remains of late post-medieval and modern agricultural activity - namely plough furrows, land drains and stone sockets (left from field clearance) - and were therefore considered to be of no archaeological significance.

The archaeological assessment undertaken in Sub-area 35 (Balheary Demesne 1), however, confirmed that a continuous structure, wall (015), exists on the eastern side between the Lissenhall and Balheary bridges beneath the modern landscaping feature in this area. Furthermore, the assessment also confirmed that an arch/culvert (016) predating the existing visible culvert on the western side of the bridge structure exists beneath the road.

This report outlines the results of the archaeological testing and assesses the impact of the proposed Metro North scheme on Testing Area 6. As this testing area incorporates the route of the Metro North alignment, Lissenhall stop, associated new access road and construction compound (Compound 2 Option 1), any sub-surface archaeology is likely to be subject to a direct negative impact from ground works associated with site preparation works (including removal of topsoil) and any other sub-structure construction associated with the stop, access road and construction compound facility (Compound 2 Option 1). It is therefore recommended that archaeological excavation of this site (Balheary Demesne 1) be carried out prior to construction works. Areas tested immediately to the north and south of Testing Area 6 revealed a Ringditch, cremation pit, burnt mound material and possible pits, the results of which are detailed in separate reports (Test Area 5 licence 09E463 to the north and Test Area 7 licence 09E465 to south).

1.0 INTRODUCTION

This document is submitted as an assessment report on the Advance Archaeological Testing of Metro North, Testing Area 6 Lissenhall Little (MN101) Co. Dublin (09E464; Figures 1 and 2).

Metro North will be a combined underground and surface light rail service development, segregated from traffic using tunnel, road median and Greenfield construction environments. The Metro North route will run along a proposed 18 km corridor, from Belinstown in North County Dublin, through Dublin Airport, to the City Centre at St. Stephen's Green.

The route of the Metro North is generally a north-south alignment. It will have stops at Belinstown (where its depot will be located), Lissenhall (provisional), Estuary, (provisional), Seatown, Swords, Fosterstown, Dublin Airport, Dardistown, Northwood, Ballymun, Dublin City University, Griffith Avenue, Drumcondra, Mater Hospital, Parnell Square, O' Connell Bridge and St. Stephen's Green. Testing Area 6 incorporates the footprint of the Metro North alignment, Lissenhall stop, associated new access road and construction compound (Compound 2 Option 1). It also includes the results from testing within the area located between Lissenhall and Balheary Bridges.

The purpose of the advance testing was to determine the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts along the route so as to inform the subsequent archaeological strategy in advance of construction. All areas of archaeological potential, sites and significant features recorded for the footprint of the proposed scheme in the Metro North EIS or subsequently identified by the Metro North geophysical survey were investigated as part of the testing programme.

For the purposes of design and construction the Metro North route has been broken into seven zones or section areas (MN101-MN107):

Area 1 MN101 - Lissenhall to Fosterstown;

Area 2 MN102 - South of Fosterstown to Dublin Airport Boundary (North);

Area 3 MN103 - Dublin Airport;

Area 4 MN104 - Dublin Airport Boundary (South) to M50 motorway;

Area 5 MN105 - M50 (South) to Dublin City University (DCU);

Area 6 MN106 - DCU to Mater Hospital; and

Area 7 MN107 - Mater Hospital to St Stephen's Green

For management purposes, the Metro North route has been sub-divided into fourteen archaeological Testing Areas (TA1–14) by the RPA Project Archaeologist and each of these areas has been assigned an individual excavation licence number (see Table 1).

Testing Area	**Excavation License No.**
TA1	09E450
TA2	09E448
TA3	09E449
TA4	09E462
TA5	09E463
TA6	09E464
TA7	09E465
TA8	09E466
TA9	09E467
TA10	09E478
TA11	09E479
TA12	09E480
TA13	09E481
TA14	09E482

Table 1: Testing areas and their assigned excavation licence numbers.

2.0 SITE LOCATION AND DESCRIPTION

Testing Area 6, incorporating the footprint of the Metro North alignment, Lissenhall stop, new access road and construction compound (Compound 2 Option 1), and the area located between Lissenhall and Balheary Bridges is located at NGR 318670/248533, in the townlands of Lissenhall Little and Balheary Demesne, Barony of Nethercross, parish of Swords, Co. Dublin, (Figure 1). The testing area is situated directly east of the R132 and the M1 motorway on land currently used for agriculture. This is within area MN101 - Lissenhall to Fosterstown.

The Testing Area measures 26,709 m^2 and extends through 3 fields (within Sub-areas 14 and 15); it is bounded by the townland boundary between Balheary Demesne and Lissenhall Little (HC#414; CRDS 2008, 451). An additional area (Sub-area 35), between the Lissenhall Bridge (HC#11) and the Balheary Bridge, was also included in the testing programme.

Testing Area 6 was situated on very gently rolling pasture flattening to the northwest, over three, roughly rectilinear fields (within Sub-areas 14 and 15). Sub-area 14 is bounded to the west by Ennis Lane, the western side of which, forms the townland boundary between Balheary Demesne and Lissenhall Little, (HC#414; CRDS 2008, 451). Sub-area 35 runs through the shallow flood plain of the Broad Meadow River (Margaret Gowen & Co Ltd. 2008). The area is bounded to the north by the townland boundary between Lissenhall Little and Balheary Demesne (HC#414), and to the east by the R132.

Soils specific to the region of North County Dublin are predominated by a highly consolidated, very stiff clay and silt matrix containing sand, gravel, cobbles and boulders. This clay is generally grey to black in colour. In Testing Area 6 of the proposed scheme, however, it is brown. Pockets of glacial sands and gravels occur within this boulder clay. These sands and gravels are likely to have been deposited in glacial ponds or streams and are generally water bearing. The underlying bedrock consists of a nodular and muddy argillaceous limestone with a relatively uniform bed thickness. It is interspersed with thin shale beds and contains major units of very distinctive, laminated fine limestone (ERM and Jacobs Engineering Ireland Ltd. 2008).

3.0 PROJECT BACKGROUND

Several stages of non-invasive archaeological investigation were carried out on the route of Metro North prior to the archaeological testing, and the results of these investigations have had a direct influence on the strategy adopted for the testing programme.

3.1 Environmental Impact Statement

An Environmental Impact Assessment was carried out as part of the Railway Order Application for Metro North. Cultural Resource Development Services Limited (CRDS), on behalf of ERM Environmental Resources Management Ireland Limited (ERM), completed the assessment for archaeology, architectural heritage and cultural heritage. This assessment consisted of a review of the published and unpublished documentary, aerial and cartographic sources, supported by a field inspection of the proposed alignment.

3.2 Archaeological Strategy Document

In addition to the EIS chapter, an Archaeological Strategy document was prepared for Metro North by Margaret Gowen Limited (MGL) in 2007. The strategy supplements the provisions outlined in the EIS for the mitigation of impacts on archaeological heritage arising from the project. The strategy is a live document and is managed by the RPA Project Archaeologist and will continue to evolve on a phased basis to ensure that it remains appropriate and effective in managing archaeological risk throughout the project up to construction commencement.

The EIS and the Metro North Archaeological Strategy recommended that a programme of geophysical survey followed by a programme of testing should be carried out in the Greenfield areas of the route in advance of construction.

3.3 Geophysical Survey

A programme of geophysical survey was carried out by MGL between May and September 2008 with further investigations in 2009 (Thebaudeau and Harrison 2009). The methodology included a scanning gradiometry survey and a detailed magnetometry survey of approximately twenty-eight areas along the route of Metro North. Sub-area 15 was not suitable for geophysical testing due to crop presence.

3.4 Ground Penetrating Radar Survey

A programme of ground penetrating radar (GPR) survey was carried out by Murphy Surveys Limited (MSL) in April 2009. The methodology included carrying out a GPR using a multi-channel and multi-frequency RIS-MF odometer over an area of approximately 78 m by 12 m within Sub-area 35 (Welsh 2009).

3.5 Underwater Archaeological Assessment

A non-invasive underwater and riverside archaeological assessment was undertaken on a 60 m section of the Ward River at Balheary Bridge, as well as a 60 m section of the

Broadmeadow River at Lissenhall Bridge (HC#11) by the Archaeological Diving Company Ltd. (ADCO) in December 2008. This assessment encompassed a detailed survey of both bridges, and riverbed and attendant bank structures at both river survey locations (Brady *et al* 2009).

4.0 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

This historical and archaeological background for Testing Area 6 has been compiled using the Archaeology, Architectural Heritage and Cultural Heritage chapter of the EIS (CRDS Ltd. 2008), the aforementioned Archaeology Strategy (Margaret Gowen & Co Ltd. 2008) and Geophysical Survey (Thebaudeau and Harrison 2009) in addition to available literary and cartographic sources.

"Evidence for prehistoric activity in north county Dublin comes from the Record of Monuments and Places, which includes prehistoric sites, stray finds and development-led investigations and surveys. In the early historical period the area through which the route is aligned formed part of the geographical region of Brega with a range of sites of this period 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 leveled many earthwork sites. These tend to survive as cropmarks, as illustrated in the archaeological desk study undertaken for the EIS.

After the conquest by Anglo-Normans in the twelfth 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' (Gowen 2008, 4-5).

The known archaeological remains within Testing Area 6 comprise Lissenhall Bridge (HC#11), located directly to the north of Balheary Bridge, and one townland boundary (HC#414). Lissenhall Bridge consists of a 5-span bridge that has a medieval origin, with much of the primary medieval fabric surviving (Margaret Gowen & Co. Ltd. 2008). Testing Area 6 directly impacts upon HC#11 and HC#414.

In addition to these remains, two circular cropmarks (HC#10), identified through aerial photography, were located to the east of Testing Area 6. The northernmost cropmark is depicted on the 1st edition Ordnance Survey map (1843) as a circular tree-covered enclosure or tree-ring (CRDS Ltd. 2008). These, however, will not be directly impacted upon.

Recorded Archaeological Sites

Due to activities associated with modern development and progress - such as agriculture, industry and infrastructural improvements in the second half of the 20th century - many archaeological sites have been levelled. The present day archaeological landscape is not therefore fully representative of the human occupation of this island which has spanned some nine thousand years. Nonetheless, archaeological sites survive today as upstanding structures, earthwork monuments or sub-surface remains.

The record of monuments and places records three archaeological sites within the townland of Lissenhall Little, with one site recorded within Balheary Demesne townland (Table 2).

HC #	RMP #	Townland	Site Type	NGR	Distance
7	DU012-002	Lissenhall Little	Enclosure	319434/249943	2275 m to the northeast
350	DU012-003	Lissenhall Little	Ringditch	319168/249680	1,750 m to the northeast
-	DU012-011	Lissenhall Little	Ritual site, Holy well	319050/248880	380 m to the northeast
11	DU011-081	Balheary Demesne	Bridge	318760/248245	-

Table 2 - RMP's within the vicinity of Lissenhall Little and Balheary Demesne townlands

Townlands and townland boundaries

The Irish landscape is divided into approximately 60,000 townlands and the system of landholding is unique in Western Europe for its scale and antiquity. Many townlands predate the arrival of the Anglo-Normans, and Irish historical documents consistently use townland names throughout the historic period to describe areas and locate events accurately in their

geographical context. The townland names and boundaries were standardised in the nineteenth century when the Ordnance Survey began to produce large-scale maps of the country. The original Irish names were eventually anglicised to varying degrees, depending in part upon the linguistic skills of the surveyors and recorders. A study of the townland names can provide information on aspects of cultural heritage including descriptions of the use of the landscape by man.

Testing Area 6 Sub-areas 14 and 15 are partially bounded to the west by Ennis Lane, which is in turn bounded to the west by the townland boundary between Balheary Demesne and Lissenhall Little (HC#414), the route of which is marked on the 1st Edition Ordnance Survey map for County Dublin (1843). Sub-area 35 is located to the south of the townland boundary between Balheary Demesne and Lissenhall Little (HC#414) within Balheary Demesne.

According to the EIS (CRDS Ltd. 2008) Lissenhall Little derived from the Irish Lisín, meaning 'little fort' with the 'hall' element possibly being a later addition referring to a particular building within the townland i.e. Lissenhall House. The direct translation of Balheary Demesne into Irish is Diméin Bhaile Anraí meaning the town or townland of the landed estate of the Henry family.

Previous Archaeological Excavations

The archaeological 'Excavations Bulletin' (1970-2005) was checked for a record of any licensed archaeological investigations carried out within the townlands of Lissenhall Little and Balheary Demesne since 1970. Two such investigations were listed in the townland of Lissenhall Little (00E0953 and 01E1074), both of which were carried out by Valerie J. Keeley Ltd. prior to the Northern Motorway/Airport–Balbriggan bypass construction. No features of archaeological significance were identified during the advance testing stage of the Northern Motorway/Airport–Balbriggan bypass (00E0953) (Lynch 2000), however an Early Neolithic habitation site was identified during the associated topsoil (001) removal and excavated (under licence 01E1074) (O'Reilly 2001). This site lies approximately 1 km to the north north-east of Testing Area 6. No archaeological excavations were listed for Balheary Demesne.

Geophysical Survey

The geophysical survey carried out in Testing Area 6 in 2008/9 revealed a number of features of possible archaeological significance including several pit-type features and short curvilinear trends (AS9, G44-G49, Thebaudeau and Harrison 2009 25 and 26). These included:

Area AS5-AS7 & AS9/G44-G50 (Figures 15 & 16)

.

- Several pit-type responses and short curvilinear trends have been identified within (G44-G49). These responses may be of interest, perhaps relating to isolated pits or plough damaged archaeological remains. However, they form no clear archaeological patterns and it is thought likely that localised pedological variations may be represented here (Thébaudeau and Harrison 2009, 25 and 26);
- Areas of magnetic disturbance within the east and north of (G47) relate to ferrous material within the adjacent boundaries. Disturbance within the south of (G48) is thought to originate from an adjacent house (Thébaudeau and Harrison 2009, 25 and 26).

Based on the recommendations of the EIS a ground penetrating radar (GPR) survey was conducted in the south part of Testing Area 6 to establish the structural relationship between Lissenhall Bridge (RMP DU011-081 Bridge; RPS 341 Fingal) and Balheary Bridge (RPS 340). The survey identified a wall beneath a modern landscaped area to the south of Lissenhall Bridge, orientated along the same north-south axis as the eastern wall of the existing bridge. It also identified a further possible wall to the east of a clearly visible arch/culvert built into the western side of the construct between the two bridges. These results were interpreted as the eastern wall of a structure that formerly connected the two bridges prior to the construction of the R132 (G50, Thebaudeau and Harrison 2009, 25 and 26; Welsh 2009).

Underwater Archaeological Assessment

The underwater archaeological assessment carried out in Testing Area 6 in 2008 concluded 'that Balheary Bridge and Lissenhall Bridge are part of the same continuous structure that was built across the Broadmeadow and the Ward rivers' (Brady *et al* 2009). Visual inspection identified that Lissenhall Bridge comprises two phases of construction, with an initial build-phase of pre-seventeenth century date followed by extensions to the east and west of the structure in the 18th century. Balheary Bridge comprises three phases of construction. The first phase identified as pre-seventeenth century in date, with later extensions in the 18th and 19th centuries (Brady *et al* 2009).

Cartographic Sources

Testing Area 6 comprises three sub-areas. Sub-area 14 comprises of the central area of one roughly rectilinear field together with the eastern and western side of a second rectilinear field to the south. Sub-area 15 occupies the southwest corner of a small field. The third Sub-area 35 is situated two fields to the south, across the Broadmeadow River, situated between Balheary Bridge and Lissenhall Bridge within Balheary Demesne. The fields which encompass the Sub-areas have been enlarged through the removal of internal boundaries when compared to the 1st Edition 6" Ordnance Survey map (1843). The internal boundary in Sub-area 14 is now marked by an electric fence. Interestingly the northern boundary to Sub-area 14 is not shown on the 1st edition map (1843) suggesting a relatively recent date. The 1st edition 6" map (1843) records the presence of trees across the testing area suggesting a parkland landscape around Lissenhall and Balheary houses which may have occasioned landscaping.

5.0 OBJECTIVES

The objective of the testing was to determine the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts along the route so as to inform the subsequent archaeological strategy in advance of construction. All areas of archaeological potential, sites and significant features identified in the EIS and by the geophysical survey were investigated during the testing programme.

As part of the advance archaeological testing of Metro North all townland boundaries directly impacted by the proposed scheme were investigated and surveyed. One of these townland boundaries (Balheary Demesne/Lissenhall Little – HC#414) was located immediately west of Testing Area 6, Sub-area 14 but lay outside the testing area. A drawn elevation and photographic survey was carried out on the 14 and 15 January 2010 and the results of this investigation are detailed in Section 7.0 below.

6.0 METHODOLOGY AND CONSTRAINTS

The archaeological excavation licence number 09E464 was granted to James Hession and transferred to John Channing both of Headland Archaeology (Ireland) Ltd. by the Department of the Environment, Heritage and Local Government (DoEHLG) in consultation with the National Museum of Ireland (NMI). This licence pertained to the excavation of test

trenches as per the trench layout plan for Testing Area 6 Sub-areas 14, 15 and 35, which was submitted together with the licence application method statement (Figure 2).

The works were carried out by Headland Archaeology (Ireland) Ltd. on behalf of the RPA on 22 September 2009. Access was later granted to Sub-area 35, which was subsequently tested on 28 and 29 January 2010.

The methodology of the investigation complied with the Policy and Guidelines on Archaeological Excavation (Dúchas 1999) and the specification, terms and conditions of the Contract between the RPA and Headland Archaeology (Ireland) Ltd. The work was undertaken in accordance with the Code of Practice agreed between the DoEHLG and the Railway Procurement Agency.

Testing Area 6 encompassed approximately 2.67 hectares. A total of 2745.6 m^2 were excavated, comprising 10.3% of the Testing Area (Appendices 1 and 2). Testing was in the form of mechanically excavated test trenches. These were excavated using a mechanical tracked excavator (generally 21-tonne) with a toothless ditching/grading bucket under the direct and continuous supervision of the director John Channing or a supervisor. This work was overseen by the Headland Archaeology Senior Archaeologist Patricia Long. One archaeological assistant was employed to assist the licensed director and the supervisor with the recording of the trenches and the features identified within them.

The layout of the test trenches was designed to test the features of archaeological potential identified in the geophysical survey. A total of 27 trenches, generally set at an average distance of 10 m apart were excavated throughout Sub-areas 14, 15 and 35. Three trenches included in the method statement for Sub-area 14 (Test Trenches 12-14) were reduced at their southern extent and Test Trench 20 was omitted due to the presence of northeast–southwest and north northeast–south southwest overhead power lines and attendant safety concerns (Figure 2).

Where features of archaeological potential were identified, the features were cleaned back and tested. The purpose of the testing was to establish the nature and extent of the archaeological deposits and features present. With this in mind, partial excavation and half-sectioning of features was undertaken where appropriate but every effort was made to preserve the stratigraphical integrity of archaeological sites/features. All features of archaeological potential were sectioned to ascertain their significance. If a feature was deemed to be non-archaeological due to its character or the presence of modern datable

material no detailed recording was undertaken, but notes were made on the trench sheets contained within the site archive.

Recording

Unique numbers were given to all contexts of archaeological potential identified during archaeological test trenching. Prefixes were not used by Headland Archaeology (Ireland) Ltd. but context numbers are illustrated throughout the report in brackets e.g. (001). Digital photographs were taken of each field, trench and feature. All trenches were surveyed using Trimble GPS surveying equipment with accuracy levels within 3 mm for the duration of the project. All recording was undertaken on Headland Archaeology (Ireland) Ltd. *pro forma* record cards. All archaeologically significant features have been related to Ordnance Datum and the Irish National Grid as per RPA Project Control.

Environmental Samples

No environmental samples were taken during the course of archaeological test trenching at Testing Area 6.

Finds Retrieval

No finds were retrieved during the course of archaeological test trenching at Testing Area 6.

6.1 Methodology for recording townland boundary

The recording of the townland boundary (HC#414) consisted of a drawn elevation and photographic survey of the length of the boundary that would be impacted by the Metro North Scheme (Figures 4-8; Plates 1-6). Measurements were taken at a series of locations along the boundary and a written description was compiled.

7. RESULTS

7.1 General

A total of 27 test trenches were mechanically excavated in four fields (Sub-area 14, 15 and 35) at Testing Area 6 (Figures 2 and 3), totalling approximately 2745.6 m^2 of the entire Testing Area 6 area of 26,709 m² (i.e. 10.3% of the Testing Area).

Archaeological remains were identified in one location: in Trenches 1, 2 and 3 in Sub-area 35 (an east-west wall (015) and arch/culvert (016); Balheary Demesne 1; Figure. 3; Plates.

7-16). Details of this archaeology are outlined below; a full description of all trenches is included in Appendix 2.

The test trenches were excavated to an average depth of 0.40 m exposing the underlying mid-yellowish brown silty clay subsoil. This subsoil contained bands of grey yellow coarse grained silty clay and blackish grey silty clay. Features identified within Testing Area 6 generally comprised linear furrows orientated northeast-southwest. A number of French ((005) and (006)) and earthen ((011), (004) and (010)) land drains were also excavated across Testing Area 6 (Figure 3; Plate 18).

Sub-areas 14 and 15: Three indistinct charcoal deposits were noted 0.5 m below ground surface in Trench 15. The deposits were tested by section and were found to be mixed with the surrounding subsoil suggesting field clearance or root burning, probably associated with managing the adjacent field boundary. They were not discrete cut features. Further cleaning within the trench revealed; agricultural furrows and a stone drain (006), which contained a fragment of clay pipe stem, that extended into Trench 16. Land drains were noted within Trenches 23 and 24 and are reflected in the geophysical survey results which were not found to have archaeological significance.

7.2 Balheary Demesne 1 (Sub-Area 35; Test Trenches 1, 2 and 3; Figure 3; Plates 10-16)

The ground penetrating radar (GPR) survey was conducted in Testing Area 6, Sub-area 35 to establish the structural relationship between Lissenhall Bridge (RMP DU011-081 Bridge; RPS 341 Fingal) and Balheary Bridge (RPS 340). The survey identified a wall beneath a modern landscaped area to the south of Lissenhall Bridge, orientated along the same north-south axis as the eastern wall of the existing bridge. It also identified a further possible wall to the east of a clearly visible arch/culvert built into the western side of the construct between the two bridges. These results were interpreted as the eastern wall of a structure that formerly connected the two bridges prior to the construction of the R132 (G50, Thebaudeau and Harrison 2009, 25 and 26; Welsh 2009) and archaeological test trenching was recommended to clarify the results.

Three test trenches (1-3) were excavated within Sub-area 35 to test the veracity of the responses identified by the ground penetrating radar. Test Trench 1 was positioned over the linear anomaly which extended southwards from the eastern side of Lissenhall Bridge. Test Trench 2 was positioned 15 m south over the arch/culvert structure and Test Trench 3 was

positioned to the east of Test Trench 2 to investigate whether the linear anomaly identified in the GPR continued southwards.

Test Trench 1: Wall (015) was identified within Test Trench 1, approximately 0.95 m below the current ground level; it traversed the entire 30 m length of the test trench. Only one course of the wall remains survived *in situ*, measuring 0.58 m in width by 0.15 m in height. Beneath these remains approximately 8 courses of the foundation footing was noted. This measured 1.20 m in height; however, the base was beyond the limits of the 7 tonne mini-digger. It was therefore not possible to ascertain the depth to which the foundation material was set; although local residents estimate that the eastern wall of the structure linking Balheary Bridge and Lissenhall Bridge was over 20ft in height (*pers.comm*.). The foundation footing was extremely well built, constructed from quarried limestone blocks bonded with lime mortar, and was neatly faced on the eastern side. The wall remains consisted of two rows of large quarried limestone blocks that were bonded with lime mortar. Between these rows was a rubble infill core which had also been bonded with lime mortar (Figure 3; Plates 10-13). A wall cut (014), measuring 0.40 m in width, was visible on the western side of the wall. Post-medieval pottery (white ware) and some rusty pieces of metal were noted within the fill of this cut indicating an 18th/19th century date. Wall (015) was positioned exactly 9.60 m from the existing *in situ* western wall. This is the same distance noted between the existing walls of Lissenhall Bridge suggesting that it may be part of the same construction. Wall (015) continued beyond the southern limits of Test Trench 1 and may have continued south to Balheary Bridge. A substantial layer of dumped and backfilled tar-macadam slabs were identified in this location. This may have hampered the results of the ground penetrating radar survey, which depicted wall (015) stopping after 30 m.

Test Trench 2: The remains of an arch/culvert (016) were identified within Test Trench 2 of Sub-area 35 (Figure 3; Plates 14 and 15).

No dating evidence was recovered from the fill surrounding the structure, however it had been previously disturbed (possibly when landscaping activity associated with the park took place) and had been backfilled with modern fill material, construction debris and occasional household refuse.

The east-facing elevation of arch/culvert (016) was identified along the western part of Trench 2. It measured 5 m in length (north-south) by 3.10 m in width by 2.50 m in depth (the base of this feature was not reached). Trench 2 was excavated to a maximum depth of 3.20 m – the limit of the mini digger). Arch/culvert (016) was a well built, extremely solid structure

constructed from quarried limestone blocks bonded with lime mortar. It was neatly faced which suggests that the eastern elevation was an exposed face.

From examining the visible arch/culvert on the western side of the existing structure between Balheary and Lissenhall Bridges it can be seen that (016) is composed of slightly different sized quarried limestone blocks. It can also be established that the arched structure visible on the western elevation of the existing wall between the two bridges is a separate build (Plate 17). Therefore arch/culvert structure (016) was interpreted as part of an earlier roadway or continuous structure that existed between Balheary Bridge and Lissenhall Bridge.

Test Trench 3: Wall (015) was also identified within Test Trench 3, located 4 m to the east of arch/culvert (016). It was orientated north-south, aligned on an identical axis to wall (015) within Test Trench 1 and the existing wall of Lissenhall Bridge, with the internal distance between the existing western wall and wall (015) within Test Trench 3 measuring 9.60 m (the same as the reading from Test Trench 1) (Plate 16).

The arch/culvert (016) was identified at a depth of 1.40 m below current ground level, with a substantial amount of backfilled material and modern construction/landscaping debris (tar-macadam) situated above it. Only the lower coursing survived; it was constructed from quarried limestone blocks bonded with lime mortar neatly faced on both sides. The construction method was similar to wall (015) within Test Trench 1, consisting of two outer rows of large quarried limestone blocks bonded with lime mortar with a rubble infill core also bonded with lime mortar. It measured 0.70 m in width. No wall cut was visible within the trench and given the amount of landscaping carried out in the immediate area it was not possible to expose the foundations of wall (015).

The identification of wall (015) within Trenches 1 and 3 strongly indicates that there was a continuous structure running from Balheary to Lissenhall bridges.

Detail

Within Sub-area 35 the ground penetrating radar survey (GPR) identified responses which suggested the presence of an earlier continuous structure spanning the area between Lissenhall Bridge (HC#11; RMP DU011-081 Bridge; RPS 341 Fingal) and Balheary Bridge (RPS 340) which, span the Broadmeadow and Ward rivers respectively. The survey noted a response, a linear anomaly, extending southwards for over 30 m from Lissenhall Bridge towards Balheary Bridge. This was interpreted as the eastern return of the old road wall or its foundations and suggests that a continuous bridge structure existed in this location. This

hypothesis is supported by both Rocques 1790 Map of Dublin County and the 1st edition Ordnance Map (1843), both of which depict a continuous structure at this location. Furthermore, examination of the visible arch/culvert on the western elevation of the bridge structure clearly shows two phases of construction with an inner arch/culvert identified 2.5 m east of the outer arch/culvert. This is suggestive of a precursor or early phase of building, possibly indicating an early road prior to the redevelopment or widening of the road in the late 17th/early18th century. An interesting observation given that much of the medieval fabric has survived within the Lissenhall Bridge structure (G50; Thebaudeau and Harrison 2009; Welsh 2009) and suggests that the earlier arched structure may be of medieval date.

The archaeological assessment carried out in Testing Area 6 confirmed the existence of a wall (015) extending 25 m from the southern end of the eastern wall of Lissenhall Bridge. This wall was also identified in Test Trench 3 located approximately 10 m south of Test Trench 1 and confirms that an eastern wall once bordered a structure which spanned from Balheary Bridge to Lissenhall Bridge. The dating of wall (015) is somewhat uncertain but it appears to be of post-medieval date and possibly represents a rebuild of an earlier medieval structure. The foundational material of wall (015) was not encountered and it is possible that wall (015) was constructed over medieval foundations.

The arch/culvert structure (016) identified in Test Trench 2 also supports the theory that an earlier possibly medieval structure existed between Balheary and Lissenhall Bridge prior to the redevelopment or widening of the road in the late 17th/early18th century.

Townland boundary

A survey of the townland boundary between Lissenhall Little and Balheary Demesne (HC#414) was carried out along the southwestern side of Testing Area 6 (Figures 4-8; Plates 1-6). The boundary consisted of a stone wall measuring between 1.83 m and 2.02 m in height, with a width of 0.40 m. The wall followed the course of a local road (Ennis Lane; Plate 1) upon which the boundary line is based. The grounds of the Emmaus retreat centre, as well as agricultural land, were located to the south. The wall itself consisted of uncoursed, large limestones, which averaged 0.30 m x 0.15 m x 0.10 m and were bonded with cement. On top of these was a single course of large cut, trapezoidal-shaped limestone slabs, which had been set vertically onto the wall to a height of 0.30 m. The wall was covered in sections by ivy (Hedera helix), a likely coloniser rather than a deliberate cultivar, which was growing from its southern side. No other flora was present.

A series of measurements were taken along the length of the boundary which are representative of the minimum and maximum dimensions and are detailed here:

Measurement 1 (Plate 2): wall 1.83 m high, 0.40 m wide

Measurement 2 (Plate 3): wall 2.02 m high, 0.40 m wide

Measurement 3 (Plate 4): wall 1.99 m high, 0.40 m wide

A number of breaks were present in the wall. Two of these were entrances to the Emmaus retreat centre (Plates 5), with an access gate to a field also noted. The only modern alteration noted to the boundary wall were sections of repair and the blocking up of entrances using concrete blocks.

A northeast-facing elevation of the boundary wall was drawn along the 71 m portion of the townland boundary (HC#414) to be impacted on by the proposed scheme (Figures 4-8).

7.3 Interpretative assessment of the geophysical survey anomalies in Testing Area 6

The features of archaeological potential and the ferrous anomalies noted in the geophysical survey were identified during the course of archaeological test trenching as the remains of agricultural activity, namely land clearance, land improvement (drainage) and cultivation. Specifically, the linear trends were the result of numerous plough furrows and land drains, and an occasional stone socket resulting from field clearance. Such linear agricultural features were aligned in a manner that coincided with the surviving upstanding fields and/or with the field systems represented on nineteenth-century Ordnance Survey maps. Most demonstrated physical characteristics (degree of straightness, spacing, etc.) clearly indicative of a mechanised origin and post-agricultural improvement (i.e. post *c.*AD 1750) process. In some instances, materials observed in the fills of the features confirmed a late post-medieval or modern origin (e.g. late transfer-printed ceramic, kiln-fired brick fragments, ceramic drain pipes, plastic sheeting, iron/steel fragments from modern farm machinery, etc.), and no finds indicated a date prior to the end of the eighteenth century at the earliest.

The geophysical anomalies resulting from elevated magnetic responses, proved to be the result of variation in the natural subsoil, namely pockets of more water-'transmissive' sands and gravels; more impermeable clays in poorly drained locations where the soils had begun to gley and/or mineral pan (Fe and Mg) had begun to form. In limited instances this type of geophysical anomaly also partly correlated to the aforementioned late post-medieval/modern agricultural features described above.

In this landscape history context, late post-medieval and modern agricultural features are not considered to be archaeologically significant.

8.0 IMPACT ASSESSMENT

Archaeological remains were identified in Testing Area 6 (Balheary Demesne 1). As Testing Area 6 incorporates the proposed footprint of the Metro North alignment, Lissenhall Stop, new access road, construction compound (Compound 2 Option 1) and an area between Balheary and Lissenhall bridges any sub-surface archaeology will be subject to direct negative impact from ground disturbance works associated with site preparation (including removal of topsoil) and any other construction works.

A section of the townland boundary between Lissenhall Little and Balheary Demesne (HC # 414; CRDS 2008), outlined in the results section above, will be directly impacted upon by the proposed scheme as the main train line corridor will extend though where this part of the boundary now stands. A 71 m length of this townland boundary will be completely removed.

9.0 PROPOSED MITIGATION

In order to mitigate the predicted impact of the proposed scheme on Testing Area 6 a detailed mitigation strategy is presented here.

The part of the Balheary Demesne and Lissenhall Little townland boundary (HC#414) within Testing Area 6 that will be impacted upon by the proposed depot has been fully recorded. No further archaeological work is therefore recommended in relation to it.

As noted, the archaeology identified in the testing area was located in Test Trenches 1-3, Sub-area 35 (Balheary Demesne 1). It is recommended that if possible the sub-surface bridge remains should be preserved *in situ*. Where an impact from the development is deemed unavoidable a programme of preservation by record should be undertaken. This would include the removal of overburden from the entire area subject to an impact so that the full extents of the bridge remains can be exposed and the-deep lying base of the structures can be located in a safe fashion. A full architectural survey should then be undertaken and if necessary the structures should be dismantled under archaeological supervision.

Test trenching within Sub-areas 14 and 15 did not reveal any finds or features of archaeological significance and no further mitigation is recommended in the areas tested.

These recommendations are provisional and subject to review/approval by the RPA Project Archaeologists and the National Monuments Service, Department of the Environment, Heritage and Local Government.

REFERENCES

Literary sources

Brady, N., Bangerter, R. and Pollard, E. 2009 *Underwater Archaeological Assessment: Metro North Project – Broadmeadow River, Lissenhall Bridge, Balheary Demesne/Lissenhall Great, Swords, Co. Dublin, 08D093, 08R311 and Ward River, Balheary Bridge,Balheary Demesne, Swords, Co. Dublin, 08D092, 08R312.* Unpublished client report by the Archaeological Diving Company Ltd.

Department of the Environment, Heritage and Local Government and the Railway Procurement Agency (2007) *Code of Practice between the Department of the Environment, Heritage and Local Government and the Railway Procurement Agency.* Dublin: Government Publications Office.

CRDS Ltd. (2008) Material Assets: Archaeology, architectural heritage and cultural heritage, In Environmental Resources Management Ireland Limited (ed.) *Environmental Impact Statement – Metro North: Belinstown to St. Stephen's Green*, Volume 1, Book 1, Chapter 23, 399-451.

Dúchas (1999) *Policy and Guidelines on Archaeological Excavation.* Department of Arts, Heritage, Gaeltacht and the Islands, Dublin, The Stationary Office.

ERM (2008) *Environmental Impact Statement – Metro North: Belinstown to St. Stephen's Green*, Volume 1, Book 1, Chapter 6, 71-96.

ERM and Jacobs Engineering Ireland Ltd. (2008) Soil and Geology In Environmental Resources Management Ireland Limited (ed.) *Environmental Impact Statement – Metro North: Belinstown to St. Stephen's Green*, Volume 1, Book 1, Chapter 17, 311-317.

Lynch, P (2000) *Lissenhall Little: 00E0953,* In Bennett (ed.), http://www.excavations.ie/Pages/Details.php?Year=&County=Dublin&id=4597. Accessed 31-07-09

Margaret Gowen & Co Ltd. (2007) *Metro North Dublin City Centre to Lissenhall; Archaeological Strategy (Preliminary)* Margaret Gowen & Co Ltd. (Unpublished Report).

O'Reilly, F (2001) *Airport/Balbriggan Bypass, Site 2, Lissenhall Little: 01E1074*, In Bennett (ed.), http://www.excavations.ie/Pages/Details.php?Year=&County=Dublin&id=6397. Accessed 31-07-09

Thebaudeau, B. and Harrison, D. (2009) *Metro North Dublin City Centre to Lissenhall, County Dublin: Geophysical Survey Report: Licence No. 08R0117.* Margaret Gowen & Co Ltd. (Unpublished Report for the RPA).

Welsh, N. (2009) *Ground Penetrating Radar Survey: Lissenhall & Balheary Bridges, Swords, County Dublin.* Margaret Gowen & Co Ltd. (Unpublished Report for the RPA).

Cartographic sources

6" Ordnance Survey maps, 1st Edition 1843, 2nd Edition 1871-5

25" Ordnance Survey Map, Dublin, 1906–1908

Record of Monuments and Places Constraint Map, Dublin

Roques map of County Dublin 1790

Websites

www.excavations.ie

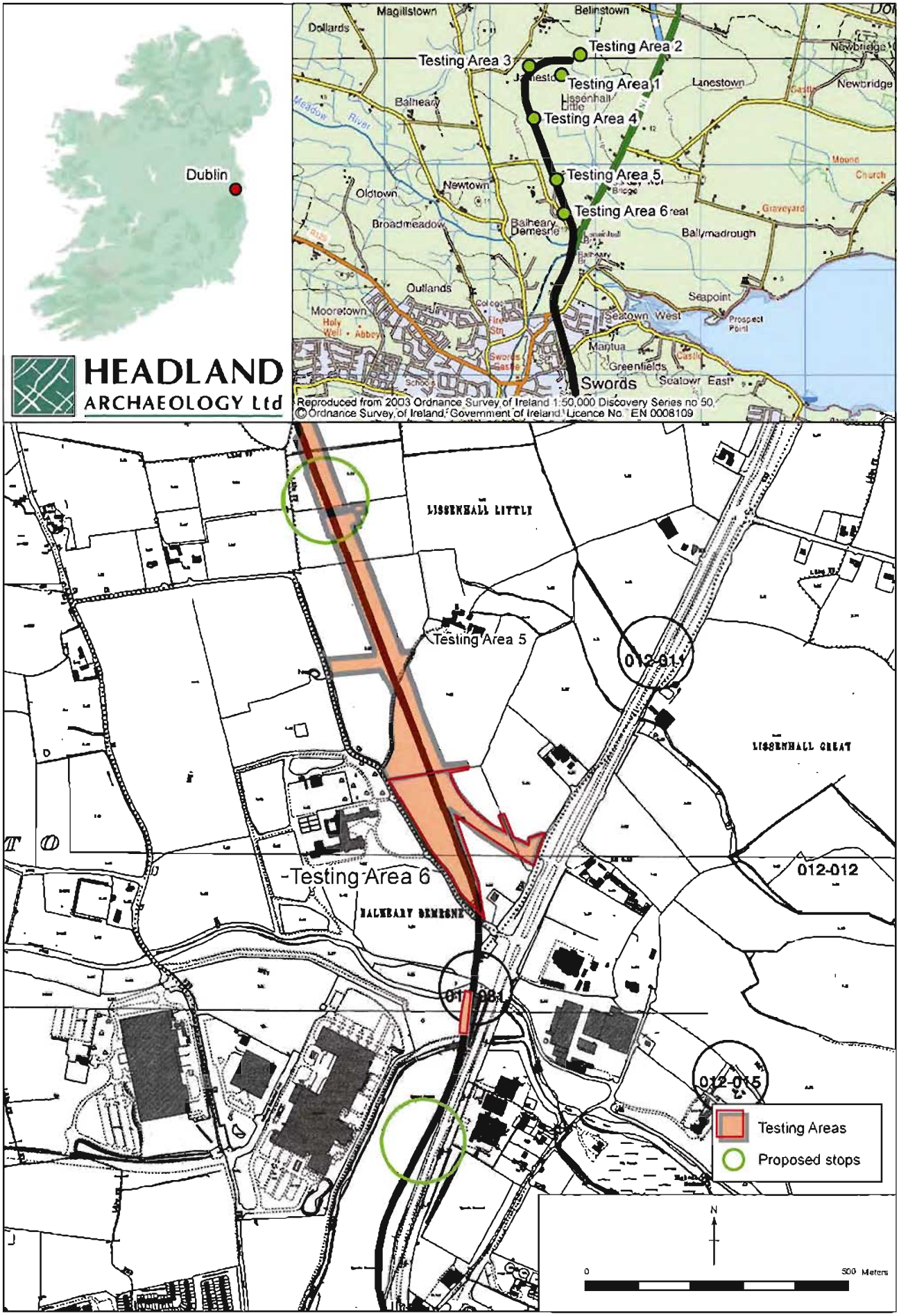


Figure 1 - Advance Archaeological Test Trenching of Metro North: Testing Area 6, Lissenhall Little and Balheary Demesne townlands, Co. Dublin, RPA ref: (MN101) Lissenhall to Fosterstown. Testing Area 6, location including RMP extract.

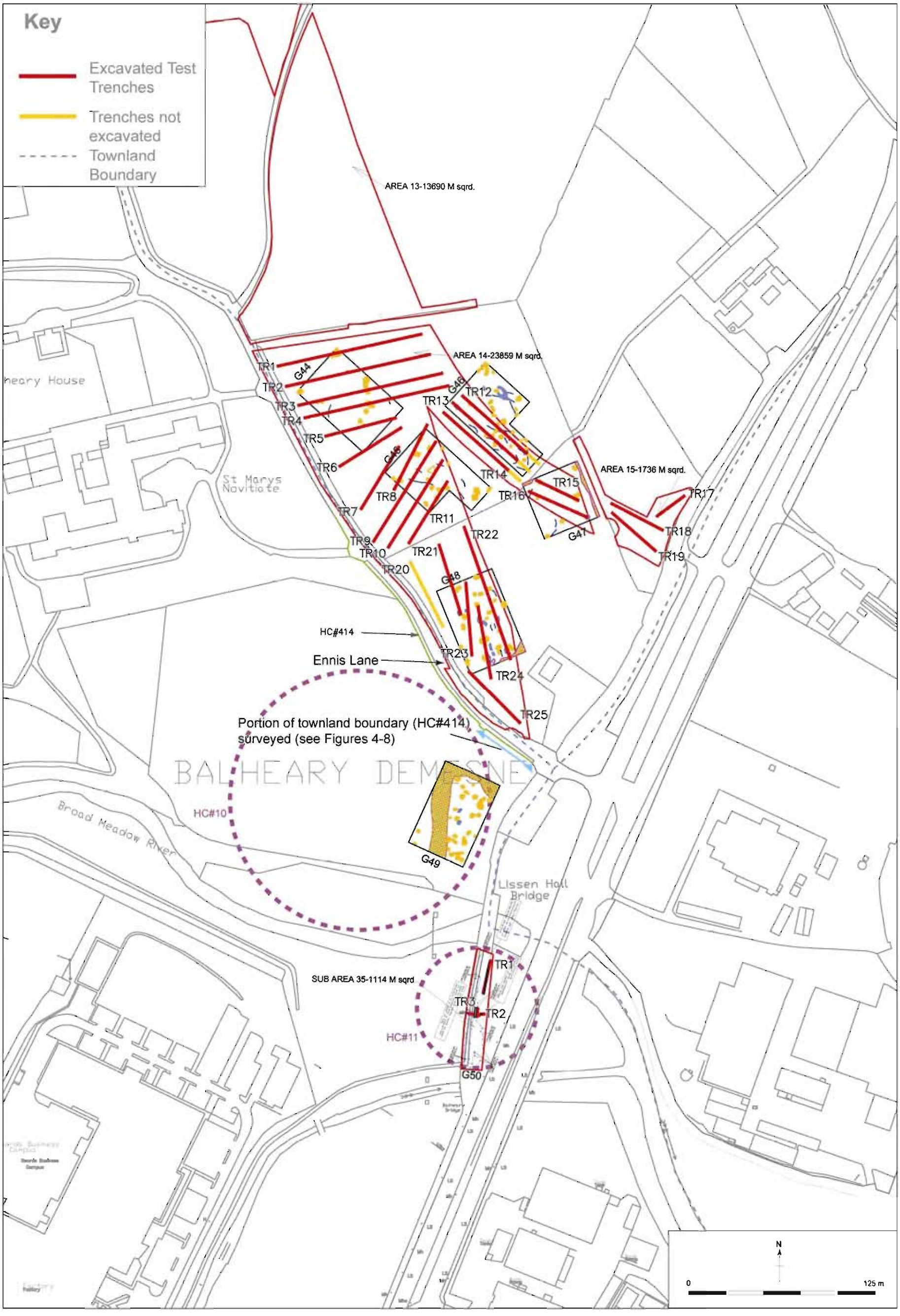


Figure 2 - Advance Archaeological Test Trenching of Metro North: Testing Area 6, Lissenhall Little and Balheary Demesne townlands, Co. Dublin, RPA ref: (MN101) Lissenhall to Fosterstown Testing Area 6 (Sub-areas 14, 15 and 35) Trench Layout.

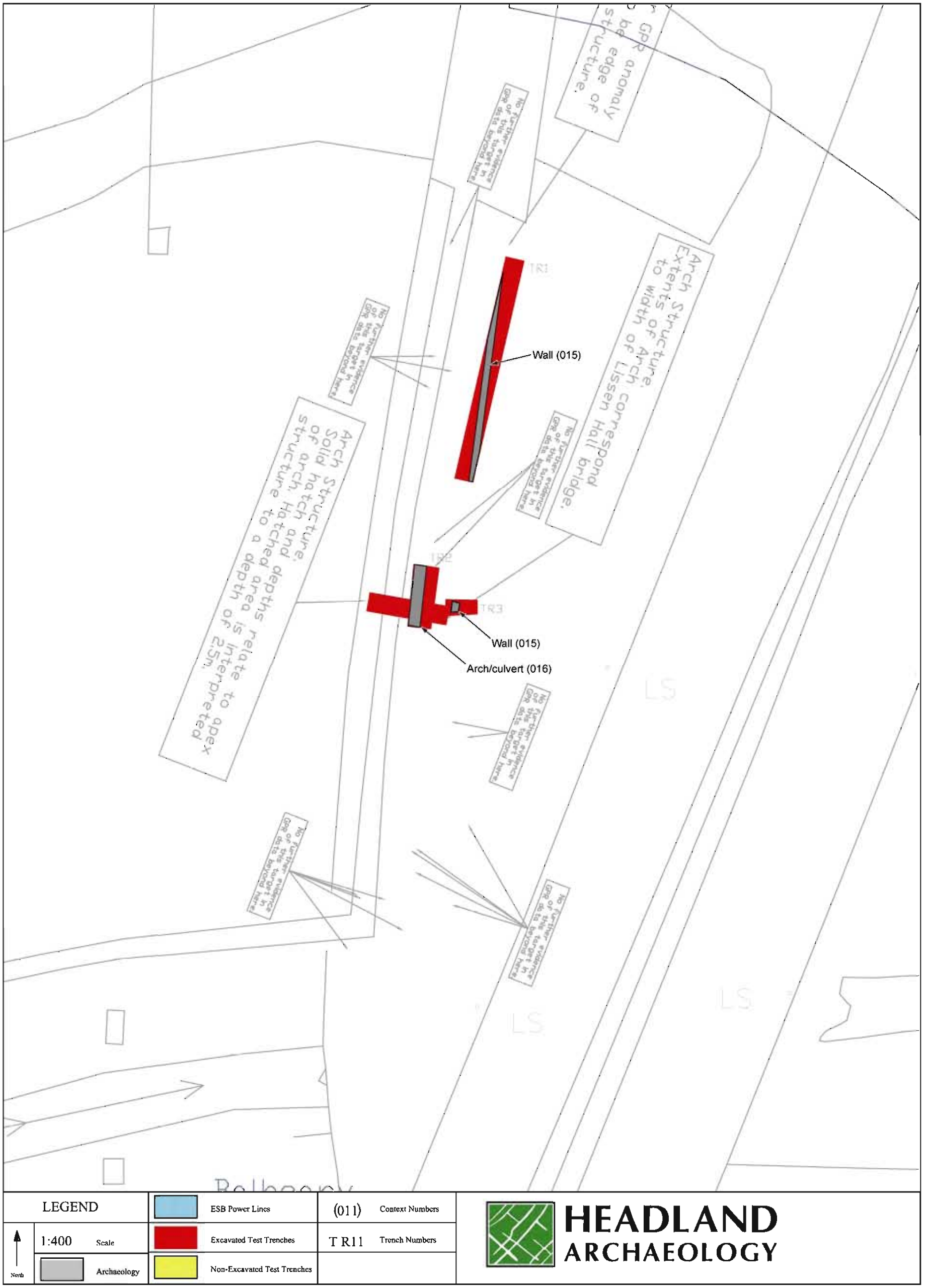
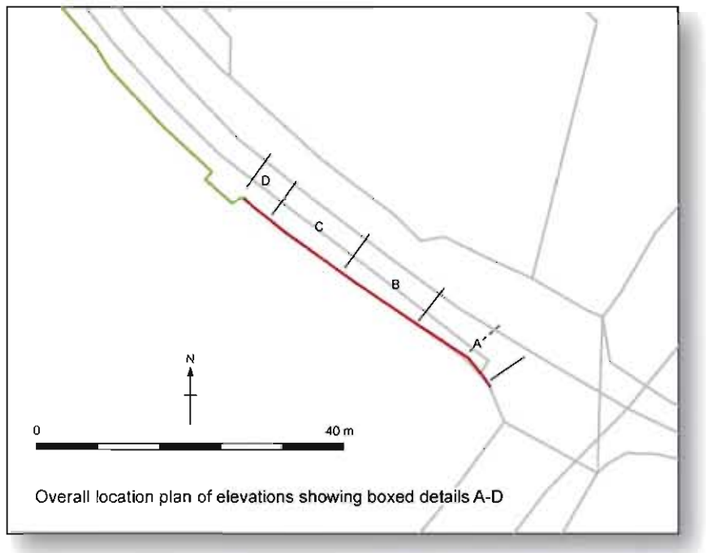


Figure 3 - Advance Archaeological Test Trenching of Metro North: Testing Area 6, Lissenhall Little and Balheary Demesne townlands, Co. Dublin, RPA ref: (MN101) Lissenhall to Fosterstown Detailed view of Test Trenches 1 and 2 within Sub-area 35.



Overall location plan of elevations showing boxed details A-D

Northeast facing elevation

Figure 4 - Advance Archaeological Test Trenching of Metro North: Testing Area 6,
Lissenhall Little and Balheary Demesne townlands, Co. Dublin, RPA ref: (MN101) Lissenhall to Fosterstown
Overall elevation of townland boundary wall HC#414, showing boxed details

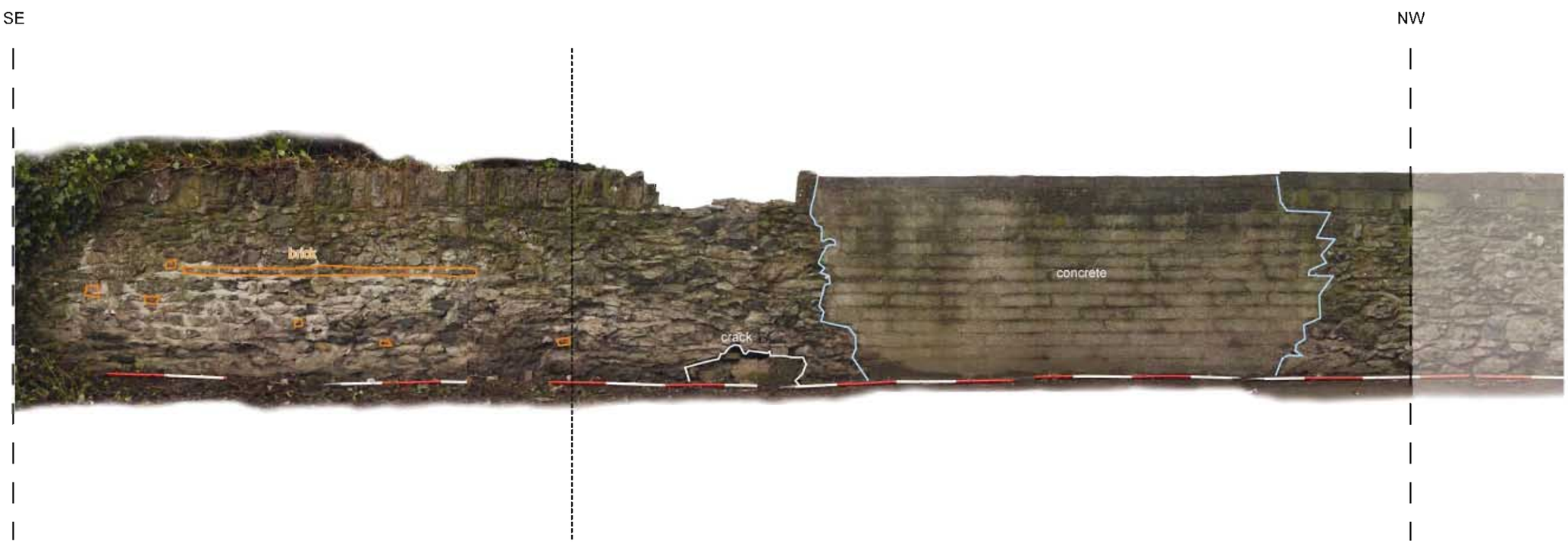


Figure 5 - Advance Archaeological Test Trenching of Metro North: Testing Area 6, Lissenhall Little and Balheary Demesne townlands, Co. Dublin, RPA ref: (MN101) Lissenhall to Fosterstown Townland boundary wall HC#414: Northeast-facing elevation, Detail A.

Figure 6 - Advance Archaeological Test Trenching of Metro North: Testing Area 6, Lissenhall Little and Balheary Demesne townlands, Co. Dublin, RPA ref: (MN101) Lissenhall to Fosterstown Townland boundary wall HC#414: Northeast-facing elevation, Detail B.

Figure 7 - Advance Archaeological Test Trenching of Metro North: Testing Area 6, Lissenhall Little and Balheary Demesne townlands, Co. Dublin, RPA ref: (MN101) Lissenhall to Fosterstown Townland boundary wall HC#414: Northeast-facing elevation, Detail C.

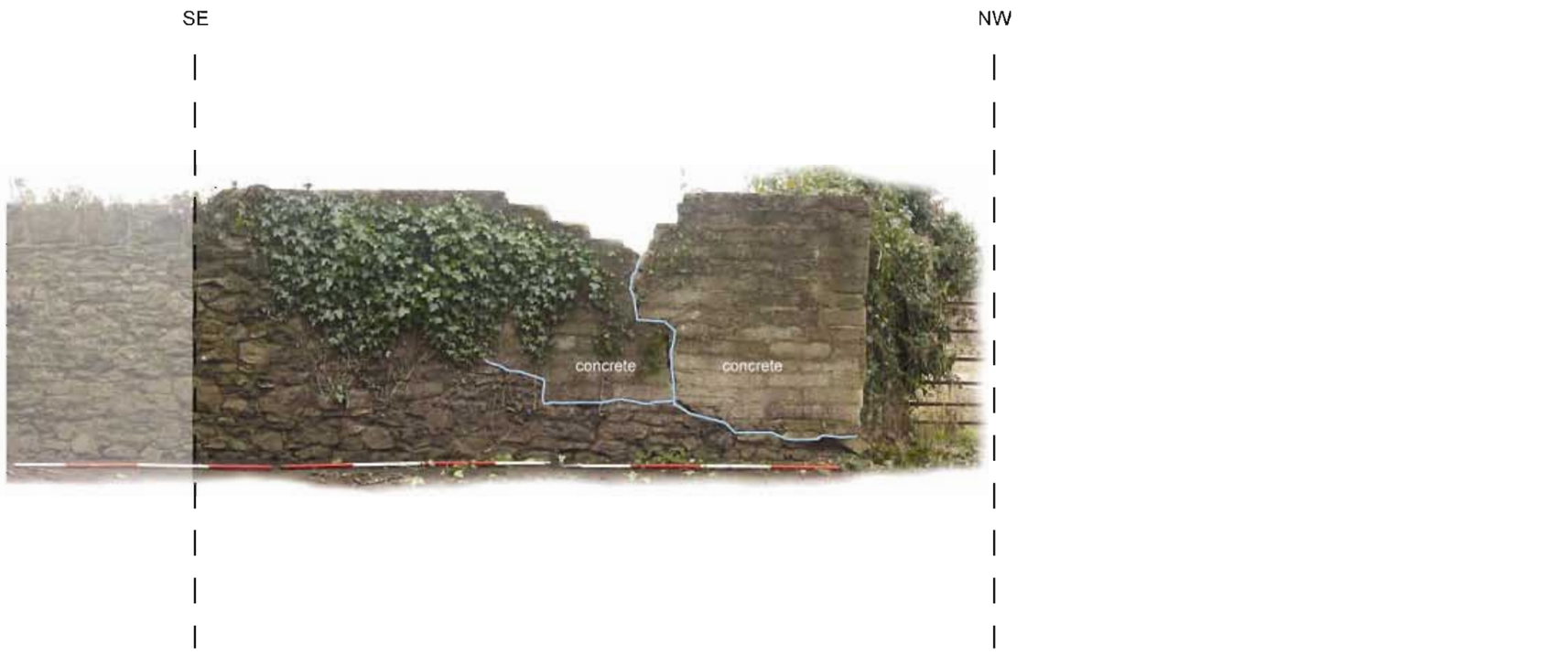


Figure 8 - Advance Archaeological Test Trenching of Metro North: Testing Area 6, Lissenhall Little and Balheary Demesne townlands, Co. Dublin, RPA ref: (MN101) Lissenhall to Fosterstown Townland boundary wall HC#414: Northeast-facing elevation, Detail D.

Plate 1 - General view looking southwest along Ennis Lane to townland boundary between Lissenhall Little and Balheary Demesne (HC#414).

Plate 2 - Measurement point 1 on townland boundary (HC#414).

Plate 3 - Measurement point 2 on townland boundary (HC#414).

Plate 4 - Measurement point 3 on townland boundary (HC#414).

Plate 5 - Entrance to Emmaus retreat centre in the townland boundary wall (HC#414).

Plate 6 - General view looking southwest along Ennis Lane to townland boundary between Lissenhall Little and Balheary Demesne (HC#414).

Plate 7 - Photograph of Lissenhall Bridge (HC#11), facing northwest.

Plate 8 - Photograph of Lissenhall Bridge (HC#11), facing northwest .

Plate 9 - Photograph of visible arch/culvert within existing western wall of Lissenhall Bridge (HC#11), facing northeast.

Plate 10 - Wall (015) within Test Trench 1, Sub-area 35, on same alignment as existing eastern wall of Lissenhall Bridge, facing north.

Plate 11 - Modern road surface debris over wall (015) within Test Trench 1, Sub-area 35, facing southeast.

Plate 12 - Photograph of upper coursing of wall (015) within Test Trench 1, Sub-area 35, facing southeast.

Plate 13 - Photograph of lower coursing of wall (015) within Test Trench 1, Sub-area 35, facing east.

Plate 14 - Photograph of arch/culvert (016) within Test Trench 2, Sub-area 35, facing west.

Plate 15 - Photograph of arch/culvert (016) within Test Trench 2, Sub-area 35, facing northwest

Plate 16 - Photograph of wall (015) within Test Trench 3, Sub-area 35, facing northwest.

Appendix 1: Field Register

Testing Area	Sub-area	Townland(s)	Description	Total Linear Metres	Services Present
6	14	Lissenhall Little	Very gently rolling Flat field in pasture	2441.6 m² (i.e. length 1220.8 m x width 2 m)	Overhead electricity cable. Trench 20 omitted and trenches 12-14 reduced due to overhead hazard
6	15	Lissenhall Little	Very gently rolling Flat field in pasture	230 m² (i.e. length 115 m x width 2 m)	Overhead electricity cable
6	35	Balheary Demesne	Very gently rolling Flat field in pasture	74 m² (i.e. length 37 m x width 2 m)	Underground Telecoms and ESB
			Total	2745.6 m²	

Appendix 2: Trench Register

Testing Area	Sub-area	Trench No.	Length (m)	Width (m)	Depth (m)	Orientation	Description	Summary of Features
6	14	1	97.30	2.00	0.30	E-W	**Topsoil (001)**: Dark brown sod with humus and mineral elements. Over lower plough zone, moderately compact brown silty clay with moderate inclusions of small to medium sub-angular stones to mid-greyish brown loam. **Natural Subsoil (002)**: Alternating bands of clay, mid-yellowish brown silty clay mottled with mid to dark blackish grey silty clay and containing occasional stone inclusions and grey gravelly clay. **No features of archaeological significance identified**.	N/A
6	14	2	78.00	2.00	0.40	E-W	**Topsoil (001)**: Dark brown sod with humus and mineral elements. Over lower plough zone, moderately compact brown silty clay with moderate inclusions of small to medium sub-angular stones to mid-greyish brown loam. **Natural Subsoil (002)**: Alternating bands of clay, mid-yellowish brown silty clay mottled with mid to dark blackish grey silty clay and containing	N/A

Testing Area	Sub-area	Trench No.	Length (m)	Width (m)	Depth (m)	Orientation	Description	Summary of Features
							occasional stone inclusions and grey gravelly clay. **No features of archaeological significance identified**.	
6	14	3	96.00	2.00	0.40	E-W	**Topsoil (001)**: Dark brown sod with humus and mineral elements. Over lower plough zone, moderately compact brown silty clay with moderate inclusions of small to medium sub-angular stones to mid-greyish brown loam. **Natural Subsoil (002)**: Alternating bands of clay, mid-yellowish brown silty clay mottled with mid to dark blackish grey silty clay and containing occasional stone inclusions and grey gravelly clay. **No features of archaeological significance identified**.	N/A
6	14	4	100.00	2.00	0.42	E-W	**Topsoil (001)**: Dark brown sod with humus and mineral elements. Over lower plough zone, moderately compact brown silty clay with moderate inclusions of small to medium sub-angular stones to mid-	N/A

Testing Area	Sub-area	Trench No.	Length (m)	Width (m)	Depth (m)	Orientation	Description	Summary of Features
							greyish brown loam. **Natural Subsoil (002)**: Alternating bands of clay, mid-yellowish brown silty clay mottled with mid to dark blackish grey silty clay and containing occasional stone inclusions and grey gravelly clay. **No features of archaeological significance identified**.	
6	14	5	50.00	2.00	0.38	E-W	**Topsoil (001)**: Dark brown sod with humus and mineral elements. Over lower plough zone, moderately compact brown silty clay with moderate inclusions of small to medium sub-angular stones to mid-greyish brown loam. **Natural Subsoil (002)**: Alternating bands of clay, mid-yellowish brown silty clay mottled with mid to dark blackish grey silty clay and containing occasional stone inclusions and grey gravelly clay **No features of archaeological significance identified**.	N/A

Testing Area	Sub-area	Trench No.	Length (m)	Width (m)	Depth (m)	Orientation	Description	Summary of Features
6	14	6	50.00	2.00	0.36	WNW-ESE	**Topsoil (001)**: Dark brown sod with humus and mineral elements. Over lower plough zone, moderately compact brown silty clay with moderate inclusions of small to medium sub-angular stones to mid-greyish brown loam. **Natural Subsoil (002)**: Alternating bands of clay, mid-yellowish brown silty clay mottled with mid to dark blackish grey silty clay and containing occasional stone inclusions and grey gravelly clay. **No features of archaeological significance identified**.	N/A
6	14	7	51.50	2.00	0.40	NE-SW	**Topsoil (001)**: Dark brown sod with humus and mineral elements. Over lower plough zone, moderately compact brown silty clay with moderate inclusions of small to medium sub-angular stones to mid-greyish brown loam. **Natural Subsoil (002)**: Alternating bands of clay, mid-yellowish brown silty clay mottled with mid to dark blackish grey silty clay with occasional stone inclusions and grey gravelly clay. **No features of archaeological**	N/A

Testing Area	Sub-area	Trench No.	Length (m)	Width (m)	Depth (m)	Orientation	Description	Summary of Features
							significance identified.	
6	14	8	50.00	2.00	0.38	NE-SW	**Topsoil (001)**: Dark brown sod with humus and mineral elements. Over lower plough zone, moderately compact brown silty clay with moderate inclusions of small to medium sub-angular stones to mid-greyish brown loam. **Natural Subsoil (002)**: Alternating bands of clay, mid-yellowish brown silty clay mottled with mid to dark blackish grey silty clay and containing occasional stone inclusions and grey gravelly clay. **No features of archaeological significance identified**.	N/A
6	14	9	80.00	2.00	0.40	NE-SW	**Topsoil (001)**: Dark brown sod with humus and mineral elements. Over lower plough zone, moderately compact brown silty clay with moderate inclusions of small to medium sub-angular stones to mid-	N/A

Testing Area	Sub-area	Trench No.	Length (m)	Width (m)	Depth (m)	Orientation	Description	Summary of Features
							greyish brown loam. **Natural Subsoil (002)**: Alternating bands of clay, mid-yellowish brown silty clay mottled with mid to dark blackish grey silty clay and containing occasional stone inclusions and grey gravelly clay. **No features of archaeological significance identified**.	
6	14	10	70.00	2.00	0.40	NE-SW	**Topsoil (001)**: Dark brown sod with humus and mineral elements. Over lower plough zone, moderately compact brown silty clay with moderate inclusions of small to medium sub-angular stones to mid-greyish brown loam. **Natural Subsoil (002)**: Alternating bands of clay, mid-yellowish brown silty clay mottled with mid to dark blackish grey silty clay and containing occasional stone inclusions and grey gravelly clay. **No features of archaeological significance identified**.	• N-S orientated land drain (003), located 40 m from the northern end of the trench.

Testing Area	Sub-area	Trench No.	Length (m)	Width (m)	Depth (m)	Orientation	Description	Summary of Features
6	14	11	50.00	2.00	0.40	NE-SW	**Topsoil (001)**: Dark brown sod with humus and mineral elements. Over lower plough zone, moderately compact brown silty clay with moderate inclusions of small to medium sub-angular stones to mid-greyish brown loam. **Natural Subsoil (002)**: Alternating bands of clay, mid-yellowish brown silty clay mottled with mid to dark blackish grey silty clay and containing occasional stone inclusions and grey gravelly clay. **No features of archaeological significance identified**.	• N/A
6	14	12	35.00	2.00	0.48	NW-SE	**Topsoil (001)**: Dark brown sod with humus and mineral elements. Over lower plough zone, moderately compact brown silty clay with moderate inclusions of small to medium sub-angular stones to mid-greyish brown loam. **Natural Subsoil (002)**: Alternating bands of clay, mid-yellowish brown silty clay mottled with mid to dark blackish grey silty clay and containing occasional stone inclusions and grey gravelly clay. **No features of archaeological**	• NNE-SSW orientated land drain/boundary (004), located 5.9 m from the eastern end of the trench. Sectioned. • WNW-ESE orientated stone-filled drain (005), located 10.8 m from the western end of the trench.

Testing Area	Sub-area	Trench No.	Length (m)	Width (m)	Depth (m)	Orientation	Description	Summary of Features
							significance identified.	
6	14	13	40.00	2.00	0.46	NW-SE	**Topsoil (001)**: Dark brown sod with humus and mineral elements. Over lower plough zone, moderately compact brown silty clay with moderate inclusions of small to medium sub-angular stones to mid-greyish brown loam. **Natural Subsoil (002)**: Alternating bands of clay, mid-yellowish brown silty clay mottled with mid to dark blackish grey silty clay and containing occasional stone inclusions and grey gravelly clay. **No features of archaeological significance identified**.	• NNE-SSW orientated land drain/boundary (005), located 9 m from the eastern end of the trench
6	14	14	40.00	2.00	0.50	NW-SE	**Topsoil (001)**: Dark brown sod with humus and mineral elements. Over lower plough zone, moderately compact brown silty clay with moderate inclusions of small to medium sub-angular stones to mid-	N/A

Testing Area	Sub-area	Trench No.	Length (m)	Width (m)	Depth (m)	Orientation	Description	Summary of Features
							greyish brown loam. **Natural Subsoil (002)**: Alternating bands of clay, mid-yellowish brown silty clay mottled with mid to dark blackish grey silty clay and containing occasional stone inclusions and grey gravelly clay. **No features of archaeological significance identified**.	
6	14	15	30.00	2.00	0.40	WNW-ESE	**Topsoil (001)**: Dark brown sod with humus and mineral elements. Over lower plough zone, moderately compact brown silty clay with moderate inclusions of small to medium sub-angular stones to mid-greyish brown loam. **Natural Subsoil (002)**: Alternating bands of clay, mid-yellowish brown silty clay mottled with mid to dark blackish grey silty clay and containing occasional stone inclusions and grey gravelly clay. **No features of archaeological significance identified**.	• N-S orientated stone-filled drain (006), located 4.5 m from the eastern end of the trench. • NE-SW orientated furrow (007), located 10.5 m from the western end of the trench. Sectioned in trench 16. • Group of non-archaeological charcoal concentrations (008), located 5 m from the western end of the trench. Sectioned.

Testing Area	Sub-area	Trench No.	Length (m)	Width (m)	Depth (m)	Orientation	Description	Summary of Features
6	14	16	45.00	2.00	0.40	WNW-ESE	**Topsoil (001)**: Dark brown sod with humus and mineral elements. Over lower plough zone, moderately compact brown silty clay with moderate inclusions of small to medium sub-angular stones to mid-greyish brown loam. **Natural Subsoil (002)**: Alternating bands of clay, mid-yellowish brown silty clay mottled with mid to dark blackish grey silty clay with occasional stone inclusions and grey gravelly clay. **No features of archaeological significance identified**.	• N-S orientated stone-filled drain (006), located 6 m from the eastern end of the trench. • Series of NE-SW orientated furrows (007), located 3 m from the western end of the trench. Sectioned.
6	15	17	25.00	2.00	0.80	NE-SW	**Topsoil (001)**: Dark brown sod with humus and mineral elements. Over lower plough zone, moderately compact brown silty clay with moderate inclusions of small to medium sub-angular stones to mid-greyish brown loam. **Natural Subsoil (002)**: Alternating bands of clay, mid-yellowish brown silty clay mottled with mid to dark blackish grey silty clay with occasional stone inclusions and grey gravelly clay. **No features of archaeological**	N/A

Testing Area	Sub-area	Trench No.	Length (m)	Width (m)	Depth (m)	Orientation	Description	Summary of Features
							significance identified.	
6	15	18	45.00	2.00	36.00	WNW-ESE	**Topsoil (001)**: Dark brown sod with humus and mineral elements. Over lower plough zone, moderately compact brown silty clay with moderate inclusions of small to medium sub-angular stones to mid-greyish brown loam. **Natural Subsoil (002)**: Alternating bands of clay, mid-yellowish brown silty clay mottled with mid to dark blackish grey silty clay with occasional stone inclusions and grey gravelly clay. **No features of archaeological significance identified**.	N/A
6	15	19	45.00	2.00	0.36	NW-SE	**Topsoil (001)**: Dark brown sod with humus and mineral elements. Over lower plough zone, moderately compact brown silty clay with moderate inclusions of small to medium sub-angular stones to mid-	N/A

Testing Area	Sub-area	Trench No.	Length (m)	Width (m)	Depth (m)	Orientation	Description	Summary of Features
							greyish brown loam. **Natural Subsoil (002)**: Alternating bands of clay, mid-yellowish brown silty clay mottled with mid to dark blackish grey silty clay with occasional stone inclusions and grey gravelly clay. **No features of archaeological significance identified**.	
6	14	20	-	-	-	-	*Not excavated due to proximity to overhead power lines.*	-
6	14	21	18.00	2.00	0.28	NNW-SSE	**Topsoil (001)**: Dark brown sod with humus and mineral elements. Over lower plough zone, moderately compact brown silty clay with moderate inclusions of small to medium sub-angular stones to mid-greyish brown loam. **Natural Subsoil (002)**: Alternating bands of clay, mid-yellowish brown silty clay mottled with mid to dark blackish grey silty clay with occasional stone inclusions and grey	N/A

Testing Area	Sub-area	Trench No.	Length (m)	Width (m)	Depth (m)	Orientation	Description	Summary of Features
							gravelly clay. **No features of archaeological significance identified**.	
6	14	22	90.00	2.00	0.35	NNW-SSE	**Topsoil (001)**: Dark brown sod with humus and mineral elements. Over lower plough zone, moderately compact brown silty clay with moderate inclusions of small to medium sub-angular stones to mid-greyish brown loam. **Natural Subsoil (002)**: Alternating bands of clay, mid-yellowish brown silty clay mottled with mid to dark blackish grey silty clay with occasional stone inclusions and grey gravelly clay. **No features of archaeological significance identified**.	• Series of NE-SW orientated furrows (009), located 14.5 m from the western end of the trench. Sectioned.
6	14	23	50.00	2.00	0.30	N-S	**Topsoil (001)**: Dark brown sod with humus and mineral elements. Over lower plough zone, moderately compact brown silty clay with moderate inclusions of small to medium sub-angular stones to mid-	N/A

Testing Area	Sub-area	Trench No.	Length (m)	Width (m)	Depth (m)	Orientation	Description	Summary of Features
							greyish brown loam. **Natural Subsoil (002)**: Alternating bands of clay, mid-yellowish brown silty clay mottled with mid to dark blackish grey silty clay with occasional stone inclusions and grey gravelly clay. **No features of archaeological significance identified**.	
6	14	24	50.00	2.00	30.00	N-S	**Topsoil (001)**: Dark brown sod with humus and mineral elements. Over lower plough zone, moderately compact brown silty clay with moderate inclusions of small to medium sub-angular stones to mid-greyish brown loam. **Natural Subsoil (002)**: Alternating bands of clay, mid-yellowish brown silty clay mottled with mid to dark blackish grey silty clay with occasional stone inclusions and grey gravelly clay. **No features of archaeological significance identified**.	• NW-SE orientated land drain (010), located 8 m from the southern end of the trench. Appears to cut NE-SW orientated (011). Sectioned. • NE-SW orientated land drain (011), located 9.4 m from the southern end of the trench. Appears to be cut by NW-SE orientated (010). • NE-SW orientated boundary ditch (012), located 9.5 m from the southern end of the trench. Partially sectioned.

Testing Area	Sub-area	Trench No.	Length (m)	Width (m)	Depth (m)	Orientation	Description	Summary of Features
								• Sub-rectangular NE-SW orientated machine-cut test pit (013), located 7 m from the southern end of the trench, up against eastern baulk.
6	14	25	50.00	2.00	0.34	NW-SE	**Topsoil (001)**: Dark brown sod with humus and mineral elements. Over lower plough zone, moderately compact brown silty clay with moderate inclusions of small to medium sub-angular stones to mid-greyish brown loam. **Natural Subsoil (002)**: Alternating bands of clay, mid-yellowish brown silty clay mottled with mid to dark blackish grey silty clay with occasional stone inclusions and grey gravelly clay. **No features of archaeological significance identified**.	N/A

Testing Area	Sub-area	Trench No.	Length (m)	Width (m)	Depth (m)	Orientation	Description	Summary of Features
6	35	1	30 m	1.50	1.10	North-south	**Topsoil (001)**: Dark brown sod with humus and mineral elements. Over lower plough zone, moderately compact brown silty clay with moderate inclusions of small to medium sub-angular stones to mid-greyish brown loam. **Tar-Macadam:** A layer of broken slabs of tarmacadam were identified underneath the topsoil measuring 0.10 in depth **Redeposited natural Subsoil:** A layer of redeposited subsoil associated with extensive landscaping work in the immediate vicinity was identified with all trenches	Wall (015) was recorded within the Trench
6	35	2 and 3	4 m and 3 m respectively	1.50	3.20	North-south and East-west respectively	**Topsoil (001)**: Dark brown sod with humus and mineral elements. Over lower plough zone, moderately compact brown silty clay with moderate inclusions of small to medium sub-angular stones to mid-greyish brown loam. **Tar-Macadam:** A layer of broken slabs of tarmacadam were identified underneath the topsoil measuring 0.10 in depth	Arch/culvert (016) and wall (015) were recorded with Test Trenches 2 and 3 respectively

Testing Area	Sub-area	Trench No.	Length (m)	Width (m)	Depth (m)	Orientation	Description	Summary of Features
							Redeposited natural Subsoil: A layer of redeposited subsoil associated with extensive landscaping work in the immediate vicinity was identified with all trenches	

Appendix 3: Context Register

Context No.	Testing Area	Sub-area	Trench No.	Type (cut/fill/ deposit)	Length (m)	Width (m)	Depth (m)	Description	Interpretation
001	6	All	All	Deposit	-	-	0.4	Dark brown with humus and mineral elements. Over lower plough zone, moderately compact mid brown silty clay with moderate inclusions of small sub-angular stones to mid-greyish brown loam.	Topsoil (001) including plough zone
002	6	All	All	Deposit	-	-	-	Alternating bands of clay. Mid-yellowish brown silty clay, pale yellowish grey silty clay and dark blackish grey silty clay. Moderate stone inclusions and occasional patches of gravel.	Natural subsoil
003	6	14	10	Cut	-	0.63	-	Linear feature orientated N-S filled with pale brown silty clay	Cut of land drain
004	6	14	12, 13	Cut	-	0.95	0.23	Linear feature orientated NNW-SSE, filled by brown silty clay with occasional small stones.	Cut of land drain/boundary

Context No.	Testing Area	Sub-area	Trench No.	Type (cut/fill/ deposit)	Length (m)	Width (m)	Depth (m)	Description	Interpretation
005	6	14	12	Cut	-	0.28	-	Linear feature orientated WNW-ESE, filled with medium and large sub-angular stones.	Cut of French drain
006	6	14	15,16	Cut	-	0.30	-	Linear feature orientated N-S, filled with medium sub-angular stones.	Cut of French drain
007	6	14	15, 16	Cut	-	0.65	0.07	Series of linear parallel features orientated NE-SW and regularly spaced 0.35 m to 0.40 m apart.	Series of furrows
008	6	14	15	Deposits	0.50 0.87 0.80	0.44 0.38 0.68	0.12 0.11 0.16	Group of three irregular concentrations of pale orangey brown silty clay with moderate charcoal inclusions	Remains of modern root burning within redeposited subsoil
009	6	14	16	Cut	-	1.25 0.90 0.90	0.30 0.30 0.20	Series of three linear, parallel features orientated NE-SW and filled with pale orangey brown silty clay	Series of furrows

Context No.	Testing Area	Sub-area	Trench No.	Type (cut/fill/ deposit)	Length (m)	Width (m)	Depth (m)	Description	Interpretation
010	6	14	22	Cut	-	0.40	0.39	Linear feature orientated NW-SE, filled by greyish brown clayey silt with occasional small sub-rounded stones	Cut of land drain
011	6	14	24	Cut	-	0.27	-	NE-SE orientated linear feature, perpendicular and cut by (010), filled by orangey brown clayey silt with occasional small sub-rounded stones	Cut of land drain
012	6	14	24	Cut	-	2.2	0.60+	Linear feature orientated NE-SW filled by greyish brown silty clay with moderated small sub-rounded stones	Cut of field drain/boundary
013	6	14	24	Cut	0.45+	0.36+	-	Sub-rectangular feature orientated NE-SW with mixed dark bluish grey clay/brown silty clay fill containing frequent medium angular stones	Cut of modern machine-cut test pit

Context No.	Testing Area	Sub-area	Trench No.	Type (cut/fill/ deposit)	Length (m)	Width (m)	Depth (m)	Description	Interpretation
014	6	35	1	Cut	25	0.50	1.30	Linear in plan with a u-shaped profile. Sharp breaks of slope were noted at the top and middle on the western side. The base of the cut was not reached	Cut of wall (15)
015	6	35	1 and 3	Wall	35 (combined length from Test Trenches 1 and 2)	0.70	1.30	Eastern wall of structure formerly running between Balheary Bridge and Lissenhall Bridge. It was constructed from quarried limestone blocks bonded with lime mortar. Only one course of the upper coursing survived. Approximately eight course of the lower coursing survived. The foundation material was not reached.	Wall
016	6	35	2	Arch/culvert	5 m in exposed length	3.10	3.20 in exposed height	Arch or culvert that predates the existing arch or culvert visible on the western elevation of existing wall between Balheary Bridge and Lissenhall Bridge. It was constructed from	Arch/culvert

Context No.	Testing Area	Sub-area	Trench No.	Type (cut/fill/ deposit)	Length (m)	Width (m)	Depth (m)	Description	Interpretation
								quarried limestone blocks bonded with lime mortar.	

Appendix 4: Photographic register

Photo No.	Camera No.	Sub-area	Trench No.	Townland	Direction Facing	Description
1066	Cas15C	14	-	Lissenhall Little	NW	General trench overview
1067	Cas15C	14	10	Lissenhall Little	SW	Field boundary record E, side lane
1068	Cas15C	14	11	Lissenhall Little	SW	General trench overview
1069	Cas15C	14	16	Lissenhall Little	SE	General trench overview
1070	Cas15C	14	15	Lissenhall Little	SE	General trench overview
1071	Cas15C	14	7	Lissenhall Little	NE	General trench overview
1072	Cas15C	14	7	Lissenhall Little	SW	General trench overview
1073	Cas15C	14	1	Lissenhall Little	E	General trench overview
1074	Cas15C	14	2	Lissenhall Little	E	General trench overview
1075	Cas15C	14	24	Lissenhall Little	E	Land drains (010) and (011) and field boundary (012)
1076	Cas15C	14	24	Lissenhall Little	E	Land drains (010) and (011) and field boundary (012)
1077	Cas15C	14	24	Lissenhall Little	W	Land drains (010) and (011) and field boundary (012)
1078	Cas15C	14	24	Lissenhall Little	SE	Land drains (010) and (011) and field boundary (012)
1079	Cas15C	14	3	Lissenhall Little	W	General trench overview
1080	Cas15C	14	3	Lissenhall Little	E	General trench overview
1081	Cas15C	14	14	Lissenhall Little	N	General trench overview
1082	Cas15C	14	13	Lissenhall Little	N	General trench overview
1083	Cas15C	14	12	Lissenhall Little	N	General trench overview
1084	Cas15C	14	12	Lissenhall Little	S	French drain (005)

Photo No.	Camera No.	Sub-area	Trench No.	Townland	Direction Facing	Description
1085	Cas15C	14	12	Lissenhall Little	E	Land drain/ boundary (004)
997	Cas4C	14	25	Lissenhall Little	NW	General trench overview
998	Cas4C	14	25	Lissenhall Little	SE	General trench overview
999	Cas4C	14	22	Lissenhall Little	N	General trench overview
1000	Cas4C	14	22	Lissenhall Little	N	Furrow (009)
1001	Cas4C	14	22	Lissenhall Little	E	Furrow (009)
1002	Cas4C	14	22	Lissenhall Little	N	Furrows (009)
1003	Cas4C	14	24	Lissenhall Little	NNW	General trench overview
1004	Cas4C	14	24	Lissenhall Little	SSE	Land drain (010)
1005	Cas4C	14	23	Lissenhall Little	NE	General trench overview
1006	Cas4C	14	22	Lissenhall Little	E	Furrow (009), section
1007	Cas4C	14	21	Lissenhall Little	NNW	General trench overview
1008	Cas4C	14	11	Lissenhall Little	SW	General trench overview
1009	Cas4C	14	10	Lissenhall Little	SW	General trench overview
1010	Cas4C	14	1	Lissenhall Little	SWW	General trench overview
1011	Cas4C	14	15	Lissenhall Little	NW	Non- archaeological
1012	Cas4C	14	8	Lissenhall Little	SW	General trench overview
1013	Cas4C	14	13	Lissenhall Little	SW	General trench overview
1014	Cas4C	14	7	Lissenhall Little	SW	General trench overview
1015	Cas4C	14	6	Lissenhall Little	WSW	General trench overview
1016	Cas4C	14	5	Lissenhall Little	ENE	General trench overview
1017	Cas4C	14	4	Lissenhall Little	ENE	General trench overview
1018	Cas4C	14	15	Lissenhall Little	NW	General trench overview

Photo No.	Camera No.	Sub-area	Trench No.	Townland	Direction Facing	Description
1019	Cas4C	14	16	Lissenhall Little	SW	General trench overview
1020	Cas4C	14	17	Lissenhall Little	NE	General trench overview
1021	Cas4C	14	18	Lissenhall Little	SE	General trench overview
1022	Cas4C	14	19	Lissenhall Little	SE	General trench overview
0031	Cas10C	14	16	Lissenhall Little	SE	General trench overview
0032	Cas10C	14	16	Lissenhall Little	SE	Furrow (007)
0033	Cas10C	14	16	Lissenhall Little	SE	French drain (006)
0034	Cas10C	14	15	Lissenhall Little	SE	General trench overview
0035	Cas10C	14	15	Lissenhall Little	SE	Burnt deposits (008)
0036	Cas10C	14	15	Lissenhall Little	SE	French drain (006)
0037	Cas10C	14	15	Lissenhall Little	SE	One of burnt deposits (008)
0038	Cas10C	14	15	Lissenhall Little	SE	Two of burnt deposits (008)
0039	Cas10C	14	15	Lissenhall Little	SE	Burnt deposits (008)
0040	Cas10C	14	15	Lissenhall Little	NW	Burnt deposits (008)
0041	Cas10C	14	19	Lissenhall Little	SE	General trench overview
0042	Cas10C	14	18	Lissenhall Little	SSE	General trench overview
0043	Cas10C	14	17	Lissenhall Little	SW	General trench overview
0044	Cas10C	14	15	Lissenhall Little	SE	One of burnt deposits (008), section.
0045	Cas10C	14	15	Lissenhall Little	N	One of burnt deposits (008), section.
0046	Cas10C	14	15	Lissenhall Little	NW	One of burnt deposits (008), section.
0271	Cas 11c	35	-	Balheary Demesne	NW	Lissenhall 5-arch Bridge

Photo No.	Camera No.	Sub-area	Trench No.	Townland	Direction Facing	Description
0272	Cas 11c	35	-	Balheary Demesne	NW	Lissenhall 5-arch Bridge
0273	Cas 11c	35	-	Balheary Demesne	NW	Lissenhall 5-arch Bridge
0274	Cas 11c	35	-	Balheary Demesne	N	Old road spanning Lissenhall Bridge
0275	Cas 11c	35	-	Balheary Demesne	NW	Old road spanning Lissenhall Bridge
0276	Cas 11c	35	-	Balheary Demesne	NW	Western wall between Balheary Bridge and Lissenhall Bridge
0277	Cas 11c	35	-	Balheary Demesne	NW	Old road spanning Lissenhall Bridge
0278	Cas 11c	35	-	Balheary Demesne	E	Arch/culvert visible in existing wall between Balheary Bridge and Lissenhall Bridge
0279	Cas 11c	35	-	Balheary Demesne	E	Arch/culvert visible in existing wall between Balheary Bridge and Lissenhall Bridge
0280	Cas 11c	35	-	Balheary Demesne	NE	Arch/culvert visible in existing wall between Balheary Bridge and Lissenhall Bridge
0281	Cas 11c	35	-	Balheary Demesne	NE	Lissenhall 5-arch Bridge
0282	Cas 11c	35	-	Balheary Demesne	NW	Sewerage main traversing Broadmeadow River
0283	Cas 11c	35	1	Balheary Demesne	S	Wall (015) within Test Trench 1
0284	Cas 11c	35	1	Balheary Demesne	S	Wall (015) within Test Trench 1
0285	Cas 11c	35	1	Balheary Demesne	S	Wall (015) within Test Trench 1
0286	Cas 11c	35	1	Balheary Demesne	SE	Wall (015) within Test Trench 1. Trench collapse.

Photo No.	Camera No.	Sub-area	Trench No.	Townland	Direction Facing	Description
0287	Cas 11c	35	1	Balheary Demesne	SE	Wall (015) within Test Trench 1. Trench collapse.
0288	Cas 11c	35	1	Balheary Demesne	NE	Wall (015) within Test Trench 1. Trench collapse.
0289	Cas 11c	35	1	Balheary Demesne	NE	Wall (015) within Test Trench 1. Trench collapse.
0290	Cas 11c	35	1	Balheary Demesne	NE	Wall (015) within Test Trench 1. Trench collapse.
0291	Cas 11c	35	1	Balheary Demesne	S	Wall (015) within Test Trench 1
0292	Cas 11c	35	1	Balheary Demesne	S	Wall (015) within Test Trench 1
0293	Cas 11c	35	1	Balheary Demesne	S	Wall (015) within Test Trench 1
0294	Cas 11c	35	1	Balheary Demesne	N	Wall (015) within Test Trench 1
0295	Cas 11c	35	1	Balheary Demesne	E	Modern Tar Macadam over Wall (015) within Test Trench 1
0296	Cas 11c	35	1	Balheary Demesne	E	Modern Tar Macadam over Wall (015) within Test Trench 1
0297	Cas 11c	35	1	Balheary Demesne	SE	Modern Tar Macadam over Wall (015) within Test Trench 1
0298	Cas 11c	35	1	Balheary Demesne	SE	Lower coursing and single upper coursing of Wall (015) within Test Trench 1. Foundation not reached.
0299	Cas 11c	35	1	Balheary Demesne	SE	Lower coursing and single upper coursing of Wall (015) within Test Trench 1. Foundation not reached.
0300	Cas 11c	35	1	Balheary Demesne	E	Lower coursing and single upper coursing of Wall (015) within Test Trench 1.

Photo No.	Camera No.	Sub-area	Trench No.	Townland	Direction Facing	Description
						Foundation not reached.
0301	Cas 11c	35	1	Balheary Demesne	E	Lower coursing and single upper coursing of Wall (015) within Test Trench 1. Foundation not reached.
0302	Cas 11c	35	1	Balheary Demesne	E	Lower coursing and single upper coursing of Wall (015) within Test Trench 1. Foundation not reached.
0303	Cas 11c	35	2	Balheary Demesne	-	Cave-in of modern material in location of culvert within Test Trench 2
0304	Cas 11c	35	2	Balheary Demesne	-	Cave-in of modern material in location of culvert within Test Trench 2
0305	Cas 11c	35	2	Balheary Demesne	S	Cave-in of modern material in location of culvert within Test Trench 2
0306	Cas 11c	35	2	Balheary Demesne	-	Cave-in of modern material in location of culvert within Test Trench 2
0307	Cas 11c	35	2	Balheary Demesne	SE	Modern household refuse within modern backfill/landscaping material within Test Trench 2
0308	Cas 11c	35	2	Balheary Demesne	SE	Modern household refuse within modern backfill/landscaping material within Test Trench 2
0309	Cas 11c	35	2	Balheary Demesne	SE	Modern household refuse within modern backfill/landscaping material within Test Trench 2
0310	Cas 11c	35	2	Balheary Demesne	SW	Arch/Culvert (016) within Test Trench 2
0311	Cas 11c	35	2	Balheary Demesne	W	Arch/Culvert (016) within Test Trench 2

Photo No.	Camera No.	Sub-area	Trench No.	Townland	Direction Facing	Description
0312	Cas 11c	35	2	Balheary Demesne	SW	Arch/Culvert (016) within Test Trench 2
0313	Cas 11c	35	2	Balheary Demesne	SW	Arch/Culvert (016) within Test Trench 2
0314	Cas 11c	35	2	Balheary Demesne	SW	Arch/Culvert (016) within Test Trench 2
0315	Cas 11c	35	2	Balheary Demesne	W	Arch/Culvert (016) within Test Trench 2
0316	Cas 11c	35	2	Balheary Demesne	NW	Arch/Culvert (016) within Test Trench 2
0317	Cas 11c	35	2	Balheary Demesne	NW	Arch/Culvert (016) within Test Trench 2
0318	Cas 11c	35	2	Balheary Demesne	NW	Arch/Culvert (016) within Test Trench 2
0319	Cas 11c	35	2	Balheary Demesne	NW	Arch/Culvert (016) within Test Trench 2
0320	Cas 11c	35	2	Balheary Demesne	NW	Arch/Culvert (016) within Test Trench 2
0321	Cas 11c	35	2	Balheary Demesne	NW	Arch/Culvert (016) within Test Trench 2
0322	Cas 11c	35	2	Balheary Demesne	NW	Arch/Culvert (016) within Test Trench 2
0323	Cas 11c	35	2	Balheary Demesne	S	Arch/Culvert (016) within Test Trench 2
0324	Cas 11c	35	2	Balheary Demesne	SW	Arch/Culvert (016) within Test Trench 2
0325	Cas 11c	35	2	Balheary Demesne	SW	Arch/Culvert (016) within Test Trench 2
0326	Cas 11c	35	3	Balheary Demesne	N	Wall (015) within Test Trench 3, sealed by modern construction material, Tar Macadam, and landscaping material

Photo No.	Camera No.	Sub-area	Trench No.	Townland	Direction Facing	Description
0327	Cas 11c	35	3	Balheary Demesne	W	Wall (015) within Test Trench 3, sealed by modern construction material, Tar Macadam, and landscaping material
0328	Cas 11c	35	3	Balheary Demesne	NW	Wall (015) within Test Trench 3, sealed by modern construction material, Tar Macadam, and landscaping material
0329	Cas 11c	35	3	Balheary Demesne	N	Wall (015) within Test Trench 3, sealed by modern construction material, Tar Macadam, and landscaping material
0330	Cas 11c	35	3	Balheary Demesne	N	Wall (015) within Test Trench 3, sealed by modern construction material, Tar Macadam, and landscaping material
0331	Cas 11c	35	3	Balheary Demesne	N	Wall (015) within Test Trench 3, sealed by modern construction material, Tar Macadam, and landscaping material
0332	Cas 11c	35	3	Balheary Demesne	N	Wall (015) within Test Trench 3, sealed by modern construction material, Tar Macadam, and landscaping material
0333	Cas 11c	35	3	Balheary Demesne	NW	Wall (015) within Test Trench 3, sealed by modern construction material, Tar Macadam, and landscaping material
0334	Cas 11c	35	-	Balheary Demesne	NE	Arch/Culvert visible on existing western elevation of structure spanning Balheary Bridge and Lissenhall Bridge showing earlier and later structure
0335	Cas 11c	35	-	Balheary Demesne	NE	Arch/Culvert visible on existing western elevation of structure spanning Balheary Bridge and Lissenhall Bridge

Photo No.	Camera No.	Sub-area	Trench No.	Townland	Direction Facing	Description
						showing earlier and later structure
0336	Cas 11c	35	-	Balheary Demesne	NE	Arch/Culvert visible on existing western elevation of structure spanning Balheary Bridge and Lissenhall Bridge showing earlier and later structure
0337	Cas 11c	35	-	Balheary Demesne	NE	Arch/Culvert visible on existing western elevation of structure spanning Balheary Bridge and Lissenhall Bridge showing earlier and later structure
0338	Cas 11c	35	-	Balheary Demesne	N	Test Trench 2 and 3, Backfilled
0339	Cas 11c	35	-	Balheary Demesne	N	Test Trench 2 and 3, Backfilled
0340	Cas 11c	35	-	Balheary Demesne	E	Test Trench 2 and 3, Backfilled
0341	Cas 11c	35	-	Balheary Demesne	N	Test Trench 1, Backfilled and reinstated
0342	Cas 11c	35	-	Balheary Demesne	NW	Test Trench 2 and 3, Backfilled
0343	Cas 11c	35	-	Balheary Demesne	N	Test Trench 1, Backfilled and reinstated
0344	Cas 11c	35	-	Balheary Demesne	SE	Test Trench 2 and 3, Backfilled and reinstated
0345	Cas 11c	35	-	Balheary Demesne	SE	Test Trench 1, Backfilled and reinstated
0346	Cas 11c	35	-	Balheary Demesne	SE	Test Trench 1, Backfilled and reinstated
0347	Cas 11c	35	-	Balheary Demesne	SE	Test Trench 1, Backfilled and reinstated

Photo No.	Camera No.	Sub-area	Trench No.	Townland	Direction Facing	Description
0348	Cas 11c	35	-	Balheary Demesne	S	Test Trench 1, Backfilled and reinstated
0349	Cas 11c	35	-	Balheary Demesne	S	Boulder placed back in front of entrance to park
0350	Cas 11c	35	-	Balheary Demesne	S	Boulder placed back in front of entrance to park

Appendix 5 - Archive Quantities

Item	Quantity
Context Sheets	16
Trench Record Sheets	28
Field record sheets	3
Drawings	0
Photographs	138
Registers	1
Notebooks	0