Archaeological Assessment Glenamuck North Phase 1, Dublin



MCGLADE & NEVIN

08/12/2021

21E0734

ABP 303978-19



SITE NAME

Phase 1, Glenamuck North, Glenamuck Road South, Co. Dublin

CLIENT

Dwyer Nolan Developments Ltd., Stoneybridge House, Stoneybridge Close, Shankill, Co. Dublin

LICENCE

21E0734

PLANNING

Planning Ref. ABP 303978-19

REPORT AUTHOR

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DATE

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ABBREVIATIONS USED

DAHG Department of Arts, Heritage and the Gaeltacht

National Museum of Ireland NMI National Monuments Service NMS

OS Ordnance Survey

RMP Record of Monuments and Places

NIAH National Inventory of Architectural Heritage

Local Area Plan LAP

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Section 1 Introduction

Report summary

A desktop assessment and subsequent programme of monitoring and excavation are detailed in this report. No archaeology was previously known from the site and little had been encountered in the closest archaeological investigations carried out in the vicinity. A wet area in one of the fields was identified as being an area of potential for prehistoric activity.

The monitoring mainly focussed on the southeast field. A large boggy area was uncovered centrally in the field along with a number of post-medieval and modern drainage features. During the monitoring programme three archaeological areas were identified. These were subsequently excavated.

The excavations revealed three fulachtaí fia and associated pits. The edge of a fourth burnt spread was also encountered to the southwest continuing beyond the limit of excavation. A number of sherds of prehistoric pottery were



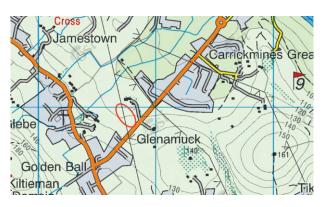
Summary of areas completed (green) and area with works yet to be carried out (red)

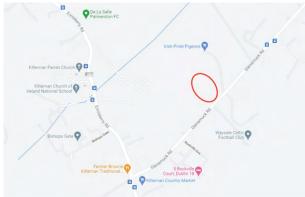
retrieved from one of the troughs and an adjacent pit. Post-excavation analysis on the samples taken and finds retrieved during the excavation is now underway.

Testing is to be carried out across the northeast field and will be reported on separately.

Site location

The site is located in the townland of Glenamuck North, Tully parish, in the half-barony of Rathdown. It is situated on the northern side of the Glenamuck Road South and is currently divided into two undeveloped agricultural fields and orientated northwest-





Area of site on OS Discovery map (top)

Area of site on satellite terrain map (bottom)

southeast. It lies c. 360m to the north of the junction of the Glenamuck Road and the Enniskerry Road.

It is bounded to the northwest by a mature hedgerow with trees. To the southwest the western field is bounded by a mature hedgerow while the eastern field is bounded by a light wire fence dividing it from the access route of an adjacent proposed development. It is bounded to the southeast by Glenamuck Road South, which rises up hill to the south and is over 2m above the southern corner of the proposed development site. The northeastern boundary of the proposed development site is formed by a mature hedgerow and treeline along the adjacent property line. A stream follows part of this boundary.

Development proposals

Planning permission for a proposed strategic housing development (ABP 303978-19) on a site of c. 4.28ha. has been granted.

The development comprises the construction of 203 residential units comprising 30 houses (20 three-bedroom and 10 four-bedroom, up to three storeys in height) and 173 apartments (31 one-bed, 124 two-bed and 18 three-bed within 12 blocks up to six storeys). The apartments will incorporate duplex units.

The development will also provide a creche or childcare facility, a retail unit, a social amenity and two ESB substations. The development will include a new access from Glenamuck Road and the provision of access connection points (vehicular, cycle and pedestrian) to future adjacent development lands. The development will include the provision of internal roads, cycle paths, footpaths, landscaped public open space and play areas. Parking at surface and basement level will be provided for 268 vehicles, 312 bicycles and 24 motorcycles. The development will also include attenuation and all additional ancillary site development works, boundary treatments, lighting and services.



Outline of Phase 1 in blue and Phase 2 in red areas

(bottom)

Dun-Laoghaire Rathdown County Development Plan

Below are outlined the policies of the Dun-Laoghaire Rathdown County Development plan 2016-2022. relate These to the archeaological heritage of Dun-Laoghaire-Rathdown County. This heritage includes structures, constructions, groups of buildings, moveable objects, developed sites and all recorded monuments (as well as their contexts) whether situated on land or underwater. The details of these policies can be found in the written County Development Plan 2016-2022, Section 6 Built Heritage Strategy, pp 143-152.

Under policy AH1 it is Council policy to protect archaeological sites, National Monuments (and their settings), which have been identified in the Record of Monuments and Places (RMP) and, where feasible, appropriate and applicable to promote access to and signposting of such sites and monuments. In the implementation of this policy, the Council will endeavour to review and assess the feasibility of improving public

accessibility to sites and monuments under the direct ownership or control of the Council or of the State.

Council policy AH2 is to seek the preservation in situ (or where this is not possible or appropriate, as a minimum, preservation by all archaeological monuments of included in the Record of Monuments and Places, and of previously unknown sites, features and objects of archaeological interest that become revealed through development activity. In respect of decision making on development proposals affecting sites listed in the Record of Monuments and Places, the Council will have regard to the advice and/ or recommendations of the Department of Arts, Heritage and the Gaeltacht (DoAHG). The Council will strictly control development proposals that could have a negative impact on the significance of archaeological sites and settlings monuments. their interpretation. Land uses shall not give rise to significant losses of the integrity, quality or context of archaeological material - except as may be conditioned or directed by the appropriate heritage agencies. This shall be achieved by the application of appropriate design standards and criteria.

It is Council policy AH3 to promote and protect the Historic Town of Dalkey as identified by the Department of Arts, Heritage and the Gaeltacht (DoAHG). While Council Policy AH4 is to support the implementation of the (Archaeological) Draft Conservation Plan for the Carrickmines Castle Site. These policies will not have a great deal of impact on the study area.

Council policy AH5 is to protect historical and/or closed burial grounds within the County and encourage their maintenance in accordance with good conservation practice and to promote access to such sites where possible. There are numerous ecclesiastical sites throughout the County which are of significant archaeological interest, many of which are listed in the Record of Monuments and Places. For the purposes of this policy, a historical burial ground is generally one which is no longer active and/ or that is included within the Record of Monuments and Places.

Architectural heritage policies are covered under policies AR1 to AR11. These pertain to the conservation and protection of Protected structures and buildings of heritage interest. They also cover buildings under council ownership, nineteenth and twentieth century buildings, estates and features, protection of historic street furniture, historic coastlines, and any industrial heritage. Policies that protect Architectural conservation areas (ACA) are contained in policies AR12 to AR17. These take into account the broader impact of changing or implementing a new architectural design to an area and how it will impact the character of the surrounding area.

Section 2 Archaeological Background

Record of Monuments & Places

The Archaeological Constraint Maps, in conjunction with the County Record of Monuments and Places, provide an initial Planning Authorities, database for Agencies and other bodies involved environmental change. The Record Monuments and Places (RMP) comprise the following elements: (i) Letter or Letters indicating County (DU = Dublin); (ii) A three digit number indicating the relevant Ordnance Survey Sheet Number (e.g. 026); (iii) A three, four- or five-digit number indicating the dedicated number of the individual site or monument.

There are eight Recorded monuments within 1km of the proposed development:

The earliest of these is the portal tomb at Kiltiernan Domain, which was partially excavated by Marcus Ó hEochaidhe (RMP files). He uncovered a chert arrowhead, three hollow scrapers and an end scraper, all tools diagnostic of the Early Neolithic (ibid.). This indicates a presence in the vicinity of the proposed development from the Early Neolithic period. This has been seen elsewhere in the foothills of the Dublin Mountains with settlement and burial activity uncovered from the early Neolithic period to the Iron Age to the north in Kilgobbin and Jamestown.

Three burials of Bronze Age date were uncovered to the northwest during sand quarrying in 1927. Two sists containing inhumation burials accompanied by food vessels were identified along with a cremation accompanied by a food vessel (RMP files). These are further indications of a continued occupation of this area during the prehistoric period.

There is potential for previously unrecorded prehistoric activity being uncovered within the proposed development.

Three of the Recorded Monuments relate to ecclesiastic sites and cross locations of early medieval date or later. These sites are removed enough from the proposed development that it is unlikely that any features relating to them would be uncovered within the site.

A further two Recorded Monuments relate to estate features of post-medieval date. Given the proximity to Glenamuck House, which is depicted to the west of the site in the 1830s Ordnance Survey mapping, it is possible additional estate features will be present within the bounds of the proposed development. To the south of the proposed development a cluster of enclosures were recorded at the southern end of Glenamuck South on the northern side of the stream overlooked by the towerhouse at Ballychorus (RMP files). The enclosures were present at the time of the First

RMP NO.	TOWNLAND	ТҮРЕ	DISTANCE
DU026-017	Jamestown	Designed landscape- tree-ring	321m NW
DU026-016	Jamestown	Designed landscape- tree-ring	370m NW
DU026-015	Jamestown	Cist	591m NW
DU016-021	Glenamuck South, Kingston	Enclosures	774m SE
DU026-004	Kilgobbin	Church, graveyard, cross & holy well	889m NW
DU026018	Carrickmines Great	Cross	961m NE
DU026-020	Kiltiernan	Church, graveyard, font & cross slab	1km SW
DU026-019	Kiltiernan Domain	Megalithic tomb – portal tomb	1km SW

Edition of the Ordnance Survey, however there no visible remains survive today. The purpose and date of the enclosures is unknown.

DU026-019 Portal tomb

The portal tomb is located 1km southwest of the Study Area. It is a megalithic burial monument from the Neolithic period. It has a particularly large capstone, now supported on concrete pillars, which was described by Borlase as a 'sphinx-like monster'. Marcus O'hEochaide conducted an excavation here in 1956 and uncovered a chert arrowhead, three hollow scrapers, a round-ended scraper, and three rimsherds of coarse pottery (Corlett 1999, 14- 16; 106). The dolmen was drawn by Vispre in 1776, copied by Beranger, and by Petrie in 1820. The Files note a current ministerial Preservation Order on this monument.

DU026-020 Ecclesiastic site

The ecclesiastic site 1km southwest of the Study Area on Bishop's Lane, comprising five distinct monuments: church, font, graveyard, holy well and cross slab. The western half of the church, with its square-headed doorway and large stones, is a rare example of a pre-Norman building (i.e. pre-1170s AD), and forms part of a distinct group of south Dublin-Rathdown early medieval church sites (Walsh 2008, 22; Murphy and Potterton 2010, 216). The eastern end of the church has a round-headed window that represents a substantial late 12th or 13th century rebuild (Corlett 1999, 136). Ball describes the church as 'a structure of very early date, and consists of a simple oblong building without a chancel (1902, 77). The church appears to have been extended in the 15th or 16th century, with a new doorway added in the south wall (Corlett ibid). Walsh (2008, 28) has identified the remains of a wall extending southward from the exterior of the south wall correlating with Regal Visitation records of



Location of Study area in relation to the closest Recorded Monuments.

1615 and 1630 describing 'a church and chancel' at Kiltiernan. The font is made of granite and is of probable 12th century date. The graveyard has a holy well and a Rathdown Slab (Corlett 1999, 137; RMP Files NMS), but no banked enclosure.

DU016-021 Enclosure

The enclosure recorded in Glenamuck South, Kingston, 774m southeast of the Study Area, no longer exists, however it was recorded on a sketch in the 1837 Ordnance Survey Letters (RMP File, NMS).

Previous investigations

Several previous archaeological investigations have been carried out within 1km of the proposed development site. A programme of archaeological test-trenching was underway at the time of the site inspection in the fields directly south and west of the Study Area,

Site Location	Licence No.	Findings
Rockville House, Glenamuck Road	18E0206	None
Struan Glen, Glenamuck South	N/A	None
Tiknick, Ballycorus Road	14E0249	None
Cromlech Farm, Klltiernan	05E0964	None
Cromlech Farm, Klltiernan	08E0298	None
Killegar Rd., Kiltiernan	98E0314	None
Kiltiernan Domain	06E1211	Medieval
	Tiknick, Ballycorus Road Cromlech Farm, Klltiernan Cromlech Farm, Klltiernan Killegar Rd., Kiltiernan	Struan Glen, Glenamuck South Tiknick, Ballycorus Road Cromlech Farm, Klltiernan Cromlech Farm, Klltiernan WE0298 Killegar Rd., Kiltiernan WAA N/A 14E0249 05E0964 08E0298 08E0298

under the direction of Siobhan Deery. No features of archaeological interest were uncovered to date (S. Deery pers. comm. 2021). A programme of archaeological geophysics was previously carried out by ACSU for the development to the south, which identified a number of anomalies across the site (ibid.). The testing showed these to be granite boulders in the subsoil (ibid.).

This endorsed the findings of a previous programme of geophysical survey that had taken place in 2006 to assess the proposed route of a new 'Glenamuck Distributor Road' (David Harrison, License 06R0064). The northern survey area was in former demesne lands surrounding 'Rockville House'. Field inspection had identified a series of linear and curvilinear field patterns that were thought to predate the mid-18th century, and a linear corresponding with the former 18th century Carrickmines-Enniskerry Road. An upright standing stone was also identified to the south of Rockville house, c. 900m from the Study Area. This stone is not part of the RMP files and is situated in a field being used as a cattle scratching post (see Geophysical Survey report 06R0064). The geophysical survey identified no significant archaeological remains.

Separate investigations (Melanie McQuade 06E1211 & Claire Walsh 07E1120) at Bishop's Lane to the southwest of the Study Area, in Kiltiernan Demesne, exposed a ditch containing medieval pottery. This was possibly associated with the adjacent site of the medieval church and graveyard of Kiltiernan, and a series of parallel cultivation furrows of probable late 18th century date (Excavations Ref. 2007:525).

A large number of archaeological excavations in the wider area around the Study Area have uncovered remains of prehistoric date. Notable sites include Cherrywood, Kilgobbin, Carrickmines Great, Carrickmines Little, Laughanstown, and Glebe, with Early Neolithic, Late Neolithic, Beaker and Bronze Age settlement and burial remains being identified (Excavations bulletins - O'Neill 1998, 1999; Hagen 2002, 2003; Cryerhall 2003; Clinton 2002; Reilly 2002; O'Driscoill 2002; Conboy 2002; O'Donovan 1998; McQuade 2003; Seaver 2002, 2004; Kyle 2011; McGlade 2014; Giacometti 2016). Iron Age activity was also identified at Cherrywood (O'Neill 1998), Carrickmines Great (Ó Drisceoil 2007) and Kilgobbin (Hagen 2013, 20). The closest of these was at Jamestown, c.720m to the northwest of the proposed development site, where Kyle (11E0085 Excavations Ref. 2011:216) excavated Neolithic and Bronze Age pits and post-holes and an Iron Age ring ditch.

Notable early medieval sites have been excavated in the wider area at Glebe ringfort (Seaver 2004; 2011, 261-287), Cherrywood (O'Neill 1998; 2006), Cabinteely (Conway 1999; Ó Donnabháin 2001, 77), Carrickmines Little (Giacometti 2016) and Kilgobbin (Bolger 2004, Larssen 2004).

Topographical files

The files in the National Museum of Ireland have been consulted. Collectively known as the Topographical Files, they provide information on artefacts, their find spots and any field monuments, which have been notified to the National Museum. Due to the current COVID-19 restrictions it was not possible to consult the paper files, however a review of the digital files was carried out.

None of the objects in the topographical files come from within the Study Area. However, the flanged bronze palstave dating to c. 1200 BC was found in a field 271m northeast of the Study Area and lies within the bounds of the Glenamuck North townland area. The artefacts found in Kiltiernan Domain come from the excavation of the portal tomb 1km southwest of the Study Area (RMP DU026-019).

Industrial archaeology

There are a number of historical industrial features located in the vicinity of the Study Area. These include a paper mill 1km southwest, a cotton factory 861m to the southeast, a post office 657m to the southwest,

a dispensary 365m to the southwest, and an old quarry 1km to the southeast. There were also two sand pits located close to the Study Area. The furthest was 596m to the northwest and the closest was 93m to the northeast. This closer sand pit could interact with the Study Area as it was located very close to the proposed roadway in the northeast of the development.

All of these features were present on the 1830s Ordnance Survey map with the paper mill even present on Rocque's 1760 map also. However, all of these features appear to be disused or their function has been altered by the time of the 1910s OS map. The paper mill, dispensary and post office are no longer designated as such and appear to be domiciles. The post office has been renamed on the 1910s OS map to Rock Villa and the dispensary has been turned into multiple homes. Similarly, the cotton factory to the southwest and the sand pit to the northeast have been labelled as disused. Both the sand pit to the northwest and the quarry to the southeast have been removed from the 1910s OS map entirely.

NMIRegisterNo	SimpleName	Component	Townland	FindPlace	County
1974:89	Palstave	Bronze	GLENAMUCK NORTH	N/A	DUBLIN
1995:1976	Token	Copper alloy	CARRICKMINES GREAT	Carrickmines castle	DUBLIN
1995:1977	Coin	Copper alloy	CARRICKMINES GREAT	Carrickmines castle	DUBLIN
1995:1993.1	Coin	Silver	CARRICKMINES GREAT	N/A	DUBLIN
1995:1993.10	Coin	Copper alloy	CARRICKMINES GREAT	N/A	DUBLIN
995:1993.11	Coin	Copper alloy	CARRICKMINES GREAT	N/A	DUBLIN
995:1993.12	Coin	Copper alloy	CARRICKMINES GREAT	N/A	DUBLIN
995:1993.13	Coin	Copper alloy	CARRICKMINES GREAT	N/A	DUBLIN
995:1993.14	Coin	Copper alloy	CARRICKMINES GREAT	N/A	DUBLIN
995:1993.15	Coin	Copper alloy	CARRICKMINES GREAT	N/A	DUBLIN
995:1993.16	Coin	Copper alloy	CARRICKMINES GREAT	N/A	DUBLIN
995:1993.17	Coin	Copper alloy	CARRICKMINES GREAT	N/A	DUBLIN
995:1993.18	Coin	Copper alloy	CARRICKMINES GREAT	N/A	DUBLIN
995:1993.19	Coin	Copper alloy	CARRICKMINES GREAT	N/A	DUBLIN
995:1993.2	Coin	Copper alloy	CARRICKMINES GREAT	N/A	DUBLIN
995:1993.20	Coin	Copper alloy	CARRICKMINES GREAT	N/A	DUBLIN
995:1993.21	Coin	Copper alloy	CARRICKMINES GREAT	N/A	DUBLIN
995:1993.22	Coin	Copper alloy	CARRICKMINES GREAT	N/A	DUBLIN
995:1993.23	Coin	Copper alloy	CARRICKMINES GREAT	N/A	DUBLIN
995:1993.3	Coin	Silver	CARRICKMINES GREAT	N/A	DUBLIN
995:1993.6	Coin	Copper alloy	CARRICKMINES GREAT	N/A	DUBLIN
995:1993.7	Coin	Copper alloy	CARRICKMINES GREAT	N/A	DUBLIN
995:1993.8	Coin	Copper alloy	CARRICKMINES GREAT	N/A	DUBLIN
995:1993.9	Coin	Copper alloy	CARRICKMINES GREAT	N/A	DUBLIN
002:228	CANNON BALL	IRON	CARRICKMINES GREAT	Carrickmines Castle	DUBLIN
A1899:62	Arrowhead	Flint	CARRICKMINES	Carrickmines Station	DUBLIN
938:25	Bifacial Form	Flint	KILTIERNAN DOMAIN	Hillside	DUBLIN
973:25	Flake	Flint	KILTIERNAN DOMAIN	Kiltiernan dolmen	DUBLIN
984:119	Axehead	Stone	KILTIERNAN	Boggy land	DUBLIN

Section 3 History & Cartography

Place Names

Place names can be useful pieces of information when looking at a site as it may give an indication into possible features located close by. Glenamuck its Irish name is Gleann na Muc(www.logainm.ie), a literal translation is 'glen of the pigs'. This indicates an association of the glen with pigs, either as a route for their movement through the landscape or as somewhere they were farmed and is an indication of past agricultural practices in the area.

The neighbouring townlands of Kiltiernan and Glebe are comparatively straight forward, with Glebe being described as church lands and Cill Tiarnáin meaning 'Church of Tiernan'. St Tiernan's church is located on these lands, however, name appears to be much older as it is refered to in the Down maps and even further back to 1303 in the taxation documents. St. Tiernan has little historical background, he is the patron saint of Crossmolina where it is said established Errew (theirishaesthete.com). There are no definitive links to St. Tiernan and the church in Kilternan but if he did establish a church there it would have been around the 6th Century. It could also be suggested that the 'kil' is actually refering to Coill meaning wood and as such would be refering to a 'Tiernan's wood' rather than church.

Both Carrickmines and Tully refer to raised areas of lands, Tully deriving from An Tulaigh meaning a hillock. Tully has ecclesiastical links also, likely due to the presence of the church at Tully. The ancient name of Tully was Tulach na n-Epscop or 'Hillock of the Bishops' and it comes from a story of St. Brigid in the ninth-century Martyrology of Oengus (Corlett 2014). Carrickmines is Carraig Mhaighin translating to 'plateau of rock'. Finally the townlands of

Jamestown and Kingston are likely named after more recent landowners.

Prehistoric context

The area surrounding the Study Area has evidence of continuous human occupation from the Neolithic period. Within a 1.5 km radius of the site an early Neolithic rectangular house, dated to 3776 to 3158 cal BC was found at Kilgobbin and at Carrickmines Great, just 1.7 km to the northeast of Glenamuck North, a disc bead neck-lace in a pit, dated to 3610-3520 cal BC (Hagen 2013, 17; Ó Driscéoil 2006, 143).

Numerous examples of megalithic tombs are also known within a few kilometres of the Study Area, including at Cairn Hill, Ballybrack, Kiltiernan, Brennanstown, Two and Three-Rock Mountains, Bullock and Laughanstown.

At Carrickmines Castle to the southwest of the Study Area a flint-knapping site of Late Neolithic date, a Late Neolithic/Early Bronze Age occupation site and two cup-marked boulders were uncovered. These were especially significant given the rarity of examples of rock art in the Dublin area (McGlade 2015, 6).

Archaeological evidence for Bronze Age (2200-800 BC) settlement in the locality is more abundant, though still dominated by burial monuments, such as those at Deansgrange, Stillorgan, Cabinteely. A band of Early Bronze Age burial sites are known in the foothills of the Dublin Mountains and extending into the Liffey Plain. An Early Bronze Age barrow and associated structure were uncovered to the southwest at Kilgobbin along with two wells and other features (McGlade 2018). An Early Bronze Age enclosure was also excavated on the adjacent site (Hagen 2013, 19).

the site, including fulachtaí fia, watering holes, structures and cremation burials. A similar watering hole and associated burnt spread was uncovered at Carrickmines Little to the north of the Study Area (Giacometti 2016, 41). Another site in Laughanstown to the east revealed a cremation burial in an upright pot, dated to 1890-1680 BC, and a corn-drying kiln dating to 1780-1610 BC (McQuade 2013, 33-

To the northwest of the site, three early Bronze Age cremations under inverted pots were found at Carmanhall (O'Reilly 2013, 36- 39). A large area of excavation at Laughanstown, 2.2 km east of Glenamuck North, to the southeast of a wedge tomb, produced Beaker pottery and a date of 2500-1950 BC for a cist cremation (Seaver 2013, 27). Later Bronze Age settlement evidence was also uncovered in the vicinity of

The Down Survey map for County Dublin, 1656-58 (top) shows the Study Area situated in the parish of Tully to the east of the castle at Carrickmines.

The map for the half-Barony of Rathdowne (centre) shows the parish of Tully in more detail. North is to the left. The Study Area is shown to be located centrally in the parish of Tully and is associated with Carrickmines here. The boundary of Tully and Kiltiernan (here Killturnan) is to the bottom of the image and this is likely to be where the study arae is situated. No features are depicted in the immediate vicinity of the Study Area.

The map for 'the Parishes of Killeny Tully and Whitechurch in the 1/2 Barony of Rathdowne' (bottom) shows the Study Area located just inside the boundary for Carrickmines and Glenamuck to the south, directly abutting the boundary for Kiltiernan parish. Here as in the half-Barony map Glenamuck is associated with Carrickmines. These lands are noted as being owned by a Theobald Welsh while surrounding lands are noted as church land. These church lands are the townlands of Laughanstown to the east and Brenanstown to the northeast, both were belonging to the Holy Trinity Church of Dublin.



35). A ring barrow at Cherrywood to the east was dated to 1440-990 BC (Ó Néill 2013, 44). A Late Bronze Age hut, cooking place and hearth, dated around 1000 BC were also found at the Carrickmines Great site (Ó Drisceoil 2013, 48).

Until recently evidence of domestic or industrial evidence of the Iron Age was scarce in Irish archaeology; instead the record was dominated by high status ceremonial sites, linear earthworks, trackways and a small body of fine metalwork (Becker 2012, 1). However, development-led excavation in the last fifteen years has produced domestic-scale sites with Iron Age dates. At the Carrickmines Great site, already mentioned, a roundhouse and a small sub-rectangular structure were excavated: these are dated to 380-180 BC and 360-50 BC. An ironworking furnace dating to 360 BC-100BC was also uncovered nearby (Ó Drisceoil 2013, 52). Close to the Neolithic house at Kilgobbin an Iron Age hut-site was uncovered, dated to 390-174 BC (Hagen 2013, 20). Additional Iron Age settlement activity is known Jamestown, Kilgobbin and Newtown Little to the southwest (McGlade 2018).

The predominant burial rite from the Middle and Late Bronze Age was cremation and this continued for dry-land sites through the Iron Age (McGarry 2010, 173). Roman coins found with inhumations in Bray, Co. Wicklow allow for a date of first to second century for the earliest inhumation burials in the wider area (Drummond 1840-1). More archaeological evidence for early contact in the greater area comes from a coin of Magnentius dated c. AD 350 that was found off Dalkey Island. At the same location Mediterranean pottery of the early fifth century and slightly later Frankish glass were found (Liversage 1968). There is evidence for a late cremation occurring at a site in Carrickmines Great approximately 70m west of the Iron age settlement dated to AD 340-540. This is likely evidence of a change over period from pagan rites to Christian (Giacometti 2016, 13).

A site at Murphystown containing an unenclosed burial site with perhaps ten extended inhumation burials, 2.3km north of Glenamuck North contains an earliest burial date of AD 305-335 with later burials AD 443-

477. There is a large cemetery, just south of Cabinteely village, in the modern townland of Loughlinstown. Although the vast majority of its 1500 burials are extended inhumations, there is a further example of the ambivalence that existed in burial custom at the beginning of the early medieval period. One of the earliest burials, AD 402-572, is a charnel pit, containing disarticulated individuals, arranged on a millstone. There are extended inhumations dated to the same range and the site demonstrates further interest in imported exotica, with Mediterranean wares and rare Gaulish pottery. The site is enclosed, with enclosures expanding to accommodate increasing burial numbers but due to lack of a final report it is hard to estimate the size of the enclosure but it could have possibly been more than 100m (Conway 1999, 2). A further enclosed burial site was excavated Cherrywood, 1.5km to the south of Cabinteely, where thirty-eight inhumation burials were found in a sub-circular enclosure of around 40m in diameter. Unfortunately, the burials not be dated but a sherd of Mediterranean pottery, early fifth century and a belt buckle of sixth to seventh-century date gives a very rough indication (Ó Néill 2006). Other dated evidence of this period are three corn-drying kilns and a possible grain storage structure at Laughanstown, close to the Bronze Age evidence cited above; these are dated 'in a tightly-dated cluster' between AD 530 and 660 (Seaver 2011, 265).

Historical Background

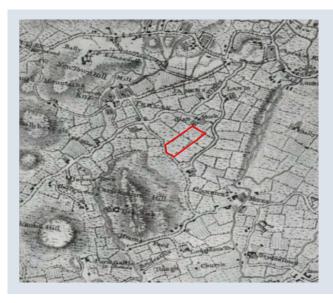
The earliest references to the Study Area concern the Kingdom of Cualu, which covered the same territory as the later Barony of Rathdown from the 5th to the 9th century AD (Boazman 2016). During this period Cualu was ruled by the clans of Dál Messin Corb and the Uí Máil.

A large number of ecclesiastical sites were founded in and around Kiltiernan and Rathdown during this period (5th-9th centuries AD), often associated with British, Welsh and Munster saints, partly due to its coastal position

but also indicating its importance as a node of Christianity during the conversion period (Walsh 2008, 22; Murphy and Potterton 2010, 216). One of these early ecclesiastical sites is situated 360m west of the Study Area at Kiltiernan. The western end of the existing church is one of the five earliest churches in Dublin. The placename (Cill Tiarnáin or Cill Tigernain – Church of Tiernan or St. Tigernan) seems to be derived from this early church (Murphy and Potterton 2010, 218), though other interpretations have been suggested, in particular with references to a wood or forest (O'Morchoe, 1934; Leslie 1934, 4).

At the time of the Anglo-Norman conquest a portion of the territory around Kiltiernan and Kilgobbin was ruled by the chieftain Donald MacGillaMoCholmoc. He is recorded as granting the church at Kiltiernan, along with adjoining lands at Tyssoch, Kamas and Baliofelennan, to St. Mary's Abbey in 1186-1195 (Corlett 1999, 136). Ball notes that he was allowed to keep some of the Kiltiernan lands, but that they eventually passed into the ownership of William de Carew (Ball 1902, 74). A charter of King John in the first decade of the 13th century records the endowment of part of the lands of Kiltiernan to Christchurch (Murphy & Potterton 2010, 68). St Mary's Abbey received Kiltiernan lands in 1277 from Gilbert Cruise (CSMA, I, 88-9, 107-8, 122-3 cited in Murphy and Potterton 2010, 80), and 'at Kiltiernan the white monks erected a manor house, which they occupied from time to time' (Ball 1902, 74). References to a medieval castle at Kiltiernan (Kiltiernan LAP DLRCC, Section 3) may in fact be references to this manor house (Leslie 1934, 25), though as Kiltiernan lay beyond the Pale in the late medieval period, a castle may well have been constructed here.

Despite the close proximity of the Study Area to the parish of Kiltiernan it is a part of the Tully parish that extends to the northeast. This parish centred on Tully church located on the 'the hill of the bishops' or Tulach na n-Epscop. This is reference comes from the Martyrology of Oengus dated to the early ninth-century. A from reference c. 1178 'Tillachnaescop' (McEnery and Refaussé 2001, 102) as being part of churches and lands in Dublin and its hinterlands granted to Dublin's Holy Trinity Church by the Archbishop Lorcán Tuathail. The archbishop was later confirmed these diocese lands by the pope in April of 1179. At the same time the Pope took the diocese of Dublin into his protection. The lands were referred to as 'Tullaghnanephscop' (McNeill 1950, 3). The priory of Holy Trinity later relinquished claims on lands in north Dublin in order to keep lands referred to as 'Tilach', 'Dromin', 'Balliochegan' and 'carucate of land at Thecloc' (ibid., 13). These lands were given up around 1185, a year before lands including 'Telach na Epscop with its church' (McNeill 1950, 15; McEnery and Refaussé 2001, 37) were confirmed to the priory by Pope Urban III in July 1186. A document dated to March of 1202 records 'the gift of Sigraghre Thorkyll, Achatillagh nuneascoib son of Culaght' (McNeill 1950, 28; McEnery and



Rocque's map of 1760 depicts the site as lying in fields to the east of a house labelled 'Glan muck', now Shandon Grange. The road to the south of the study area is the modern day Glenamuck Road that runs from Carrickmines to Kiltiernan. The Tully church can be seen in the bottom centre of the map named as 'Tulach Church' and it resides in Laughanstown. No features are depicted within the Study Area.

Refaussé 2001, 103) and its confirmation to Holy Trinity Church by King John of England. This is clearly verification that Sitric Mac Torcaill, Hiberno-Norse ruler of Dublin granted the Tully lands to the Church. It is also clear that these lands fell under the abovementioned Kingdom of Cualu.

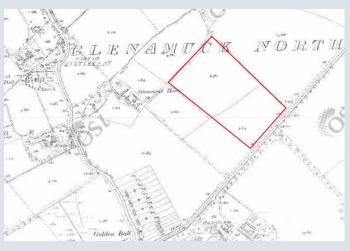
A grange farm at Clonkeen is also recorded as being owned by the Holy Trinity. As an extension the lands of Tully, while held by the church were possibly leased to tenants. However, any evidence for this appears quite a time later in the record. In August 1538 James Ashepoll (later Archbold) is documented as leasing 'the town of Balliloghan with the temporalities belonging thereto for 31 years, at a rent of 40s., with the customs and watch hens as of old and heriots; in case of arrear for two months, the lessee to forfeit 40s' (McEnery and Refaussé 2001, 234). Here the name Balliloghan refers to the general lands of the parish and Tullagh was actually the name of the church during the period. Further evidence comes from a document that details the dissolution of the monasteries from 31st December 1539. In this document the priory of Holy Trinity is described as retaining tithes of former grange lands, of specific mention was Tullaghe church and the lands of Balliloghan (ibid., 115). Later, in 1568 a John Crahawe seems to have ended Archbold's association with the lands of Tully by leasing them from the church (ibid., 264). In July 1594 an alderman of Dublin Gerald Young leased tithes of corn and grain in Laghanston from the dean and chapter of Holy Trinity (ibid., 288). The dean of Christ Church would continue to hold these tithes through the seventeenth century.

While the Archbold's were strongly connected to the lands of Laughanstown and Ballyloghan the Walsh family had strong links to the townland of Carrickmines. An eighteenth-century headstone dedicated to a Walsh of Carrickmines is evident in the graveyard at Tully church (Corlett 2014). This is further bolstered by a reference made by a Richard Walshe in his

The First Edition Ordnance Survey map of 1837-43 (top)depicts the Study Area as lying within the fields making up the townland of Glenamuck North. The Study Area is comprised of the two fields outlined. Glenamuck House is visible to the west of the Study Area and has since been renamed to Shandon Grange. Rockville House is present to the south of the Study Area in the townland of Glenamuck South. To the southwest is a dispensary which lies on the boundary of Glenamuck North and Kiltiernan. A sand pit is located to the North of the Study Area.

The 1910-12 edition of the Ordnance Survey (bottom) shows that there has been an increase of development in the area with the dispensary to the southwest being replaced by multiple houses and gardens. Glenamuck House still remains along with the Jamestown Lodge. The sand pit marked on the OS map 1837-43 has now been labelled as disused.





will stating he wanted to be buried 'amongst my ancestors in the parish church of Tully' (Griffith 1991, 446). This suggests the graveyard was in continued use by the family. Connections to the Brennanstown lands and the Walsh family are also found. This is made even more noteworthy when it is taken into account that the lands of Brennanstown and Carrickmines made up a significant portion of the parish of Tully in the medieval period.

Evidence from the Down Survey maps shows that from around 1641 the owner of the lands in Carrickmaine (Carrickmines) and Glanmuck (Glenamuck) was one Theobald Welsh (Walsh) son of the above-mentioned Richard Walshe. This suggests the lands of Glenamuck were held by the Walsh family for a prolonged period. Glanemucke was also referred to in the will of Richard Walshe (Griffith 1991, 446-47). Theobald was described as residing in Carrickmines Castle in 1630 by a report on the diocese of Dublin, and maintaining a friar and priest in the castle (Ball 1902). It can be presumed then that he was not in residence when the castle was overthrown during the Rebellion of 1641 as Theobald survived. In October 1654 Charles Fleetwood, Lord Deputy ordered a survey of the half barony of Rathdown. This survey included the lands of the parish of Tully and references borders with the lands of Kiltiernan and Killgobbin. One hundred acres of land in Glenamuck was specifically mentioned as being owned by Theobald Walsh.

The properties of the Walsh's are shown to have been transferred to Sir Roger Jones, the First Viscount Ranelagh some time before his death in c.1644. He was the son of Thomas Jones, Archbishop of Dublin and Lord Chancellor of Ireland. The lands of Tully are also attributed to the Earl of Meath around 1670.

The 6" OS Map and Rocque's 1760 map shows a large home designated Glenamuck House to the west of the Study Area. The grounds of this house form a border with the eastern edge of the lands of St. Tiernan's Church. Glenamuck House also remains present on the 25" OS map. Modern maps show a house at the location of Glenamuck House; however, the name has been

since changed to Shaldon Grange. It is likely the lands within the Study Area would have been part of the lands associated with Glenamuck House.



Aerial Photographs and Satellite Images. The main feature of note visible in the aerial and satellite imagery of the Study Area is the village of Kiltiernan to the west. Further houses have been built surrounding the study area, in particular two to the southwest and one to the northeast. No features of archaeological or cultural heritage interest were noted in (or in the vicinity of) the site on the Ortho 1995, 2000 and 2005 Aerial Photographs provided by Ordnance Survey Ireland, or on recent satellite imagery provided by Google Earth.

Section 4 Site Inspection

A site inspection was carried out on the 23rd September 2021 in sunny conditions. The site is largely formed by two large fields (Field 1 to northwest and Field 2 to southeast) and is orientated northwest-southeast. A portion of the site to the northeast extending across the field boundary into an adjacent plot (Field 3). This portion of the site was overgrown and it was not accessible during the inspection.

The northeast field boundary is formed by a mature hedgerow and trees. A stream runs

along part of the boundary. The northwest and southwest boundaries are also formed by mature hedgerows within Field 1. The southwest boundary of Field 2 is formed by a wire fence dividing the site from the access road of an adjacent development, which was being archaeologically tested at the time of the site inspection. The southeast boundary of the site is formed by the hedgerow running along the side of the Glenamuck Road. The road slopes down from the south and the southern end has been built up, with the road surface being over













View of Field 1 looking southeast (top left)

View of Field 2 looking southwest with mature hedge row to right hand side of image (top right)

View from northeast boundary looking northwest in Field 1 (bottom right)

View of tractor tracks in adjacent field, looking northwest (bottom left)

2m above the present ground level within the development in the southern corner. A mature hedgerow also divides Fields 1 and 2.

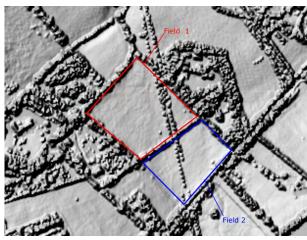
The fields are in lands that are generally sloping down from south to north, however both fields are relatively flat.

The fields are not currently in agricultural use and contain high wild grasses and shrubby bushes, but they are not completely overgrown. The northern section of Field 2 is wet under foot suggesting there is poor drainage within this field. Fulachai fia are frequently identified in this sort of environment, however there is no above ground indication of any such sites within the field.

Large ESB pylons cross the site, running approximately north-south. A second lower ESB powerline runs northeast-south west across Field 1.

There are views to the Dublin Mountains to the south and southwest. The existing treeline blocks views to the north while the hedgerow along the Glenamuck Road blocks views to the east.

No archaeological features or anomalies were apparent during the site inspection.



Overlay of field designation numbers on LIDAR imagery of Study Area. Field 1 in red and Field 2 in blue

Section 5 Impact assessment

Introduction

The Study Area consists of two agricultural fields. Portions of a third overgrown field also form part of the Study Area. The Study Area is situated to the northeast of Kiltiernan village, north of the Glenamuck Road in the townland of Glenamuck North.

It is bounded to the northwest by a mature hedgerow with trees. To the southwest the western field is bounded by a mature hedgerow while the eastern field is bounded by a light wire fence dividing it from the access route of an adjacent proposed development. It is bounded to the southeast by Glenamuck Road South, which rises up hill to the south and is over 2m above the southern corner of the proposed development site. The northeastern boundary of the proposed development site is formed by a mature hedgerow and treeline along the adjacent property line. A stream follows part of this boundary.

Archaeological potential

There are no Recorded Monuments within the Study Area or in its immediate vicinity. The desktop assessment identified that Kiltiernan and the surrounding area has been witness to considerable activity in the prehistoric and historic eras, most notably during the Neolithic and early medieval periods.

An excavation at the nearby portal tomb produced an arrowhead, four scrapers and coarse pottery sherds. Portal tombs are associated with the Neolithic period when the introduction of agriculture instigated the major deforestation of Ireland. The discovery of a stone axe-head, recorded in the Topographical

Files, is suggestive of Neolithic land clearance in the area. The portal tomb itself is indicative of a major construction project that was undertaken in this period and this implies the likelihood of a nearby settlement with associated farming.

Settlement at the time usually took the form of rectangular timber houses with hearths, though circular examples are not unknown, and it is possible that such evidence could survive on the proposed development site. Evidence for animal husbandry and grain cultivation could survive in associated potential features. The probability of physical evidence for Neolithic tillage activity surviving is extremely small. The cartographic evidence shows that the land has been used for farming or forestry for at least the last 250 years and these activities would likely have obliterated any Neolithic cultivation evidence.

A bronze flanged palstave axe was retrieved from a field under 300m from the Study Area and a standing stone was also identified during archaeological investigations under 200m from the Study Area. Both of these are indicative of



Image showing archaeological potential and Study Area boundary

activity in the vicinity of the Study Area in the Bronze Age. A Bronze Age cist burial is recorded c. 600m to the northwest while a burnt mound was uncovered during archaeological investigations c. 700m northeast of the Study Area, further indications of Bronze Age activity.

The depiction of marshy ground within the Study Area on the 6" OS map is also interesting, as this type of land was often utilised for the location fulachtaí fia. Fulachtaí fia generally date to the Bronze Age. They are normally characterised by a horseshoe-shaped spread of burnt stones and charcoal that usually seals at least one trough and are often found in association with stake-holes and hearths. Long dismissed as simple cooking pits, recent research by Hawkes (2015) and others has reappraised both the functionality and importance of these sites. While cooking is still seen as the primary use of these monuments, other uses that have been suggested for fulachtaí include sweathouses, bathing, tanning, dying, brewing and washing and fulling of textiles. Apart from their physical and tangible functions, they are now also believed to have formed an important social role in Bronze Age communities, serving as a focal point for the community who returned regularly to feast and socialise.

Additional prehistoric activity in the wider area has been unearthed in several other excavations, and there is a potential for some such evidence to survive within the Study Area.

Two church sites, one of which has pre-Norman architecture, survive within 1km of the Study Area, indications of the early ecclesiastic foundations that were established across South Dublin during the early medieval period. At that time the Study Area lay within the territory of Cualu. No early medieval settlement sites are known from the immediate vicinity of the Study Area, though many have been uncovered in the vicinity, particularly to the north and east. Following the arrival of the Anglo-Normans the lands in the vicinity of the Study Area came into the control of St Mary's Abbey.

Following the dissolution of the monasteries in 1539, the lands at Tully came to be leased or owned by successive families of the Anglo-Norman descendancy. The Study Area was part

of the Carrickmines lands and was likely used for agricultural purposes. Again, evidence for field systems from this period potentially survives on the proposed development site. There is no record of surviving early medieval, medieval or post-medieval remains within the Study Area.

Development proposals

The development comprises the construction of 203 residential units comprising 30 houses (20 three-bedroom and 10 four-bedroom, up to three storeys in height) and 173 apartments (31 one-bed, 124 two-bed and 18 three-bed within 12 blocks up to six storeys). The apartments will incorporate duplex units. The development will also provide a creche or childcare facility, a retail unit, a social amenity and two ESB substations. The development will include a new access from Glenamuck Road and the provision of access connection points (vehicular, cycle and pedestrian) to future adjacent development lands. The development will include the provision of internal roads, cycle paths, footpaths, landscaped public open space and play areas. Parking at surface and basement level will be provided for 268 vehicles, 312 bicycles and 24 motorcycles. The development will also include attenuation and all additional ancillary site development works, boundary treatments, lighting and services.



Development plan for site



Overview of phase areas within development plan. Phase 1 in blue and Phase 2 in red (top)

Overlay of archaeological areas within development site demonstrating that they cannot be preserved in situ (bottom)

Impact Assessment

Following the archaeological desktop assessment and site inspection an assessment of the potential archaeological impacts was carried out. The proposed development within the Study Area will not impact on any known archaeology.

Given the wealth of prehistoric and historic archaeology in the vicinity, there is potential for previously unknown archaeology to be uncovered within the Study Area.

The development has been divided into two phases and two different forms of mitigation were proposed. Following discussions with National Monuments a programme of archaeological monitoring was proposed for Phase 1. A programme of archaeological test-trenching is to be carried out in the Phase 2 portion of the proposed development.

The monitoring of the Phase 1 lands has now been completed (see Section 6), while the testing of the Phase 2 lands will be carried out in the New Year.

The monitoring identified three archaeological areas (Areas 1-3) within the Phase 2 lands, all relating to burnt mound sites. A further impact assessment was carried out under the knowledge of the presence of the archaeology within the site.

Area 1 was located within the footprint of an apartment building proposed within development. The construction of the building would severely and negatively impact the archaeology surviving within the area. Area 2 was also partially within the footprint of a proposed apartment building. The eastern corner of the area, where the most promising archaeology lies, was within the building footprint. The construction of the building would severely and negatively impact the archaeology surviving within the area. Area 3 was traversed by a proposed path within the development. Little archaeology was identified within this area. If this was indeed another burnt mound, the majority of it lay to the southwest beyond the limit of excavation of

this development. This would be within the strip to the southwest where an access road associated with an adjacent development is located. The construction of the pathway traversing Area 3 would severely and negatively impact the limited archaeology surviving within the area.

Fulachtaí Fia are one of the most common site types identified in Ireland, with 62 included as Recorded Monuments in County Dublin with an additional 23 burnt mounds and two burnt spreads. The central part of Phase 1 of the development was clearly wet and marshy ground for a significant length of time. It was soft and mobile, particularly with heavy site machinery in Autumnal conditions.

It was assessed that should no further works be carried out within the three archaeological areas identified they would likely be negatively impacted as the development continued around them. The topsoil had been stripped off the areas, which were exposed to the elements. Some service trenches and excavations for the roads within the development were already underway in the parts of the site where archaeology was not identified. These works were altering the water table and drainage on the site, which may have negatively impacted the archaeology surviving within the three areas should no further works take place. The current design of the development, which was then under construction, would have negatively impacted the archaeology surviving within the three areas.

As this archaeology was not of major significance it was proposed that be fully excavated by hand and preserved by record. The impact assessment was submitted to National Monuments, who agreed to extend the licence to cover the excavation of the three archaeological areas.

A further impact assessment will be produced for the Phase 2 lands once the testing has been carried out.

Section 6 Monitoring Report

Report Summary

A programme of archaeological monitoring (Licence 21E0734) was carried out within the Phase 1 lands of the site at Glenamuck North, South County Dublin in October 2021. Three archaeological areas were identified during the works. An expanse of former wetland was also uncovered. A number of post-medieval and modern drainage features were also identified, attempts to drain these wetlands. This had not entirely worked as the central part of the area remained wet underfoot until the beginning of the monitoring programme.

An amendment to the archaeological licence for the project was submitted to National Monuments and it was agreed that the archaeology within the three areas would be excavated under the same licence (Section 7).

Site description

The site is located on the northern side of the Glenamuck Road South and is currently divided into two undeveloped agricultural fields and orientated northwest-southeast (Field 1 to northwest and Field 2 to southeast).

It is bounded to the northwest by a mature hedgerow with trees. To the southwest the western field is bounded by a mature hedgerow while the eastern field is bounded by a light wire fence dividing it from the access route of an adjacent proposed development. It is bounded to the southeast by Glenamuck Road South, which rises up hill to the south and is over 2m above the southern corner of the proposed development site. The northeastern boundary of the proposed development site is formed by a mature hedgerow and treeline along the

adjacent property line. A stream follows part of this boundary.

Phase 1 of the development consists of the entirety of Field 2 and part of the eastern portion of the Field 2. The field inspection of the site prior to the works noted that the central section of the southeast field was quite waterlogged, which raised the potential for burnt mounds to be identified within the site.

Methodology

The stripping began on the 7th October with haul roads and drainage ditches. Further stripping down to the natural subsoil was carried out from the 13th to the 20th of October. The area defined by Phase 1 was entirely cleared of topsoil during this time. This uncovered three areas of archaeological potential. These areas were then designated



Image detailing monitored area and location of archaeological areas (green), and area where works are to be carried out (red)

Areas 1, 2, and 3 and were cordoned off as outlined in method statement.

Results

During the stripping carried out for the haul roads and drainage ditches an initial area approximately 100m long (north to south) by 12m wide (east to west), and 50m (east to west) and 12m (north to south) was stripped. These areas constituted the haul road network. The layer of topsoil measured 0.1-0.6m in depth. The topsoil was a mid to dark brown peaty soil, and was heavily saturated due to persistent rainfall and poor drainage in the area. This was mostly concentrated in the central low-lying area of the site and reduced as it approached

the higher ground and edges defined by field boundaries. Topsoil over the archaeological areas was thinner (c.0.2m) and showed evidence of disturbance with burnt mound material mixed through the topsoil in places. This layer was removed and natural subsoil exposed. Numerous shallow field drains were evident in the subsoil, the majority of these drains ran southwest-northeast across the site. For the most part they ran parallel to each other approximately two to three meters apart, although, some did cross at points. A large linear was observed running southwest northeast across the northern end of the area stripped. Nothing else of note was found in this area. This linear was later uncovered to the west of the haul roads and investigated. A slot placed through the linear showed that it was a modern field boundary ditch.





View of north-south road after stripping looking northwest (top)

View of north-south road after stripping looking southeast (bottom)





Linear running southwest northeast in north end of Field 2, looking north (top)

View of east-west road looking east (bottom)





View of the north end of Area 1 after stripping, looking north (top)

View of the south end of Area 1 after being cordoned off, looking north (bottom)

Stripping carried out for the drainage ditches on the 7th and 13th of October consisted of an area 10m wide and 75m long for the first drainage ditch and 10m wide and c. 100m for the second ditch. The topsoil layer was removed completely down to the natural subsoil in both cases. Once the strips were inspected and no features of archaeological potential observed the strips were handed over to the developer and further excavations were carried out to complete the ditches.

Area 1 was located to the east side of the site in the northeast corner of Field 2, directly south of the mature hedgerow and field boundary ditch that runs east to west through the site. The topsoil covering the area measured 0.2-0.3m in depth. Once all the topsoil had been removed from area 1 two large spreads of burnt material were observed. The spread to the north had a trough centrally located in the spread with a further three charcoal-rich features located to





View of Area 2 after stripping, looking southwest (top)

View of southwest limit of excavation showing feature of Area 3, looking west (bottom)

the north and east of the trough. The southern spread had a trough located to the southwest corner, with additional charcoal-rich features to the southeast. In the northwest corner of Area 1 seven possible postholes were observed. Area 1 was also disturbed by multiple field drains running northeast southwest across the two large spread areas. To the northwest two stone drains were also observed. Sondages were inserted into a number of features to assess the nature and depth of the features encountered. The associated burnt spread was also assessed. Two troughs were identified, one to the north and the other to the south of Area 1.

Area 2 was located directly north of Area 1 inside Field 1, on the northern side of the mature hedgerow and field boundary ditch. This area was much more heavily disturbed due to the removal of mature trees from the topsoil. The topsoil layer measured 0.3-0.5m in depth. Upon removal of topsoil a spread of burnt

material was evident. This spread was centrally located, with a possible trough located to the south side of the area. A single possible pit was also observed in the northwest corner. The subsoil had been heavily disturbed by root action from the mature hedgerow. Similarly, a large field drain along with a modern drain had disturbed the spread material.

Area 3 was located in the southeast corner of the site. The topsoil layer was 0.1-0.25m in depth. When this area had been entirely cleared of topsoil a spread of burnt material was observed along with two linear features. One linear running north south along the western side of the spread and the other running southwest northeast and truncating the spread at the northern end. The linear truncating the spread to the north was determined to be modern due to topsoil fill and modern detritus present in upper layer. Area 3 was bound by the limit of excavation on the eastern side and as a result, the full extent of the spread could not be exposed.



The subsoil is a light grey sandy clay with yellow mottling with areas of highly saturated clayey sand. There was a natural slope from the road to the south of the site down to the mature hedgerow and ditch that divided the two agricultural fields. Field boundaries and numerous shallow field drains were observed criss-crossing the site with the majority running towards the field boundary ditches either to the centre of site or to the eastern side.

A test slot was excavated through the linear found in stripping for the haul road and was determined to be a modern drainage ditch that had been backfilled.

Of the three areas of archaeological potential, Area 1 represents two distinct areas of features to the north and south with potential for another in the northeast corner. Area 2 represents related features with a trough and associated spread. Area 3 was determined to be a spread of burnt mound material with an







Test slot placed in linear, determined to be modern drainage ditch, looking northeast (top)

Overview of site with Area 1 cordoned off, looking west (centre)

View of field drains in Field 2 looking north (bottom)

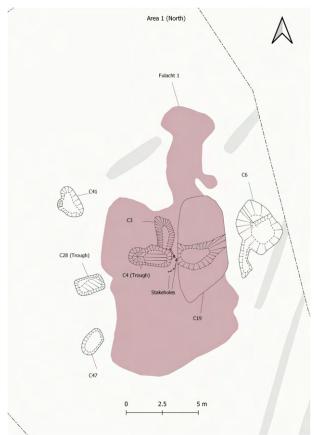
associated linear to the western side of spread. The linear to the north was determined to be a modern field boundary.

As the features of archaeological potential in Areas 1, 2 and 3 are located directly in the path of further development needed for this site an amendment to the archaeological licence for the site was sought to include the excavation of the three archaeological areas.

Section 7 Excavation

The excavation

The excavation Glenamuck North, at Carrickmines, Co. Dublin began on the 7th October 2021. In early October Archaeological Areas 1, 2, and 3 were stripped under archaeological supervision down to the subsoil. This was carried out in the area of two agricultural fields designated under phase 1. No previous archaeological investigations had been carried out on the site. When archaeology was uncovered the areas were cordoned off and protected while the surrounding topsoil was stripped. Following discussions with National Monuments it was decided that excavation and



Post-ex plan of Fulacht Fiadh 1 in the north of Area 1

preservation by record was the appropriate resolution for the archaeological features uncovered. The features were then cleaned back in preparation for excavation. All features within the areas were then excavated by hand, recorded, photographed and planned.

Area 1

Area 1 was located in the east side of the development, directly south of the mature hedgerow and boundary ditch running from east to west dividing the two agricultural fields. The stripping uncovered twenty-five features in this area. Included in these features were ten stake-holes, eight pits, three troughs, three spreads, and a single posthole. Area 1 can be further broken down into two fulachtaí fia.

Fulacht Fiadh 1

The sub-area designated Fulacht Fiadh 1 was located just south of the mature hedgerow and boundary ditch. There was a total of eighteen features associated with this area. These included ten stake-holes, four pits, two troughs and two spreads.

Troughs

The larger Trough 1 (C4) was rectangular in plan and was located in the centre of the area, with a base sloping down from east to west. It was filled by four distinct fills (C16, C17, C18, C20). The basal fill (C16) was a silty clay, suggesting that it had formed while the trough was open and being used. It is likely that this built up over time through sedimentation. The secondary fill (C17) was very similar to the surrounding spread material (C21, C32). Due to the presence of charcoal and burnt granite stone inclusions, it was determined that this fill

represents the backfill of the trough with the surrounding spread material. This may have been an intentional act or have occurred after abandonment of the trough. subsequent fill (C20) was only present in the east end of the trough. It was comprised of a charcoal rich clayey silt with heat fractured granite inclusions. As a result, it was concluded that this fill represents a possible washing in of charcoal-rich surrounding material adjacent features (C3, C19). The upper most fill the trough denoted the final of deposition event. It was composed of a black silty sand with burnt and heat shattered granite fragments. This fill was also present in a pit located on the north east corner of the trough, and was very similar to the material from the spread located directly east. As such, it likely represents the backfilling of the trough using surrounding burnt waste material, or the gradual erosion of this material into the largely infilled trough over time.



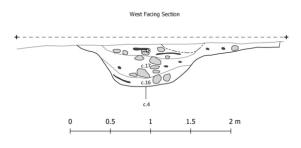
West facing section of Trough 1 (C4) showing fills, looking east (top)

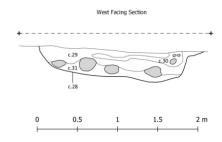
Post-ex photo of Trough 2 (C28), looking northeast (bottom)

To the southwest of Trough 1 was Trough 2 (C28), which was orientated slightly northeastsouthwest. The base of this trough was also deeper to the west. This sub-rectangular trough contained three fills. The basal fill (C31) was very similar to that of the other trough and likely was formed in the same way, however the presence of burnt granite suggests it was not fully cleared out after the last use. The upper fill (C29) consisted of a black charcoal-rich silty sand that indicates the redeposit of nearby burnt material. Contained within this upper fill was a lens of dark grey silty clay (C30). Such a lens was likely formed from the deposition of a separate material during the backfilling process. As this trough has little to no interaction with the southern extent of the spread material (C21) a relationship to the other trough cannot be determined.

Pits

Four pits were uncovered in the vicinity of fulacht fiadh 1. The southernmost pit (C47) was





West facing section drawing of Trough 1 (top)
West-facing section drawing of Trough 2 C28 (bottom)







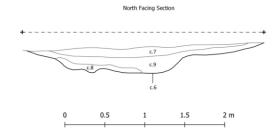


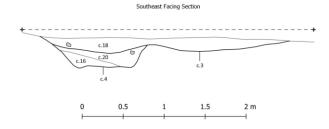
Mid-ex photo of pit C6 showing over-cut below charcoal-rich fill, looking southeast (top)

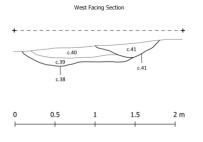
Mid-ex photo of pit C3 and Trough C4 east facing section, looking west (upper centre)

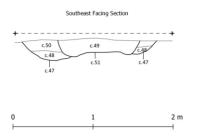
Mid-ex photo of pit C38 west facing section, looking east (lower centre)

Post-ex photo of pit C47 looking northwest (bottom)









North facing section drawing of pit C6 (top)

Southeast facing section drawing showing interaction of pit C3 with Trough 1 (upper centre)

West facing section drawing of pit C38 (lower centre)

Southeast facing section drawing of pit C47 and re-cut C51 (bottom)

a sub-oval pit probably used as a waste dump for one of the troughs. The pit was filled by two fills and was later re-cut. The basal fill (C48) is a grey clayey sand with charcoal flecks, suggesting possible washed in material when the pit was open. Above this is the uppermost fill (C50) composed of grey mix of coarse sand and clay with charcoal inclusions. Into this feature is recut another pit. A sub-rectangular pit (C51) filled by a single orange brown sand and grey clay mix (C49) with heat-fractured granite inclusions. The composition of this fill is very similar to the spread material (C21) seen surrounding the trough (C4).

The pit (C38) located to the northwest of the central trough (C4) was heavily disturbed to the south by roots. From an investigation of the intact half to the north it was determined to be a shallow sub-oval pit containing two fills. The basal fill (C39) was a dark grey charcoal rich silty sand with burnt granite inclusions. The composition indicated a relationship with one of the nearby troughs, possibly a waste pit. The upper fill (C40) was a natural redeposit of material with occasional charcoal and burnt granite fragment inclusions. It was unclear if this material was intentionally or naturally backfilled. The root disturbance to the south and west had incorporated some burnt material (C42) into the upper section of the feature. This

material was similar to that of the upper fill (C18) of the central trough (C4).

The shallow pit (C6) located to the eastern side of the area was irregular in shape, with a short, c. 2.5m extension running south from a sub-oval main body. It contained a fill (C7) comprised of charcoalrich silty sand with burnt granite inclusions. Similarities in this fill and that of the nearby trough (C4) suggest an association, although, no clear interaction was observed.

The fourth pit (C3) in this area was cut into the northeast corner of the central trough (C4). The sub-oval pit was set

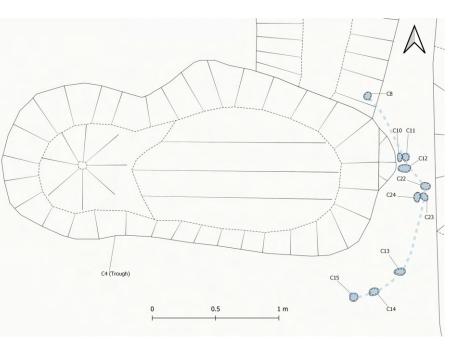
into the spread of material (C32) to the north of the trough; however, no spread material was evident in the pit. Instead, it was filled with a charcoal-rich silty sand (C18) with heat fractured granite fragments. This was similar to the uppermost fill of the adjacent trough. It appears that the pit was filled with this burnt material before the spread was built up. It was likely that this material was then used to backfill the remainder of the trough. This could suggests that the pit was used for the heating of the stones used in the trough. As there is no indication of a formal hearth, the presence of this pit could suggest a nearby informal hearth.

Stakeholes

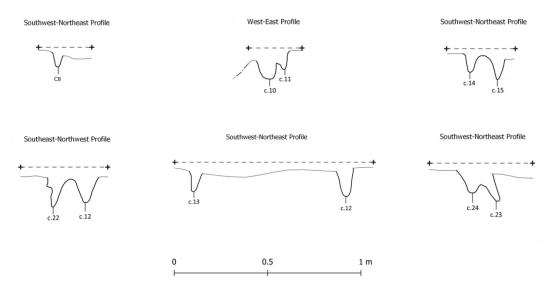
Ten stake-holes were identified at the eastern end of Trough 1. They were organised in a semi-circular shape suggesting a possible structure.

The northernmost stake-hole (C8) was located in the base of the pit (C3) at the northeast corner of the trough (C4).

Two more stake-holes (C10, C11) were situated to the eastern end of the central Trough 1. One stake-hole (C10) had been inserted on the edge of the trough itself, with the other (C11) driven



Post-ex plan of Trough 1 and stake-holes located to eastern end



Profiles of stake-holes located to eastern end of Trough 1

in at an angle on the eastern side of the first, creating a double stake-hole. The angle suggested the second (C11) could have been bracing the first (C10).

Another stake-hole (C12) located just south of the two above had no direct interaction with any other features.

Further south at the southeast corner of the trough three further stake-holes were identified. They were arranged in a short line c. 0.5m long, orientated east-west (C13, C14, C15).

A stepped stake-hole (C22) was located just southeast of stake-hole (C12). The step to the southwest side could represent an initial placement of the stake, a later support for the stake or from the removal of the stake.

The remaining stake-holes (C23, C24) were situated to the southeast corner of Trough 1 just south of stake-hole (C22). These two stake-holes interacted on the western (for C23) and eastern (for C24) sides respectively. As the easternmost stake-hole (C23) was placed at an angle it was possibly a support for the other.

All stake-holes were filled with the same material (C18) and could suggest the presence of a structure that was either removed or degraded and the stake-holes later filled with this material. The arrangement of these stake-holes suggest a possible structure was present. The material C18 is very similar to the charcoal-

rich spread C19. The stake-holes were arranged in an arc, possibly representing a rack associated with activities taking place within the trough, or a shelter for those working at the trough.

Spreads

The charcoal-rich spread (C19) was located at the east end of Trough 1 and to the east of all ten stake-holes. The black silty sand with burnt granite inclusions was similar to the fill (C18) of the shallow pit (C3) on the northeast corner of the trough. This spread was likely the first deposit around the trough and represents the fires used to heat the stones. The later spread of C21, C32 was then deposited to the west of C19.

The larger spread extended to the north (C32) and south (C21) of Trough 1 (C4). The spread was comprised of an orange brown silty sand with black charcoal rich deposits. There was an abundance of burnt granite stones and fragments in the spread and the coarse sand appears to be broken down granite. The spread covered an area measuring 8m x 9m to the south and 2.95m x 2.4m to the north, with a depth ranging from 0.07m to 0.2m. Combined it gives a rough total volume of c. 10.68m³. This material was used to backfill the central trough and appeared as the middle fill (C17).

Fulacht Fiadh 2

The sub-area designated Fulacht Fiadh 2 was located directly south of Fulacht Fiadh 1 in the

southern part of Area 1. It contained seven features of archaeological potential. These included four pits, one trough, one posthole and a spread.

Trough

This trough (C55) was situated in the southwest quadrant of the area. It had a sub-rectangular shape in plan, and became more rounded to the western end. The sides were near vertical and undercut in parts, possibly due to hydraulic action. Like Trough 1, the base sloped from east to west. Four fills were identified within the trough. The basal fill (C56) was a grey sandy clay which likely formed when the trough was open or in use. It was mostly present in the eastern side of the trough. The second fill (C57) was a stone filled charcoal-rich silty sand that was directly on the base of the trough at the western end. It represents the intentional backfilling of the trough using the burnt mound material. The weight of this material is possibly the reason for the basal fill's extrusion to the eastern end. The concentration of this material on the western side suggests it was backfilled from this side. The next fill (C58) was very similar in composition to the spread material and produced three prehistoric pottery sherds and a single flint find. The uppermost fill (C59) of the trough was intermittently visible in section and could represent some disturbance from upper topsoil and spread material.

Pits

The southernmost pit (C64) was located at the very edge of the southern limit of excavation. This sub-oval pit contained two distinct fills. The basal fill (C66), primarily present on the east side of the pit, was a deposit of burnt granite likely related to the nearby trough (C55). The upper fill (C65) was a more charcoal-rich material and similar to other fills from this area. The upper fill was sealed by the spread (C54) that covered the area.

Located to the northeast was a sub-oval pit (C45). It was no covered by the spread material. This pit had a single fill (C46) that was rich in charcoal and contained burnt granite inclusions, and it was very similar to the secondary fill (C57) of the trough (C55). Prehistoric pottery









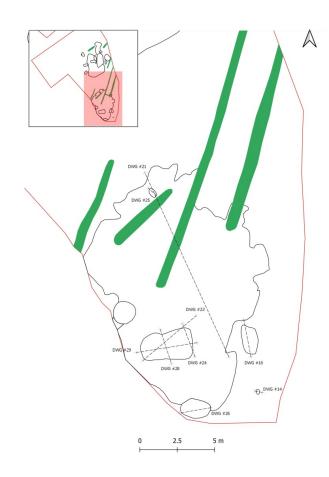
Mid-ex photos of spread C19 east facing section north extent (top) and south extent (upper centre)

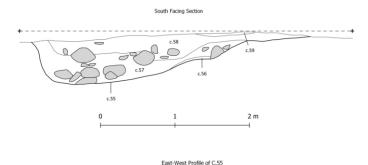
Mid-ex photo of spread C21 located to south of Trough 1 (lower centre)

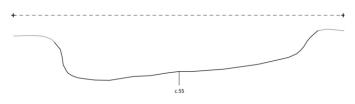
Photo of slot through spread C32 located at eastern end of Trough 1 (bottom)

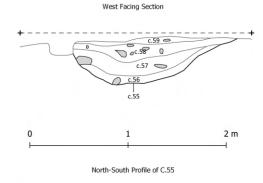


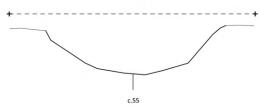












Mid-ex photos of Trough 3 C55 showing fills. Looking east (top)

 $\label{eq:mid-exphoto} \mbox{Mid-ex photo of Trough 3 C55, looking north (upper centre)}$

South-facing section of Trough 3 C55 (lower centre)

East-west profile of Trough 3 showing true length dimensions (bottom)

Pland of section locations in Area 1 south (top)

West-facing section drawing of Trough 3 C55 (centre)

North-south profile of Trough 3 showing true width dimensions (bottom)

rim sherds were found in the upper portion of this fill, one of which was decorated.

A third pit (C62) was situated to the northwest of the trough (C55). This sub-circular pit contained a single fill (C63), composed of charcoal-rich silty sand and burnt granite. The composition suggests it could have been a waste pit associated with the trough. The pit was sealed by the spread (C54).





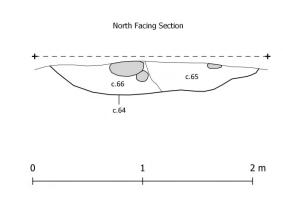


Mid-ex photo of pit C45 east-facing section, looking west (top)

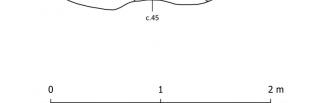
MId-ex photo of pit C64 north-facing section, looking south (centre)

Mid-ex photo of pit C60 east-facing section, looking west (top)

The final pit (C60) was positioned directly north of the trough, close to the northern extent of the spread. Its sub-oval shape and irregular base suggested it had been disturbed. However, it was filled with a charcoal-rich silty sand (C61) and contained heat fractured granite inclusions. Again, this was uncovered after the removal of the spread layer.





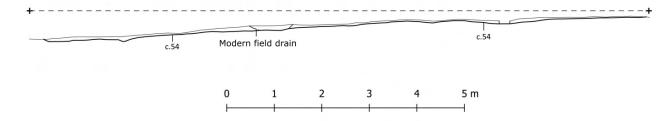




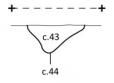
North-facing section drawing of C64 (top)

East-facing section of C45 (centre)

Post-ex photo of pit C62 looking southeast (bottom)



Northeast Facing Section



0 0.1 0.2 m ├──





Northeast facing section drawing of posthole C44 located to southeast of Trough 3 (top)

Section drawing of spread C54, showing disturbance by modern field drain (middle top)

Mid-ex photo of spread C54 after cross-section removal, looking north (middle bottom)

Mid-ex photo of spread C54 looking west (bottom)

The sole posthole (C44) was located in the southeast corner of the area, and was not sealed by the spread. It contained a single fill (C43) comprised of a charcoal-rich clayey silt.

Spread

Measuring 16.4m x 10.4m and with a depth of 0.01m-0.14m this spread (C54) had a minimum volume of c. 13.65m3. The dark grey/black silty sand was very similar to the upper fill of the trough and likely represented the last backfill event. Similarly, it covered three out of the four pits identified in the area. Disturbances from field drains were evident to the north half of the spread. The material found in this spread is similar to that found in the spread of Fulacht Fiadh 1, however, the stones found within this spread were slightly larger on average. This could suggest more of the burnt mound remained after disturbance.

Area 2

Area 2 was located in the east side of the development, directly north of the mature hedgerow and boundary ditch running from east to west dividing the two agricultural fields. The stripping carried out uncovered three features: a pit, a trough, and a spread. This area denotes Fulacht Fiadh 3.

Trough

This trough (C25) was situated on the southern edge of the area, close to the ditch. The basal fill (C52) was a grey sandy clay and likely formed when the trough was open and in use.

The upper fill (C26) was a charcoal-rich silty sand with burnt granite stones and heat shattered fragments. It had been badly disturbed in the upper portion due to root activity as it was previously covered by the hedgerow associated with the ditch. Some animal bones were found in the upper fill These were from a small mammal, and may be intrusive.

Pit

The single pit (C35) located in Area 2 is in the northwest corner. The irregular shape and single

fill (C36) of the feature suggested disturbance from root activity. It was not sealed by the spread. It is likely that this is the remains of a tree bowl.

Spread

The dark grey sandy clay with heat fractured granite inclusions that made up this spread (C53) was heavily disturbed by two modern drains. Combined with the root disturbance of the trees above, it meant the spread was poorly surviving. It measured 8m x 7.5m with a depth



Post-ex plan of Area 2 (top)

Mid-ex photo of southwest facing section of Trough 4 C25 showing fills and disturbance to north, looking east (above right)

Post-ex photo of Area 2 showing disturbance of spread C53 in centre, looking northeast (above left)

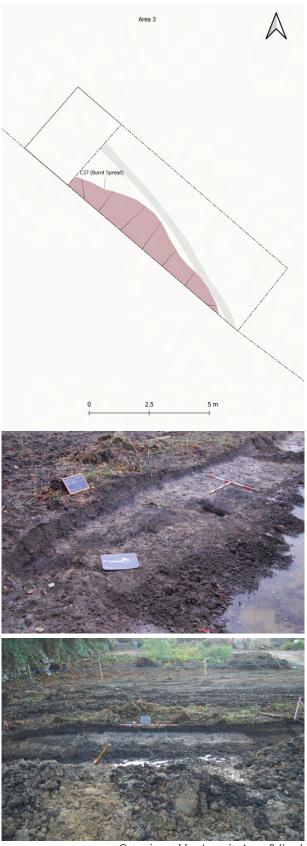
of 0.02-0.1m. This gave the spread a minimum volume of c. 3.6m3. Three patches of similar burnt mound material were uncovered (C27, C33, C34) suggesting that the spread had been truncated as it lay beneath the former hedgerow.

Area 3

Area 3 was located in the southwest corner of the development. The stripping carried out uncovered three possible features. However, only one turned out to be archaeological, a spread of burnt material. The others were a field drain containing spread material a field boundary ditch.

Spread

The spread of material (C37) was a charcoal-rich silty sand with burnt granite inclusions. The full extent of the spread could not be ascertained as it continued west past the limit of excavation. Both the field drain and field boundary cut this spread, the former to the east and latter to the north.



Overview of features in Area 3 (top)

Mid-ex photo of northeast facing section of spread C37 showing field drain running north (centre)

Mid-ex photo showing spread C37 being truncated by field boundary to right (bottom)

Section 8 Discussion

Introduction

The excavations at Glenamuck North revealed three distinct fulachtaí fia along with a spread of burnt mound material in the southwest of the site. The fulachtaí fia uncovered on the site are broken down into three separate fulacht fiadh. They were located in close proximity to each other on slightly raised ground. Each had a trough and associated spread of material. In the case of Fulacht 1 and 2 there were a number of associated pits and other features. The large amount of spread material found in the fulachts suggests prolonged use over time.

There are 62 fulacht fiadh sites listed in the RMP in County Dublin, with a further 23 burnt mounds and two burnt spreads. Seventeen of these are within 5km of the site. Based on a brief analysis of the excavation bulletins, fulachtai fia have been identified during 76 archaeological investigations in County Dublin. The term 'burnt mound' was used 79 times in the bulletins within the county, however it was frequently used along with 'fulacht fiadh' so there is some overlap here. A number of the excavated sites have since been added to the RMP, so it is difficult to get an exact measure of the number of burnt mound sites currently known from the county. It is clear, however, that these are a frequently encountered monument type in the county.

Fulachtaí Fia

The fulachtaí fia present on this site are good examples of typical fulacht fiadh found in the archaeological record. The measurements for each trough (Table 1) fall within the average sizes of troughs on burnt mound sites (Hawkes 2018, 67). They all have sub-rectangular troughs present, two in the case of Fulacht Fiadh 1, and all are located directly beside or under an associated spread of burnt mound material, comprised of burnt stone and charcoal. Both Fulacht 1 and 2 had a number of pits located around their respective troughs. While no pits were uncovered in the area of Fulacht 3, the immediate area was so badly disturbed it is possible they could have been removed by agricultural or root activity.

Both Fulacht 2 and 3 are good examples of a single trough fulacht fiadh. The complexity is relatively low as there are only a small number of associated pits and a single spread of material. This appears to be a common scenario when considering fulachtaí fia that are tightly clustered, such as is present here. These can be catagorised as Type 1 mounds (Hawkes 2018, 111). Fulacht 1 can be considered a more complex example due to the presence of two distinct sub-rectangular troughs and an arc of stake-holes. This added complexity sets it apart from Fulacht 2 and 3 and places its definition inside a separate typology, Type 2 Complex burnt mounds (Hawkes 2018, 111-12). While

Туре	Fulacht Fiadh	Context	L(m)	W(m)	D(m)
Trough 1	1	C4	3.12	1.54	0.42
Trough 2	1	C28	1.96	1.3	0.36
Trough 3	2	C55	3.5	2	0.61
Trough 4	3	C25	2.4	1.3	0.5
Averages	n/a	n/a	2.23	1.4	0.4

Table 1. Trough Dimensions



Post-ex plans of Area 1 north (top left) and south (top right) and Area 2 (left) showing locations of spreads in relation to troughs. The presence of charcoal-rich material to the east of both C4 and C55 suggests a build up of material on this side. As a result, it may have blocked access to the trough from this direction, meaning the features were accessed from the west side. Similarly in Area 2 the spread of material is located primarily to the northwest of the trough. While this area was subject to heavy disturbance from above it is likely that this trough was accessed from the south east.

Fulacht 1 may sit at the lower end of this complex type scale it is still better to designate it as such. It might also assist in the characterisation of the surrounding pits.

Spreads

The spread material for each fulacht was very similar. It was primarily composed of a mixture of burnt granite sand and heat fractured stones. Granite is rarely the stone selected for use in burnt mound sites (Hawkes 2018, 60-61). This is likely due to its inconsistent reaction to heating, with granite more likely to shatter through the heating and rapid cooling that are part of the water heating process carried out at these sites. In her synthesis of the site type, Dennehy (2008, 8) concludes that sandstone was used predominantly, irrespective of local geology, with limestone also used to a lesser degree. A search of online Excavations Bulletins identifies 1,407 archaeological sites classified either as 'burnt mound' or 'fulacht fiadh'. Of these, 11 (under 1%) are recorded as having mounds or spreads composed mostly of fire-cracked granite and a further four are recorded as containing small amounts of granite alongside a different predominant stone type. One further site is recorded as having granite in the trough only (Kingstown Co. Dublin, not far from Glenamuck North). Of these 11 sites with mostly granite in the burnt mound, a high proportion are located close to the Glenamuck North site, for example Site 56 at Carrickmines Great (Reilly, 02E0428, 2002:480), Site 70 Ballyogan (Breen, 02E0481 2002:466), Murphystown Site 6 (Breen, 02E0153 2002:631), Kilgobbin Lane (Larsson, 04E0981 2004:646) and Taylorsgrange (McCarthy, 05E1178 2005:541), reflecting perhaps local geology (but see Dennehy 2008) or, more interestingly, regional cultural variation. It was likely used as it can be found locally and in abundance.

The charcoal-rich spread C19 to the east of Trough 1 likely represents the deposition of burnt material from a fire. The material is very similar to the fills found in pits C3 and C6, which are located in close proximity to C19.

This suggests that they were backfilled around the same time or, perhaps the material was left in natural depressions in the subsoil. The absence of burnt mound material interacting with the C19 spread means it is difficult to interpret their relationship. Due to the lack of burnt mound material beneath the charcoal-rich spread it can be assumed that the charcoal-rich spread was deposited first. It is probable that the charcoal-rich material represents the waste from the burning events carried out in the heating of the stones used in the troughs.

While Fulacht 1 demonstrated a clear division between the charcoal-rich spreads and the burnt mound spread, Fulacht 2 and 3 do not. The burnt mound spreads of both Fulachts 2 and 3 are much more mixed. There are characterised by pockets of charcoal-rich material throughout the burnt mound spread. In the case of Fulacht 3 this is likely due to the heavily truncated and disturbed nature of the spread. Whereas in Fulacht 2 there were some deposits of charcoal-rich material present to the east of Trough 3. Further investigation into these deposits showed them to be just pockets of charcoal-rich material sitting within the burnt mound material unlike those seen in Fulacht 1.

In each case the spread material lay directly on top of the subsoil. There was no evidence for buried soils at any of the fulacht areas. There were occasional deposits of charcoal-rich material present in the spread of Fulacht 1 whereas, charcoal-rich material had been much more evenly distributed through the spreads of Fulacht 2 and Fulacht 3. This may be partly due to the high concentration of charcoal-rich material found at the eastern end of Trough 1 (C4). This charcoal-rich material was very similar to the material found in Area 3 and designated a spread of burnt mound material (C37). The high frequency of heat fractured stones and charcoal would suggest the presence of a nearby fulacht perhaps just beyond the limit of excavation.

Due to the lack of a formal hearth at each of the troughs it is possible that there was a more informal hearth located on the burnt mounds. As this material is most likely the remains of fires to heat the stones it would be plausible that the hearths were located close by. The charcoal within the spreads relates to the waste from the fires for heating the stone. It is possible that the portions of the spreads where charcoal was more prevalent in an indication of proximity to the hearths.

(Hawkes 2018, 82-85). It is more plausible that it represents a channelling of the water away from the working area rather than a reservoir. It was likely cut into silts associated with the surrounding wetlands and may have been a reworking of a natural pit.

Trough Access

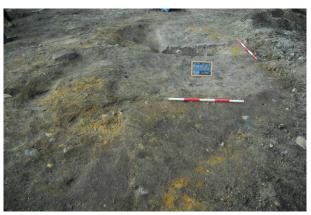
The charcoal-rich deposits to the east of Trough 1 could infer some route of access to the trough. If this area was used to deposite waste material from burning events it was likely not covered by the burnt mound. However as there is no clear indication of exactly where the burnt mound was located it is very difficult to infer any access routes to Trough 1.

A slightly higher concentration of charcoal-rich material within the burnt mound was also noted to the east end of Trough 3 (C55) in Fulacht 2. This could mirror the accessibility seen at Trough 1. There is an issue with this theory however, the material surrounding Trough 3 in Fulacht 2 is much more mixed. This makes it even more difficult to accertain the location of the burnt mound and, as a result, where the access route would be to the trough.

Trough 4 (C25) in Fulacht 3 shows no clear concentration of charcoal rich material, due in part to the area being heavily disturbed. Combined with the heavily truncated nature of the area to the south east it makes it almost impossible to determine where the trough was likely accessed from.

Water Management

A large shallow pit (C6) located to the west of Trough 1 in Fulacht Fiadh 1 was filled with burnt mound material. This charcoal-rich material was disturbed on its eastern side by a modern field drain. At first it was thought that this feature was a large waste pit for disposing of burnt material. However, a small channel to the southwest side of the pit could allow for its interpretation as a water management system





Pit C6 located to east of Trough 1. Shallow cut of pit in centre of image with remains of possible channel visible to left of image. Possible water management feature (top)

Post-ex image of Trough 1 C4 with arc of stake-holes marked in red dashed line present to top of image (bottom)

Structural Elements

Trough 1 was the only trough to display evidence for structural elements present in a fulacht area. Ten stake-holes located at the eastern end of the trough were arranged in a semi-circular arc. Due to the tight clustered nature of the stake-holes it is unlikely that they formed part of a large covering structure for the trough. It is more likely that they represent a smaller possibly dividing structure such as a fence or windbreak. Stake-arcs are a common feature associated with sub-rectangular troughs and are usually located at either end (Hawkes 2018, 104). The absence of a hearth feature makes it difficult to say definitively that this structure could be a windbreak. However, it is possible that they formed a lightweight shelter for those working at the trough, or a rack or storage structure for holding or drying materials, the drying process would also suggest the presence of a fire or hearth.

Pits

The pits located within Fulacht 1 and 2 have been difficult to characterise. This is due in part to the pits being filled with similar waste material. However, certain uses can be ruled out from examining them more closely. None of the pits contained any signs of linings and so it can be presumed that they were not used as troughs. The pits are also of the most common shape found on fulacht sites, the sub-oval shape accounts for approximately 70% of those found (Hawkes 2018, 86). Similarly, the depth of the

pits (Table 2) makes it unlikely they were primarily used for water boiling as they are all too shallow. All of the pits found fall within the two most common depth ranges for pits found on fulacht sites (Hawkes 2018, 87). Such pits have been suggested as being used to store organic or ceramic containers (Grogan et al. 2007) however, with the exception of pit C45 no ceramic finds were discovered. The ceramic evidence could explain the function of pit C45, however, there was only a single sherd found in the upper section of the fill suggesting it was discarded with waste rather than from a pot broken in situ.

The lack of in situ burning in the pits means they were unlikely to have been used as fire pits to cook food. Despite this certain ethnographic evidence for cooking methods do describe earth ovens for smaller food items (Wandsnider 1997; Peacock 1998). If hot stones were placed into the pits after being heated in a fire there would be no in situ burning present. Especially if the pits were packed with organic material to promote a moist environment to facilitate food cooking (Wandsnider 1997, 14; Thoms 2008, 449). The abundance of charcoal-rich fills found in each of the pits does not necessarily discount them as food cooking pits as this has been previously attested to in other sites (Hawkes 2018, 89). However, there is a lack of animal bone or organic evidence present to confirm this idea. Consequently, it makes it difficult to differentiate the use of these pits from ancillary cooking pits to waste pits backfilled with charred raked out material.

It was possible to group some of the pits together using their fill material. Pits C38. C3 and C6 in Fulacht 1 all contained charcoal-rich

Context	Fulacht Fiadh	L(m)	W(m)	D(m)	
C38	1	1.28	1.1	0.2	
C44	2	0.25	0.24	0.16	
C45	2	2.35	1.04	0.28	
C47	1	1.95	1.25	0.26	
C51	1	1.1	0.7	0.2	
C60	2	0.62	0.31	0.21	
C62	2	1.38	1.23	0.09	
C64	2	1.89	1.3	0.3	

Table 2. Pit Dimensions.

deposits. The lack of any burnt mound material was also characteristic of these pits. This suggests that they would have been filled before the burnt mound material was spread across the area. Similarly the pits in Fulacht 2 can be grouped in this way. Pits C45, C60 and C63 were all filled with charcoal-rich material and, in the case of both C60 and C63, lay beneath the burnt mound material. This again suggests their use and backfilling before the burnt mound material was spread across the site. The posthole C44 was also filled in this manner.

Pits C41 and C47 from Fulacht 1 were both filled with burnt mound material, suggesting they were open when the material was spread across site. Although in the case of C41 this could have been disturbance from root activity. In Fulacht 2 the same is true of pit C64, as it is filled with material that is similar to the burnt mound material and was found directly beneath the spread.

Intensity of Use

In order to determine the intensity of use of these troughs some rough calculations were carried out to determine the volume of spread material associated with each fulacht area. The spread for Fulacht 1 was approximately 10.68m³. Given that there were two troughs in Fulacht 1 with a combined volume of 3m³ (Trough1=2m3, Trough2=1m3) it would give a minimum of c.4 complete fills of both troughs. As it is unlikely that the trough was fully filled on each use it could be presumed that a third of the stones could be used to successfully heat the water in the trough (Hawkes 2015). This would put the number at around 10 for the fulacht. While this is still relatively low it must be taken into account that agricultural activity almost certainly has reduced the amount of burnt mound material significantly. This can be attested to by the shallow layer of topsoil present over each of the fulacht areas (c.0.1m-0.2m)

Calculations for Fulacht 2 deliver a number of around 10 for intensity of use and for Fulacht 3 it worked out as 7. These numbers are again low and likely do not represent the actual intensity of use of these fulachtaí fia. The highly

disturbed nature of Area 2 is the probable reason for a low intensity with this fulacht. As for Fulacht 2 the same reason for the low yield in Fulacht 1 can be used here also. Despite this, it does demonstrate that the remaining material is consistent with the size of each fulacht. This suggests that each fulacht was possibly used to the same intensity before being abandoned and backfilled. This allows for a good insight into the prolonged activity and organisation of the site.

As all of the spreads for the fulachts were heavily truncated each of the above calculations are approximations. It was taken into account that the troughs were about one third filled with stone to carry out heating processes. However, granite is a durable stone and it is possible that stones could have been re-used multiple times in the heating process. If this was the case it would give a higher intensity of use for each trough and possible prolonged life for the fulachts.

Each trough also held a thin basal fill made up of a silty clay deposit. This likely formed when the troughs were in use and was never removed before they were backfilled. The mobile nature of this layer can be seen particularly in Trough 3 as the basal fill has been forced up to the east side by the heavier stony fill above. The build up of this layer suggests the troughs were not only left exposed but were in use for a prolonged period of time in order for this to occur.

Finds

Only 631 burnt mound sites in Ireland have documented finds. Of the 631 sites with finds uncovered only ten are within Dublin and of these ten only three have pottery present in the finds record (Hawkes 2018, 288 Appendix 1). Troughs and pits make up 7% (88) of the total finds found on these sites. Prehistoric pottery is very rarely found within troughs, only two documented cases (Hawkes 2018, 199). Pottery is more common in pits compared to troughs, as it is present in ten cases, but this is still very low. As a result, it makes the following finds all

the more impressive. A single flint and a number of ceramic finds were found associated Fulacht 2. Eight sherds of prehistoric pottery, some with linear decoration, were identified within the fills of Trough 3. A piece of worked flint was also recovered from the trough. Two additional sherds were retrieved from an adjacent pit. The pottery may be Early Bronze Age, or possibly even Beaker, though we are awaiting identification from Eoin Grogan. The fills in which the pottery was found were similar, however, they represented distinct fills with no clear interaction. It is plausible that the pieces were thrown out with waste material either into the burnt mound or spread material and were later deposited in the pit and trough when they were backfilled. As pottery only makes up around 9% of finds found in burnt mound sites (Hawkes 2018, 117) this is a rare find for a site such as this. Comparatively lithic finds, such as the flint found, account for 61% of total finds.

Further Investigations

Further testing to be carried out in Phase 2 of the development can hopefully shed some light on the surrounding area to the northeast of these features. There is a possibility for more similar features to be uncovered or perhaps further evidence of sustained occupation on the site contemporary with the features found here.

It is hoped that post-excavation analysis on the pottery and flint, combined with the radiocarbon dating of the features will tell us when these sites were in use. Were they in use at the same time, did they replace one another, or do they represent people returning to the same location over a long period of time?

The environmental analysis may also give us an insight into the surrounding landscape, the fuels selected for use at the sites, and prehaps indicate what the sites were used for.

The use of the fulachts was also difficult to discern at the time of excavation. As a result, their possible functions will be further assessed once the post-excavation analyses are complete.

Section 9 Conclusions

The excavation uncovered three fulachtaí fia within the Phase 1 portion of the site. The edge of a fourth was also identified, however this continued beyond the limit of excavation to the southwest. The excavations within the three archaeological areas is now complete as they are fully recorded. They have been handed over to the client.

Post-excavation analyses on the result of the excavation are now underway. Once the processing is complete the environmental analysis will be carried out by Lorna O'Donnell. The prehistoric pottery will be analysed by Eoin Grogan. Lithics will be analysed by Sean Sharpe. Radiocarbon dates for the three fulachtai fia will

be obtained from Queen 's University Belfast once the environmental analysis is complete.

All of Field 2 has now been archaeologically resolved. The majority of the eastern portion of Field 1 has also been resolved, though the line of the proposed road to the north has not been investigated to date.

Testing will be carried out in the Phase 2 lands in the New Year and a report on the results of this will be sent to the National Monuments Service along with an update to the impact assessment. Recommendations for any additional archaeological requirements will also be made.



Image showing finished area (green) alongside area of works to be carried out (red) inside the development area.

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ntext	Type	Fill of	Filled by	L. (m)	W. (m)	D. (m)	Interpretation	Description	Finds/	Context	Context Below	Area
	- "	,	,		,	0.0.0.4			Ecofacts			١
	Topsoil	n/a	n/a	n/a	n/a	0.2-0.6	topsoil	Mid to dark brown peaty soil.	n/a	n/a	multiple	all
	Subsoil	n/a	n/a	n/a	n/a	n/a	Natural	Light grey sandy clay with yellow mottling	n/a	multiple	n/a	all
	Cut	n/a	C5	1.91	1.8	0.18	Shallow pit	Shallow pit located at NE corner of trough c.4. Irregular oval in plan, u shape in profile. Imperceptible break of slope at top and base. Concave sides and concave base. Orientated N-S. Cut by stake hole c.8.	n/a	C8	Nat	1
4	Cut	n/a	C16, C17, C18, C20	3.12	1.54	0.42	Cut of trough	Trough located in N end of A1. Sub- rectangular shape in plan, u-shape in profile. Sharp break of slope at top and base. Undercut sides to N and S near vertical to E and W. Flat sloping base E to W. Orientated E- W.	n/a	C16	Nat	1
5	Fill	C3, C4	n/a	3.12	2.89	0.17	Fill of trough	uppermost fill of trough, spreads N to fill pit c.3. Loose black charcoal rich weathered granite and sand fill. Occasional scorched stones.	ss#11	Topsoil	20	1
6	Cut	n/a	C7	3.64	2.87	0.12	Shallow pit	Possible cut of shallow pit used for burnt material, possibly waste from trough C4. Irregular shape in plan, mostly circular. Break of slope is imperceptible at top and base. Gently sloping sides with a concave base. Cut on E side by modern field drain.	n/a	C7	Nat	1
7	Fill	C6	n/a	3.64	2.87	0.12	Fill of pit	Fill of shallow pit C6. comprised of burnt material likely associated with trough C4. Loose black charcoal rich silty sand. Frequent burnt granite inclusions.	ss#2	Topsoil	C6	1
8	Cut	n/a	C5	0.06	0.05	0.08	Stakehole	shape in plan, v-shape profile. Sharp break of slope at top. Steep sloping sides with pointed base.	ss#1	C5	C3	1
9	Non-arch	n/a	n/a	n/a	n/a	n/a	Natural clay deposit	Natural clay deposit beneath C6	n/a	C6	nat	1
10	Stake-hole	n/a	C5	0.09	0.08	0.1	Stake-hole	Stake-hole located at E end of trough C4. Sub-circular shape in plan, u-shape in profile. Sharp break of slope at top with vertical sides and flattened base. E side shared with C11.	ss#3	C5	nat	1

Context	Туре	Fill of	Filled by	L. (m)	W. (m)	D. (m)	Interpretation	Description	Finds/ Ecofacts	Context Above	Context Below	Area
11	Stake-hole	n/a	C5	0.06	0.04	0.09	Stake-hole	Stake-hole located at E end of trough C4. Sub-circular shape in plan, v-shape in profile. Sharp break of slope at top with steep sloping sides and rounded pointed base. W side shared with C10.	ss#3	C5	nat	1
12	Stake-hole	n/a	C5	0.09	0.07	0.16	Stake-hole	Stake-hole located at E end of trough C4. Sub-circular shape in plan, v-shape in profile. Sharp break of slope at top with vertical sides and pointed base. Located S of C11.	ss#5	C5	nat	1
13	Stake-hole	n/a	C5	0.07	0.07	0.11	Stake-hole	Stake-hole located at E end of trough C4. Sub-circular shape in plan, v-shape in profile. Sharp break of slope at top with vertical sides and pointed base. Located SW of C12.	ss#6	C5	nat	1
14	Stake-hole	n/a	C5	0.06	0.05	0.09	Stake-hole	Stake-hole located at E end of trough C4. Sub-circular shape in plan, v-shape in profile. Sharp break of slope at top with vertical sides and pointed base. Located W of C13.	ss#7	C5	nat	1
15	Stake-hole	n/a	C5	0.08	0.06	0.11	Stake-hole	Stake-hole located at E end of trough C4. Sub-circular shape in plan, v-shape in profile. Sharp break of slope at top with vertical sides and rounded point at base. Located W of	ss#8	C5	nat	1
16	Fill	C4	n/a	2.47	1.04	0.12	Fill of trough	0.1.	ss#10	C17	C4	1
17	Fill	C4	n/a	2.72	1.14	0.26	Fill of trough	Middle fill of trough C4. loose orange brown weathered granite and sand. Occasional charcoal and stones. Similar to spread material C21 and C32.	n/a	C20	C16	1
18	Fill	C4	n/a	3.12	1.09	0.17	Fill of trough	Uppermost fill of trough C4. Loose black charcoal rich silty sand. Frequaent burnt granite stones. Cut by modern drain runnning NE-SW.	ss#11	topsoil	C20	1
	Spread	n/a	n/a	6.63	3.33	0.17	Spread of burnt material	Spread of burnt material similar to C5 from trough. Loose dark grey black charcoal rich silty sand with orange mottle. Ocassional burnt granite.	ss#9	Topsoil	nat	1
20	Fill	C4	n/a	1.08	1	0.28	Fill of trough		n/a	C18	C17	1

Context	Туре	Fill of	Filled by	L. (m)	W. (m)	D. (m)	Interpretation	Description	Finds/ Ecofacts	Context Above	Context Below	Area
21	Spread	n/a	n/a	8	9	0.07-0.2	Spread of burnt material	Spread of burnt material associated with trough C4. This is southern extent of spread, same material as C32. Loose orange brown charcoal rich silty sand with black deposits. Frequent burnt granite inclusions.	n/a	C18, C19	C17	1
22	Stake-hole	n/a	C5	0.11	0,07	0.16	Stake-hole	Stake-hole located at E end of trough C4. Sub-oval shape in plan, v-shape in profile. Sharp break of slope at top with vertical sides except to SW where stepped, pointed base.	ss#13	C5	nat	1
23	Stake-hole	n/a	C5	0.06	0.05	0.14	Stake-hole	Stake-hole located at E end of trough C4. Sub-circular shape in plan, v-shape in profile. Sharp break of slope at top with steeply angled sides undercut to SE. NW side lost due to interaction with C24. pointed base. Located S of C22.	ss#14	C5	nat	1
24	Stake-hole	n/a	C5	0.1	0.1	0.12	Stake-hole	Stake-hole located at E end of trough C4. Sub-circular shape in plan, u-shape in profile. Sharp break of slope at top with steeply sloping sides. SE side lost due to interaction with C23. concave base. Located S of C22.	ss#14	C5	Nat	1
25	Cut	n/a	C26, C52	2.4	1.3	0.5	Cut of trough	Trough located at S side of A2. Sub-oval shape in plan, with rectangular shape to SE end. u-shape in profile. Sharp break of slope at top and base. Steeply sloping sides. Flat base, sloping to SE. Orientated NW-SE. Partially truncated by modern disturbance on NW side, possible root activity.		C52	Nat	2
26	Fill	C25	n/a	2.4	1.3	0.44	Fill of trough	Uppermost fill of trough C25. Comprises main	bs#1	topsoil	C52	2
27	Spread	n/a	n/a	1.03	0.83	0.01-0.09	Spread of burnt material	Small amount of spread material filling depression in natural. Loose dark grey clayey silt. With moderate charcoal and frequent burnt granite. Uneven and irregular shape likely due to root activity.	n/a	Topsoil	nat	2

Context	Туре	Fill of	Filled by	L. (m)	W. (m)	D. (m)	Interpretation	Description	Finds/ Ecofacts	Context Above	Context Below	Area
28	Cut	n/a	C29, C30, C31	1.96	1.3	0.36	cut of trough	Trough located in N end of A1, to SW of C4. Sub-rectangular shape in plan with u-shaped profile. Sharp break of slope at top and base. Near vertical sides with a flat base slightly sloping from NE to SW. Orientated NE-SW.	n/a	C31	Nat	1
29	Fill	C28	n/a	1.96	1.3	0.3	Fill of trough	Uppermost fill of trough C28. Main fill of trough. Loose black charcoal rich silty sand. Frequent burnt granite.	ss#15	Topsoil	C31	1
30	Fill	C28	n/a	1.14	1.3	0.2	Fill of trough	Lens of material within fill C29 of trough C28. likely contemporary with C29 and deposited after initial deposition of C29. Friable dark grey silty clay with occasional burnt granite.	n/a	C29	C29	1
31	Fill	C28	n/a	1.64	1.2	0.14	Fill of trough	Basal fill of trough C28. Loose light grey gravely sandy silt. Gravel likely comprised of burnt and broken down granite related to stones in upper fill.	ss#16	C29	C28	1
32	Spread	n/a	n/a	2.95	2.4	0.17	Spread of burnt material	Spread material associated with C4 that extends N of trough. Loose orange brown granite sand with frequent charcoal deposits. Frequent burnt granite and occasional sandstone. Similar to C17 fill of trough C4, and same as C21 (Southern extent of spread).	n/a	Topsoil	nat	1
33	Spread	n/a	n/a	1.45	0.86	0.07	Spread of burnt material	Spread material associated with trough C25 A2. Loose dark grey silty clay with orange mottle. Moderate charcoal and burnt granite inclusions. Material likely filling depression in natural.	n/a	Topsoil	Nat	2
34	Spread	n/a	n/a	0.88	0.82	0.05	Spread of burnt material	Spread material associated with trough C25 A2. Loose dark grey silty clay with orange mottle. Moderate charcoal and burnt granite inclusions. Material likely filling depression in natural. Adjacent to C33 and likley the same material.	n/a	Topsoil	Nat	2
35	Cut	n/a	C36	1.54	0.75	0.24	Cut of small pit	Cut of possible pit in NW corner of area 2. Irregular shape in plan. Break of slope at top and base sharp to S and E, gradual to N and W. Sloping sides steep in parts. Irregular base, orientated NW-SE. Possible scorching to SE corner. Irregular shape suggests natural formation possible tree bowl	n/a	C36	nat	2

Context	Type	Fill of	Filled by	L. (m)	W. (m)	D. (m)	Interpretation	Description	Finds/ Ecofacts	Context Above	Context Below	Area
36	Fill	C35	n/a	1.54	0.75	0.24	fill of small pit	Sole fill of possible pit C35. Loose mid brown silty soil. Frequent roots and small stones. Similar to topsoil. Suggests disturbance by root activity.	n/a	Topsoil	C35	2
37	Spread	n/a	n/a	8.4	>1.5	0.14	Spread of burnt material	Spread of burnt mound material located in area 3. Full extent unclear due to running beyond limit of excavation to E. Loose black charcoal rich silty sand. Frequent burnt granite inclusions. Cut by modern drain to S and by field boundary.	ss#19	Topsoil	nat	3
38	Cut	n/a	C39, C40	1.28	1.1	0.2	Cut of Pit	Cut of possible waste pit located to NW of trough C4. Sub-oval shape in plan semi oval in profile. Break of slope sharp at top and imperceptible at base, with sloping sides. Concave base and orientated NW-SE. Cut by C41 to S. Heavily disturbed by possible root activity to F.	n/a	C39	Nat	1
39	Fill	C38	n/a	1.28	1.05	0.08	Fill of pit	Basal fill of pit C38. Loose dark grey charcoal rich silty sand with frequent burnt granite inclusions.	ss#17	C40	C38	1
40	Fill	C38	n/a	0.97	1.1	0.14	Fill of pit	Upper fill of pit C38. Firm grey sandy clay with yellow mottling. Occasional charcoal and burnt granite sand inclusions. Likely natural redeposit that was washed in after initial deposition of C39.	n/a	C41	C39	1
41	Non-Arch	n/a	C42	1.9	0.75	0.17	Tree bowl	Disturbance in top of C38 caused by root activity, filled by burnt material likely from trough C4.	n/a	C42	C40	1
42	Fill	C41	n/a	1.9	0.75	0.17	Spread material	Spread material that has filled tree bowl C41 through possible root activity. Loose black charcoal rich silty sand with moderate burnt granite inclusions. Fills very irregular space due to heavy root disturbance. Abundance of small roots found throughout fill also.	n/a	Topsoil	C41	1
43	Fill	C44	n/a	0.25	0.24	0.09-0.16	Fill of possible posthole	Sole fill of possible posthole C44 in S end of A1. Loose dark grey/ black clayey silt. Moderate charcoal and occasional small stone inclusions.	ss#18	Topsoil	C44	1

Context	Type	Fill of	Filled by	L. (m)	W. (m)	D. (m)	Interpretation	Description	Finds/ Ecofacts	Context Above	Context Below	Area
44	Cut	n/a	C43	0.25	0.24	0.09-0.16	Cut of possible posthole	Remains of cut of post hole located in S end of A1. Sub-circular shape in plan with semi oval shape in profile. Break of slope at top sharp to W and S gradual to N and E, sharp at base. Near vertical sides and concave base.	n/a	C43	nat	1
45	Cut	n/a	C46	2.35	1.04	0.28	Cut of pit	Cut of pit in SE corner of A1, possible waste pit associated with trough C55. Sub-oval shape in plan with semi oval shape in profile. Break of slope at top gradual to N sharp all else, Break of slope at base is gradual. Sloping sides, steeper to S. Concave base and orientated SE-NW.	n/a	C46	nat	1
46	Fill	C45	n/a	2.35	1.04	0.28	Fill of pit	Sole fill of pit C45. Filled with similar material to that found in trough C55. Loose black charcoal rich silty sand with orange and grey mottle. Frequent burnt granite throughout. Ceramic found in upper part of fill, (rim sherd).	ss#20 Finds: Cerami C	Topsoil	C45	1
47	Cut	n/a	C48, C50	1.95	1.25	0.26	Cut of pit	Cut of pit. Sub-oval shape in plan, semi oval in profile. Break of slope sharp at top and gradual at base. Steep sloping sides, concave in places. Base is irregular but flat for the mostpart. Orientated NE-SW. Cut by later pit C51.	n/a	C48	nat	1
48	Fill	C47	n/a	1.95	1.25	0.1	Fill of pit	Basal fill of pit C47. Loose mid grey clayey sand. Occasional charcoal and small stone inclusions. Possibly related to troughs in close proximity.	n/a	C50	C47	1
49	Fill	C51	n/a	1.1	0.7	0.22	Fill of pit	Sole fill of re-cut C51. Loose orange brown sand with mid grey clay. Occasional charcoal and moderate burnt granite. Possible waste material from troughs due to presence of heat fractured stones.	n/a	Topsoil	C51	1
50	Fill	C47	n/a	1.95	1.25	0.18	Fill of pit	Upper fill of pit C47. Firm mid grey mix of sand and clay. Occasional charcoal inclusions. Likely waste material from trough as with other fills.	n/a	C51	C48	1
51	Cut	n/a	C49	1.1	0.7	0.22	Cut of pit		n/a	C49	C50	1

Context	Type	Fill of	Filled by	L. (m)	W. (m)	D. (m)	Interpretation	Description	Finds/ Ecofacts	Context Above	Context Below	Area
52	Fill	C25	n/a	2.4	1.3	0.12	Fill of trough	Basal fill of trough C25. Firm mid grey sandy clay with yellow mottle. Occasional small stone inclusions. Likely build up of material from water action in trough.	n/a	C26	C25	2
53	Spread	n/a	n/a	13.25	13.25	0.1-0.4	Spread of burnt material	Spread of material located to NW of trough C25. Cut by two modern drains and heavily disturbed due to tree root activity. Loose dark grey sandy clay with dark brown mottling. Moderate small stone, occasional medium stone and burnt granite inclusions. Possibly same as C33 and C34	n/a	Topsoil	nat	2
54	Spread	n/a	n/a	16.4	10.4	0.01-0.14	Spread of burnt material	Spread of material located in S end of A1, associated with trough C55. Loose dark grey / black silty sand. Frequent charcoal deposits with burnt granite, and moderate stone inclusions.	ss#22	Topsoil	C55,	1
55	Cut	n/a	C56, C57, C58, C59	3.5	2	0.37-0.61	Cut of trough	Cut of large trough located in S end of A1. Sub-rectangular shape in plan, becomes rounded to west. Break of slope sharp at top, gradual at base. Sides are near vertical and undercut in parts, possibly due to hydraulic action. Steep sloping to N side. Base is flat and slopes from E to W. Orientated E-W.	n/a	C56	nat	1
56	Fill	C55	n/a	1.45	2	0.11	Fill of trough	Basal fill of trough C55. Not present at W end of trough likely extruded away from base through deposition of stones, likely highly mobile when wet. Firm mid grey sandy clay with moderate charcoal, occasional medium stone and burnt granite inclusions.	n/a	C57	C55	1
57	Fill	C55	n/a	3.5	2	0.52	Fill of trough	Main fill of trough C55. Loose dark grey / black charcoal rich silty sand with orange brown mottling related to sand inclusions. Frequent large and medium stone inclusions primarily present in W end of fill. All stones are brunt or heat fractured. Sand present is likely from breakdown of granite.	ss#23	C58	C57	1
58	Fill	C55	n/a	3.5	2	0.36	Fill of trough	Upper fill of trough C55, similar to surrounding spread material. Ceramic and flint finds. Loose dark grey/black charcoal rich silty sand. Frequent small to medium burnt granite inclusions.	Finds; Cerami	C59	C57	1

Context	Type	Fill of	Filled by	L. (m)	W. (m)	D. (m)	Interpretation	Description	Finds/ Ecofacts	Context Above	Context Below	Area
59	Fill	C55	n/a	1.44	0.78	0.07	Fill of trough	Thin layer of material over the top of trough C55. Possible interface layer between uppermost fill and topsoil above. Loose mid grey brown stoney sandy clay. Occasional charcoal inclusions.	n/a	topsoil	C58	1
60	Cut	n/a	C61	0.62	0.31	0.21	Cut of pit		n/a	C61	nat	1
61	Fill	C60	n/a	0.62	0.31	0.21	Fill of pit	Sole fill of pit C60. Loose mid grey silty sand. Occasional burnt granite and sandstone, and charcoal inclusions. Similar to burnt spread C54.	ss#25	C54	C60	1
62	Cut	n/a	C63	1.38	1.23	0.09	Cut of shallow pit	Cut of shallow pit located to NW of trough C55, likely waste pit associated with trough. Sub-oval shape in plan, semi oval in profile. Break of slope is gradual at top and base, with concave sides and flat base. Orientated N-S.	n/a	C63	Nat	1
63	Fill	C62	n/a	1.38	1.23	0.09	Fill of pit	sole fill of shallow pit C62. Loose dark grey charcoal rich silty sand. Frequent burnt granite inclusions. Possible waste material from nearby trough C55. Underneath spread C54.	n/a	C54	C62	1
64	Cut	n/a	C65, C66	1.89	1.3	0.3	Cut of pit	Cut of pit at S end of area 1. Located S of trough C55, likely waste pit for trough. Suboval shape in plan, semi oval shape in profile. Break of slope at top sharp, gradual to W. Concave sides and a gradual break of slope at base. Base is flat and orientated E-W.	n/a	C66	Nat	1
65	Fill	C64	n/a	1.1	1	0.3	Fill of pit	Upper fill of waste pit C64. Loose dark grey sandy clay. Frequent charcoal and small to medium weathered stone inclusions. Likely burnt material associated with trough C55.	ss#26	C54	C66	1
66	Fill	C64	n/a	0.88	1.1	0.3	Fill of pit	Basal fill of waste pit C64. Loose orange brown with grey mottle gravely sand. Moderate burnt stone and occasional charcoal inclusions. Likely represents burnt stone dump from trough C55.	n/a	C65	C64	1

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APPENDIX B Finds Register		

		_						
Find No.	Site No.	Context No.	Item No.	Count	Simple name	Full name	Material	Description
21E0734:46:1	21E0734	46	1	2	Pottery	Pottery	Ceramic	Rim sherds. Possibly BA
21E0734:54:1	21E0734	54	1	5	Pottery	Pottery	Ceramic	Possibly body sherds, some fragmentary.
21E0734:58:1	21E0734	58	1	3	Pottery	Pottery	Ceramic	Body sherds with linear decortation.
21E0734:58:2	21E0734	58	2	1	Flint	Flint	Lithic	Flint scraper, burnt.

APPENDIX C Sample Register

Sample No.	Context No.	Cut no.	Area	Feature type	Volume (l.)	Reason for sample
1	C8	C8	1	Stake-hole	1x4l	100% sample of Stake-hole
2	C7	C6	1	Spread	2x10l	Charcoal rich deposit
3	C10	C10	1	Stake-hole	1x4l	100% sample of Stake-hole
4	Cancelled					
5	C11, C12	C11, C12	1	Stake-hole	1x4l	100% sample of Stake-hole
6	C13	C13	1	Stake-hole	1x4l	100% sample of Stake-hole
7	C14	C14	1	Stake-hole	1x4l	100% sample of Stake-hole
8	C15	C15	1	Stake-hole	1x4l	100% sample of Stake-hole
9	C19	C19	1	Spread	2x10l	Spread to E of trough C4
10	C16	C4	1	Trough	2x10l	Basal fill of trough C4
11	C18	C4	1	Trough	1x10l	Burnt stone rich fill of trough C4
12	C20	C4	1	Trough	1x10l	Charcoal rich fill of trough C4
13	C22	C22	1	Stake-hole	1x4l	100% sample of Stake-hole
14	C23, C24	C23, C24	1	Stake-hole	1x4l	100% sample of Stake-hole
15	C29	C28	1	Trough	1x10l	Charcoal rich fill of trough C28
16	C31	C28	1	Trough	1x10l	Basal fill of trough C28
17	C39	C38	1	Pit	1x10l	Charcoal rich basal fill
18	C43	C44	1	Posthole	1x4l	Sole fill of posthole
19	C37	C37	3	Spread	1x10l	Charcoal rich burnt mound material
20	C46	C45	1	Pit	2x10l	Ceramic find
21	C26	C25	2	Trough	2x10l	Main fill of trough C25
22	C54	C54	1	Spread	2x10l	Burnt spread related to trough C55
23	C57	C55	1	Trough	2x10l	Main fill of trough C55
24	C58	C55	1	Trough	1x10l	Ceramic and flint finds
25	C61	C60	1	Pit	1x10l	under spread C54
26	C65	C64	1	Pit	1x10l	Charcoal rich fill under spread C54

APPENDIX D Bone Register

Sample No.	Context No.	Fill No.	Feature type	Area	Notes
1	C25	C26	Trough	2	Animal bone

APPENDIX E Drawing Register

Drawing No.	Plan/Section		Scale	Area	Sheet No.	Cut no.s	Fill no.s	Issues	Checked
1	Section	SE-facing section of Pit C3 and Trough C4	1:20	1	1	C3, C4	C16, C18, C20		у
2	Section	N-facing section of pit C6	1:20	1	1	C6	C7		У
3	Section	W-facing section of trough C4	1:20	1	1	C4	C16, C17, C18		У
4	Section	E-facing section of spread C19	1:50	1	1	n/a	C19		У
5	Profile	SW-NE profile of stake-hole C8	1:10	1	1	C8	n/a		У
6	Profile	W-E profile of stake-hole C10, C11	1:10	1	1	C10, C11	n/a		У
7	Profile	SW-NE profile of stake-hole C12, C13	1:10	1	1	C12, C13	n/a		у
8	Profile	W-E profile of stake-hole C14, C15	1:10	1	1	C14, C15	n/a		ý
9	Profile	SE-NW profile of stake-hole C12, C22	1:10	1	1	C12, C22	n/a		У
10	Profile	SW-NE profile of stake-hole C23, C24	1:10	1	1	C23, C24	n/a		V
11	Section	W-facing section of pit C38 and recut C41	1:20	1	1	C38, C41	C39, C40, C42		у
12	Section	N-facing section of trough C28	1:20	1	1	C28	C29, C30, C31		у
13	Section	E-facing section of spread C21, C32	1:20	1	1	n/a	C21, C32		У
14	Section	NE-facing section of C44	1:10	1	3	C44	C43		V
15	Section	NE-facing section of spread C37	1:20	3	3	n/a	C37		У
16	Section	E-facing section of pit C45	1:20	1	3	C45	C46		У
17	Section	SE-facing section of pit C47 and recut C51	1:20	1	3	C47, C51	C48, C49, C50		
18	Section	SW-facing section of trough C25	1:20	2		C25	C26, C52		У
					1				V
19	Plan	Post ex plan of area 2	1:50	2		C25, C27, C35, C53	n/a		
					4				
									У

Drawing No.	Plan/Section	Description	Scale	Area	Sheet No.	Cut no.s	Fill no.s	Issues	Checked
20	Plan	Post ex plan of area 1 (northern	1:50	1		C3, C4, C6,	n/a		
		extent)				C8, C10,			
						C11, C12,			
						C13, C14,			
					2	C15, C19,			
						C21, C22,			
						C23, C24,			
						C28, C38,			
						CA1 CA7			У
21	Section	SW-facing section of spread C54	1:20	1	3	n/a	C54		У
22	Plan	Post ex plan of area 1 (southern	1:50	1		C44, C45,	n/a		
		extent)			5	C54, C55,			
					9	C60, C62,			
						C64			У
23	Section	S-facing section of trough C55	1:20	1	3	C55	C56, C57, C58, C59		У
24	Section	W-facing section of trough C55	1:20	1	3	C55	C56, C57, C58, C59		У
25	Section	NE-facing section of pit C61	1:20	1	3	C61	C62		У
26	Section	N-facing section of C64	1:20	1	3	C64	C65, C66		У
27	plan	Post ex plan of area 3, C37	1:50	3	5	C37	n/a		У
28	Section	N-S profile of C55	1:20	1	3	C55	n/a		У
29	Section	E-W profile of C55	1:20	1	3	C55	n/a		У

APPENDIX F Photo Register

The photographic record from the site has been organised in the following way. The archive consists of 337.

1. A sorted collection of the photos from the excavation arranged in folders.

Folder 1	Area 1	(191 images)
Folder2	Area 2	(34 images)
Folder 3	Area 3	(46 images)
Folder 4	Monitoring	(54 images)
Folder 5	Site inspection	(12 images)

Images under the Monitoring folder were taken using a phone, all other images were taken using digital DSLR camera.

APPENDIX G Archive Register

Site Name: Glenamuck North Archaeological Licence No. 21E0734 Site director: Steven McGlade

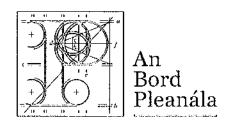
Date: 03/12/2021

Field Records	Items (quantity)	Comments
Site drawings (plans)	4	
Site sections, profiles, elevations	25	
Other plans, sketches, etc.	0	
Timber drawings	0	
Stone structural drawings	0	
Site diary/ notebooks	1	
Site registers (folders)	1	
Survey/levels data (origin information)	Digital	
Context sheets (paper)	66	
Context sheets (digital)	66	
Wood sheets	0	
Skeleton sheets	0	
Worked stone sheets	0	
Digital photographs	337	
Photographs (print)	0	
Photographs (slide)	0	
Finds and environmental archive		
Flint/chert	1	
Stone artefacts	0	
Pottery - prehistoric	10	
Medieval	0	
Post-medieval	0	
Ceramic building materials (specify types eg	0	
daub, tile)	0	
Metal artefacts (specify types - bronze, iron) -		
iron	0	
Glass	0	
	U	
Other find types or special finds	0	
Human bone (specify type eg cremated,		
skeleton, disarticulated) - cremated bone	0	
Animal bone	1	
Metallurgical waste	0	
Environmental bulk soil (specify number of		
samples)	26	
Timbers/ stakes	0	
Security of archive	Good	Digital and paper archive

Our Ref: ABP-303978-19

PA Reg Ref:

Your Ref:



Jerry Barnes MacCabe Durney Barnes 20 Fitzwilliam Place Dublin 2

MacCabe Durney Barnes
Received on

28/96/19

Date: 2.7 JUN 2019

Re: 30 no. houses and 173 no. apartments with all associated site works. Glenamuck Road South, Kilternan, Dublin 18.

Dear Sir

An Bord Pleanála has made a decision in respect of the application for Strategic Housing Development for the above mentioned proposed development. A copy of the Board Order is enclosed.

In accordance with section 146(5) of the Planning and Development Act, 2000, as amended, the Board will make available for inspection and purchase at its offices the documents relating to the decision within 3 working days following its decision. In addition, the Board will also make available the Inspector's Report and the Board Direction on the decision on its website (www.pleanala.ie). This information is normally made available on the list of decided cases on the website on the Wednesday following the week in which the decision is made.

Overleaf contains information in relation to challenges to the validity of a decision of An Bord Pleanála under the provisions of the Planning and Development Act, 2000, as amended.

If you have any queries in relation to the matter please contact the undersigned officer of the Board.

Please mark in block capitals "STRATEGIC HOUSING UNIT" and quote the above mentioned An Bord Pleanála reference number in any correspondence or telephone contact with the Board.

Yours faithfully,

Cora Cunningham Executive Officer

Direct Line: 01-8737246

Encis. SHA32

Judicial review of An Bord Pleanála decisions under the provisions of the Planning and Development Act, 2000, as amended.

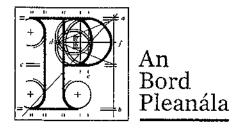
A person wishing to challenge the validity of a Board decision may do so by way of judicial review only. Sections 50, 50A and 50B of the Planning and Development Act 2000 (as substituted by section 13 of the Planning and Development (Strategic Infrastructure) Act 2006, as amended/substituted by sections 32 and 33 of the Planning and Development (Amendment) Act 2010 and as amended by sections 20 and 21 of the Environment (Miscellaneous Provisions) Act 2011) contain provisions in relation to challenges to the validity of a decision of the Board.

The validity of a decision taken by the Board may only be questioned by making an application for judicial review under Order 84 of The Rules of the Superior Courts (S.I. No. 15 of 1986). Sub-section 50(6) of the Planning and Development Act 2000 requires that subject to any extension to the time period which may be allowed by the High Court in accordance with subsection 50(8), any application for judicial review must be made within 8 weeks of the decision of the Board. It should be noted that any challenge taken under section 50 may question only the validity of the decision and the Courts do not adjudicate on the merits of the development from the perspectives of the proper planning and sustainable development of the area and/or effects on the environment. Section 50A states that leave for judicial review shall not be granted unless the Court is satisfied that there are substantial grounds for contending that the decision is invalid or ought to be quashed and that the applicant has a sufficient interest in the matter which is the subject of the application or in cases involving environmental impact assessment is a body complying with specified criteria.

Section 50B contains provisions in relation to the cost of judicial review proceedings in the High Court relating to specified types of development (including proceedings relating to decisions or actions pursuant to a law of the state that gives effect to the public participation and access to justice provisions of Council Directive 85/337/EEC i.e. the EIA Directive and to the provisions of Directive 2001/12/EC i.e. Directive on the assessment of the effects on the environment of certain plans and programmes). The general provision contained in section 50B is that in such cases each party shall bear its own costs. The Court however may award costs against any party in specified circumstances. There is also provision for the Court to award the costs of proceedings or a portion of such costs to an applicant against a respondent or notice party where relief is obtained to the extent that the action or omission of the respondent or notice party contributed to the relief being obtained.

General information on judicial review procedures is contained on the following website, www.citizensinformation.ie.

Disclaimer: The above is intended for information purposes. It does not purport to be a legally binding interpretation of the relevant provisions and it would be advisable for persons contemplating legal action to seek legal advice.



Board Order ABP-303978-19

Planning and Development Acts 2000 to 2018

Planning Authority: Dún Laoghaire-Rathdown County Council

Application for permission under section 4 of the Planning and Development (Housing) and Residential Tenancies Act 2016, in accordance with plans and particulars, lodged with An Bord Pleanála on the 19th day of March 2019 by Victoria Homes Limited care of MacCabe Durney Barnes Limited, 20 Fitzwilliam Place, Dublin 2.

Proposed Development:

A planning permission for a strategic housing development on a site circa 4.28 hectares, at Glenamuck Road South, Kiltiernan, Dublin 18.

The proposed development will consist of:

- 1. The construction of 203 number residential units comprising;
 - 30 number houses (20 number three-bedroom and 10 number four-bedroom, up to three storeys)
 - 173 number apartments, (31 number one-bed, 124 number two-bed and 18 number three-bed within 12 blocks up to six storeys). The apartments incorporate duplex units.
- 2. The provision of a creche/childcare facility (circa 480.4 square metres).
- 3. The provision of a retail unit (circa 83.5 square metres).
- 4. The provision of a social/amenity facility (circa 299.4 square metres).
- 5. The provision of two Electricity Supply Board substations (circa total 45 square metres).

- 6. The development will include a new access from Glenamuck Road and the provision of access connection points, (vehicular, cycle and pedestrian) to future adjacent development lands.
- 7. Provision of internal roads, cycle paths, foot paths, landscaped public open space and play areas.
- Parking at surface and basement (268 number total spaces for car parking,
 312 number spaces for bicycles and 24 number spaces for motor cycles).
- 9. The development will include a new access from Glenamuck Road and the provision of access points, (vehicular, cycle and pedestrian) to future development lands and adjacent lands to the west and north west.
- 10. Provision of attenuation and all ancillary site development works, boundary treatments, lighting and services provision above and below ground.

Decision

Grant permission for the above proposed development in accordance with the said plans and particulars based on the reasons and considerations under and subject to the conditions set out below.

Matters Considered

In making its decision, the Board had regard to those matters to which, by virtue of the Planning and Development Acts and Regulations made thereunder, it was required to have regard. Such matters included any submissions and observations received by it in accordance with statutory provisions.

ABP-303978-19 Board Order Page 2 of 18

Reasons and Considerations

In coming to its decision, the Board had regard to the following:

- (a) the site's location within the boundary of the Kiltiernan/ Glenamuck Local Area Plan 2013-2019 with a zoning objective for residential development;
- (b) the policies and objectives in the Dún Laoghaire Rathdown County Development Plan 2016-2022;
- (c) the Rebuilding Ireland Action Plan for Housing and Homelessness 2016;
- (d) the Design Manual for Urban Roads and Streets (DMURS) issued by the Department of Transport, Tourism and Sport and the Department of the Environment, Community and Local Government in March 2013;
- (e) the Guidelines for Sustainable Residential Developments in Urban Areas and the accompanying Urban Design Manual – a Best Practice Guide, issued by the Department of the Environment, Heritage and Local Government in May 2009;
- (f) the Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities issued by the Department of the Housing, Planning and Local Government in March 2018;
- (g) the Urban Development and Building Heights, Guidelines for Planning Authorities 2018;
- (h) the nature, scale and design of the proposed development;
- (i) the pattern of existing and permitted development in the area;
- (j) the submissions and observations received, and
- (k) the report of the Inspector.

It is considered that, subject to compliance with the conditions set out below, the proposed development would not seriously injure the residential or visual amenities of the area or of property in the vicinity, would respect the existing character of the area, and would be acceptable in terms of pedestrian and traffic safety and convenience. The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

Appropriate Assessment Screening

The Board completed an Appropriate Assessment screening exercise in relation to the potential effects of the proposed development on designated European Sites, taking into account the nature, scale and location of the proposed development, the Screening for Appropriate Assessment Screening report submitted with the application, the Inspector's report, and submissions on file. In completing the screening exercise, the Board adopted the report of the Inspector and concluded that, by itself or in combination with other development in the vicinity, the proposed development would not be likely to have a significant effect on any European Site in view of the sites' conservation objectives, and that a Stage 2 Appropriate Assessment is not, therefore, required.

Environmental Impact Assessment Screening

The Board completed an environmental impact assessment screening of the proposed development and considered that the Environmental Impact Assessment Screening Report submitted by the applicant, identifies and describes adequately the direct, indirect, secondary, and cumulative effects of the proposed development on the environment.

Having regard to:

- (a) the nature and scale of the proposed development on a site served by public infrastructure.
- (b) the absence of any significant environmental sensitivities in the area,
- (c) the location of the development outside of any sensitive location specified in article 109(3) of the Planning and Development Regulations 2001 (as amended),

the Board concluded that, by reason of the nature, scale and location of the subject site, the proposed development would not be likely to have significant effects on the environment. The Board decided, therefore, that an environmental impact assessment report for the proposed development was not necessary in this case.

ABP-303978-19 Board Order Page 4 of 18

Conditions

The development shall be carried out and completed in accordance with the plans and particulars lodged with the application, except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior to commencement of development and the development shall be carried out and completed in accordance with the agreed particulars. In default of agreement, the matter(s) in dispute shall be referred to An Board Pleanála for determination.

Reason: In the interest of clarity.

The landscaping scheme shown on drawing number 100 Landscape
 Masterplan, as submitted to the An Bord Pleanála on the 19th day of March,
 2019 shall be carried out within the first planting season following substantial completion of external construction works.

All planting shall be adequately protected from damage until established. Any plants which die, are removed or become seriously damaged or diseased, within a period of five years from the completion of the development, shall be replaced within the next planting season with others of similar size and species, unless otherwise agreed in writing with the planning authority.

Reason: In the interest of residential and visual amenity.

ABP-303978-19 Board Order Page 5 of 18

3. Prior to the commencement of development, the developer shall retain the professional services of a qualified landscape architect as landscape consultant throughout the life of the site development works and shall notify the planning authority of that appointment in writing. The developer shall engage the landscape consultant to procure, oversee and supervise the landscape contract for the implementation of the permitted landscape proposals. When all landscape works are inspected and completed to the satisfaction of the landscape consultant, he/she shall submit a Practical Completion Certificate (PCC) to the planning authority for written agreement, as verification that the approved landscape plans and specification have been fully implemented.

Reason: To ensure full and verifiable implementation of the approved landscape design proposals for the permitted development, to the approved standards and specification.

- 4. All trees and hedgerows within and on the boundaries of the site shall be retained and maintained, with the exception of the following:
 - (a) Specific trees, the removal of which is authorised in writing by the planning authority to facilitate the development.
 - (b) Trees which are agreed in writing by the planning authority to be dead, dying or dangerous through disease or storm damage, following submission of a qualified tree surgeon's report, and which shall be replaced with agreed specimens.

Retained trees and hedgerows shall be protected from damage during construction works. Within a period of six months following the substantial completion of the proposed development, any planting which is damaged, or dies shall be replaced with others of similar size and species, together with replacement planting required under paragraph (b) of this condition.

Reason: In the interest of visual amenity.

5. Prior to commencement of any permitted development, the developer shall engage the services of a qualified arborist as an arboricultural consultant, for the entire period of construction activity. The developer shall inform the planning authority in writing of the appointment and name of the consultant, prior to commencement of development. The consultant shall visit the site at a minimum on a monthly basis, to ensure the implementation of all of the recommendations in the tree reports and plans. To ensure the protection of trees to be retained within the site, the developer shall implement all the recommendations pertaining to tree retention, tree protection and tree works, as detailed in the in the submitted Tree Survey Report. All tree felling, surgery and remedial works shall be completed upon completion of the works. All works on retained trees shall comply with proper arboricultural techniques conforming to BS 3998: 2010 Tree Work – Recommendations. The clearance of any vegetation including trees and shrub shall be carried out outside the bird-breeding season (1 March-31 August inclusive) or as stipulated under the Wildlife Acts 1976 and 2000. The arborist shall carry out a post construction tree survey and assessment on the condition of the retained trees. A completion certificate is to be signed off by the arborist when all permitted development works are completed and in line with the recommendations of the tree report. The certificate shall be submitted to the planning authority upon completion of the works.

Reason: To ensure and give practical effect to the retention, protection and sustainability of trees during and after construction of the permitted development.

6. Prior to the commencement of development, the developer shall submit revised plans for the written agreement of the planning authority. The revisions will relate to the pedestrian linkage referred to as proposed connection point 2 in section 5.2 of the Masterplan, Connections and Open Space Hierarchy Report and shall comprise a redesign of the proposed connection to ensure that it is universally accessible.

Reason: In the interests of inclusion and pedestrian permeability.

ABP-303978-19 Board Order Page 7 of 18

- 7. The following requirements in terms of traffic, transportation and mobility shall be incorporated and, where required, revised drawings / reports showing compliance with these requirements shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development:
 - (a) The roads and traffic arrangements serving the site (including footpath connections and signage) shall be in accordance with the detailed requirements of the planning authority for such works and shall be carried out at the developer's expense.
 - (b) The roads layout including junctions, parking areas, footpaths, cycle paths and kerbs, pedestrian crossings, car parking bay sizes and road access to the development shall comply with the requirements of the Design Manual for Roads and Streets and with any requirements of the planning authority for such road works.
 - (c) Cycle tracks within the development shall be in accordance with the guidance provided in the National Cycle Manual.
 - (d) The materials used in any roads/footpaths/set down areas provided by the developer shall comply with the detailed standards of the planning authority for such road works.
 - (e) A Mobility Management Plan shall be prepared and submitted to the planning authority for approval prior to the commencement of development.
 - (f) The developer shall carry out a Stage 2 and Stage 3 Quality Audit (which shall include a Road Safety Audit, Access Audit, Cycle Audit and Walking Audit), which shall be submitted to the planning authority for its written agreement. The developer shall carry out all agreed recommendations contained in the audits, at the developer's expense.

Reason: In the interests of traffic, cyclist and pedestrian safety.

8. Prior to the developer making available for occupation of any of the units, all of the proposed pedestrian cyclist links shall be satisfactorily completed at the developer's expense and available for public use. This shall include the proposed new footpath/cycle link along the northern side of Glenamuck Road South, unless otherwise agreed with the planning authority.

Reason: To comply with Section 10.6 of the Kiltiernan/ Glenamuck Local Area Plan 2013-2019 and provide for connectivity.

9. Prior to commencement of development the developer shall agree details of the layout and all works to be carried out at the developers expense at Glenamuck Road South with the planning authority (Capital Projects Section).

Reason: In the interests of sustainable development and proper planning.

10. All roads shown connecting to adjoining lands shall be constructed up to the boundaries with no ransom strips remaining to provide access to adjoining lands. These areas shall be shown for taking in charge in a drawing to be submitted and agreed with the planning authority

Reason: In the interest of permeability and proper planning and sustainable development.

11. No dwelling units within the proposed development shall be sold separately, independent from the associated car parking provision. All the proposed car parking spaces shall be for occupants of the residential units and shall be sold off with the units and not sold separately or let independently from the residential development.

Reason: In the interest of orderly development.

12. The proposed development shall make provision for the charging of electrical vehicles. All car parking spaces shall be provided with electrical connections, to allow for the provision of future charging points and in the case of all of the parking areas serving the apartments and 10% of the spaces serving the houses shall be provided with electrical charging points by the developer. Details of how it is proposed to comply with these requirements, including details of design of, and signage for, the electrical charging points and the provision for the operation and maintenance of the charging points (where they are not in the areas to be taken in charge) shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development.

Reason: In the interests of pedestrian, cyclist and traffic safety, to protect residential amenity and in the interest of sustainable transportation.

13. Public lighting shall be provided in accordance with a scheme, details of which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. Such lighting shall be provided prior to the making available for occupation of any unit.

Reason: In the interests of amenity and public safety.

14. Water supply and drainage arrangements, including the attenuation and disposal of surface water, shall comply with the requirements of the planning authority for such works and services.

Reason: In the interest of public health.

15. Proposals for an estate/development name, apartment and house numbering scheme and associated signage shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development.

Thereafter, all estate/development signs, and apartment/house numbers, shall be provided in accordance with the agreed scheme. The proposed name shall be based on local historical or topographical features, or other alternatives acceptable to the planning authority. No advertisements/marketing signage relating to the name of the development shall be erected until the developer has obtained the planning authority's written agreement to the proposed name.

Reason: In the interests of urban legibility, and to ensure the use of locally appropriate place names for new residential developments.

16. The mitigation measures outlined in the Ecology Impact Assessment submitted with this application shall be carried out in full, except where otherwise required by conditions of this permission.

Reason: To protect the environment.

- 17. The developer shall facilitate the archaeological appraisal of the site and shall provide for the preservation, recording and protection of archaeological materials or features which may exist within the site. In this regard, the developer shall:
 - (a) notify the planning authority in writing at least four weeks prior to the commencement of any site operation (including hydrological and geotechnical investigations) relating to the proposed development, and
 - (b) employ a suitably-qualified archaeologist prior to the commencement of development. The archaeologist shall assess the site and monitor all site development works.

The assessment shall address the following issues:

- (i) the nature and location of archaeological material on the site, and
- (ii) the impact of the proposed development on such archaeological material.

A report, containing the results of the assessment, shall be submitted to the planning authority and, arising from this assessment, the developer shall agree in writing with the planning authority details regarding any further archaeological requirements (including, if necessary, archaeological excavation) prior to commencement of construction works.

In default of agreement on any of these requirements, the matter shall be referred to An Bord Pleanála for determination.

Reason: In order to conserve the archaeological heritage of the area and to secure the preservation (in-situ or by record) and protection of any archaeological remains that may exist within the site.

18. Notwithstanding the provisions of the Planning and Development Regulations 2001, or any statutory provision amending or replacing them, no advertisement signs (including any signs installed to be visible through the windows), advertisement structures, banners, canopies, flags, or other projecting elements shall be displayed or erected on the buildings or within the curtilage of the site, unless authorised by a further grant of planning permission.

Reason: In the interest of visual amenity, and to permit the planning authority to assess all signage on this site through the statutory planning process.

19. Details of the materials, colours and textures of all the external finishes to the proposed buildings shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This shall include revised drawings indicating the omission of timber cladding and use of render on the apartment blocks and its replacement with more suitable robust and sustainable material/s. The finishes of the proposed bin stores and substation shall be changed from brick to granite.

Reason: In the interest of the visual amenities of the area.

20. No additional development shall take place above roof parapet level, including lift motor enclosures, air handling equipment, storage tanks, ducts or other external plant, telecommunication aerials, antennas or equipment, unless authorised by a further grant of planning permission.

Reason: To protect the residential amenities of property in the vicinity and the visual amenities of the area.

21. Site development and building works shall be carried out only between 0800 to 1800 hours Mondays to Fridays inclusive, between 0800 to 1400 hours on Saturdays and not at all on Sundays and public holidays. Deviation from these times will only be allowed in exceptional circumstances where prior written approval has been received from the planning authority.

Reason: In order to safeguard the amenities of property in the vicinity.

22. Prior to the commencement of development, the developer shall submit a construction and demolition waste management plan to the planning authority for agreement prepared in accordance with the Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects published by the Department of the Environment, Heritage and Local Government in July 2006. This shall include details of waste to be generated during site clearance and construction phases and details of the methods and locations to be employed for the prevention, minimisation, recovery and disposal of this material.

Reason: In the interest of orderly development and sustainable waste management.

23. Prior to commencement of development the developer shall submit and obtain the written agreement of the planning authority, a plan containing details for the management of waste within the development, including the provision of facilities for the storage, separation and collection of the waste and for the ongoing operation of these facilities.

Reason: To provide for the appropriate management of waste and, in particular recyclable materials, in the interest of protecting the environment.

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24. All service cables associated with the proposed development (such as electrical, communal television, telephone and public lighting cables) shall be run underground within the site. In this regard, ducting shall be provided to facilitate the provision of broadband infrastructure within the proposed development.

Reason: In the interest of orderly development and the visual amenities of the area.

25. The construction of the development shall be managed in accordance with a Construction Management Plan, which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This plan shall include details and location of proposed construction compounds, details of intended construction practice for the development, noise management measures, and details of off-site disposal of construction/demolition waste.

Reason: In the interests of public safety and residential amenity.

26. Prior to commencement of development, the developer shall submit to and agree in writing with the planning authority a properly constituted Owners' Management Company. This shall include a layout map of the permitted development showing the areas to be taken in charge and those areas to be maintained by the Owners' Management Company. Membership of this company shall be compulsory for all purchasers of apartments and duplex units in the development. Confirmation that this company has been set up shall be submitted to the planning authority prior to the occupation of the first residential unit.

Reason: To provide for the satisfactory completion and maintenance of the development in the interest of residential amenity.

27. Prior to commencement of development, the developer or other person with an interest in the land to which the application relates shall enter into an agreement in writing with the planning authority in relation to the provision of housing in accordance with the requirements of section 94(4) and Section 96(2) and (3) (Part V) of the Planning and Development Act 2000, as amended, unless an exemption certificate shall have been applied for and been granted under section 97 of the Act, as amended. Where such an agreement is not reached within eight weeks from the date of this order, the matter in dispute (other than a matter to which section 97(7) applies) may be referred by the planning authority or any other prospective party to the agreement to the Board for determination.

Reason: To comply with the requirements of Part V of the Planning and Development Act 2000, as amended, and of the housing strategy in the development plan for the area.

28. Prior to commencement of development, the developer shall lodge with the planning authority a cash deposit, a bond of an insurance company, or other security to secure the provision and satisfactory completion and maintenance until taken in charge by the local authority of roads, footpaths, watermains, drains, public open space and other services required in connection with the development, coupled with an agreement empowering the local authority to apply such security or part thereof to the satisfactory completion or maintenance of any part of the development. The form and amount of the security shall be as agreed between the planning authority and the developer or, in default of agreement, shall be referred to An Bord Pleanála for determination.

Reason: To ensure the satisfactory completion and maintenance of the development until taken in charge

29. Prior to commencement of development, the developer shall lodge with the planning authority a cash deposit, a bond of an insurance company, or such other security as may be acceptable to the planning authority, to secure the reinstatement of public roads which may be damaged by the transport of materials to the site, coupled with an agreement empowering the planning authority to apply such security or part thereof to the satisfactory reinstatement of the public road. The form and amount of the security shall be as agreed between the planning authority and the developer or, in default of agreement, shall be referred to An Bord Pleanála for determination.

Reason: In the interest of traffic safety and the proper planning and sustainable development of the area.

30. The developer shall pay to the planning authority a financial contribution in respect of public infrastructure and facilities benefiting development in the area of the planning authority that is provided or intended to be provided by or on behalf of the authority in accordance with the terms of the Development Contribution Scheme made under section 48 of the Planning and Development Act 2000, as amended. The contribution shall be paid prior to commencement of development or in such phased payments as the planning authority may facilitate and shall be subject to any applicable indexation provisions of the Scheme at the time of payment. Details of the application of the terms of the Scheme shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be referred to An Bord Pleanála to determine the proper application of the terms of the Scheme.

Reason: It is a requirement of the Planning and Development Act 2000, as amended, that a condition requiring a contribution in accordance with the Development Contribution Scheme made under section 48 of the Act be applied to the permission.

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31. The developer shall pay to the planning authority a financial contribution in respect of the Glenamuck District Distributor Road Scheme and the Surface Water Attenuation Ponds Scheme in accordance with the terms of the Supplementary Development Contribution Scheme made by the Planning Authority under section 49 of the Planning and Development Act 2000, as amended. The contribution shall be paid prior to commencement of development or in such phased payments as the planning authority may facilitate and shall be subject to any applicable indexation provisions of the Scheme at the time of payment. Details of the application of the terms of the Scheme shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be referred to An Bord Pleanála to determine the proper application of the terms of the Scheme.

Reason: It is a requirement of the Planning and Development Act 2000, as amended, that a condition requiring a contribution in accordance with the Supplementary Development Contribution Scheme made under section 49 of the Act be applied to the permission.

Paul Hyde

Member of An Bord Pleanála duly authorised to authenticate the seal of the Board.

Dated this 2 day of June

2019