

APPENDIX 16.1 – ARCHAEOLOGICAL TESTING REPORT

Archaeological testing report

**Site 3 and 5, Clonburris SDZ,
Kishoge and Balgaddy, Clondalkin, County Dublin**

Excavation Licence Number: 24E0707

Prepared by
Camilla Brännström
John Cronin & Associates
Burnside
Saint Oran's Road
Buncrana
Co. Donegal

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Document Control Sheet

Project type	Test trenching
Archaeologist	Camilla Brännström
Excavation Licence	24E0707
Townland	Balgaddy and Kishoge
Town	Clondalkin
County	Dublin
OS Sheet	DU017
ITM	704310, 732930
Description of subject site	The subject sites (Site 3 and 5) are located within the Clonburris Strategic Development Zone (SDZ) at Kishoge and Balgaddy, Clondalkin, County Dublin. Site 3 and 5 comprises two vacant plots located c. 300m apart.
Summary of findings	Fourteen archaeological test trenches, measuring 661 linear metres in combined length, were excavated within Site 3 and 5 of the Clonburris SDZ. The programme of testing, undertaken to inform an EIAR, was carried out in September 2024. The testing programme identified significant modern ground disturbance within the southern and eastern portions of Site 3 and Site 5. No archaeological features were identified.

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1. Introduction

John Cronin & Associates (JC&A) were commissioned to undertake a programme of licenced archaeological test trenching within Site 3 and 5 of the Clonburris Strategic Development Zone at Kishoge and Balgaddy, Clondalkin, County Dublin (**Figure 1** and **2**). The subject sites (Site 3 and 5) are located within two separate plots, c.300m apart and consist of vacant plots under rough grass.

There are no recorded archaeological sites located within the subject sites. The programme of test trenching was carried out as part of a pre-planning application archaeological impact assessment which will be included in the EIAR for the proposed development.

The works entailed the archaeological excavation of 14 no. trenches. Six of the original 20 proposed trenches as outlined in the method statement could not be excavated due to previous ground disturbance in those areas. The archaeological investigations described in this report were carried out under Excavation Licence no. 24E0707.

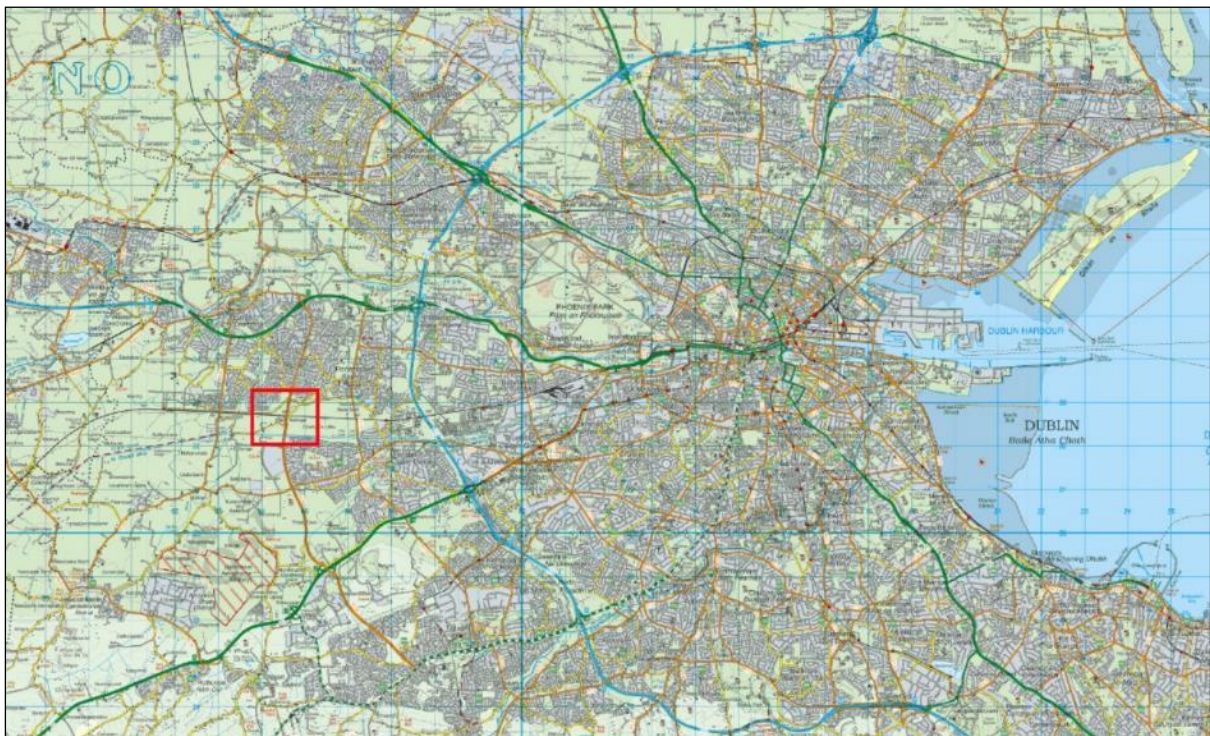


Figure 1: General location of development site (Source: Tailte Eireann)

Section 2 of this report provides archaeological context for the general area within 500m of the proposed development. **Section 3** summarises the results of the archaeological test trenching, while **Section 4** details the preliminary conclusions arising from the site investigations.

In summary, no archaeological features were identified within the excavated test trenches.

2. Context

Location and site description

The investigated areas are located within Kishoge and Balgaddy townlands, Clondalkin, County Dublin and comprise Site 3 and 5 of the proposed Clonburris SDZ development. Site 3 is located within the townland of Kishoge and Site 5 is located within the townlands of Kishoge and Balgaddy. Site 3 ('Lot 1') consists of a large vacant plot of c.13.6 hectares overgrown with vegetation. Site 3 is bounded to the south by the South Western Commuter railway, to the east by the Outer Ring Road (R136), to the north by Griffeen Avenue, and to the west by the grounds of the Lucan East Educate Together National School. The site is bisected by the Adamstown Link Road which runs on a southwest to northeast axis. Site 5 ('Lot 3') consists of a vacant plot of c.6.2 hectares, divided in two parcels by the Thomas Omer Way. Site 5 is bounded to the north and east by a residential development currently under construction, to the north by the Foxborough housing estate, to the west by a vacant plot and the south by Thomas Omer Way (**Figure 2 and 3**). The underlying geology of this area comprises Carboniferous dark limestone and shale of the Lucan formation, and the underlying subsoil consists of fine loamy drifts (Source: Teagasc.ie).

A site visit undertaken as part of this assessment identified the western parcel of Site 3 and the western portion of the northern parcel of Site 5 as suitable for archaeological testing. Several overhead transmission lines traverse Site 3 and 5 and Site 3 also contains an electrical substation and communications mast. A significant proportion of the development lands have been subjected to previous development and ground disturbance. Hard fill and stockpiling of soil was evident in many places, making such areas unsuitable for testing. Site 4 (**Figure 3**) contains an active tree nursery and SDCC yard, making them unsuitable for testing, with a narrow strip of greenfield land along its western margin. No testing was proposed in this area due to the presence of overhead and underground power cables as well as spoilheaps.



Figure 2: Clonburris SDZ Masterplan (Source: SDCC)

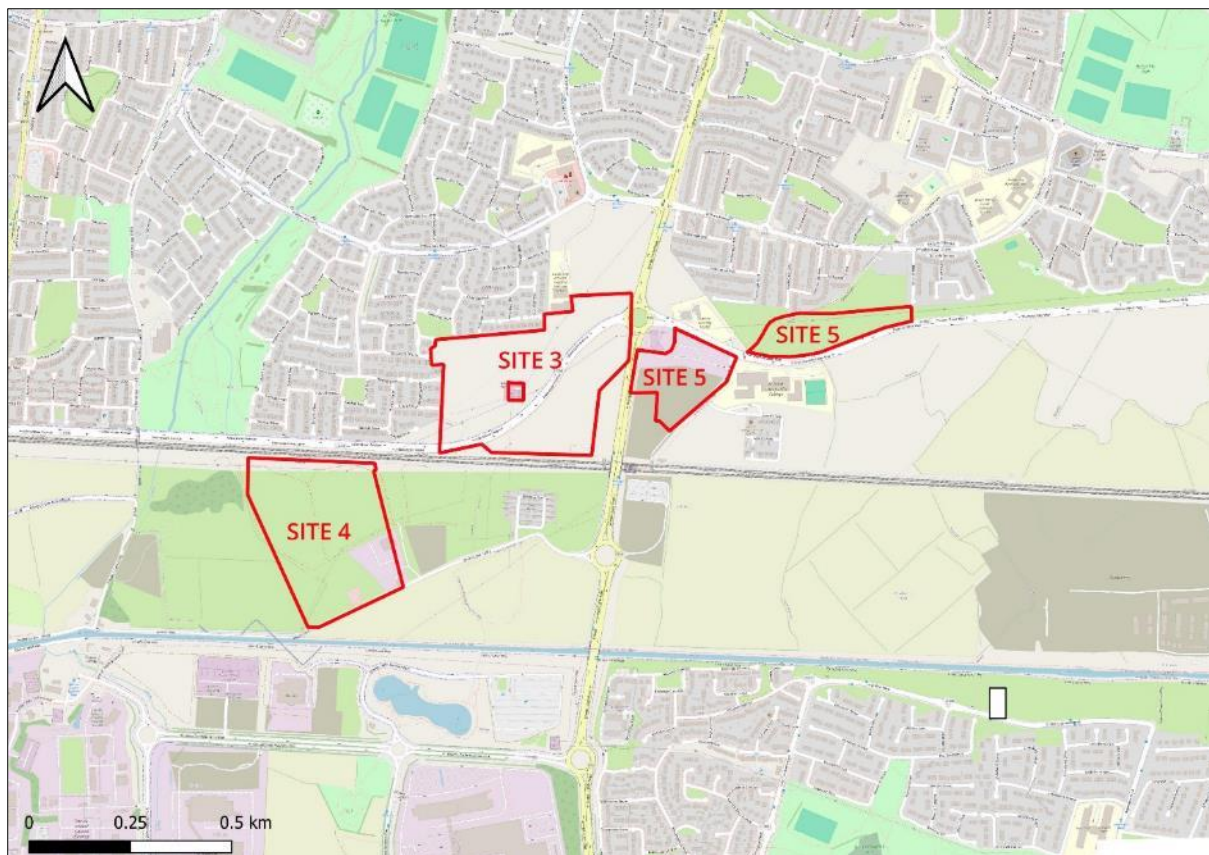


Figure 3: Detailed site location (OpenStreetMap)

Archaeological background

There are no recorded archaeological sites within the subject lands. There are **four archaeological sites** recorded by the ASI within the 1km radius study area which surrounds the subject site. The nearest recorded site is an enclosure (DU017-036----) 750m to the southeast. Details of these archaeological monuments are presented in **Table 1** and **Figure 4**, and their published inventory descriptions are provided in **Appendix 1**.

Table 1: List of recorded archaeological sites within approximately 1km of the subject sites

SMR No.	RPS No.	Class	Townland	Easting	Northing
DU017-030001-	105	House - fortified house	Ballyowen	705024	734206
DU017-030002-	n/a	Building	Ballyowen	705026	734204
DU017-030003-	n/a	Building	Ballyowen	705026	734204
DU017-034----	132	Castle - tower house	Grange (Newcastle By.)	702836	732705

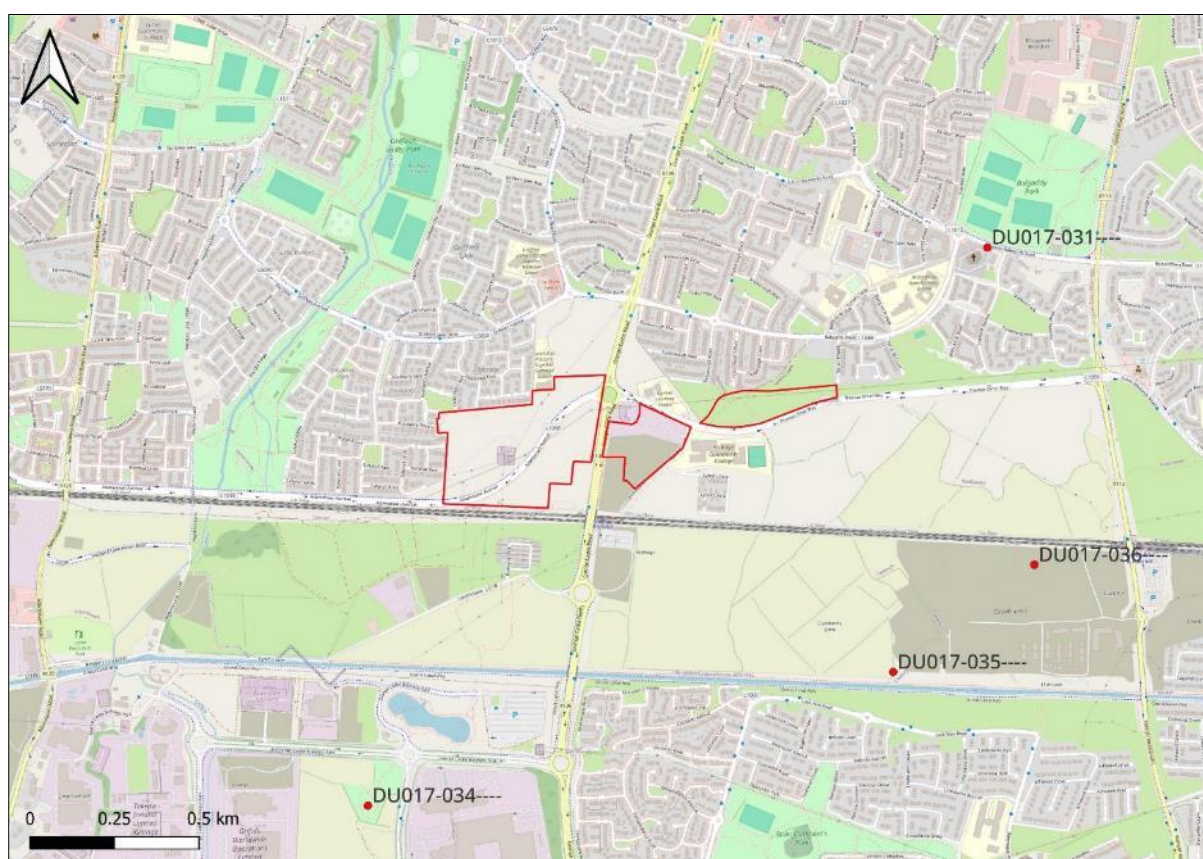


Figure 4: Recorded archaeological sites located within 1km of the subject site (Source: Government of Ireland, OpenStreetMap)

Placenames database

The Placenames Database of Ireland (available at www.logainm.ie) which provides translations of the Irish origins of townland names was consulted. Townlands are the smallest unit of land division in the Irish landscape and many may preserve early Gaelic territorial boundaries that pre-date the Anglo-Norman conquest. The boundaries and nomenclature of the Irish townlands were recorded and standardised by the Ordnance Survey in the 19th-century. The Irish roots of townland names often refer to natural topographical features, but some name elements may also give an indication of the presence of past human activity within the townland, e.g., dun, lios or rath indicate the presence of a ringfort while temple, saggart, termon or kill record an association with a church site. The subject sites are located within the townlands of Kishoge and Balgaddy. Kishoge is derived from 'An Chiseog'. In 1837 the townland was known as 'Ciseog' and noted 'dim. of Ciseach, a causeway of wickerwork'. Ciseog translates to basket which implies the picking of willow or hazel. Balgaddy is derived from 'Baile' meaning townland, town, homestead.

Archaeological excavations

The Excavation Database contains summary accounts of all licensed archaeological investigations carried out in Ireland (North and South) from 1969 to 2023. The database gives access to over 27,000 reports and can be browsed or searched using multiple fields, including year, county, site type, grid reference, license number, Sites and Monuments Record number and author. A review of the townlands of Kishoge and Balgaddy revealed that a number of licensed archaeological excavations have taken place within the vicinity of the subject sites, see **Appendix 2** for further details.

Of particular interest is the archaeological excavation of a Neolithic house to the southwest of Site 3 (01E0061). The remains of a burnt Neolithic wooden house were excavated in 2001 between Clondalkin and Newcastle. The structure had been disturbed by modern agricultural activity; however, it survived through several foundation trenches and a series of associated pits and postholes. Finds included rough flint scraping tools and flint waste flakes. Further archaeological investigations in neighbouring townlands have revealed more evidence of Neolithic activity. In 2016, Early Neolithic Pottery along with postholes and pits were identified as part of the Microsoft Campus Data Centre developments (13E0471).

In 2020, greenfield lands to the east and west of Site 4 were archaeologically tested as part of an earlier phase of Clonburris SDZ and 6 areas of archaeological significance were identified (20E0390). Previously unrecorded 18th- and 19th-century brick manufacture was identified within Trenches 27 and 28 adjacent to the western boundary of Site 4 in the townland of Kishoge.

Archaeological testing of Clonburris SDZ lands in Cappagh and Clonburris Little in 2022 identified seven areas of archaeology, comprising charcoal production pits, brick kilns and post-medieval structures (22E0438). Furthermore, the lands to the immediate south of Site 3 were archaeologically monitored during the topsoil strip for a proposed carpark but nothing of archaeological significance was noted (19E0318).

Cartographic review

The detail on historic cartographic sources demonstrates the nature of past settlements and land use patterns in recent centuries and can also highlight the impacts of modern developments and

agricultural practices. This information can aid in the identification of the location and extent of unrecorded or partially levelled features of archaeological or architectural heritage interest. The cartographic sources examined for the study area include the first edition 6-inch (1:10,560) Ordnance Survey map (1837-42) and the 25-inch (1:2500) Ordnance Survey map (1888-1913). Modern aerial imagery was also consulted.

On the first edition 6-inch Ordnance Survey (OS) map, the subject site encompasses portions of eight irregularly shaped agricultural fields. Two large fields in the central and southern portion of the site are bordered by deciduous trees. The fields belong to Springfield House, depicted immediately outside the development boundary to the east. A short section of the townland boundary of Kishoge and Esker South is marked within the south-western portion of Site 3 (**Figure 5**). The northern parcel of Site 5 is depicted as located within two agricultural fields separated by the townland boundary of Kishoge and Balgaddy. The boundary also separates the baronies of Balrothery East and Newcastle. No other features are noted within Site 5 on the first edition OS map (**Figure 6**). The late nineteenth century/early twentieth century 25-inch Ordnance Survey map records only minor changes to the subject lands within Site 3. The deciduous trees noted in the field boundaries have been removed and a pond and pump are depicted at the eastern margin of the site (**Figure 7**). The 25-inch map does not record any changes within Site 5 (**Figure 8**). There were no indications of previously unknown archaeological sites from this cartographic review.

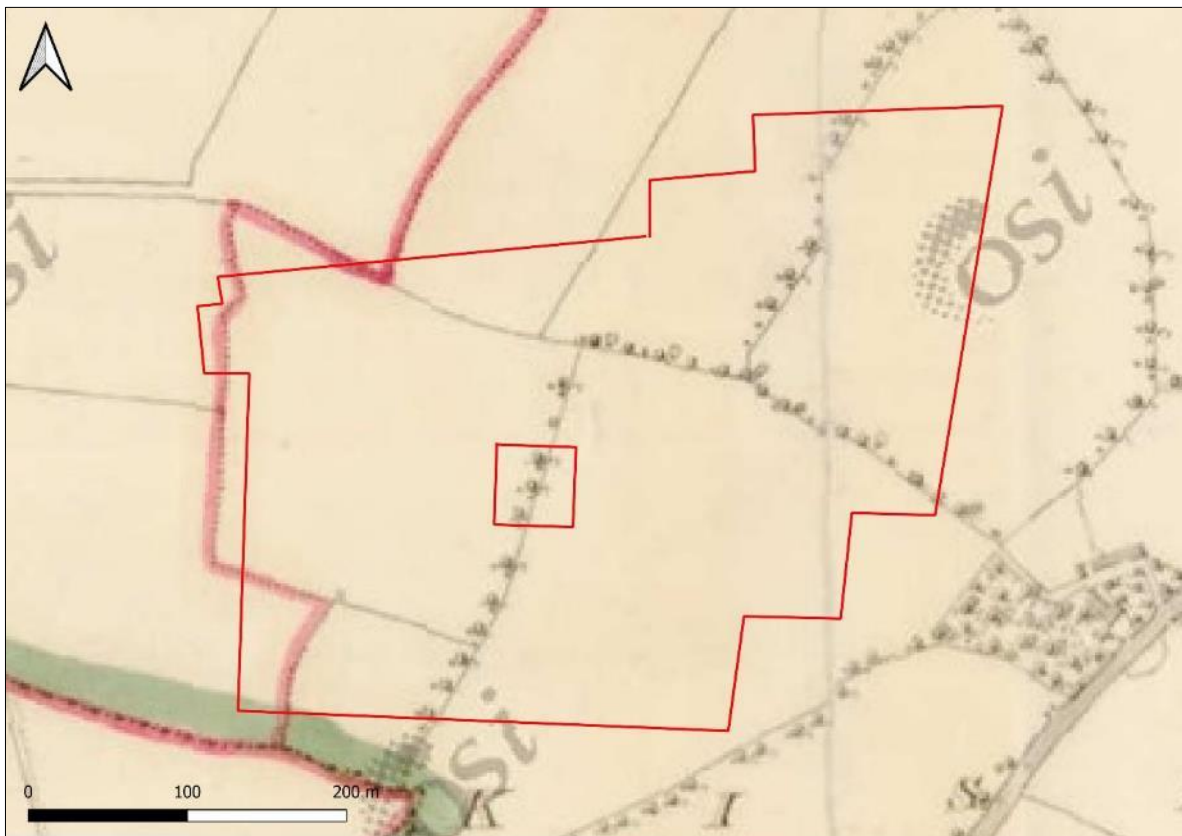


Figure 5: Extract from the first edition 6-inch OS map (1837-42) showing Site 3 (Source: Tailte Éireann)

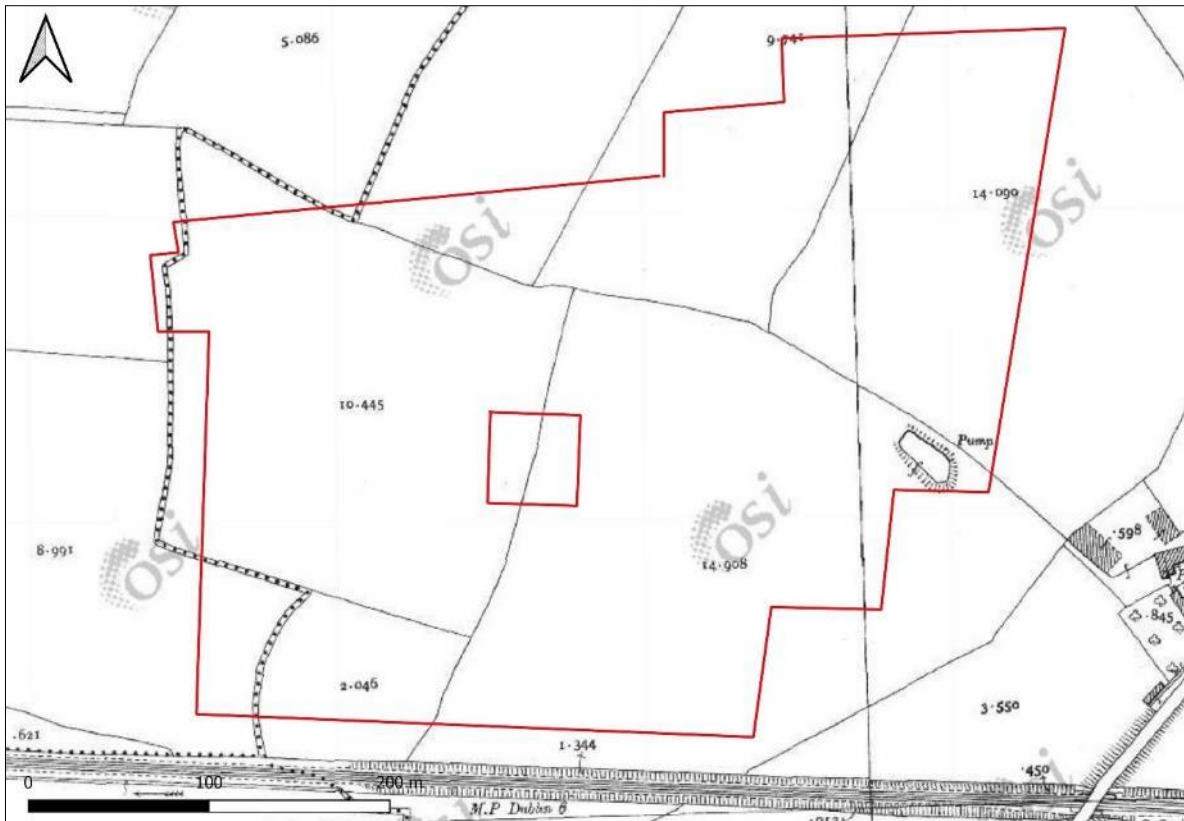


Figure 6: Extract from the 25-inch OS map (1888-1913) showing Site 3 (Source: Tailte Éireann)



Figure 7: Extract from the first edition 6-inch OS map (1837-42) showing Site 5 (Source: Tailte Éireann)

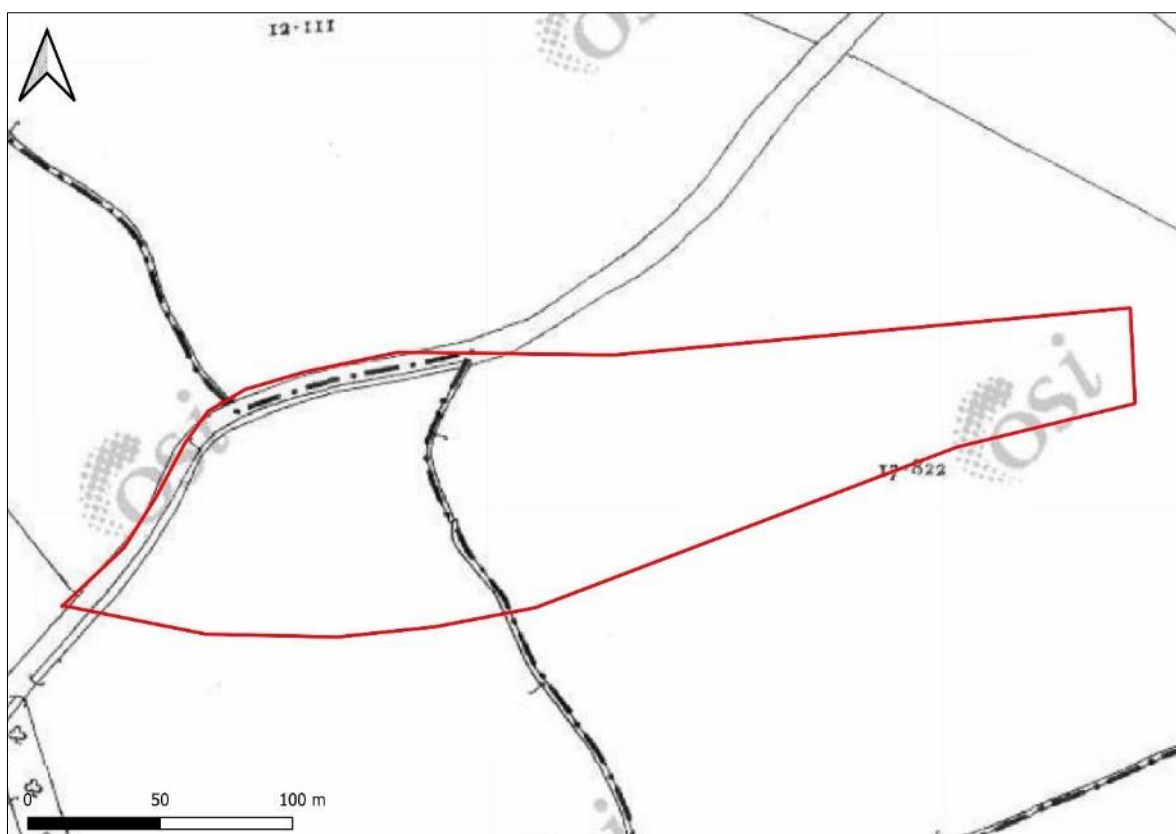


Figure 8: Extract from the 25-inch OS map (1888-1913) showing Site 5 (Source: Tailte Éireann)

A review of aerial imagery from 1995 identified significant ground disturbance within the southwest corner of Site 3 and the southern parcel of Site 5 (**Figure 9**). The review also identified a small number of circular cropmarks within the northwest corner of Site 3, visible on Apple Maps (**Figure 10** and **11**). It is possible that the circular marks are caused by the ground disturbance and soil dumping noted elsewhere within Site 3 but they could also be archaeological. The southern parcel of Site 3 has been subject to modern disturbance through the construction of Kishoge Station and commuter rail, the R136 and Adamstown Link Road which bounds this parcel to the northwest. A review of aerial imagery for Site 5 confirmed that the southern parcel has been previously developed with marginal areas overgrown by vegetation. The northern parcel is dominated by ground disturbance from current construction with one greenfield area remaining within its western portion. The townland boundary is not extant (**Figure 12**).



Figure 9: Aerial view of subject sites c.1995 (Source: Tailte Éireann)



Figure 10: Detail of aerial view showing cropmarks within Site 3 (Source: Apple Maps)



Figure 11: Detail showing cropmarks within Site 3 (circled in red) (Source: Apple Maps)



Figure 12: Aerial view of Site 3 (Source: Google Maps)



Figure 13: Aerial view of Site 5 (northern parcel) (Source: Bing Maps)

3. Archaeological test trenching

Overview

The programme of archaeological test trenching described in this report was carried out under Excavation Licence 24E0707 over a period of four days on 3 and 24 – 26 September 2024. A total of 14 no. linear trenches (T1 – T10, T15 and T19) and six test pits (within T19 and T20), with a combined length of 661 linear metres, were excavated using a tracked, 13-ton, 360° mechanical excavator fitted with a toothless grading bucket operating under strict supervision by the licensee. The excavated spoil from all trenches was systematically inspected to assist with artefact retrieval. The ground conditions were dry during the site investigations. The test excavation revealed significant modern ground disturbance within Site 5 and portions of Site 3 leading to six trenches (T11-T14, T16, T20) being omitted from the original testing programme and a further five (T10, T15, T17 - T19) not excavated to subsoil due to the compaction of the fill. T11-T14 were located in an area recently tested by Ian Russell of ASCU under licence 24E0780. The area had also been disturbed by ongoing ESB undergrounding works (**Plate 16**). Trench 15 was shortened by c.8m due to modern disturbance. A layer of severely compacted hard fill was also encountered within Site 5 where six 2m-long test pits were excavated within Trench 19 and 20 in order to investigate its extent. Natural subsoil was encountered at a depth of 1.2m below the current ground level in two of the test pits.

Table 2: Trench details. See **Figure 14** and **15** for trench locations (blue denotes unexcavated trenches)

Trench no.	Dimensions (m)	Orientation
1	43 x 1.8	N-S
2	43 x 1.8	N-S
3	43 x 1.8	N-S
4	43 x 1.8	N-S
5	43 x 1.8	N-S
6	43 x 1.8	N-S
7	43 x 1.8	N-S
8	43 x 1.8	NE-SW
9	43 x 1.8	NE-SW
10	43 x 1.8	NE-SW
11	43 x 1.8 (not excavated)	NE-SW
12	43 x 1.8 (not excavated)	NE-SW
13	43 x 1.8 (not excavated)	NE-SW
14	43 x 1.8 (not excavated)	NE-SW
15	35 x 1.8	E-W
16	43 x 1.8 (not excavated)	E-W
17	43 x 1.8	NE-SW
18	43 x 1.8	N-S
19	110 x 1.8 (+ three 2m test pits)	E-W
20	140 x 1.8 (three 2m test pits)	E-W



Figure 14: Image showing the proposed test trenches (yellow) and site boundary (red) in Site 3



Figure 15: Image showing the location of test pits (red squares) and site boundary (red) in Site 5

Trench descriptions

All 14 no. trenches were located within vacant land overgrown with tall rough grasses. Extensive modern ground disturbance and hard fill were identified within Trenches 15, 17 - 20. The remaining trenches were excavated through topsoil deposits to the natural subsoil, a compacted, light brownish yellow sandy silt with moderate stone inclusions. Subsoil was encountered at a depth of 0.2 to 0.6m below the ground surface in Site 3 and a depth of 1.2m in Site 5. No archaeological features were identified. See below for further details and trench descriptions.

Trench ID	T1
Dimensions	W: 1.8m L: 43m D:0.3-0.4m
Orientation	N-S
ITM Co-ords	704101.94 733032.68 704105.79 732990.06
Description	Test trench 1 (T1) was excavated to a maximum depth of 0.4m below the ground surface. The trench was excavated through a 0.3-0.4m thick layer of topsoil consisting of mid brown clayey silt with occasional stone inclusions. It overlay a compact subsoil consisting of light brownish yellow sandy silt with moderate stone inclusions (Plate 1). No archaeology was identified in this trench

Trench ID	T2
Dimensions	W: 1.8m L: 43m D:0.3-0.4m
Orientation	N-S
ITM Co-ords	704120.30 733034.68 704124.14 732992.06
Description	Test trench 2 (T2) was excavated to a maximum depth of 0.4m below the ground surface. The trench was excavated through a 0.3-0.4m thick layer of topsoil consisting of mid brown clayey silt with occasional stone inclusions. It overlay a compact subsoil consisting of light brownish yellow sandy silt with moderate stone inclusions (Plate 2). No archaeology was identified in this trench

Trench ID	T3
Dimensions	W: 1.8m L: 43m D:0.3-0.4m
Orientation	N-S
ITM Co-ords	704139.02 733036.97 704142.87 732994.35
Description	Test trench 3 (T3) was excavated to a maximum depth of 0.4m below the ground surface. The trench was excavated through a 0.3-0.4m thick layer of topsoil consisting of mid brown clayey silt with occasional stone inclusions. It overlay a compact subsoil consisting of light brownish yellow sandy silt with moderate stone inclusions (Plate 3). No archaeology was identified in this trench

Trench ID	T4
Dimensions	W: 1.8m L: 43m D:0.3-0.4m
Orientation	N-S
ITM Co-ords	704159.13 733038.75 704162.97 732996.12
Description	Test trench 4 (T4) was excavated to a maximum depth of 0.4m below the ground surface. The trench was excavated through a 0.3-0.4m thick layer of topsoil consisting of mid brown clayey silt with occasional stone inclusions. It overlay a compact subsoil consisting of light brownish yellow sandy silt with moderate stone inclusions (Plate 4). No archaeology was identified in this trench

Trench ID	T5
Dimensions	W: 1.8m L: 43m D:0.3-0.4m
Orientation	N-S
ITM Co-ords	704178.44 733037.86 704182.29 732995.24
Description	Test trench 5 (T5) was excavated to a maximum depth of 0.4m below the ground surface. The trench was excavated through a 0.3-0.4m thick layer of topsoil consisting of mid brown clayey silt with occasional stone inclusions. It overlay a compact subsoil consisting of light brownish yellow sandy silt with moderate stone inclusions (Plate 5). No archaeology was identified in this trench

Trench ID	T6
Dimensions	W: 1.8m L: 43m D:0.3-0.4m
Orientation	N-S
ITM Co-ords	704197.98 733040.52 704201.82 732997.90
Description	Test trench 6 (T6) was excavated to a maximum depth of 0.4m below the ground surface. The trench was excavated through a 0.3-0.4m thick layer of topsoil consisting of mid brown clayey silt with occasional stone inclusions. It overlay a compact subsoil consisting of light brownish yellow sandy silt with moderate stone inclusions (Plate 6). No archaeology was identified in this trench

Trench ID	T7
Dimensions	W: 1.8m L: 43m D:0.4-0.6m
Orientation	N-S
ITM Co-ords	704216.92 733041.12 704220.77 732998.50
Description	Test trench 7 (T7) was excavated to a maximum depth of 0.6m below the ground surface. The trench was excavated through a 0.4-0.6m thick layer of topsoil consisting of mid brown clayey silt with occasional stone inclusions. It overlay a compact subsoil consisting of light brownish yellow sandy silt with moderate stone inclusions (Plate 7). No archaeology was identified in this trench

Trench ID	T8
Dimensions	W: 1.8m L: 43m D:0.3-0.4m
Orientation	NE-SW
ITM Co-ords	704257.68 733048.80 704232.10 733014.49
Description	Test trench 8 (T8) was excavated to a maximum depth of 0.4m below the ground surface. The trench was excavated through a 0.3-0.4m thick layer of topsoil consisting of mid brown clayey silt with occasional stone inclusions. It overlay a compact subsoil consisting of light brownish yellow sandy silt with moderate stone inclusions (Plate 8). No archaeology was identified in this trench

Trench ID	T9
Dimensions	W: 1.8m L: 43m D:0.4-0.5m
Orientation	NE-SW
ITM Co-ords	704273.96 733043.47 704248.38 733009.16
Description	Test trench 9 (T9) was excavated to a maximum depth of 0.4m below the ground surface. The trench was excavated through a 0.3-0.4m thick layer of topsoil consisting of mid brown clayey silt with occasional stone inclusions. It overlay a compact subsoil consisting of light brownish yellow sandy silt with moderate stone inclusions (Plate 9). An underground electricity cable (marked with caution tape) was noted at the NE end of this trench. No archaeology was identified in this trench

Trench ID	T10
Dimensions	W: 1.8m L: 25m D:0.4-0.5m
Orientation	NE-SW
ITM Co-ords	704340.41 732981.46 704314.83 732947.15
Description	Test trench 10 (T10) was excavated to a maximum depth of 0.5m below the ground surface. The trench was excavated through a 0.4-0.5m thick layer of topsoil consisting of mid brown clayey silt with occasional stone inclusions. It overlay a compact subsoil consisting of light brownish yellow sandy silt with moderate stone inclusions (Plate 10). No archaeology was identified in this trench

Trench ID	T15
Dimensions	W: 1.8m L: 35m D:0.3-0.4m
Orientation	E-W
ITM Co-ords	704526.91 733134.20 704484.11 733133.91
Description	Test trench 10 (T10) was excavated through a layer of very compacted construction hard fill (tarmac, concrete, steel etc) to a depth of 0.3-0.4m where it became too compacted to excavate. The length of the trench was also shortened

	by 8m due to the ground conditions. The natural subsoil was not encountered in this trench (Plate 11). No archaeology was identified in this trench
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Trench ID	T17
Dimensions	W: 1.8m L: 43m D:0.2-0.3m
Orientation	NE-SW
ITM Co-ords	704151.61 732911.27 704184.99 732938.06
Description	Test Trench 17 (T17) was excavated through a layer of very compacted construction hard fill (crushed aggregate stone, tarmac, concrete etc) to a depth of 0.2-0.3m where it became too compacted to excavate. The natural subsoil was not encountered in this trench (Plate 12). No archaeology was identified in this trench

Trench ID	T18
Dimensions	W: 1.8m L: 32m D:0.2-0.3m
Orientation	NE-SW
ITM Co-ords	704209.17 732930.41 704213.02 732887.79
Description	Test Trench 18 (T18) was excavated through a layer of very compacted construction hard fill (crushed aggregate stone, tarmac, concrete etc) to a depth of 0.2-0.3m where it became too compacted to excavate. The natural subsoil was not encountered in this trench (Plate 13). No archaeology was identified in this trench

Trench ID	T19
Dimensions	W: 1.8m L: 110m D:0.2-0.3m
Orientation	NE-SW
ITM Co-ords	704896.6 733042.1 705007.1 733043.6
Description	Test Trench 19 (T19) was excavated through a layer of very compact construction hard fill (crushed aggregate stone, tarmac, concrete etc) to a depth of 0.2-0.3m where it became too compacted to excavate. A series of three test pits were excavated at both ends and the middle of the trench to investigate the depth of this modern deposit. The natural subsoil was identified at a depth of 1.2m below the current ground surface (Plate 14). No archaeology was identified in this trench

4. Conclusions and recommendations

Conclusions

A programme of pre-planning archaeological test trenching comprising 14 no. individual trenches, was carried out at two separate sites (Site 3 and 5) within the Clonburris SDZ lands at Balgaddy and Kishoge, County Dublin. The aim of the testing programme was to inform an EIAR which is currently being compiled. The testing took place over a period of four days on 3, and 24 to 26 September 2024. There are no archaeological sites listed on the SMR/RMP within the development boundary. Extensive modern ground disturbance was noted within the eastern and southern portion of Site 3 and Site 5. This is likely caused by recent development in the immediate vicinity of the tested areas. The circular cropmarks noted on aerial images had no subsurface expression within any of the trenches. Increased amounts of rubbish were noted within the topsoil at these locations and it is likely that this is the cause of the change in the vegetation. The proposed development area of Site 3 has a low archaeological potential based on the results of the archaeological testing programme. Site 5 could not be tested fully due to the presence of a thick layer of compacted modern fill across the land parcel and its archaeological potential is therefore considered moderate. Site 4 was omitted from the testing programme due to the lack of available areas to test. Site 4 consists of SDCC tree nursery and yard with spoilheaps and electricity cables present within greenfield areas. It is envisaged that Site 4 will be subject to a programme of licensed archaeological monitoring upon receipt of planning, if granted.

Recommendations

The programme of targeted archaeological test trenching has not identified any archaeological activity. It has however, identified significant modern ground disturbance within large portions of Site 3 and Site 5. It is therefore recommended that no further archaeological works are carried out within Site 3. Site 5 could not be fully tested and it is therefore recommended that following a grant of planning, a suitably qualified archaeologist will be appointed to monitor the removal of the modern fill within this area, to the level of the natural subsoil, formation level or uppermost archaeological level, whichever is encountered first. This will allow for the appropriate mitigation of any potential archaeological features (if present) ahead of the construction phase.

All archaeological works will be carried out under licence by the National Monuments Service and in advance of the commencement of construction.

It should be noted that the above recommendations are subject to the approval of the National Monuments Service and planning authority.

5. References/sources

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Appendix 1: SMR inventory entries

SMR. No. DU017-034----

Class: Castle – tower house

Townland: Grange (Newcastle By.)

Description: Attached to a farmhouse in flat, low-lying ground. Shown as a castle on the Down Survey (1655-6) map. This is a rectangular tower house with a square tower that's projects to the N in the NE corner. The tower house is three storeys high. The walls are plastered but where stonework is visible it is coursed limestone with roughly dressed quoins. The windows are all later insertions. Entrance is in the N wall through a round-headed doorway. There is a murder hole over the entrance lobby which leads into a vaulted ground floor (int. dims. L 7.08m; Wth.5.2m). Access to stair turret is off the lobby through a round-headed doorway. First floor not accessible. Second floor is accessed through a two-centred arched doorway. There is a garderobe chute in the SE corner which is supported by corbels and entered through a narrow round-headed door to a small circular chamber lit by a single ope. The jambs are hammer-dressed. There is a square stair tower or cap house which rises above parapet level (Healy 1974, 22; Mc Dix 1897, XXXIX, 22). A drawing by Beranger in 1773 shows stepped crenellations at parapet level (Harbison 1998, 168-9). In 1997 monitoring and excavation were undertaken in the vicinity of the castle, in advance of the construction of an access road and the excavation of foul sewers for a Business Park at Grange Castle. A curving ditch was identified orientated north-east/south-west. It was 30m in length, 0.8-0.9m deep, and 1.2-2.4m wide. The upper fills contained charcoal, mortar, flint and animal bones, and were aceramic. A decorated bone comb, stick-pin and knife gave the later ditch phase a terminus ante quem of from the 12th to the 13th century AD. A stone causeway, 0.5-0.6m wide and 0.06-0.1m deep, crossed the ditch. The evidence suggests that extensive early medieval and post-medieval activity survives in this area; the ditches can be interpreted as medieval field boundaries (O'Brien, R. 1998, 26-7). Compiled by: Geraldine Stout
Date of upload: 26 August 2011

SMR. No. DU017-030002-

Class: Building

Townland: Ballyowen

Description: Excavations in 1995, prior to development identified a clay-bonded wall lying to the N of Ballyowen castle associated with medieval pottery, interpreted as a stone-building of 15th-century date (Simpson 1996, 28). Compiled by: Geraldine Stout Date of upload: 26 August 2011.

SMR. No. DU017-030003-

Class: Building

Townland: Ballyowen

Description: Remains of a large stone building were also revealed to the E of the castle. This was rectangular in plan with a chimney in the E wall and pre-dated the castle (Simpson 1996, 28). Compiled by: Geraldine Stout Date of upload: 26 August 2011.

SMR. No. DU017-030001-

Class: House – fortified house

Townland: Ballyowen

Description: Ballyowen Castle is a 16th/17th century fortified house (Gowen 1995, unpub.). A drawing by Beranger (1766) shows a large rectangular building with a projecting corner turret

(Harbison 1998, 56-7). The existing structure is rectangular in plan (L 11.6m, Wth 5.7m) which survives to first floor level with a projecting NE corner turret. It is built of roughly coursed masonry. The main chamber is entered from the ground floor through round arched doorway (now blocked) which is centrally placed. The external face of the door has a carved stone surround with a rounded arch and protruding keystone. It displays a bar-bolt recess. There are also later inserted doorways in the E wall. The interior is lit by a small rectangular window in the N wall between the doorway and the turret, and a possible ope with a segmented arch in the W wall. The square turret rises to two storeys and is lit by plain square opes. There are four entrances into it, an external blocked doorway in the E wall, an entrance at ground floor level in the S wall, a second entrance at first floor level in the S wall and a possible entrance at second floor level in the S wall. A series of beam slots suggest that the turret originally had a semi-basement. Musket loops are located at this level in the N and W wall (Simpson 1996, Joyce 1912, 355; Irish Builder 1897, 22). A scar of a wall which was bonded into the turret indicates the former existence of a N range. Excavations in 1995, prior to development identified a clay-bonded wall lying to the N of the castle associated with medieval pottery, interpreted as a stone-building of 15th-century date. Remains of a large stone building were also revealed to the E of the castle. This was rectangular in plan with a chimney in the E wall and pre-dated the castle (Simpson 1996, 28). Compiled by: Geraldine Stout Date of upload: 26 August 2011

Appendix 2: Excavations.ie summaries

Name	Licence & Author	Summary
Clonurris Little, Cappagh, Kishoge and Grange	John O'Neil 20E0390	<p>Testing was undertaken within the Clonburris Strategic Development Zone (SDZ) in the townlands of Clonburris Little, Cappagh, Kishoge and Grange, Dublin 22. The assessment incorporated a programme of metal-detecting under licence 20R0168.</p> <p>Archaeological testing was carried out over the course of four weeks in August and September 2020. The trenches targeted open green space within the proposed infrastructure for the Clonburris SDZ identifying 6 areas of archaeological significance (AA1-AA6). These comprise evidence for brick manufacture (AA1, AA2 and AA3) and charcoal kilns and related activity (AA4, AA5 and AA6).</p> <p>A total of 82 trenches were excavated across the site measuring 7,106 linear metres across five different townlands, which were (from west to east): Adamstown (Trenches 1-9 and Trench 101), Grange (Trenches 10-22), Kishoge (Trenches 23-33), Clonburris Little (Trenches 34-43) and Cappagh (44-82).</p> <p>The topsoil was relatively consistent across the area investigated with between around 0.3m and 0.4m of mid-brown silty clay present. This overlay a series of compact clays, varying in colour from orange to grey, with some limestone bedrock in places. In some locations a grey-yellow fine silty clay was exposed when the topsoil was removed and found to be present to a depth of up to 0.2m overlying the subsoil. This appears to have a natural origin but was generally removed during testing to ensure it had not formed over the top of deposits of archaeological significance.</p> <p>It should be noted that evidence for past agricultural activity across the whole site was not particularly intensive with little evidence for agricultural furrows. Attempts at land drainage were present in a number of locations but former farmers and landowners and others familiar with the area have indicated that the ground can be seasonally very wet. While the construction of the Grand Canal to the south in the 1760s and 1770s likely improved drainage, even subsequently the ground may often have been too marginal for many forms of agricultural activity. During testing, a limited assemblage of material was identified within the topsoil. Mainly this consisted of a very small number of sherds of nineteenth- and twentieth-century pottery, often cream wares, with very occasionally sherds of pottery such as Black Ware that may be eighteenth century in date. As farmhouse rubbish was generally retained in a midden which was scattered on fields as fertiliser, the limited manuring also suggested that the area had not been intensively farmed. Similarly there was a singular absence of any earlier artefactual evidence, or introduced and unmodified materials that would be indicative of the proximity of sustained human activity. This is borne out by the archaeological features identified in testing.</p> <p>Most of the field boundaries in the area appear on the first edition Ordnance Survey maps and would appear, then, to pre-date the 1830s. The</p>

Name	Licence & Author	Summary
		<p>layout of the small demesne around Clonburris Cottage, in Clonburris Little townland, is clearly cut by the line of the Grand Canal and indicates that the field boundaries have their origins well before 1750.</p> <p>AA1: Substantial evidence of previously unrecorded brick manufacture was found in Trench 14 and some of the surrounding trenches in the same field as Trench 14, in particular the south-eastern end of Trench 13. Trench 14 was widened to establish the full extent of the brick manufacturing and an area of 10m by 10m was identified. While a series of small structural features were identified within this area, it may represent a single large brick kiln and other similar structures may be present in the vicinity.</p> <p>AA2: Further evidence of previously unrecorded brick manufacture was found in a number of trenches laid out beside each other in the field to the south of AA1. These included the eastern half of Trenches 17 to 20 and all of Trenches 21 and 22, within an irregular area measuring 150m by 150m.</p> <p>AA3: Further evidence of previously unrecorded brick manufacture was found in Trenches 27 and 28 in Kishoge, in the fields just to the east of the R136.</p> <p>AA4: Three pits, with evidence for burning and charcoal, were identified in Trench 55 in Cappagh just to the east of the R113.</p> <p>AA5: A single large pit, capped in clay and containing charcoal, was identified in Trench 57 in Cappagh just to the east of the R113.</p> <p>AA6: A single large pit, capped in clay and containing charcoal, was identified in Trench 68 in Cappagh in the fields to the west of the R113.</p> <p>In Clonburris Little and Cappagh, a number of features exposed by the test trenches corresponded to field boundaries indicated on the first edition Ordnance Survey maps but no longer visible on the ground.</p> <p>In Clonburris Little, the boundaries around Clonburris Cottage as indicated on early edition Ordnance Survey maps correspond to features noted in Trenches 42 and 43. These were collapsed limestone and brick walls incorporating significant amounts of modern debris. The suggestion, from the absence of references to the cottage on site in late eighteenth- and early nineteenth-century newspaper rental adverts, is that the cottage itself was, at the earliest, nineteenth century in date. There was nothing noted to suggest earlier activity at the site although, given the nature of the landscape, it is likely that buildings were constructed within the driest areas of the surrounding lands and so were the repeated focus of occupation over the years (making them the likely locations for in situ archaeological materials).</p> <p>In Cappagh, in demesne lands to west of Cappagh House, Trenches 72 and 76 exposed linear boundary features that correspond to field boundaries indicated on earlier edition Ordnance Survey maps but that are no longer visible on the ground.</p>
New IAWS HQ, Grange Castle Business	Eoin Sullivan 06E1161	The Grange Castle Business Park has witnessed several archaeological investigations since 2000 (O'Donovan 2004; Doyle 2005). These investigations resulted in the discovery and excavation of several prehistoric sites in the area of the Grange Castle Business Park. The Record

Name	Licence & Author	Summary
Park, Clondalkin, Dublin		<p>of Monuments and Places records two castles located within the grounds of Grange Castle Business Park, namely Grange Castle DU(017-134) and Nangor Castle DU(017-037). The new IAWS HQ has an area of 9.3ha and is located at the south-west corner of Grange Castle Business Park, being bordered on the west by the R120 (Lucan road). The site was part of an extensive geophysical survey carried out by Margaret Gowen & Co. Ltd in October 2005, which revealed that the south-west corner of the site had a distinct magnetic disturbance indicative of a spread of material, possibly rubble.</p> <p>All groundworks associated with the development were monitored during December 2006. The excavation of the site access road resulted in the discovery of a modern pit, a modern linear spread of angular stone, a small spread of red brick mixed with shells and several modern land drains. No features of archaeological significance were encountered during the stripping of topsoil. The programme for the monitored stripping of topsoil at the eastern portion of the site will resume in January 2007.</p>
Kildare Rail Route Project, Section 2, Cappagh to Stacumny Cottage	Colm Moriarty 07E0749	<p>Testing was carried out in advance of the construction phase of the Kildare route project railway line. The project will involve upgrading the Dublin to Cork railway track and has been divided by Iarnród Éireann into three subsections. The testing programme carried out under this licence dealt specifically with Section 2 of the railway scheme. Section 2 is located mainly in County Dublin and runs from Cappagh to Stacumny Cottage (which is in County Kildare). The location of four compound areas (Compounds 2A, 2B, 2M and 2I) were tested as part of this assessment. Two additional compound areas (Compounds 2K and 2L) were unavailable for testing due to site access issues. Where possible, the trenching layout consisted of a centre-line with alternating 90-degree offsets located at 15m intervals. The trenches measured 1.8-2m in width and were excavated to the surface of archaeological deposits or the underlying substrata, whichever was encountered first.</p> <p>Compound 2A, Cappagh, 30590 23266</p> <p>The proposed site for Compound 2A is located in the south-east corner of large undulating field of pasture. The site is bounded by the railway line to the south and by agricultural land to the north, east and west. The site for Compound 2A measures c. 100m east-west by 40m. The western part of the compound was severely flooded, which restricted the testing programme. A 70m-long centre-line and four perpendicular offsets were excavated here. An additional test-trench, orientated north-south, was also excavated along the very eastern side of the compound. Problems with water egress were encountered in many of the trenches opened. The trenching revealed that the site was relatively undisturbed, with topsoil overlying natural boulder clay. The only features identified were a series of regular east-west furrows and a large ditch orientated south-west/north-east. The ditch measured c. 1.4m in width and was filled by greyish-brown silty clay that contained glass, animal bone and white-glazed ceramics. This cut corresponds to a field boundary shown on the first-edition OS map (1841).</p>

Name	Licence & Author	Summary
		<p>Compound 2B, Clonburris Little, 30530 23266</p> <p>The proposed site for Compound 2B consists of a small triangular area of scrubland. The site is bounded by the railway line to the south and agricultural land to the east, north and west. The eastern and western boundaries of the compound are defined by low overgrown banks, which also represent townland boundaries. The eastern boundary separates the townlands of Clonburris Little and Cappagh, while the western boundary separates the townlands of Clonburris Little and Kishoge. The compound area measures a maximum of 45m east-west by 25m. Two intercutting trenches forming a cruciform plan were excavated here. These revealed that the site was relatively undisturbed, with topsoil overlying natural boulder clay. The only features identified were regularly spaced agricultural furrows that were orientated north-west/south-east.</p> <p>Compound 2M, Kishoge, 30450 23270</p> <p>The proposed site for Compound 2M consists of an area of waste ground bounded by the railway line to the south, new roads to the north and east and more waste ground to the west. Prior to testing it was noted that very little vegetation cover existed at the site, which suggested that the ground had recently been disturbed. The compound area measures c. 300m east-west by 35m. A large stockpile of clay, in excess of 4m in height, restricted access to the very eastern end of the compound. A 200m-long centre-line and nine perpendicular offsets were excavated here. Testing revealed that the site was severely disturbed, with deep deposits of modern backfill covering all of the area investigated. The depth of these deposits increased from east (1m) to west (1.8m). A number of stone-filled field drains were the only features identified during the testing programme. These were orientated north-south and appeared to be modern in date.</p> <p>Compound 2I, Stacumny Cottage, 30006 23246</p> <p>The proposed site for Compound 2I consists of an area of rough pasture. It is bounded on the south by the railway line, on the north by a roadway and by agricultural land to the east and west. The compound area measures c. 130m east-west by 45m. Testing was slightly restricted in the north-western part of the site due to overhead cables. A centre-line and eight offsets were excavated here. These revealed that the site was relatively undisturbed, with topsoil overlying natural boulder clay. No features or deposits of archaeological interest were noted in any of the trenches opened.</p>
Grange Castle International Business Park, Grange & Kishoge	Ian W. Doyle 00E0061	<p>Test-trenching was carried out at Grange Castle International Business Park, Clondalkin, Dublin 22, on a site owned by South Dublin County Council, during February 2001. The greater part of this site is currently under development as a business park by Wyeth Medica Ireland.</p> <p>The assessment was concerned with the area immediately south of the Grand Canal in Grange and Kishoge townlands. It is intended to construct an attenuation lake in this area, which will aid drainage. The lake structure will measure approximately 250m north-west/south-east by 90m. An underground 110kV electricity cable will run through this area and towards the west for a length of approximately 1.5km. The terrain in the</p>

Name	Licence & Author	Summary
		<p>areas to be affected is relatively low-lying and the land has been used for agricultural purposes. The centre of the area intended for the attenuation lake was subjected to ground disturbance in the recent past. This disturbance appears to have been associated with the diversion of a stream and ground was stripped to bedrock in places.</p> <p>Sixteen trenches were opened by mechanical excavator. These were placed in the areas which would be subjected to disturbance by the attenuation lake and the electricity cable way-leave.</p> <p>Trench 1 was located at the western end of the lake and associated roadway. It revealed a long linear feature cutting natural subsoil. Where sectioned, the cut for this feature, which measured 2.6m east-west by 16.5m with a depth of 0.35m, comprised a sloping-sided flat-bottomed gully. The upper fill consisted of a moderately compact light brown clay silt with occasional inclusions of mollusc shells and small pebbles. The lower fill comprised a moderately compact grey clay with occasional mollusc shell inclusions. A small undated hearth was revealed in Trench 4, which was also located to the west of the lake.</p> <p>Trench 13 was opened on the line of the electricity cable way-leave, at a point where a mound and masonry wall were observed in the extreme north-eastern corner of the field. What is likely to be a modern agricultural feature was revealed, comprised of a mound, a stone wall and a metallised surface. This is likely to represent a watering-hole for livestock formed by excavating a depression, placing the upcast to the west into a mound, which was then revetted with a low masonry wall. A metallised surface was then placed at the point of animal access.</p> <p>Monitoring of topsoil-stripping was recommended and was later carried out (see Excavations 2001, No. 428).</p>
Kishogue Railway Station, Dublin 22	Jean O'Dowd 19E0318	Topsoil was stripped across the proposed car park and the access road leading in from the Outer Ring Road. No archaeological deposits or features were identified in these areas.
Grange Castle International Business Pk. Grange & Kishoge	Ian W. Doyle 01E0718 ext.	<p>The archaeological assessment carried out in this area during February 2001 (see Excavations 2001, No. 438) recommended that an archaeologist be present to monitor the stripping of topsoil.</p> <p>The initial recognition of archaeological features was compromised somewhat by the contractor stripping a quantity of topsoil before informing the archaeologist. However, several metallised surfaces, field drains, pits and gullies of post-medieval and modern date were recognised during the stripping when an archaeological presence was maintained.</p> <p>In Kishoge townland, to the south-west of the area intended for the attenuation lake, the remains of a subrectangular structure, which appears to have burnt down, were detected. This consisted of what appeared to be the remains of slot-trenches cut into natural boulder clay with a fill of oxidised clay and charcoal. The feature measured 5.8m east-west by 4.6m and appeared to have been truncated through intensive ploughing. Access to this area was not available at the time of the assessment owing to dumping and storage of building materials. This area</p>

Name	Licence & Author	Summary
		was later excavated by Edmond O'Donovan (see Excavations 2001, No. 438).
Clonurris SDZ Tile 1, Cappagh, Dublin	Ferghal Murtagh 22E0438	<p>The assessment was carried out to study the impact, if any, on the archaeological and historical resource of a development within the Clonburris SDZ, which is located at Cappagh, Clonburris Little and Kishoge.</p> <p>Archaeological testing was carried out over the course of three days from 15 September 2022 using a mechanical excavator fitted with a flat grading bucket. The trenches targeted geophysical anomalies and open green space to investigate the archaeological potential of the site. Testing revealed seven areas of archaeological significance, which have been designated as Archaeological Areas 1–7. These comprise:</p> <ul style="list-style-type: none"> • AA1: Charcoal spread and pit. • AA2: Three pits containing heat-affected material. • AA3: Three brick kilns or clamps. • AA4: A charcoal-production pit. • AA5: A charcoal-production pit. • AA6: Concrete aligned with a structure depicted on the first edition OS map • AA7: Possible paving on alignment of path/roadway depicted on first edition OS map.
Kishoge	Edmund O'Donovan 01E0061	<p>The remains of a truncated burnt Neolithic wooden house were identified in Kishoge, Dublin 22, halfway between Clondalkin and Newcastle. Ploughing in antiquity had led to the truncation of the structure, and no occupation surfaces survived. However, cut features, such as post-holes, pits and foundation trenches, were identified at the site.</p> <p>The house was originally roughly rectangular in shape, although the walls were slightly curved at the south-western end. The structure measured 6.05m (north-east/south-west) by 4.5m. The archaeological remains consisted of foundation trenches cut into the glacial boulder clay and bedrock. The house walls and the support for the building's superstructure were constructed from timber posts augmented by planking. All of the posts and planks identified in the house were of oak. The foundation trenches varied between 0.25m and 0.3m in width and were excavated to a depth of 0.08–0.21m. The foundation trenches at the north-eastern end of the house originally housed upright timber planks that formed the house walls. A break in one of these linear features (house wall) was visible in the north-eastern foundation trench; this was interpreted as an entrance. The south-western end of the house was predominantly post-built. The south-western house walls curved, with an open entrance at the southern end of the building.</p> <p>Only two features were identified in the interior of the structure: the truncated remains of two internal timber roof supports, suggesting some kind of internal division within the house into two spaces at the north-east and south-west ends. The house appeared to have burnt down in antiquity, with little evidence for repair or reoccupation.</p>

Name	Licence & Author	Summary
		<p>Pits and charcoal were identified both to the south and north-west of the house. These features are likely to represent contemporary domestic activity around the dwelling. A small number of artefacts were retrieved from these features, including a number of crude round scrapers, waste flint and a single poorly preserved fragment of prehistoric pottery.</p> <p>Rough flint scraping tools and flint waste flakes were retrieved from the features excavated on the site, but none of these were obviously diagnostic. The complete absence of prehistoric pottery from the house is curious. The morphological comparison with other Neolithic houses excavated in Ireland suggests that the structure dates from this period. This was confirmed by the results of the radiocarbon dating programme. The Centrum voor Isotopen Onderzoek, Groningen, processed three samples to date the house (GrN-26770, 4880±40 BP; GrN-26771, 5020±40 BP; and GrN-26789, 4990±50 BP). The 2-sigma-calibrated results indicate that the house was built and occupied between 3941 and 3659 BC. A fourth Middle Bronze Age date (GrN-26772, 3120±75 BP) was obtained from a large pit to the south of the house (1595–1131 BC), suggesting that not all of the peripheral archaeological activity is contemporary with the structure.</p>
Kishoge	Georgina Scally 02E1808	<p>Monitoring before the construction of a temporary haul road associated with the construction of the South Dublin Outer Ring Road was undertaken in November and December 2002. The temporary haul road is in the vicinity of Lynches Lane, in the townland of Kishoge, west Dublin. All subsurface works associated with the construction of the road were monitored, and no finds, features or structures of archaeological significance were uncovered. The licence has since been extended to include monitoring of the full length of the roadway, which will extend c. 5.7km from Kingwood in Tallaght to Lynche's Lane. This work will continue in 2003.</p>
Grange Castle International Business Park, Grange/Nangor/Kilmahuddrick	Ian W. Doyle 01E0718	<p>Monitoring continued in the townlands of Grange, Nangor and Kilmahuddrick. Wyeth Medica Ireland commenced construction of a biotechnology campus in this area in September 2000.</p> <p>The campus area is located west of Clondalkin village and incorporates parts of the townlands of Grange, Kishoge, Kilmahuddrick and Nangor. It is bounded to the north by the Grand Canal, to the south by New Nangor Road, to the east by a new housing estate and reservation for the South Dublin Outer Ring Road and, finally, to the west by the Grange Castle International Business Park access road. The Wyeth Medica Ireland site is approximately 90 acres in extent.</p> <p>Previously, during 2000, excavation in Kilmahuddrick townland concentrated on a prehistoric ring-barrow, which was resolved in advance of construction (Excavations 2000, No. 225, 00E0448). Monitoring of topsoil-stripping in October 2000 led to the identification and excavation of a small fulacht fiadh in Nangor townland.</p> <p>The monitoring of topsoil-stripping within these townlands continued during January 2001. No additional archaeological material was detected.</p>

Name	Licence & Author	Summary
Gollierstown, Aungierstown, Ballybane, Dublin	Billy Quinn 15E0551	<p>Kishoge Site</p> <p>The proposed interface compound at Kishoge is located to the south-east of a roundabout at the junction of the R136 and the Ninth Lock Road. The field contains a high voltage tower with power lines overhead; the ground is of rough pasture with evidence of previous infill. This infilling was confirmed by the geophysical results, frequent 'iron spikes' were interpreted as relating to the importation of soils/debris. Three trenches were excavated across this area. Groundworks exposed a disturbed stratigraphy of imported builders' rubble and topsoil that had been dumped on the site. Subsoil, a boulder clay, was exposed at 1m in depth. There were no finds or features of archaeological potential.</p>
DART + South West Project	Thaddeus Breen & Marion Sutton 21E0495	<p>Exploratory ground investigations (GI) for the DART + South West project were monitored from 30 July 2021 to 12 Feb 2022. 198 locations were monitored along the existing rail line between Heuston Station and Glasnevin in Dublin and between Heuston Station and Hazelhatch and Celbridge in Co. Kildare.</p> <p>The existing railway corridor traverses 29 townlands, as well as the former St James' Ward (now part of Dublin South City) and the Phoenix Park (part of Dublin North City). The 9 townlands traversed in Kildare are (from south-west to north-east) Dangan, Commons Lower, Ringwood, Straleek, Loughlins, Elmhall, Stacumny, Stacumny Cottage and Ballymadeer. The 20 townlands traversed in Dublin are (from south-west to north-east) Aderrig, Gollierstown, Finnstown, Adamstown, Esker South, Grange, Kishoge, Clonburris Little, Cappagh, Neillstown, Ballymanaggin, Gallanstown, Ballyfermot Upper, Ballyfermot Lower, Inchicore South and Inchicore North on the main line, and Grangegorman South, Grangegorman Middle, Grangegorman North and Slutsend or Westfarm on the branch line.</p> <p>The GI works consisted of inspection pits and test pits, with most sited online i.e. on or immediately beside existing railway lines, which were excavated at night. A smaller number of offline GI locations were also monitored. GI pits were dug with a vacuum excavation machine and deepened by hand. In some cases, excavation was followed by drilling. The stratigraphy was recorded and the sampled material checked for artefacts. Other than a small amount of industrial railway metal and branded railway crockery, there were no finds of archaeological interest. Except for the western areas at Adamstown and Hazelhatch, the ground has been extensively disturbed by railway construction and sand/gravel extraction. Track-bed inspections within the Phoenix Park Tunnel showed that in places there was a concave brick floor beneath the ballast, but elsewhere the base was cut into rock.</p>

Appendix 3: Photographic record



Plate 1: View of Trench 1 facing north



Plate 2: View of Trench 2 facing south



Plate 3: View of Trench 3, facing south



Plate 4: View of Trench 4, facing south



Plate 5: View of Trench 5, facing north



Plate 6: View of Trench 6, facing north



Plate 7: View of Trench 7, facing north



Plate 8: View of Trench 8, facing northeast



Plate 9: View of Trench 9, facing southwest



Plate 10: View of Trench 10, facing southwest



Plate 11: View of Trench 15, facing east



Plate 12: View of Trench 17, facing northeast



Plate 13: View of Trench 18, facing south



Plate 14: View of test pit within Trench 19, facing east



Plate 15: View of test pit within Trench 20, facing south



Plate 16: View of recently disturbed ground in vicinity of Trench 11-14, facing north