

ARCHAEOLOGICAL ASSESSMENT AT TILE 3, CLONBURRIS STRATEGIC DEVELOPMENT ZONE, CAPPAGH, COUNTY DUBLIN

ON BEHALF OF: CAIRN HOMES PLC

AUTHORS: MATT BROOKS & FERGAL MURTAGH

NOVEMBER 2022

IAC PROJECT REF.: J3803

DOCUMENT CONTROL SHEET

DATE	DOCUMENT TITLE	REV.	PREPARED BY	REVIEWED BY	APPROVED BY
28.11.22	Archaeological Assessment at Tile 3, Clonburris SDZ, Cappagh, County Dublin	0	Matt Brooks	Faith Bailey	Faith Bailey

ABSTRACT

This report has been prepared on behalf of Cairn Homes PLC, to study the impact, if any, on the archaeological and historical resource of the proposed residential development at Tile 3 within the Clonburris Strategic Development Zone (SDZ), Cappagh, County Dublin (Figure 1, ITM 705707, 732566). The assessment was undertaken by Matt Brooks and Fergal Murtagh of IAC Archaeology.

The site comprises three fields, south of the Great Southern and Western Railway line. There is one archaeological site partially within the proposed development area consisting of an enclosure (DU017-036) discovered through aerial photography taken in 1971 (SMR file). It should be noted that this site does not possess any upstanding remains and is not visible at ground level. There are no further archaeological sites within 250m of the proposed development area.

Geophysical survey of the site was carried out in June 2022 (Dowling 2022, Licence 22R0200) and indicated several potential features of archaeological significance including faint anomalies possibly associated with enclosure DU017-036, a ditch, several pits/spreads and evidence of agriculture.

Test trenching was conducted under licence 22E0719 in November 2022, as issued by the DoHLGH. A total of six trenches were excavated in Tile 3, with an additional six trenches excavated in Tile 2 to the immediate east and southeast.

Trench 1, in the western part of the site, revealed the remains of a linear spread of material (aligned northeast-southwest), which sealed a metalled surface with a width of 2.3m. It is possible this feature represents the remains of a field track, but no such features are marked in this area within the historic mapping. Ground disturbances associated with the development will result in a negative impact on this feature.

Trenches 7 and 8, located within Tile 2 to the immediate east, targeted the more definitive geophysical anomalies that may relate to enclosure DU017-036. The anomalies comprise the remains of shallow ditches measuring between 1.52m and 2.05m wide and 0.4m to 0.48m deep. No diagnostic material was recorded and if the ditches do relate to an enclosure, they appear to have been subject to a large amount of horizontal truncation due to the shallow depth. Due to the required layout/density of the proposed development, any archaeological remains associated with the monument will be subject to a negative impact. This will be caused by ground disturbances associated with the construction of the development.

Prior to the commencement of construction any remains associated with enclosure DU017-036 and the identified metalled surface, will be subject to a programme of preservation by record (archaeological excavation). This will be carried out under licence to the National Monuments Service of the DoHLGH.

Ground disturbances associated with the overall development may have an adverse impact on small or isolated archaeological remains that have the potential to survive beneath the current ground level and outside of the footprint of the excavated test trenches. As such, all topsoil stripping associated with the proposed development will be monitored by a suitable qualified archaeologist. If any archaeological features are identified, further consultation will be carried out with the DoHLGH in order to agree additional mitigation, such as preservation in-situ or by record.

CONTENTS

ABSTRACT					
CONTEN	NTS	III			
List of	f Figures	iv			
List of	f Plates	iv			
1 INT	TRODUCTION	1			
1.1	General				
1.2	The Development				
2 ME 2.1	ETHODOLOGYPaper Survey				
2.1	Field Inspection				
2.2	Geophysical Survey				
2.3	Archaeological Testing				
	SULTS OF ARCHAEOLOGICAL ASSESSMENT				
3.1	Archaeological and Historical Background				
3.2	Summary of Previous Archaeological Fieldwork				
3.3	Cartographic Analysis				
3.4 3.5	County Development Plan Topographical Files of the National Museum of Ireland				
3.5 3.6	Aerial Photographic Analysis				
3.7	Field Inspection				
3.8	Summary of Geophysical Survey				
3.9	Summary of Archaeological Testing				
	ONCLUSIONS				
	PACT ASSESSMENT AND MITIGATION STRATEGY				
5.1	Impact Assessment				
5.2	Mitigation	17			
6 REF	FERENCES	19			
APPEND	DICES	I			
Apper	ndix 1 SMR/RMP Sites within the Surrounding Area	i			
Apper					
Apper					
Apper	ndix 4 Mitigation Measures and the Cultural Heritage Resour	cevii			
FIGURES	S				

LIST OF FIGURES

- Figure 1 Site location showing nearby archaeology
- Figure 2 Plan of proposed development
- Figure 3 Extracts from historic mapping showing approximate location of the proposed development
- Figure 4 Extracts from historic mapping (1843 and 1871) showing location of the proposed development
- Figure 5 Extract from OS map of 1910 showing location of the proposed development
- Figure 6 Results of geophysical survey 22R0200 and location of test trenches

LIST OF PLATES

- Plate 1 Proposed development area, facing east
- Plate 2 Slight rise in landscape at approximate location of DU017-036, facing southeast
- Plate 3 Remains of a ditch in Trench 7 that may relate to DU017-036, facing southeast
- Plate 4 Remains of a ditch in Trench 8 that may relate to DU017-036, facing northeast

1 INTRODUCTION

1.1 GENERAL

The following report details an archaeological assessment undertaken in advance of a proposed residential development at Tile 3 within the Clonburris Strategic Development Zone (SDZ), Cappagh, County Dublin (Figure 1; ITM 705707, 732566). This assessment has been carried out to ascertain the potential impact of the proposed development on the archaeological and historical resource that may exist within the area. The assessment was undertaken by Matt Brooks and Fergal Murtagh of IAC Archaeology (IAC), on behalf of Cairn Homes PLC. The assessment has been informed by a programme of geophysical survey carried out by Ger Dowling and archaeological testing carried out by Fergal Murtagh.

The archaeological assessment involved a detailed study of the archaeological and historical background of the proposed development site and the surrounding area. This included information from the Record of Monuments and Places of County Dublin, the topographical files within the National Museum and all available cartographic and documentary sources for the area. A field inspection has also been carried out with the aim to identify any previously unrecorded features of archaeological or historical interest.

1.2 THE DEVELOPMENT

The proposed development, as illustrated in Figure 2, will comprise the following:

The construction of 157 no. dwellings on a site of c. 3.45 hectares in the Clonburris South-West Development Area of the Clonburris Strategic Development Zone (SDZ) Planning Scheme 2019 as follows:

- i. 81 no. houses comprising 4 no. 2-bedroom houses, 65 no. 3-bedroom houses and 12 no. 4-bedroom houses (all 2-no. storey with associated private open space and car parking);
- ii. 76 no. apartment units consisting of 26 no. 1-bedroom and 50 no. 2-bedroom units within Block 1 (4 no. storeys);
- iii. Vehicular access will be provided from the permitted street under SDZ21A/0022 and the permitted Clonburris Southern Link Street (SDZ20A/0021) and R113 (Fonthill Road) to the east;
- iv. All ancillary site development works including footpaths, landscaping boundary treatments, public and private open space areas, car parking (170 no. spaces) and bicycle parking (170 no. spaces), single-storey ESB substations, bin and bicycle stores and all ancillary site development/construction works.

2 METHODOLOGY

Research for this report was undertaken in four phases. The first phase comprised a paper survey of all available archaeological, historical and cartographic sources. The second phase involved a field inspection of the site. The third phase comprised a geophysical survey of the accessible portions of the proposed development area and the fourth phase a programme of archaeological testing.

2.1 PAPER SURVEY

- Record of Monuments and Places for County Dublin;
- Sites and Monuments Record for County Dublin;
- National Monuments in State Care Database;
- Preservation Orders List;
- Topographical files of the National Museum of Ireland;
- Cartographic and written sources relating to the study area;
- South Dublin County Development Plan 2022-2028;
- Clonburris Strategic Development Zone Planning Scheme (2019);
- Aerial photographs;
- Excavations Bulletin (1970–2022).

Record of Monuments and Places (RMP) is a list of archaeological sites known to the National Monuments Section, which are afforded legal protection under Section 12 of the 1994 National Monuments Act and are published as a record.

Sites and Monuments Record (SMR) holds documentary evidence and field inspections of all known archaeological sites and monuments. Some information is also held about archaeological sites and monuments whose precise location is not known e.g. only a site type and townland are recorded. These are known to the National Monuments Section as 'un-located sites' and cannot be afforded legal protection due to lack of locational information. As a result, these are omitted from the Record of Monuments and Places. SMR sites are also listed on a website maintained by the Department of Housing, Local Government and Heritage (DoHLGH) – www.archaeology.ie.

National Monuments in State Care Database is a list of all the National Monuments in State guardianship or ownership. Each is assigned a National Monument number whether in guardianship or ownership and has a brief description of the remains of each Monument.

The Minister for the DoHLGH may acquire national monuments by agreement or by compulsory order. The state or local authority may assume guardianship of any national monument (other than dwellings). The owners of national monuments (other than dwellings) may also appoint the Minister or the local authority as guardian of that monument if the state or local authority agrees. Once the site is in ownership or guardianship of the state, it may not be interfered with without the written consent of the Minister.

Preservation Orders List contains information on Preservation Orders and/or Temporary Preservation Orders, which have been assigned to a site or sites. Sites deemed to be in danger of injury or destruction can be allocated Preservation Orders under the 1930 Act. Preservation Orders make any interference with the site illegal. Temporary Preservation Orders can be attached under the 1954 Act. These perform the same function as a Preservation Order but have a time limit of six months, after which the situation must be reviewed. Work may only be undertaken on or in the vicinity of sites under Preservation Orders with the written consent, and at the discretion, of the Minister.

The topographical files of the National Museum of Ireland are the national archive of all known finds recorded by the National Museum. This archive relates primarily to artefacts but also includes references to monuments and unique records of previous excavations. The find spots of artefacts are important sources of information on the discovery of sites of archaeological significance.

Cartographic sources are important in tracing land use development within the development area as well as providing important topographical information on areas of archaeological potential and the development of buildings. Cartographic analysis of all relevant maps has been made to identify any topographical anomalies or structures that no longer remain within the landscape.

Documentary sources were consulted to gain background information on the archaeological and cultural heritage landscape of the proposed development area.

Development Plans contain a catalogue of all the Protected Structures and archaeological sites within the county. The South Dublin County Development Plan 2022-2028 and Clonburris Strategic Development Zone Planning Scheme (2019) were consulted to obtain information on cultural heritage sites in and within the immediate vicinity of the proposed development area.

Aerial photographic coverage is an important source of information regarding the precise location of sites and their extent. It also provides initial information on the terrain and its likely potential for archaeology. A number of sources were consulted including aerial photographs held by the Ordnance Survey and Google Earth.

Excavations Bulletin is a summary publication that has been produced every year since 1970. This summarises every archaeological excavation that has taken place in Ireland during that year up until 2010 and since 1987 has been edited by Isabel Bennett. This information is vital when examining the archaeological content of any area, which may not have been recorded under the SMR and RMP files. This information is also available online (www.excavations.ie) from 1970–2022.

2.2 FIELD INSPECTION

Field inspection is necessary to determine the extent and nature of archaeological and historical remains, and can also lead to the identification of previously unrecorded or suspected sites and portable finds through topographical observation and local information.

The archaeological field inspection entailed -

- Walking the proposed development and its immediate environs.
- Noting and recording the terrain type and land usage.
- Noting and recording the presence of features of archaeological or historical significance.
- Verifying the extent and condition of any recorded sites.
- Visually investigating any suspect landscape anomalies to determine the possibility of their being anthropogenic in origin.

2.3 GEOPHYSICAL SURVEY

Geophysical survey is used to create 'maps' of subsurface archaeological features. Features are the non-portable part of the archaeological record, whether standing structures or traces of human activities left in the soil. Geophysical instruments can detect buried features when their electrical or magnetic properties contrast measurably with their surroundings. In some cases, individual artefacts, especially metal, may be detected as well. Readings, which are taken in a systematic pattern, become a dataset that can be rendered as image maps. Survey results can be used to guide excavation and to give archaeologists insight into the pattern of non-excavated parts of the site. Unlike other archaeological methods, the geophysical survey is not invasive or destructive.

A geophysical survey by Ger Dowling was undertaken to inform this assessment in June 2022, under licence 22R0200 (Figure 6) and the results are summarised within this report.

2.4 ARCHAEOLOGICAL TESTING

Archaeological testing can be defined as 'a limited programme... of intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site on land or underwater. If such archaeological remains are present test trenching defines their character and extent and relative quality' (CIFA 2020a).

A programme of archaeological testing was carried out across Tile 3 by Fergal Murtagh under licence 22E0719, as issued by the National Monuments Service of the Department of Housing, Local Government and Heritage. The results of the assessment are given in this report (Figure 6).

3 RESULTS OF ARCHAEOLOGICAL ASSESSMENT

3.1 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The proposed development is located within the townland of Cappagh, Parish of Clondalkin and Barony of Uppercross, County Dublin. The proposed development area comprises parts of three fields, located to the immediate south of the Great Southern and Western Railway line. There is one recorded archaeological site within the proposed development area consisting of approximately 25 percent of a circular enclosure (DU017-036) discovered through aerial photography taken in 1971 (SMR file). It should be noted that this site does not possess any upstanding remains and is not visible at ground level. There are no further archaeological sites within 250m of the proposed development area (Figure 1).

3.1.1 Prehistoric Period

Mesolithic Period (7000-4000 BC)

Although recent evidence suggests there may have been a human presence in the southwest of Ireland as early as the Upper Palaeolithic (Dowd and Carden 2016), the earliest evidence for widespread settlement in Ireland dates to the Mesolithic period. These communities subsisted on hunting, fishing, and foraging with seasonal natural resources being of key importance. The most common evidence found to show the presence of Mesolithic communities at a site is scatters of worked flint, a by-product from the production of flint implements. The coastal areas of County Dublin have produced flint tools dating to the Mesolithic and seasonal habitation sites have been interpreted through the discovery of shell middens along this coastline. There is no evidence of Mesolithic activity in the vicinity of the proposed development area.

Neolithic Period (4000-2500 BC)

During this period communities became less mobile and their economy became based on the rearing of stock and cereal cultivation. The transition to the Neolithic was marked by major social change. Communities had expanded and moved further inland to more permanent settlements. This afforded the development of agriculture which demanded an altering of the physical landscape. Forests were rapidly cleared and field boundaries were constructed. Pottery was also being produced, possibly for the first time. The advent of the Neolithic period also provided the megalithic tomb. There are four types of tomb in Ireland, namely the Court Cairn, Portal, Passage and Wedge; of which the latter style straddles the Neolithic to Bronze Age transition.

The remains of a truncated and burnt Neolithic wooden house was discovered in the townland of Kishoge, c. 1.5m southwest of the proposed development area (Licence 01E0061), indicating that the wider landscape was occupied during the Neolithic period. A small number of artefacts were retrieved, including several crude round scrapers, waste flint and a single poorly preserved fragment of prehistoric pottery.

Bronze Age (2500-800 BC)

The Bronze Age was marked by the widespread use and production of metal for the first time in Ireland. As with the transition from Mesolithic to Neolithic, the transition into the early Bronze Age was accompanied by changes in society. The megalithic tomb tradition declined and ended in favour of individual, subterranean cist or pit burials that occur either in isolation or in small cemeteries. These burials contained inhumed or cremated remains and were often accompanied by a pottery vessel. A bronze axe head (IA/163/1996) is recorded in the topographical files of the National Museum of Ireland as potentially originating from within the Clonburris Strategic Development Zone (SDZ), although no detail as to the circumstances of the find is contained in the record.

Over 7,000 burnt mounds or *fulacht fia* sites have been recorded in the country and c. 1,500 examples excavated, making them the most common prehistoric monument in Ireland (Waddell 2022, 164). Although burnt mounds of shattered stone occur as a result of various activities that have been practised from the Mesolithic to the present day, the Bronze Age has long been believed to have seen the peak of this activity. Dating evidence from a growing number of burnt mounds, suggests activities resulting in burnt mounds were carried out over a span of 3,500 years in Ireland (Hawkes 2018). They are typically located in areas where there is a readily available water source, often in proximity to a river or stream or in places with a high water table. In the field burnt mounds may be identified as charcoal-rich mounds or spreads of heat shattered stones, however, in many cases, the sites have been disturbed by later agricultural activity and are no longer visible on the field surface. Nevertheless, even disturbed spreads of burnt mound material often preserve the underlying associated features, such as troughs, pits and gullies, intact.

There are a number of *fulacht fia* recorded in the surrounding landscape. Enclosure DU017-035 is located c. 296m southwest of the proposed development area and is described in the SMR file as follows: 'An aerial photograph (FSI 1971/224-6) shows a horseshoe-shaped enclosure. Not visible at ground level.' The description suggests that this enclosure may represent a *fulacht fia* or burnt mound, as a horseshoe plan is a common feature of the site type. Given that the site is located to the immediate north of the Grand Canal, it may also relate to the construction of that feature rather than being archaeological in nature. The site possesses no upstanding remains today.

Iron Age (800 BC-AD 500)

There is increasing evidence for Iron Age settlement and activity in recent years as a result of development-led excavations as well as projects such as LIARI (Late Iron Age and Roman Ireland). Yet this period is distinguishable from the rather rich remains of the preceding Bronze Age and subsequent early medieval period, by a relative paucity within the current archaeological record. The Iron Age in Ireland is problematic for archaeologists as few artefacts dating exclusively to this period have been found and without extensive excavation, it cannot be determined whether several monument types, such as ring barrows or standing stones, date to the late Bronze Age or Iron Age. It is likely that there was significant continuity in the Iron Age, with earlier monuments re-used in many cases.

There are no known monuments in the vicinity of the proposed development area that would suggest an active presence of Iron Age communities.

3.1.2 Early Medieval Period (AD 500–1100)

The early medieval period is depicted in the surviving sources as an almost entirely rural based society. Territorial divisions were based on the *túath*, or petty kingdom, with Byrne (1973) estimating probably at least 150 kings in Ireland at any given time. This period, with a new religious culture and evolving technologies, saw significant woodland clearance and the expansion of grassland. A new type of plough and the horizontal mill were two innovations that improved agriculture and allowed for the population to increase. Consequently, from c. AD 500 onwards, the landscape became well settled, as evidenced by the profuse distribution of ringforts, a dispersed distribution of enclosed settlements, normally associated with various grades of well-to-do farming and aristocratic classes in early medieval Ireland (Stout and Stout 1997, 20).

The ringfort or *rath* is considered to be the most common indicator of settlement during the early medieval period. One of the most recent studies of early medieval settlement enclosures has suggested that there is potential for at least 60,000 such sites to have existed on the island (O'Sullivan et al. 2014, 49). One of the most common indicators of settlement during this period is the ringfort (Stout 1997). Ringforts were often constructed to protect rural farmsteads and are usually defined as a broadly circular enclosure delineated by a bank and ditch. Ringforts can be divided into three broad categories — univallate sites, with one bank or ditch; multivallate sites with as many as four levels of enclosing features and platform or raised ringforts, where the interior of the ringfort has been built up. These enclosed sites were intimately connected to the division of land and the status of the occupant.

Enclosures (DU017-035 and DU017-036) may represent ringforts or similar sites, although as noted above it seems probable that DU017-035 relates to Bronze Age activity. It is difficult to ascertain the date and function of 'enclosures' without archaeological investigation, particularly if no above ground trace remains.

3.1.3 Medieval Period (AD 1100–1600)

The beginning of the medieval period was characterised by political unrest that originated from the death of Brian Borumha in 1014. Diarmait MacMurchada, deposed King of Leinster, sought the support of mercenaries from England, Wales and Flanders to assist him in his challenge for kingship. Norman involvement in Ireland began in AD 1169 when Richard de Clare and his followers landed in Wexford to support MacMurchada. Two years later de Clare (Strongbow) inherited the Kingdom of Leinster and in AD 1171, Dublin was besieged and taken by Diarmait MacMurchada and his Leinster forces supported by a force of Anglo-Norman knights led by Strongbow (Richard Fitz-Gilbert de Clare) and Raymond le Gros. By the end of the 12th century, the Normans had succeeded in conquering much of the country (Stout and Stout 1997). The initial stage of the invasion of the country was marked by the construction of motte and bailey castles, which were later replaced with stone castles.

A castle (DU017-032001) is recorded c. 719m to the northeast of the proposed development area in the townland of Neilstown. In the Down Survey of c. 1655, this site is referred to as an 'old castle' suggestive of a medieval date. A 16th/17th century house (DU017-032002) is recorded in association with the castle at Neilstown. These may relate to the 'three or four cabins' mentioned in the Civil Survey (1654-6). No upstanding remains are extant. A tower house (DU017-029) is recorded c. 2.7km west of the proposed development area, in the townland of Adamstown. While the three-storey tower house was demolished in the 1960s, it likely dated to the latter part of the medieval period.

The medieval parish church of St. Cuthbert of Lindesfarne was held by St. Mary's Abbey, Dublin from 1186 until 1540 when it was re-united with Clondalkin (Ball 1906). The church (DU017-038001) located c. 839km southwest of the proposed development area served the smallest parish in the county. To the south of the church's graveyard (DU017-038001) is a possible moated site (DU017-038003) defined by a flat-topped earthen bank and wide outer fosse (SMR File).

3.1.4 Post-Medieval Period (AD 1600–1800)

The ending of the Williamite Wars saw the beginning of a comparative politically calm era, which allowed the country's landowners the security to experiment with the latest styles of architecture without the need to refer to defensive matters. Initially, constraints on available resources resulted in mansions of a relatively modest scale and relatively plain appearance. However, as the Irish aristocracy's sense of security grew over the following decades, their greater access to wealth helped foster a shift towards more ostentatious buildings.

During the 18th and 19th centuries, this area was typified by large manors with associated demesne landscapes and villages interspersed with medium-sized houses and farmsteads. The 18th century, a relatively peaceful period, saw the large-scale development of demesnes and country houses in Ireland. The large country house was often only a small part of the overall estate of a large landowner and provided a base to manage often large areas of land that could be located nationwide.

Lands associated with the large houses were generally turned over to formal gardens, which were much the style of continental Europe. Gradually this style of formal avenues and geometric garden designs was replaced during the mid-18th century by the adoption of parkland landscapes — to be able to view a large house within a natural setting. Considerable constructional effort went into their creation - the earth was moved, field boundaries disappeared, streams were diverted to form lakes and quite often roads were completely diverted to avoid travelling anywhere near the main house or across the estate. Several small demesnes are depicted on the first edition OS map of 1843, including Cappagh House, Rosebank, Clonburris Cottage and Moorfield. The closest to the proposed development area is the demesne of Clonburris Cottage, located c. 95m to the southwest within Clonburris Little townland (Figure 4). No upstanding remains of the house or the demesne survive today.

The Grand Canal, located c. 317m south of the proposed development area, is c. 131km long and links Dublin City to the River Shannon. Work began on the canal in 1756 and it was officially opened to traffic in 1804. While the rise of the railway significantly reduced the popularity of the canal, it was not until 1960 that the last cargo was transported along the Grand Canal.

3.2 SUMMARY OF PREVIOUS ARCHAEOLOGICAL FIELDWORK

A review of the Excavations Bulletin (1970–2022) has revealed that a number of previous archaeological investigations have been carried out in the surrounding environs, which are summarised below.

Archaeological testing was recently carried out to the immediate south of the proposed development area in September 2022, as part of a proposed residential development (Planning Ref.: SDZ21A/0022), (Licence Ref.: 22E0438). A number of small areas of archaeological potential were identified, including a number of charcoal production pits and three brick kilns or clamps. Scattered pits were also identified as well as the remains of a structure and track shown on the historic OS maps. None of these features expand into the proposed development area.

Archaeological testing and metal detection was also carried out in advance of the initial infrastructure development within the Clonburris SDZ under licences 20E0390 and 20R0168. A number of the test trenches were excavated adjacent to the proposed development area. Several archaeological areas were identified within the wider area with AA1 and AA2 (O'Néill 2020) located c. 120m south of the proposed development area. AA1 comprised three pits, with evidence of burning and charcoal, although no dating evidence was recovered from these pits during testing. AA2 comprised a single large pit, capped in clay and containing charcoal. These features were subject to preservation by record during 2022 by ACSU, but no summary has been submitted to the Excavations Bulletin.

Geophysical survey and archaeological testing carried out within the proposed development is summarised within sections 3.8 and 3.9.

3.3 CARTOGRAPHIC ANALYSIS

Down Survey Maps of the Barony of Newcastle, c. 1655

The Down Survey maps were created to identify land ownership and while they are often scant in detail, major topographical features and occasionally notable manmade landmarks are depicted. The proposed development area at this time is within open land considered 'part of Nelstowne'. The castle (DU017-032001) at 'Nelstowne' to the northeast is shown and labelled as an 'old castle', suggesting that the castle was already of substantial age by the time of this map. It is shown in association with a second smaller structure which may represent the 16th/17th century house (DU017-032002).

Rocque's An Actual Survey of County Dublin, 1760 (Figure 3)

Rocque's map of 1760 depicts a largely agricultural landscape with dispersed settlements surrounding the proposed development area. The Grand Canal is visible as 'New Canal' to the south. A small settlement is present to the east called 'Cappoh'. A group of structures is shown at the location of the castle at Neilstown but the castle is not annotated. To the west, 'Castle Adams' is depicted which may correlate to the tower house (DU017-029) in Adamstown. The church of St. Cuthbert of Lindesfarne (DU017-038001) located to the southwest is annotated as 'in ruins'.

John Taylor's Map of the County of Dublin, 1816 (Figure 3)

By the time of Taylor's map of 1816, the demesne at Cappagh and Moorfield is shown within a wooded landscape to the east of the development area, which remains as open land. A number of settlements are also marked, including Springfield to the southwest (immediately north of the Grand Canal) and Kishoge House to the west. A number of locks are indicated along the Grand Canal to the south including the 9th-11th locks that possess several structures fronting the canal including the 'Rose Bank'.

First Edition Ordnance Survey Map, 1843, scale 1:10,560 (Figure 4)

The development area is within three undeveloped fields that are tree lined, within Cappagh townland. Several small demesnes are depicted in the surrounding area including Cappagh House, Rosebank, Clonburris Cottage and Moorfield. There are a number of small structures immediately north of the Grand Canal, which are located to the south of the proposed development area. These likely represent vernacular houses, accessed from the canal path.

Second Edition Ordnance Survey Map, 1871, scale 1:10560 (Figure 4)

The proposed development area remains unchanged with minor changes within the surrounding landscape from the previous mapping. These include the formation of the Great Southern and Western Railway line located to the immediate north of the proposed development area. Clondalkin Fonthill Station has not yet been built.

Ordnance Survey Map, 1910, scale 1:2,500 (Figure 5)

There are no major changes of note within the cartography of this map that relate to the proposed development area.

3.4 COUNTY DEVELOPMENT PLAN

The South County Dublin Development Plan (2022-2028) recognises the statutory protection afforded to all RMP sites under the National Monuments Legislation (1930–2014). The development plans list a number of aims and objectives in relation to archaeological heritage (Appendix 2). It is a policy of the South County Dublin Development Plan (2022-2028) to promote the in-situ preservation of archaeology as the preferred option where development would have an impact on buried artefacts. Where preservation in situ is not feasible, sites of archaeological interest shall be subject to archaeological investigations and recording according to best practice, in advance of redevelopment.

There is one recorded archaeological site partially within the proposed development area, consisting of an enclosure (DU017-036). The site was discovered through aerial photography taken in 1971 (SMR file) (Figure 1; Appendix 1). It should be noted that this site does not possess any upstanding remains and is not visible at ground level. The 2022 geophysical survey identified potential archaeological remains at the approximate location of the recorded enclosure, although it is noted that the anomaly only registered faintly within the geomagnetic data. Based on the geophysical survey approximately 25 percent of the enclosure is located in the eastern section of the site.

There are no further archaeological sites within 250m of the proposed development area.

Clonburris Strategic Development Zone Planning Scheme 2019

Section 2.12.3 of the Clonburris Strategic Development Zone Planning Scheme 2019, states that development should be designed and carried out in a manner that protects archaeological heritage and avoids adverse impacts on sites, objects or features of significant archaeological interest and that in accordance with the recommendations of the Framework and Principles for the Protection of Archaeological Heritage (1999), in-situ preservation of archaeological features is favoured.

Section 2.13.2 also states that development that has been pre-determined to have the potential to disturb archaeological sites, objects or features shall be supported by an Archaeological Impact Assessment and Mitigation Strategy particularly for development within the vicinity of known archaeological sites and previously unrecorded features identified through archaeological survey work. Where appropriate, the incorporation of any known or discovered archaeological sites or features should be detailed and described within design statements for all medium to large scale development proposals (see Section 2.8.2 – Design Criteria) on the SDZ lands.

3.5 TOPOGRAPHICAL FILES OF THE NATIONAL MUSEUM OF IRELAND

Information on artefact finds from the study area in County Dublin has been recorded by the National Museum of Ireland since the late 18th century. Location information relating to these finds is important in establishing prehistoric and historic activity in the study area. A bronze axehead (IA/163/1996) is recorded in the topographical files of the National Museum of Ireland as potentially originating from within the Clonburris SDZ, although no detail as to the circumstances of the find is contained in the record.

3.6 AERIAL PHOTOGRAPHIC ANALYSIS

Inspection of the aerial photographic coverage of the proposed development area held by the Ordnance Survey (1995–2013), Google Earth (2008–2022) and Bing Maps revealed that the proposed development area has experienced minor changes since 1995. As of 1995, the site is within three fields with the Fonthill Road having been constructed by 2000 further to the east. The construction of the Clondalkin Fonthill Railway Station and the associated car park is visible to the northeast and east in the

aerial imagery of 2008. The location of test trenches (Licence 20E0390) is visible from coverage in 2021 bound to the west and south of the proposed development area (Google Earth). No previously unrecorded sites or areas of archaeological potential were noted during the course of the analysis.

3.7 FIELD INSPECTION

The field inspection sought to assess the site, its previous and current land use, the topography and any additional information relevant to the report. During the course of the field investigation the proposed development site and its surrounding environs were inspected (Figure 1).



Plate 1: Proposed development area, facing east

The proposed development area is characterised by two level fields of rough pasture bordered to the north by the railway line and the corner of a third field. The fields are surrounded by mature hedgerows that are very overgrown, having not been subject to any maintenance in recent years (Plate 1). A very slight rise in the field containing recorded monument DU017-036 was noted, although it remains unclear as to whether this is archaeological or a natural undulation in the landscape (Plate 2).

No previously unrecorded features of archaeological potential were noted during the course of the inspection.



Plate 2: Slight rise in landscape at approximate location of DU017-036, facing southeast

3.8 SUMMARY OF GEOPHYSICAL SURVEY

A geophysical survey was conducted within the proposed development area in June 2022 (Dowling 2022, Licence 22R0200) as part of a preliminary archaeological investigation of the Cappagh area (Figure 6). The geophysical survey was focused on five separate fields and covered an area of approximately 8ha. in total size. The investigation revealed several features of potential archaeological significance, including what may be the remains of a small, sub-circular enclosure, which may correspond to enclosure DU017-036. This feature appears to be bisected, east to west, by a possible ditch and is conceivably associated with several possible pits/spreads mapped in the surrounding area. Evidence for former agriculture was also detected.

3.9 SUMMARY OF ARCHAEOLOGICAL TESTING

Archaeological testing of the geophysical anomalies was carried out by Fergal Murtagh of IAC Archaeology in Tile 3 (and the adjacent Tile 2), during November 2022. Test trenching was conducted under licence 22E0719, as issued by the DoHLGH. A total of six trenches were excavated in Tile 3, with an additional six trenches excavated in Tile 2 to the immediate east and southeast.

Trench 1, in the western part of the site, revealed the remains of a linear spread of material (aligned northeast-southwest), which sealed a metalled surface with a width of 2.3m. It is possible this feature represents the remains of a field track, but no such features are marked in this area within the historic mapping.

Trenches 7 and 8, located within Tile 2 to the immediate east, targeted the more definitive geophysical anomalies that may relate to enclosure DU017-036. The

anomalies comprises the remains of shallow ditches measuring between 1.52m and 2.05m wide and 0.4m to 0.48m deep (Plates 4 and 5). The ditches were filled by similar material in both trenches with the upper fill consisting of a compacted bright orange clay and the lower fill consisting of an orange clay with moderate amount of decayed stone present. No diagnostic material was recorded and if the ditches do relate to an enclosure, they appear to have been subject to a large amount of horizontal truncation due to the shallow depth.

No other features of archaeological potential were identified in the proposed development area, or in the lands to the east and southeast (Tile 2).



Plate 3: Remains of a ditch in Trench 7 that may relate to DU017-036, facing southeast



Plate 4: Remains of a ditch in Trench 8 that may relate to DU017-036, facing northeast

4 CONCLUSIONS

This archaeological assessment was commissioned by Cairn Homes PLC to assess the potential for the survival of archaeological features in advance of a proposed residential development at Tile 3 within the Clonburris SDZ, Cappagh, County Dublin. The site comprises parts of three fields to the immediate south of the Great Southern and Western Railway line. There is part of one recorded archaeological site within the proposed development area consisting of an enclosure (DU017-036) discovered through aerial photography taken in 1971 (SMR file). It should be noted that this site does not possess any upstanding remains and is not visible at ground level.

Archaeological testing has been carried out to the immediate south of the proposed development area as part of the SDZ road infrastructure requirements and as part of a permitted residential development. This work resulted in the identification of a number of areas post-medieval brick production, charcoal production sites and a number of scattered pits. Archaeological activity is scattered and relatively isolated and indicates probable small scale post medieval industrial activity.

Analysis of cartographic sources has depicted the proposed development area as primarily agricultural greenfield throughout the post-medieval period. Several small demesnes are depicted in the local area including Cappagh House, Rosebank, Clonburris Cottage and Moorfield. The Great Southern and Western Railway line (bound to the north of the site) was constructed during the late 19th century.

Analysis of aerial photographic record available for the area failed to identify any previously unknown archaeological features. Similarly, no definitive archaeological remains were identified during the field inspection. A slight rise in the landscape was noted at the approximate location of the recorded enclosure, but this may also be a natural undulation.

A geophysical survey was conducted within the proposed development area in June 2022. The investigation revealed several potential features of archaeological significance, including what may be the remains of a small, sub-circular enclosure at the approximate location of recorded enclosure DU017-036. This feature appears to be bisected, east to west, by a possible ditch and is conceivably associated with several possible pits/spreads mapped in the surrounding area. Evidence for former agriculture was also detected.

Archaeological testing was carried out within the proposed development area and within adjacent lands to the immediate east and southeast (Tile 2). The trenches targeted the geophysical anomalies. Six trenches were excavated within the proposed development area and one area of archaeological potential was identified, comprising an undated metalled surface. To the immediate east of the proposed development area, two trenches targeted the more definitive geophysical anomalies potentially associated with enclosure DU017-036. A shallow ditch was revealed in each trench that may relate to the enclosure. The ditches were less than 0.5m in depth and as

such, if these features relate to an enclosure, it is likely it has been subject to truncation.

5 IMPACT ASSESSMENT AND MITIGATION STRATEGY

Impacts can be identified from detailed information about a project, the nature of the area affected and the range of archaeological resources potentially affected. Archaeological sites can be affected adversely in a number of ways: disturbance by excavation, topsoil stripping; disturbance by vehicles working in unsuitable conditions; and burial of sites, limiting access for future archaeological investigation. Upstanding archaeology can be affected adversely by direct damage or destruction arising from development, from inadvertent damage arising from vibration, undermining etc. and also by indirect impacts to a building's visual setting, view or curtilage.

5.1 IMPACT ASSESSMENT

- The recorded monument, enclosure DU017-036, does not possess any surface remains, although the geophysical survey that has been carried out indicates that 25 percent of the site may be located in the development area. Testing to the immediate east indicates denuded remains of a ditch. Due to the required layout/density of the proposed development, any archaeological remains associated with the monument will be subject to a negative impact. This will be caused by ground disturbances associated with the construction of the development.
- An undated metalled surface was identified in the western part of the proposed development area. Ground disturbances associated with the development will result in a negative impact on this feature.
- Ground disturbances associated with the overall development may have an adverse impact on small or isolated archaeological remains that have the potential to survive beneath the current ground level and outside of the footprint of the excavated test trenches.

5.2 MITIGATION

- Prior to the commencement of construction any remains associated with enclosure DU017-036 and the identified metalled surface, will be subject to a programme of preservation by record (archaeological excavation). This will be carried out under licence to the National Monuments Service of the DoHLGH.
- All topsoil stripping associated with the proposed development will be monitored by a suitable qualified archaeologist. If any archaeological features are identified, further consultation will be carried out with the DoHLGH in order to agree additional mitigation, such as preservation in-situ or by record.

It is the developer's responsibility to ensure full provision is made available for the resolution of any archaeological remains, both on site and during the post excavation process, should that be deemed the appropriate manner in which to proceed.

Please note that all recommendations are subject to approval by the National Monuments Service of the Heritage and Planning Division, Department of Housing, Local Government and Heritage.

6 REFERENCES

- Bennett, I. (ed.) 1987–2010. Excavations: Summary Accounts of Archaeological Excavations in Ireland. Bray. Wordwell Ltd.
- Ball, E.F. 1906. (Reprint 1979) A history of the County Dublin, 6 vols. Dublin. Gill and Macmillan.
- Byrne, F. J. 1973. Irish Kings and High Kings. Dublin. Four Courts Press.
- Chartered Institute for Archaeologists 2020a. Standards & Guidance for Field Evaluation.
- Chartered Institute for Archaeologists 2020b. Standards & Guidance for Archaeological Excavation.
- Chartered Institute for Archaeologists 2020c. Standards & Guidance for an Archaeological Watching Brief (Monitoring).
- Clonburris Strategic Development Zone Planning Scheme (2019).
- Department of Arts, Heritage, Gaeltacht and the Islands. 1999a. Framework and Principles for the Protection of the Archaeological Heritage. Government Publications Office, Dublin.
- Department of Arts, Heritage, Gaeltacht and the Islands. 1999b. *Policy and Guidelines on Archaeological Excavation*. Government Publications Office, Dublin.
- Dowd, M. and Carden, R.F. 2016. First evidence of a Late Upper Palaeolithic human presence in Ireland. *Quaternary Science Reviews* 139, 158-163.
- Dowling, G. 2022. Geophysical Survey Report, Cappagh, Dublin 22, 22R0200. Unpublished report.
- Environmental Protection Agency. 2017. *Draft Advice Notes on Current Practice (in the preparation of Environmental Impact Statements)*. Government Publications Office, Dublin.
- Environmental Protection Agency. 2022. Guidelines on the Information to be Contained in Environmental Impact Statements. Government Publications Office, Dublin.
- Hawkes, A. 2018. *The Archaeology of Prehistoric Burnt Mounds in Ireland.* Oxford. Archaeopress.

National Monuments Service, Department of Housing, Local Government and Heritage. Sites and Monuments Record, County Dublin.

National Museum of Ireland. Topographical Files, County Dublin.

- O' Neill, J. 2020. Archaeological Assessment at Clonburris Little, Cappagh, Kishoge, and Grange, Clondalkin Dublin 22 (Clonburris Strategic Development Zone). Licence: 20E0390 and 20R0168. Unpublished report prepared by IAC Archaeology.
- O'Sullivan, A., McCormick, F., Kerr, T.R., Harney, L. 2014. *Early Medieval Ireland, AD 400-1100: The Evidence from Archaeological Excavations*. Dublin. Royal Irish Academy.

South Dublin County Development Plan 2022-2028.

Stout, M. 1997. The Irish Ringfort. Dublin. Four Courts Press.

Stout, G. and Stout, M. 1997. Early Landscapes: from Prehistory to Plantation. In F.H.A. Aalen et al. (eds), *Atlas of the Irish Rural Landscape*. Cork. Cork University Press.

Waddell, J. 2022. *The Prehistoric Archaeology of Ireland* (New Edition). Dublin. Wordwell Ltd.

CARTOGRAPHIC SOURCES

Down Survey Maps of the Barony of Newcastle, c. 1655

Rocque's An Actual Survey of County Dublin, 1760

John Taylor's Map of the County of Dublin, 1816

Ordnance Survey Maps of Dublin, 1843, 1871 and 1910

ELECTRONIC SOURCES

www.excavations.ie - Summary of archaeological excavation from 1970-2022.

www.archaeology.ie - DoHLGH website listing all SMR/RMP sites.

www.heritagemaps.ie – The Heritage Council web-based spatial data viewer which focuses on the built, cultural and natural heritage.

www.bingmaps.com - Satellite imagery of the proposed development area.

www.geohive.ie— Ordnance Survey Ireland National Townland and Historical Map Viewer (including Aerial imagery 1995-2013).

www.googleearth.com - Satellite imagery (2005-2022).

APPENDICES

APPENDIX 1 SMR/RMP SITES WITHIN THE SURROUNDING AREA

SMR NO.	DU017-036
RMP STATUS	Scheduled for inclusion in the next revision of the RMP
TOWNLAND	Cappagh
PARISH	Clondalkin
BARONY	Uppercross
I.T.M.	705830 / 732592
CLASSIFICATION	Enclosure
DIST. FROM DEVELOPMENT	0m
DESCRIPTION	Situated in rough pasture on fairly level ground N of a stream. An aerial photograph taken in 1971 (FSI 206/5/4) shows a cropmark of an elongated oval enclosure (est. dims. NE-SW c. 34m; NW-SEc.22m). Not visible at ground level.
REFERENCE	www.archaeology.ie/ SMR file

APPENDIX 2 LEGISLATION PROTECTING THE ARCHAEOLOGICAL RESOURCE

PROTECTION OF CULTURAL HERITAGE

The cultural heritage in Ireland is safeguarded through national and international policy designed to secure the protection of the cultural heritage resource to the fullest possible extent (Department of Arts, Heritage, Gaeltacht and the Islands 1999, 35). This is undertaken in accordance with the provisions of the *European Convention on the Protection of the Archaeological Heritage* (Valletta Convention), ratified by Ireland in 1997.

THE ARCHAEOLOGICAL RESOURCE

The National Monuments Act 1930 to 2014 and relevant provisions of the National Cultural Institutions Act 1997 are the primary means of ensuring the satisfactory protection of archaeological remains, which includes all man-made structures of whatever form or date except buildings habitually used for ecclesiastical purposes. A National Monument is described as 'a monument or the remains of a monument the preservation of which is a matter of national importance by reason of the historical, architectural, traditional, artistic or archaeological interest attaching thereto' (National Monuments Act 1930 Section 2). A number of mechanisms under the National Monuments Act are applied to secure the protection of archaeological monuments. These include the Register of Historic Monuments, the Record of Monuments and Places, and the placing of Preservation Orders and Temporary Preservation Orders on endangered sites.

OWNERSHIP AND GUARDIANSHIP OF NATIONAL MONUMENTS

The Minister may acquire national monuments by agreement or by compulsory order. The state or local authority may assume guardianship of any national monument (other than dwellings). The owners of national monuments (other than dwellings) may also appoint the Minister or the local authority as guardian of that monument if the state or local authority agrees. Once the site is in ownership or guardianship of the state, it may not be interfered with without the written consent of the Minister.

REGISTER OF HISTORIC MONUMENTS

Section 5 of the 1987 Act requires the Minister to establish and maintain a Register of Historic Monuments. Historic monuments and archaeological areas present on the register are afforded statutory protection under the 1987 Act. Any interference with sites recorded on the register is illegal without the permission of the Minister. Two months' notice in writing is required prior to any work being undertaken on or in the vicinity of a registered monument. The register also includes sites under Preservation Orders and Temporary Preservation Orders. All registered monuments are included in the Record of Monuments and Places.

PRESERVATION ORDERS AND TEMPORARY PRESERVATION ORDERS

Sites deemed to be in danger of injury or destruction can be allocated Preservation Orders under the 1930 Act. Preservation Orders make any interference with the site

illegal. Temporary Preservation Orders can be attached under the 1954 Act. These perform the same function as a Preservation Order but have a time limit of six months, after which the situation must be reviewed. Work may only be undertaken on or in the vicinity of sites under Preservation Orders with the written consent, and at the discretion, of the Minister.

RECORD OF MONUMENTS AND PLACES

Section 12(1) of the 1994 Act requires the Minister for Arts, Heritage, Gaeltacht and the Islands (now the Minister for the Department of Housing, Local Government and Heritage) to establish and maintain a record of monuments and places where the Minister believes that such monuments exist. The record comprises a list of monuments and relevant places and a map/s showing each monument and relevant place in respect of each county in the state. All sites recorded on the Record of Monuments and Places receive statutory protection under the National Monuments Act 1994. All recorded monuments on the proposed development site are represented on the accompanying maps.

Section 12(3) of the 1994 Act provides that 'where the owner or occupier (other than the Minister for Arts, Heritage, Gaeltacht and the Islands) of a monument or place included in the Record, or any other person, proposes to carry out, or to cause or permit the carrying out of, any work at or in relation to such a monument or place, he or she shall give notice in writing to the Minister of Arts, Heritage, Gaeltacht and the Islands to carry out work and shall not, except in case of urgent necessity and with the consent of the Minister, commence the work until two months after giving of notice'.

Under the National Monuments (Amendment) Act 2004, anyone who demolishes or in any way interferes with a recorded site is liable to a fine not exceeding €3,000 or imprisonment for up to 6 months. On summary conviction and on conviction of indictment, a fine not exceeding €10,000 or imprisonment for up to 5 years is the penalty. In addition, they are liable for costs for the repair of the damage caused.

In addition to this, under the *European Communities (Environmental Impact Assessment) Regulations 1989*, Environmental Impact Statements (EIS) are required for various classes and sizes of development project to assess the impact the proposed development will have on the existing environment, which includes the cultural, archaeological and built heritage resources. These document's recommendations are typically incorporated into the conditions under which the proposed development must proceed, and thus offer an additional layer of protection for monuments which have not been listed on the RMP.

THE PLANNING AND DEVELOPMENT ACT 2000

Under planning legislation, each local authority is obliged to draw up a Development Plan setting out their aims and policies with regard to the growth of the area over a five-year period. They cover a range of issues including archaeology and built heritage, setting out their policies and objectives with regard to the protection and enhancement of both. These policies can vary from county to county. The Planning and Development Act 2000 recognises that proper planning and sustainable

development includes the protection of the archaeological heritage. Conditions relating to archaeology may be attached to individual planning permissions.

South Dublin County Council Development Plan 2022-2028

South County Dublin contains a large number of buildings, structures and sites of architectural, historic and/or artistic importance, in addition to numerous archaeological sites. This significant archaeological and architectural heritage is a valuable resource adding to the historical and cultural character of the County. The Development Plan contains policies which are intended to ensure the protection of this heritage. Village Design Statements can be utilised as a tool to guide development in smaller centres. It should be noted that archaeological sites and archaeological zones of interest are identified by a recorded monument reference number on the land use zoning maps. The recorded monument reference numbers are taken from the Record of Monuments and Places for Dublin, published by Department of the Environment, Heritage and Local Government.

Policy NCBH13: Archaeological Heritage

Manage development in a manner that protects and conserves the Archaeological Heritage of the County and avoids adverse impacts on sites, monuments, features or objects of significant historical or archaeological interest.

NCBH13 Objective 1:

To favour the preservation in-situ of all sites, monuments and features of significant historical or archaeological interest in accordance with the recommendations of the Framework and Principles for the Protection of Archaeological Heritage, DAHGI (1999), or any superseding national policy document.

NCB13 Objective 2:

To ensure that development is designed to avoid impacting on archaeological heritage including previously unknown sites, features and objects.

NCBH13 Objective 3:

To protect and enhance sites listed in the Record of Monuments and Places and ensure that development in the vicinity of a Recorded Monument or Area of Archaeological Potential does not detract from the setting of the site, monument, feature or object and is sited and designed appropriately.

NCBH13 Objective 4:

To protect and preserve the archaeological value of underwater archaeological sites including associated features and any discovered battlefield sites of significant archaeological potential within the County.

NCBH13 Objective 5:

To protect historical burial grounds within South Dublin County and encourage their maintenance in accordance with conservation principles.

APPENDIX 3 IMPACT ASSESSMENT AND THE CULTURAL HERITAGE RESOURCE

POTENTIAL IMPACTS ON ARCHAEOLOGICAL AND HISTORICAL REMAINS

Impacts are defined as 'the degree of change in an environment resulting from a development' (Environmental Protection Agency 2022). They are described as profound, significant or slight impacts on archaeological remains. They may be negative, positive or neutral, direct, indirect or cumulative, temporary or permanent.

Impacts can be identified from detailed information about a project, the nature of the area affected and the range of archaeological and historical resources potentially affected. Development can affect the archaeological and historical resource of a given landscape in a number of ways.

- Permanent and temporary land-take, associated structures, landscape mounding, and their construction may result in damage to or loss of archaeological remains and deposits, or physical loss to the setting of historic monuments and to the physical coherence of the landscape.
- Archaeological sites can be affected adversely in a number of ways: disturbance by excavation, topsoil stripping and the passage of heavy machinery; disturbance by vehicles working in unsuitable conditions; or burial of sites, limiting accessibility for future archaeological investigation.
- Hydrological changes in groundwater or surface water levels can result from construction activities such as de-watering and spoil disposal, or longer-term changes in drainage patterns. These may desiccate archaeological remains and associated deposits.
- Visual impacts on the historic landscape sometimes arise from construction traffic and facilities, built earthworks and structures, landscape mounding and planting, noise, fences and associated works. These features can impinge directly on historic monuments and historic landscape elements as well as their visual amenity value.
- Landscape measures such as tree planting can damage sub-surface archaeological features, due to topsoil stripping and through the root action of trees and shrubs as they grow.
- Ground consolidation by construction activities or the weight of permanent embankments can cause damage to buried archaeological remains, especially in colluviums or peat deposits.
- Disruption due to construction also offers in general the potential for adversely affecting archaeological remains. This can include machinery, site offices, and service trenches.

Although not widely appreciated, positive impacts can accrue from developments. These can include positive resource management policies, improved maintenance and access to archaeological monuments, and the increased level of knowledge of a site or historic landscape as a result of archaeological assessment and fieldwork.

PREDICTED IMPACTS

The severity of a given level of land-take or visual intrusion varies with the type of monument, site or landscape features and its existing environment. Severity of impact can be judged taking the following into account:

- The proportion of the feature affected and how far physical characteristics fundamental to the understanding of the feature would be lost;
- Consideration of the type, date, survival/condition, fragility/vulnerability, rarity, potential and amenity value of the feature affected;
- Assessment of the levels of noise, visual and hydrological impacts, either in general or site-specific terms, as may be provided by other specialists.

APPENDIX 4 MITIGATION MEASURES AND THE CULTURAL HERITAGE RESOURCE

POTENTIAL MITIGATION STRATEGIES FOR CULTURAL HERITAGE REMAINS

Mitigation is defined as features of the design or other measures of the proposed development that can be adopted to avoid, prevent, reduce or offset negative effects.

The best opportunities for avoiding damage to archaeological remains or intrusion on their setting and amenity arise when the site options for the development are being considered. Damage to the archaeological resource immediately adjacent to developments may be prevented by the selection of appropriate construction methods. Reducing adverse effects can be achieved by good design, for example by screening historic buildings or upstanding archaeological monuments or by burying archaeological sites undisturbed rather than destroying them. Offsetting adverse effects is probably best illustrated by the full investigation and recording of archaeological sites that cannot be preserved *in situ*.

DEFINITION OF MITIGATION STRATEGIES

ARCHAEOLOGICAL RESOURCE

The ideal mitigation for all archaeological sites is preservation *in situ*. This is not always a practical solution, however. Therefore, a series of recommendations are offered to provide ameliorative measures where avoidance and preservation *in situ* are not possible.

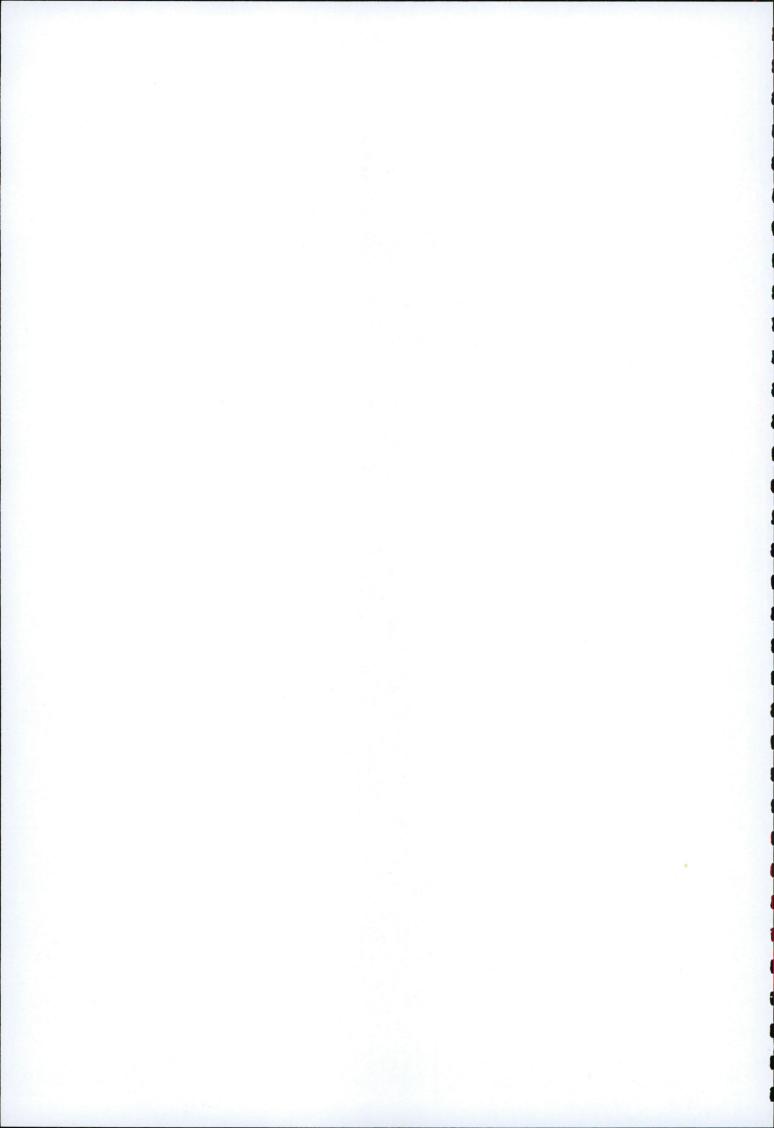
Archaeological Test Trenching can be defined as 'a limited programme of intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site on land, intertidal zone or underwater. If such archaeological remains are present field evaluation defines their character, extent, quality and preservation, and enables an assessment of their worth in a local, regional, national or international context as appropriate' (CIFA 2020a).

Full Archaeological Excavation can be defined as 'a programme of controlled, intrusive fieldwork with defined research objectives which examines, records and interprets archaeological deposits, features and structures and, as appropriate, retrieves artefacts, ecofacts and other remains within a specified area or site on land, intertidal zone or underwater. The records made and objects gathered during fieldwork are studied and the results of that study published in detail appropriate to the project design' (CIFA 2020b).

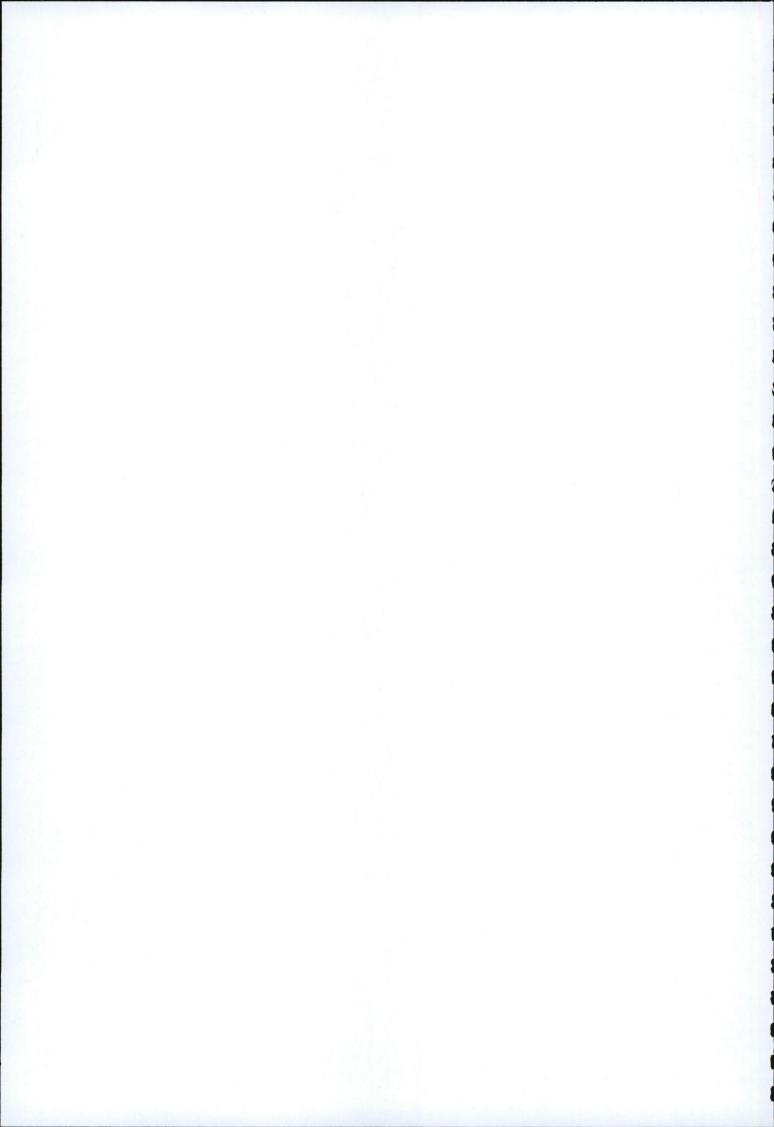
Archaeological Monitoring can be defined as 'a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons. This will be within a specified area or site on land, inter-tidal zone or underwater, where there is a possibility that archaeological deposits may be

disturbed or destroyed. The programme will result in the preparation of a report and ordered archive (CIfA 2020c).

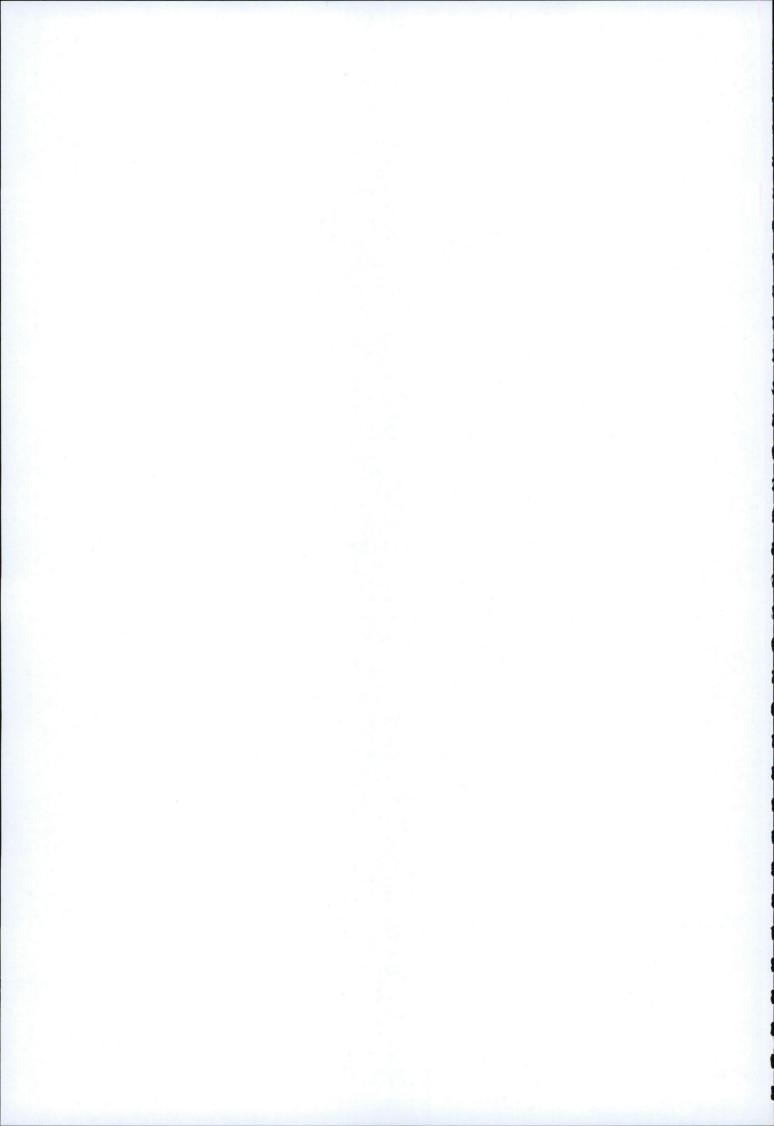
Underwater Archaeological Assessment consists of a programme of works carried out by a specialist underwater archaeologist, which can involve wade surveys, metal detection surveys and the excavation of test pits within the sea or riverbed. These assessments are able to access and assess the potential of an underwater environment to a much higher degree than terrestrial based assessments.





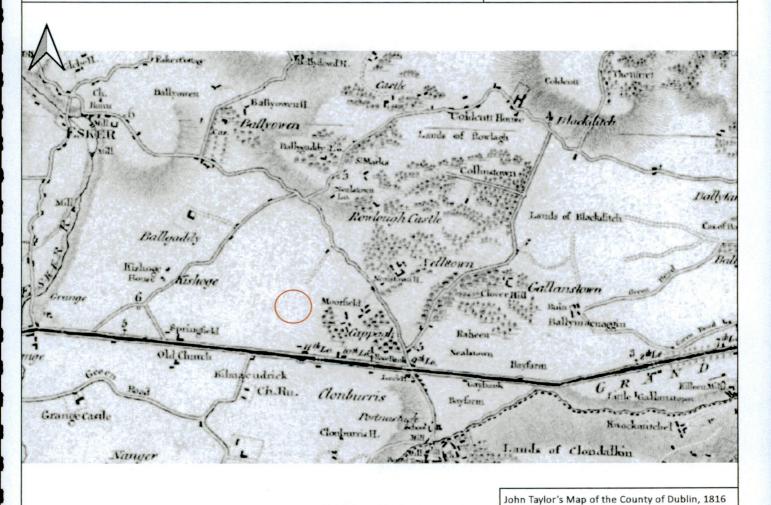








Rocque's An Actual Survey of County Dublin, 1760



Title: Extracts from historic mapping showing approximate location of the proposed development

Project: Clonburris Cairn T3

Client: Cairn Homes PLC

Title: Extracts from historic mapping showing approximate location of the proposed development

Date: 14/10/2022

Checked By:FB

Rev. 0

