

4.0 ARCHAEOLOGY, ARCHITECTURAL AND CULTURAL HERITAGE

4.1 INTRODUCTION

This chapter describes the architectural heritage, archaeological and cultural heritage importance of the land under consideration for a proposed residential development in the townland of Kilgobbin at Clay Farm to the south of Ballyogan Road, Dublin 18. The study has been carried out by Siobhán Deery¹ of Courtney Deery Heritage Consultancy Ltd. on behalf of Viscount Securities.

The application area comprises Phase 2 of a wider development site (Figure 4.1 and 4.2). Phase 1, which comprises the northern section of the lands is currently under construction and it includes an Ecopark area along the Ballyogan Stream, this park separates Phase 1 and Phase 2. Phase 2 comprises the southern portion of the Clay Farm lands, it is bound to the south by Cruagh Manor and Carrickmines Golf Course, to the west by open fields zoned for development and to the east by the Ballyogan Tip Head.

The main purpose of the impact assessment report is to assess the potential significance and sensitivity of the existing architectural heritage, archaeological and cultural heritage environment, and in turn to evaluate the likely and significant impacts of the proposed development on this environment. Ameliorative (remedial or reductive) measures are proposed where necessary to safeguard any monuments, features or finds of antiquity or features of local cultural heritage interest that are identified during the course of the present study.

4.2 STUDY METHODOLOGY

The assessment of architectural, archaeological and cultural heritage potential of the proposed development area was based on a desk study which was supported by a field inspection, a geophysical survey and targeted archaeological test excavation.

4.2.1 Desk Study

The following publicly available sources were availed of:

Record of Monuments and Places (RMP) and Sites and Monuments Record (SMR)

The primary source of information for the desk study is the Record of Monuments and Places (RMP) of the now Department of Culture, Heritage and Gaeltacht (DCHG). The Sites and Monuments Record (SMR), as revised in the light of fieldwork, formed the basis for the establishment of the statutory RMP pursuant to Section 12 of the National Monuments (Amendment) Act, 1994. The RMP records known upstanding archaeological monuments, their original location (in cases of destroyed monuments) and the position of possible sites identified as cropmarks on vertical aerial photographs. It is based on a comprehensive range of published and publicly available documentary and cartographic sources. The information held in the RMP files is read in conjunction with constraint maps (published at reduced six-inch scale).

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Development Plan and National Inventory of Architectural Heritage

The primary source of architectural heritage information is the Dun Laoghaire Rathdown County Development Plan (2016–2022) which was consulted for the Record of Protected Structures (RPS) in the study area. Not all architectural heritage of Ireland is known or recorded by the National Inventory of Architectural Heritage (NIAH) or RPS or is protected by legislation. There is currently no NIAH survey available for Dun Laoghaire-Rathdown. The field survey carried out as part of this assessment was carried out in order to identify any previously unknown/unrecorded features of architectural heritage merit, and assess if they will be impacted by the proposed development.

The Topographical Files of the National Museum of Ireland

The topographical files of the National Museum of Ireland (NMI) identify recorded stray finds held in the museum's archive. The files, which are donated to the state in accordance with national monuments legislation, are provenanced to townland and sometimes include reports on excavations undertaken by NMI archaeologists earlier in the 20th century.

Documentary and Cartographic Sources

Documentary and literary references, including previous relevant archaeological surveys were consulted (Section 4.14). Documentary and literary sources were consulted in the Trinity map library and the National Library of Ireland. A review of historical maps was also undertaken, primarily in the map library of Trinity College Dublin where the following were examined: William Petty's Down Survey of the Barony of Half Rathdown c.1656; Rocque's map of Dublin 1760 (Fig. 4.3); Taylor's map of Dublin 1816 (Fig. 4.4); OS first edition six-inch map 1837-43 (Fig. 4.5a); OS revised edition six-inch map 1874 (Fig. 4.5b); OS revised edition 25-inch map 1906-9 (Fig. 4.5c). The sites and monuments database of the Archaeological Survey of Ireland which is available online at www.archaeology.ie was also examined.

Excavations Bulletins and Excavations Database

'Excavations' is an annual bulletin that contains summary accounts of all excavations carried out annually in Ireland. The online database contains summary accounts of all excavations carried out from 1985. The bulletins and database were consulted to establish the results of excavations that previously have been undertaken at sites or as a consequence of development in the environs of the proposed development. The National Monuments Service of the DCHG was also consulted to identify any archaeological investigations that have taken place since 2010.

4.2.2 Non-Invasive Field survey

Field inspection was undertaken in July 2014, January 2015 and June 2017 to assess current land use, access to the site, local topography and any additional environmental information relevant to the site's appraisal. It also sought to identify any features of architectural heritage, archaeological or cultural heritage merit which may survive within the proposed development area.

Geophysical survey comprising preliminary gradiometer scan with targeted detailed survey was carried out within the Clay Farm, Phase 1 and 2 lands in 2008 and 2014 (Licence Ref.08R0259 and 14R0099) (Fig. 4.6). The extent of the survey was limited to a large extent by the presence of overgrown vegetation and / or waterlogged ground, disturbed ground and wooded areas, primarily along the Ballyogan Stream (i.e. in the area within the RMP zone for DU026-087 along the line of the Pale boundary). The conditions of those fields were considered unsuitable for survey.

4.2.3 Archaeological Test Trenches

Targeted archaeological test excavation was carried out within the both the Phase 1 and 2 lands (Fig. 4.7, McLoughlin 2014). The main purpose of the testing exercise was to examine the geophysical survey anomalies/areas of potential in order to assess whether any archaeological remains were present and to establish the impact of the proposed development on these remains.

The testing exercise was also carried out to establish whether there were surviving sections of the Pale defences within the proposed development area, the recorded remains of which are located both to the west (DU026-087) and to the east (DU026-115) of the proposed development site. In total 18 archaeological test trenches were excavated within the Clay Farm lands (Licence Ref. 14E0359). 15 test trenches were excavated over four days from 1st September 2014 and an additional three test trenches were excavated on the 15th October 2014. 10 of these trenches (T6-15, Fig. 4.7) were opened in the Phase 2 lands. Details of the findings of the test trench excavations pertaining to the present application are provided in Appendix 4.1. A testing report was submitted to the DCHG in accordance with the conditions of the testing licence.

4.2.4 Standards and Guidelines

The following legislation, standards and guidelines were considered and consulted for the purposes of the report (excerpts from the relevant legislation are contained in Appendix 4.2):

- The Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act, 1999;
- The Heritage Act, 1995
- National Monuments Act, 1930, as amended in 1954, 1987, 1994, 2004 and 2012 (S.I. 249 of 2012)
- Planning and Development Act, 2000, as amended;
- Environmental Protection Agency (EPA) (2015), Revised Guidelines on the information to be contained in Environmental Impact Statements, Draft September 2015;
- Environmental Protection Agency (EPA) (2015), Advice Notes for preparing Environmental Impact Statements Draft September 2015;
- Historic England (July 2015), Historic Environment Good Practice Advice in Planning, Note 3: The Setting of Heritage Assets;
- The Heritage Council (2013), Historic Landscape Characterisation in Ireland: Best Practice Guidance;
- Department of Arts Heritage and the Gaeltacht (DAHG) (2011), Architectural Heritage Protection Guidelines for Planning Authorities;
- NRA (2010), Project Management Guidelines;
- Historic Scotland (October 2010), Managing Change in the Historic Environment;
- The Heritage Council (2010), Proposals for Irelands Landscapes;
- Cork County Council Heritage Unit (2007), Guidance Notes for the Appraisal of Historic Gardens, Demesnes, Estate and their Settings;
- National Roads Authority (Now TII) (2006), Guidelines for the Assessment of Archaeological Heritage Impacts of National Road Schemes;
- NRA (2006), Guidelines for the Assessment of Architectural Heritage Impacts of National Road Schemes;
- NRA (2005), Guidelines for the Testing and Mitigation of the Wetland Archaeological Heritage for National Road Schemes;
- Environmental Protection Agency (EPA) (2003), Advice Notes on Current Practice (in preparation of Environmental Impact Statements);
- Environmental Protection Agency (EPA) (2002), Guidelines on the information to be contained in Environmental Impact Statements;
- Department of Arts, Heritage, Gaeltacht and Islands (now Department of Culture, Heritage and Gaeltacht) (1999a), Framework and Principles for the Protection of the Archaeological Heritage;
- DAHGI (1999b), Policy and Guidelines on Archaeological Excavation.

4.2.5 Impact Significance

Cultural heritage sites are considered to be a non-renewable resource and cultural heritage material assets are generally considered to be location sensitive. In this context, any change to their environment, such as construction activity and ground disturbance works, could adversely affect these sites. The likely significance of all impacts is determined in consideration of the magnitude of the impact and the baseline rating upon which the impact has an effect. The impact significance is defined as imperceptible, slight, moderate, significant and / or profound (Appendix 4.2).

Archaeological and Cultural Heritage

In accordance with the NRA 'Guidelines for the Assessment of Archaeological Heritage Impact of National Road Schemes' (2006), the significance criteria used to evaluate an archaeological site, monument or complex are as follows: existing status (level of protection), condition or preservation, documentation or historical significance, group value, rarity, visibility in the landscape, fragility or vulnerability, and amenity value. In accordance with EPA guidelines, the context, character, significance and sensitivity / vulnerability of each site, monument or complex assessed. Any direct impact on a recorded archaeological monument or site is regarded at the least as a significant negative impact. A glossary of impacts as defined by the EPA is provided in Appendix 4.3.

Architectural Heritage

In accordance with the NRA 'Guidelines for the Assessment of Architectural Heritage Impacts of National Road Schemes' which sets out examples of architectural heritage, the report seeks to identify the properties/structures of architectural heritage merit that will be directly impacted by the proposed scheme. A direct impact is where a feature or site of architectural heritage merit is physically located in whole or in part within the footprint of a potential development site. In this case the main form of mitigation would be redesign and avoidance, where feasible, and having regard to the significance of the feature or site concerned. Several categories of special interest are taken into consideration when assessing the significance of a property/structure. These include architectural, historical, archaeological, artistic, cultural, scientific, technical or social.

Potential effects of the proposed development on the cultural heritage resource can be described in three categories:

- Direct physical effects;
- Indirect physical effects; and
- Effects on setting.

Direct Physical Effects

Direct physical effects describe those development activities that directly cause damage to the fabric of a heritage asset. Typically, these activities are related to construction works; in the case of MSAs they could include excavation of foundations, earthmoving/site preparation, creation of access roads and the excavation of service trenches or excavation for the placement of underground tanks. Further direct physical effects are unlikely to be experienced during the operational life of the development.

Indirect Physical Effects

Indirect physical effects describe those processes, triggered by development activity, that lead to the degradation of heritage assets.

Effects on Setting

Effects on the setting of heritage assets describes how the presence of a development changes the surroundings of a heritage asset (archaeological, architectural or cultural heritage sites) in such a way that it affects (positively or negatively) the heritage significance of that asset. Visual effects are most commonly encountered but other

environmental factors such as noise, light or air quality can be relevant in some cases. Effects may be encountered at all stages in the life cycle of a development from construction to decommissioning but they are only likely to be considered significant during the prolonged operational life of the development.

The Draft EPA Revised Guidelines on Information to be contained within an EIA Report (September 2015) has also described two additional types of impact/effects:

- Indirect Impacts – Effects that arise off-site or are caused by other parties that are not under the control of the developer. Effects which are caused by the interaction of effects, or by associated or off-site projects (this is different to the explanation stated in the NRA guidelines 2006 see above).
- Secondary Impacts – Effects that arise as a consequence of a project.

4.3 THE EXISTING RECEIVING ENVIRONMENT (BASELINE SITUATION)

4.3.1 Archaeological and Historical Background

Introduction

The proposed development site (Fig. 4.1) is located in the townland and parish of Kilgobbin, within the barony of Rathdown. Evidence for human activity in the area dates from at least the Neolithic period, with monuments and artefacts in the area attesting to ritual, social and settlement activity over several thousand years. Extensive archaeological investigations in this area have greatly increased our knowledge of this area from the prehistoric period onwards, particularly the results of those carried out in advance of residential development in Kilgobbin and its surrounding townlands (2002-2004), as part of the works for the M50 South Eastern Motorway (SEM) in 2000-2002, and in advance of the LUAS in 2006. Archaeological investigations in proximity to the proposed development site are shown on Figure 4.1 (referenced by licence number e.g. 97E0467). These and other relevant excavation results are discussed in context throughout the text below.

Mesolithic Period (c. 7000–4000 BC)

While known archaeology from the Mesolithic is not well represented in south County Dublin, one of the earliest prehistoric finds in the wider study area is a flint tool (NMI Ref. 1967:137), either Mesolithic or Neolithic in date, found in Loughlinstown townland.

Neolithic Period (c. 4000-2400 BC)

There are no stray finds from this period in the National Museum of Ireland's (NMI) Topographical Files recorded within the proposed development site. Several artefacts were however recorded in the townlands surrounding the proposed development, including a fragment of a polished axehead from Murphystown townland (NMI Ref. 1979:73) and a polished stone axe (NMI Ref. 1984:19) from Kilternan. These artefacts of highly finished, fine-grained stone are typical of the Neolithic period, when they were used for cutting wood.

In contrast with this paucity in the NMI records, archaeological investigations in the vicinity of Kilgobbin since 2002 have uncovered a substantial amount of evidence (artefactual and otherwise) for Neolithic activity in the area. Early Neolithic activity was identified in Kilgobbin townland in 2004. Two ditches, although mostly containing medieval pottery, also contained sherds of early Neolithic carinated bowls, representing the remains of at least three vessels from 4000–3600 BC (Dennehy 2004a, Licence Ref. 04E0566). The sherds were fragmentary and abraded and although in a 'secondary position it probably represents outlying activity within the wider domestic landscape of Kilgobbin' (Grogan 2004).

In the townland of Newtown Little to the west of the proposed development, archaeological investigations produced evidence for settlement activity in the early, middle and late Neolithic period (Phelan 2005; Licence Ref. 05E0655). It also revealed two possible Beaker structures and a number of sherds of Beaker pottery, indicating settlement and activity here continuing from the early Neolithic period during the transitional phase between the late Neolithic period and the early Bronze Age. On the southern side of the Ballyogan Stream, in Kilgobbin townland, settlement and burial activity (some of which dated to the late Neolithic/Beaker period) was uncovered during archaeological monitoring of topsoil removal (Hagen 2003; Licence Ref. 02E1173ext) in advance of a residential development.

Late Neolithic occupation associated with Grooved Ware pottery, which predated a Bronze Age flint knapping site, was also revealed at Carrickmines Great during the M50 SEM excavations, to the east/southeast of the proposed development (Conboy 2002a; Licence Ref. 02E0700). Neolithic artefacts were recovered during excavations associated with the M50 SEM, where there was also evidence for Beaker occupation (2460–2200 BC; O’Drisceoil 2002 & Seaver 2002, Licence Refs 02E0272 & 02E1133). These included the unusual find of a Neolithic bead necklace, along with fragments of a pottery vessel, deposited in a small pit. The pit was located within an area that was the focus of later settlement, during the Bronze and Iron Ages, though it was isolated from the main foci of this activity. Although the function of the pit is uncertain and the reason for the deposition unknown, it is thought to form part of a tradition of depositing special items in places that were of importance within the Neolithic landscape (Ó Drisceoil 2006). A prehistoric rock art site consisting of three small boulders with cupmarks (Clinton 2002; Licence Ref. 00E0525) was also identified during the SEM works.

Bronze Age (c. 2400-500 BC)

There is a substantial amount of evidence for the Bronze Age in the area surrounding the proposed development site, with the number of sites of this period revealed during archaeological investigations suggesting that there was a significant Bronze Age presence on the lower slopes of the Two Rock and Three Rock Mountain.

Following the decline of the megalithic tombs of the Neolithic period, the tradition of communal burial largely disappeared in the Bronze Age. Instead, individual burials were set in pits or cists (stone-lined pits), often accompanied by pottery vessels (known as food vessels) or other small grave goods, or contained within large pottery urns. These sites could be under tumuli or cairns, set into natural sand hills or have no permanent above-ground markers. Groups of burials often take the form of flat cemeteries, the largest single type of burial site known from the period, which consisted of multiple graves dug into the ground that were stone-lined or simple pits.

Archaeological excavations in Kilgobbin townland in advance of a large residential development revealed a small Bronze Age cremation burial complex, incorporating two cremation burials, one of which contained a coarse pottery vessel, possibly of middle to late Bronze Age date (Hagen 2004b; Licence Refs 02E0906, 02E1104, 02E1173, 02E1196, 02E1220, 03E0306, 03E0717, 04E0566). Further excavations for the same development in 2003 in Kilgobbin / Newtown Little identified a second Bronze Age burial complex (Hagen 2004a; Licence Ref. 03E0306) and a burnt mound, with associated activity in the form of a hearth, post and stake holes and a pit containing numerous fragments of prehistoric pottery of possible early–late Bronze Age date (Cryerhall 2004; Licence Ref. 03E0717). A single late Bronze Age pit was also identified as part of these investigations in Kilgobbin in 2004, along with the early Neolithic material noted above (Dennehy 2004a; Licence Ref. 04E0566).

A number of burials have been recorded in the surrounding area, including an urn burial (DU026-123) found in the lawn of Kilgobbin Cottage (Lewis 1837), c. 40m west/northwest of Phase 2 development. Another urn burial is recorded from Jamestown townland, where the remains may represent a small flat cemetery (DU026-015; NMI Refs. 1927:45; 1927: 64; Waddell 1970, 83), though references to other human bones and pottery sherds in the area suggest that there may have been a sizeable Bronze Age cemetery in the sand hills of Jamestown (NMI Refs. 1929: 1290; 1957: 126-9). An early Bronze Age flat cemetery has also been excavated in Murphystown, to the northwest of the proposed development (Breen 2002a & b; Licence Refs 02E0699, 02E0153).

There is evidence for Bronze Age settlement as well as burial activity in this area. Excavations carried out in Ballyogan in 1997 and 1998 produced evidence for an enclosed Bronze Age settlement that has been radiocarbon dated to 3670±50 BP (Reid 1997; DU026-128; Licence Ref. 97E0467). Late Bronze Age activity in Carrickmines Great, uncovered during the M50 SEM excavations, took the form of a series of cooking-pits, huts and hearths that were probably part of a larger settlement (Ó Drisceoil 2006). A Bronze Age oval hut was identified in Woodside, during archaeological excavations in advance of a large residential development (McCabe 2002; Licence Ref. 02E1584).

The presence of fulachta fiadh is often indicative of Bronze Age seasonal communal activity in river or stream valleys and boggy ground (an area of former bog is located to the south of Carrickmines Great townland). Conboy (2002) and Reilly (2002b; Licence Ref. 02E1188) excavated a fulacht fiadh and a burnt mound in Carrickmines Great. Another burnt mound was excavated in that same townland, the trough of which contained diagnostic pottery sherds dating to the Bronze Age (Reilly 2002a; Licence Ref. 02E0428). Investigations in 1998 also revealed a fulacht fiadh (dated 2852 BC±9) during monitoring associated with a foul sewer outfall in the environs of the Ballyogan tiphead in Jamestown, to the east of the proposed development (Reid 1998; Licence Ref. 98E0119), further attesting to the intensive use of the environs Kilgobbin in the Bronze Age period.

Additional examples of such sites are known from the surrounding area, including two possible fulachta fiadh in Ballyogan (Breen 2002 & Conboy 2002c; Licence Refs 02E0481 & 02E1276), two fulacht fiadh in Murphystown (Breen 2002a & b; Licence Refs 02E0699, 02E0153) and a fulacht fiadh in Carmanhall and Leopardstown townland (Breen 2002c; Licence Ref. 02E0330) and another in Carrickmines Great, along with a cremation pit (Tobin 2004; Licence Ref. 04E0773). Excavations in Jamestown townland uncovered a fulacht fiadh, with a sample of timber from the site producing a dendrochronological date of 2852±9 BC (Brady 1998; Licence Ref. 98E0119).

The topographical files of the National Museum of Ireland also record several artefacts from the area dating to this period. These include a bronze flat axe from Murphystown (NMI record only) and a bronze palstave from Glenamuck (NMI Ref. 1974:89). A small cast bronze ring from Kilgobbin (NMI Ref. 1971:1050) may also date from this period. A number of possible standing stones have been also noted in the field adjacent to Kilgobbin Cottage and may also date to this period (C. Corlett, *Pers. Comm.* Cited in Clancy 2006).

Iron Age (c. 500 BC – 400 AD)

A La Tène Iron Age site (c.200 cal. BC) was excavated during the SEM works in Carrickmines Great. It appears to have been an open undefended settlement, comprising a round house (the first Iron Age example in County Dublin), an iron-smelting furnace and associated domestic structures, while analysis of plant remains from the site indicates cereal growing (Ó Drisceoil 2006). A pit-cremation of the 4th-6th century cal. AD post-dates the earlier Iron Age settlement and is only one of two Irish cremations that have been dated after c. 400 AD (the other being at Furness, Co. Kildare) (Ó Drisceoil 2006). These cremations occurred at a time when other, contemporary burials appear quite Christian in character, though the associated beliefs are uncertain (Ó Drisceoil 2006). There is also tentative evidence for Iron Age activity / settlement within Kilgobbin townland, though its exact location is unknown; a small iron tube may represent an iron tool of this period (NMI Ref. 1972:18).

Early Medieval Period (c. 400-1200 AD)

The principal settlement type during the early medieval period was the ringfort or rath, though upstanding examples are very rare in Dublin, where intensive agriculture and the expanding city have removed much of their physical presence and their immediate and wider setting within the landscape. Of the two recorded sites previously thought to be ringforts in the surrounding area, neither proved to be of early medieval origin. The designed landscape feature recorded in Woodside townland was formerly recorded as a ringfort (DU022-069), though subsequent archaeological testing and a topographical survey undertaken in 1998 indicated that it is more likely to have been a tree ring (Reid 1998; Licence Ref. 98E0119). Similarly, an enclosure recorded in Jamestown

(DU026-001), when investigated was found to be non-archaeological in origin and associated with the modern dump at Ballyogan (Reid 1998; Licence Ref. 98E0119).

Christianity was introduced into Ireland in the 5th century AD, bringing with it the introduction of the country's earliest churches. The Irish word 'cill', meaning church, often appears as the root of townland names in areas where early churches were founded (as in Kilgobbin, DU026-016 c. 350m west). The present ruined church of Kilgobbin was built by Archbishop King in 1703-07 on the site of an early medieval church (DU025-01601), to serve the parishes of Taney and Cruaghe (Ó hÉailidhe 1984). It went out of use in 1826 when the new church at Kiltiernan was built. While most of the gravestones in the surrounding graveyard (DU025-01602) are 18th century or later in date, earlier gravestones within the church attest to the continuous use of the site since its foundation.

The early church is said to owe its foundation to St Gobbán, and although there are several saints with this name and local tradition associates the name with the Goban Saor, the foundation of Kilgobbin is likely to be attributed to the Welsh saint Gobbán, a nephew of St David of Wales (Bolger 2008). The saint's name appears in the *Martyrology of Tallaght* and the *Martyrology of Donegal*, and the church in Kilgobbin was mentioned in 1179 as *Technabretnach*, the 'house of the Welshman' (Gwynn and Hadcock 1988). This fits with the well-established tradition along the eastern seaboard of early Irish churches associated with British missionary founders (Bolger 2008). After the arrival of the Anglo-Normans, the church was granted to the archbishop of Dublin and was subsequently assigned to the archdeacon of Dublin, becoming the chapel that was subservient to the church at Taney. The church was abandoned prior to the 17th century, and in 1615, the Regal Visitation found both its chancel and nave in ruins.

There is extant physical evidence for the early ecclesiastical foundation at Kilgobbin. At the base of the hill stands a high cross (DU025-016011, a National Monument), found in the graveyard in the early 19th century (Goodbody 1993). The cross was inserted into a bullaun stone (DU025-016012) and was erected at the junction of Kilgobbin Lane and the former road, which ran around the back of the hill. Early medieval fragments survive within the church, including a quernstone (DU025-016006), several Rathdown graveslabs (DU025-016003 to 005), decorated stones (DU025-016008 to 010 and a cross fragment (DU025-016007). A holy well, known as Eye Well, formerly existed near Kilgobbin church, but a drain constructed in its vicinity removed its spring and caused it to disappear (O'Flanagan 1927).

Archaeological investigations at a site adjacent to Kilgobbin church identified a complex sequence of enclosures with associated corn-drying kilns and field ditches, mostly dating from between AD 650 and 950, as well as adjacent secular settlement activity evidence of iron-working, scattered pits, post-holes and ditches of early medieval / medieval date (Bolger 2008; Larsson 2004 & 2007; Licence Refs. 04E0773ext, 05E0459; 04E0501 & 04E0777). The concentric curvilinear enclosures found are a typical characteristic of early medieval ecclesiastical sites and the overall economy of the site, especially evidence for a variety of metallurgical processes, is comparable to other excavated ecclesiastical sites (Bolger 2008). Although there is an absence of substantial evidence for activity post-950 AD, this is likely to be a result of the extensive 18th and 19th century quarrying that have altered the local topography (Bolger 2008).

There are several other pre-Norman ecclesiastical settlements in the surrounding area, including one at the Kilgobbin / Jamestown townland boundary (DU026-004) to the northeast of the study area) and in the wider landscape, Tully and Rathmichael. A cross base, which is probably early medieval in date, is recorded in the townland of Carrickmines Great (DU026-018) and it is thought that a cross at this location may have marked a route or a boundary between Tully to the east and Jamestown to the west (Corlett 1999). According to the Schools Survey, organised by the Irish Folklore Commission in 1937, there was a tradition that the cross was buried somewhere in the vicinity. The cross base stands within a farmhouse garden and the trackway beside the house is known as the 'Old Packhorse Road' (RMP File). Archaeological testing at the site of the cross base did not reveal any features and may indicate that the cross did indeed mark an early routeway (Dennehy 2005; Licence Ref. 04E0114ext).

Medieval Period (c.1200-1700 AD)

The medieval period is well-represented in the study area, with the tower house at Kilgobbin (DU025-01701) and its status as a frontier village of the Pale mirrored in other tower houses in the locality, such as those at Carrickmines (DU026-005, National Monument) and Murphystown (DU023-025). The churches, holy wells, and crosses in the area also point to a considerable local population living in well-defined villages and hamlets, rather than scattered across the landscape. They also appear to reflect a relatively stable early medieval and medieval population, as the church in Kilgobbin (DU025-016) appears to have been rebuilt with stones from an older church, rather than being deserted. The village of Kilgobbin grew up around the church and castle built by the Walsh family in the fifteenth century. It is only when people moved to larger villages in the last few centuries that smaller hamlets such as that at Kilgobbin, and the second church between Jamestown and Kilgobbin, were deserted.

The Harold family, who occupied a great tract of land around the Dublin Mountains, first owned the lands of Kilgobbin after the Anglo-Norman invasion in 1169 (Ball 1905). Ownership of Kilgobbin subsequently passed from the Harolds to the Hacketts and then to a branch of the Walsh family of Carrickmines, the Harolds' allies in the protection of the Pale. The construction of Kilgobbin Castle (DU025-01701), as with the nearby Carrickmines Castle, was almost certainly due to the Walsh family. By the 16th century the Walshes were in occupation either as tenants or owners of a wide extent of land and they had become one of the most important families on the south side of Dublin. Finds from the period include a range of Belarmine ware (NMI Ref. 1971:1126, 1972:16) and some stoneware sherds (NMI Ref. 1972:17) found in the area around the castle in the locally known 'Battlefield'.

Excavation in a field to the north of the tower house in 2002 produced evidence of a small number of medieval features relating to drainage, land enclosure and agricultural activity in the area (Hagen 2004b; Licence Refs 02E0906, 02E1104, 02E1173, 02E1196, 02E1220, 03E0306, 03E0717, 04E0566). The remains of a burial (preserved *in situ*) were discovered at the edge of the excavation area, though the date of the burial is unknown (Hagen 2003). Archaeological testing in 2005, in advance of a residential development at Riverside Cottage in Kilgobbin also revealed a series of ditches of apparent medieval date, that may have been associated with the nearby castle (Moriarty 2005; Licence Ref. 05E0322).

At the start of the 17th century the Walshes were described as 'a large and ancient stock and as men of note in the metropolitan county', which was then 'rich and plenteous in corn and cattle, and inhabited by a people of stately port and garb' (ref. from 1642 in Ball 1902). Circumstances had changed by the mid-17th century, when the Walsh family became involved in the Confederate rising of 1641 and Carrickmines became the centre for disaffection in the southern part of county Dublin (Ball 1902). The castle was besieged in the winter after the rebellion of 1641/2; when it finally was captured, it is reported that the castle was razed and that all 300 of its inhabitants were massacred (Ball 1902).

The extensive archaeological investigations undertaken at Carrickmines Castle at the end of the 20th century and beginning of the 21st (particularly the SEM excavations) have added significant detail to the picture of medieval settlement in the vicinity of the proposed development (See Desmond 2000; Clinton 2000, 2001 & 2002; Reilly 2002a & b; Conboy 2002a-d; O'Neill 1998). Prior to these investigations, little was known of the strongly fortified castle that was erected at Carrickmines, probably in the mid-13th century. There was a fragment of wall, on the right-hand side of the Glenamuck Road (extending towards Golden Ball) and a series of significant earthworks in a field west of the castle. The latter appeared to be the remains of a deserted settlement associated with the castle.

The excavations revealed a well-defended medieval landscape which included a revetted fosse, two outer earthen banks and fosse, an earlier ringwork castle type enclosure featuring a massive fosse, an outer fosse and associated banks, a mill pond and mill race, house sites, industrial features, the main castle entrance and a medieval village (Clinton 2000, 2001, 2002; Licence Ref. 00E0525). Some of these sites were located east of the designated RMP zone of archaeological potential. A burial pit revealed the remains of eight skeletons, aged

between 18 and 20, who showed signs of suffering traumatic injuries before their death, potentially providing archaeological evidence for the aftermath of the siege of 1642 (Clinton 2007). Up to 8,000 pieces of medieval pottery, coins, cannon balls and other weapons, textiles and more than 10,000 pieces of post-medieval pottery dating to the time when the manor house was built (depicted on the Down Survey) were found during the excavations.

Archaeological excavations in advance of the LUAS were undertaken in the vicinity of the 15th century Murphystown Castle (DU023-025), to the north/northwest of the proposed development area. These show further evidence of significant activity in this area during the medieval period, with 13th/14th century quarrying activity pre-dating the 15th century tower-house and possibly indicating that there was an earlier residence / proto-tower-house (Johnson 2006; 06E0227).

4.3.2 The Pale Boundary (known recorded sections)

The archaeological monument most pertinent to the proposed development is the medieval Pale boundary, which appears to have run east-west from Kilgobbin village (c. 350m west of the proposed development) to Carrickmines Castle (1.9km to the east). A recorded linear earthwork (DU026-087) which is believed to form a section of the Pale boundary extends from the direction of Kilgobbin Castle in the west, along the Ballyogan stream and forms the southern boundary of the western portion of the open space zoned lands between Clay Farm Phases 1 and 2 (Fig. 4.1). A second recorded linear earthwork (DU026-115), beginning at the Kilgobbin / Jamestown townland boundary (just east of Phase 1 and 2 site boundary), continues the line of the Pale c. 400m to the southeast of DU026-087 (Fig. 4.1).

The line of the Pale Boundary connecting the two recorded sections has not been verified, but based on archaeological testing (detailed further below) which has eliminated the boundary on the north side of the Ballyogan stream, it is most likely to follow the line of the large upstanding tree-topped field boundary running east-west between the Phase 1 and 2 lands (between fields F6 & F8 and F5 & F7) as shown in figure 4.1.

Historical Context of the Pale Boundary

The Pale boundary partially surrounded Dublin during the medieval period and was a defensive structure built by the English settlers to alleviate the constant raiding of their lands by native Irish tribes such as the O'Tooles and the O'Byrnes. The term 'Pale' is derived from the Latin *palus*, meaning stake, and refers to a method of fencing using vertical wooden stakes or poles (Goodbody 1993).

An Act of Parliament in 1488–89 required the landowners of the time to construct a defensive boundary along the borders of the Pale and the construction of the Pale earthwork was often undertaken to enclose an individual's property rather than ensuring that the pale boundary followed a definite orientation or predictable structure (after Bolger 2005; see O'Keeffe 1992). According to O'Keeffe (1992, 71),

'one might assume from the description in the Act that the earthwork ran more or less in a line from one location to the next, but the field evidence indicates otherwise.' As such the morphology of the boundary varies greatly from landowner to landowner, a fact that is borne out by the recent excavations (discussed below). In general the earthwork took the form of two ditches with a flat-topped earthen bank located between them. Often the bank was wide enough to be used as a roadway, being in excess of 4m wide. Joyce noted that the pale boundary in Dublin was an 'old double-ditch and pathway' and that it was 'the route taken by the Corporation in ancient times, when riding the franchises or boundaries of their municipal jurisdiction' (Joyce 1912, 434).

Previous Archaeological Investigations of the Pale Boundary: Linear Earthwork DU026-087

The upstanding remains of the section recorded in the open space zoned lands of the proposed development in Kilgobbin townland (DU026-087) appear as a bank and ditch, constructed at the base of a natural scarp, c. 2m high. On the northern side of the bank is the watercourse of the Ballyogan Stream. Archaeological testing confirmed that the scarp was a natural feature and it was thought possible at the time that it was used in conjunction with the watercourse to create a natural defensive feature, which substituted for the construction of formal Pale defences in this area (Bolger 2000; Licence Refs. 00E0247 & 00E0248). It should be noted, however, that the course of the Ballyogan Stream originally flowed through the centre of the field, as depicted on the first edition OS map, and was not realigned to flow along the southern field boundary until the late 19th / early 20th century (Fig. 4.5c).

Previous Archaeological Investigations of the Pale Boundary: Linear Earthwork DU026-115

The recorded section of the Pale Boundary to the east of the open space zoned land of the proposed development (DU026-115) is 500m in length, broken in one or two places by access lanes, and orientated slightly east/southeast–west/northwest (Goodbody 1993). It runs almost parallel to Ballyogan Road and to the Ballyogan Stream, which flows eastwards towards Carrickmines. The western end disappears under the Ballyogan tiphead and may well have been longer before the opening of this dump as it is upstanding to the east of the landfill site. The preservation varies along its length but generally it measures c. 2–3m wide at the top, and stands 2.5m above the present bottoms of the ditches. The ditches vary from 2–3m in width. The bank has hedgerow trees growing along the length of it, mainly on the sides, leaving a clear path along the top. Many of the trees are of considerable age, with hawthorns of girth up to 1.3m and clumps of ash, sycamore and hawthorn as coppice regrowth from now disappeared stumps (Goodbody 1993).

Archaeological investigations have been undertaken along this line of the recorded linear earthwork (DU026-115). The characteristic Pale Boundary morphology of large bank with flanking ditches was evident in the section excavated in Ballyogan / Jamestown (O'Carroll 2001 & O'Connor 2002; Licence Refs 01E0413 & 01E0413). The northern ditch was 2.2m in width and 1.1m in depth while the southern one was up to 2.4m in width and 1.2m in depth. The intervening bank appeared to be 4m in width. Another section of Pale Ditch was uncovered beneath a modern laneway in Jamestown, where it was noted as a single ditch (Brady 1998 & Reid 1998; Licence Ref. 98E0119). Also in Jamestown, testing across existing gaps in the Pale Boundary confirmed the survival of the ditch below the gaps, with late medieval pottery contained within the bank material, supporting a medieval date for the linear earthwork (Brady 1999; Licence Ref. 99E0456).

A natural scarp along a field boundary in Carrickmines Great townland, similar to that identified by Bolger in Kilgobbin, was the presumed continuation of the line of the Pale Boundary to the southeast of the recorded section DU026-115. The field boundary and a field on the south side of the stream were tested in 2005, however, and no archaeological features or artefacts were identified (Bolger 2005b; Licence Ref. 05E0459). Although it was thought that the scarp and bank in this location might also represent a natural defensive feature on the line of the Pale Boundary, subsequent testing of the Jamestown / Carrickmines Great townland boundary in 2009 and excavation in 2012 has demonstrated otherwise.

Testing was undertaken in the area of the Pale boundary and through the Jamestown / Carrickmines Great townland boundary (to the east of the recorded section DU026-115), in advance of a new road. These investigations identified a ditch and bank that continues easterly from the recorded terminus beneath the existing tree-lined townland boundary (O'Flanagan 2009; Licence Ref. 09E0300). Excavation of the section of the boundary to be impacted by the proposed new road (i.e. a 60m east-west x 15m north-south) was completed in 2012.

In profile from south to north it comprised a large ditch c. 1m plus in depth, a bank with a level path c. 1.8m wide on top with a cobbled surface and a corresponding shallow ditch on the northern side. This ditch to the north is

likely to have been filled in over time. The southern face of the bank was revetted with stone in a fashion similar to that identified in the outer defences found at Carrickmines Castle. Following the line of this boundary, it is very likely that it trends eastwards towards Carrickmines Castle, perhaps continuing along the line of the townland boundary and kinking north. It could, however, also run along the curving property boundary associated with the houses to the north where the ditch element has been filled in, similar to the course suggested on Rocque's Map.

4.3.3 Cartographic Evidence

William Petty's Down Survey of the Barony of Half Rathdown, c.1656.

Kilgobbin townland is neither named nor depicted on this mid-17th century map.

Rocque's Map of the County of Dublin, 1760 (Fig. 4.3)

Rocque's map of 1760 shows the area of the proposed development as unenclosed land on the north side of a watercourse (the present Ballyogan Stream; not named on this map), situated west/northwest of Kilgobbin village. In the 16th century, the Civil Survey describes Kilgobbin village as a cluster of small cabins around Kilgobbin Castle. A century later, Rocque's map shows the castle surrounded by several substantial houses, on the south side of a bridge crossing the stream. The stream flows through a valley which stretches west to the small settlement at 'Carrick Mines' from Kilgobbin. The southern face of this valley appears to be steeper in nature than the northern side. Just north of the stream, a trackway or path is shown running parallel to the valley, with the proposed development site located between the two. Two structures are depicted in the approximate location of the proposed development and may represent the houses of Elmfield, Greenfield or Larkfield that are shown on the first edition OS map. A small cluster of structures is also depicted to the southeast of Kilgobbin village, on the south side of the watercourse, roughly in the location of the present Clay Farm which lies c. 40m west / northwest of the Phase 2 site boundary.

Taylor's Map of Dublin 1816 (Fig. 4.4).

Taylor's map of 1816 shows the stream running east / west along the south side of the proposed development site. As on Rocque's 18th century map, two structures are depicted on the north side of the watercourse, with the added detail of a wooded area enclosing them. A 'New Road' is also shown to the north of the wooded area but it does not appear to follow the same path as the path noted on Rocque's map. Kilgobbin Castle, Cross and Church and several houses are shown in Kilgobbin village, with a path or track leading southeast to a cluster of structures in the approximate location of Clay Farm.

First edition Ordnance Survey six-inch map, 1843 (Fig. 4.5a)

The subject lands are depicted on the first edition OS map as predominantly agricultural land on the east / southeast side of Kilgobbin village, bounded by the Ballyogan Road to the north/northeast. The Ballyogan Stream flows through the open space zoned lands, to the rear (south) of Larkfield House, which lies within the proposed Phase 1 development area. The houses of Greenfield and Elmfield each occupy their own small estates on the northwest side of the proposed development Phase 1 area, with a narrow strip of land providing access to Greenfield House and a gate lodge depicted but not named at Ballyogan Road. The typescript indicates that Kilgobbin Castle and the Church to the southwest were both disused at the time of survey. Several other structures are named within or just outside the village, including Castle Lodge and Bayly's Cabin, with the church, graveyard, cross and a School House shown to the southwest.

There are at least seven irregularly shaped fields within the Phase 2 lands. A lime kiln is indicated in the northwestern most field adjacent to its eastern field boundary. There are no other items of note in the fields. Kilgobbin Cottage is depicted just west of the development as a small complex of structures, comprising a substantial house with farm buildings around a courtyard adjacent what appears to be a walled garden with

ornamental design to the southeast. Two more structures, one a cruciform shape, are shown to the rear of the walled garden, accessed via a pathway around the garden from the main complex of structures.

Revised edition Ordnance Survey six-inch map, 1874 (Fig. 4.5b)

The area has changed little since the first edition map drawn in 1843. A number of structures have been added to Larkfield House. The course of the Ballyogan Stream is otherwise unaltered, with the exception of a small pond shown to the southeast of the house and a footbridge located to the southwest; a watercourse channel diverts from the stream and flows northwest from the house along the estate boundary, continuing along the southern boundary of the adjoining field to the west and into the grounds of Greenfield House. There is little change to Kilgobbin Cottage, though the walled garden has lost its formal ornamental aspect. To the southeast, a new house has replaced the cruciform structure on the site of Clay Farm and additional courtyard buildings are depicted.

The lime kiln is no longer represented in this map edition, though there is a kink in the boundary where it was located.

Revised edition Ordnance Survey 25-inch map, 1906-9 (Fig. 4.5c)

By the start of the 20th century, the course of the Ballyogan Stream has been altered; it no longer flows through the open space zoned lands but instead flows along the southwestern field boundary. 'Clay Farm' is now named and a final structure has been added to the complex, completing the southwestern side of the courtyard. There are no other significant changes within the study area.

The boundary where the lime kiln once stood had been ditched and widened as part of what appears to be an improvement in the drainage of the surrounding lands in general.

4.3.4 Architectural and Cultural Heritage

Record of Protected Structures (RPS Sites)

No protected structures are recorded in the Record of Protected Structures (RPS) in the County Development within or immediately adjacent to the proposed development site, the nearest sites are those located in Kilgobbin Village (Fig 4.2)

Structures of Local Architectural/Cultural Heritage Interest Within the Proposed Development

There are no structures within the Phase 2 lands.

Protected Structures in the Wider Environs of the Proposed Development

Kilgobbin village is particularly notable for the survival of houses dating from the 17th to 19th centuries, which form part of a cluster of protected structures (Fig. 4.2). Located within the village to the northwest of the proposed development site are the following RPS sites: Kilgobbin Church (RPS No.1717); Kilgobbin Castle and Kilgobbin Castle House (RPS No.1696); Castle Lodge (RPS No.1690); Oldtown House (RPS No.1700 & RMP DU025-017002); Thornberry (RPS No.1689); Kilgobbin House (RPS No.1684); and Kilgobbin Villa (RPS No.1688).

Oldtown House on Kilgobbin Road, situated opposite the castle, was formerly an inn known as the *White House of Kilgobbin*. This inn formed the focus of the village after the demise of the castle. It appears to have been built around 1690 (Turner 1983) and served travellers passing along the road to Enniskerry, a trade that continued throughout the 18th century. The inn may have closed in the 1820s when the new Enniskerry Road was built, the

passing trade then being picked up by the Step Inn, established in the 1790s as the ‘Kilgobbin Inn’ (Goodbody 1993).

Later houses in the area include Kilgobbin Castle House, a late 18th century villa and Kilgobbin House, a late Georgian farmhouse. Kilgobbin Castle House is a one-storey over-basement villa, with a tall, projecting porch, incorporating an earlier house that is now situated to the rear. Its location suggests that the original house may have been built when the castle became too uncomfortable or too run-down for its inhabitants. Kilgobbin Castle House has walled gardens to the south, and some of its outbuildings extend outside the tree-lined boundary to the west. The boundary consists of a deep ditch, with traces of embanking on either side, planted with mature beeches. Its size and appearance suggest it may have been the original castle precinct, and it was probably incorporated into the Pale defences. The walled lane from near the junction between Kilgobbin Road and Kilgobbin Lane defines the western limit of the walled gardens and continues the line of the beech-lined ditch.

Kilgobbin House is a late Georgian three-bay farmhouse, with a round-headed doorway and fanlight. It would have been one of the grander houses in Kilgobbin village. Three further houses of this period are Thornberry and its companion Castle Lodge, built by Margaret Cuthbert in the 1820s, and a house called Kilgobbin Villa on the opposite side of the road. Margaret Cuthbert also built a row of cottages alongside the houses in the 1840s (Goodbody 1993). From the early maps, it appears that there had been buildings previously on or near the site of the houses. The Church of Ireland parish school was built in 1818-19 on a site opposite the church (*ibid.*) and is marked as such on the 1843 edition OS six-inch map.

The area containing the castle, house, outbuildings and trees forms an integral part of Kilgobbin village and, in addition to being protected structures, are protected under the National Monuments Acts 1930-2004, as part of the zone of archaeological protection for RMP DU025-017 / DU026-121 (Fig. 4.2).

4.3.5 Placename Evidence

Townland names are a rich source of information, not only on the topography, land ownership and land use within the landscape, but also on its history, archaeological monuments and folklore. Where a monument has been forgotten or destroyed, a place name may still refer to it and may indicate the possibility that the remains of certain sites survive below the ground surface. Some Irish toponymy suggests ecclesiastical settlement.

The earliest historical reference to a church at Kilgobbin is contained in Archbishop Alen’s Register (*Liber Niger Aleni*) where it is referred to as *Technabretnach* (lit. the House of the Welshman/men). It is described as a gift of the ostmen (McNeill 1950, 3; 7; 28); this is not surprising given its location. However, the ascription of the site to a Welsh man (or men) warrants examination. Allied to the Norse overlordship of this area towards the end of the early medieval period is evidence for the transplantation of Welsh settlers or political refugees under Norse patronage (O’Byrne 2003, 230-4). The origins of the Walsh family in the Kilgobbin/Carrickmines area appear to pre-date the Anglo-Norman control of the area, and there is evidence for a direct relationship with the Welsh settlers at Cloghran (O’Byrne 2003, 233-4). Local place name evidence – Ballybrenan (Baile na mBretnach, now Brenanstown), Carrigbrenan (now Monkstown), and most notably the earliest recorded name for the church at Kilgobbin, Tech na Bretnach, appear to reflect this influx (O’Byrne 2003, 231).

The element ‘Kil’ in Kilgobbin is an anglicisation of Cell (later Cill), literally a monastic cell but generally signifying a church, in this case, the church founded by St Gobbán. Its first recorded use in connection with the present site post-dates that of *Tech na Bretnach* (though both occur in Anglo-Norman documents – to date no references to the site have been identified in pre-Norman sources). A number of St Gobbán’s are referenced in the Martyrologies of Tallaght and Donegal, including the Gobbán who was nephew to St. David of Wales. Local tradition associates the placename with the mythological Goban Saor. It is possible that Kilgobbin was the original name for the site and that the Norse and Welsh simply absorbed an existing ecclesiastical foundation. There is a well-established tradition of Irish churches (particularly on the eastern seaboard) associated with British founders from the missionary period and later. This possibility should not be discounted in relation to Kilgobbin and could

easily be camouflaged by subsequent changes in secular patronage; in fact such a dedication could have influenced the adoption of the site by incoming settlers

There are placenames with English forms in the surrounding area. Murphystown probably indicates an English-speaking population, as the English suffix '-town' is combined with the Irish name *Ó Murchú*. Woodside is an English name also and may be a translation of an earlier Irish form or may simply be a new name given to the area, which still has several areas of woodland. Another English name that refers to the topographical aspects of the landscape is Stepside, which is translated from the Irish word *An Chéim*, meaning the pass. The name Carrickmines is derived from the Irish words 'Carrig Maigin' meaning rock of the little plain. The ending 'mines' is a modern corruption which is first written on Rocque's 1760 map (Price in Loganim.ie). Jamestown is likely to be derived from an early English landowner of the area, while Ballyogan is also derived from a family name, referring to O'Hogan's town.

4.3.6 Field Inspection

All of the subject lands of the proposed Clay Farm development were inspected, the field inspection below should be read in conjunction with figures 4.1 and 4.5 upon which the field numbers are indicated and Plates 4.1-4.28. Fields 1-3 are part of the Phase 1 lands and are currently being developed, archaeological monitoring of all earthmoving works are ongoing.

Open Space Zoned Land (Fields 4-6) and Pale Boundary (DU026-087)

The open space zoned lands occupy the flat, level valley of the Ballyogan Stream, running from northwest to southeast between the proposed Phase 1 and Phase 2 residential development (Fig. 4.1).

A narrow strip of field 4, along its northern side, is incorporated into the proposed Phase 1 housing development (currently under construction), with the remainder forming the open space zoned lands that run between Phases 1 and 2. This field was described in the 2005 inspection as having been topsoil-stripped, with a number of large spoil heaps located within the field, and has been previously disturbed by the insertion of a sewerage line and the undergrounding of 110kv cables. The field is now entirely overgrown and the ground surface is uneven, with substantial overgrowth of vegetation along the boundaries and within the field itself (Plate 4.1).

Fields 5 and 6 are equally overgrown disturbed with wetter ground evident underfoot in the vicinity of the Ballyogan Stream (Plate 4.2). Both fields are described as containing dumps of spoil with evidence of some disturbance, in the previous 2005 inspection and there is still a large spoil heap at the southeastern end of the field. The stream diverts from its course along the southwestern boundary of fields 4 and 5, flowing north/northeast between fields 5 and 6 and then along the southwestern boundary between fields 1 and 6.

The south/southwestern field boundary of field 4 forms part of the recorded section of the Pale Boundary DU026-087 (bounding field 7 to the southwest). This section of the linear earthwork was entirely overgrown and inaccessible at the time of inspection, but was inspected in 2005 when there was little or no vegetation overgrowth and was described as follows: '*A linear earthwork located at the base of a steep north facing natural scarp, it consists of a ditch which varies in width from 1.5m to 2m in width. To the north of the ditch is an earthen bank c. 1.5m in width and rising 0.75m above ground level. On the northern exterior of the bank is the current course of the Ballyogan Stream. The course of the Ballyogan Stream appears to truncate the earthwork at its eastern edge*'. The section of the Pale Boundary between fields 4 and 7 that was tested by Bolger in 2000 (as described above, Licence Ref. 00E0247 / 00E0248) was evident as a gap in the boundary, levelled and denuded of trees / hedgerow.

A publicly accessible part of the recorded Pale Boundary (DU026-087) was inspected outside of the subject lands to the west, at the edge of a landscaped open zone on the south side of the Kilgobbin Wood residential development. The Ballyogan Stream flows roughly parallel to the Boundary, c. 20m northeast, through the

landscaped area. The Boundary consists of a substantial earthen bank, c. 2m high, lined with mature trees and shrubs. It has a shallow, U-shaped ditch (c. 1.5m wide at the base) along its northeastern side. The top of the bank is flat and broad, measuring as much as 4m wide, with a pathway running along it (Plate 4.3). There is no obvious ditch along the southwest side of the bank and the ground appears to level off on this side. A stone revetment was visible where a c. 2m section had been cut through the bank (Plate 4.4), indicating that this part of the Pale Boundary was almost identical in morphology to a section of pale boundary (RMP DU026-115) excavated by O'Flanagan at the Jamestown / Carrickmines Great townland boundary (Licence Ref. 09E0300; Plate 4.5).

The eastern surviving section of the Pale was also inspected (DU026-115). It runs almost parallel to Ballyogan Road and to the Ballyogan Stream, which flows eastwards towards Carrickmines. It measures c. 2–3m wide at the top, and stands 2.5m above the present bottoms of the ditches (Plate 4.6). The ditches vary from 2–3m in width. The bank has hedgerow trees growing along the length of it, mainly on the sides, leaving a clear path along the top.

Possible continuation of the Pale (between DU026-087 to the east and DU026-115 to the west)

When compared to the surviving sections of the Pale, the nature of the field boundaries between Field 6 and 8 and between fields 5 and 7 suggest that they may represent a continuation of the Pale Ditch. The boundary between field 5 and 7 comprises a mature-tree-lined earthen bank, c. 2m high, dropping steeply to the Ballyogan Stream below; the bank is c.2-3m wide at the top and has a 'pathway' along it (Plate 4.7). Although the stream now flows along the foot of the bank, its original course was further out in the field, to the northeast, much like it still is at the recorded section of the Pale Boundary.

The boundary between fields 6 and 8 is also comprises an overgrown earthen bank with dense vegetation, from the bank the lands drop steeply to the north to the lowlying damp fields and the lands to the south however rise steeply well above the boundary line. Where accessible the bank measured c. 1.1m to 1.8m high (Plate 4.8), it has a flat topped 'pathway' approximately c.2.5m wide (Plate 4.9). There were no ditches on either side of the bank; it is likely however that they may have been infilled over time. On the north facing side of the bank there was some loose rubble stone evident which might suggest the presence of a revetment (Plate 4.10). The eastern end of the boundary is highly disturbed by an earthen dump of material that has been laid down alongside the boundary; there are two existing breeches in the boundary.

Phase 2 lands

The Phase 2 lands (Fields 7 to 15) occupy an area of elevated ground above the rough, level scrub fields along the banks of the Ballyogan Stream. There are good views north towards the Ballyogan Road, east to the Ballyogan Civic Recycling Park (former landfill) and south to the Two and Three Rock Mountains. Fields 12 and 13 have been cut for hay, the remaining fields are under good pasture and all of the field boundaries are mature hedgerow (Plates 4.11 – 4.15). The route of the proposed access road travels through the northwestern half of field 8 (Plate 4.12).

Fields 10 to 14 are level, while fields 7 to 9 slope gently to the northeast, descending into the valley occupied by the Ballyogan Stream. The land drops sharply from the northeastern field boundaries of fields 7 and 8, though for the most part the boundaries were too overgrown to allow closer inspection. It was possible to access the boundary at one point in field 7, in the northwestern half of the field, c. 20m southeast of the section tested in 2000 (Licence Ref. 00E0247 / 00E0248). The surviving field boundary at this point exhibits a similar form to the recorded Pale Boundary that was inspected at the rear of the Kilgobbin Wood residential development (described above).

A hard-core track runs along the northeastern boundary of field 9 (Plate 4.16), continuing south and southwest around the edge of the Phase 2 lands (Plate 4.17), before exiting at the Cruagh Manor residential development in Stepaside.

Structures of Architectural/cultural Heritage Interest in the Vicinity of the Proposed Development

Two structures of local architectural interest, neither of which is listed in the Record of Protected Structures, are located in the vicinity of the proposed development, but outside the application site (Fig. 4.2), Kilgobbin Cottage and Clay Farm House.

Kilgobbin Cottage and its associated complex of buildings is the older of the two properties and lies c. 100m northwest of the proposed Phase 2 development. The high walls of the large ornamental garden depicted on the first edition OS map are extant and line of the narrow laneway that provides current access to Clay Farm (c. 45m northwest of the proposed Phase 2 development; Plate 4.18).

A cruciform-shaped structure is shown on the site of Clay Farm house on the first edition OS map, but was replaced by the present structure in 1869 (Plate 4.19). The majority of the courtyard buildings to the rear of the house are also present by the time of the 1874 OS map, though the range in the southeast corner may be those shown on the earlier map. A gated entrance, with two tall coursed granite pillars form the front entrance to the courtyard off the laneway; one of the pillars is engraved with 'Clay Farm, 1869' (Plate 4.20 and 4.21.).

With the exception of a modern lean-to construction, the latest addition to the courtyard appears to be a long structure in the southwest of the courtyard of late 19th century date, which appears to have been used as a separate dwelling, with an entrance in the northwest gable end fronting onto the laneway, comprising a narrow three bay façade with a loft with red brick window and door surrounds (4.22 & 4.23). It is taller than the other courtyard buildings, with a pitched slate roof and a red-brick chimney stack. A water-pump (Plate 4.24) that now stands just inside the entrance to the adjoining modern property, would once have stood along the side of the laneway that accessed the earlier dwelling at Clay Farm. The remaining courtyard buildings are single-storey, lime-washed random-rubble construction (Plate 4.25). The Clay Farm farm complex has a defined and enclosed courtyard setting.

The houses and their associated complexes of buildings, the narrow access laneway, water pump and high walls of the walled garden contribute to the nineteenth century architectural and cultural heritage of this area, with the character of their historic setting appearing little changed despite the extensive modern developments that have occurred around it.

4.3.7 Geophysical Survey

A Geophysical survey was carried out in 2008 (Licence Ref.08R0259, Harrison 2008) and 2014 (Leigh 2014, Licence Ref.14R0099) within both the Phase 1 and Phase 2 lands (Fig. 4.7). The surveys comprised of a preliminary gradiometer scan with targeted detailed survey positioned to investigate scanned anomalies of potential interest.

Detailed survey in the Phase 2 lands along the southeastern boundary identified a series of responses considered to be of archaeological potential. Sporadic pit type anomalies were identified in Field 14. The results also suggested a possible curvilinear ditch in field 11 along the southeastern boundary of the proposed development area (Figure 4.6, Geophysical Survey Area D, F11). It is speculated that the response continues outside the field and may represent the western extent of an archaeological enclosure.

4.3.8 Archaeological Test Trenching

Fifteen test trenches were excavated over four days from 1st September 2014 and an additional three test trenches were excavated on the 15th October 2014 in both the Phase 1 and Phase 2 lands (Fig 4.7). The main purpose of the assessment was:

- to establish if the Pale defences runs between the upstanding recorded sections located to the west (DU026-087) and to the east (DU026-115) of the proposed development site,
- to establish the nature of the anomalies identified in the geophysical survey and to assess the impact of the proposed development on these.

In total four areas of archaeological interest were identified (Archaeological Areas 1-4, Figure 4.7), Areas 1 and 4 located in the Phase 1 lands and Areas 3 and 2A-C located in the Phase 2 lands. A summary of the findings is presented below and a detailed description of each trench within the Phase 2 lands is provided in Appendix 4.1.

Phase 1 Lands (under construction):

Area 1 is located in the north of the development area (trench 3) in Field 2 (Fig. 4.7). A pit was identified during testing and appeared to be an isolated pit; however, the presence of a saddle quern fragment was identified in the fill. In advance of the construction of the Phase 1 lands, a pit containing a saddle quern was excavated (Licence 16E0610) in advance of the development. The quern was made of granite and is broken across the width, with perhaps as much as two-thirds of the stone present. The working surface is smooth and slightly dished; there is no trace of any distinct wear polish. The primary use of the saddle quern was for grinding grain and perhaps other dried foodstuffs; the dried grain was placed on the smooth working surface and broken down using an elongated rubbing stone. Two shallow linear depressions extend for a maximum distance of 6mm from the unbroken end. These may be natural or accidental, but a small area of pecking circa mid-stone on the upper surface, and a corresponding, but much better defined, circular depression on the underside, are certainly manmade features. Radiocarbon dating of the charcoal sealed under the saddle quern fall into the Late Bronze Age period. Two sherds of Late Bronze Age pottery were also recovered confirming the date (Cotter, forthcoming).

In Archaeological Area 4 (trench 17) located in a low-lying area in Field 4 a spread of charcoal rich material was identified, measuring 12m x 9m x 0.2m deep. A small penannular copper-alloy ring with expanded terminals was recovered from this spread (14E0359:38:1) and this find was subsequently stabilised by a conservator.

Open Space Lands - the Probable Continuation of the Pale Ditch

Trench 5 was placed to test an upstanding field boundary bank and associated ditch which follows the line of the Ballyogan stream (between F1 and F6, Fig 4.7). The boundary, which was quite overgrown with brambles and shrubs was tested in an attempt to identify the location of the Pale boundary. The bank was 0.68m high x 1.9m wide and the ditch was 1.5m wide x 0.45m deep (Plates 4.26 and 27). The ditch contained a single fill of loose dark brown humic topsoil with frequent roots (C5). A deposit of brown-grey compact silty clay subsoil (C3) overlay natural subsoil and the bank overlay this layer. The bank itself was made up of re-deposited natural subsoil; grey-yellow compact silty clay with frequent roots. Based on the small scale of the bank and ditch and the nature of the fills, this ditch was interpreted as an ordinary field boundary and not part of the Pale defences. No features of archaeological interest were identified in Trench 5.

The more southerly boundary between field F6 and F8 was tested and the boundary was found to be disturbed in this location by the route of the sewer pipeline installed in the late 1990's and by a power line running north of and parallel to the boundary. As such the testing in trench 7 was inconclusive as to whether this boundary is part of the pale defences or not, however as described in the field inspection above (Section 4.3.6) the nature and form of the boundary would suggest that it is indeed part of the Pale ditch defences.

Phase 2 Lands:

Archaeological Area 2 includes features identified in trenches 8, 9 and 10 in Field 14 (Appendix 4.1, Fig. 4.7). The main concentration of activity was located in trench 8 where a cluster of four pits was uncovered, one of which yielded a rim sherd of Late Bronze Age pottery. In trench 10 a single pit containing charcoal and burnt bone was uncovered and in trench 9 a spread of charcoal rich soil was uncovered. It is possible that the features in Area 2 may belong to a larger concentration of prehistoric activity.

Archaeological Area 3 is located in the southeast of the development area (trench 14) in Field 11 and comprises a substantial curvilinear ditch (C23) which extends beyond the development area to the southeast (Plate 4.28). A section excavated across the ditch was 3.05m wide x 1.15m deep and contained eight fills, most of which contained animal bones (Plate 4.28).

4.4 CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

The proposed development comprises a mixed residential development. It is the second phase of a larger development of the Clay Farm lands, located south of the Ballyogan Road, Dublin 18 (Fig. 4.1). Phase 1 is currently under construction. The Phase 2 proposal is for a residential development of 927 no. residential units, a neighbourhood centre containing a childcare facility and 2 no. retail/commercial units, associated internal roads, pedestrian and cycle paths, and all associated site and infrastructural works. It includes the associated section of the Clay Farm Loop Road running from the permitted Phase 1 development, across a bridged link over the Ballyogan stream valley through the Phase 2 lands and up to the boundary with Stepaside Park.

As part of an integrated design team approach and given the archaeological potential of the lands, archaeological investigation was carried out in the earliest design and planning stages of the Clay Farm development. The investigations comprised field walkover survey, geophysical survey and test excavation assessment. The findings of the assessment informed the layout of the proposed development in accordance with archaeological best practice. This interaction has enabled the preservation in situ of the enclosure site (Archaeological Area 3, Fig. 4.7) identified in the southeastern area of the proposed development within a passive open space or archaeology park.

A road bridge from Phase 1 over the existing Ballyogan Stream and floodplain providing access to and through the Phase 2 lands and the rest of the land ownerships along the Clay Farm Loop Distributor Road is proposed. The bridge design developed for the original Phase 1 application spanned the open space area and the potential line of the Pale boundary. However, as part of the detailed design for the Phase 2 application, it has emerged that the clear spanning of the potential line of the Pale boundary is not deemed possible for several reasons:

- The CFRAMS flood mapping assessment requires that the northern bridge abutment be moved further north away from the Ballyogan Stream. The southern abutment of the permanent bridge will as a result be in immediate proximity to the possible Pale boundary and will affect the topsoil, roots and soil stability in its vicinity. A break in the possible boundary will be needed to facilitate the safe construction of the southern abutment.
- During the construction of a permanent bridge it will not be possible to avoid and safeguard the possible line of the Pale boundary. To facilitate construction of the permanent bridge, a temporary road, working platform and bridge (or culvert) will be required for construction access for heavy plant, equipment and materials needed to build the permanent bridge. This temporary road/bridge will be required from Clayfarm Phase 1 across the existing Ballyogan Stream to the Clayfarm Phase 2 lands to the south. The temporary road/culvert will not have the required length or height of the permanent completed bridge to cross-over the possible Pale boundary, and therefore a break in boundary will need to be created to facilitate this temporary access.

The loop road bridge is of strategic importance to the development of the Clay Farm lands as it provides both construction and operational access from Phase 1 into the Phase 2 lands and also to the land ownerships along the Clay Farm Loop Distributor Road. The loop road forms part of Dun-Laoghaire Rathdown County Development Plan 2016-22 Policy ST24, to secure improvements to the County Road network including improved pedestrian and cycle facilities as part of their 6-Year and Long-Term Road Objectives. Preservation in-situ and avoidance of a 47.2m section of the probable line of the Pale boundary site (Fig 4.8) is now not a possibility if delivery of the plan is to be achieved.

Except for the 47.2m section of the boundary at the proposed bridge crossing, the extension of the permitted Phase 1 Ecopark into the northern portion of the Phase 2 lands will preserve in situ the line of the Pale Ditch boundary (DU026-087) and its probable continuation running at least 400m east-west between development Phases 1 and 2.

4.5 POTENTIAL IMPACT OF THE PROPOSED DEVELOPMENT

4.5.1 General

A systematic approach in identifying and assessing the impacts of the proposed development on the archaeological heritage has provided a high degree of confidence in our understanding of the archaeological potential of the proposed Phase 2 lands and on the impact of the proposed development on it. This has allowed a more defined mitigation strategy to be adopted for the development and has ensured that a complete as possible record of the archaeological potential is presented and assessed.

Direct physical impacts describe those development activities that directly cause damage to the fabric of an archaeological site. In accordance to the EPA guidelines (Appendix 4.2) the systematic removal and excavation of the below-ground remains of archaeological sites will result in – at the least – a negative, direct and significant impact. However, the recording, analysis and publication of archaeological excavation can amount to an effective mitigation, reducing the degree of the residual impact.

4.5.2 Archaeological Heritage

Proposed Ecopark: The Pale Boundary

A recorded linear earthwork (DU026-087) extends into the western side of the open space zoned lands, with a second (DU026-115) located c. 60m outside the proposed development area to the east (Fig. 4.1 and 4.2). Both of these are recorded as sections of the medieval Pale Boundary. It is probable that the boundary continued between the two, linking both sections together, though its exact course is uncertain. Cartographic analysis and field inspection suggested two possible courses for this boundary through the application lands; running parallel with the northern side of the Ballyogan stream as it does along the recorded section in Kilgobbin townland (DU026-087) or following the more direct line of the field boundary running east-west to the south of the stream.

As a result of testing carried out as part of the preparation of this assessment it was possible to discount the field boundary to the north of the Ballyogan stream as being part of the Pale boundary, it comprised a low bank (0.68m high) and shallow ditch (0.45m deep) which was not thought to be suggestive of the form of the Pale Boundary. The more southerly boundary (between Field 6 and 8) was tested in a disturbed location where a bridge alignment was previously proposed and where the boundary was free of trees. Whilst the testing was inconclusive as to whether this boundary is part of the Pale defences or not, comparison with the known upstanding sections it is thought on balance that this substantial boundary topped with mature trees is the most likely candidate for the continuation of the Pale Boundary. The discovery of the possible continuation of the Pale Ditch has enabled a greater understanding of the nature and extent of this boundary.

The recorded section of the Pale boundary, the possible continuation of the boundary (between Field 6 and 8) and the Ballyogan Stream are located within the permitted Ecopark. These boundaries will be preserved in situ and incorporated into the passive amenity lands as per the permitted Phase 1 development. The boundary will also be preserved in situ in the extension of the permitted Phase 1 Ecopark into the northern portion of the Phase 2 lands. The highlighting of the Pale boundary and its probable continuation (in the form of illustrative displays) will enhance the amenity and will allow for the enrichment of public appreciation of the archaeology of the area.

Proposed Road Bridge

As detailed above in Section 4.4 it will not be possible for the proposed road bridge to clear span the probable line of the Pale boundary (located between field 6 and 8). The bridge and the required construction area will result in the removal of a 47.2m wide section of the boundary. Newly identified and potential archaeological sites / features are given a medium sensitivity rating (as detailed in Appendix 4.3). The proposed development would therefore have a significant, direct and negative impact on a 47.2m section of the pale boundary.

Given its riverine context there is a potential that isolated archaeological soils or features might be revealed during earthmoving works associated with the landscaping proposals in this open space area.

Archaeological Features identified

Two areas of archaeological interest were identified in the proposed development lands.

Archaeological Area 2 includes features identified across trenches 8, 9 and 10 (Field 14, Fig. 4.6). The main concentration of activity was located in trench 8 where a cluster of four pits was uncovered, one of which yielded a rim sherd of Late Bronze Age pottery. In trench 10 a single pit containing charcoal and burnt bone was uncovered and in trench 9 a spread of charcoal rich soil was also revealed. It is possible that the features in Area 2 may belong to a larger concentration of activity. The proposals for Phase 2 would result in a direct negative impact on these features and any features which may be associated with them and therefore this area would be subject to archaeological excavation, monitoring and recording during the construction phase. The proposed development would therefore have a significant, direct and negative impact on the archaeological features identified.

Archaeological Area 3 is located in the southeast of the development area (field 11, Fig. 4.7) and comprises a substantial curvilinear ditch which extends beyond the development area to the southeast. A section excavated across the ditch was 3.05m wide x 1.15m deep and contained eight fills, most of which contained animal bones (Plate 4.28). This feature may represent a ringfort or similar. It is proposed to preserve the site *in situ* within the open space in the area of this archaeological site and as such there will be no direct impact, however it could be indirectly impacted during construction by movements of machinery and plant and mitigation measures to safeguard the features should be put in place.

General Archaeological Potential

A number of other archaeological sites are recorded within the vicinity of the application area, including the flat cemetery (DU026-123) and standing stone at Kilgobbin Cottage and the early medieval ecclesiastical settlement at Kilgobbin Church to the southwest, the cluster of sites recorded around the medieval Kilgobbin Castle (DU026-121/DU025-017) to the west/southwest, and to the northeast, the ecclesiastical remains north of Jamestown House (DU026-004). Excavations in Kilgobbin and the surrounding townlands have revealed extensive sites from the Bronze Age onwards and have proved the high level of archaeological potential in this area.

Given the clustering of archaeological sites and monuments in the area around the proposed development, it is possible that further archaeological material, similar to that found in neighbouring developments, could be revealed within the proposed development areas of Phase 2.

4.5.3 Architectural Heritage and Cultural Heritage

There are no protected structures within or in close proximity to the proposed development. Two structures of architectural heritage interest, Kilgobbin Cottage and Clay Farm, lie just outside the proposed Phase 2 development lands, and are not within the applicant's ownership. The associated walled access laneway to the houses (with its tight bend) are also of local cultural heritage merit and have an inherent historical character. Both properties and the laneway will not be impacted by the proposed development.

4.6 POTENTIAL CUMULATIVE IMPACTS

The significant recorded archaeological remains within the development itself will be sensitively incorporated into the proposed development and newly identified sites will both be added to the archaeological record through excavation or preserved in-situ in the development. The landscape within which the proposed development is proposed comprises an expanding suburb, it is surrounded by new developments and infrastructure and is one of the last greenfield areas to be developed. Given the location, distance and lack of visual links to the of the surrounding recorded archaeological sites and protected structures (Fig. 4.1 and 4.2) and to Kilgobbin Village (where the majority lie), there will not be any cumulative impacts on these sites any or increase in terms of indirect impacts on the setting of monuments and protected structures.

There are no archaeological, architectural or cultural heritage sites in the environs of the site that the development would have a cumulative impact upon.

4.7 'DO NOTHING' IMPACT

There will be no adverse impact on archaeological material and features if the site is not developed. The proposed development area will remain unused. The Ballyogan Stream valley will remain overgrown and inaccessible and the alignment and extent of the Pale boundary will remain unknown and will remain illegible in the landscape.

4.8 AVOIDANCE, REMEDIAL & MITIGATION MEASURES

Pre-Construction Phase

Proposed Ecopark Extension: The Pale Boundary

Due to the location of recorded sections of the Pale Boundary, both within and in proximity of the proposed development, it is highly likely that the line of the Boundary continues along the line of the upstanding east-west tree topped field boundary between the Phase 1 and 2 development areas (between fields 5 and 7 and 6 and 8). The recorded Pale boundary and possible continuation of it along with the Ballyogan stream will be within the proposed Ecopark extension into the northern part of the Phase 2 lands.

The proposed landscape plan (prepared by BSM, see Chapter 6 and Figure 6829-302 Landscape Masterplan), has been designed with regard to the known and potential line of the Pale and the landscaping proposals will be achieved without disturbing the boundary and its potential continuation.

CH PRE-CONST 1: *Consultation and Monitoring*

It is likely that the National Monuments Service (NMS), Department of Culture, Heritage and Gaeltacht (DCHG) will require a conservation plan detailing the proposals for the preservation *in situ* of the Pale boundary. The document will ensure that the Pale boundary is preserved and integrated within the development area and will set out measures to ensure that any future maintenance plans or any activity carried out within the area is cognisant of the sensitivity therein.

It is recommended that a buffer zone be established 10m beyond the outer edge of the Pale boundary and its possible continuation in advance of construction to protect the feature and any features that may be associated with it. This area should be cordoned off to protect it from construction activities and all contractors on site shall be made aware of its presence.

No excavation work should be undertaken in the sensitive area around the Pale boundary without prior consultation with and approval from the DCHG. This work must be carried out in consultation with and under the relevant licence/consent to the DCHG.

Proposed Link Road Bridge Crossing (Pale Boundary)

A 47.2m section of the probable line of the Pale boundary (measuring in c. 400m east - west) will be directly impacted by the proposed bridge crossing. This area includes both the bridge and the bridge construction corridor, within which all works will be strictly confined. It is proposed, subject to agreement with the National Monuments Service (NMS) that the impacted area be excavated (preserved by record).

CH PRE-CONST 2: *Proposed Link Road Bridge Crossing - Archaeological excavation*

It is recommended that an area measuring 47.2m east–west x 15m north–south (Fig. 4.8) and centred on the probable line of the Pale boundary be excavated in full. The excavation will be carried out under licence to the DCHG. The granting of the excavation licence will be subject to the provision of a detailed method statement approved by the DCHG and confirmation that developer will make a provision to allow for and to fund the archaeological works, including the post excavation analysis and the preparation of any reports arising from that work including, should the results warrant it, publication.

During construction, the construction area for the bridge will be cordoned off so no inadvertent damage to the remaining sections of the boundary to the east and west would be impacted.

Archaeological Area 2- Central Area of the Application Lands

It is proposed, subject to agreement with the National Monuments Service (NMS) DCHG, that preservation by record (excavation) is the preferred mitigation measure for the newly revealed pits identified in Area 2 in the central area of the application lands (Fig. 4.8).

CH PRE-CONST 2: Archaeological excavation

An area measuring 20m x 20m is recommended for excavation of the features in trench 8 (2A), and two areas measuring 10m x 10m are recommended for the features in trenches 9 and 10 (2B and 2C). There is potential for further features to be uncovered outside of these areas and monitoring of topsoil stripping should be carried out with provision made to deal with any further features that may be uncovered. Excavation will be carried out in advance of any construction work at these locations under licence to the DCHG according to the requirements of the NMS. The developer will fund the onsite excavation work and post excavation analysis.

Archaeological Area 3 – Southeastern Area of the Application Lands

A passive open space or archaeology park will facilitate the preservation in situ of the enclosure ditch in Area 3 (see Landscape Chapter 6 and Figure 6829-302).

CH PRE-CONST 2: Preservation in Situ (Archaeology Park)

An archaeology park will facilitate the preservation in situ of the enclosure ditch in Area 3 it includes a development buffer of 10m beyond the outer edge of the enclosure ditch in order to protect any features that may be associated with it. The site will be protected from construction activities by way of fencing. It is likely that the DCHG will require a conservation plan detailing the proposals for the preservation- in situ of the Pale boundary. The document will ensure that the enclosure is preserved and integrated within the development area and will set

out measures to ensure that any future maintenance plans or any activity carried out within the area is cognisant of the sensitivity therein.

Construction Phase

CH CONST 2: General Mitigation

Given the rich archaeological assemblage in the surrounding area, it is recommended that all topsoil stripping for the proposed development be archaeologically monitored with provision made to deal with any archaeological features that may be uncovered. This will ensure the full recognition of, and the proper excavation and recording of all archaeological soils, features, finds and deposits which may be disturbed below the ground surface.

In the event that archaeological remains are uncovered works will cease in that area pending a decision on how best to deal with the remains. The National Monuments Section, will advise on whether preservation *in situ* or preservation by record is the most suitable means of mitigation. The developer must make provision to fund any archaeological work that may take place during construction of the proposed development, the offsite post excavation analysis and the preparation of any reports arising from that work. All mitigation practices will be carried out in accordance with current best practice. The developer will make a provision to allow for and to fund the archaeological works.

Operation Phase

CH OPER 2: Landscaping in the vicinity of the Pale Boundary and Archaeological Area 3

The final treatment for the Pale Boundary and its likely continuation and Archaeological Area 3 can be agreed by the authorities so that it is both appropriate and designed with sensitivity. To avoid inadvertent damage to these sites occurring in the future it will be necessary to create a local awareness of the sites and to highlight their position within the landscape (perhaps in the form of illustrative displays informed by the excavations). This should be approved as part of the landscape plan.

The removed section of probable line of the Pale boundary will be reflected on the bridge structure, indicating the continuation of the alignment so the users of the Ecopark can trace continuation of the boundary.

All recommendations are subject to approval by the National Monument Section of the Heritage and Planning Division, Department of Culture, Heritage and the Gaeltacht.

4.8.1 Architectural Heritage and Cultural Heritage

No mitigation measures are required.

4.9 PREDICTED IMPACTS OF THE PROPOSED DEVELOPMENT

4.9.1 Archaeological Heritage

Proposed Ecopark

The linear earthworks DU026-087 and DU026-115 form part of the Pale boundary and are recorded both within and in close proximity to the proposed development, with the probable line of the Pale boundary continuing through the proposed development along the line of the large upstanding tree-topped field boundary running east-west between the Phase 1 and 2 lands (between fields 5 and 7 and 6 and 8, Fig 4.1). This Pale boundary and its continuation will for the most part be preserved in-situ within the permitted Ecopark and its proposed extension into the northern part of the Phase 2 lands and will be fully accessible and integrated into it, forming part of the amenity of the park. Signage will highlight and provide the interpretation of the boundary.

A 47.2m east-west section of the probable line of the boundary will be crossed by the proposed road bridge over the Ballyogan Stream and will, subject to approval from the NMS, be preserved by record and excavated, recorded and removed in full. A similar sized section of Pale boundary (to the east DU026-115) along the Jamestown / Carrickmines section of the boundary was excavated in 2012 in advance of a new road of a similar size (O’Flanagan 2009; Licence Ref. 09E0300). From north to south it comprised a large ditch c. 1m plus in depth, a bank with a level path c. 1.8m wide on top with a cobbled surface and a corresponding shallow ditch which was revetted with stone on the southern face. It is likely that a similar profile arrangement will be identified in the area of the bridge crossing. The results of the excavation will feed into the interpretation of the site.

A scatter of prehistoric pits (Area 2) in the Phase 2 lands will be directly impacted by the Phase 2 proposals. Archaeological Area 3 is located in the southeast of the development area (field 11, Fig. 4.7) and comprises a substantial curvilinear ditch; this feature will be preserved in situ as part of the open space proposals in the Phase 2 lands.

A significant number of previously unknown archaeological sites have been uncovered in the lands in and around Kilgobbin townland, in the vicinity of the proposed development and four previously unknown sites were identified within the lands as a result of archaeological testing carried out during the preparation of this assessment. Given that much of the lands were unsuitable for geophysical survey there remains a possibility that further previously unknown archaeological features with no surface expression will be uncovered on this site.

4.9.2 Architectural Heritage and Cultural Heritage

There will be no impact on architectural and cultural heritage sites

4.10 MONITORING

Post development monitoring is not applicable in terms of the archaeological, architectural or cultural heritage.

4.11 REINSTATEMENT

No reinstatement is necessary from a cultural heritage perspective.

4.12 INTERACTIONS

The significant interaction with cultural heritage and archaeology associated with the development is namely the proposed extension of the permitted Phase 1 Ecopark into the northern portion of the lands to preserve the possible line of the pale boundary, the development of the bridge across the Ballyogan Stream and potential line of the pale boundary, and the preservation of the archaeological feature within an open space area on the eastern part of the site.

Ongoing dialogue with the design team and monitoring onsite will ensure that all interactions are identified and mitigated appropriately.

4.13 DIFFICULTIES ENCOUNTERED IN COMPILING

No difficulties were encountered in compiling this EIAR.

4.14 REFERENCES

Anon. 1834. ‘Kilgobbin Castle, County of Dublin’, in *The Dublin Penny Journal*
Ball, F.E. 1902-1905. *A history of the County Dublin*, Vol. I-III, Dublin.

- Ball, F.E. and Hamilton, E. 1895. *The Parish of Taney*.
- Bolger, T. 2000. 'Kilgobbin 00E0247 & 00E0248', 2000:306 & 307 in Bennett, I. (ed.) *Excavations 2000*. Wordwell, Bray.
- Bolger, T. 2008. Excavations at Kilgobbin Church, Co. Dublin', in *The Journal of Irish Archaeology*, Vol. 17, 85-112. Wordwell, Bray.
- Bolger, T. 2005a. *Archaeological Monitoring, The Park, Carrickmines Great, County Dublin, Licence No. 04E0773ext*. Unpublished report for Margaret Gowen and Company Ltd.
- Bolger, T. 2005. *Archaeological Assessment and Impact Statement: Carrickmines Green—Phase I, Glenamuck Road, Carrickmines Great, County Dublin*. Unpublished report, Margaret Gowen & Co. Ltd.
- Bolger, T. 2005b. *Archaeological Assessment, Carrickmines Great, County Dublin Licence No. 05E0459*. Unpublished report for Margaret Gowen and Company Ltd.
- Brady, N. 1998. 'Carrickmines and Jamestown, 98E0119', 1998:126 in Bennett, I. (ed.) *Excavations 1998*. Wordwell, Bray.
- Brady, N. 1999. 'Jamestown, 99E0456', 1999:249 in Bennett, I. (ed.) *Excavations 1999*. Wordwell, Bray.
- Brady, N. 2000. 'Carrickmines Castle, Carrickmines Great: Adjacent to castle, 00E0045, 2000:0215', in Bennett, I. (ed.) *Excavations 2000*. Wordwell, Bray.
- Breen, T. 1996. 'Ballyogan, 96E265, 1996:065', in Bennett, I. (Ed) *Excavations 1996*. Bray.
- Breen, T. 2002. 'Site 70, Ballyogan, 02E0481', 2002:0466 in Bennett, I. (Ed) *Excavations 2002*. Bray.
- Breen, T. 2002a. 'Murphystown Site 73M, 02E0699', 2002:0632 in Bennett, I. (Ed) *Excavations 2002*. Bray.
- Breen, T. 2002b. 'Murphystown Site 6, 02E0153', 2002:0478 in Bennett, I. (Ed) *Excavations 2002*. Bray.
- Breen, T. 2002c. 'Site 65M, Carmanhall and Leopardstown 02E0330', 2002:0631 in Bennett, I. (Ed) *Excavations 2002*. Bray.
- Clancy, P. 2006. *Architectural Heritage, Archaeological and Cultural Heritage: Residential Development, Clay Farm, Ballyogan Road, Kilgobbin, Co. Dublin*. Unpublished Report, Margaret Gowen & Co. Ltd.
- Clinton, M. 2000. 'Carrickmines Castle, Carrickmines Great 00E0525', 2000:0216 in Bennett, I. (Ed) *Excavations 2000*. Bray.
- Clinton, M. 2001. 'Carrickmines Great 00E0525', 2001:335 in Bennett, I. (Ed) *Excavations 2000*. Bray.
- Clinton, M. 2002. Carrickmines Castle, Carrickmines Great 00E0525', 2002:0479 in Bennett, I. (Ed.) *Excavations 2000*. Wordwell, Co. Wicklow.
- Clinton, M. L. Fibiger and D Shiels. 2007. 'Archaeology of massacre: the Carrickmines mass grave and the siege of March 1642', in Edwards, D., Lenihan, P. and Tait, C. (eds) *Age of Atrocity: Violence and Political Conflict in Early Modern Ireland*. Dublin, Four Courts.
- Conboy, G. 2002a. 'Site 63, Carrickmines Great, 02E0700', 2002:0484 In Bennett, I. (Ed.) *Excavations 2002*. Wordwell, Co. Wicklow.
- Conboy, G. 2002b. 'Site 75, Carrickmines Great 02E1130', 2002:0488 in Bennett, I. (Ed.) *Excavations 2002*. Wordwell, Co. Wicklow.
- Conboy, G. 2002c. 'Site 80, Ballyogan 02E1276', 2002:0467 in Bennett, I. (Ed.) *Excavations 2002*. Wordwell, Co. Wicklow.
- Conboy, G., 2002d. Site 72, Carrickmines Great 02E0563', 2002:0487 in Bennett, I. (Ed.) *Excavations 2002*. Wordwell, Co. Wicklow.
- Conboy, G. 2002e. 'Site 71, Carrickmines Great 02E0560', 2002:0486 in Bennett, I. (Ed.) *Excavations 2002*. Wordwell, Co. Wicklow.
- Corlett, C. 1999. *Antiquities of Old Rathdown*. Wordwell, Bray.
- Cryerhall. A. 2004. *Preliminary Excavation Report, Phase 3 Development, Kilgobbin, Co. Dublin*. 03E0717. Unpublished report, Margaret Gowen & Co. Ltd.
- Deery, S. & Halpin, S. 2004. *Environmental Impact Assessment, LUAS Line B1 archaeology, Co. Dublin*. Unpublished report, Margaret Gowen & Co. Ltd.
- Deery, S. 2014. *Environmental Impact Assessment, Clay Farm Phase 1, Co. Dublin*. Unpublished report, Courtney Deery Heritage Consultancy
- Dennehy, E. 2004a. *Preliminary Excavation Report, Phase 4 ('Block 7'), Kilgobbin, Co. Dublin (04E0566)*. Unpublished report, Margaret Gowen & Co. Ltd.

- Dennehy, E. 2004b. *Archaeological Assessment, Glenamuck Road, Carrickmines Great, Dublin*. Unpublished report, Margaret Gowen & Co. Ltd.
- Dennehy, E. 2005. 'Carrickmines Manor, Glenamuck Road, Carrickmines Great 04E0114ext.', 2005:399 in Bennett, I. (ed) *Excavations 2005*. Bray.
- Desmond, S. 2000. 'Site 19, Carrickmines Great 00E0098', 2000:0217 in Bennett, I. (Ed) *Excavations 2000*. Bray.
- Dix, F.R.McC. 1897. 'The Lesser Castles in the County Dublin', in *The Irish Builder* 29, 199.
- Dunne, L. (2000) 'Ballyogan Road, Jamestown', in Bennett, I. (ed) *Excavations 1998*. Bray.
- Frazer, W. O. [July] 2007. *Request for Ministerial Consent II, For Archaeological Test Excavation and Archaeological Monitoring at Priorsland, Glenamuck Road, Carrickmines, Dublin 18*. Unpublished report, Margaret Gowen & Co. Ltd.
- Guest, E.M. 1936. *Journal of the Royal Society of Antiquaries of Ireland*, 116-123.
- Goodbody, R. 1993. *On the Borders of the Pale: a history of the Kilgobbin, Stepside and Sandyford areas*. Pale Publishing, Dublin.
- Goodbody, R. 1993 'Pale Ditch in South County Dublin', in *Archaeology Ireland* 7.7, 24-25. Wordwell, Bray.
- Grogan, E. 2004. *The prehistoric pottery assemblage from 'Belarmine', Kilgobbin, Co. Dublin*. Unpublished report for Margaret Gowen & Co. Ltd
- Griffith R. *Valuation books, c.1855 to present*, Valuations Office of Ireland
- Gwynn, A. and Hadcock, R. N. 1988. *Medieval Religious House: Ireland*. Longman: Dublin & London.
- Hagen, I. 2002a. *Archaeological Monitoring and Test Excavations, Phase 2 Development, Kilgobbin/Newtown Little, Co. Dublin*. Unpublished report. Margaret Gowen & Co. Ltd.
- Hagen, I. 2002b. *Archaeological Monitoring and Excavations, Phase 1 Development, Kilgobbin/Newtown Little, Co. Dublin*. Unpublished report. Margaret Gowen & Co. Ltd.
- Hagen, I. 2002. *Archaeological Monitoring and Test Excavations, Phase 2 Development, Kilgobbin / Newtown Little, Co. Dublin (02E0906, 02E1173)*. Unpublished report. Margaret Gowen & Co. Ltd.
- Hagen, I. 2003. *Preliminary Excavation Report, Phase 2 Development, Kilgobbin, Co. Dublin (02E1173 ext.)*. Unpublished report. Margaret Gowen & Co. Ltd.
- Hagen, I. 2004a. *Preliminary Excavation Report, Phase 3 Development, Kilgobbin, Co. Dublin (03E0306)*. Unpublished report. Margaret Gowen & Co. Ltd.
- Hagen, I. 2004b. *Summary Report of work carried out at Kilgobbin and Newtown Little, Co. Dublin (02E0906, 02E1104, 02E1173, 02E1196, 02E1220, 03E0306, 03E0717, 04E0566)*. Unpublished report. Margaret Gowen & Co. Ltd.
- Harrison, D. 2008. *Geophysical Survey Report, Ballyogan Road, Clay Farm, South Co. Dublin. Licence Ref. 08R0259*. Unpublished report. Margaret Gowen & Co. Ltd.
- Johnston, A. 2006. 'Murphystown 06E0227', 2006:678 in Bennett, I. (ed) *Excavations 2006*. Wordwell: Bray
- Joyce, W.S.J. 1912 *The Neighbourhood of Dublin*, Dublin.
- Kilfeather, A. 2000. *Archaeological Assessment, Kilgobbin, Co. Dublin*. Unpublished report. Margaret Gowen & Co. Ltd.
- Kissane, N. 1987. *Historic Dublin Maps*. National Library of Ireland.
- Larsson, E. 2004. 'Kilgobbin Lane / Enniskerry Road, Stepside, Co. Dublin 04E0501 & 04E0777'. 2004:0644 & 2004:0645 in Bennett, I. (ed) *Excavations 2004*. Wordwell: Bray.
- Leigh. J. 2014. Geophysical survey report Clay Farm, Kilgobbin, Co. Dublin 14R0099. Unpublished report for Courtney Deery Heritage Consultancy.
- Lewis, S. 1837. *A Topographical Dictionary of Ireland*. Kennikat Press: New York (Reprint)
- McCabe, S. 2002. 'Woodside, 02E1584', 2002:0698 in Bennett, I. (ed) *Excavations 2002*. Wordwell: Bray
- McLoughlin, G. 2014. Archaeological test trenching Kilgobbin, Co.Dublin 14E0359. Unpublished report for Courtney Deery Heritage Consultancy.
- Moriarty, C. 2005. 'Riverside Cottage, Kilgobbin Road, Sandyford, 05E0322', 2005:527 in Bennett, I. (ed) *Excavations 2005*. Wordwell: Bray
- Myles, F. 2006. *Archaeological Monitoring, The Park, Carrickmines Great, County Dublin. Licence No. 04E0773 Ext*. Unpublished report for Margaret Gowen and Company Ltd.
- Nicholls, J. 2002. *Geophysical Survey, Residential Development Stepside, Kilgobbin / Newtown Little, Co. Dublin 02R079*. Unpublished report for Margaret Gowen & Co. Ltd.

- O'Carroll, E., 2001. 'Ballyogan Recycling Park, Jamestown 01E0413', 2001:434 in Bennett, I. (ed) *Excavations 2001*. Wordwell: Bray
- O'Connor, D., 2002. 'Ballyogan Road, Jamestown 01E0413', 2002:0601 in Bennett, I. (ed) *Excavations 2002*. Wordwell: Bray
- Ó Drisceoil, C. 2002. 'Sites 59-62, 02E0272', in Bennett, I. (Ed) *Excavations 1998*. Wordwell: Bray.
- Ó Drisceoil, C. 2006. 'A Neolithic Disc-Bead Necklace from Carrickmines Great, Co. Dublin', in *Journal of the Royal Society of Antiquaries of Ireland*, Vol. 136, 141-156. Dublin.
- Ó Drisceoil, C. 2007. 'Life and Death in the Iron Age at Carrickmines Great, Co. Dublin', in *Journal of the Royal Society of Antiquaries of Ireland*, Vol. 137, 5-28. Wordwell, Dublin.
- O'Flanagan, M. 1927. *Letters containing information relative to the antiquities of the County of Dublin: collected during the Ordnance Survey in 1837*. Bray.
- O'Flanagan, N. 2009. *Archaeological Assessment at The Park Carrickmines, on behalf of Park Developments Ltd – 1st Report*. 09E0300. Unpublished report.
- Ó hÉailidhe, P. 1984 'Decorated Stones at Kilgobbin, Co. Dublin', in *Journal of the Royal Society of Antiquaries of Ireland* 114, 142-144. Dublin.
- O'Keeffe, T. 1992. 'Medieval frontiers and fortifications: The Pale and its evolution', in Aalen, F.H.A. and Whelan, K. (eds.) *Dublin City and County: from prehistory to present*. Geography Publications, Dublin, pp. 57-77.
- O'Neill, J. 1998. 'Carrickmines-Bray Gas Pipeline, Carrickmines Great/Laughanstown/ Tiknick/ Rathmichael/ Shankill/ Ballyman 98E0445', 1998:125 & 668 in Bennett, I. (Ed) *Excavations 1998*. Bray.
- O'Neill, J. 2002. *Archaeological assessment at the Pale boundary (DU026-115) Ballyogan Road, Jamestown, Co. Dublin. Licence No. 02E0535*. Unpublished report for Margaret Gowen and Company Ltd.
- Pearson, P. 2001. *Between the mountains and the sea: Dún Laoghaire-Rathdown County*, O'Brien Press, Dublin.
- Phelan, S. 2005. 'Newtown Little, 05E0655', 2005:514 in Bennett, I. (ed) *Excavations 2005*. Wordwell: Bray
- Reid, M. 1997. 'Ballyogan and Stepside, 97E0467', 1997:080 & 1998:217 in Bennett, I. (ed) *Excavations 1997 & 1998*. Bray.
- Reid, M. 1998. 'Ballyogan, Jamestown, 98E0119', 1998:204 in Bennett, I. (ed) *Excavations 1998*. Bray.
- Reilly, F., 2002a. 'Site 56, Carrickmines Great 02E0428', 2002:0480 in Bennett, I. (Ed) *Excavations 2002*. Bray.
- Reilly, F. 2002b. 'Site 79, Carrickmines Great, 02E1188', 2002:0489 in Bennett, I. (Ed) *Excavations 2002*. Bray.
- Seaver, S. 2002. 'Site 78, 02E1133', 2002:0619 in Bennett, I. (Ed) *Excavations 1998*. Wordwell: Bray.
- Stout, M. 1997. *The Irish Ringfort*.
- Tobin, R. 2004. *Excavation Report, Carrickmines Great, Co. Dublin Licence Reference: 04E0773*. Unpublished report for Margaret Gowen and Company Ltd.
- Turner, K. 1983. *If you seek monuments: a guide to the antiquities of the Barony of Rathdown*. Rathmichael Historical Society.

World Wide Web (Accessed May 2017)

The location of Recorded and Registered Monuments were examined on this website: www.archaeology.ie
Archaeological excavations were reviewed on this website: www.excavations.ie
Townland names and place-names were reviewed on this website: www.logainm.ie
Ordnance survey mapping and aerial photographs were browsed on this website: www.osi.ie

APPENDIX 4.1 DETAIL OF ARCHAEOLOGICAL TESTING RESULTS

Introduction

Test trenching at the proposed development site took place in two phases. The first phase commenced on the 1st September 2014 and lasted for four days and the second phase took place on the 15th October 2014. Both phases were carried out using a 13 tonne tracked machine with toothless grading bucket under strict archaeological supervision. The weather was dry for the first phase of testing and varied from overcast to sunny and the second phase was wet. A total of 18 test trenches were excavated within the site, Trenches 6-14 were opened in phase 2 (Figure 4.7). All test trenches measured 1.8m wide and between 21m and 67m in length.

The test trenches were carefully excavated to the depth of the underlying subsoil or to the surface of archaeological stratigraphy whichever was encountered first. Sections were excavated by hand across features of archaeological potential to establish their nature and extent and following recording they were covered in plastic and backfilled. A report containing the results of the testing was submitted to the DCHG.

Results of the Testing Programme in the Phase 2 lands and in the Ecopark area

Test trenches T5–15 were opened in the Phase 2 Lands on the 1st September 2014 and trenches T18 on the 15th October 2014 (See Figure 4.7). Trenches T8, T9, T10 yielded archaeology (i.e. Archaeological Area 2) and T14 (i.e. Archaeology Area 3).

Trench 5

Trench	Length	Width	Depth	Orientation
T5	37m	1.8m	0.3m	NE-SW

Trench 5 was placed to test an upstanding field boundary bank and associated ditch which follows the line of the Ballyogan stream. The boundary, which was quite overgrown with brambles and shrubs was tested in an attempt to identify the location of the Pale boundary. The bank was 0.68m high x 1.9m wide and the ditch was 1.5m wide x 0.45m deep. The ditch contained a single fill of loose dark brown humic topsoil with frequent roots (C5). A deposit of brown-grey compact silty clay subsoil (C3) overlay natural subsoil and the bank overlay this layer. The bank itself was made up of re-deposited natural subsoil; grey-yellow compact silty clay with frequent roots. Based on the small scale of the bank and ditch and the nature of the fills, this ditch was interpreted as an ordinary field boundary and not part of the Pale defences. No features of archaeological interest were identified in Trench 5.

Trench 6

Trench	Length	Width	Depth	Orientation
T6	42m	1.8m	0.3m	WNW-ESE

Trench 6 was placed to test the negative results of the 2008 geophysical survey. The natural subsoil in trench 6 was compact yellow-brown sandy silt with inclusions of broken bedrock in places, particularly towards the western end of the trench. No features of archaeological interest were identified in Trench 6.

Trench 7

Trench	Length	Width	Depth	Orientation
T7	61m	1.8m	0.3m–0.6m	NE-SW

Trench 7 was placed to test both the negative results of the 2008 geophysical survey and the upstanding field boundary in order to either confirm or rule out this boundary as being part of the Pale defences. This boundary is lined with mature trees and it is planned to retain it within the future development as a park, with a road crossing the boundary, linking the north and south sides of the development. The test trench was placed to assess the area where this road would impact and it was also a location where there were no standing trees. The line of the field boundary proved to be extensively disturbed with much modern debris in this location and according to the

farmer, this was the route of the sewer pipeline installed in the late 1990's. As such it was not possible to either discount or confirm this boundary as part of the Pale defences. Natural subsoil within the trench consisted of yellow-grey silty sandy clay, which was quite stony towards the southern end of the trench. No features of archaeological interest were identified in Trench 6.

Trench 8

Trench	Length	Width	Depth	Orientation
T8	21m	1.8m	0.4m	WNW-ESE

Trench 8 was placed to investigate an isolated anomaly identified in the 2008 geophysical survey. Natural subsoil in trench 8 consisted of loose grey brown gravelly clay. Two pits were identified in the trench and four additional trenches measuring 5m, 8m, 8m and 11m were excavated to assess the limits of these features and if there were any associated features. In total four pits were identified in this area (C11, C13, C15 and C17) (Figure 6). All of these pits contained charcoal rich soils, and a rim sherd of prehistoric pottery (probably middle/late Bronze Age) was recovered from the surface of pit C11. The largest of the pits measures 2.2m x 2.3m x 0.3m deep (C13) and the smallest measures 1.25m x 1.2m x 0.2m deep (C11).. It appeared that pit C17 was cut into a layer that sealed pit C15 and as such there may be two phases of activity represented here.

Trench 9

Trench	Length	Width	Depth	Orientation
T9	23m	1.8m	0.3m-0.4m	NNE-SSW

Trench 9 was placed to investigate an isolated anomaly identified in the 2008 geophysical survey. Natural subsoil in trench 9 consisted of loose grey brown gravelly clay. Two features were identified in the trench (C9 and C8). C9 was an east-west oriented ditch measuring 1.2m wide x 0.3m deep. It contained a single fill and was consistent with a field boundary / drainage ditch and did not appear to be of archaeological interest. C8 was an oblong spread measuring 1.05m x 0.45m and a section excavated across it was 0.05m deep. It was identified at 0.35m below the sod and contained frequent inclusions of charcoal.

Trench 10

Trench	Length	Width	Depth	Orientation
T10	27m	1.8m	0.3m-0.35m	E-W

Trench 10 was placed to investigate an isolated anomaly identified in the 2008 geophysical survey. Natural subsoil in trench 10 consisted of loose grey brown gravelly clay. One feature was identified in the trench (C7) and an additional trench measuring 5m was excavated to assess if there were any associated features. No additional features were identified and the pit appears to be an isolated feature. C7 is a small circular pit 0.26m in diameter x 0.15m deep with a charcoal rich fill containing frequent inclusions of burnt bone (C6).

Trench 11

Trench	Length	Width	Depth	Orientation
T11	28m	1.8m	0.4m	N-S

Trench 11 was placed to investigate an isolated anomaly identified in the 2008 geophysical survey. Natural subsoil in trench 11 consisted of grey-orange clay with patches of small angular stones. One pit was identified in the trench (C19) and it is likely to represent the anomaly identified in the geophysical survey. The pit measured 1m x 0.7m and a section indicated a depth of 0.3m. The single fill of fine grey sandy silt (C20) was quite loose and a sherd of modern pottery was recovered from close to the surface. This feature is not thought to be of archaeological interest.

Trench 12

Trench	Length	Width	Depth	Orientation
T12	50m	1.8m	0.25m	ENE-WSW

Trench 12 was placed to investigate the negative results of the 2014 geophysical survey. Natural subsoil in trench 12 consisted of yellow-grey compact silty sand and no features of archaeological interest were identified.

Trench 13

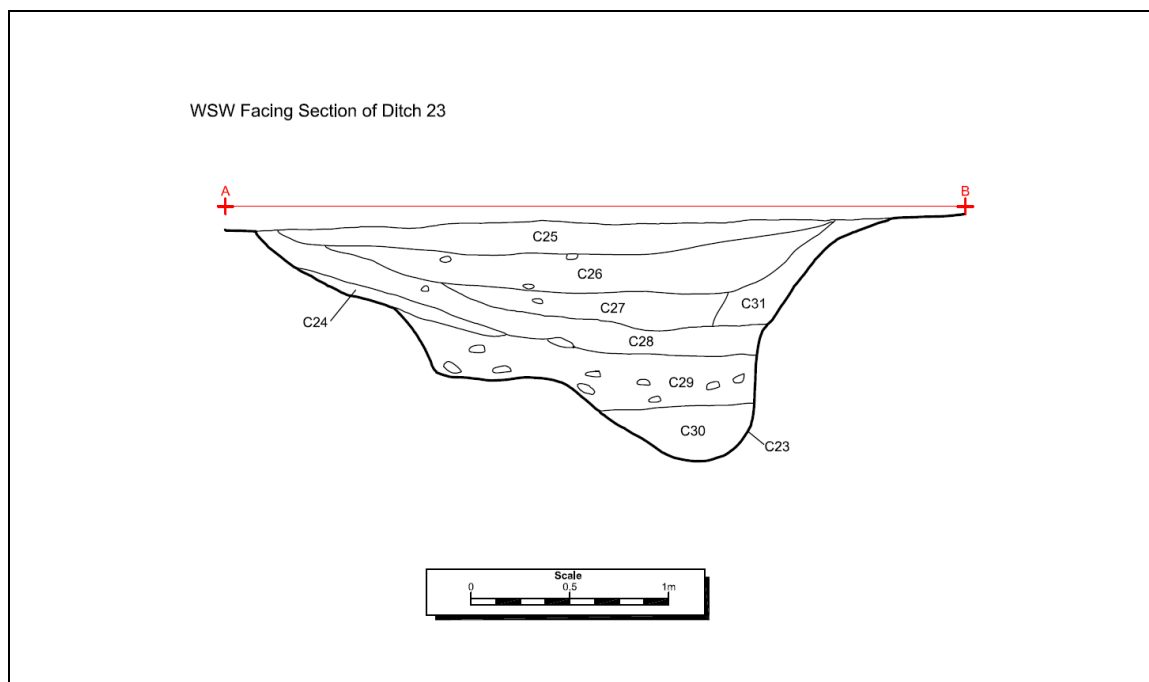
Trench	Length	Width	Depth	Orientation
T13	67m	1.8m	0.3m-0.4m	NW-SE

Trench 13 was placed to investigate the negative results of the 2014 geophysical survey. Natural subsoil in trench 13 consisted of compact yellow gritty clay. Agricultural furrows and a former linear field boundary / drainage ditch that were identified in the geophysical survey were evident in the trench. No features of archaeological interest were identified in trench 13.

Trench 14

Trench	Length	Width	Depth	Orientation
T14	36m	1.8m	0.25m	E-W

Trench 14 was placed to investigate a curvilinear ditch type response identified in the 2014 geophysical survey. Natural subsoil in trench 14 consisted of compact yellow-grey silty sandy clay with frequent stones and bits of broken bedrock. The curvilinear ditch as indicated in the geophysical survey was identified in the trench and a section of the ditch proved it to be a substantial ditch measuring 3.05m wide x 1.15m deep (C23). Eight fills were identified within the excavated section, including a charcoal rich deposit (C24) which was sampled and could be used to establish a date for the backfilling of the ditch. Animal bone, which appears to be mostly cattle was retrieved from fills throughout the section as well as burnt bone from the upper fill (C25).



Section of Enclosure Ditch C23, Archaeological Area 3

Trench 15

Trench	Length	Width	Depth	Orientation
T15	33m	1.8m	0.35m	NW-SE

Trench 15 was placed to investigate the negative results of the 2008 geophysical survey. Natural subsoil in trench 15 consisted of yellow-grey slightly sandy, silty clay with occasional patches of decayed stones. No features of archaeological interest were identified in trench 15.

Trench 16

Trench	Length	Width	Depth	Orientation
T16	44m	1.8m	0.35-0.7m	E-W

Trench 16 was placed to test part of the constraint area surrounding the recorded portion of the Pale boundary to the west of the site (DU026-087). Natural subsoil in trench 16 consisted of mid-grey silty clay, varying to yellow-orange silty clay and ranged in depth from 0.35m at the west end to 0.7m at the east end. It was evident that this area had previously been stripped of topsoil and then backfilled with a mixture of builder's rubbish and redeposited compact stony subsoil from elsewhere. No features of archaeological interest were identified in trench 16.

Trench 17

Trench	Length	Width	Depth	Orientation
T17	22m	1.8m	0.75-0.9m	SW-NE

Trench 17 was placed to test part of the constraint area surrounding the recorded portion of the Pale boundary to the west of the site (DU026-087). Sod and topsoil (0.15m) overlay a layer of redeposited stony yellow subsoil (C35) (0.3m), which in turn overlay layers of mottled grey-brown silty clay (C36) (0.1m) and light grey-yellow silty clay (C37) (0.2m) which represent natural silting. Beneath these deposits a spread of dark grey-black charcoal rich silty sand (C38) was identified at 0.75m below the current ground level (Archaeological area 4, Fig. 4.7). Additional trenches were excavated to establish the extent of the deposit which measured 12m southwest-northeast x 9m northwest-southeast and a small excavated section indicated a depth of 0.15-0.2m.

Trench 18

Trench	Length	Width	Depth	Orientation
T18	20m	1.8m	0.55m	NW-SE

Trench 18 was placed to test part of the constraint area surrounding the recorded portion of the Pale boundary to the west of the site (DU026-087). Natural subsoil in trench 18 consisted of light grey slightly sandy, silty clay with granite boulders protruding in places. Builder's rubbish and redeposited compact stony subsoil brought in from elsewhere was present in the northwest end of the trench. No features of archaeological interest were identified in trench 18.

APPENDIX 4.2 SUMMARY OF RELEVANT LEGISLATION

National Monuments Legislation

All archaeological sites have the full protection of the national monuments legislation (Principal Act 1930; Amendments 1954, 1987, 1994 and 2004). In the 1987 Amendment of Section 2 of the Principal Act (1930), the definition of a national monument is specified as:

any artificial or partly artificial building, structure or erection or group of such buildings, structures or erections:

- any artificial cave, stone or natural product, whether forming part of the ground, that has been artificially carved, sculptured or worked upon or which (where it does not form part of the place where it is) appears to have been purposely put or arranged in position, any, or any part of any, prehistoric or ancient (i.) tomb, grave or burial deposit, or (ii.) ritual, industrial or habitation site, and
- any place comprising the remains or traces of any such building, structure or erection, any cave, stone or natural product or any such tomb, grave, burial deposit or ritual, industrial or habitation site...

Under Section 14 of the Principal Act (1930):

It shall be unlawful...

to demolish or remove wholly or in part or to disfigure, deface, alter, or in any manner injure or interfere with any such national monument without or otherwise than in accordance with the consent hereinafter mentioned (a licence issued by the Office of Public Works National Monuments Branch),

or

to excavate, dig, plough or otherwise disturb the ground within, around, or in the proximity to any such national monument without or otherwise than in accordance...

Under Amendment to Section 23 of the Principal Act (1930), a person who finds an archaeological object shall, within four days after the finding, make a report of it to a member of the Garda Síochána or the Director of the National Museum.

The latter is of relevance to any finds made during a watching brief. In the 1994 Amendment of Section 12 of the Principal Act (1930), all the sites and 'places' recorded by the Sites and Monuments Record of the Office of Public Works are provided with a new status in law. This new status provides a level of protection to the listed sites that is equivalent to that accorded to 'registered' sites [Section 8(1), National Monuments Amendment Act 1954] as follows:

- The Commissioners shall establish and maintain a record of monuments and places where they believe there are monuments and the record shall be comprised of a list of monuments and such places and a map or maps showing each monument and such place in respect of each county in the State.
- The Commissioners shall cause to be exhibited in a prescribed manner in each county the list and map or maps of the county drawn up and publish in a prescribed manner information about when and where the lists and maps may be consulted.

In addition, when the owner or occupier (not being the Commissioners) of a monument or place which has been recorded, or any person proposes to carry out, or to cause or permit the carrying out of, any work at or in relation to such monument or place, he shall give notice in writing of his proposal to carry out the work to the Commissioners and shall not, except in the case of urgent necessity and with the consent of the Commissioners, commence the work for a period of two months after having given the notice.

The National Monuments Amendment Act 2004

The National Monuments Amendment Act enacted in 2004 provides clarification in relation to the division of responsibilities between the Minister of Environment, Heritage and Local Government, Finance and Arts, Sports and Tourism together with the Commissioners of Public Works. The Minister of Environment, Heritage and Local

Government will issue directions relating to archaeological works and will be advised by the National Monuments Section and the National Museum of Ireland.

The Act gives discretion to the Minister of Environment, Heritage and Local Government to grant consent or issue directions in relation to road developments (Section 49 and 51) approved by An Bord Pleanála and/or in relation to the discovery of National Monuments

14A. (1) The consent of the Minister under section 14 of this Act and any further consent or licence under any other provision of the National Monuments Acts 1930 to 2004 shall not be required where the works involved are connected with an approved road development.

(2) Any works of an archaeological nature that are carried out in respect of an approved road development shall be carried out in accordance with the directions of the Minister, which directions shall be issued following consultation by the minister with the Director of the National Museum of Ireland.

Subsection 14A (4) Where a national monument has been discovered to which subsection (3) of this section relates, then the road authority carrying out the road development shall report the discovery to the Minister subject to subsection (7) of this section, and pending any directions by the minister under paragraph (d) of this subsection, no works which would interfere with the monument shall be carried out, except works urgently required to secure its preservation carried out in accordance with such measures as may be specified by the Minister.

The Minister will consult with the Director of the National Museum of Ireland for a period not longer than 14 days before issuing further directions in relation to the national monument.

The Minister will not be restricted to archaeological considerations alone, but will also consider the wider public interest.

Planning and Development Act, 2000

Structures of architectural, cultural, scientific, historical or archaeological interest can also be protected under the Planning and Development Act, 2000.

This act provides for the inclusion of protected structures into the planning authorities' development plans and sets out statutory regulations regarding works affecting such structures. Under the new legislation, no distinction is made between buildings formerly classified under development plans as List 1 and List 2. Such buildings are now all regarded as 'protected structures'.

The act defines a 'protected structure' as follows:

(a) a structure, or
(b) a specified part of a structure,
which is included in a record of protected structures, and, where that record so indicates, includes any specified feature which is within the attendant grounds of the structure and which would not otherwise be included in this definition.

'Protection', in relation to a structure or part of a structure, includes conservation, preservation, and improvement compatible with maintaining the character and interest of the structure or part;

Part IV of the act deals with architectural heritage, and Section 57 deals specifically with works affecting the character of protected structures or proposed protected structures.

...the carrying out of works to a protected structure, or a proposed protected structure, shall be exempted development only if those works would not materially affect the character of—

- (a) the structure, or
- (b) any element of the structure which contributes to its special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest.

Section 58, subsection 4 states that:

Any person who, without lawful authority, causes damage to a protected structure or a proposed protected structure shall be guilty of an offence.

APPENDIX 4.3: GLOSSARY OF IMPACT ASSESSMENT

Significance Criteria (NRA Guidelines 2006)

The significance criteria can be used to evaluate the significance of an archaeological site, monument or complex. It should not, however, be regarded as definitive, rather it is an indicator which contributes to a wider judgment based on the individual circumstances of a feature. Different monument types lend themselves more easily to assessment and it should be borne in mind that this can create a bias in the record, for example an upstanding stone monument such as a fortified house is easier to examine with a view to significance than a degraded enclosure site.

Significance Criteria

Criteria	Explanation
Existing Status	The level of protection associated with a monument or complex is an important consideration.
Condition /Preservation	The survival of a monument's archaeological potential both above and below ground is an important consideration and should be assessed in relation to its present condition and surviving features. Well-preserved sites should be highlighted, this assessment can only be based on a field inspection.
Documentation /Historical Significance	The significance of a monument may be enhanced by the existence of records of previous investigations or contemporary documentation supported by written evidence or historic maps. Sites with a definite historical association or an example of a notable event or person should be highlighted.
Group Value	The value of a single monument may be greatly enhanced by its association with related contemporary monuments or with monuments from different periods indicating an extended time presence in any specific area. In some cases it may be preferable to protect the complete group, including associated and adjacent land, rather than to protect isolated monuments within that group.
Rarity	The rarity of some monument types can be a central factor affecting response strategies for development, whatever the condition of the individual feature. It is important to recognise sites that have a limited distribution.
Visibility in the landscape	Monuments that are highly visible in the landscape have a heightened physical presence. The inter-visibility between monuments may also be explored in this category.
Fragility/ Vulnerability	It is important to assess the level of threat to archaeological monuments from erosion, natural degradation, agricultural activity, land clearance, neglect, careless treatment or development. The nature of the archaeological evidence cannot always be specified precisely but it may still be possible to document reasons to justify the significance of the feature. This category relates to the probability of monuments producing material of archaeological significance as a result of future investigative work.
Amenity Value	Regard should be taken of the existing and potential amenity value of a monument.

Determining Significance of Architectural Heritage Assets

The significance of perceived impact on structures and sites of architectural merit is determined by a combination of the architectural heritage importance of the structure and the degree of impact. In each case the structure is given a rating as to its importance and, if higher than "Record only", the nature of its special interest is given. The rating definitions are in accordance with those given by the National Inventory of Architectural Heritage (NIAH):

- International:** Structures or sites of sufficient architectural heritage importance to be considered in an international context. Examples include St Fin Barre's Cathedral, Cork. These are exceptional structures that can be compared to and contrasted with the finest architectural heritage in other countries.
- National:** Structures or sites that make a significant contribution to the architectural heritage of Ireland. These are structures and sites that are considered to be of great architectural heritage significance in an Irish context. Examples include Ardnacrusha Power Station, Co. Clare; the Ford Factory, Cork; Carroll's Factory, Dundalk; Lismore Castle, Co. Waterford; Sligo Courthouse, Sligo; and Emo Court, Co. Laois.
- Regional:** Structures or sites that make a significant contribution to the architectural heritage within their region or area. They also stand in comparison with similar structures or sites in other regions or areas within Ireland. Examples would include many Georgian terraces; Nenagh Courthouse, Co. Tipperary; or the Bailey Lighthouse, Howth. Increasingly, structures that need to be protected include structures or sites that make a significant contribution to the architectural heritage within their own locality. Examples of these would include modest terraces and timber shop fronts.

Local: These are structures or sites of some vintage that make a contribution to the architectural heritage but may not merit being placed in the RPS separately. Such structures may have lost much of their original fabric.

Record only: These are structures or sites that are not deemed to have sufficient presence or inherent architectural or other importance at the time of recording to warrant a higher rating. It is acknowledged, however, that they might be considered further at a future time.

Where the rating is deemed to be higher than “Record only” the category of special interest is noted. It should be noted that the term “special architectural interest” applies only in the context of this assessment of architectural heritage and does not imply that those buildings and other structures that are not considered to be of special architectural interest are in any way inferior or are of lower value.

The special interest is based on the categories set down in the Planning and Development Act, 2000. While that Act gives no criteria for assigning a special interest to a structure, the National Inventory of Architectural Heritage (NIAH) offers guidelines to its field-workers. This offers guidance by example rather than by definition, and is the system adopted for the present assessment. There are eight categories set down in the Act, viz. archaeological, architectural, historical, technical, cultural, scientific, social and artistic, and the NIAH guidance for each is as follows:

Archaeological

It is to be noted that the NIAH is biased towards post-1700 structures. Structures that have archaeological features may be recorded, providing the archaeological features are incorporated within post-1700 elements. Industrial fabric is considered to have technical significance, and should only be attributed archaeological significance if the structure has pre-1700 features.

Architectural

A structure may be considered of special architectural interest under the following criteria:-

- An aspiration of aesthetic appeal to its design.
- Good quality or well executed architectural design
- The work of a known and distinguished architect, engineer, designer, craftsman
- Modest or vernacular structures may be considered to be of architectural interest, as they are part of the history of the built heritage of Ireland.
- Well-designed decorative features, externally and/or internally.

Historical

A structure may be considered of special historical interest under the following criteria:

- A significant historical event associated with the structure
- An association with a significant historical figure
- Has a known interesting and/or unusual change of use, e.g. a former workhouse now in use as a hotel
- A memorial to a historical event.

Technical

A structure may be considered of special technical interest under the following criteria:

- Incorporates building materials of particular interest, i.e. the materials or the technology used for construction
- Incorporates innovative engineering design, e.g. bridges, canals or mill weirs
- A structure which has an architectural interest may also merit a technical interest due to the structural techniques used in its construction, e.g. a curvilinear glasshouse, early use of concrete, cast-iron prefabrication.
- Mechanical fixtures relating to a structure may be considered of technical significance.

Cultural

A structure may be considered of special cultural interest where there is an association with a known fictitious character or event, e.g., Sandycove Martello Tower which featured in Ulysses.

Scientific

A structure may be considered of special scientific interest where it is considered to be an extraordinary or pioneering scientific or technical achievement in the Irish context, e.g., Mizen Head Bridge, Birr Telescope.

Social

A structure may be considered of special social interest under the following criteria:

- A focal point of spiritual, political, national or other cultural sentiment to a group of people, e.g. a place of worship, a meeting point, assembly rooms.
- Developed or constructed by a community or organisation, e.g. the construction of the railways or the building of a church through the patronage of the local community
- Illustrates a particular lifestyle, philosophy, or social condition of the past, e.g. the hierarchical accommodation in a country house, philanthropic housing, vernacular structures.

Artistic

A structure may be considered of special artistic interest under the following criteria:

- Work of a skilled craftsman or artist, e.g. plasterwork, wrought-iron work, carved elements or details, stained glass, stations of the cross.
- Well-designed mass-produced structures or elements may also be considered of artistic interest.
- In the evaluation of the special interest of a structure it is possible for the structure to have a special interest under more than one of the above categories.

Assessment of Material Assets, as Defined by the EPA (2002)

Context Describe the location and extent of the asset. Does it extend beyond the site boundary?

Character Describe the nature and use of the asset. It is exploited, used or accessible? Is it renewable or non-renewable and if so over what period?

Significance Describe the significance of the asset. Is the material asset unique, scarce or common in the region? Is its use controlled by known plans, priorities or policies? What trends are evident or may reasonably be inferred?

Sensitivity Describe the changes in the existing environment which could limit the access to, or the use of, the material asset.

Glossary of Impacts as Defined by the EPA (2002) and the NRA Guidelines 2006

Impacts are generally categorised as either being a direct impact, an indirect impact or as having no predicted impact. A glossary of impacts as defined by the EPA are as follows: -

A **direct impact** occurs when a cultural heritage asset is located within the proposed development area and entails the removal of part, or the entire asset.

Indirect impacts may be caused due to the close proximity of a development to a cultural heritage asset. Mitigation strategies and knowledge of detail design can often ameliorate any adverse indirect impact. Indirect impacts may include severance of linked features, degradation of setting and amenity or provide a visual intrusion.

No predicted impact occurs when the proposed development does not adversely or positively affect a cultural heritage asset.

The impacts of the proposed development on the cultural heritage environment are first assessed in terms of their quality i.e. positive, negative, neutral (or direct and indirect):

Negative Impact A change that will detract from or permanently remove a cultural heritage asset from the landscape.

Neutral Impact A change that does not affect the cultural heritage asset.

Positive Impact A change that improves or enhances the setting of a cultural heritage asset.

Duration of Impacts:

Temporary Impact Impact lasting for one year or less.

Short-term Impacts Impact lasting one to seven years.

<i>Medium-term Impact</i>	Impact lasting seven to fifteen years.
<i>Long-term Impact</i>	Impact lasting fifteen to sixty years.
<i>Permanent Impact</i>	Impact lasting over sixty years.
Types of Impacts:	
<i>Cumulative Impact</i>	The addition of many small impacts to create one larger, more significant, impact.
<i>Do Nothing Impact</i>	The environment as it would be in the future should no development of any kind be carried out.
<i>Indeterminable Impact</i>	When the full consequences of a change in the environment cannot be described.
<i>Irreversible Impact</i>	When the character, distinctiveness, diversity or reproductive capacity of an environment is permanently lost.
<i>Residual Impact</i>	The degree of environmental change that will occur after the proposed mitigation measures have taken effect.
<i>'Worst case' Impact</i>	The impacts arising from a development in the case where mitigation measures substantially fail.

Magnitude of Impact

Extent – size, scale and spatial distributions of the effect

Duration – period of time over which the effect will occur

Frequency – how often the effect will occur

Context – how will the extent, duration and frequency contrast with the accepted baseline conditions.

Magnitude Criteria Table:

Magnitude of Impact	Criteria
Very High	Applies where mitigation would be unlikely to remove adverse effects. Reserved for adverse, negative effects only. These effects arise where a cultural heritage asset is completely and irreversibly destroyed by a proposed development.
High	An impact which, by its magnitude, duration or intensity alters an important aspect of the environment. An impact like this would be where part of a cultural heritage asset would be permanently impacted upon leading to a loss of character, integrity and data about the archaeological / cultural heritage feature/site.
Medium	A moderate direct impact arises where a change to the site is proposed which though noticeable is not such that the archaeological / cultural heritage integrity of the site is compromised and which is reversible. This arises where an archaeological / cultural heritage feature can be incorporated into a modern day development without damage and that all procedures used to facilitate this are reversible.
Low	An impact which causes changes in the character of the environment which are not significant or profound and do not directly impact or affect an archaeological / cultural heritage feature, site or monument.
Negligible	An impact capable of measurement but without noticeable consequences.
No change	No change to the asset or setting

Sensitivity Criteria

An evaluation of the sensitivity / value of sites and features is based on the extent to which assets contribute to the archaeological or built heritage character, though their individual or group qualities, either directly or potentially and guided by legislation, national policies, acknowledged standards, designations and criteria. The table below presents the scale of sensitivity / value together with criteria.

Sensitivity Criteria Table:

Sensitivity Value	Criteria
Very High	Sites of international significance: World Heritage Sites National Monuments Protected Structures of international and national importance Designed landscapes and gardens of national importance Assets of acknowledged international importance or that can contribute significantly to international and national research objectives
High	RMP / SMR sites Designated assets that contribute to regional research objectives Protected Structures of regional importance

Sensitivity Value /	Criteria
	Architectural Conservation Areas
Medium	Recently / newly identified archaeological sites (not yet included on the SMR / RMP; the importance of the resource has yet to be fully ascertained) Undesignated assets that contribute to regional research objectives NIAH Building Survey and Garden Survey Sites
Low	Undesignated Sites of local importance (e.g. townland / field boundaries) Assets compromised by poor preservation and/or poor survival of contextual associations Assets of limited value but with the potential to contribute to local research objectives (e.g. potential buried foundations associated with features / structures shown the 1 st edition OS six-inch mapping) Historic townscapes or built up areas of limited historic integrity in their building or their settings
Negligible	Assets with very little or no surviving archaeological interest. Buildings of no architectural or historic note
Unknown	The nature of the resource has yet to be fully ascertained, e.g. sites or areas of specific archaeological potential, greenfield areas or riverine / stream / coastal environs with inherent archaeological potential. Structures with potential historic significance (possibly hidden or inaccessible).

Criteria for Assessment of Impact Significance

Using both the sensitivity of the heritage asset and the magnitude of impact, the impact significance is established (see table below).

Impact Significance Matrix

Impact Significance					
Magnitude Impact (+/-)	Sensitivity/ Value of Cultural Heritage asset				
	Very Low	Low	Medium	High	Very High
Very Low	Imperceptible	Imperceptible	Slight	Slight	Slight
Low	Imperceptible	Slight	Moderate	Moderate	Moderate
Medium	Slight	Moderate	Moderate	Significant	Significant
High	Slight	Moderate	Significant	Significant	Profound
Very High	Slight	Moderate	Significant	Profound	Profound

Chapter 4 Figures and Plates

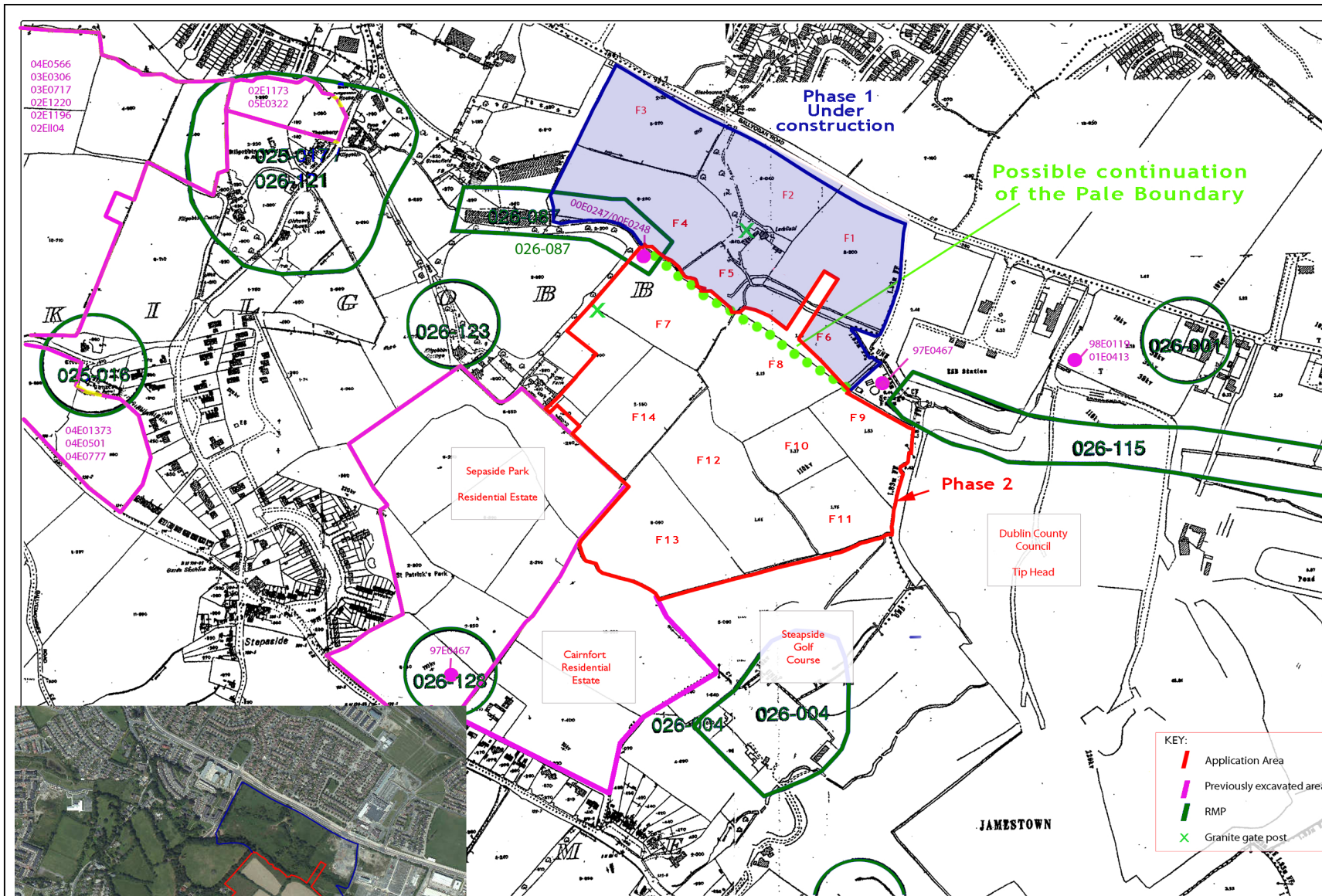
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COURTNEYDEERY 
Heritage Consultancy

Title: RMP site locations, proposed development area & previous investigations
 Project: Clay Farm Phase 2, Ballyogan Road, Steapside, Co. Dublin
 Client: Viscount Securities
 Figure: 4.1



COURTNEYDEERY 
Heritage Consultancy

Title: RPS Sites
 Project: Clay Farm Phase 2, Ballyogan Road, Stepaside, Co. Dublin
 Client: Viscount Securities
 Figure: 4.2

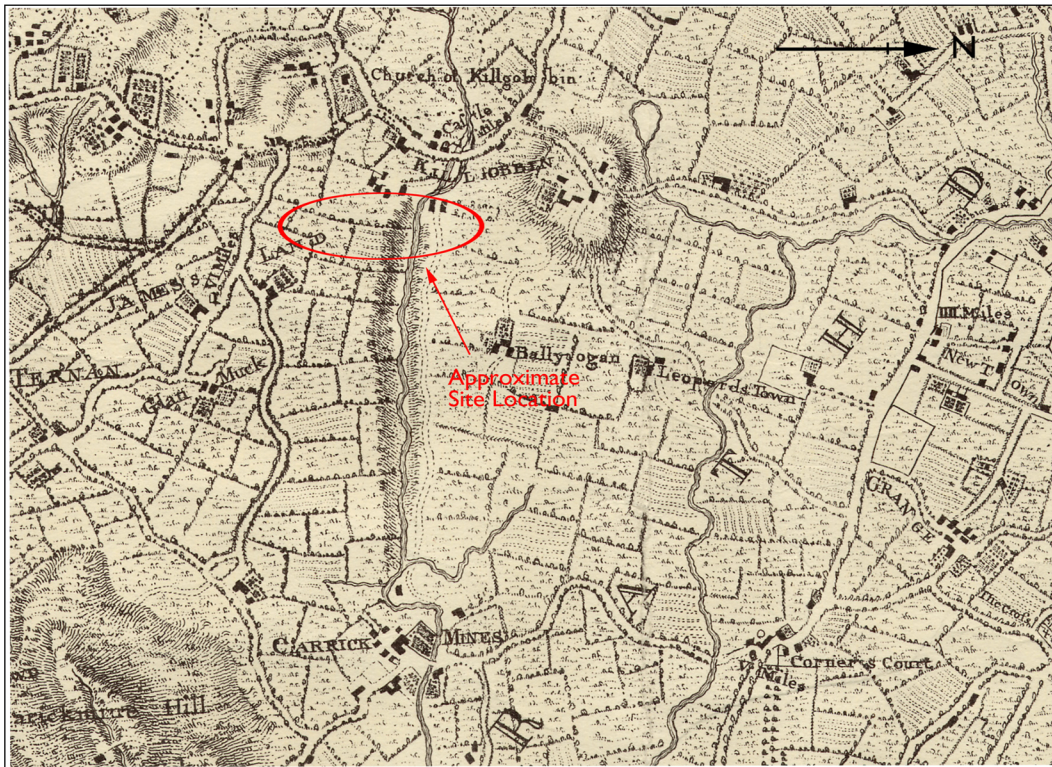


Figure 4.3 Rocque's map of Dublin, 1760, showing approximate location of the Phase 1 and 2 lands

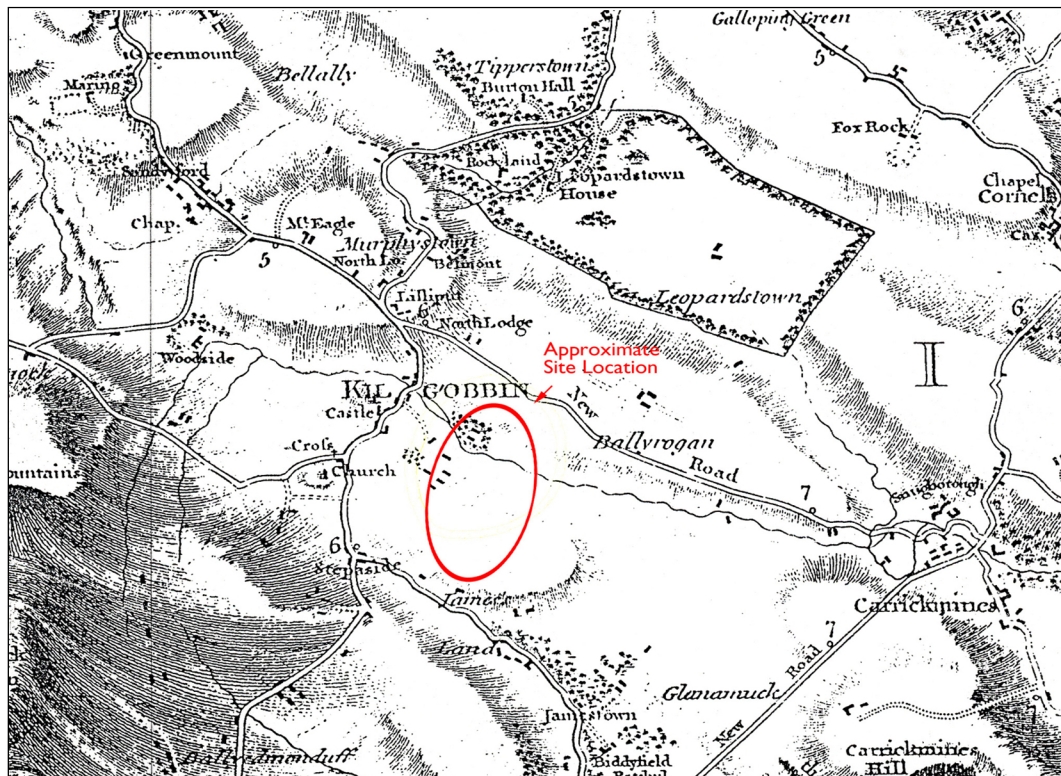


Figure 4.4 Taylor's map of Dublin, 1816, showing approximate location of the Phase 1 and 2 lands

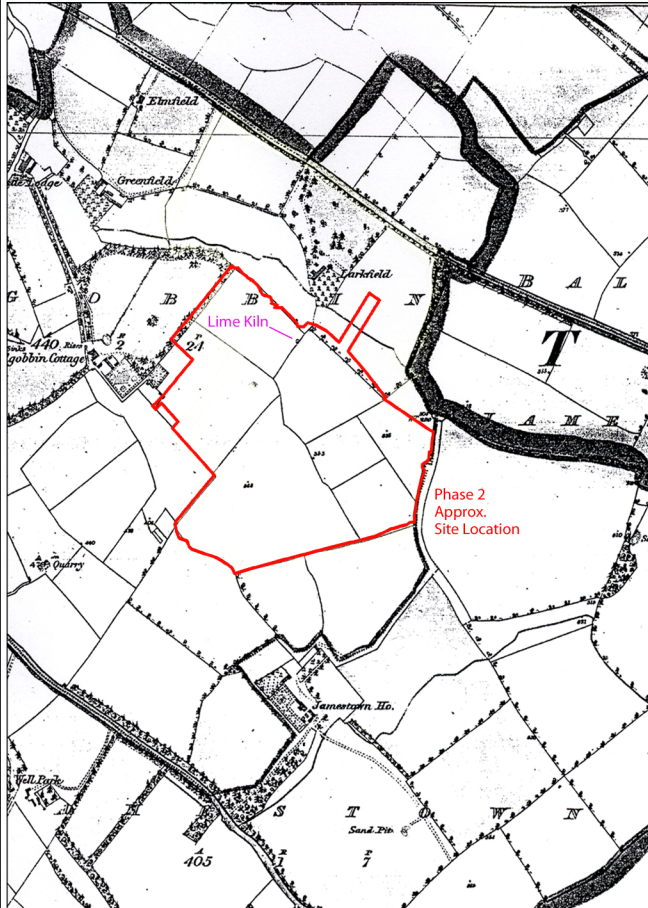


Fig. 4.5a 1st ed OS map, 1843

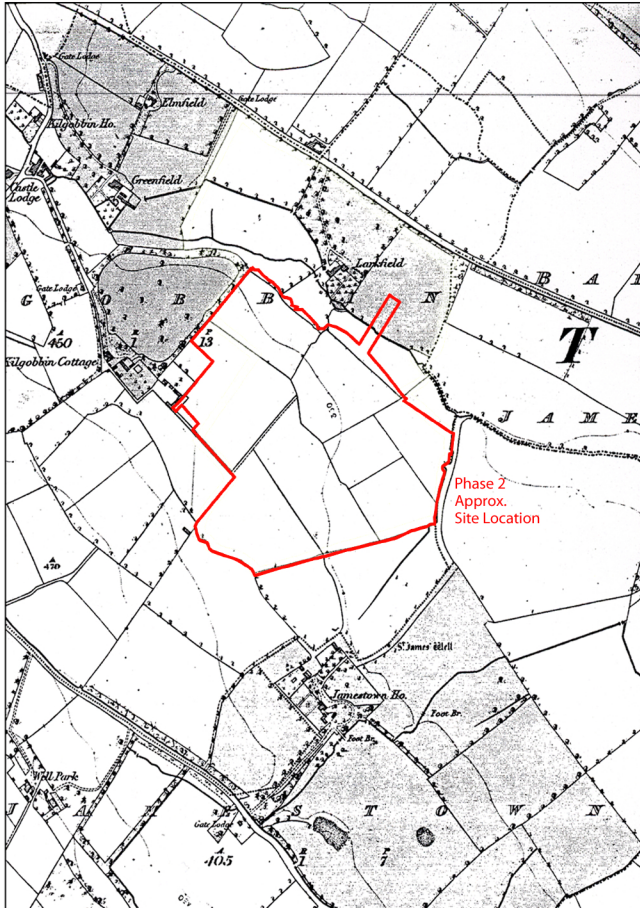


Fig. 4.5b 2nd ed OS map, 1874

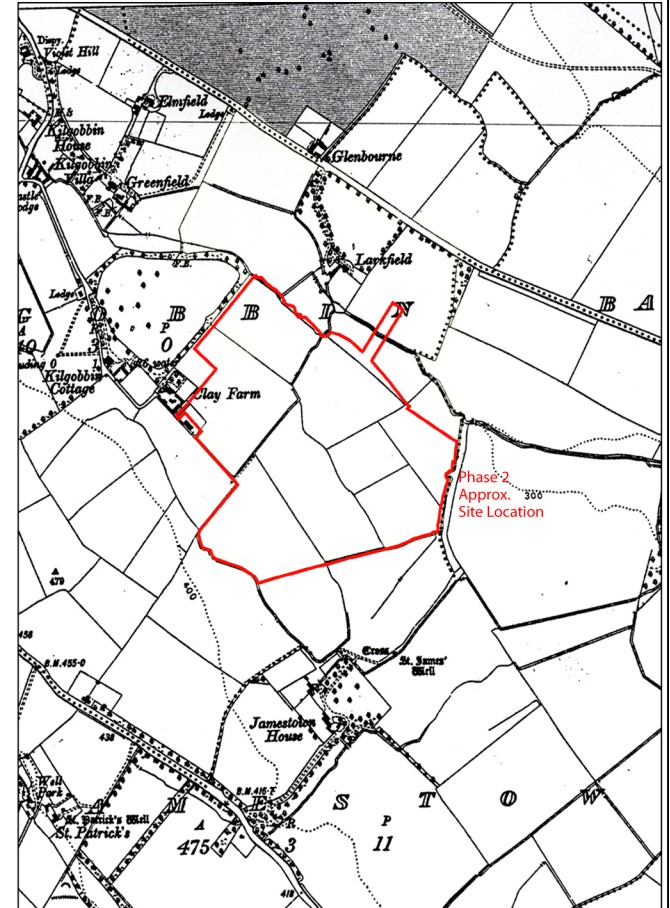
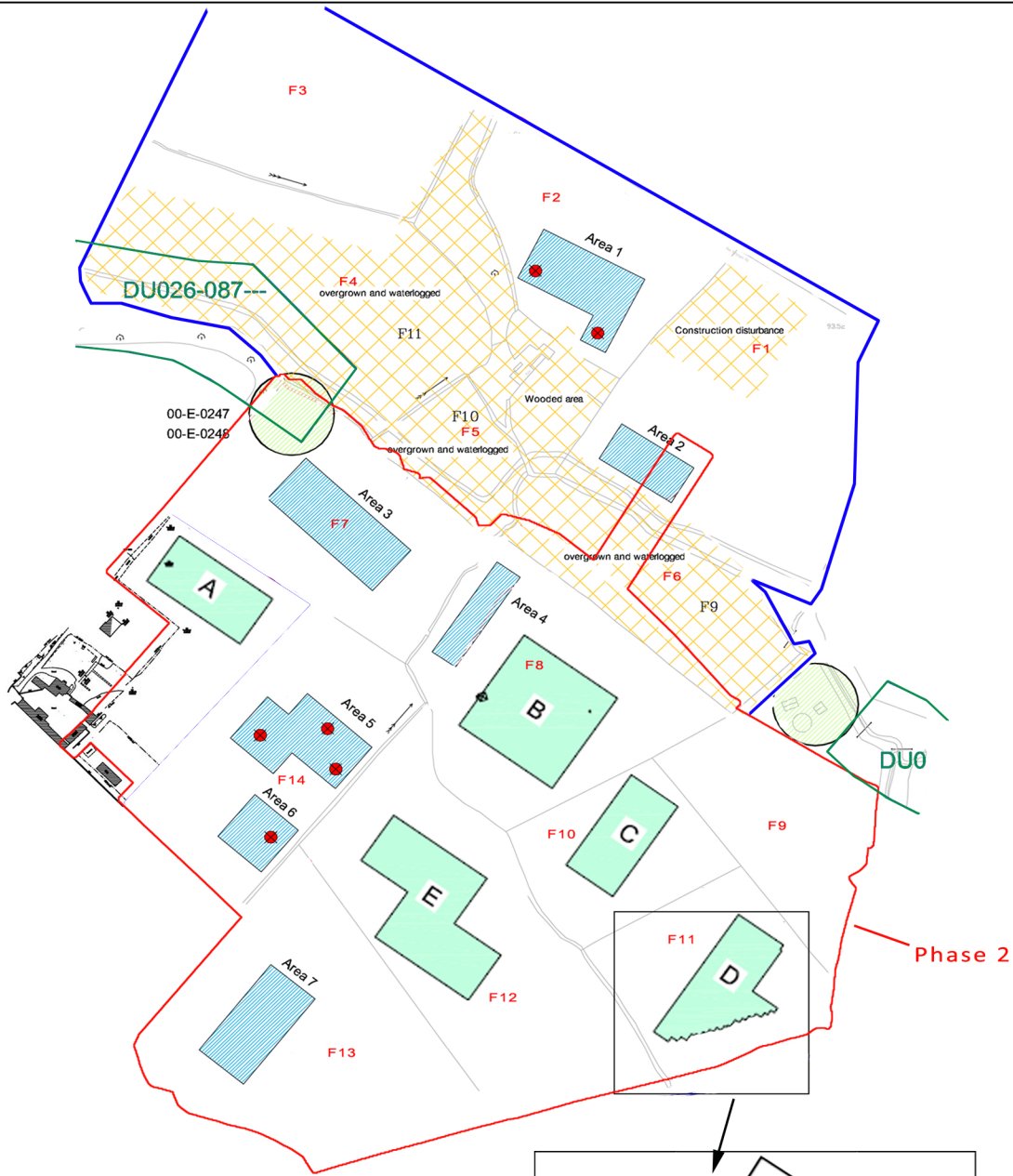



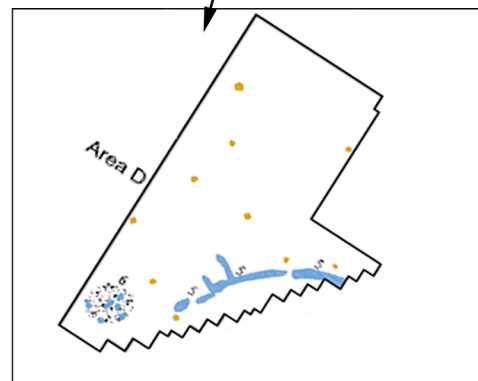


Fig. 4.5c 3rd ed OS map, 1912

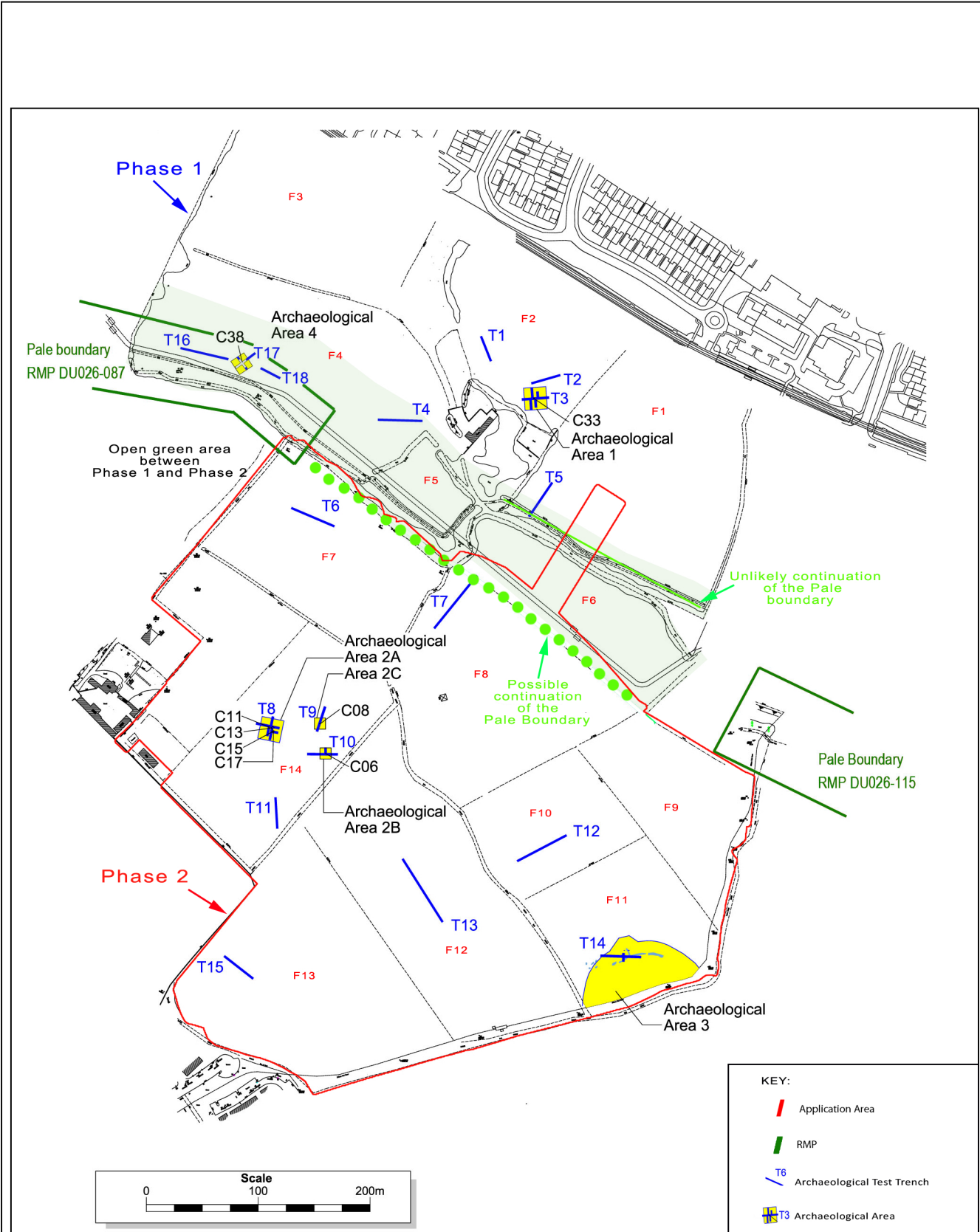


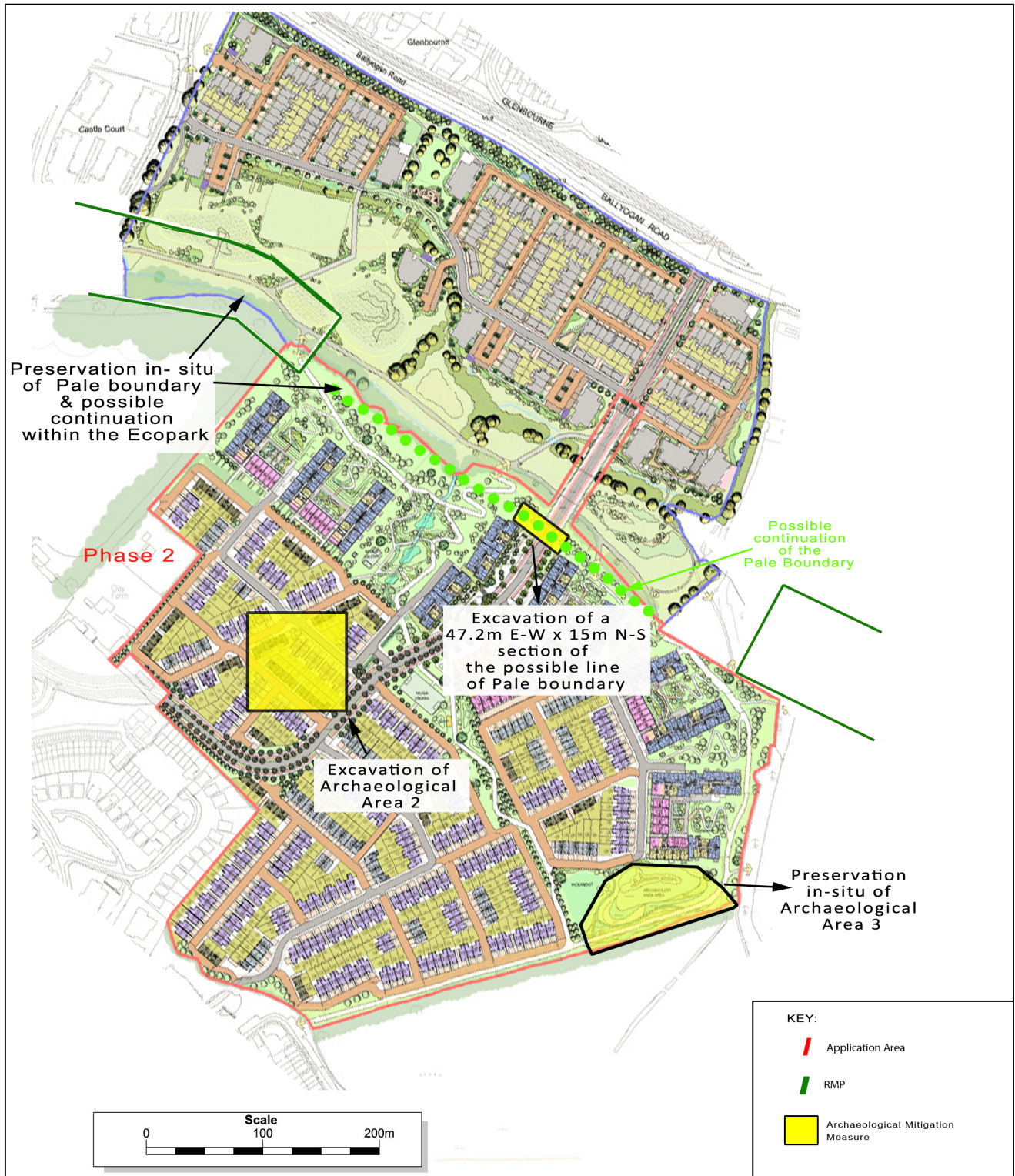
KEY:

-  Targeted detailed gradiometer survey 14R0099
-  Targeted detailed gradiometer survey 08R0259
-  Area unsuitable for geophysical survey



Detail of interpretation drawing of curvilinear ditch identified in Area D (Archaeological Area 3)





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Plate 4.2 View of Field 5 facing southeast



Plate 4.3 Pathway along top of bank, Pale Boundary DU026-087 (outside development area)

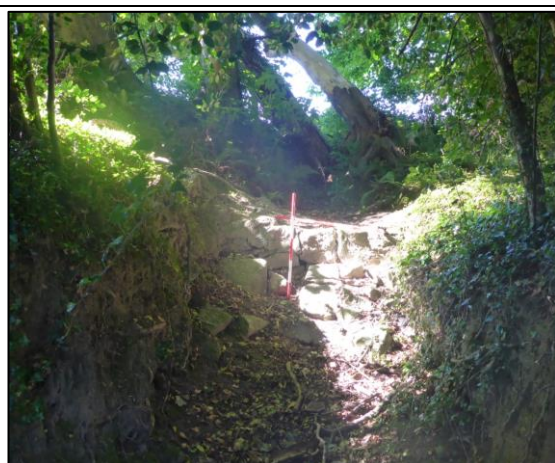


Plate 4.4 Section through bank showing stone revetment, Pale Boundary DU026-087



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Plate 4.12 Field 8, facing northeast along route of proposed access road



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Plate 4.14 Field 12, facing southwest



Plate 4.15 Field 14, facing northeast



Plate 4.16 Track along northeast side of field 9

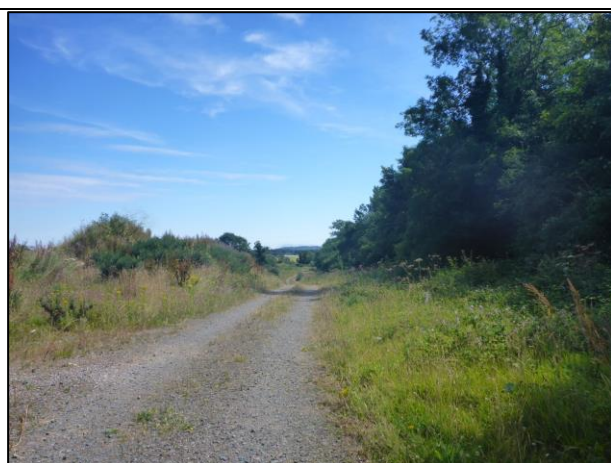


Plate 4.17 Track along southeast side of Phase 2 lands, facing east



Plate 4.18 Walled garden of Kilgobbin Cottage and laneway to Clay Farm House



Plate 4.19 Clay Farm house, facing southwest

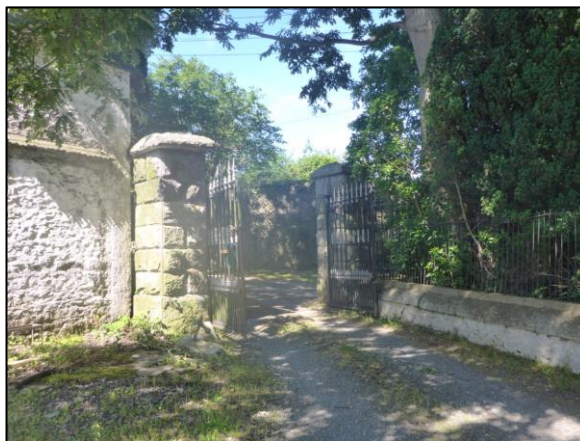


Plate 4.20 Front gateway entrance to Clay Farm, facing west



Plate 4.21. Engraved pillar, Clay Farm



Plate 4.22 Late 19th century structure, Clay Farm, northwest gable



Plate 4.23 Late 19th century structure, Clay Farm, northeast facade



Plate 4.24 Water pump inside entrance to modern house adjacent Clay Farm



Plate 4.25 Outbuildings and rear gateway in eastern corner of courtyard, Clay Farm



Plate 4.26 Ballyogan stream between fields 1 & 2



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