

ENVIRONMENTAL IMPACT ASSESSMENT REPORT FOR THE EXPANSION OF A MATERIALS RECOVERY FACILITY AT CAPPOGUE AND DUNSINK, BALLYCOOLIN ROAD, DUBLIN 11

Volume 2 – Main Body of the EIAR Chapter 14 – Archaeological, Architectural and Cultural Heritage

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14. INTRODUCTION

This chapter has been prepared to examine the potential effects of the proposed development on the archaeological, architectural and cultural heritage resource in the local environments, referred to in this chapter as the study areas.

The proposed development is defined in Chapter 1 and a detailed description of the proposed development is set out in Chapter 4: Description of the Development in Volume 2 of this EIAR.

The impacts of the proposed development are considered, having taken account of mitigation measures to reduce or eliminate any residual impacts on the surrounding archaeology, architectural and cultural heritage.

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This chapter assesses the impacts, if any, of the proposed development on the archaeological, architectural and cultural heritage environment in the vicinity of the proposed development site. This chapter will also propose mitigation measures to safeguard any monuments, features or finds of antiquity, if required.

Appendices 14.1 and 14.2 have been prepared in support of this chapter. They are included in Volume 3 of this EIAR.

- Appendix 14.1 - Receiving Environment
- Appendix 14.2 - Mitigation Measures and the Archaeological Resource

14.1 Assessment Methodology

The objectives of this chapter are to:

- Identify all known features of archaeological, architectural and cultural heritage importance in the vicinity of the proposed development site;
- Determine any potential impacts of the proposed development on the archaeological, architectural and cultural heritage resource; and
- Identify measures to mitigate any potential impacts of the proposed development on the archaeological, architectural and cultural heritage resource.

The potential impacts considered include the following:

- Direct and indirect impacts of construction activities on recorded and unrecorded archaeological, architectural and cultural heritage features;
- Direct and indirect impacts of the operation of the proposed development on recorded and unrecorded archaeological, architectural and cultural heritage features; and
- Cumulative and residual impacts of the proposed development on recorded and unrecorded archaeological, architectural and cultural heritage features.



14.1.1 Relevant Guidance and Legislation

Archaeological Resource

The *National Monuments Act, 1930 to 2014* and relevant provisions of the *National Cultural Institutions Act, 1997* are the primary means of ensuring the satisfactory protection of archaeological remains, which includes all man-made structures of whatever form or date except buildings habitually used for ecclesiastical purposes.

A number of mechanisms under the National Monuments Act are applied to secure the protection of archaeological monuments. These include the Record of Monuments and Places, the Register of Historic Monuments, the placing of Preservation Orders and Temporary Preservation Orders on endangered sites and National Monuments in the Ownership or Guardianship of the Minister for Housing, Local Government and Heritage.

The Minister may acquire National Monuments by agreement or by compulsory order. The State or the Local Authority may assume Guardianship of any National Monument (other than dwellings). The owners of National Monuments (other than dwellings) may also appoint the Minister or the Local Authority as Guardian of that monument if the State or Local Authority agrees. Once the site is in ownership or Guardianship of the State, it may not be interfered with without the written consent of the Minister.

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

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

Section 12(1) of the 1994 Act requires the Minister to establish and maintain a Record of Monuments and Places where the Minister believes that such monuments exist. The Record comprises a list of monuments and relevant places and a map/s showing each monument and relevant place in respect of each county in the State. All sites recorded on the Record of Monuments and Places receive statutory protection under the National Monuments Act 1994.

Section 12(3) of the 1994 Act provides that:

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



Architectural and Built Heritage Resource

The main laws protecting the built heritage are the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act, 1999 and the Planning and Development Act, 2000 (Amended 2010). The Architectural Heritage and Historic Monuments Act requires the Minister to establish a survey to identify, record and assess the architectural heritage of the country. The National Inventory of Architectural Heritage (NIAH) records built heritage structures from within each county in the State. As inclusion in the Inventory does not provide statutory protection, the document is used to advise Local Authorities on compilation of a Record of Protected Structures (RPS) as required by the Planning and Development Act, 2000.

The Planning and Development Act, 2000 requires Local Authorities to establish a Record of Protected Structures to be included in the County Development Plan (CDP). This Plan includes objectives and policies designed to protect the archaeological, architectural and cultural heritage resource during the planning process. Buildings recorded in the RPS can include Recorded Monuments, structures listed in the NIAH, or buildings deemed to be of architectural, archaeological or artistic importance by the Minister. Sites, areas or structures of archaeological, architectural or artistic interest listed in the RPS receive statutory protection from injury or demolition under the Planning and Development Act, 2000. Damage to or demolition of a site registered on the RPS is an offence. The RPS list is not always comprehensive in every county.

The Local Authority has the power to order conservation and restoration works to be undertaken by the owner of a Protected Structure if it considers the building in need of repair. An owner or developer must make a written request to the Local Authority to carry out any works on a Protected Structure and its environs, which will be reviewed within 12 weeks of application. Failure to do so may result in prosecution.

14.1.2 Impact Appraisal Methodology

There is no professional standard for defining the extent of a study area when assessing potential impacts on archaeological, architectural or cultural heritage remains. A study area of 1 km has been imposed around the proposed development site to assess the presence of statutorily protected archaeological remains. A 1 km study area is an industry agreed approach for assessing potential impacts on archaeological remains, and is accepted by National Monuments Service as providing an adequate assessment of any impacts that may occur on archaeological features. This involved mapping all Recorded Monuments within 1 km of the proposed development sites and assessing their potential to be impacted on as a result of the proposed developments. In addition, a 5 km study area has been assessed to look for the presence of any World Heritage Sites, sites included in the Tentative List as consideration for nomination to the World Heritage List, National Monuments or sites with Preservation Orders or Temporary Orders. However, monuments with any potential to be impacted outside of this defined study area will be included in the assessment.

A study area of 1 km has been imposed around the proposed development sites to record the presence of Protected Structures or any additional statutorily protected architectural or cultural heritage features recorded in the *Fingal Development Plan 2017 – 2023* (www.heritagemaps.ie). A one km study area has also been established to identify any buildings or historic gardens recorded in the National Inventory of Architectural Heritage (www.buildingsofireland.ie).

Research has been undertaken in two phases to establish the baseline environment. The first phase comprised a desk review, namely a paper and digital survey of archaeological, historical and cartographic sources. The second phase involved a field inspection of the proposed development site. The steps involved in each phase are presented in sections 14.2.4 and 14.2.5 respectively.



14.1.3 Evaluation Criteria

The proposed development will involve the construction works as described in Chapter 4: Description of the Existing and Proposed Development. The development will include earthworks involving ground disturbance activities. Such works have the potential to impact on archaeological, architectural or cultural heritage remains that could potentially be present at the development site.

Development projects have the potential to impact archaeological, architectural or cultural heritage resources in the following ways:

- Permanent and temporary land-take, associated structures, landscape mounding, and their construction may result in damage to or loss of archaeological remains and deposits, or physical loss to the setting of historic monuments and to the physical coherence of the landscape;
- Archaeological sites can be affected adversely in a number of ways: disturbance by excavation, topsoil stripping and the passage of heavy machinery; disturbance by vehicles working in unsuitable conditions; or burial of sites, limiting accessibility for future archaeological investigation;
- Hydrological changes in groundwater or surface water levels can result from construction activities such as de-watering and spoil disposal, or longer-term changes in drainage patterns. These may desiccate archaeological remains and associated deposits;
- Visual impacts on the historic landscape sometimes arise from construction traffic and facilities, built earthworks and structures, landscape mounding and planting, noise fences, and associated works. These features can impinge directly on historic monuments and historic landscape elements as well as their visual amenity value;
- Landscape measures such as tree planting can damage sub-surface archaeological features, due to topsoil stripping and through the root action of trees and shrubs as they grow;
- Ground consolidation by construction activities or the weight of permanent embankments can cause damage to buried archaeological remains, especially in colluvium or peat deposits;
- Disruption due to construction also offers in general the potential for adversely affecting archaeological remains. This can include machinery, site offices, service trenches etc.; and
- Although not widely appreciated, positive effects can accrue from permitted developments. These can include positive resource management policies, improved maintenance and access to archaeological monuments and the increased level of knowledge of a site or historic landscape as a result of archaeological assessment and fieldwork.

14.1.3.1.1 Assessment of Magnitude and Significance of Impact on Archaeological, Architectural and Cultural Heritage remains

There is no standard scale against which the severity of effects on the archaeological and historic landscape may be judged. The severity of a given level of land-take or visual intrusion varies with the type of monument, site or landscape feature and its existing environment.



Severity of effect can be judged taking the following into account:

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

For this impact assessment the significant effects criteria outlined in Table 14.1 is used.

Table 14-1: Significance of Effects

Level of Effect	Significance Criteria
Imperceptible	An effect capable of measurement but without significant consequences
Not Significant	An effect which causes noticeable changes in the character of the environment but without significant consequences
Slight Effects	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities
Moderate Effects	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends
Significant Effects	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment
Very Significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment
Profound Effects	An effect which obliterates sensitive characteristics

14.1.4 Desk Study

The study involved detailed interrogation of the archaeological and historical background of the proposed development sites and their surrounding landscape. In addition to the EIA Guidance listed in Chapter 1 of Volume 2, other reference documents used in the preparation of this chapter include the following:

- **Record of Monuments and Places (RMP) of County Dublin** - This is a list of archaeological sites known to the National Monuments Service. Back-up files of the Sites and Monuments Record (SMR) provide details of documentary sources and field inspections where these have taken place. There are no monuments recorded on the RMP within the proposed development site;
- **Topographical Files of the National Museum of Ireland** - This is the archive of all known finds recorded by the National Museum. This archive relates primarily to artefacts, but also includes references to monuments and unique records of previous excavations. The find spots of artefacts are important sources of information in the discovery of sites of archaeological significance.



The townland of Cappogue Co. Dublin has one Topographical File of the National Museum of Ireland (File No: 1969:836). This artefact has been identified as a polished stone adze head. The townland of Dunsink has two Topographical Files of the National Museum of Ireland (File No: 1930:534 identified as a copper Roman coin, and File No: 1998:90 identified as Dublin-type medieval pottery).

- **Fingal County Development Plan (CDP) 2017 – 2023** (Fingal County Council, 2017) - Contains Objectives and Policies on the preservation and management of archaeological, architectural and cultural heritage features. The “Record of Protected Structures” (Fingal County Council, 2017) for the Fingal is included as part of the CDP. Both documents were consulted to obtain information on features within the proposed development sites and the 1 km study area;
- **National Inventory of Architectural Heritage (NIAH)** – This is a section within the Department of Housing, Local Government and Heritage. The work of NIAH involves identifying, recording and evaluating on a non-statutory basis the architectural heritage of Ireland from 1700 to the present day. The NIAH website also contains a non-statutory register of historic gardens and designed landscapes, and this was assessed to look for the presence of any such features within the proposed development sites and the 1 km study area;
- **Cartographic sources** – These are important in tracing land-use development within the proposed development sites, as well as providing topographical information on sites and areas of archaeological potential. Cartographic analysis of relevant maps has been made to identify any topographical anomalies that may no longer remain within the landscape;
- **Documentary sources** – These were consulted to gain background information on the historical and archaeological landscape surrounding the proposed development sites. Sources consulted included the publications Historic Fingal: A Guide to the Study of Monuments, Historic Buildings and Landscapes (Fingal County Council and the Heritage Council 2008), and Managing Fingal County Councils Archaeological Resource (ibid, 2012), and Assessing Fingal’s Archaeological Resource (ibid, 2010);
- **Aerial photographs of Ordnance Survey Ireland and Bing aerial photography** - This coverage is an important source of information regarding the precise location of sites and their extent. It also provides initial information on the terrain and its potential to contain previously unidentified archaeological remains;
- **Previous Archaeological Fieldwork**- An assessment has been made of archaeological fieldwork programmes carried out in or near to the proposed development sites. This provides important information on the below-ground archaeological potential of the development sites;

A list of sites and areas of archaeological, architectural and cultural heritage potential was compiled and a summary of the findings of this desktop review is presented in Appendix 14.1.

14.1.5 Field Assessment

Field inspection is necessary to determine the extent, character and condition of archaeological, architectural and cultural heritage remains, and can also lead to the identification of previously unrecorded or suspected sites and portable finds through topographical observation and local information. The site visit took place on 28th March 2022 and weather at the time of the visit was dry and bright.

The area walked and visually assessed included the full extent of the development site shown on Figure 14.1. In addition, land surrounding this area, but which does not form part of the proposed development, was visually assessed to gain information on the wider landscape.



Further information in relation to the field inspection is included in Appendix 14.1 of Volume 3 of this EIAR. No archaeological, architectural, or cultural heritage features were revealed within the proposed development site or visible in surrounding landscape.

14.2 Receiving Environment

14.2.1 Archaeological and Historical Background

The proposed development will take place in the townlands of Cappogue and Dunsink, in the barony of Castleknock, County Dublin. There are no Recorded Monuments within the proposed development site. There are ten Recorded Monuments within the 1 km study area around the proposed development site (www.archaeology.ie). The closest Recorded Monument (RMP DU014-026) is located in Dunsink townland approximately 110m south of the proposed development location, on the opposite side of the M50, and has been identified as a ring-barrow as shown in Figure 14-1. Ring-barrows are funerary sites and can date to the Bronze Age or Iron Age.

Reference to Summary Accounts of Archaeological Excavations in Ireland (www.excavations.ie) has shown that seven archaeological fieldwork programs have been carried out in Cappogue townland and four have been carried out in Dunsink townland. Of the Cappogue excavations two of these programs involved excavations of identified archaeological sites (archaeological licence numbers 06E0228 and 08E0032), three involved preconstruction stage archaeological test trenching in advance of development works (archaeological licence numbers 19E0636, 19E0142 and 99E0724), and two comprised archaeological monitoring of construction works (archaeological licence numbers 10E0410 and 19E0069). All four of excavations in Dunsink were carried out in advance of development. Only two of these works were carried out under archaeological licence (archaeological licence numbers 94E0061 and 05E0064). A number of pits with heat fractured stone were identified during works for the Northern Cross Route Motorway (M50) (archaeological licence numbers 94E0061).

A large-scale archaeological excavation was undertaken at the site of Cappogue Castle (archaeological licence 06E0228ext) in advance of an industrial development. Cappogue Castle is a known and legally protected archaeological site (RMP DU014-027) and is 350m east of the proposed development. The excavation at Cappogue Castle identified four phases of archaeology dating from the Bronze Age to the post medieval period, and prehistoric pits, a cemetery that included at least 16 inhumation burials, evidence of a medieval settlement, and a post medieval isolated burial.

There is one known artefact from Cappogue townland recorded in the Topographical Files of the National Museum of Ireland (File No: 1969:836). This artefact has been identified as a polished stone adze head. There are two known artefacts in the townland of Dunsink, although the exact findspot of these artefacts is not recorded. One of the artefacts found in Dunsink is a copper coin identified as being Roman featuring Constantinus Magnus (NMI Reference 1930:534). Constantinus Magnus, also known as Constantine the Great was a fourth century Roman Emperor who fought in Britain in 305 AD. The second artefact from Dunsink is a glazed pottery jug rim and handle that dates to the medieval period (NMI Reference 1998:90).

Reference to cartographic sources identified that a section of the townland boundary between Cappogue and Dunsink is within the proposed development site. This townland boundary is depicted as a drainage ditch and hedgerow on the historic Ordnance Survey maps of the area. Townland boundaries can date to the early medieval period, and can originate as historic Gaelic tribal boundaries. The historic 25" to a mile scale Ordnance Survey map of the area dates to circa 1900. This map depicts a small pond in the southwest end of the proposed development site, in Dunsink townland. The area of proposed development and the surrounding environment is generally recorded as rough pasture on all editions of the Ordnance Survey maps.



There was no evidence of any archaeological, architectural or cultural heritage features recorded on aerial photographs within the proposed development sites or the surrounding landscape. Transport Infrastructure Ireland (TII, formerly the National Roads Authority) developed the M50 Road Project. As part of this project TII commissioned a LIDAR (Light Detection and Ranging) survey of the lands immediately around the M50 Road Project. The LIDAR survey of the proposed development site at Cappogue was examined as part of this assessment.

The walkover survey identified the proposed development site to consist of grassland and scrubland. The extant townland boundary between Cappogue and Dunsink is a shallow ditch and hedge-topped earthen bank. There is evidence of recent maintenance of this ditch. The M50 Motorway is located 50m to the south of the proposed development. The M50 is significantly higher elevation than the proposed development site indicating that the ground levels were raised artificially during the construction of the road project. No archaeological, architectural or cultural heritage features were identified within the proposed development site or the surrounding landscape during walkover survey.

Detailed information on the archaeological and historical background of the landscape surrounding the proposed development sites is provided in Appendix 14.1 of Volume 3 of this EIAR.

14.2.2 Record of Monuments and Places

There are no Recorded Monuments within the proposed development site. There are ten Recorded Monuments within the 1 km study area of the proposed development as outlined in Table 14-2 and Figure 14-1. The closest Recorded Monument (RMP DU014-026) is located in Dunsink townland approximately 110m south of the proposed development location. This archaeological site is described in the RMP files as a ring-barrow that was identified through an examination of aerial photography (File Number (FSI 1973 O.148/9). An archaeological investigation took place at the site in 1991 to assess the nature of the archaeology. At the time of the investigation recent topsoil stripping associated with a landfill site at Dunsink had taken place. No evidence of the archaeological site RMP DU014-026 was identified during the investigation and it was considered likely that the works for the landfill had destroyed the archaeology.

A souterrain (RMP DU014-033001) is situated in Dunsink townland 300m south of the proposed development site. This archaeological site was identified during drainage works in 1978.

A Neolithic habitation site (RMP DU014-028) was identified in Cappogue townland 350m east of the proposed development. This archaeological site was identified during the construction of the Northeast Gas Pipeline in 1984. The realignment of the Ballycoolin Road in 2006-7 resulted in the identification of several previously unknown archaeological sites in Cappogue townland, 250m east of the proposed development. A medieval habitation site (RMP DU014-116001) and two structures (RMP DU014-116002 and DU014-116003) were identified.

The site of Cappogue Castle (RMP DU014-027), a later medieval tower house, is 350m to the east of the proposed development. This castle appears in a drawing by Gabriel Beranger dating to 1776 and shows a three-storey tower at the south-eastern corner of a walled enclosure. According to the archaeological file for Cappogue Castle the site had been removed prior to 1860. Excavations carried out at the site of Cappogue Castle (RMP DU014-027, archaeological licence 06E0288) identified a previously unknown early medieval cemetery (RMP DU014-117) and enclosure (RMP DU014-118). The cemetery comprised of at least 16 inhumation burials and dated to the early medieval period (AD 400 – 1100). A sample of human bone from one of the burials returned a radiocarbon date of (AD 419-556, 2 sigma calibration). The enclosure was formed by a large L-shaped water-filled ditch and the archaeologists interpreted this enclosure as dating to the medieval period (AD 1100-1550).



A ringfort (RMP DU014-029) is situated in Cappogue townland 900m east of the proposed development. According to the archaeological file for this site the ringfort is situated within rough grazing pasture, on flat land which slopes away slightly to the southwest. The ringfort comprises a circular platform (diameter 34m and internal height 1-1.8m). The bank has not survived and there are no traces of an external fosse.

Table 14-2: RMP Sites within the 1 km Study Area of the Development Site

RMP No.:	Classification	Townland
DU014-116001	Habitation Site	Cappogue
DU014-116002	Structure	Cappogue
DU014-116003	Structure	Cappogue
DU014-117	Burial Ground	Cappogue
DU014-118	Enclosure	Cappogue
DU014-026	Ring Barrow	Dunsink
DU014-027	Tower House	Cappogue
DU014-028	Habitation Site	Cappogue
DU014-029	Ringfort	Cappogue
DU014-033001	Souterrain	Dunsink

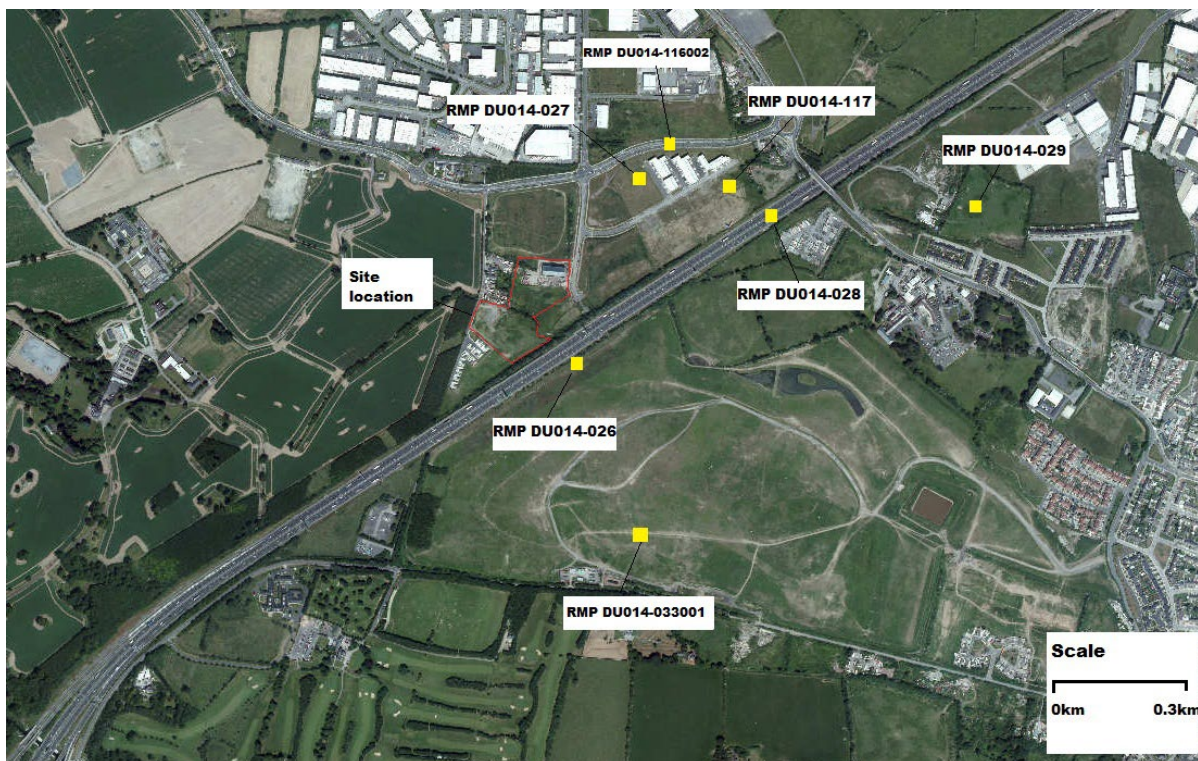


Figure 14-1: RMP Sites within the 1 km Study Area



14.2.3 National Monuments

The Department of Housing, Local Government and Heritage maintains a database on a county basis of National Monuments in State Care: Ownership and Guardianship (www.archaeology.ie). The term National Monument is defined in Section 2 of the National Monuments Act 1930, (No. 2 of 1930), as amended, as a monument, or the remains of a monument:

“the preservation of which is a matter of national importance by reason of the historical, architectural, traditional, artistic or archaeological interest attaching thereto” (www.archaeology.ie).

There are no National Monuments in State Care within the proposed development site or the wider 1 km study area.

There are no sites with Preservation Orders or Temporary Preservation Orders within the proposed development site or the wider 1 km study area.

There are no World Heritage Sites or sites included in the Tentative List as consideration for nomination to the World Heritage List within the proposed development site or the wider 1 km study area.

14.2.4 Fingal Development Plan 2017-2023

Archaeological Heritage

It is the stated policy (CH03) of the Fingal Development Plan 2017-2023 to:

“Protect all archaeological sites and monuments, underwater archaeology, and archaeological objects, which are listed in the Record of Monuments and Places and all sites and features of archaeological and historic interest discovered subsequent to the publication of the Record of Monuments and Places, and to seek their preservation in situ (or at a minimum, preservation by record) through the planning process.” (Fingal County Council 2017, 346).

It is also a stated policy (CH05) of the Fingal Development Plan 2017-2023 that in relation to developments the council will:

“Ensure archaeological remains are identified and fully considered at the very earliest stages of the development process, that schemes are designed to avoid impacting on the archaeological heritage” (ibid, 347).

The stated Demand Management Strategy (DMS153) of Fingal Development Plan 2017-2023 is as follows:

“All development proposals that may (due to their location, size, or nature) have implications for archaeological heritage shall be accompanied by an Archaeological Impact Assessment and Method Statement” (ibid, 469).



In 2012, Fingal County Council published the document 'Managing Fingal County Council's Archaeological Resource (Baker, 2012). This document states that 143 known archaeological sites are in the ownership of Fingal County Council (Baker, 4). None of these sites are within the development area at Cappogue or Dunsink.

Fingal County Council have previously commissioned the document Assessing Fingal's Archaeological Resource (Archer Heritage, 2010). This assessment was carried out with five objectives:

- Check emerging revisions to the RMP for additional sites, revisions or information and comparing these results to the published RMP list which is maintained and up-dated by the National Monuments Service (NMS) of the Department of Environment, Heritage and Local Government (DoEHLG).
- To compile a list of licensed archaeological excavations within Fingal for the period 1999–2009 carried out under Section 12 of the National Monuments Acts 1930–2004.
- To provide a current database of all known and suspected archaeological sites within the county area and a map of the county area illustrating all the site extents. The database and county map are intended for incorporation into the existing GIS datasets maintained by the Planning Section, Fingal County Council.
- On completion of the database, the following issues were to be examined and discussed in the final report: The source of each excavation report, The quality of mapping used to generate the location map illustrating each site extent and the ultimate source of the mapping (i.e. electronic vs. paper format), The quality of information available for each site as set out in the excavation report Recommendations for archiving materials within Fingal County Council into the future in consultation with the Council's Archivist.
- Finally, an assessment of the archaeological resource in Fingal addressing the following issues was required: An overview of the data collated, A review of the monument resource – including a detailed breakdown of monument types, An assessment of the rate of destruction of monuments in the county area, A list of new sites entered on the 'emerging RMP' with an assessment of their importance, An assessment of the surface expression of sites Identifiable information and knowledge gaps in relation to the archaeological resource in Fingal.

Architectural Heritage

It is an Objective (CH25) of Fingal Development Plan 2017-2023 to:

"Ensure that proposals for large scale developments and infrastructure projects consider the impacts on the architectural heritage and seek to avoid them. The extent, route, services and signage for such projects should be sited at a distance from Protected Structures, outside the boundaries Fin historic designed landscapes, and not interrupt specifically designed vistas. Where this is not possible the visual impact must be minimised through appropriate mitigation measures such as high-quality design and/or use of screen planting." (ibid., 351).

The Fingal Development Plan 2017-2023 contains the Record of Protected Structures for the county. There are no Protected Structures recorded in the Fingal Development Plan 2017-2023 within the proposed development site. There are two Protected Structure within the 1 km study area of the proposed development site. These sites are Dunsink Observatory House (RPS 0687), Dunsink, and the South Dome of Dunsink Observatory (RPS 0688). Dunsink Observatory House (RPS 0687) is a late eighteenth century house with outbuildings. The South Dome (RPS 0688) is a mid-nineteenth century rotunda with copper dome that houses a nineteenth century telescope.



There are no Architectural Conservation Areas recorded in the Fingal Development Plan 2017-2023 within the proposed development site or the wider 1 km study area.

Cultural Heritage

The stated objective (CH01) of the Fingal Development Plan 2017-2023 is:

“Support the implementation of the Fingal Heritage Plan in relation to the promotion and protection of Fingal’s Cultural Heritage.” (ibid, 345).

14.2.5 National Inventory of Architectural Heritage (NIAH)

NIAH (www.buildingsofireland.ie) maintains a non-statutory register of buildings, structures etc. recorded on a county basis.

There are no entries recorded on the NIAH building survey within the proposed development site. There are two entries recorded on the NIAH building survey within the 1 km study area of the proposed development site. One of these entries is Dunsink Observatory (NIAH 11354008), a detached seven-bay two-storey house, built 1783, with three central projecting bays having domed observatory above. The other is the domed rotunda (NIAH 11354009) at Dunsink Observatory. This building is a snecked limestone rotunda that houses a telescope. It was built circa 1868 to plans by Henry Ussher, and features a copper-roofed dome and projecting entrance porch.

NIAH also maintains a non-statutory register of historic gardens and designed landscapes recorded on a county basis. There are no such features recorded on the NIAH within the proposed development site or the 1 km study area.

14.3 Potential Effects

The proposed development will involve construction works including the mechanical excavation of all ground materials, topsoil and overburden down to and through geologically deposited strata, followed by construction activities, removal of excavated material, the installation of drainage infrastructure and utilities services, and construction of buildings and all other structures.

As a result of carrying out this assessment, the following potential archaeological, architectural and cultural heritage direct, indirect, construction, operational, decommissioning, cumulative and residual effects have been assessed:

14.3.1 Do-nothing Effect

- If the proposed development were not to proceed, there would be no effect on the archaeological, architectural or cultural heritage resource.



14.3.2 Construction Phase

14.3.2.1 *Potential Direct and Indirect Effects*

- There are no Recorded Monuments, Protected Structures, Architectural Conservation Areas, NIAH structures or NIAH historic gardens or designed landscapes within the proposed development site. As a result, there will be no direct construction effect on the recorded archaeological, architectural or cultural heritage resource.
- The construction of the proposed development has the potential to have a permanent, direct, negative effect on any previously unrecorded archaeological remains that may exist within the development footprint of the development area. The risk of this occurring is considered to be unlikely.
- The construction of the proposed development will have a temporary, reversible, imperceptible visual effect on archaeological and architectural resources in the study area during its construction phase.

14.3.3 Operational Phase

14.3.3.1 *Potential Direct and Indirect Effects*

- There are ten Recorded Monuments within the 1 km study area of proposed development. The presence of the proposed development will have a **long-term, reversible, imperceptible visual effect** on archaeological and architectural resources in the study area during its operational phase.

14.3.4 Decommissioning phase

14.3.4.1 *Potential Direct and Indirect Effects*

- There will be no effects on the archaeological, architectural or cultural heritage resource during the decommissioning phase of the project. The decommissioning phase of the proposed development will not involve the carrying out of any demolition works. The buildings, concrete hardstanding, drainage systems, and fencing will be left in-situ.

14.3.5 Cumulative Effects

Cumulative effects are defined as:

“The addition of many minor or significant effects, including effects of other projects, to create larger, more significant effects” (Environmental Protection Agency 2017, 52).

- Due to the absence of additional effects, either as a result of proposed, present or foreseeable future development in the area, and the character of the existing environment, it is considered there will be no cumulative effects on the archaeological, architectural or cultural heritage resource.



14.3.6 Summary of Potential Effects

- The construction of the proposed development has the potential to have a **permanent, direct, negative effect** on any previously unrecorded archaeological remains that may exist within the development footprint. The risk of this occurring is considered to be unlikely. There will be a **temporary, reversible, imperceptible visual effect** on the archaeological and architectural resource during the construction phase of the proposed development. There will be a **long-term, reversible, imperceptible visual effect** on archaeological and architectural resources in the study area during the operational phase of the proposed development. There will be no effects on archaeological, architectural or cultural heritage resources in the study area during the decommissioning phase of the proposed development. There will be no cumulative effects on the archaeological, architectural or cultural heritage resource.

14.4 Mitigation Measures

The following mitigation measure is proposed to prevent the construction phase of the proposed development having a negative impact on any previously unrecorded archaeological remains that may exist within the development footprint:

- Monitoring will be carried out under licence to the Department of Housing, Local Government and Heritage and the National Museum of Ireland. Provision will be made for the full excavation and recording of any archaeological features or deposits that may be exposed during monitoring.

More information on the proposed mitigation methods to be employed during the construction phase of the proposed development is contained in Appendix 14.2.

14.5 Residual Impacts

Following the adoption of the proposed mitigation measure, the proposed development will have the following residual impact on archaeological and architectural resources in the study area.

- There will be a **temporary, reversible, imperceptible visual effect** on the archaeological and architectural resource during the construction phase of the proposed development.
- There will be a **long-term, reversible, imperceptible visual effect** on archaeological and architectural resources in the study area during the operational phase of the proposed development.

There will be no significant effect on archaeological, architectural or cultural heritage resources due to the proposed development.



14.6 Interactions

The proposed development impact on landscape and visual amenity has the potential to impact on the archaeological, architectural or cultural heritage resources contained within that landscape. No archaeological, architectural or cultural heritage features were identified within the proposed development site or the surrounding landscape during the desk based study or walkover survey however. The proposed development's visual effect on archaeological, architectural and cultural heritage resources will therefore not be significant.

14.7 References

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