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Vantage Data Centers DUB13 Limited

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VANTAGE DUBLIN DATA CENTER

VOLUME 2A: LANDSCAPE, VISUAL AND BUILT HERITAGE IMPACT ASSESSMENT

Volume 2A: Landscape, Visual and Heritage Impact Assessment Table of Contents

1A Landscape and Visual

2 Cultural Heritage

Glossary of Terms and Abbreviations

1A LANDSCAPE AND VISUAL

Introduction

- 1.1 This chapter of the EIAR reports on the likely significant Landscape and Visual effects arising from the Proposed Development's demolition and construction and operation at Day 1 and Year 5 (for viewpoint 06 and 07).
- 1.2 The chapter describes the landscape policy context; the methods used to assess the potential impacts and likely effects; the baseline conditions within and surrounding the site; the likely landscape and visual effects taking into consideration embedded mitigation; if additional mitigation and enhancement is required; the significance of residual effects; and inter-project cumulative effects.
- 1.3 The chapter is supported by the following technical appendices in EIAR Volume 2:
 - Appendix 1.1:
 - Figure 1: Location Plan and Study Area;
 - Figure 2: Site Landscape Elements and Features;
 - Figure 3: ZTV and Viewpoint Locations;
 - Figure 4: Future Baseline - DUB 1 Landscape General Arrangement;
 - Appendix 1.2: Viewpoint Photographs;
 - Appendix 1.3: Day 1 of Operation Viewpoint Photomontages; and
 - Appendix 1.4: Year 5 of Operation Viewpoint Photomontage for VP 06 and 07

Consultation

- 1.4 Landscape and visual scope for the EIAR was discussed at an informal discussion at the pre-application meeting on 21 September 2022, with South Dublin County Council (SDCC), the Applicant and Ramboll. The proposed viewpoint locations were presented and agreed at the meeting.

Assessment Scope

Technical Scope

- 1.5 This LVIA identifies and assesses the significance of effects that result from the proposed development's impact on both the landscape, as an environmental resource in its own right, and on people's views and visual amenity. The semi-urban nature of the surrounding land requires both landscape and townscape elements to be considered as part of the assessment.
- 1.6 As advised in EPA Guidance¹, the LVIA has been prepared considering relevant local and national guidance, policy and legislation, and the Landscape Institute's 2013 Guidelines for Landscape and Visual Impact Assessment² (GLVIA) that provides the definitions that have been used as described below:
 - Landscape is an area, as perceived by people, the character of which is the result of the action and interaction of natural and/or human factors. Townscape refers to areas where the built environment is dominant. Villages, towns and cities often make important contributions as elements in wider open landscapes, but townscape means the landscape within the built-up area, the character and composition of the built environment including the buildings, the relationships between them, the different types of urban open spaces, including green spaces, and the relationship between buildings

and open spaces³. The way that villages, towns and cities change and develop over time contributes to their current form and character.

- Visual amenity is the overall pleasantness of the views people enjoy of their surroundings, which provides an attractive visual backdrop for the enjoyment of activities of the people living, working, recreating, visiting, or travelling through an area.

Spatial Scope

- 1.7 As shown in Figure 1, Appendix 1.1 of this volume, The Landscape study area extends to 1 km surrounding the Site located at located at Irish grid reference O 03911 30784, within Profile Park commercial area.
- 1.8 The Site's immediate boundaries are defined by:
 - New Nangor Road (R134) to the north;
 - Falcon Avenue, with Equinox land (subject to data centre development, application SD21A/0186 and SD22A/0156) and Grange Castle Golf Club beyond to the east;
 - Falcon Avenue to the south; and
 - the consented Vantage data centre development DUB-1 (planning reference SD21A/0241) to the west.
- 1.9 The site is an irregular parcel of former agricultural land covering an area of 3.79 ha at an elevation between 74 and 75 m Above Ordnance Datum (m AOD).

Temporal Scope

- 1.10 The assessment considers impacts that would arise during the demolition and construction stage which would be expected to be temporary (<1 year).
- 1.11 Operation impacts are considered at Day 1 and Year 5 and would be expected to be long-term (15-60 years) to Permanent (> 60 years) in nature.

¹ Environmental Protection Agency, 2017, Draft Guidelines on the information to be contained in the Environmental Impact Assessment Reports

² Landscape Institute, 2013. Guidelines for Landscape and Visual Impact Assessment (GLVIA3). Third Edition.

³ Landscape Institute Technical Information Note (TIN) "Townscape Character Assessment" specifically for undertaking a character assessment for "townscape" LI TN 05/2017 [Ref 3.I].

Baseline Characterisation Method

Desk Study

- 1.12 To establish the study area's existing baseline landscape and visual conditions, relevant data was reviewed and assessed. The data sets and associated sources can be summarised as follows:
- Available and relevant landscape character assessments published at the time of the assessment;
 - Online resources including any online records and available designations that include landscape, heritage, natural heritage and environment; and
 - Geographic Information System (GIS) resources and analysis, including calculating a zone of theoretical visibility using a DSM to approximately 1 km from the site boundary to determine landscape and visual receptors within the study area.
- 1.13 The baseline would identify landscape and visual receptors and make a judgement on their value and susceptibility to development of the type proposed to determine their sensitivity for the basis of the assessment.
- 1.14 The landscape study area extends to 1 km from the site and visual amenity study area extends to approximately 2 km from the site to take account of the Grand Canal designated feature and N7 transport route.

Field Study

- 1.15 Photography was undertaken at 11 viewpoint locations identified through desk study and agreed with SDCC at pre-application consultation. Photography was undertaken using a Sony full Frame Sensor camera with 50 mm lens in accordance with the Landscape Institute's Technical Guidance Note 06/19⁴. GPS Coordinates and angle of view were recorded to provide accurate positioning for the development of photomontages. Three site visits were undertaken to secure photography, all during summer months when vegetation foliage is at its maximum.

Assessment Method

Methodology

- 1.16 This LVIA forms part of an Environmental Impact Assessment Report (EIAR) that has been prepared to accompany the planning application for the proposed development by the Applicant. The LVIA is delivered in accordance with the principles outlined within the GLVIA⁵.
- 1.17 The GLVIA states the need for an approach that is proportionate to the scale of the project being assessed and the nature of its likely effects. In accordance with the GLVIA and within this LVIA, 'impact' is defined as the action being taken, and the 'effect' is defined as the change resulting from that action. In accordance with the GLVIA guidance, this LVIA specifies the nature of the proposed development, describes the existing landscape and visual amenity in the area that may be affected, predicts the effects, and considers how those effects might be mitigated.
- 1.18 This LVIA has been prepared under the supervision of a Chartered Member of the Landscape Institute. In carrying out this LVIA, an independent stance has been taken. As appropriate, the LVIA addresses both the positive and negative impacts of the proposed development in a way that can be relied upon by all parties

concerned. All impacts are assumed to be negative unless stated otherwise in the assessment. The assessment has been informed by a combination of desk-top research, digital analysis and photography.

- 1.19 The proposed development would form part of a wider data center campus associated with the July 2022 DUB-1 permitted development. It has been designed within the built and landscape context of the adjacent July 2022 DUB-1 permitted development. The proposed development would be constructed over a similar time period as DUB-1 Phase 2. Consequently, the landscape and visual effects are closely related. Within this context, it has been agreed that effects will be reviewed against a future baseline of the July 2022 DUB-1 permitted development in existence (refer to Chapter 2, Volume 1).
- 1.20 To account for the future baseline in this assessment, a two stage approach is taken:
- Establish the existing baseline: the existing baseline conditions are established for the proposed development to ensure a robust and coherent review of the current landscape and visual condition and amenity.
 - Establish a future baseline: the July 2022 DUB-1 permitted development within the context of the existing landscape and visual condition.
- 1.21 Within the operational visual assessment each viewpoint has been assessed at day 1 of operation and year 5 of operation. Photomontages and wireframes are used to determine the landscape and visual impacts at day 1 of operation and at year 5 of operation. The photomontages:
- place 3D georeferenced models into the viewpoint photography provided at Appendix 1.2;
 - render the model to give an accurate representation of building façade treatment and landscape planting;
 - include the July 2022 DUB-1 permitted development, where the building is screened, a blue line is used to indicate the building location;
 - include DUB-13 proposed development, where the building is screened, a red line is used to indicate the building location;
 - are provided by the architect and reviewed by the landscape architect responsible for the landscape design and strategy to ensure planting accurately depicts the type and size of planting specified.
- 1.22 Year 5 of operation photomontages have been produced for viewpoints containing the dominant facades along New Nangor Road and Profile Park Roundabout (connected to Falcon Avenue), therefore these photomontages have only been produced for viewpoint 7 and viewpoint 8. Where photomontages for year 5 of operation have not been produced, professional judgement has been adopted for the assessment of effects. Year 5 photomontages will demonstrate the effectiveness of boundary landscape treatments to screen the proposed development as planting takes time to mature and become established. Year 5 photomontages assume 30 cm growth per annum, so an additional 150 cm growth on trees is shown.
- 1.23 A cumulative impact assessment is undertaken to establish the impact of the proposed development when considered in conjunction with similar in-planning, consented and reasonably foreseeable developments within the study area.
- 1.24 The assessment of effects arising from the cumulative developments has been carried out using the same criteria as set out below. The study area used for the proposed development⁶ is used to identify the cumulative projects.

Assessment Criteria

- 1.25 When assessing landscape and visual amenity receptors the following are determined:
- Nature of the receptor (sensitivity): The value, importance, and susceptibility of the receptor in relation to proposed development; and

⁴ https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstitute-org/2019/09/LI_TGN-06-19_Visual_Representation.pdf (Accessed on 28/9/22)

⁵ Landscape Institute, 2013. Guidelines for Landscape and Visual Impact Assessment (GLVIA3). Third Edition.

⁶ The cumulative study area was decided upon extensive previous experience in respect to similar developments elsewhere, with the majority of cumulative developments experiencing intervisibility with the proposed development contained within.

- Nature of impact (magnitude): The impact on the receptor arising as a result of the proposed development regarding probability, reversibility, spatial extent, and temporal aspects.

1.26 The criteria used for determining the sensitivity of landscape and visual receptors is described in Table 1-1. The descriptions are not intended to be exhaustive but provide an indication of each level of receptor sensitivity. Professional judgment is applied when determining the appropriate level of sensitivity for each receptor with reasoning provided in the assessment that considers the duration of the effect, the geographical extent of the effect and the surrounding landscape context.

Receptor Sensitivity/Value Criteria

1.27 The sensitivity of receptors has been classified as low, medium or high in accordance with the criteria set out in Table 1-1.

Sensitivity	Criteria	
	Landscape	Visual
Low	<p>High capacity to accommodate development of the same type, scale and appearance as the Proposed Development.</p> <p>An area of poor quality or condition.</p> <p>Is locally abundant and has few or no distinguishing or designated features.</p>	<p>A view that is characterised by features of the same type, scale and appearance as the proposed development.</p> <p>A view that has little visual amenity or interest, or of a townscape with poor condition.</p> <p>A view that is incidental or experienced at speed.</p>
Medium	<p>Locally valued for its character, features and sense of place.</p> <p>Good to medium quality or condition, potentially including some designated features such as Tree Preservation Orders or Listed Buildings.</p>	<p>A positive view experienced by people during leisure activities such as sports, walking, cycling.</p> <p>A view that has specific local value but is not recognised by designation in local planning or guidance.</p> <p>A positive view experienced in passing by large numbers of people in passing from transport corridors</p>
High	<p>Value or character is recognised through national or local designation (within, or predominantly within a Conservation Area or Registered Park and Garden, or a high proportion of Listed Buildings, Ancient Woodland).</p> <p>Consistently of high quality and condition, offers strong scenic value.</p> <p>Little capacity to accommodate development of the same type, scale and appearance as the Proposed Development.</p>	<p>A view recognised by designation in local planning policy or guidance.</p> <p>A positive/valued view experienced by residents, or large number of visitors/recreational users.</p> <p>Static views towards important local features, landmarks, or buildings.</p> <p>Views that are susceptible to changes of the type, scale and appearance as the proposed development.</p>

Sensitivity	Criteria	
	Landscape	Visual
Very High	<p>Landscapes of very high international/national importance and rarity or value with no or very limited ability to accommodate change without substantial loss/gain (e.g. national parks, internationally acclaimed landscapes - UNESCO World Heritage Sites)</p>	<p>A view recognised by designation in national or international policy or guidance.</p> <p>A positive/valued view that is the primary reason for visiting the area by local, national and international users.</p> <p>Views that are very susceptible to changes of the type, scale and appearance as the proposed development.</p>

Impact Magnitude Criteria

1.28 The magnitude of impact has been classified as no change/negligible, low, medium, or high, in accordance with the criteria set out in Table 1.2.

Magnitude of Impact	Criteria	
	Landscape	Visual
No Change/Negligible	No perceptible change to the landscape character.	No perceptible change to the overall view.
Low	<p>A small change resulting from the proposed development that may be incongruous in itself, whilst retaining the overall character and quality of the wider townscape area.</p> <p>A notable change to the landscape area resulting from the proposed development that is in-keeping with the surrounding character.</p>	<p>A change that is visible but would not be immediately apparent to the visual receptor or in key views.</p> <p>A change that is visible but is consistent with the nature and amenity of the existing view.</p> <p>A notable change within a small proportion of overall view, or for limited durations.</p>
Medium	<p>A notable change resulting from the proposed development that is incongruous with the surrounding character.</p> <p>The proposed development would result in the loss/addition of a valuable component of the landscape.</p>	<p>A notable change within a view.</p> <p>The addition or removal of a key component of the view.</p>
High	<p>The proposed development would result in a large-scale change to the character of the area.</p> <p>The proposed development</p>	<p>A complete change to the nature of the view.</p> <p>Addition of a feature within part of the view that influences the perception and amenity of the wider view.</p>

Table 1- 2: Impact Magnitude Criteria	
	would conflict with the character of the wider area and exert a large influence upon it.

Scale of Effect Criteria

- 1.29 Impacts have been assessed on the basis of the value/sensitivity of receptors against the magnitude of impact to determine the scale of effect as presented in Table 1.3.

Table 1- 3: Scale of Effect Criteria				
Magnitude	Sensitivity of Receptors			
	Low	Medium	High	Very High
No change/ Negligible	Imperceptible	Imperceptible	Not significant/ Slight	Moderate
Low	Imperceptible	Not significant/ Slight	Moderate	Significant
Medium	Not significant/ Slight	Moderate	Significant	Very Significant
High	Moderate	Significant	Very Significant	Profound

- 1.30 Based on Environmental Protection Agency's (EPA) Guidelines on the information to be contained in Environment Impact Assessment Reports⁷ (2022), as described in Chapter 2: EIA Process and Methodology, effects ranging from 'moderate' to 'profound' are considered 'significant' in terms of EIA.

Nature of Effect Criteria

- 1.31 The nature of the effect can be described as either negative, neutral, or positive as outlined in Chapter 2: EIA Process and Methodology. In this assessment, all effects are assumed to be negative unless stated otherwise in the assessment.

Assumptions and Limitations

- 1.32 Photographs were taken in June and August 2021 and August 2022 when trees were in leaf. The worst-case scenario for visual impacts is during the winter months, when the absence of leaves on the trees can open up more distant views. The LVIA has taken this into account using professional judgement and experience from other projects to determine the extent of visibility and the impact on views during winter months.
- 1.33 The Zone of Theoretical Visibility Analysis is determined using a Digital Surface Model that has an accuracy of +/- 1.5m accuracy and therefore positions could be inaccurate by up to 3 m. The model takes heights from the surface and does not consider screening by vegetation and buildings. Consequently, the ZTV presents a worse-case scenario and visibility of the Proposed Development on the ground would be less due to screening.

Baseline Conditions

Existing Landscape Baseline

- 1.34 The existing baseline represents the current conditions of the site and surrounding area as of Summer 2022, as described in Chapter 1 and 2, Volume 1 of this report. In addition, this assessment also establishes a future baseline, to account for the July 2022 DUB-1 permitted development (see section 1.823 below).
- 1.35 The baseline considers landscape Features and elements of the site and surrounds and how combined they contribute to the wider context of the landscape character as an inherent resource and as it is perceived by people. Elements include:
- Topography;
 - Hydrological Features;
 - Landcover;
 - Land use;
 - Landscape types that are described by characteristics that can occur within different locations and character areas;
 - Landscape Character Areas at the appropriate scale; and
 - Designations that recognise landscape and/or landscape features.
- 1.36 A site plan is provided as Figure 1.2, Appendix 1 (Volume 2).

Topography

- 1.37 The site is a triangular parcel of agricultural land, with a residential dwelling located in the north-west corner of the site, and an area of hardstanding within the south-west of the site. The site covers a total area of 3.31 ha and lies at an elevation between approximately 74 and 75 m Above Ordnance Datum (m AOD).
- 1.38 Within the study area, the site is positioned within a lowland area that is gently sloping upwards from north (at c. 66 m AOD) to south (c 90 m AOD) as the land gently rises before transitioning to the slopes of the Dublin foothills at approximate 4.5 km from the site. Mount Seskin rises up to 271 m AOD to the south-east of the site. In contrast, the topography in an east west direction gently undulates transitioning between lows of 71 m AOD and highs of 77 m AOD across the study area.

Hydrological Features

- 1.39 As described in Chapter 10, Volume 1, the Baldonnel Stream crosses under Falcon Avenue and flows through the south of the site; entering at the south-east before meandering north-west and leaving the site. Within the site, the stream runs in a small channel with an unmanaged hedgerow on its northern bank and grassland along its southern bank. The stream is a tributary of the River Griffeen that travels north through the Grange Castle Business Park.

Land cover

- 1.40 The majority of the site is covered with improved grassland with scraggy hedgerows with some emerging trees following the path of the river across the south of the Site and form its southwest boundary.
- 1.41 A single residential dwelling and associated outbuilding occupy the north-west area of the site. The dwelling faces onto Nangor Road and is set back behind a small boundary wall to the rear of the grassed verge. A row of mature trees creates a visual and physical boundary between the dwelling and the eastern part of the site and an overgrown hedgerow provides a physical boundary to the west of the dwelling. An area of hard standing is located in the south-west of the site with two small outbuildings in a degraded condition. The Athgoe and Saggart Hills provide a backdrop to the site in the far distance.
- 1.42 As set out in the arboricultural report, there are 130 trees on the site and approximately 285 linear metres of hedgerow within the site.

⁷ Environmental Protection Agency, 2022. Guidelines on the information to be contained in Environmental Impact Assessment Reports (EIAR)

- 1.43 Surrounding the site, the landcover is a mix of peri-urban development and agricultural fields with a network of hedgerows, shelter belts and road infrastructure crossing the area.
- 1.44 To the north, land cover is predominantly urbanised before development becomes more dispersed with an increase in grassland and hedgerows around Grange Castle. Beyond, at approximately 1.9 km, the proposed Natural Heritage Area (pNHA), the Grand Canal, crosses the landscape with Griffen Valley and a mix of urban cover including parkland beyond.
- 1.45 East of the site is the Equinox development site, prepared for development as an area of flat, hardstanding. Beyond is the Grange Castle Golf club with a mix of maintained grassland, ponds and small areas of trees that encompasses the south east of the study area.
- 1.46 From south to west, the area is less developed than the north with a patchwork of developed areas that are composed of large commercial buildings, typical of data centers, and improved grassland fields with boundary hedgerows and emerging trees.

Land use

- 1.47 Surrounding land use is varied within this transitional, peri-urban landscape. To the north, commercial buildings are dominant with large warehouses and technology industry buildings, including a substation, located in the Grange Castle Business Park and Kilcarbery Park.
- 1.48 To the east the land is less intensely developed with open areas between the business parks and the R136. Beyond the R136 land use becomes residential with a suburb of Oldcastle Park.
- 1.49 To the south east, land use is predominantly recreational with the Grange Castle Golf Club. Beyond the R136, recreational uses continue with bike tracks and baseball facilities.
- 1.50 To the south, there is a mixture of uses include the Digital Realty Profile Park with data centres and substations interspersed with undeveloped former agricultural fields. Further south, a waste water treatment plant is located near cultural elements including Killbride Cemetery and Baldonnel House and Orchard, before giving way to the large area associated with the Casement Aerodrome and its associated buildings.
- 1.51 South west of the site there is a mix of data centre development associated with the Grange Castle Business Park South and some intervening agricultural fields. Baldonnel Road curves round from the R134 south then south east, forming a boundary to the business park development. Scattered residencies are located south of the road with Kilmactalway cemetery beyond. The small settlement of Castlebaggot is located approximate 1.5 km south west of the site with a mix of commercial uses including car repair, plant hire, and care sales
- 1.52 The road corridors form linear features across the study area, providing a link between townscape and landscape, traversing the transition between South Dublin urban area. The road corridors also provide boundaries between different land use areas for example, the R136 provides a dividing area to residential areas to the east and commercial development to the west and the Baldonnel Road contains Profile Park and the Grange Castle Business Park to the south.

Regional Character Assessment

- 1.53 A national Landscape Character Assessment is under development in Ireland, and until available Counties are responsible for identifying character types and areas within their administrative boundaries as set out in the Draft Guidelines for Planning Authorities⁸.
- 1.54 A Landscape Character Assessment was carried out on behalf of South Dublin County Council by Minogue and Associates with Aegis Archaeology, Michael Cregan and Geoscience Ltd in February 2015, a review of

the assessment was carried out in May 2021 with the Draft Report⁹ appended to the SDCC Development Plan 2022-2028. The report emphasises that:

- South Dublin County provides the landscape setting from the west and south of Dublin City and that maintaining this character and quality is of significance for the greater Dublin area and that it is arguably of national significance.
- existing and new business and retail parks should provide for greater landscaping treatment that is more sympathetic to the landscape and less visually intrusive; considerable opportunities exist to use various green design options as well as planting schemes.

- 1.55 There are no protected views or prospects within the landscape or visual study area.

South Dublin Landscape Character Types

- 1.56 Within the SDCC character assessment, Landscape Character Types (LCTs) are identified. The site is located within an area typical of the urban fringe as described below:
- **Urban fringe:** Transitional lands that were largely rural, transforming into suburban or urban derived land use. Land use comprises transport, retail/business parks, quarries and urban derived housing. Priority is to screen through appropriate native broadleaf planting to provide stronger visual boundary and definition as well as enhancing ecological connectivity. Integrate transitional lands into landscape through appropriate planting and boundary treatments.
- 1.57 The site is in close proximity to areas identified as Limestone farmland LCT:
- **Limestone farmland:** Gently undulating low-lying (generally below 100 m) with limestone bedrock. Land use includes tillage and pasture. Generally dispersed settlement pattern. Principles for development include controls on urban expansion, ribbon development and other types of erosion and fragmentation of landscape character. Its character as a rural landscape provides a distinct and important identity to this area and requires site planning guidance on the use of appropriate vernacular styles and treatments in new developments. Assessed as low to medium sensitivity type.
- 1.58 Connected to the site by the Baldonnel stream, although outside of the landscape study area, includes the Grand Canal (pNHA) classified as the Canal LCT:
- **Canals:** man-made watercourses of historic importance. Embankments are a feature and frequently alignment is closely associated with the railway lines. Woodland and habitats associated with the canal are important ecological features. Offers accessible recreational area for urban dwellers. Principles for development include enhancing ecological connectivity. Assessed as low to medium sensitivity type.
- 1.59 Ensuring visual screening and high-quality boundary treatments that provide ecological connectivity area important considerations within the LCTs associated with the site.

South Dublin Landscape Character Areas

- 1.60 Excluding the urban area of South Dublin, four LCAs are identified through the SDCC Landscape Character Assessment. The site is located within LCA 2: Newcastle Lowlands, close to the urban area boundary (see **Figure 1, Appendix 1.1**). The Dublin foothills form a backdrop to the site and are located within the Athgoe and Saggard Hills LCA and the Dodder and Glenasmole LCA. Due to the distance from the site and the proposed development's similarity in scale and form to surrounding structures in the immediate vicinity, it is judged that the Athgoe and Saggard Hills LCA and the Dodder and Glenasmole LCA would experience Negligible/No change magnitude of impact and are therefore judged to not be appropriate for inclusion in the baselines and assessment of this LVIA.
- 1.61 In general, the SDCC landscape assessment identified the following key characteristics for the Newcastle Lowlands LCA:
- Low-lying and gently undulating agricultural lands over limestone.

⁸ <https://www.gov.ie/en/publication/71181-landscape-and-landscape-assessment/> Accessed 23 September 2022.

⁹ <https://www.sdcc.ie/en/devplan2022/stage-2-draft-plan/appendices/appendix-9-draft-landscape-character-assessment.pdf> Accessed 23 September 2022

- Established communication corridors that include the Grand Canal, railway corridor and two aerodromes at Weston and Baldonnel.
 - Agricultural land use primarily pasture and tillage.
 - Increasing influence of urban activities closer to the motorways, national roads and regional roads.
 - Long history of historic settlement and human activity with medieval landscape complex associated with Newcastle village and surrounds.
 - Number of demesnes associated with former country houses and institutions including reuse of older country houses at sites such as Peamount and Baldonnel.
- 1.62 The assessment identifies the following potential Landscape and Visual sensitivities relevant to the site's context:
- Hard engineering and new infrastructure have not benefitted from planting schemes that would assimilate them more sympathetically into the surrounding landscape.
 - Within the generally flat landscape, vertical structures such as existing pylons can be seen across quite long distances.
 - The remaining rural character of Newcastle Lowlands LCA fulfils landscape, ecological and economic functions and merits a considered approach.
- 1.63 The SDCC assessment reviewed Newlands Lowlands LCA sensitivity to change (Visual and Character), its value (in terms of experiential qualities) and its capacity to accommodate development as extracted below:
- Landscape value: **Medium to High**
 - Landscape capacity: **Low**: Key characteristics of the landscape are vulnerable to change. There may be limited opportunity to accommodate development without changing landscape character. Great care would be needed in locating development.
 - Overall landscape sensitivity: **Medium**
- 1.64 The SDCC assessment identifies mitigation measures for development in the area summarised below:
- Guidelines including those contained in the Urban Design Manual, Local Area Plan and, the County Development Plan provide relevant site planning advice and should be complied with for new development and enhancing existing development where possible. Boundary treatments including screening through appropriate tree planting (of native provenance) would sympathetically absorb development into the ambient landscape.
 - Explore the potential to establish a linear park to enhance green infrastructure and appropriate recreational space from the Grand Canal to the foothills and uplands
 - When the opportunity arises, planting and other landscape design measures, including planting with native hedgerows, and/or installing limestone walls, should be used in laybys, and at new developments.
 - This LCA functions as the rural landscape that frames western Dublin and retaining both separate distances and its agricultural character is very important.
- 1.65 The landscape condition is described as variable across the LCA with the landscape closer to the urban fringe and major transport corridors tending to be more fragmented in character.
- 1.66 Profile Park sits within an area of the Newcastle Lowlands that is typical of the urban fringe character type, that is rapidly transitioning to an industrial and commercially focused area. The SDCC Development Plan 2022-2028¹⁰ designates the Profile Park area, and the Grange Business Park to the north and south, as land for enterprise and employment.
- 1.67 The plan allocation has led to an increasing commercial character with a focus of technology-led industrial development that consists of large, often clad buildings that create a scale of development that can be prominent in this relatively flat landscape. Developments surrounding the site have a mix of boundary types

of varying quality that do not consistently contribute to a coherent landscape character within the commercial area.

- 1.68 Several locations within the landscape study area are under development with hoarding and building plant visible. The landscape character of the area immediately surrounding the site is that of a former agricultural landscape undergoing rapid change to a commercial and industrial landscape. The high quality, formal planting associated with Profile Park and Grange Castle Business Park entrances does not extend across the whole study area, much of which is of indifferent landscape quality.
- 1.69 Where boundary landscape planting is used effectively, such as at the Grange Castle Golf Course, the fragmentary nature of the area's landscape character is partially resolved and assimilated more effectively into the broader Lowland Character context.
- 1.70 Road corridors form a key townscape element within the study area landscape:
- The R134 crosses the study area from east to west, dividing the Grange Castle Business Park into North and South areas. The road transitions from a relatively constrained peri-urban environment to more open vistas as it extends into the Newcastle Lowlands.
 - The R135 runs north to south providing a boundary between commercial and residential areas. The smaller Baldonnel Road provides a southern boundary to Profile Park and the Grange Castle Park South.

Architectural

- 1.71 There are no built heritage assets in the site, or in the immediate vicinity. An assessment of the impact of the Proposed Development on the heritage assets is undertaken in Volume 2, Chapter 2, Cultural Heritage. The listed buildings are assessed as landscape and townscape receptors that contribute to the character of the area.
- 1.72 Due to the high number of built heritage assets within the study area, they are collectively judged as having a high value. Overall, the buildings are assessed High sensitivity receptors due to their designation. Their distribution can be seen in **Figure 1, Appendix 1.1**. The buildings are grouped based on their orientation around the site. These groups are described below:
- To the north are a cluster of buildings associated with the Grand Canal including the 12th Lock Bridge and Mill Buildings. Listed sites include (1120454; 11204053; 1120458; 11204055; 1120453; 11204057). In closer proximity to the site is the ruins of the Grange Castle (11208012) that is a prominent landmark in the area.
 - To the east are a cluster of buildings associated with the Nangor Road, including the group of four early-twentieth century semi-detached houses (11209004; 11209005; 11209002; 11209003) and Kilcarberry House (11209001), a Georgian house, described in the listing as 'set in the rural' setting.
 - To the south are a cluster of buildings associated with the Baldonnel Aerodrome (11208028; 11208025; 11208024; 11208027; 11208026; 11209093; 11209094) and Baldonnel House, a Victorian country house that is a demesne characteristic of the LCA. To the south-west, is Castle Bagot House (11208010) that is described as 'dominating the low-lying agricultural land'¹¹.
 - To the west of the site are a cluster of four listed sites that include rural buildings and features. The area is a mix of rural and commercial in character with car yards and gym in the vicinity. From the road adjacent to the sites, the commercial buildings surrounding the site are visible. Listed features include: 1120815 (Milltown); 11208016 (Polly Hops), 11208006 (Milltown); 11208005 (Milltown gateway).

Table 1.5 Landscape Receptor Sensitivity

Receptor	Description	Sensitivity
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¹⁰ <https://www.sdcc.ie/en/services/planning/development-plan/> Accessed 23 September 2022

¹¹ National Inventory of Architectural Heritage (2021) Website Available at: <https://www.buildingsofireland.ie/> Accessed 22 July 2021

Receptor	Description	Sensitivity
The Site	A small irregular shaped parcel of former agricultural land with residential dwelling and associated building within an allocated development area. Features include Baldonnel stream and vegetation cover that includes hedgerows established trees, shrubs, ground cover and areas of hard standing.	Low
Newcastle Lowlands Character	Low-lying and gently undulating agricultural lands over limestone. Key characteristics of the landscape are vulnerable to change. Limited opportunity to accommodate development without changing landscape character. Great care needed in locating development.	Medium
The Grand Canal	A pNHA providing important biodiversity, green infrastructure and recreational functions within the landscape. Although outside the landscape study area, the canal is linked via Baldonnel stream to the site.	High
NIAH Listed buildings	27 listed buildings are located within 1.5km of the site including a range of type and condition. Collectively the buildings' sensitivity has been determined by their listed status within the landscape and the susceptibility to change.	High
Baldonnel Stream	Watercourse connected to a pNHA area (the Grand Canal) with its surrounding riparian vegetation providing refuge for flora and fauna from surrounding agricultural, commercial and urban land uses. The river has been impacted by a long history of human activity within the area.	Medium
Road corridors	Road corridors form distinct features across this landscape including the R134, R136, Baldonnel Road and Falcon Avenue and provide a link between townscape and landscape, traversing the transition between South Dublin urban area	Low

Visual Amenity

- 1.73 The extent of the Proposed Schemes visibility was determined using a Zone of Theoretical Visibility (ZTV), as described in the Methodology.
- 1.74 Due to the range of surrounding land uses, the study area contains four main types of receptors as set out below:
- **Residential receptors** located in the surrounding settlements of Oldcastle Park and the scattered dwellings along Baldonnel Road. The ZTV shows limited visibility from Oldcastle Park due to intervening buildings and screening vegetation and therefore this area is scoped out of the assessment. Scattered dwellings along Baldonnel Road and at Casement Aerodrome are judged to have medium sensitivity due to the presence of existing buildings of similar scale and form within the views and surrounding commercial activities already within their vicinity, including the aerodrome.
 - **Recreational receptors** using the Grand Canal and adjacent Grange Castle Golf Club.
 - **Employment receptors** including the commercial premises on the R134 adjacent Bolands Garage, Digital Realty Profile Park, Google PPL Data Center Campus, and businesses within the Grange Castle Business Park (North and South) and Kilcarbery Park.
 - **Travel receptors** associated with all the existing roads including the New Nangor Road R134, Baldonnel Road, Falcon Avenue and potentially views from the N7 Naas Road.

Representative Viewpoints

- 1.75 To assess the potential effect of the proposed development on landscape and visual amenity generally, a series of representative viewpoints have been selected. The effects on specific landscape and visual receptors and these locations are assessed. Baseline conditions at these locations are described in Table 1.6 below and the location of the viewpoints are shown in **Figure 3, Appendix 1.1**.

Viewpoint	Description	Receptor Type and Sensitivity
1: The Grand Canal looking south east	<p>The view extends from the Grand Canal, a pNHA, 2.6km north west of the Site. Currently the site is not visible from this location</p> <p>The view is generally open with long-distance views to the undulating Dublin foothills. A prominent urban element, composed of commercial buildings, forms the mid-ground of the view.</p> <p>The foreground is composed mixed predominantly native vegetation, including grasses, hedgerows with some small deciduous trees. Agricultural fields separate the fore and mid ground view.</p> <p>Despite the presence of the commercial buildings in the midground, the view retains relatively strong rural character typical of Newcastle Lowlands due to the open fields in the foreground and backdrop of the Dublin foothills.</p>	Recreational: Medium
2: New Nangor Road	<p>The view is from the roundabout junction at the R134, New Nangor Road, with Baldonnel Road looking south east 1km from the Site. Currently the site is not visible from this location.</p> <p>The view is generally open, with low-lying land that hosts a mix of elements including transport infrastructure, commercial buildings and open fields. The foreground contains footpaths, walls, a watercourse emerging from a culvert and public bench.</p> <p>The midground is formed by a field with long grass, scattered trees and mounds of earth potentially associated with construction.</p> <p>Glimpses of the Dublin foothills can be seen through gaps between trees.</p> <p>The view has a weak character due to the mix of elements that do not blend coherently within the view.</p>	Transport and Employment: Low
3: Baldonnel Road	<p>The view extends east from Baldonnel Road at the junction with Falcon Avenue approximately 1km from the Site. Currently the site is not visible from this location</p> <p>The view is enclosed with raised land and buildings following Falcon Avenue as it disappears to the right</p>	Transport and Employment: Low

Table 1.6 Representative Viewpoint Baseline View		
	<p>behind raised land. The view has a strong commercial, built-up character with the security fencing prominent and limited boundary vegetation to soften the impact of the commercial buildings at street level.</p> <p>A large white-clad commercial building dominates the view in the foreground. In the mid ground is a grey industrial building with no visible windows or features.</p> <p>No long distance views are visible from this location.</p>	
4: Casement Aerodrome entrance	<p>The view extends north from a Baldonnel Road layby near the entrance of the Casement Aerodrome approximately 715m from the Site.</p> <p>Currently the site not directly visible from this location although the top of a row of trees that cross the site can be seen.</p> <p>Views are relatively open although constrained to the mid-ground by commercial buildings and trees. Some vertical grey structures punctuate the skyline in the far distance.</p> <p>A mix of agricultural and commercial elements give this view an indistinct character.</p>	Residents: Medium Transport and Employment: Low
5: Bolands Garage	<p>The view extends east from Bolands Garage located on the R134, New Nangor Road approximately 300m west of the Site.</p> <p>Currently the site is not visible from this location.</p> <p>The view has a commercial and road-side character with road infrastructure features and commercial buildings prominent in the view. Established vegetation, trees and overgrown hedgerow, help soften the impact of the hardscape and provides some visual amenity and screening. Views are constrained at this location, channelled along the road corridor with no distance elements.</p>	Transport and Employment: Low
6 North West Corner of the Site	<p>The view extends south east from New Nangor Road approximately 100m from the north west corner of the Site with much of the site visible from this location</p> <p>The view has an indistinct roadside character with infrastructure, boundary planting and a residential dwelling forming the view. The foreground is dominated by the road, a pedestrian crossing and some signage.</p> <p>In the mid-ground, telegraph poles and wires cross the view with shrub type vegetation screening the majority of the residential dwelling in the Site. A row of large established trees screen further views. No long distance views are visible from this location.</p>	Transport and Employment: Low

Table 1.6 Representative Viewpoint Baseline View		
7 Entrance to Profile Park	<p>The view extends south west from the pedestrian walkway at the New Nangor Road roundabout junction with Falcon Avenue, approximately 65m from the north east corner of the Site.</p> <p>Currently the site is visible from this location.</p> <p>The view has the character of a formal, commercial area, created by the clipped hedging, maintained grass area, formal planting, flag structures and signage.</p> <p>The foreground is dominated by the road and associated roundabout and flag poles. Established trees and vegetation in the mid-ground form the backdrop to the view and prevent any longer distance views.</p>	Transport and Employment: Low
8 Profile Park Access Road	<p>The view extends north west from an access road located south of Falcon Avenue, approximately 160m south of the Site. The Site is visible from this location.</p> <p>The foreground is made up of road infrastructure including adjacent footpath and lighting columns.</p> <p>The midground transitions to scrub vegetation and long grasses with large established trees. Tree planting is a mix of formal row of trees along Falcon Avenue, accompanied by lower maintained hedgerow planting, and more naturalistic planting away from Falcon Avenue.</p> <p>Established trees on the Proposed Development site are visible.</p> <p>In the far distance, part of a large commercial building is visible through gaps in the trees</p>	Transport and Employment: Low
9 Falcon Avenue	<p>The view extends north east from Falcon Avenue approximately 355m south west of the Site, and the site is clearly visible from this location.</p> <p>The view is composed of a tarmac road, running from the fore to the mid ground view, and adjacent grass fields with scattered established trees.</p> <p>In the distance, a continuous line of trees interspersed with lamp posts runs along the horizon, interrupts the sightline.</p>	Transport and Employment: Low
10 N7 Junction with R136	<p>The view extends north west from the elevated junction of the N7 and R136 approximately 2.2km south east of the Site. The Site is not visible from this location.</p> <p>The view is dominated by a dual carriageway bridge structure. In the midground, road signage for a roundabout can be seen with traffic lights. A tree line runs across the far-ground view with a mix of trees varying in height and distance.</p>	Transport and Employment: Low
11 Grange Castle Golf Course Entrance	<p>The view extends west from the footway north of the entrance to the Golf Course approximate 455m from the Site. The Site is not visible from this location</p>	Recreational: Medium

	<p>The foreground view is dominated by the road and adjacent footpath. Lighting columns extend to the skyline across the view.</p> <p>A roundabout and the entrance to the Golf Course form the mid-ground view, with the blue security fencing prominent against a background of trees that prevent long distance views.</p>	<p>Transport and Employment: Low</p>
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Future Baseline

- 1.76 The future baseline for the Landscape and Visual assessment comprises the area to the west of the proposed development site, which would be occupied by the July 2022 DUB-1 permitted development.
- 1.77 During the demolition and construction stage of the proposed development, the July 2022 DUB-1 permitted development Phase 1 would be complete and the Phase 2 construction activities would be underway, located in the southern area of the site. The construction activities would be similar in nature to that of the proposed development due to the similar form and dimension of the developments, consented and proposed.
- 1.78 On Day 1 of operation of the proposed development the July 2022 DUB-1 permitted development would be operational. The developments would be set within a consistent landscape scheme that would have had a minimum period of six month establishment period. The enhanced Baldonnel stream and associated wetland planting and SuDs attenuation features would be completed with some period of establishment.
- 1.79 The development would occupy the north west area of Profile Park, forming the area to the west of the main New Nangor entrance. The extensive planting and berm treatments will form a new continuous and naturalistic planting boundary along the R134.
- 1.80 Experienced from the New Nangor Road, the landscape strategy, if implemented effectively and maintained, will provide a high quality boundary treatment that extends the boundary experienced travelling along the R134 from the Grange Castle Golf Club and Grange Castle Business Park boundaries further east. The landscaping features to be implemented as part of the July 2022 DUB-1 permitted development would provide screening and mitigate the visual impacts of that development as well as providing biodiversity and green infrastructure benefits.
- 1.81 The July 2022 DUB-1 permitted development boundary treatments contribute to an overall positive effect on the hedgerows and trees that are an important landscape feature within the Newcastle Lowlands LCA. In addition, the boundary treatments would have contributed to local amenity value, biodiversity and green infrastructure while supporting the creation of a high quality business park environment.

Sensitive Receptors

- 1.82 The receptors identified as sensitive to the proposed development, and which have been 'scoped-in' to the assessment are summarised in Table 1-7.

Receptor	Sensitivity
Landscape	
The Site; surrounding road corridors	Low
Road Corridors	Low

Receptor	Sensitivity
Landscape Character (Newcastle Lowlands); Baldonnel Stream	Medium
Designations: The Grand Canal; NIAH Buildings	High
Visual	
Recreational and residential	Medium
Travel and Employment	Low

- 1.83 Based on the baseline characterisation, the following receptors have been scoped out of the subsequent assessment:
- Residents in Old Castle Park are scoped out of the LVIA due to limited visibility shown on ZTV and photography showing the development site would be screened from this location; and
 - The Athgoe and Saggard Hills LCA and the Dodder and Glenasmole LCA, would experience Negligible/No change magnitude of impact due to the distance from the site and the proposed development's similarity in scale and form to surrounding structures in the immediate vicinity and are therefore judged to not be appropriate for inclusion in the baselines and assessment of this LVIA.

Assessment of Effects

- 1.84 As set out in detail in Chapter 4, Volume 1, and summarised below, the proposed development occurs within the red line boundary (shown in **Figure 1.1, Chapter 1, Volume 1**) and covers an area of 3.79 ha, would comprise of the following elements:
- Demolition of existing double-storey dwelling and three outbuildings/sheds.
 - Removal of 160 linear metres existing hedgerow and 72 trees from the site.
 - One, two-story data centre that includes;
 - a building footprint of c. 12,893sqm;
 - offices on the first floor;
 - 13 standby emergency generators with associated flues each 22.3m in height on the west of the building;
 - Parapet height with roof structures including Genset flues;
 - Access via Falcon Avenue with a new vehicular access point;
 - 60 car parking spaces;
 - Exterior cladding in white, light and dark grey, consistent with associated DUB-1 permitted development and other data centres within the context of the Proposed Development; and
 - Green walls on the East elevation where the building would be visible from the R134 New Nangor Road.
- 1.85 As set out in Volume 1, Chapter 4, Table 4.3, the maximum overall height of DUB-13, excluding the flues and plant at roof level is 15.70 m above finished floor level (FFL). Flues which are grouped in stacks of three flues would be 22.3 m in height (95.95m AOD) from ground level associated with the data center emergency generators. Refer to Table 4.3, Volume 1 for further detail. Elevations of the building area shown in **Figures 4.6 – 4.8, Volume 1**.
- 1.86A DUB-13 would clad the main façade with a white and grey powder-coated finish. ~~Perforated metal panels~~ [An expanded aluminium mesh](#) would be used around the staircases ~~and with stainless steel that would be a raw mesh finish metallic that would dull to light grey / silver non reflective as the aluminium oxidises.~~ [The wire mesh would also](#) allow planting to grow up the façade to create living green walls with the aim of increasing biodiversity and soften the building at street level.

- 1.87A Rooftop plant, including chillers and transformers ~~would be are~~-masked by a ~~dark-grey-mesh polyester powder coated aluminium off-white mesh~~ panels ~~to blend with sky and clouds~~. Office entrances and generator plant would comprise a similar ~~colour~~ palette of ~~dark~~-grey mesh and aluminium curtain wall. A sedum green roof is introduced over the office and non-critical areas of the data center. The material palette is displayed in **Figure 4.5, Volume 1**.
- 1.88 As illustrated in **Figure 4.1, Volume 1**, DUB-13 would be constructed broadly orientated in the center of the site. DUB-13 would be screened by proposed boundary berms, planting, and landscaping to the north and east, to reduce the visual bulk of the data center from New Nangor Road and Falcon Avenue. Existing vegetation to the north and east would be retained to maintain screening function during construction and operation.
- 1.89 Landscape plans include:
- a landscaping footprint of 15,305 m²;
 - 4 m high berms to the north and north east of the proposed building;
 - triple staggered rows of native trees on berm ridges planted at 3 m centres with heights at time of planting between 2.5 and 4. 5m (*Pinus sylvestris* species specified between 2.5 and 3 m) to function as immediate screening;
 - Copses of native trees planted at 3 m centres;
 - Native Riparian Planting along the south west area in proximity to the Baldonnel stream;
 - Areas of wet meadow seedling in proximity to a SuDs attenuation pond; and
 - 557 m length of native hedgerow planted around the north and east of Proposed Development to the rear of established trees where present.
 - Climbers to extend up exterior staircase wall structures to create a visible green wall on the north elevation.
- 1.90 The proposed development would be oriented to allow the alignment of the Baldonnel Stream, located within the southern portion of the site, to remain as existing while also including measures to enhance the ecological value of the Baldonnel Stream.
- 1.91 The proposed landscaping in the north west corner of the site, within the red line boundary, forms part of the Proposed Development. Proposed landscaping is consistent with the landscape approach adopted within the July 2022 DUB-1 permitted development as described in 1.8.25 above and shown in **Figure 1.4, Volume 2**.

Demolition and Construction Effects

Landscape and Townscape

- 1.92 Chapter 5, Volume 1 sets out the demolition and construction works of the proposed development and the key activities that would be undertaken during the works. Impacts arising during the demolition and construction processes are temporary, generally short-term and intermittent. As discussed above, the effects would be judged against the Future Baseline that assumes July 2022 DUB-1 permitted development with associated landscaping would be complete with Phase 2 under construction.
- 1.93 The landscape and visual effects are assessed based on the framework for the Construction Environment Management Plan (CEMP) considered as embedded mitigation. Based on the assumption that planning consent is secured in Quarter 4 (Q4) 2023 / Quarter 1 (Q1) 2024, the demolition and construction works would commence in Quarter 1 in 2024, with indicative completion targeted for Quarter 4 2024 / Quarter 1 in 2025. Overall, the works are anticipated to be undertaken over an 11-month period.
- 1.94 For the purposes of the EIA, it is assumed that 2024 would be the peak year for the demolition and construction works as this would include the site wide enabling works, groundworks and associated landscaping and biodiversity improvements and would result in noisiest works; majority of waste generation

(such as from excavation and demolition) and import associated with cut and fill; and associated heavy good vehicles (HGV) trips.

- 1.95 As part of the site enabling works, it is understood that:
- Landscape mitigation works would commence at the earliest opportunity to allow planting to mature through the construction works programme. Baldonnel Stream enhancements and associated landscape and biodiversity enhancements would be undertaken at an early stage.
 - 72 site trees and 160 linear metres of hedgerow vegetation would be removed to enable the construction.
 - Soil cover would be removed where levelling of the site is required. It is envisaged that any soil excavated would be retained on site and reused as fill material or landscaping.
 - Where existing vegetation (such as trees and hedgerows) is to be retained, exclusion zones would be identified and protected to avoid root damage as outlined in the Arboriculturist Tree Protection Plan for the site¹².
 - A 2.4 m high hoarding fence would be erected around the site boundary to reduce negative visual impacts from the activities.
 - Appropriate material excavated during ground works would be re-used as part of earthworks and as temporary back-fill where necessary. It is proposed that some of the spoil generated would be reused under and as part of landscaped areas (including berms) where suitable and/or in the formation level for the construction compound.
 - Works would be undertaken during times that are agreed with SDCC and with regard to minimising the impact on amenity for residents.

The Site

- 1.96 The magnitude of impact to the Site's landscape fabric (Low sensitivity) is judged to be medium due to the embedded mitigation in place that helps to reduce the impact of the scale and extent of development. The site's vegetation loss, excavation of soil, and a change in topography and land use would be mitigated by the landscape strategy's early implementation in the construction process. The impact of the demolition and construction stage on the Site is judged as **Temporary, Not significant/Slight, Negative and Not significant** in terms of EIA.

Baldonnel Stream

- 1.97 A small stretch of the Baldonnel Stream would experience an impact from the demolition and construction phase of the proposed development. The stream is judged as a medium sensitivity landscape receptor and due to the extent of the works the magnitude is judged as Low with the embedded mitigation in place. The scale of effect on the stream during construction is judged as **Temporary, Not Significant/Slight, Negative and Not Significant** in terms of EIA.

Newcastle Lowland LCA

- 1.98 Based on the embedded mitigation set out in Chapter 5, it is judged that the impact to the broader character of the Newcastle Lowland LCA (Medium sensitivity) would be a low magnitude of impact as the demolition and construction would occur within a small area of the LCA that has experienced similar activities and scales of construction activity. It is likely that the construction would be simultaneous with Phase 2 of the July 2022 DUB-1 permitted development construction occurring in close proximity.
- 1.99 During the demolition and construction stage, impacts on the Newcastle Lowland character area are considered to be **Temporary, Not significant/Slight, Negative and Not significant in terms of EIA**.

¹² Refer to TreeSpace Drawing TS_TPP_3_9_22, 3/9/22: Tree Removal & Protection Plan

Grand Canal and NIAH Listed Buildings

- 1.100 The Grand Canal and NIAH listed buildings are high sensitivity receptors and judged to experience a no change/negligible magnitude of impact due to their distance from the development and the ongoing similar demolition and construction activity within their vicinity.
- 1.101 During the demolition and construction stage, impacts on the Grand Canal and NIAH Listed Buildings are considered to be **Temporary, Negative , Not significant/Slight** and **Not Significant in terms of EIA.**

Road Corridors

- 1.102 With consideration of embedded mitigation, the adjacent road corridors (Low sensitivity) would experience a low magnitude of impact resulting from the demolition and construction of the proposed development.
- 1.103 During the demolition and construction stage, impacts on road corridors are considered to be **Temporary, Imperceptible,** Negative and **not significant in terms of EIA.**
- 1.104 A summary of the assessment on Landscape character and receptors during the Demolition and Construction stage is provided in Table 1.8.

NIAH Listed features	High	Disturbance and impacts on character amenity and tranquillity	No change/Negligible	Not significant/Slight	Not significant (Negative)
Road Corridors	Low	Disturbance on setting and amenity	Low	Imperceptible	Not significant (Negative)

Table 1.8 Demolition and construction landscape impacts

Receptor	Sensitivity	Description of impact	Magnitude	Scale	Significance
Site	Low	Removal of vegetation and dwelling with stripping of soil and change of topography to accommodate proposed development and landscaping. Embedded mitigation of early landscaping works reduces magnitude from High to Medium	Medium	Not significant/Slight	Not significant (Negative)
Baldonnel Stream	Medium	Disturbance impacts on function and character value. Embedded mitigation of early landscaping and enhancement reduces the magnitude to Low	Low	Not significant/Slight	Not Significant (Negative)
Newcastle Lowlands	Medium	Construction activity within urban fringe area of LCA that has been allocated for development	Low	Not significant/Slight	Not significant (Negative)
The Grand Canal	High	Disturbance of linked green infrastructure	No change/Negligible	Not significant/Slight	Not significant (Negative)

Visual

- 1.105 Demolition and construction visual impacts and effects are not reviewed separately due to the ongoing construction and development within the proposed development study area. In particular, the construction of the proposed development would be planned to happen in approximately the same time period as Phase 2 of the July 2022 DUB-1 permitted development and is not anticipated to increase the magnitude of visual impact due to the close proximity and embedded mitigation set out in Chapter 5, Volume 1. It is anticipated that the continuation of construction activity within close proximity would result in a negligible/no change magnitude of impact across viewpoints and receptors resulting in imperceptible neutral impact that is **not significant** in terms of EIA.

Operation Effects

Landscape and Townscape

- 1.106 At day 1 of Operation of the proposed development, it is assumed that the July 2022 DUB-1 proposed development would be operational, with the boundary landscape treatments becoming well-established. The retained established vegetation of DUB-13 proposed development at the north and east boundary would provide a mix of tree profiles. Newly planted woodland, hedgerow and wildflower areas would be established for a minimum of six-months.
- 1.107 Along the west and south areas of the site, the enhancements to Baldonnel stream along with the addition of the SUDS attenuation pond and wetland meadow features would provide a varied riparian area within the site boundary. The increased tree planting and species diversity along the proposed development boundary would help to soften the impact of the building within the landscape.

Landscape Fabric of the Site

- 1.108 If the landscape strategy is implemented effectively, site’s landscape fabric would have settled and would be developing its new character within the context of the proposed development. The topography, planting and SUDS attenuation pond would become the new landscape features of the site and would begin to establish its new character as the grounds and setting for the proposed development. The landscape strategy’s focus on natives and pollinator species in the planting palette would support a diverse boundary.
- 1.109 At day 1 of operation, the magnitude of impact on the low sensitivity site is judged to reduce to low following the major change during the demolition and construction stage. The focus of the site’s landscape strategy on the Baldonnel Stream feature creates a new character around this valuable receptor.
- 1.110 At year 5 it is anticipated that the increase in tree planting and habitat types would contribute to overall low magnitude of impact on the site’s landscape character.
- 1.111 At day 1 of operation of the proposed development, impacts on the landscape fabric of the site are considered to be **Short-term, Imperceptible, Negative** and **Not significant in terms of EIA.**
- 1.112 At year 5 of operation of the proposed development, impacts on the site’s landscape fabric are considered to be **Long-term to Permanent, Imperceptible, Positive** and **Not significant** in terms of EIA.

Baldonnel Stream

- 1.113 The Baldonnel stream (Medium sensitivity) is anticipated to benefit as a landscape feature due to the enhancements implemented in the landscape strategy. The associated riparian planting and new wetland meadow features would extend the influence of the stream within its associated landscape.
- 1.114 At Day 1 the magnitude of impact on the stream is judged to be Low positive due to the enhancements in the surrounding riparian landscape
- 1.115 At Year 5 it is anticipated that the magnitude would increase to medium positive as a notable change to this landscape feature through the planned landscaping if implemented and well maintained.
- 1.116 At day 1 of operation of the proposed development, landscape impacts on the Baldonnel Stream are considered to be **Short-term, Not significant/Slight, Positive** and **Not significant** in terms of EIA.
- 1.117 At year 5 of operation of the proposed development, landscape impacts on the Baldonnel Stream are considered to be **long-term to permanent, Moderate, Positive** and **Significant** in terms of EIA.

Newcastle Lowland LCA

- 1.118 The overall impact of the proposed development on the Newcastle Lowlands LCA (Medium sensitivity) is judged to be a low magnitude of impact at day 1 of operation as the proposed development would be a small change that is within keeping with the surrounding character of this urban fringe location within the LCA with associated boundary treatments that help to assimilate the development into the LCA.
- 1.119 At year 5 of operation, the impact is judged to reduce to negligible due to the surrounding similar developments in existence, the business park setting and the continued growth and contribution that the boundary treatments and landscaping would make to the area's broader green infrastructure. The tree planting associated with the proposed development along the New Nangor Road, and in combination with planting associated with the July 2022 DUB-1 permitted development, would help to continue the vegetated boundary experienced further east. DUB-1 permitted development. The continuation of vegetated boundaries would help to assimilate the development into the transition experience from townscape to the open fields landscape of the Newcastle Lowlands LCA.
- 1.120 At day 1 of operation, the impact of the proposed development is judged to be a notable change that is in keeping with the surrounding character of a business park and therefore low magnitude.
- 1.121 At year 5, the boundary treatments would be more established providing a continued vegetated corridor along the road, with green wall elements of the building visible from the road. These elements would help to create a high quality commercial character within the broader business park townscape experienced from the road corridor and is judged as negligible impact.
- 1.122 At day 1 of operation of the proposed development, landscape impacts on the Newcastle Lowlands LCA are considered to be **Short-term, Not significant/Slight, Negative** and **Not significant** in terms of EIA.
- 1.123 At year 5 of operation of the proposed development, landscape impacts on the Baldonnel Stream are considered to be **long-term to permanent, Imperceptible, Negative** and **Not significant** in terms of EIA.

The Grand Canal and NIAH Listed Buildings

- 1.124 High sensitivity NIAH listed buildings would experience a no change/negligible magnitude impact in the short-term due to the distance from the development and surrounding buildings of similar size and form at day 1 and year 5.
- 1.125 The High sensitivity Grand Canal would experience no change/negligible negative magnitude impact due to its distance and the presence of similar developments within proximity at Day 1 and Year 5.
- 1.126 At day 1 of operation of the proposed development, landscape impacts on the Grand Canal and NIAH Listed Buildings are considered to be **Short-term, Not significant/Slight, Negative** and **Not significant** in terms of EIA.

- 1.127 At year 5 of operation of the proposed development, landscape impacts on the Newcastle Lowland LCA are considered to be **long-term to permanent, Not significant/Slight, Negative** and **Not significant** in terms of EIA.

Road Corridors

- 1.128 The road corridors as low sensitivity receptors will experience a low magnitude of impact at Day 1, due to a notable change within the setting that is in-keeping with the surrounding character. As the landscape boundary treatments and green walls become more established and prominent, the magnitude of impact is expected to reduce to Negligible impact.
- 1.129 At day 1 of operation of the proposed development, landscape impacts on Road Corridors are considered to be **Short-term, Imperceptible, Negative** and **Not significant** in terms of EIA.
- 1.130 At year 5 of operation of the proposed development, landscape impacts on Road Corridors are considered to be **long-term to permanent, Imperceptible, Positive** and **Not significant** in terms of EIA.

Table 1.8 Operation landscape impacts Day 1 and Year 5

Receptor	Sensitivity	Description of impact	Magnitude	Scale	Significance
Site	Low	Creation of new topography and habitat types with increased tree planting and connection with the Baldonnel stream landscape feature	Day 1: Low	Imperceptible (Negative)	Not significant (Negative)
			Year 5: Low (Positive)	Imperceptible (Positive)	Not significant (Positive)
Baldonnel Stream	Medium	Enhancement with new riverine planting and features including wetland meadow and pond	Day 1: Low (Positive)	Not significant / Slight (Positive)	Not significant (Positive)
			Year 5: Medium (Positive)	Moderate (Positive)	Significant (Positive)
Newcastle Lowlands LCA	Medium	Additional data centre development within a business park on the urban fringe with extensive boundary treatments that soften and assimilate the building into the landscape	Day 1: Low	Not significant / Slight	Not significant (Negative)
			Year 5: No change/ Negligible	Imperceptible	Not significant (Negative)
The Grand Canal	High	Enhancement of linked green infrastructure features and increased commercial	Day 1 / Year 5: No change/ Negligible	Not Significant / Slight	Not significant (Negative)

		development within setting.			
NIAH Listed features	High	Increased commercial development within setting.	Day 1 / Year 5: No change/ Negligible	Not Significant / Slight	Not significant (Negative)
Road corridors	Low	New commercial element within the transition from townscape to landscape.	Day 1: Low Year 5 Negligible positive	Imperceptible	Not significant (Positive)

Visual

- 1.131 As discussed in the methodology above, the visual impacts and effects have been assessed against the future baseline of the consented development, the July 2022 DUB-1 permitted development constructed and operational. As described in section 1.5.3 above, the architectural drawings, landscape plans and photomontages of the operational building at day 1 and year 5 (VP06 and VP07) (**Appendix 1.3**) provide an indicative understanding of the proposed development, its context with relation to July 2022 DUB-1 permitted development and the associated boundary landscaping.
- 1.132 The photomontages have been provided by the architect and are used to provide an indicative position of the proposed development within the landscape. Redlines are used in Appendix 1.3 to make clear the approximate height and mass of the proposed development building. Blue lines indicate the location of the July 2022 DUB-1 permitted development.
- 1.133 At viewpoints 6 and 7, year 5 photomontages are also provided where a medium magnitude of impact has been identified (**Appendix 1.4**). Providing the year 5 photomontages allows the assessment to consider how the boundary vegetation would develop on the north and east boundary of the site where visibility is greatest from the New Nangor road corridor, an area identified at pre-application consultation with the SDCC as important for visual amenity considerations.

Viewpoint and Receptor Sensitivity	Assessment Magnitude of Impact	Day 1 Residual Effect	Year 5 Residual Effect
1: The Grand Canal looking south-east Medium Sensitivity Receptors	The proposed development would occupy a small proportion of the view and would be contained within the visual envelope of the commercial urban element already present within the view. The proposed structures are of similar height to the surrounding buildings within the area with the flue structures potentially visible from this location but in the far distance. Intervening buildings and vegetation would screen the majority of the proposed development from view. <ul style="list-style-type: none"> • At Day 1 the impact is judged as a low. • At Year 5, the impact is anticipated to reduce to no change/negligible due to the surrounding developments of similar form 	Short-term, Not significant / Slight, Negative and Not-significant in terms of EIA.	Long-term to Permanent, Imperceptible, Negative and Not-significant in terms of EIA.

2: New Nangor Road Low Sensitivity Receptors	The proposed development would be visible in the far distance partially screened by lines of trees. The proposed development would provide a continuation of the built form across the view with the white cladding providing a less intrusive visual impact than the dark grey buildings visible from this location to the left of the view. <ul style="list-style-type: none"> • At day 1 the impact is judged as low • At year 5, the impact is judged to reduce to no change/negligible due to the surrounding developments of similar form and scale. 	Short-term, Imperceptible, Negative and Not-significant in terms of EIA.	Long-term to Permanent, Imperceptible, Negative and Not-significant in terms of EIA.
3: Baldonnell Road Low Sensitivity Receptors	The proposed development would not be visible at this location and is indicated by the redline annotation in the photomontage as screened by a large commercial building in the foreground. At day 1 and year 5 the building is judged to be no change/negligible neutral	Short-term, Imperceptible, Negative and Not-significant in terms of EIA.	Long-term to Permanent, Imperceptible, Negative and Not-significant in terms of EIA.
4: Casement Aerodrome entrance Medium sensitivity	At this location the proposed development would be visible in the far distance emerging from the rear of a large commercial building. The July 2022 DUB-1 permitted development is visible to the left of the view and the buildings are consistent in form and materiality. <ul style="list-style-type: none"> • At day 1 the scale of the proposed development and its height within the view contribute to a low impact as a notable change within the view. • At Year 5, due to the buildings of similar scale and form within the view, it is anticipated that the magnitude of impact would reduce to negligible 	Short-term, Not significant/Slight, Negative and Not-significant in terms of EIA.	Long-term to Permanent, Not Significant / Slight, Negative and Not-significant in terms of EIA.
5: Bolands Garage Low Sensitivity Receptors	The proposed development would not be visible at this location and is indicated by the redline annotation in the photomontage. The proposed development would be screened by the July 2022 DUB-1 permitted development landscaping and building. <ul style="list-style-type: none"> • At Day 1 and Year 5 the building is judged to be no change/negligible impact 	Short-term, Imperceptible, Negative and Not-significant in terms of EIA.	Long-term to Permanent, Imperceptible, Negative and Not-significant in terms of EIA.

6 North West Corner of the Site Low Sensitivity Receptors	The proposed development would be partially visible to the rear of established, retained trees and new boundary berms and associated planting implemented as part of the July 2022 DUB-1 permitted development. The remainder of the proposed development which <u>that</u> would be visible is indicated by the redline annotation in the photomontage. <ul style="list-style-type: none"> At Day 1 the scale of the proposed development and its height within the view contribute to a medium magnitude of impact as a notable change within the view. At Year 5, due to the buildings of similar scale and form along this roadside setting and the increase in boundary vegetation and green wall coverage, it is anticipated that the magnitude of impact would reduce to low. 	Short-term, Not significant/Slight, Negative and Not-significant in terms of EIA.	Long-term Permanent, Imperceptible, Negative and Not-significant in terms of EIA.
7 Entrance to Profile Park Low Sensitivity Receptors	Part of proposed Development's north and east elevations would be visible at this location to the rear of the proposed the boundary treatments that include berms, tree planting and hedging. Despite the screening, the building would take up a large proportion of the view at this location. <ul style="list-style-type: none"> At Day 1, the scale of the Proposed Development and its mass within the view that was previously an open field would contribute to a medium magnitude of impact as a notable change. At Year 5, the boundary vegetation would be more established forming a continuous tree line across the north boundary, linking to the retained conifers. The green wall vegetation would also help to blend the building into this treeline. The vegetated boundary would help to assimilate the Proposed Development into its surrounding landscape and townscape. However due to the scale of the building at this location, it is judged the impact would continue to be medium. 	Short-term, Not Significant/Slight, Negative and Not-significant in terms of EIA.	Long-term Permanent, Not-Significant to Slight, Negative and Not-significant in terms of EIA.
8 Profile Park Access Road	A small element of the Proposed Development's east elevation would be	Short-term, Imperceptible,	Long-term Permanent,

Low Sensitivity Receptors	visible at this location screened by proposed berms, planting and the established retained trees along Falcon Avenue. <ul style="list-style-type: none"> At Day 1, due to the effect screening by retained vegetation, the magnitude of impact is judged to be low. At Year 5, due to the growth of boundary vegetation, the magnitude of impact would reduce to negligible/no change leading to a imperceptible scale of effect that is not significant in EIA terms. 	Negative and Not-significant in terms of EIA.	Imperceptible, Negative and Not-significant in terms of EIA.
9 Falcon Avenue Low Sensitivity Receptors	The Proposed Development is not visible at this location and is indicated by the redline annotation in the photomontage. The Proposed Development would be screened by the consented development DUB-1 landscaping and building. <ul style="list-style-type: none"> At Day 1 and Year 5 the building is judged to be no change/negligible as it is not visible from this location. 	Short-term, Imperceptible, Negative and Not-significant in terms of EIA.	Long-term Permanent, Imperceptible, Negative and Not-significant in terms of EIA.
10 N7 Junction with R136 Low Sensitivity Receptors	The Proposed Development is not visible at this location due to distance and screening by vegetation. <ul style="list-style-type: none"> At Day 1 and Year 5 the impact is judged to be no change/negligible. 	Short-term, Imperceptible, Negative and Not-significant in terms of EIA.	Long-term Permanent, Imperceptible, Negative and Not-significant in terms of EIA.
11 Grange Castle Golf Course Entrance Medium Sensitivity Receptors	A small element of the Proposed Development is visible at this location in the far distance. The scale of the building is relatively small in comparison to surrounding vegetation and lighting structures. As boundary matures the building would be further screened. b. <ul style="list-style-type: none"> At Day 1, the magnitude is judged as Low. and Year 5 the Magnitude of impact is judged to reduce to no change/negligible. 	Short-term, Not significant / Slight, Negative and Not-significant in terms of EIA.	Long-term Permanent, Imperceptible, Negative and Not-significant in terms of EIA.

Additional Mitigation

1.134 No significant Negative effects are predicted by Year 5 of operation for landscape and visual receptors and consequently no additional mitigation is required.

Assessment of Residual Effects

Demolition and Enabling Works Residual Effects

1.135 As no additional mitigation would be required, the residual demolition and enabling works effects remain as reported in the assessment of effects section.

Construction Residual Effects

1.136 As no additional mitigation would be required, the residual construction effects remain as reported in the assessment of effects section.

Operation Residual Effects

1.137 As no additional mitigation would be required, the residual operation effects remain as reported in the assessment of effects section.

Summary of Residual Effects

1.138 Table 1-10 provides a summary of the outcomes of the Landscape and Visual assessment of the proposed development. Where **significant positive** effects are likely these are highlighted in bold green and where **significant negative** effects are predicted these are highlighted in bold red.

Table 1- 10: Summary of Residual Effects									
Receptor	Description of Residual Effect	Additional Mitigation	Scale and Significance of Residual Effect **	Nature of Residual Effect*					M B T St Mt Lt P**
				+	L	D	R		
Demolition and Construction									
Landscape									
Site	Removal of vegetation and dwelling with stripping of soil and change of topography to accommodate proposed development and landscaping	N/A	Not significant / Slight	-	L	D	IR		T
Baldonnel Stream	Disturbance impacts on function and character value.	N/A	Not significant / Slight	-	L	D	R		T
Newcastle Lowlands LCA	Construction activity within urban fringe area	N/A	Not significant / Slight	-	L	I	R		T

Table 1- 10: Summary of Residual Effects									
	of LCA that has been allocated for development								
The Grand Canal	Disturbance of linked green infrastructure affecting landscape context and setting	N/A	Not significant / Slight	-	L	I	R		T
NIAH Listed features	Disturbance and impacts on character amenity and tranquillity	N/A	Not significant / Slight	-	L	I	R		T
Road Corridors	Change to the townscape associated with the road corridors	N/A	Imperceptible	-	L	D	R		T
Visual									
VP1-11	Disturbance and construction impacts affect the visual amenity for receptors (Low - Medium)	N/A	Imperceptible	-	L	I	R		T
Operation - Year 5									
Site	Creation of new topography and habitat types with increased tree planting and connection with the Baldonnel stream landscape feature	N/A	Imperceptible	+	L	D	IR		Lt to P
Baldonnel Stream	Enhancement with new riverine planting and features including wetland meadow and pond	N/A	Moderate	+	L	D	R		Lt to P
Newcastle Lowlands LCA	Additional data centre development within a business park on the urban fringe with extensive boundary treatments that	N/A	Imperceptible	-	L	ID	IR		Lt to P

Table 1- 10: Summary of Residual Effects								
	soften and assimilate the building into the landscape							
The Grand Canal	Enhancement of linked green infrastructure features and increased commercial development within setting.	N/A	Not significant / Slight	-	L	ID	IR	Lt to P
NIAH Listed features	Increased commercial development within setting.	N/A	Not significant / Slight	-	L	ID	IR	Lt to P
Road Corridors	New commercial element within the transition from townscape to landscape.	N/A	Imperceptible	+	L	ID	IR	Lt to P
Visual								
VP: 03, 05, 10,	Not visible within view	N/A	Imperceptible	-	L	ID	IR	Lt to P
VP04	A small addition to the view in context with surrounding character	N/A	Not Significant / Slight	-	L	ID	IR	Lt to P
VP: 01; 02; 06; 08; 09,11	A small addition to the view in context with surrounding character	N/A	Imperceptible	-	L	ID	IR	Lt to P
VP: 07	A notable change within the view in keeping with the character of the area.	N/A	Not significant / Slight	-	L	ID	IR	Lt to P
Notes: * - = Negative/ + = Positive / +/- = Neutral; R = Reversible, IR = Irreversible; D = Direct, ID = Indirect; L= Likely, U = Unlikely; M = Momentary, B = Brief, T= Temporary, St = Short-term, Mt = Medium-term, Lt = Long-term, P = Permanent. ** Imperceptible, Not Significant/Slight, Moderate, Significant, Very Significant, Profound.								

Cumulative Effects

Intra-Project Effects

1.139 As explained in Chapter 2: EIA Process and Methodology, intra-project cumulative effects are discussed in Chapter 16: Cumulative Effects.

Inter-Project Effects

1.140 Within the context of this LVIA, the likely landscape and visual effects arising from the cumulative developments summarised in **Chapter 2: Table 2.3, Volume 1** are assessed. The location of cumulative developments is shown in **Figure 2.1, Volume 1**. Within the vicinity of the Proposed Development, 12 other Data Centers and associated infrastructure developments are considered, 10 with planning permission granted and in various stages of development. In summary, these include:

- To the east two development applications by Equinix (Ireland) Ltd (SD21A/0186 and SD22A/0156) that include construction of a three-storey (part four storey) data centre (consented) and subsequent modifications (further information required);
- To the south, modifications to the Digital Reality Trust data centre (SD17A/0377); Centrica Business solutions construction of a gas fired power plant (SD21A/0167); Digital Netherlands construction of two data centre buildings and associated buildings, including a gas generation compound (SD21A/0217) and Vantage Data Centre's Gas Insulated Switchgear substation (An Bord Pleanála Ref - 312793 to be decided);
- To the north and west, five further developments have been granted permission that are for data centre developments or associated energy infrastructure including Microsoft (SD20A/0283) that is scheduled to complete construction in early 2023 prior to the Proposed Development; UBC Properties construction of three data centre buildings that are currently under construction (SD20A/0121 and associated substation) Cyrus One (SD18A/0134 and SD20A/0295).

Demolition and Construction Cumulative Effects Landscape

- 1.141 The Proposed Development would reach peak construction in 2024, which could potentially coincide with construction activity for applications already granted permission or being considered surrounding the site.
- 1.142 Due to the Proposed Development's close association with the consented DUB-1 development, and the planned construction period in the approximate timeframe of Phase 2 of that development, the cumulative impacts are minimised as carried out as an extension of planned construction within a contained visual envelope. However, the number of data centre developments occurring during a similar time period would collectively accelerate change of the surrounding landscape character.
- 1.143 The stream and Site are not anticipated to experience an increase in impacts due to cumulative developments beyond the impact of the proposed development.
- 1.144 As assessed above, the Proposed Development construction activities are judged to have a low impact on the Newcastle Lowlands LCA, with an imperceptible negative effect. In addition to other construction activities that are planned in the area, it is not anticipated that the Proposed Development's magnitude of impact would increase due to proximity of the works to the other sites within the LCA. The construction would be contained within the constrained area of Profile Park and would be synonymous with the permitted development DUB-1. In combination, all the construction planned within the area happening simultaneously would potentially impact on the amenity and setting of the landscape although in the short-term. Appropriate phasing and coordination of construction between development sites would help to mitigate the risk of adverse cumulative effects occurring.

- 1.145 The Grand Canal and NIAH sites are considered to be a sufficient distance from the construction area that the increased construction activities are unlikely to impact on their amenity, levels of tranquillity and value. In addition, the temporary effects from cumulative construction activities are considered insufficient to increase the magnitude of impact to moderate. Within this rapidly developing urban fringe character type, it is judged that the in addition and in combination cumulative impact of the Proposed Development remains Not significant/Slight negative and is not significant in EIA terms.

Visual

- 1.146 The construction activity would be occurring within a relatively contained area of Profile Park and Grange Castle South Business Park. Consequently, construction activities would be restricted to a relatively small visual envelope within the area. In addition, embedded mitigation would support the screening of construction from the main surrounding road corridors.
- 1.147 The surrounding area has undergone a period of relatively rapid transition from agricultural land to commercially developed land in the peri-urban environs. It is judged that scale of in combination construction would not be beyond what has been experienced already and therefore susceptibility of receptors may be reduced to some extent.
- 1.148 High to medium sensitivity receptors (residential and recreational) are located at sufficient distance with intervening screening features (VPs 01; 04; 11) from the Proposed Development that would help to ensure that cumulative impacts are buffered and would be unlikely to result in an increase in magnitude impact or scale of effects experienced.
- 1.149 At the closest VP locations, (06, 07, 08, 09) construction impacts would be mitigated by site hoarding features and retained vegetation. At this proximity, cumulative impacts are unlikely to be experienced by the low sensitivity receptors associated with these VP locations (transport and employment).
- 1.150 It is judged that cumulative demolition and construction activities are unlikely to increase the magnitude of impact on visual amenity and therefore no significant effects are identified due to the location of the developments and embedded mitigation.

Operation Cumulative Effects

- 1.151 The Proposed Development is located within an area identified for commercial development in the SDCC County Development Plan 2022-2028¹³. The site is allocated within Zone EE: Enterprise and Employment. The stated aim is to provide for enterprise and employment related uses with the nature of the development focusing on data centres that are large in scale and form, with flue structures extending from the roofline. This large scale development within a lowland environment would change the character of the landscape within the area and the visual amenity experienced. The cumulative impacts of the proposed Development are discussed in terms of 'in addition' and 'in combination' to assess the full cumulative effects.

Landscape

- 1.152 In addition, the Proposed Development would be a relatively small component within an area of commercial development that is undergoing a rapid change of character and it is not anticipated that adverse cumulative effects are likely.
- 1.153 In combination, the consented and proposed developments would change the character of area from a scattered mosaic of fields and some commercial buildings to a relatively densely developed business park with some open spaces. In this circumstance, the character of the area has been somewhat predetermined and the focus from a landscape perspective should be a cohesive and high quality design. The location of the development area to the Grange Castle Business Park North does mitigate the impact of the in combination effects by ensuring they occur within the visual envelope of existing commercial development.

Although large in scale, the in-combination is densely located therefore restricting the impact to a relatively small area within the broader landscape.

- 1.154 If all schemes consented collectively contributed an overall green infrastructure (GI) strategy that connected boundary vegetation and enhanced blue infrastructure across the area, the development could make a collective cumulative effect that could be a significant benefit.
- 1.155 Within this context of creating a new high quality commercial character that contributes to GI (as described in Volume 1, Chapter 4), the Proposed Development does demonstrate a positive landscaping approach, with native tree and hedgerow planting along with stream enhancements, connected to its adjacent DUB-1 permitted development.
- 1.156 High sensitivity landscape receptors (Grand Canal and NIAH listed buildings) are sufficient distance that the Proposed Development and surrounding planned and existing developments are maintained within the existing 'commercial' envelope without further eroding the broader character of the Newcastle Lowlands LCA and setting of its high value features. Again, a connected GI approach across the developments could provide a benefit to the Grand Canal in particular.
- 1.157 It is judged that operation cumulative effects are unlikely to increase the magnitude of impact on landscape character and therefore no significant effects are identified.

Visual

- 1.158 Due to the contained nature of the cumulative developments and the extent and form of the existing development within the vicinity of the development it is not anticipated any in addition or in combination effects would be experienced.
- 1.159 High and medium sensitivity receptors (residential and recreational) are located at sufficient distance (VPs 01; 04; 11) from the Proposed Development that cumulative impacts are judged unlikely to result in an increase in magnitude of impact or scale of effects experienced.
- 1.160 From VP locations 03, 05, 10, 11 it is anticipated that the Proposed Development operational activities would be screened by other developments (established) or underway, or are not visible, and therefore would not have a cumulative impact on visual receptors.
- 1.161 At the closest VP locations, (06, 07, 08, 09) operational impacts would be mitigated by site boundary treatments including increased planting, berms and new wetland features if delivered effectively. At this proximity, cumulative impacts are unlikely to be experienced by the low sensitivity receptors associated with these VP locations (transport and employment) due to the Proposed Development screening developments to its rear and the surrounding industrial and commercial character of the immediate area.
- 1.162 It is judged that operation cumulative effects are unlikely to increase the magnitude of impact on visual amenity at the VP locations and therefore no significant effects are identified.
- 1.163 Table 1.11 provides a summary of the likely cumulative effects resulting from the proposed development and the cumulative developments.

Cumulative Development	Demolition and Construction		Operation	
	Cumulative Effects Likely?	Reason	Cumulative Effects Likely?	Reason
Landscape	No	Impacts and effects experienced would not be	No	The scale and type of building is appropriate

¹³ <https://www.sdcc.ie/en/services/planning/development-plan/plan-2022-2028/>

Table 1.11A Inter-Project Cumulative Effects				
		out of context with previous activity and distance of high sensitivity landscape receptors mean that impacts to character, amenity or value are unlikely.		within the context of the business park area of the LCA. High sensitivity receptors are sufficient distance from the area that the cumulative developments are unlikely to increase landscape impacts or scale of effects. Potential to create positive cumulative effects by ensure all developments consented and proposed provide coordinated and connected landscaping strategies.
Visual	No	Impacts and effects experienced would not be out of context with previous activity those associated with an industrial/commercial urban fringe. Distance of medium sensitivity visual receptors mean that an increase in magnitude of impacts is unlikely.	No	The scale and type of building is appropriate within the context of the business park area and is contained within a restricted visual envelope. Effective boundary treatments and roof screening that blends with the skyline help assimilate the development and those to its rear into the visual setting. Receptors would have the ability to accommodate the development of the type proposed without changes to visual amenity.

- Within the context of the Newcastle Lowlands LCA, the site is within an area that has already undergone transitional change from agriculture to industrial and commercial land use.
- The landscape strategy applies the LCA development mitigation advice to establish 'a linear park to enhance green infrastructure' and 'planting and other landscape design measures including planting with native hedgerows.
- the Proposed Development does meet the criteria for the 'limited opportunity' to accommodate development within the LCA.

1.166 Due to the Proposed Development's close association the July 2022 DUB-1 permitted development, impacts and effects have been judged against a future baseline that represents the projected environmental conditions in the future in 2025, which is the projected year when they would become fully operational.

Demolition and Enabling Works Effects

Landscape

- 1.167 The demolition and construction stage of the Proposed Development would have a Moderate effect on the Site that is significant in terms of EIA and negative. The Site's topography, land use and vegetation would change dramatically during this stage of the development with soil and vegetation being stripped and established mature trees being removed. The magnitude of impact is to be expected when changing use from agricultural and with the scale of development proposed. The landscaping strategy determines that landscaping and planting are to be delivered at an early stage to allow vegetation to establish prior to the operation phase. This approach would minimise the period that the site and its associated feature, the Baldonnel Stream, is in a transitional period and lacking any cover and therefore the embedded mitigation reduces the magnitude to Low and the effect Not significant/Slight, Negative and Not Significant in EIA terms.
- 1.168 The it is judged that the impact to the broader character of the Newcastle Lowland LCA would be a low magnitude of impact as the demolition and construction would occur within a small area of the LCA that has experienced similar activities and scales of construction activity. It is likely that the construction would be congruous with Phase 2 of DUB-1 permitted development construction occurring in proximity. The effect is Not significant/Slight Negative and Not Significant in EIA terms.
- 1.169 The Grand Canal and NIAH buildings are High Sensitivity receptors and judged to experience a no change/negligible magnitude of impact due to their distance from the development and the ongoing similar activity. The effect is Not significant/Slight Negative and Not Significant in EIA terms.

Visual

- 1.170 Construction and Demolition visual impacts and effects are not reviewed separately due to the ongoing construction and development within the Proposed Development study area. In particular, the construction of the Proposed Development would be planned to happen on a similar timeframe with that of Phase 2 of the July 2022 DUB-1 permitted development and is not anticipated to increase the magnitude of visual impact due to the close proximity and embedded mitigation set out in Volume 1, Chapter 5.
- 1.171 It is judged that the continuation of construction activity within close proximity would result in a negligible/no change magnitude of impact across viewpoints with no significant effects.
- 1.172 Overall, it is considered that the demolition of existing site and construction of the proposed development would result in temporary to short-term effects that range from imperceptible to Not significant/Slight negative on the landscape and visual amenity of the area and identified receptors and **would not give rise to significant effects in terms of EIA.**

Summary of Assessment

Background

- 1.164 This chapter has detailed on the likely significant Landscape and Visual effects to arise from the Proposed Development's construction (including demolition works) and its operation (at Day 1 and Year 5). The Proposed Development covers a 3.79ha are of irregularly shaped former agricultural land with residential development. The buildings and vegetation would be removed and a two-storey data centre with a footprint of 12,893m² would be constructed centrally surrounded by boundary landscaping that include berms with woodland planting, wetland meadow, riparian planting along the stream and SUDS attenuation pond.
- 1.165 The baseline assessment used publicly available information and site photography to assess visual amenity and discerned the following:
- The site is located within an area allocated for strategic employment development by the Regional and Local Authority within a Data Center Park on the urban fringe of Ireland's capital city.
 - The site is within an area on the transition between land character types: urban fringe and limestone farmland.

Operation Effects

Landscape

- 1.173 At Day 1 of Operation the magnitude of impact on the Site is reduced to Low with an imperceptible scale of effect that is not significant in terms of EIA. The reduction in impact reflects the extent of new planting around the boundary of the Site and the enhancements to Baldonnel stream and the creation of associated wetland features. The landscape strategy indicates the planting would include standard trees as well as whip planting that would provide a range of trees profiles, including retained vegetation. At Year 5, as the Site's new landscape features mature and establish, the increased habitat diversity, planting mix, berms and pond is expected to lead to an imperceptible benefit in terms of the fabric of the Site.
- 1.174 The broader Newcastle Lowlands LCA is expected to experience a Not significant/Slight negative impact from the Proposed Development although contained within an area of land given over to commercial uses. The boundary treatments of the Proposed Development would help to assimilate the building into the LCA, continuing the vegetated boundary from the Castel Grange Golf Course Area and that proposed for the adjacent DUB-1 development. The mix of native trees, hedgerows and grassland would help to create a varied naturalistic border providing contrast to the formal business park planting and more in keeping with the LCA. It is anticipated that the boundary treatments proposed would soften the impact of the development and that over time, as vegetation matures and the surrounding area fulfils its development potential, the impact would reduce to imperceptible negative.
- 1.175 Offsite landscape features that include the Grand Canal and NIAH listed features are expected to experience an imperceptible negative effect due to the Proposed Development occurring within a pocket of commercial land that is already influencing these features.

Visual

- 1.176 To assess the impact and effect of the Proposed Development, photography has been provided for 11 viewpoints at locations surrounding the Site as agreed with SDCC. Photomontages have been prepared where the Proposed Development would be visible and annotated photographs (prepared with wireframes) have been provided where the Proposed Development is not visible.
- 1.177 Three of the viewpoint locations are associated with medium sensitivity recreation and /or residential receptors. The remainder are associated with Low sensitivity transport or employment receptors.
- 1.178 During Year 5 of operation no significant effects in terms of EIA have been identified. To summarise:
- Nine viewpoint locations (VP: 01; 02; 03; 05; 06; 08; 09; 10) would experience a no change/negligible magnitude of impact with an imperceptible negative effect.
 - One viewpoint (VP04) would experience a low magnitude of impact with a Not significant/Slight negative effect.
 - One viewpoint (VP07) would experience a moderate magnitude of impact with a Not significant/Slight negative effect.

Cumulative Effects

- 1.179 The Proposed Development Site is located within an area of the Newcastle Lowlands given over to development under its enterprise and employment zoning by SDCC. The nature of the development has focused on data centers that are large in scale and form, with flue structures extending from the roofline. This large scale development within a lowland environment would change the character of the landscape within the area and the visual amenity experienced.

Landscape

- 1.180 In addition, the Proposed Development would be a relatively small component within an area of commercial development that is undergoing a rapid change of character and it is not anticipated that cumulative effects are likely.
- 1.181 In combination, the development of consented and proposed developments would change the character of the Profile Park area from a scattered mosaic of fields and some commercial buildings to a relatively densely developed business park with some open spaces. In this circumstance, the character of the area has been predetermined and the focus from a landscape perspective should be a cohesive and high-quality design that assimilates the area effectively into its surrounding landscape.
- 1.182 An opportunity exists for consented developments to work together to connect green infrastructure across this commercial landscape, ensuring boundaries form a network of habitats creating a natural framework to soften this industrial landscape in a coordinated way. A coordinated boundary approach would be in keeping with the SDCC Landscape Character Assessment¹⁴ mitigation measure to establish a linear park to enhance green infrastructure from the Grand Canal to the Dublin foothills. The Proposed Development would effectively support this aspiration through its enhancement of Baldonnel stream, boundary treatments and effective landscape linkage with the July 2022 DUB-1 permitted development.
- 1.183 It is judged that operation cumulative effects are unlikely to increase the magnitude of impact on landscape character, provided that the landscape mitigation measures are carried out, and therefore it is not anticipated that any additional or significant additional negative effects would be experienced.

Visual

- 1.184 Due to the contained nature of the cumulative developments and the extent and form of the existing development within the vicinity of the development it is not anticipated and any additional or significant additional negative effects would be experienced.

¹⁴ <https://www.sdcc.ie/en/devplan2022/stage-2-draft-plan/appendices/appendix-9-draft-landscape-character-assessment.pdf> Accessed 23 September 2022

2 CULTURAL HERITAGE AND ARCHAEOLOGY

2.1 Introduction

- 2.1.1 This chapter of the EIA reports on the likely significant cultural heritage and archaeology effects that are predicted to arise from the demolition and construction stage and the operation stage of the proposed development.
- 2.1.2 The chapter describes the cultural heritage policy context; the methods used to assess the potential impacts and likely effects; the baseline conditions at and surrounding the site; the likely cultural heritage effects taking into consideration embedded mitigation; the need for additional mitigation and enhancement; the significance of residual effects; and inter-project cumulative effects.
- 2.1.3 This chapter is supported by the following technical appendices in EIA Volume 3:
- Technical Appendix 2.1: Legislation and planning policy;
 - Technical Appendix 2.2: Gazetteers of archaeology and architectural heritage in the 1 km study area;
 - Technical Appendix 2.3: Archaeological Consultancy Services Unit, 2022, Archaeological Impact Assessment of a proposed development site at Profile Park, Grange Castle, Dublin 22
 - Technical Appendix 2.4: Archaeological Consultancy Services Unit, 2022, Report on Geophysical Survey at Profile Park, Grange Castle, Ballybane, Dublin
 - Technical Appendix 2.5: Archaeological Consultancy Services Unit, 2022, Report on Test Trenching at New Nangor Road, Ballybane, Co. Dublin
- 2.1.4 The assessment has been informed by the following legislation, policies, and published guidance:
- National Legislation and Policy:
 - National Monuments Acts 1930-2014.
 - Heritage Act 1995.
 - Architectural Heritage (National Inventory) and Historic Monuments Act 2000.
 - The Planning and Development Act 2000 as amended.
 - Planning and Development Regulations 2001-2019 (as amended).
 - National Planning Framework 2018.
 - Regional Policy:
 - Eastern and Midland Regional Assembly, 2019 Regional Spatial and Economic Strategy 2019-2031.
 - Local Policy:
 - South Dublin County Council Development Plan 2016-2022.
 - Guidance and Industry Standards:
 - Department of Arts, Heritage, Gaeltacht and the Islands, 1999, Frameworks and Principles for the Protection of the Archaeological Heritage.
 - Environmental Protection Agency, 2017 Guidelines on The Information to be Contained in Environmental Impact Statements, (Draft).
 - Office of the Planning Regulator, January 2021, Archaeology in the planning process, Planning Leaflet 13.
 - Office of the Planning Regulator, January 2021, A guide to Architectural Heritage, Planning Leaflet 12.
- 2.1.5 Further details are provided in EIA Volume 3: Technical Appendix 2.1.

2.2 Assessment Scope

Technical Scope

- 2.2.1 The technical scope of the assessment has considered the following:
- Disturbance or removal of on-site terrestrial-based archaeological deposits during construction;
 - Effects on historic landscape character as a result of the development land take and removal of existing site features;
 - Effects on cultural heritage assets as a result of the demolition and construction processes, e.g. visual presence, noise, vibration, potential damage to trees or structures; and
 - Effects on cultural heritage assets as a result of the presence of the new built form, its siting, scale, extent, appearance and character, and the new road layout, access, and patterns of circulation.
- 2.2.2 Chapter 2: EIA Process and Methodology explains the assessment methodology used throughout this EIA. The assessment in this chapter is a qualitative one, and the evaluation of significance and effects is ultimately a matter of professional judgement.

Spatial Scope

- 2.2.3 The study area for this assessment covers an area of 1 km radius from the site boundary (see Figure 2.1). The study area is sufficiently large to allow a judgement to be made of the likely archaeological potential of the site, based on the evidence in the surrounding area, and to allow an assessment of effects on structures and monuments because of changes to historic or landscape character or visual changes.

Temporal Scope

- 2.2.4 The assessment has considered impacts arising during the demolition and construction stage which would be expected to be temporary (less than a year) in nature and from the operation stage which would be expected to be long term (15 to 60 years) to permanent in nature (i.e., >60 years).

2.3 Baseline Characterisation Method

Desk Study

- 2.3.1 This chapter assesses the cultural heritage resources of the site and its environs as they are identified through statutory designation and inventory, the national or local archaeological record, documentary sources or other studies. In order to establish baseline cultural heritage conditions in the study area, the relevant data was reviewed and assessed. Data was obtained from the following sources:
- Sites and Monuments Record (SMR), including the Register of Historic Monuments (RM) and the Record of Monuments and Places (RMP);
 - National Inventory of Architectural Heritage (NIAH);
 - Record of Protected Structures (RPS, South Dublin County Council); and
 - Cartographic and published sources.

Field Study

2.3.2 The site has been the subject of a geophysical survey and subsequent test trenching by Archaeological Consultancy Services Unit Ltd (ACSU) in September and October 2022 under licences 22R0316 and 22E0760. The results of these surveys are presented in the reports in technical appendices 2.4 and 2.5 in EIAR Volume 3. The assessment also included a review of the investigations for the July 2022 DUB-1 permitted development for context. The present appearance of the site and the surrounding area can be seen in the photographs in EIAR Volume 1, Chapter 1: Introduction; and Volume 2, Chapter 1: Landscape and Visual Impact Assessment (LVIA).

2.4 Assessment Method

Methodology

Demolition and Construction Stage

2.4.1 This chapter first assesses the components, qualities and level of importance or value of all monuments and archaeological sites identified within the chosen study area, and the contribution to their significance made by the surrounding land. The contribution of the surroundings in which an asset is experienced and the range of historic, functional, or visual relationships, as evident in both physical attributes and perceptual values, to the significance of any single asset or group of assets would depend on the nature of the asset and its past and present setting. The importance of the setting of an asset, or of particular views or vistas (both deliberately designed, and the result of incidental or fortuitous changes over time), to its significance, and to how it is understood and appreciated, can therefore vary greatly.

2.4.2 The assessment of value, coupled with reference to national and local legislation, relevant policy statements and best professional practice, allows a judgement to be made of the significance of the asset and its sensitivity as a receptor. The focus is the inherent value and importance of the historic site itself, which is clearly separated in the assessment from any public amenity value particular sites may have, or potential contribution to tourism or other interests.

2.4.3 The judgement of the magnitude of change likely to occur in the demolition and construction stage is based on available information on the attributes of the proposed development: for example, immediate changes such as ground disturbance for site preparation and construction, removal of existing structures, routes, or trees and changes to drainage and landform.

Operation Stage

2.4.4 The baseline study and assessment of significance are as above for the demolition and construction stage.

2.4.5 The judgement of the magnitude of change likely to occur in the operation stage is based on available information on the attributes of the proposed development: for example, the addition of new structures and transport networks; and changes to the character of views of, from or across heritage features, or to perceptions of their priority in the landscape. The assessment refers where necessary to the zone of theoretical visibility (ZTV), viewpoint photographs and wireframe visualisations in Volume 2, Chapter 1: Landscape and Visual Impact Assessment (LVIA).

Cumulative Stage

2.4.6 For the purposes of assessing the cumulative effects, consideration has been given to all cumulative schemes that have the potential to result in a significant cumulative effect alongside the proposed development. Full details of all the cumulative schemes are given in Chapter 2: EIA Process and Methodology. The baseline and assessment of significance, and the judgement of the magnitude of change are assessed as above for the demolition and construction and the operation stages. Only

receptors for which the proposed development is predicted to result in a significant residual effect alone are included in this part of the assessment.

2.5 Assessment Criteria

2.5.1 The assessment of significance of effect with regards to cultural heritage is based on professional judgement of the sensitivity of the receptor and the magnitude of effect.

2.5.2 The general criteria used to assess if an effect is significant or not, is set out in Chapter 2 of this volume further details are provided herein. This is determined by consideration of the sensitivity of the receptor, magnitude of impact and scale of the effect. In considering the significance of an effect, consideration has been given to the duration of the effect, the geographical extent of the effect and the application of professional judgement

Receptor Sensitivity/Value Criteria

2.5.3 The sensitivity of receptors has been classified as low, medium or high in accordance with the criteria set out in Table 2-1 which are based on the significance and importance of the receptor (the heritage asset, referring to both below ground archaeology and built heritage) as identified through designation at national and county level.

Sensitivity	Criteria
Low	Heritage asset with archaeological interest of local importance. NIAH structures rated as of local interest or for record only. Areas of well preserved historic landscape.
Medium	Buildings included in the Record of Protected Structures. NIAH structures rated as of regional interest. Architectural conservation areas. Other heritage asset with archaeological interest of regional importance.
High	World Heritage Site or its buffer zone. Features included in the Record of Monuments and Places (RMP). NIAH structures rated as of international or national interest. Other heritage asset with archaeological interest of national importance.

Impact Magnitude Criteria

2.5.4 The magnitude of impact has been classified as low, medium, or high, in accordance with the criteria set out in Table 2-2.

Magnitude of Impact	Criteria
No change	No change to a heritage asset or to contributory attributes of its setting.
Low	Minor change to a heritage asset or to contributory attributes of its setting.
Medium	Considerable change to a heritage asset or to contributory attributes of its setting.
High	Complete destruction of a heritage asset or comprehensive change to key contributory attributes of its setting.

Scale of Effect Criteria

2.5.5 Impacts have been assessed on the basis of the value/sensitivity of receptors against the magnitude of impact to determine the scale of effect as presented in Table 2-3.

Magnitude	Sensitivity of Receptors		
	Low	Medium	High
No Change	Imperceptible	Imperceptible	Imperceptible
Low	Imperceptible	Imperceptible/Not Significant	Slight/Moderate
Medium	Imperceptible/Not Significant	Moderate	Moderate/Significant
High	Slight/Moderate	Moderate/Significant	Very Significant/Profound

2.5.6 Based on Environmental Protection Agency’s (EPA) Guidelines on the information to be contained in Environment Impact Assessment Reports¹ (2022), as described in Chapter 2: EIA Process and Methodology, effects ranging from ‘moderate’ to ‘profound’ are considered ‘significant’ in terms of EIA.

Nature of Effect Criteria

2.5.7 The nature of the effect has been described as either negative, neutral, or positive as outlined in Chapter 2: EIA Process and Methodology.

2.6 Assumptions and Limitations

2.6.1 Professional judgement is an important consideration in the determination of the overall cultural heritage effects and, even with qualified and experienced professionals, there can be differences in the judgements made.

2.7 Baseline Conditions

Existing Baseline

Geology

2.7.1 The site geology consists of fine loamy drift of the Straffan and Elton associations overlying dark limestone and shale of the Lucan Formation.

The Archaeological Resource

2.7.2 The evidence is presented in chronological order in broadly accepted chronological periods such as Palaeolithic–Neolithic. All assets included in the SMR data are shown on Figure 2.1, and on an aerial photograph illustrating the current and emerging character of the study area in Figure 2.2, each with a reference number, and the relevant entries in the SMR and NIAH are included in the gazetteers in Appendix 2.2. A total of 22 assets are identified within the 1 km radius study area, none of which fall within the site boundary. There are no structures included in the statutory RPS or assets on the RMP or the RM within the site. The closest statutory designated heritage asset is Grange Castle (RPS, RM) at 1km distance on the edge of the study area to the north.

Prehistoric

2.7.3 There are no records for the Mesolithic or the Neolithic periods in the study area.

2.7.4 The Early Bronze Age is represented in the study area with the discovery in 2000 and subsequent investigation of a ring barrow monument in the townland of Kilmahuddrick c.1 km north-east of the site (TOR6, DU017-080). The barrow was sited in a slightly elevated position and comprised a ditch

enclosing an internal area of 13 metres. A cist-like structure was revealed along with fragments of a human skull, with some cremated bone, pottery and a bead found within the interior of the enclosing ditch. Some 100 metres to the south of this barrow site, topsoil-stripping in 2000 revealed the remains of a small fulacht fiadh (TOR7, DU017-084) consisting of a small trough, a spread of heat-cracked stone and a linear gully feature to the south-west of the trough. No dateable artefacts were recovered for this site, but they can range in date from 1500-500BC (Mid-Late Bronze Age).

2.7.5 There are no further prehistoric sites recorded in the study area, but a recent excavation c.210 m to the south west has revealed a likely Bronze Age enclosure (see 2.7.20).

Early Medieval Period (AD400 – 1100)

2.7.6 There are two concentric enclosure sites, of probable early medieval origin, recorded as cropmark features on aerial photographs to the west of the site. The outline of one at Ballybane townland (TOR10, DU021-108) is discernible on Figure 2.2, while another recorded enclosure (TOR11, DU021-109) is no longer present due to the recent construction of the industrial units. Neither site is indicated on any edition of the Ordnance Survey maps (see Figures 2.3a & 2.3b).

Medieval Period (1100 - 1600)

2.7.7 The majority of the sites recorded in the study area relate to the medieval period. The placename Kilbride is first recorded in 1295, and there are records of the linked estates of Kilbride and Nangor into the early 17th century (see Appendix 2.3). The townland names Ballybane and Kilbride are first recorded in the early 14th century.

2.7.8 The ruined church and churchyard at Kilbride (TOR2-4, DU021-005001-005003, RPS 184, RM) survives within an enclosure bounded by low stone walls raised above the fields of the modern farm and is overlooked by the buildings at Casement Aerodrome across the road. There are numerous grave-markers, the most recent dating to the 1930s. Both ecclesiastical enclosure and church sites are recommended for inclusion in the revised RMP.

2.7.9 There are several examples in the study area of late medieval fortified tower houses, constructed in the 15th and 16th centuries on the edge of the Pale and close to one of the main routes that led from Dublin to the south-west.

2.7.10 On the north edge of the study area, Grange Castle (TOR8 & 16, DU017-034, RPS132, RM) is the ruins of a three-storey tower house that was constructed around 1580. The tower preserves a vaulted basement, a projecting turret with spiral stair, and a garderobe on the south side. The complex was approached from the north on a causeway over a boundary ditch and related features included a stone-lined fishpond. The building was remodelled in c.1750, with the addition of a two-storey house to the west side, with two full height buttresses, and the windows of the earlier range were widened. A courtyard of ancillary and farm buildings was gradually added to the north, and an additional range to the east of the house, which was served by a hearth and a brick chimney attached to the walls of the three-storey tower. The house remained in occupation until the 1980s and then deteriorated to a roofless ruin. The NIAH rating is of regional value for the archaeological, architectural, and historical special interest and the structure is recommended for inclusion in the revised RMP. The ruins have been stabilised and restored, and the castle now forms the centrepiece of a new public park within the Grange Castle Business Park.

2.7.11 The former locations of two other tower houses are recorded to the east of the site at Nangor Castle (TOR9, DU017-037) which was in existence by the 1530s and may have been incorporated into a later 19th century house, since demolished, and close to the church enclosure at Kilbride to the south (TOR1, DU021-004). The castle site at Nangor is associated with a medieval field system (TOR5, DU017-082) and excavations prior to development uncovered evidence of earthworks and other boundaries, and material of early medieval to 12th and 13th century date. Both sites are recommended for inclusion in the revised RMP.

¹ Environmental Protection Agency, 2022. Guidelines on the information to be contained in Environmental Impact Assessment Reports (EIAR)

Post-medieval Period (1600 - 1900)

- 2.7.12 The pastoral farming landscape of the study area is shown on the map of Dublin County published by John Rocque in 1760, crossed by the line of the Grand Canal to the north of Grange Castle. The largest holding shown is at Nangor, where the house and group of ancillary buildings are shown alongside an area of woodland and enclosed gardens, approached by an avenue from the south. The dispersed farms and other holdings include to the west a small holding named Ballybawn and further unnamed dwellings on the road. To the south-east is the house and surrounding formal gardens with long approach avenues at Corkagh. The church at Kilbride is noted as being in ruins and the main holding appears to have shifted to the east of the old castle location.
- 2.7.13 An example of the number of new gentry scale houses in a classical idiom that were constructed at the beginning of the 19th century is Kilcarberry House (TOR17, RPS173), a small country house of c.1810, with a formal front facing south. It has a distinctive porch, and some ancillary buildings survive. It has a NIAH rating of regional value for its architectural, artistic, and technical special interest. The inventory entry notes the rural landscape setting, however, since 1998 the house and ancillary structures have been within the Grange Castle Golf Club, forming part of the car park and maintenance area.
- 2.7.14 The Ordnance Survey first edition 6" map (Figure 2.3a) surveyed in 1836, shows the site area as part of an irregular group of fields defined to the south by the boundaries of townlands of Ballybane, Kilbride and Kilcarberry, and the parishes of Clondalkin and Kilbride. Of the older estates, the building group at Nangor Castle is the most extensive, with an area identified as parkland and a number of enclosed gardens to the west of the house. Grange Castle to the north is shown as a single long range within orchards, with some smaller structures forming a courtyard on the access from the north. The detailed 25" map published in 1908 shows no change to the arrangement of the fields that include the site but there are two new unnamed buildings within an enclosure shown on the other side of the road. At Kilbride the old castle location is part of the farm buildings of the new Kilbride House to the west.

Modern Period (1900 - present)

- 2.7.15 Baldonnel Aerodrome, at the south edge of the study area, was established in 1917, and opened in May 1918 as a base for the Royal Flying Corps. Several of the four aircraft hangars of the original aerodrome remain in use, including a flight shed (TOR21) and a general service hangar just outside the study area. A further early hangar at the south of the main group also falls just outside the study area. The aerodrome reopened in 1922 as Air Service HQ for the Air Corps of the Irish Defence Forces. In 1928 it was the start base for the first successful east to west flight across the Atlantic, which is commemorated in a plaque on the flight shed. The layout of the base is depicted on the OS map published in 1937 (Figure 2.3b). Additional buildings were added to the Air Corps base from the 1930s. At the north edge of the building group is the officers' mess of 1932 (TOR18, RPS188), with pavilions either side of the central entrance. The 1937 sports hall (TOR22), is of pre-cast concrete and shows the influence of European Modernism on aviation buildings. The Art Deco administration building (TOR29, RPS189) was constructed in 1938, its long 23-bay façade facing north overlooking the parade ground and entrance to the base. A new all-concrete church was constructed in 1946 (TOR20, RPS190).
- 2.7.16 All of these buildings have a NIAH rating of regional value across the range of architectural, artistic, and technical special interest, with recognition of the additional social interest of the church and the cultural interest of the connection of the 1917 flight shed with the 1928 transatlantic flight. The base was provided with new concrete runways in the mid-1950s and was renamed Casement Aerodrome in 1965. It remains an operational military airfield.
- 2.7.17 At the east edge of the study area, on the short dead-end section of Upper Nangor Road beyond the golf course, are two semi-detached pairs of single storey cottages of c.1935 (TOR12-15). They have a NIAH rating of regional value for architectural and technical interest. The description states that the

cottages retain a rural setting, however this is in the process of being lost through the ongoing construction of a housing development on the remaining fields to the south.

- 2.7.18 The map regression (Figures 2.3a and 2.3b) illustrates that except for the short portion of the townland boundary between Ballybane and Kilbride on the south, which is severed by Profile Park Road, none of the site boundaries relate to the field patterns as first mapped in the mid-19th century. The structure of the wider area is dominated the new road layout and buildings of the business park. Very little historic influence remains legible in the present landscape of the site and study area.

Previous Archaeological Investigations

- 2.7.19 A geophysical survey of the site was conducted by ACSU in September 2022 under licence 22R0316. The survey identified two linear anomalies, aligned north west to south east, which correspond with an access to a former yard and are visible on aerial imagery, other positive responses of potential archaeological significance and a number of disturbances, particularly along the site edges.
- 2.7.20 Test trenching under licence 22E0760 took place in October 2022. Eleven test trenches totalling 597 m of linear trenches were excavated within the site, targeting the trends identified in the geophysical survey. In general, the sod and topsoil measured 0.34–0.50 m in thickness and lay above a mid-grey natural clay and stone. One potential archaeological feature was identified, consisting of a linear feature or ditch, aligned north west–south east and measuring c.25.0 m in length, 1.70 m in width and 0.32 m in depth. It was filled with a mid-brown silty clay containing occasional inclusions of decayed stone and a few small fragments of animal bone. It was identified as of possible prehistoric or early historic origin given the absence of modern field boundaries within the field or illustrated on any of the historic maps.
- 2.7.21 The geophysical survey conducted for the July 2022 DUB-1 permitted development by ACSU in 2020 under licence 20R0080 identified the location of a number of previously unrecorded archaeological remains, including a sub-circular enclosure, part of an early historic field system and a pre-existing historic field boundary, as well as a high degree of modern disturbance in the data, probably as a consequence of an existing dwelling and varying degrees of modern ground disturbance, tree throws or natural geological variations.
- 2.7.22 The scheme of archaeological test trenching carried out in March 2021 for the July 2022 DUB-1 permitted development by ACSU under licence 21E0061 excavated a total of 30 trenches across the site, primarily targeting anomalies revealed in the geophysical survey (see above). The excavation failed to reveal any features or deposits of archaeological significance and no artefacts were recovered.
- 2.7.23 Other excavations further to the west of the site, still within the Profile Park Business Park and part of the Grange Castle South Data Centre application and development work, identified what had been shown on aerial photographs as two large enclosures (TOR10 & 11). The sub-circular enclosure was sited c.210-metres south-west on the southern side of the internal road and is shown on figure 7 in Appendix 2.3. It was the subject of targeted trenching followed by excavation under the same licence. The work confirmed the remains of an oval/circular enclosure, measuring 37 m in length by 34 m in width, with the pottery recovered producing a Bronze Age date. The final analysis of the recovered artefacts and environmental assemblage is on-going.

Future Baseline

- 2.7.24 Considering the future baseline approach, the approved investigation works as part of the July 2022 DUB-1 permitted development to mitigate effects on the archaeological resource would be implemented.

Assessment of Significance

Archaeology

- 2.7.25 There are no recorded archaeological sites listed on the SMR or RMP anywhere within the site boundary. There are no recognisable buildings or possible archaeological sites shown on any historic maps with the site remaining as a large field since the mid-19th century. There are records stating the Church leased the site for grazing horses and cows dating back to the 1850s. There are no cropmarks that would indicate potential below ground archaeological sites or features on modern aerial imagery of the site. The southern site boundary is a townland boundary between Ballybane and Kilbride that now comprises a line of mature trees and a steam/wet ditch.
- 2.7.26 The site investigations identified the alignment of a ditch of possible prehistoric or early historic date.
- 2.7.27 The geophysical survey undertaken for the July 2022 DUB-1 permitted development by ACSU in 2020 failed to reveal any clear probable or possible archaeological anomalies pertaining to previous activity. The subsequent test trenching exercise to evaluate the archaeological resource and determine its likely significance, failed to reveal any archaeological finds, features or deposits.
- 2.7.28 Collectively, and taking into consideration the close proximity of the most recent enclosure site revealed by geophysical survey, with excavation producing a Bronze Age date, the study area possesses an archaeological resource of local value, and low sensitivity, predominantly focused on the early-late Medieval periods with focal points of prehistoric activity.

Built Heritage

- 2.7.29 The site is not part of an area of intact historic landscape and there are no on-site standing structures of heritage interest. The portion of the townland boundaries representing pre-17th century land divisions between Ballybane and Kilbride noted above survives as a line of vegetation along the stream on the south edge of the site (see viewpoint photographs 9 and 10, Volume 2, Chapter 1: Landscape and Visual Impact Assessment (LVIA)).
- 2.7.30 The church ruins and related features at Kilbride (TOR2-4) c.700 m to the south of the site are included in the RPS and RM and are recommended for inclusion in the revised RMP for the range of interest of the standing structures and the archaeological potential of the enclosure. The site is also in close proximity to the former castle site alongside the late 19th century farm. The church and enclosure are in an open setting of fields immediately to the south of Grange Castle Golf Course, visible from the Baldonnel Road to the south, and is overlooked by the buildings of the aerodrome. The buildings at Grange Castle Business Park South are visible across the fields to the north and the consented development at Profile Park would form part of this group when completed.
- 2.7.31 Grange Castle (TOR8 and 16), at the north edge of the study area, is designated for its archaeological, architectural, and historic interest and is a locally important landmark set within a small area of open land within the business park. The surrounding landscape setting preserves a range of related features, including the original access to the north, the related field and property boundaries and the alignments of demolished ancillary buildings, and is important to perceptions of the castle. The significant close views towards the castle are from the south and east and from the north. The wider setting of the ruins within the business park creates a dramatic juxtaposition of old and new and the scale of the business park buildings prevents longer distance views. The building is included in the RPS and RM and is recommended for inclusion in the revised RMP. The range of interests are of regional importance; the visual qualities of the recently restored structure and its public profile as part of the park, including the planned limited access to the interior of the monument, are an additional value.
- 2.7.32 The closest built heritage asset to the site is Kilcarberry House approximately 550 m to the east (TOR17). The formal early 19th century house is included in the RPS because of its special architectural and historic interest. It retains its visual qualities and character although the setting is now dominated by the surrounding golf course.

- 2.7.33 Further east beyond the R136 the two pairs of cottages at 1-4 Skylawn on Upper Nangor Road (TOR12-15) are of value as examples of a small scale and vernacular form, set back and unobtrusive when seen from the road. The formerly rural setting is currently subject to major change as a result of the construction of the new housing area to the west, south and east of the cottages immediately abutting the gardens to the rear. Given the scale and nature of the asset, the enclosed character of the setting, the distance from the site and intervening development and highways these buildings are not considered to be sensitive to the proposed development and they have been 'scoped-out' of the assessment that follows.
- 2.7.34 The identified structures of heritage interest at Casement Aerodrome (TOR18-22) are part of the large group of buildings at the base on the north edge of the runways. They include several hangars that survive from the original establishment of the aerodrome during WWI and a range of Air Corps buildings dating from the early 1930s to the mid-1940s. All have been altered for their continued use as part of the operational military airbase. The officers' mess, administration building, and the church are included in the RPS for their special architectural and historic interest.
- 2.7.35 All of these structures are of regional value and of medium sensitivity based on the criteria in Table 2-1. The recently restored Grange Castle has an additional cultural and social value as the focus of the new public park created at the centre of the Grange Castle Business Park.

Sensitive Receptors

- 2.7.36 The receptors identified as sensitive to the proposed development, and which have been 'scoped-in' to the assessment are summarised in Table 2-4.

Receptor	Sensitivity
Archaeology – on site	Low
Archaeology – study area	Low*
Kilbride church and related features (TOR2-4)	Medium
Grange Castle (TOR8 and 16)	Medium
Kilcarberry House (TOR17)	Medium
Buildings at Casement Aerodrome (TOR18-22)	Medium

- 2.7.37 Whilst archaeology within the study area is considered to be a receptor of low sensitivity it has been scoped out of the assessment of effects and is not considered further due to lack of direct and indirect impacts.

2.8 Assessment of Effects

Demolition and Construction Effects

Archaeology

- 2.8.1 The proposed development would involve groundworks, which would inevitably have an impact on below ground archaeological remains where they are now known or suspected to exist.
- 2.8.2 The risk of impacts would come from works associated with demolition and construction resulting in the possible damage to any below ground sites / features / localised findspots. There would be no direct construction effects on any archaeological sites recorded within the SMR or RMP for the site.
- 2.8.3 The test trenching across the site identified a north west–south east aligned ditch of possible prehistoric or early historic origin. During the demolition and construction stage, groundworks associated with the proposed development would result in a high magnitude of impact and the loss of identified

archaeological remains of local importance and low sensitivity. The resulting effect is considered to be **Permanent, Slight/Moderate** and **Negative** effect. This would be irreversible and would be not significant in terms of EIA.

Built Heritage

- 2.8.4 There would be no direct construction effects on any of the identified built heritage features in the study area during the demolition and construction stage.
- 2.8.5 The site is more than 500 m away from all of the sensitive receptors in the study area and the visual presence of construction activity, including cranes, and the related noise and vibration would not be perceptible from any of the assets or their setting.
- 2.8.6 The ongoing construction of the business parks and the housing area to the south east at Kilcarberry beyond the R136 are also an established aspect of the character of the wider study area. The demolition and construction stage would not result in any change to the buildings of heritage interest in the study area or the character of their setting.
- 2.8.7 During the demolition and construction stage the potential for effects on built heritage (medium sensitivity) as a result of demolition and construction activities would result in no change. However, for the purpose of EIA the effect is (no change) is considered to result in a **Temporary, Imperceptible, Neutral** effect which is not significant in terms of EIA.

Operation Effects

Archaeology

- 2.8.8 There would be no change to the archaeological resource on site during the operation stage. The effects on archaeology (low sensitivity) as a result of the operation stage would be a **Permanent, Imperceptible, Neutral** effect which is not significant in terms of EIA.

Built Heritage

TOR2-4

- 2.8.9 The site of Kilbride church and related features (TOR2-4) is within the open agricultural setting of the adjacent farm and Kilbride House.
- 2.8.10 The existing and emerging character of the wider setting is mixed, with the influence of the aerodrome to the south of Baldonnell Road, the adjacent golf course, and the visible new buildings of the business parks to the north.
- 2.8.11 There is no historic connection to the site and the monument is physically and visually separated from it by the intervening development. The ZTV in Volume 2, Chapter 1: Landscape and Visual Impact Assessment (LVIA) Figure 3 predicts visibility of elements of the proposed development across some of the open land around the monument, and within the graveyard enclosure.
- 2.8.12 The change to the character of the setting of the monument through the addition to the existing business park development visible to the north would result in a low magnitude of impact to a receptor of medium sensitivity. This would result in a **Permanent, Imperceptible/Not Significant, Irreversible** and **Negative** effect that is not significant in terms of EIA.

TOR8 and 16

- 2.8.13 Grange Castle (TOR8 and 16) to the north on the edge of the 1 km study area is physically and visually separated from the site by the buildings of Grange Castle Business Park north of R134 New Nangor Road.
- 2.8.14 The recently restored tower house and related features are seen within the designed landscape setting of the public park defined by the main roads of the business park.

- 2.8.15 There is no historic or present relationship to the site area and more distant views from the areas close to the castle and the new park are prevented by the vegetation along the retained field boundaries and the business park buildings to the south.

- 2.8.16 The ZTV in Volume 2, Chapter 1: Landscape and Visual Impact Assessment (LVIA) predicts no potential for visibility of the proposed development at the monument and related features or across the open park surrounding it.

- 2.8.17 There would be no change to the monument or to the character of its setting as a result of the proposed development. However, for the purposes of EIA, the effect on built heritage (medium sensitivity) as a result of the operation stage is considered to be a **Permanent, Imperceptible, Neutral** effect which is not significant in terms of EIA.

TOR17

- 2.8.18 Kilcarberry House (TOR17) is part of Grange Castle Golf Course. The principal visual relationship is to the former landscape setting to the south, and the house is physically and visually separate from the site. The ZTV in Volume 2, Chapter 1: Landscape and Visual Impact Assessment (LVIA) predicts some narrow splays of potential visibility of the proposed development around the house across the surrounding golf course. These views are likely to be very localised because of the tree cover, are not on the principal south-facing orientation of the house and would not affect appreciation of its visual qualities or relationship to the wider landscape.

- 2.8.19 There would be no change to the appreciation of the architectural qualities of the building or to the character of its setting as a result of the proposed development. However, for the purposes of EIA, the effects on built heritage (medium sensitivity) as a result of the operation stage is considered to be a **Permanent, Imperceptible, Neutral** effect which is not significant in terms of EIA.

TOR19-24

- 2.8.20 The buildings of heritage interest at Casement Aerodrome (TOR19-24) are all part of the operational military aerodrome. The functional relationship is to the runways to the south and between and within the group of buildings, which is locally visually prominent on Baldonnell Road. There is no physical or visual relationship to the site area. The ZTV in Volume 2, Chapter 1: Landscape and Visual Impact Assessment (LVIA) predicts no visibility of the proposed development in the spaces around the aerodrome buildings. The single splay of potential visibility across the open area to the west of the main building group would be experienced in the context of the operation airfield, and the existing glimpses of the edge of the business parks to the north.

- 2.8.21 There would be no change to the buildings or their setting as a result of the proposed development. However, for the purposes of EIA, the effects on built heritage (medium sensitivity) as a result of the operation stage is considered to be a **Permanent, Imperceptible, Neutral** effect which is not significant in terms of EIA.

2.9 Additional Mitigation Demolition and Construction Stage

Archaeology

- 2.9.1 The demolition and construction stage is predicted to result in a negative effect for on site archaeological resource identified by the geophysical survey and test trenching. Although this effect is defined as not significant in terms of the EIA, it can be fully mitigated by the programme of archaeological monitoring of topsoil stripping in the area immediately surrounding the possible prehistoric or early historic ditch and by preservation by record (excavation) of any features exposed prior to construction, as recommended in the ACSU report (Appendix 2.5). This mitigation can be secured through an appropriately worded planning condition. Although the demolition and construction

stage effect for on-site archaeology can be fully mitigated, due to the beneficial effect of knowledge gained by preservation by record of the possible prehistoric or early historic ditch feature and the addition to the knowledge of the archaeological resource, the resulting impact of magnitude is considered to be medium, on a receptor of low sensitivity.

Built Heritage

2.9.2 No significant effects are predicted on built heritage during the demolition and construction stage. Consequently, no additional mitigation is required.

Operation Stage

Archaeology

2.9.3 No significant effects are predicted on the archaeological resource during the operation and no additional mitigation is required.

Built Heritage

2.9.4 No significant effects are predicted on built heritage during the operation stage. Consequently, no additional mitigation is required.

2.10 Enhancement Measures

2.10.1 No enhancement measures are proposed in respect of cultural heritage.

2.11 Assessment of Residual Effects

Demolition and Construction Residual Effects

Archaeology

2.11.1 With the additional mitigation in place, the residual demolition and construction stage effects would be as follows:

- Once the mitigation works are complete the effect on the on site archaeology would be reduced to a **Permanent, Imperceptible/Not Significant, Beneficial** effect which is not significant in terms of EIA.

Built Heritage

2.11.2 As no additional mitigation would be required, the residual demolition and construction effects remain as reported in the assessment of effects section.

Operation Residual Effects

2.11.3 As no additional mitigation would be required for either archaeology or built heritage, the residual operation effects remain as reported in the assessment of effects section.

Summary of Residual Effects

2.11.4 Table 2-5 provides a summary of the outcomes of the cultural heritage assessment of the proposed development. Where **significant positive** effects are likely these are highlighted in bold green and where **significant negative** effects are predicted these are highlighted in bold red.

Demolition and Construction									
	Knowledge gained by preservation by record	Programme of archaeological monitoring of topsoil stripping in the area immediately surrounding the possible prehistoric or early historic ditch and by preservation by record (excavation) of any features exposed prior to construction.	Imperceptible/Not Significant	+	L	D	IR	P	
On site archaeology									
Built heritage	None identified	None required	Imperceptible	+/-	U	D	R	T	
Operation									
On site archaeology	None identified	None required	Imperceptible	+/-	U	D	IR	P	
Built heritage (TOR2-4)	Change to visual qualities of setting	None required	Imperceptible/not significant	-	L	D	IR	P	
Built heritage (TOR8, 16, 17, 18-22)	None identified	None required	Imperceptible	+/-	U	D	IR	P	
Notes: * - = Negative/ + = Positive / +/- = Neutral; R = Reversible, IR = Irreversible; D = Direct, ID = Indirect; L= Likely, U = Unlikely; M = Momentary, B = Brief, T= Temporary, St = Short-term, Mt = Medium-term, Lt = Long-term, P = Permanent. ** Imperceptible, Not Significant, Slight, Moderate, Significant, Very Significant, Profound.									

2.12 Cumulative Effects

Intra-Project Effects

2.12.1 As explained in Volume 1, Chapter 2: EIA Process and Methodology, intra-project cumulative effects are discussed in Volume 1, Chapter 16: Intra Cumulative Effects.

Inter-Project Effects

2.12.2 No significant effects are predicted on the archaeological resource as a result of the proposed development alone in either the demolition and construction or the operation stage. There is therefore no potential for inter-project effects with the cumulative schemes to occur.

2.12.3 No significant effects are predicted on built heritage as a result of the proposed development alone in either the demolition and construction or the operation stage. There is therefore no potential for inter-

Receptor	Description of Residual Effect	Additional Mitigation	Scale and Significance of Residual Effect **	Nature of Residual Effect*				
				+	L	D	R	M B T St Mt Lt P**
				-	U	I	IR	

project effects with the cumulative schemes to occur. Built heritage is not considered further in this section of the assessment

2.12.4 Table 2-6 provides a summary of the likely cumulative effects on archaeology resulting from the demolition and construction stage of the proposed development and the cumulative developments.

Table 2-6: Inter-project Cumulative Effects		
Cumulative Development	Demolition and Construction	
	Cumulative Effects Likely?	Reason
Microsoft - Grange Castle Business Park, Nangor Road, Clondalkin, Dublin 22 (SD20A/0283)	No	No significant effects are predicted on the archaeological resource as a result of the proposed development.
UBC Properties - Townlands within Grange Castle South Business Park, Baldonnell, Dublin 22 (SD20A/0121)		
UBC Properties - Grange Castle South Business Park, Dublin 22 (VA06S.308585)		
Digital Reality Trust - Profile Park, Baldonnell, Dublin 22, D22 TY06 (SD17A/0377) - revision - scheme built out already		
Cyrus One - Grange Castle Business Park, Clondalkin, Dublin 22 (SD18A/0134)		
Cyrus One Townlands within Grange Castle South Business Park, Baldonnell, Dublin 22 (SD20A/0295 (amendment to SD18A/0134))		
Cyrus One - Grange Castle South Business Park, Baldonnell, Dublin 22. (VA06S.309146)		
Centrica Business Solutions - Profile Park, Baldonnell, Dublin 22 (SD21A/0167)		
Equinix (Ireland) Ltd - Plot 100, Profile Park, Nangor Road, Clondalkin, Dublin 22 (SD21A/0186)		
Equinix (Ireland) Ltd (SD22A/0156)		
Digital Netherlands VIII B.V (SD21A/0217)		

Table 2-6: Inter-project Cumulative Effects		
Cumulative Development	Demolition and Construction	
	Cumulative Effects Likely?	Reason
Vantage Data Centers Dub 11 Limited Profile Park Business Park and partly within Grange Castle Business Park, Dublin 22. (ABP Ref: VA06S.312793)		

Demolition and Construction Cumulative Effects

2.12.5 The proposed additional mitigation of potential effects to the archaeological resource within the site though the monitoring and subsequent excavation of features identified in the test trench evaluation follows a similar approach to all pre-development works across Profile Park. Any archaeological mitigation required for the cumulative developments would be likely to apply a similar approach in terms of archaeological evaluation and preservation by record in order to inform and duly mitigate potential effects. Such works would add to the knowledge of the archaeological resource in the immediate vicinity and wider study area of the site and may add a further prehistoric or early medieval habitation sites to the ones recorded in the study area.

Operation Cumulative Effects

2.12.6 Once any required site investigations are complete, the identified archaeological resource would have been appropriately dealt with in line with local/national policy and best practice guidance. The overall knowledge gained would result in a beneficial effect of imperceptible significance.

2.13 Summary of Assessment Background

2.13.1 This chapter has detailed the potential cultural heritage effects of the demolition and construction and operation stages of the proposed development. The assessment has been undertaken considering the relevant national and local guidance and regulations.

2.13.2 A 1km study area from the site boundary has been used for this assessment. All recorded archaeological and architectural built heritage features of interest, identified in the national and local record, have been assessed in the chapter. These included all features in the Sites and Monuments Record (SMR), including the Register of Historic Monuments (RM) and the Record of Monuments and Places (RMP), the National Inventory of Architectural Heritage (NIAH) and the Record of Protected Structures (RPS) maintained by South Dublin County Council. A total of 24 sites are identified within the study area. These are shown on Figures 2.1 and 2.2.

2.13.3 The site contains no recorded archaeological sites, finds or monuments. The study area gives a general background to potential as well as useful information on archaeological sites uncovered as a consequence of pre-development site investigations. The Early Bronze Age is represented in the study area with the discovery and subsequent investigation of a ring barrow monument in the townland of Kilmahuddrick c.1km north-east of the site (TOR6, DU017-080). Some 100 metres to the south of this barrow site, topsoil-stripping in 2000 revealed the remains of a small fulacht fiadh (TOR7, DU017-084) consisting of a small trough, a spread of heat-cracked stone and a linear gully feature to the south-west of the trough. No dateable artefacts were recovered for this site, but they can range in date from 1500-500BC (Mid-Late Bronze Age).

- 2.13.4 There are two concentric enclosure sites, of probable early medieval origin, recorded as cropmark features on aerial photographs to the west of the site. The outline of one at Ballybane townland (TOR10, DU021-108) is discernible on Figure 2.2. while another recorded enclosure (TOR11, DU021-109) is no longer present due to the construction of industrial units at this location.
- 2.13.5 A geophysical survey was conducted by Archaeological Consultancy Services Unit Ltd (ACSU) in 2020 under licence 20R0080 for the July 2022 DUB-1 permitted development. A scheme of archaeological test trenching was carried out in March 2021 by ACSU under licence 21E0061. A total of 30 trenches were excavated, totalling 1,928m of linear trenches and primarily targeting anomalies revealed in the geophysical survey. The aforementioned surveys identified a sub-circular enclosure c.210-metres south-west on the southern side of the internal road. Excavation confirmed the remains of an oval/circular enclosure, measuring 37m in length by 34m in width, with the pottery recovered producing a Bronze Age date.
- 2.13.6 There are no recorded archaeological sites listed on the SMR or RMP anywhere within the site boundary. The geophysical survey undertaken on land immediately west of the site by ACSU in 2020 failed to reveal any clear probable or possible archaeological anomalies pertaining to previous activity. The subsequent test trenching exercise to evaluate the archaeological resource and determine its likely significance, failed to reveal any archaeological finds, features or deposits.
- 2.13.7 The baseline evidence for the recorded prehistoric archaeological sites or chance finds in the study area is meagre. Some early medieval concentric enclosure sites have been identified but nothing is present on the recent geophysical survey or on the RMP mapping for the site. There are no cropmarks that would indicate potential below ground archaeological sites or features on modern aerial imagery of the site. The southern site boundary is a townland boundary between Ballybane and Kilbride that now comprises a line of mature trees and a steam/wet ditch.
- 2.13.8 The site was the subject of a geophysical survey and subsequent test trenching by ACSU in September and October 2022 under licences 22R0316 and 22E0760. The results of these surveys are presented in the reports in technical appendices 2.4 and 2.5 in EIAR Volume 3. The site investigations identified the alignment of a ditch of possible prehistoric or early historic date. Based on the criteria in Table 2-1 the on-site archaeological resource is considered to be of low sensitivity.
- 2.13.9 The built heritage in the study area includes the site of the medieval church at Kilbride (TOR2-4) which preserves the ruins of the medieval church, the related ecclesiastical enclosure, and a range of other features. At the north edge of the study area is the tower house at Grange Castle (TOR8 & 16), which was first built in around 1580, and was converted into a house in the mid-18th century. The building was ruinous from the 1980s and has recently been restored as the centrepiece of the new public park at Grange Castle Business Park. The example of the early 19th century formal country house at Kilcarberry House (TOR17) is now within the Grange Castle Golf Course. At the south edge of the study area, the group of older buildings at Casement Aerodrome includes several examples of the early hangars constructed when the base was established in 1917 and a range of additional buildings built through the 1930s to 1946 (TOR18-22). Beyond the R136 to the east is a group of four small semi-detached cottages dated c.1935 (TOR12-15). Based on the criteria in Table 2-1 these heritage assets are considered to be of medium sensitivity.

Demolition and Construction Effects

- 2.13.10 The proposed development would involve groundworks, which would inevitably have an impact on the identified below ground archaeological remains because of the risk of possible damage. There would be no direct construction effects on any archaeological sites recorded within the SMR or RMP for the site. The demolition and construction stage would result in a high magnitude of impact to assets of low sensitivity, which would be a negative effect of Slight/Moderate significance. This would be permanent and irreversible and would not be significant in terms of EIA.
- 2.13.11 This effect can be fully mitigated through a programme of archaeological monitoring and excavation, which, due to the knowledge gained as a result of the mitigation works the resulting residual effect

would be a beneficial effect of **Imperceptible/Not significant**. This would be permanent and irreversible and would not be significant in terms of EIA.

- 2.13.12 No change is predicted to built heritage during the demolition and construction stage, which would be a temporary, imperceptible and neutral effect which would not be significant.
- 2.13.13 Overall, it is considered that the demolition of the existing site and construction of the proposed development would result in a neutral effect on cultural heritage and identified receptors, which would not be significant.

Operation Effects

- 2.13.14 No change is predicted on the currently meagre archaeological resource during the operation stage. This would be a permanent, imperceptible neutral effect, which would be irreversible not be significant in terms of EIA.
- 2.13.15 An imperceptible/not significant negative effect is predicted to Kilbride church and related features (TOR2-4). This would be permanent and irreversible and would not be significant. Imperceptible and neutral effects are predicted on all other built heritage assets during the operation stage.
- 2.13.16 Overall, it is considered that the operation stage of development would result in neutral effects on cultural heritage and identified receptors.

Cumulative Effects

- 2.13.17 No significant effects are predicted on the archaeological resource as a result of the proposed development alone in either the demolition and construction or the operation stage. There is therefore no potential for inter-project effects with the cumulative schemes to occur. The overall knowledge gained by any investigation of the site and its addition to other contemporary monuments from this period would result in a positive effect of imperceptible significance.
- 2.13.18 No significant effects are predicted on built heritage as a result of the proposed development alone in either the demolition and construction or the operation stage so there is no potential for cumulative effects.

GLOSSARY OF TERMS

Applicant	Vantage Data Centers DUB11 Limited	Environmental Statement	A statement that includes such information that is reasonably required to assess the environmental effects of a development.
Application	Means the full planning application, for the proposed development on the site.	Mitigation	Any process, activity of thing designed to avoid, reduce or remedy adverse environmental effects likely to be caused by a development project.
Baseline Studies	Studies of existing environmental conditions which are designed to establish the baseline conditions against which any future changes can be measured or predicted.	Mitigation Measure	Measure aiming at reducing an adverse environmental effect.
Operational Phase	A development scheme which has been build out and is operational.	National Planning Policy Framework	Came into force on 27 March 2012 and was revised in July 2018, with minor revisions made in February and June 2019. It sets out the Government's economic, environmental and social planning policies for England and summarises, in a single document, all previous national planning policy advice (Planning Policy Statements and Planning Policy Guidance notes).
Cumulative Effects	Effects that result from incremental changes caused by other past, present or reasonably foreseeable actions.	Non-Technical Summary	A summary of the Environmental Statement in 'non-technical language'.
Cumulative Schemes	Developments that have received a resolution to grant planning permission or have a signed legal agreement in place. They are likely to be delivered concurrently with the Proposed Development assessed in the EIA.	Ordnance Datum	Land levels are measured relative to the average sea level at Newlyn, Cornwall. This average level is referred to as 'Ordnance Datum'.
Desk Study	A non-intrusive study and review of all available information pertaining to a site, including historical records, collated and monitored data, and consultation with relevant stakeholders.	Overshadowing	Overshadowing occurs when a structure blocks out sunlight from neighbouring properties on the northern side of that structure. It can affect the amount of daylight let into neighbouring properties when the shadow cast falls across windows or glazed doors.
EIA Scoping	An initial stage in determining the nature and potential scale of the environmental impacts arising from a proposed development, and assessing what further studies are required to establish their significance.	Receptor (Sensitive)	A component of the natural, created, or built environment such as human being, water, air, a building, or a plant that is affected by an impact.
EIA Scoping Opinion	A written statement of the opinion of the relevant planning authority as to the information to be provided in the Environmental Statement.	Residual Effects	Those effects of a development that cannot be mitigated following implementation of mitigation proposals.
EIA Screening	An initial stage in which the need for EIA is considered in respect of a development. Some developments are automatically subject to EIA by means of their inevitable size, nature and effects (Schedule 1 developments). Other projects are made subject to EIA because it is anticipated that they are likely to have significant environmental effects (Schedule 2 developments).	Study Area	Defined impact assessment area surrounding the site relative to the technical topic in question and determined based professional judgement.
Environmental Impact Assessment	A process by which information about the environmental effects of a development is collected and taken into account by the relevant decision-making body before a decision is given on whether the development should go ahead.	Sustainable Development	Development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.

ABBREVIATIONS

EIA	Environmental Impact Assessment
LVIA	Landscape and Visual Impact Assessment
EPA	Environmental Protection Agency
GLVIA	Guidelines for Landscape and Visual Assessment
EIAR	Environmental Impact Assessment Report
MW	Megawatt
NLS	National Landscape Strategy
NPF	National Planning Framework
NDP	National Development Plan
NDO	National Policy Objectives
SUDS	Sustainable Drainage Systems
LACCA	Landscape Classification Character Assessment
HLCA	Historic Landscape Character Assessment
GI	Green Infrastructure
HCL	Heritage Conservation and Landscape Objective
BMP	Biodiversity Management Plan
LCA	Landscape Character Area
SDCC	South Dublin County Council
NHA	National Heritage Area
NIAH	National inventory of Architectural Heritage
ZTV	Zone of Theoretical Visibility
VP	Viewpoint
SMR	Sites and Monuments Record
RM	Register of Historic Monuments
RMP	Record of Monuments and Places
RPS	Record of Protected Structures
ACSU	Archaeological Consultancy Services Unit Ltd
NMS	National Monuments Service

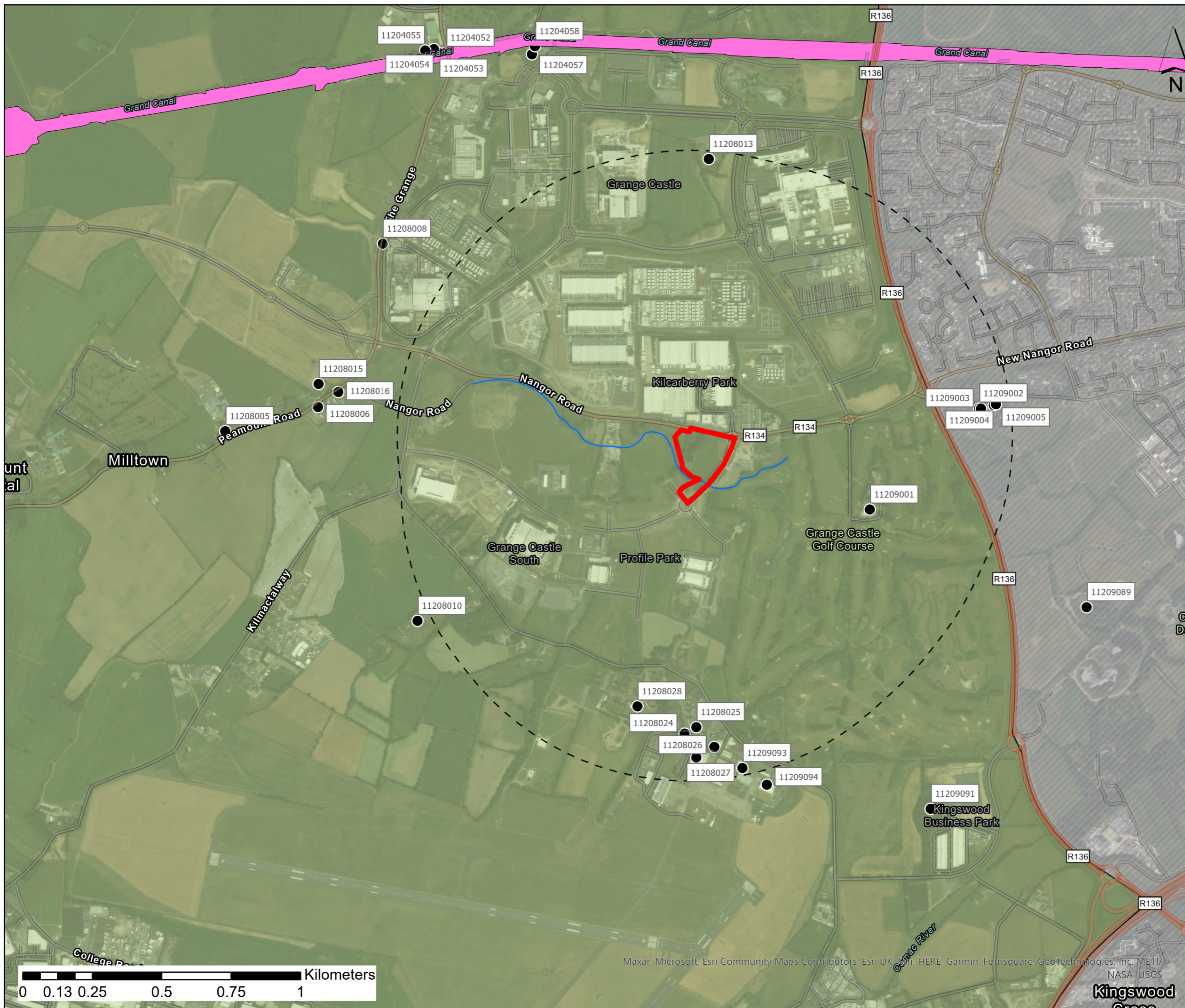
Volume 2A: Technical Appendices

Table of Contents

Technical Appendix 1.1:	Figures 1-3
Technical Appendix 1.2:	Viewpoints
Technical Appendix 1.3A:	Viewpoint Photomontages – Operation 1 Day 1
Technical Appendix 1.4A:	Viewpoint Photomontages – Operation Year 5
Technical Appendix 2.1:	Cultural Heritage Figures 1-3
Technical Appendix 2.2:	Legislation and planning policy
Technical Appendix 2.3:	Gazetteers of archaeology and architectural heritage in the 1km study area
Technical Appendix 2.4:	Archaeological Consultancy Services Unit, 2022, Archaeological Impact Assessment of a proposed development site at Profile Park, Grange Castle, Dublin 22
Technical Appendix 2.5:	Archaeological Consultancy Services Unit, 2022, Report on Geophysical Survey at Profile Park, Grange Castle, Ballybane, Dublin
Technical Appendix 2.6:	Archaeological Consultancy Services Unit, 2022, Report on Test Trenching at New Nangor Road, Ballybane, Dublin

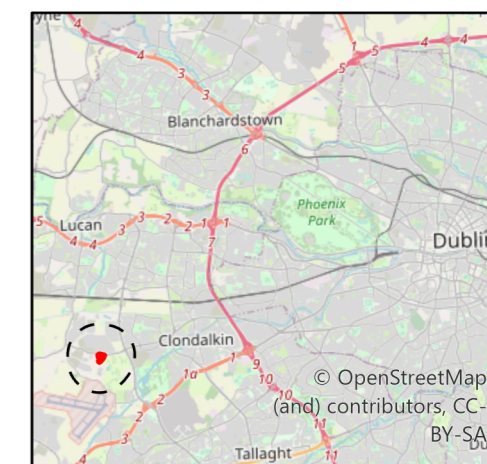
Technical Appendix 1.1: Landscape and Visual Assessment Figures

Figure 1: Location, study area and landscape features



- DUB-13 Site Boundary
- Baldonnel Stream
- 1km study area
- Grand Canal pNHA
- NIAH sites with reference number
- Newcastle Lowlands
- Urban South Dublin

Below insert: Location map of Dublin City Region at 1:250,000



Development Proposal
Landscape and Visual Impact
Assessment
Client: Vantage
Volume 2, Appendix 1.1
Landscape and Visual Assessment

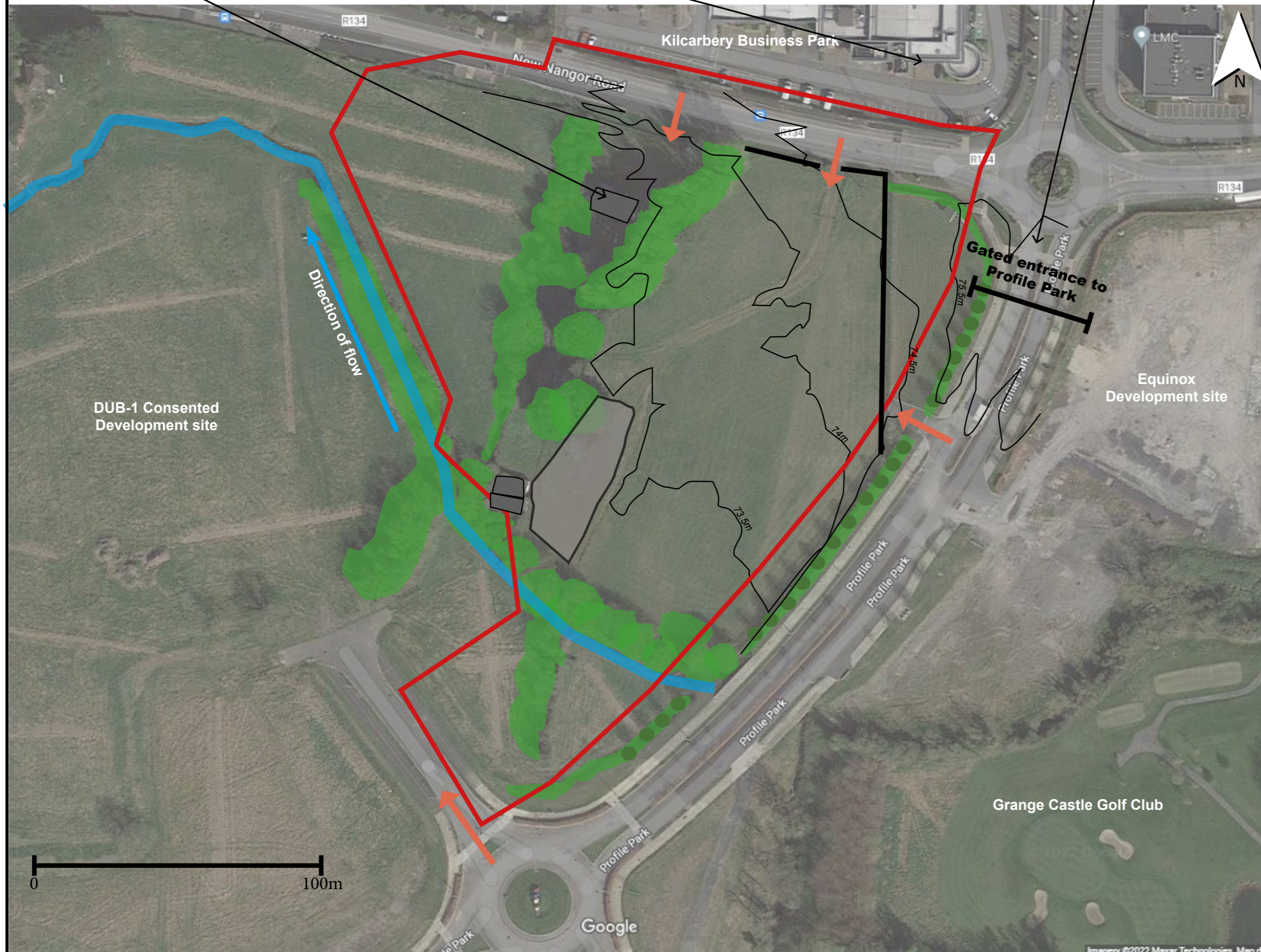
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Figure 1.2
Site landscape elements and features



-  Proposed Development Red Line
-  Entrance to site
-  Baldonnel Stream
-  Security fencing
-  Site trees and hedgerow vegetation
-  Formal trees and hedgerow planting
-  Building
-  Hardstanding

Development Proposal
Landscape and Visual Impact Assessment
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Volume 2, Appendix 1
Landscape and Visual Assessment



Figure 3: Zone of Theoretical Visibility and Viewpoint Locations



- DUB-13 Site Boundary
 - ↑ Viewpoint
 - Building height points
 - 1km study area
 - Existing Buildings
- Visibility Value**
- High
 - Low

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 Volume 2, Appendix 1.1
 Landscape and Visual Assessment

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Technical Appendix 1.2: Viewpoint Photographs

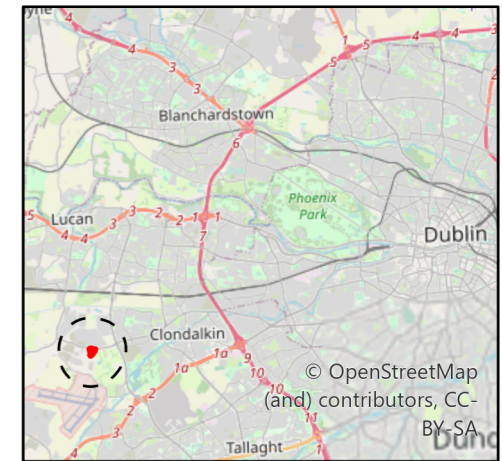
Appendix 1.2 Viewpoint Photography

- DUB-13 Site Boundary
- ↖ Viewpoint

- VP01: The Grand Canal
- VP02: R134 / Baldonnel Rd.
- VP03: Baldonnel Rd. / Falcon Av.
- VP04: Layby near Casement Aerodrome
- VP05: Bolands Garage, R134
- VP06: Northwest corner of the Site
- VP07: Entrance to Profile Park
- VP08: Profile Park Access Rd.
- VP09: Falcon Av.
- VP10: N7 Junction with R136
- VP11: Grange Castle Golf Course entrance



Below insert: Location map of Dublin City Region at 1:250,000



Development Proposal
Landscape and Visual Impact
Assessment
Client: Vantage
Volume 2, Appendix 1.2
Landscape and Visual Assessment

Scale at A3: 1:10,000
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Viewpoint 1: The Grand Canal | Viewing distance at A3: 542mm | Horizontal field of view: 39.6° | Direction of view: 134°
Camera: Sony ILCE-1| Lens: Sony 50mm | Camera height: 1.5m AGL | Date taken: 28 June 2021 | Aperture: f/11 | ISO speed: 100 | Shutter: 1/160 sec



Viewpoint 2: Corner of R134 New Nangor Road and Baldonnell Road Junction | Viewing distance at A3: 542mm | Horizontal field of view: 39.6° | Direction of view: 114°
Camera: Sony ILCE-1 | Lens: Sony 50mm | Camera height: 1.5m AGL | Date taken: 25 August 2022 | Aperture: f/8 | ISO speed: 100 | Shutter: 1/500 sec



Viewpoint 3: Baldonnell Road at Falcon Avenue junction | Viewing distance at A3: 542mm | Horizontal field of view: 39.6° | Direction of view: 63°
Camera: Sony ILCE-1 | Lens: Sony 50mm | Camera height: 1.5m AGL | Date taken: 28 June 2021 | Aperture: f/11 | ISO speed: 100 | Shutter: 1/160 sec



Viewpoint 4: Baldonnell Road layby near the entrance to the Casement Aerodrome | Viewing distance at A3: 542mm | Horizontal field of view: 39.6° | Direction of view: 360°
Camera: Sony ILCE-1 | Lens: Sony 50mm | Camera height: 1.5m AGL | Date taken: 18 August 2021 | Aperture: f/11 | ISO speed: 100 | Shutter: 1/50 sec



Viewpoint 5: R134 New Nangor Road at Bolands Car Centre | Viewing distance at A3: 542mm | Horizontal field of view: 39.6° | Direction of view: 109°
Camera: Sony ILCE-1| Lens: Sony 50mm | Camera height: 1.5m AGL | Date taken: 28 June 2021 | Aperture: f/11 | ISO speed: 100 | Shutter: 1/80 sec



Viewpoint 6: R134 New Nangor Road at the north west corner of the Site | Viewing distance at A3: 542mm | Horizontal field of view: 39.6° | Direction of view: 178°
Camera: Sony ILCE-1 | Lens: Sony 50mm | Camera height: 1.5m AGL | Date taken: 25 August 2022 | Aperture: f/8 | ISO speed: 100 | Shutter: 1/500 sec



Viewpoint 7: R134 New Nangor Road at Profile Park entrance | Viewing distance at A3: 542mm | Horizontal field of view: 39.6° | Direction of view: 252°
Camera: Sony ILCE-1 | Lens: Sony 50mm | Camera height: 1.5m AGL | Date taken: 25 August 2022 | Aperture: f/8 | ISO speed: 100 | Shutter: 1/320 sec



Viewpoint 8: Profile Park Access Road | Viewing distance at A3: 542mm | Horizontal field of view: 39.6° | Direction of view: 354°
Camera: Sony ILCE-1 | Lens: Sony 50mm | Camera height: 1.5m AGL | Date taken: 25 August 2022 | Aperture: f/8 | ISO speed: 100 | Shutter: 1/320sec



Viewpoint 9: Profile Park Access Road | Viewing distance at A3: 542mm | Horizontal field of view: 39.6° | Direction of view: 335°
Camera: Sony ILCE-1 | Lens: Sony 50mm | Camera height: 1.5m AGL | Date taken: 28 June 2021 | Aperture: f/11 | ISO speed: 100 | Shutter: 1/160 sec



Viewpoint 10: N7 and R136 Junction | Viewing distance at A3: 542mm | Horizontal field of view: 39.6° | Direction of view: 310°
Camera: Sony ILCE-1 | Lens: Sony 50mm | Camera height: 1.5m AGL | Date taken: 28 June 2021 | Aperture: f/11 | ISO speed: 100 | Shutter: 1/160 sec

Technical Appendix 1.3A: Viewpoint Photomontages –Operation Day 1

Red line outlines DUB-13 Proposed Development
Blue line outlines DUB-1 Consented Development



Viewpoint 1: Photomontage of Day 1 view from the Grand Canal | Viewing distance at A3: 542mm | Horizontal field of view: 39.6° | Direction of view: 134°
Camera: Sony ILCE-1| Lens: Sony 50mm | Camera height: 1.5m AGL | Date taken: 28 June 2021 | Aperture: f/11 | ISO speed: 100 | Shutter: 1/160 sec

Red line indicates location of DUB-13 where screened.
Blue line indicates DUB-1 Consented Development where screened.



Grey area indicates the development under construction to the fore of DUB-1 in this viewpoint location

Red line indicates location of DUB-13 where screened.
Blue line indicates DUB-1 Consented Development where screened.



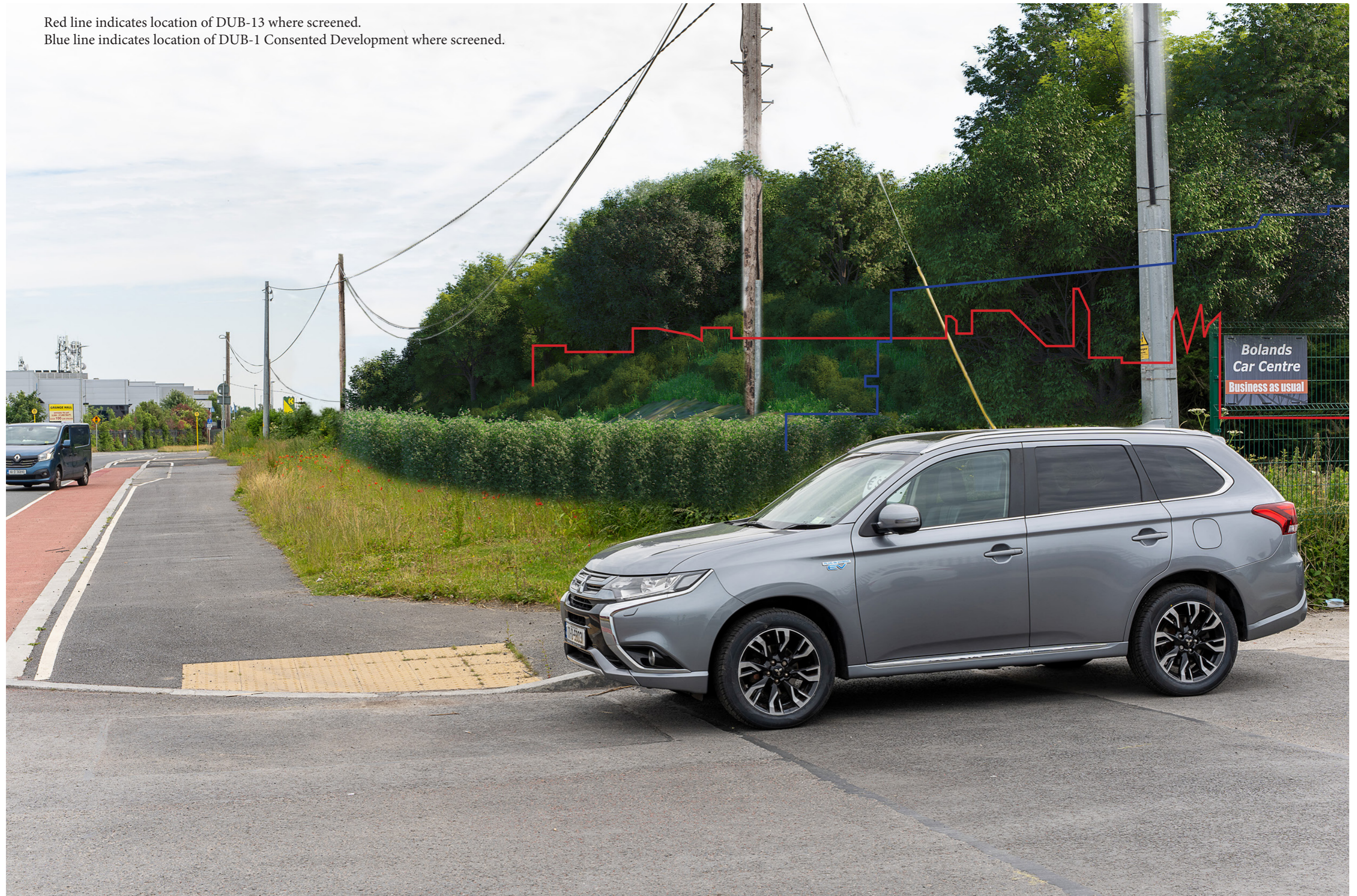
Viewpoint 3: Photomontage of Day 1 view from Baldonnell Road at junction with Falcon Avenue | Viewing distance at A3: 542mm | Horizontal field of view: 39.6° | Direction of view: 63°
Camera: Sony ILCE-1| Lens: Sony 50mm | Camera height: 1.5m AGL | Date taken: 28 June 2021 | Aperture: f/11 | ISO speed: 100 | Shutter: 1/160 sec

Blue line indicates where DUB-1 Consented Development is screened.



Viewpoint 4: Photomontage of Day 1 view from layby on Baldonnell Road near the entrance to Casement Aerodrome | Viewing distance at A3: 542mm | Horizontal field of view: 39.6° | Direction of view: 360°
Camera: Sony ILCE-1| Lens: Sony 50mm | Camera height: 1.5m AGL | Date taken: 18 August 2021 | Aperture: f/11 | ISO speed: 100 | Shutter: 1/50 sec

Red line indicates location of DUB-13 where screened.
Blue line indicates location of DUB-1 Consented Development where screened.



Viewpoint 5: Photomontage of view from R134 New Nangor Road at Bolands Car Centre | Viewing distance at A3: 542mm | Horizontal field of view: 39.6° | Direction of view: 109°
Camera: Sony ILCE-1| Lens: Sony 50mm | Camera height: 1.5m AGL | Date taken: 28 June 2021 | Aperture: f/11 | ISO speed: 100 | Shutter: 1/80 sec



Viewpoint 6: Photomontage of Day 1 view from R134 New Nangor Road at the north west corner of the Site | Viewing distance at A3: 542mm | Horizontal field of view: 39.6° | Direction of view: 178°
Camera: Sony ILCE-1| Lens: Sony 50mm | Camera height: 1.5m AGL | Date taken: 25 August 2022 | Aperture: f/8 | ISO speed: 100 | Shutter: 1/500 sec

Blue line indicates location of DUB-1 Consented Development where screened.



Viewpoint 7: Photomontage of Day 1 view from R134 New Nangor Road at the entrance to Profile Park | Viewing distance at A3: 542mm | Horizontal field of view: 39.6° | Direction of view: 252°
Camera: Sony ILCE-1| Lens: Sony 50mm | Camera height: 1.5m AGL | Date taken: 25 August 2022 | Aperture: f/8 | ISO speed: 100 | Shutter: 1/320 sec

Red line indicates location of DUB-13 Development where screened.



Viewpoint 8: Photomontage of Day 1 view from Profile Park Access Road | Viewing distance at A3: 542mm | Horizontal field of view: 39.6° | Direction of view: 354°
Camera: Sony ILCE-1| Lens: Sony 50mm | Camera height: 1.5m AGL | Date taken: 25 August 2022 | Aperture: f/8 | ISO speed: 100 | Shutter: 1/320sec

Red line indicates location of DUB-13 where screened.
Blue line indicates location of DUB-1 Consented Development where screened.



Viewpoint 9: Photomontage of Day 1 view from Faclon Avenue | Viewing distance at A3: 542mm | Horizontal field of view: 39.6° | Direction of view: 335°
Camera: Sony ILCE-1| Lens: Sony 50mm | Camera height: 1.5m AGL | Date taken: 28 June 2021 | Aperture: f/11 | ISO speed: 100 | Shutter: 1/160 sec

Red line indicates location of DUB-13 where screened.
Blue line indicates location of DUB-1 Consented Development where screened.



Viewpoint 11: Photomontage of Day 1 view from R134 at entrance to Grange Castle Golf Course | Viewing distance at A3: 542mm | Horizontal field of view: 39.6° | Direction of view: 264°
Camera: Sony ILCE-1 | Lens: Sony 50mm | Camera height: 1.5m AGL | Date taken: 25 August 2022 | Aperture: f/8 | ISO speed: 100 | Shutter: 1/320sec

Technical Appendix 1.4A: Viewpoint Photomontages –Operation Year 5

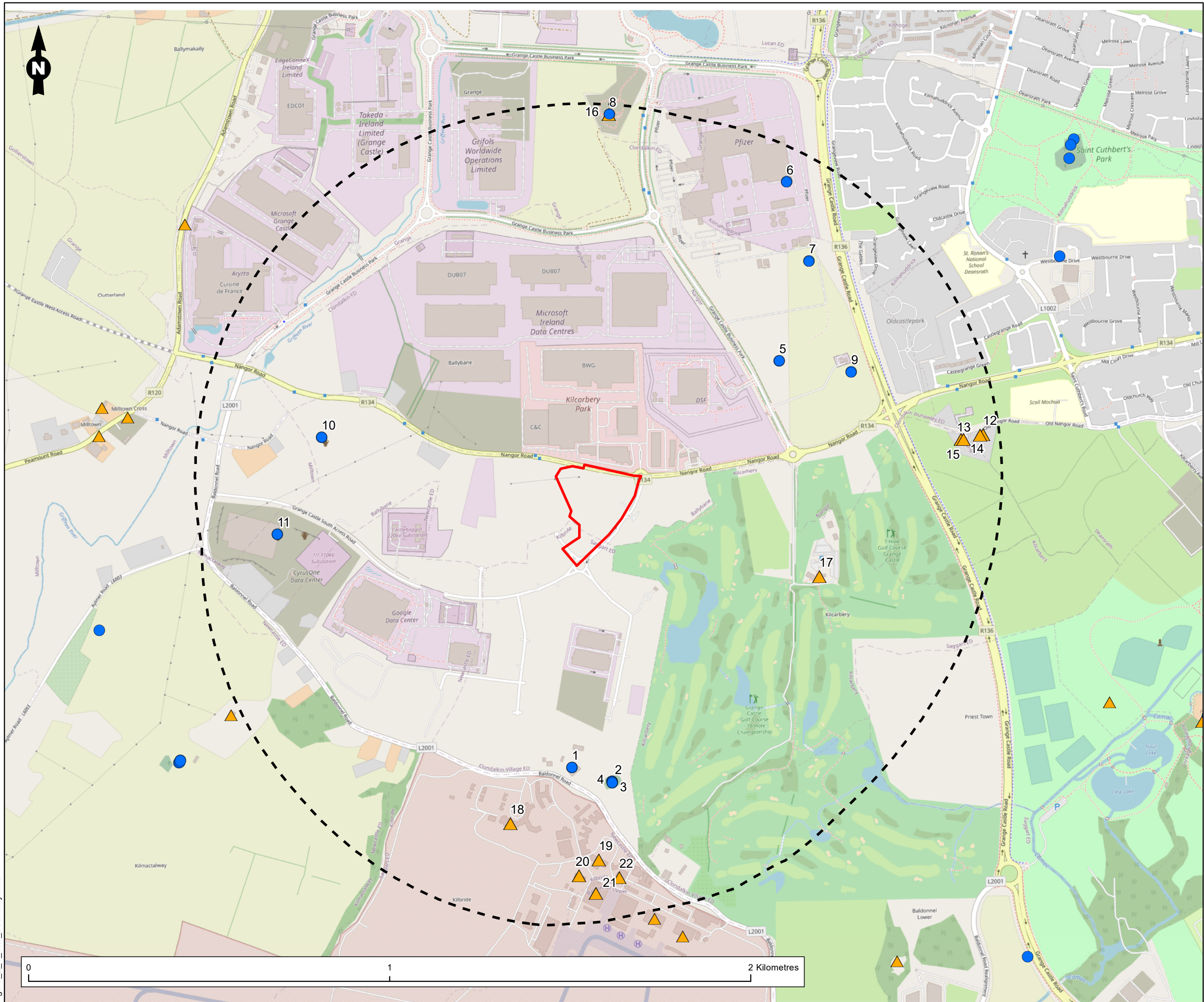


Viewpoint 6: Photomontage of Year 5 view from R134 New Nangor Road at the north west corner of the Site | Viewing distance at A3: 542mm | Horizontal field of view: 39.6° | Direction of view: 178°
Camera: Sony ILCE-1| Lens: Sony 50mm | Camera height: 1.5m AGL | Date taken: 25 August 2022 | Aperture: f/8 | ISO speed: 100 | Shutter: 1/500 sec



Viewpoint 7: Photomontage of Year 5 view from R134 New Nangor Road at the entrance to Profile Park | Viewing distance at A3: 542mm | Horizontal field of view: 39.6° | Direction of view: 252°
Camera: Sony ILCE-1 | Lens: Sony 50mm | Camera height: 1.5m AGL | Date taken: 25 August 2022 | Aperture: f/8 | ISO speed: 100 | Shutter: 1/320 sec

Technical Appendix 2.1: Cultural Heritage Figures



- Site boundary
- 1km study area
- National Monuments
- ▲ NIAH sites

Figure Title
Heritage assets in the 1km study area

Project Name
DUB 13 Profile Park

Project Number 198409	Figure No. 2.1
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Date October 2022	Prepared By JC
----------------------	-------------------

Scale 1:10,000 @A3	Issue 1
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Client
Vantage Data Centers



Figure_2_1_Site_boundary.mxd

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- Site boundary
- 1km study area
- National Monuments
- ▲ NIAH sites

Figure Title
Heritage assets in the 1km study area

Project Name
DUB 13 Profile Park

Project Number 198409	Figure No. 2.2
--------------------------	-------------------

Date October 2022	Prepared By JC
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Scale 1:10,000 @A3	Issue 1
-----------------------	------------

Client
Vantage Data Centers



Figure 2.1_Site_boundary.mxd

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Technical Appendix 2.2: Cultural Heritage Legislation and Policy

Appendix 2.1 Legislation and policy

National Legislation and Policy:

- National Monuments Acts 1930-2014.
- Heritage Act 1995.
- Architectural Heritage (National Inventory) and Historic Monuments Act 2000.
- The Planning and Development Act 2000 as amended.
- Planning and Development Regulations 2001-2019 (as amended).
- National Planning Framework 2018.

Regional Policy:

- Eastern and Midland Regional Assembly, 2019 Regional Spatial and Economic Strategy 2019-2031.

Local Policy:

- South Dublin County Council Development Plan 2016-2022.

Guidance and Industry Standards:

- Department of Arts, Heritage, Gaeltacht and the Islands, 1999, Frameworks and Principles for the Protection of the Archaeological Heritage.
- Environmental Protection Agency, 2017 Guidelines on The Information to be Contained in Environmental Impact Statements, (Draft).
- Office of the Planning Regulator, January 2021, Archaeology in the planning process, Planning Leaflet 13.
- Office of the Planning Regulator, January 2021, A guide to Architectural Heritage, Planning Leaflet 12.

Legislation

National

National legislation and policy recognises the value and significance of cultural heritage, and the public interest in the preservation of particular monuments, and sets out mechanisms to ensure that it is taken into account in planning decision-making. Archaeological remains, meaning all man-made structures of whatever form of date except for buildings in ecclesiastical use, are protected by the provisions of the National Monuments Act 1930 to 2014. A national monument is “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”. (NMA 1930, section 2).

Monuments that are afforded statutory protection are included in the Register of Historic Monuments and the Record of Monuments and Places.

The legislation concerning the protection of historic buildings of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest is the Planning and Development Act 2000 (as amended) and the Planning and Development Regulations 2001, as amended. This legislation includes provisions for preserving protected structures and

Details of protected structures for each planning authority are listed in the Record of Protected Structures (RPS), which forms part of the development plan. Additionally, the non-statutory National Inventory of Architectural Heritage (NIAH) provides a database of post-1700 buildings.

National policy recognises that proper planning and sustainable development includes objectives for the protection of the archaeological heritage and local authority development plans are required to

include such objectives. The

Framework and Principles for the Protection of the Archaeological Heritage (Government of Ireland 1999)

National policy emphasises the non-renewable nature of the archaeological heritage and that there needs to be a presumption in favour of its preservation in-situ, or where that is not here preservation in-situ is not the option chosen, there must be preservation by record (i.e. archaeological excavation and recording must take place). The importance of appropriate forms of archaeological assessment being carried out is also emphasised.

National Planning Framework 2018

The National Planning Framework published in February 2018. The NPF replaced its predecessor the National Spatial Strategy 2002-2020. It sets out the Governments planning policies for Ireland. It provides within a single document, guidance at a high-level for planning and development of the country. Finalisation of the NPF alongside the ten-year National Development Plan (NDP) will culminate one plan to guide strategic development and the infrastructure investment at national level.

National Policy Objective 17

“Enhance, integrate and protect the special physical, social, economic and cultural value of built heritage assets through appropriate and sensitive use now and for future generations.

The qualities and character of our national built heritage in rural areas, including towns and villages, can add distinctiveness to place-making and over time can acquire special interest through its intrinsic quality. This ‘sense of place’ is also becoming an important factor in attracting foreign direct investment and individual talent to Ireland.

Ireland’s built heritage assets are a non-renewable resource that merit being nurtured in a manner appropriate to their significance as an aid to understanding the past, contributing to community well-being and quality of life as well as regional economic development.”

National Policy Objective 60

“Conserve and enhance the rich qualities of natural and cultural heritage of Ireland in a manner appropriate to their significance.”

National Development Plan 2018 – 2027 (last updated 26 November 2020).

The National Development Plan sets out the investment priorities that will underpin the implementation of the NPF.

Regional and local

South Dublin County Council Development Plan 2016-2022

The Development Plan was adopted in May 2016. The core strategy, included within the development plan, provides an overarching strategy for the spatial development of the county over the medium to longer term and will form the basis for policies and objectives throughout the Plan. It translates the strategic planning framework set out in the National Spatial Strategy (2002) and the Regional Planning Guidelines for the Greater Dublin Area (2010), to county level.

Technical Appendix 2.3: Gazetteers of Archaeology and Architectural Heritage in the 1km study area

Appendix 2.2: Gazetteers of archaeology and architectural heritage in the 1km study area

Sources:

Sites and Monuments Record South Dublin County Council
 Record of Monuments and Places (RMP, included in SMR with recommendations for additions)
 Register of Historic Monuments (RM, included in SMR)
 National Inventory of Architectural Heritage (NIAH)
 Record of Protected Structures (RPS) (South Dublin County Development Plan 2016-2022, schedule 2)

Archaeological records in the study area

TOR ref	SMR ref	Description
1	DU021-004	Class: Castle - unclassified Townland: KILBRIDE Scheduled for inclusion in the next revision of the RMP: Yes Description: Situated in a narrow valley. There are farm buildings on the site. There is no visible trace above ground (Ball 1906, 66).
2	DU021-005001 RPS 184	Class: Church Townland: KILBRIDE Scheduled for inclusion in the next revision of the RMP: Yes Description: Located in a circular raised graveyard (L 42m, Wth 30) on the edge of a valley (DU021-005002). This may be the remains of an early ecclesiastical enclosure (DU021-005003). In 1228 the archbishop of Dublin granted the church of Kilbride to Andrew de Monevea as a prebend and later conferred it on the Canons of St Patrick's Cathedral (Mc Neill 1950, 75). In 1630 it was described as ruinous (Ronan 1941, 80). This church was attached to St. Patrick's Cathedral and was described at the dissolution in 1547 as an old chapel (Ball 1906, 68-70). Consists of a small rectangular building (int. dims L5.8m, Wth 3.63m, T 0.85m) with a NW turret in ruinous condition. Formerly entered through an opening in the W end (now damaged). Built of randomly coursed masonry. There is an aumbry in the E end of the N wall of the church. The E window has a S jamb of tufa. There are remnants of another window in the W end of the S wall. The NW turret (L1.35m, Wth 0.77m, H1.78m) is entered through a lintelled doorway off the church. It has a corbelled roof. There are traces of a stairwell on the S side of the turret (Ni Mharcaigh, 1997, 268-269).
3	DU021-005002 RPS 184	Class: Graveyard Townland: KILBRIDE Scheduled for inclusion in the next revision of the RMP: Yes Description: Located in a circular raised graveyard (L 42m, Wth 30) on the edge of a valley. Encloses the remains of a medieval church (DU021-005001).
4	DU021-005003 RPS 184	Class: Ecclesiastical enclosure Townland: KILBRIDE Scheduled for inclusion in the next revision of the RMP: Yes Description: The church of Kilbride is located in a circular raised graveyard (L 42m, Wth 30) on the edge of a valley. This may be the remains of an early ecclesiastical enclosure.

5	DU017-082	Class: Field system Townland: NANGOR Scheduled for inclusion in the next revision of the RMP: Yes Description: Excavations in 2001 revealed a medieval ditch complex. This appeared to represent the remains of medieval field boundaries with associated water management gullies. Some 1600 sherds of local medieval pottery were recovered and two sherds of imported ware (Doyle 2003, 135-136).
6	DU017-080	Class: Barrow - ring-barrow Townland: KILMAHUDDRICK Scheduled for inclusion in the next revision of the RMP: Yes Description: Geo-physical survey and test trenching in 2000 revealed a ring barrow. This was located in a slightly elevated position. It comprises a ditch (Wth 2.5m, D 1.6m) which encloses a maximum area of 13m. Fragments of a human skull was found in the upper fill of the ditch. A 'cist-like structure' was exposed in the northern quadrant of the ditch. Cremated bone associated with Early Bronze Age pottery and a bead were found within the interior of the enclosing ditch. Soil samples from the ditch contained remains of barley, wheat, oats and evidence for hazel, haw and sloe (Doyle 2002, 75-6).
7	DU017-084	Class: Fulacht fia Townland: NANGOR Scheduled for inclusion in the next revision of the RMP: No Description: Monitoring of topsoil-stripping in 2000 revealed the remains of a small fulacht fiadh. This consisted of a small pit or trough, a spread of heat-cracked stone and a linear feature to the south-west of the trough. The pit/trough consisted of a subcircular cut into natural, 0.56m by 1.25m. This spread measured 1.92m north-south x 1.18m with a maximum depth of 0.05m. Approximately 6m to the west of the spread a linear gully feature was revealed. This gully consisted of a cut into natural boulder clay measuring 2.57m north-south x 0.28-0.54m. This had a depth of 0.16m with sharply sloping sides and a flat base. The cut was filled with a moderately compact, mid-brown clay containing frequent pieces of oxidised clay and occasional flecks of charcoal. Infrequent fragments of burnt bone were noted in the fill (Doyle, 2001)
8	DU017-034	Class: Castle - tower house Townland: GRANGE (Newcastle By.) See architectural heritage table below.
9	DU017-037	Class: Castle - unclassified Townland: NANGOR Scheduled for inclusion in the next revision of the RMP: Yes Description: Located in flat terrain. Named 'Nangor castle' on the 1837 edition OS 6-inch map and 'Nangor castle on site of castle' in the later edition. This indicates that the castle had been incorporated into an 19th-century mansion. All buildings on the site have been recently demolished leaving no surface trace of the earlier building. In 1532 Ffinian Bassenett was residing at Nangor (Ball 1906, 112; Healy 1974, 22; D'Alton 1976, 345 (2nd ed.)). There are earthworks in the field to the south of the castle. Pre-development testing in the vicinity of the castle in 1996 produced evidence for a substantial ditch and an associated shallower linear feature of uncertain date. Trial-trenching in the field bounding the castle site to its south uncovered several lignite cores and slivers, early medieval pottery and metal slag suggesting a date in at least the early medieval period- twelfth/thirteenth century. Several trenches cut through a large ditch located on both the east and west of the field. Human skeletal remains were also uncovered, as were numerous charcoal-flecked irregular features (McConway 1997, 17).

10	DU021-108	Class: Concentric enclosure Townland: BALLYBANE Scheduled for inclusion in the next revision of the RMP: Yes Description: Not indicated on any OS map a large concentric enclosure is visible as a crop-mark on an aerial photo. A second enclosure (DU021-109) is visible to the SW.
11	DU021-109	Class: Enclosure Townland: BALLYBANE Scheduled for inclusion in the next revision of the RMP: Yes Description: Not indicated on any OS map this enclosure is as a crop- mark on an aerial photo. A second larger enclosure (DU021-108) is visible to the NE.

Architectural heritage records in the study area

TOR ref	Description
12: Skylawn no 4, off Nangor Road, DEANSRATH	
NIAH no. 11209005	Semi-detached single-bay single-storey house, c.1935. Roughcast finish with smooth rendered base course. Replacement uPVC windows. Hipped slate roof with red brick chimney stack. Later flat-roofed porch to east with timber panelled door. Appraisal One of a group of four semi-detached houses set in a now peaceful location on the formerly busier Nangor Road. Despite some alterations, this house retains its original proportions and remains an important element of this group, the unobtrusive siting of which adds visual interest to this rural road.
13: Skylawn, no 3, off Nangor Road, DEANSRATH	
NIAH no. 11209004	Semi-detached single-bay single-storey house, c.1935. Roughcast finish with smooth rendered base course. Tripartite timber sash window to front, door to side. Hipped slate roof with red brick chimney stack. Appraisal One of a group of four semi-detached houses set in a now peaceful location on the formerly busier Nangor Road, the unobtrusive siting of which adds visual interest to this rural road. This house is substantially intact, retaining original window, roofing and wall materials.
14: Skylawn, no 1, off Nangor Road, DEANSRATH	
NIAH no. 11209002	Semi-detached single-bay single-storey house, c.1935. Roughcast finish with smooth rendered base course. Tripartite timber sash windows to front, door to side. Hipped slate roof with red brick chimney stack. Appraisal One of a group of four semi-detached houses set in a now peaceful location on the formerly busier Nangor Road, the unobtrusive siting of which adds visual interest to this rural road. This house is substantially intact, retaining original window, roofing and wall materials.
15: Skylawn, no 2, off Nangor Road, DEANSRATH	
NIAH no. 11209003	Semi-detached single-bay single-storey house, c.1935. Roughcast finish with smooth rendered base course. Replacement uPVC windows. Hipped slate roof with red brick chimney stack. Appraisal One of a group of four semi-detached houses set in a now peaceful location on the formerly busier Nangor Road. Despite some alterations, this house retains its original proportions and remains an important element of this group, the unobtrusive siting of which adds visual interest to this rural road.

16: Grange Castle, Clondalkin	
DU017-034	Class: Castle - tower house Townland: GRANGE (Newcastle By.)
Scheduled for inclusion in the next revision of the RMP	Attached to a farmhouse in flat, low-lying ground. Shown as a castle on the Down Survey (1655-6) map. This is a rectangular tower house with a square tower that's projects to the N in the NE corner. The tower house is three storeys high. The walls are plastered but where stonework is visible it is coursed limestone with roughly dressed quoins. The windows are all later insertions. Entrance is in the N wall through a round-headed doorway. There is a murder hole over the entrance lobby which leads into a vaulted ground floor (int. dims. L 7.08m; Wth.5.2m). Access to stair turret is off the lobby through a round-headed doorway. First floor not accessible. Second floor is accessed through a two-centred arched doorway. There is a garderobe chute in the SE corner which is supported by corbels and entered through a narrow round-headed door to a small circular chamber lit by a single ope. The jambs are hammer-dressed. There is a square stair tower or cap house which rises above parapet level (Healy 1974, 22; Mc Dix 1897, XXXIX, 22). A drawing by Beranger in 1773 shows stepped crenellations at parapet level (Harbison 1998, 168-9). In 1997 monitoring and excavation were undertaken in the vicinity of the castle, in advance of the construction of an access road and the excavation of foul sewers for a Business Park at Grange Castle. A curving ditch was identified orientated north-east/south-west. It was 30m in length, 0.8-0.9m deep, and 1.2-2.4m wide. The upper fills contained charcoal, mortar, flint and animal bones, and were aceramic. A decorated bone comb, stick-pin and knife gave the later ditch phase a terminus ante quem of from the 12th to the 13th century AD. A stone causeway, 0.5-0.6m wide and 0.06-0.1m deep, crossed the ditch. The evidence suggests that extensive early medieval and post-medieval activity survives in this area; the ditches can be interpreted as medieval field boundaries (O'Brien, R. 1998, 26-7).
NIAH no. 11208013 RPS 132, RM	Grange Castle Ruinous remains of detached multiple-bay three-storey over vaulted basement former tower house, remodelled c. 1750 by addition of two-bay two-storey domestic wing attached to the west, with large supporting wall buttresses to the south. All openings blocked in roughcast walls leading to partially roofless wallheads. Earlier house, built c.1580, retains slender projecting square tower and garderobe. Large chimneybreast exposed where buildings have been demolished in the east. Appraisal Despite its ruinous state, many features of the two building phases can be clearly discerned, and the building remains a prominent landmark in the area.
17: Kilcarberry House, off Nangor Road	
NIAH no. 11209001 RPS 173	Detached three-bay two-storey house, c.1810, with projecting diagonally-set single-storey porch. Roughcast rendered walls. Single-pane timber sash windows. Timber panelled door with Ionic doorcase having radial elliptical fanlight. Hipped slate roof with brick chimney stacks. Lower two-storey rere section with lean-to slate roof forming catslide. Stone rubble outbuildings to rere in various states of dilapidation with pitched timber-framed slate roofs. Appraisal This attractive Georgian house is beautifully set in the rural landscape. It has been well-maintained and its unusual porch design makes it a unique and interesting building retaining its original proportions and styles of fenestration.
18: Officers' mess, Baldonnell Aerodrome (Casement Aerodrome)	

NIAH no. 11208028 RPS 188	Detached multiple-bay single-storey officers' mess, c.1932. Roughcast rendered walls with yellow brick base. Central entrance section with timber door having brick and tile dressings to surround, and three French windows to each side with tile lintels and concrete surrounds. uPVC casement windows to flanking sections. Hipped slate roof with sprocketed eaves, rendered chimney stacks, and cupola and parapet to entrance section. Canted side pavilions. X-plan north dormitory wing with decorated doorway. Conservatories to south, modern extension to east. Barrel-vaulted ballroom with original fixtures and fittings.
	Appraisal
TOR ref	Description
	A low, attractive officers' mess with rich decorative detailing, designed by W H Cooke of the Office of Public Works in 1927, intended to resemble part of an English village.
19: Office, Baldonnell Aerodrome (Casement Aerodrome)	
NIAH no. 11208025 RPS189	Detached twenty-three-bay two-storey T-plan airbase administration block, c.1938, with central breakfront bay of yellow brick with glazed timber doors having granite surround, and first floor window with metal grille over. Roughcast rendered walls with yellow brick base course. uPVC casement windows with red brick panels between storeys. Other faces similarly articulated. Hipped slate roof with sprocketed eaves, central bronze cupola having clock and helicopter weathervane. Faces onto parade ground and entrance.
	Appraisal A commanding office block containing a fine art deco entrance breakfront with many intact decorative features, flanked by restrained, well-proportioned elevations.
20: Church/chapel, Baldonnell Aerodrome (Casement Aerodrome)	
NIAH no. 11208024 RPS 190	Detached concrete-framed basilica-plan Roman Catholic church, built 1946. Seven-bay nave with two-bay chancel. Timber door in west porch, with barley-sugar mullions to porch and to five-light window over. Paired round-arched windows to aisles, triple-arched to clerestorey. Self-supporting poured concrete roof with concrete beams and semi-circular ribs, linked to stepped buttresses. Red tile, concrete and cut stone dressings. Pitched slate roof. Aviation themed fittings, including glass and spitfire-propeller cross. Associated memorial to deceased air men, comprising granite slab with cross-shaped void and four flanking pillars.
	Appraisal This singular church was built during the post-World War II timber shortage, resulting in its innovative all-concrete construction and unusual buttresses. The interior is particularly striking due to the bold geometry, contrasting colours and period details.
21: Hangar, Baldonnell Aerodrome (Casement Aerodrome)	

NIAH no. 11208027	Detached former flight shed, c.1917, now in use as an aircraft hangar. Yellow brick buttressed corner piers, the eastern incorporating an open platform. Seven bay lean-to brick office ranges to north and south, with uPVC casement windows. Walls and roof re-clad, c.1990, with corrugated metal. Sliding hangar doors to north and south on original cast-iron frames. Internal wall forms brick arcade. Associated memorial to first east-west Atlantic flight and inscribed stone panel inset in ground marking take-off point in 1928.
	Appraisal This, the oldest hangar on the base, retaining significant original fabric, was built as part of the standard pattern of four, as at Belgard Aerodrome. Sited due to the prevailing wind, this hangar was filmed for the movie "Blue Max". It flanks the starting point of the first east-west Transatlantic flight by the then base commander, J Fitzmaurice and Baron E G Hunefeld in a Junkers plane in 1928. It is, therefore, of historical importance for aviation.
22: Sports hall/centre/gymnasium, Baldonnell Aerodrome (Casement Aerodrome)	
NIAH no. 11208026	Detached multiple-bay double-height gymnasium, c.1937, with single-storey lean-to extension to east. Roughcast rendered concrete walls. uPVC casement windows, fixed lights to east clerestorey and western concrete grid wall. uPVC glazed door. Transverse full-span reinforced concrete roof in nine barrel vaulted sections, approached by external open spiral staircase.
	Appraisal The dramatic profile of this gymnasium roof shows early use of pre-cast concrete trusses. The spiral staircase is reminiscent of German modern movement design and is a particularly striking abstract form.

Technical Appendix 2.4: Archaeological Impact Assessment

past | present | future

ACS



**Archaeological Impact Assessment
of a proposed development site at
Profile Park, Grange Castle, Dublin 22**

ARCHAEOLOGICAL
CONSULTANCY
SERVICES UNIT

Client:

Ramboll

ITM: 703837, 730822

RMP/SMR Nos: N/A

Donald Murphy and Jeanne Rochford

2 August 2022

ACSU Ref.: 2272

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PROJECT DETAILS

Project	Profile Park, Grange Castle, Dublin 22
Report Type	Archaeological Impact Assessment
Archaeologist	Donald Murphy and Jeanne Rochford
Client	Ramboll UK Limited
Site	Profile Park, Grange Castle, Dublin 22
Townlands	Ballybane
ITM Refs	703837, 730822
RMP/SMR Nos	N/A
Protected Structure No.	N/A
Report Date	2 August 2022
ACSU Ref.	2272

Revision	Date	Description	Status	Author	Reviewed	Approved
0	02.08.2022	Archaeological Impact Assessment	Draft	D.M and J.R	M.L	D.M

NON-TECHNICAL SUMMARY

This report presents the findings of an archaeological impact assessment for a site at Profile Park, Grange Castle, Dublin 22 (ITM 703837, 730822). This assessment was carried out at the request of the client to accompany a planning application. It is based on the findings of a study of available sources and field survey results. It aims to identify and describe known and potential archaeological and cultural heritage constraints within the study area and offer recommendations for the mitigation of such potential impacts.

The site is roughly rectangular in shape and lies within the northeast portion of Profile Park, on lands adjacent to and south of New Nangor Road; west of internal Profile Park Road and within the southeast portion of the townland of Ballybane.

The site does not contain any Recorded Monuments listed within the Record of Monuments and Places (RMP) or Sites and Monuments Record (SMR). The nearest monument to the site is field system DU017-082, which was identified during excavation in 2001, approximately 0.5km to the northeast. The site contains no Protected Structures, as listed within the *South Dublin County Development Plan 2016–2022*, nor structures listed within the National Inventory of Architectural Heritage (NIAH) for County Dublin. The nearest Protected Structure is Kilcarberry House (RPS ID 173; NIAH Reg. No 11209001) located c. 0.6km to the southeast of the site.

The site was not subject to archaeological investigations previously. It does, however, lie adjacent to an area that was subject to recent assessments, including geophysical surveys (20R0006, 20R0080), test trenching and excavation (21E0061). Test trenching in March 2021, of the area directly adjacent and to the west and south, did not identify any features of archaeological significance. Approximately 210m to the southwest of the current site, however, geophysical survey (20R0080) confirmed the presence of archaeological remains, including a sub-circular enclosure and part of an early historic field system. This enclosure was since subject to targeted test trenching and excavation.

Cartographic and aerial imagery was reviewed as part of this assessment. No buildings were depicted on examined maps, and analysis of aerial imagery did not show any cropmarks that could indicate archaeological monuments. Buildings have been depicted along the site's west boundary since 1995, and an access road was added sometime before 2009.

A site visit was carried out on 15th of July 2022 by Jeanne Rochford and Robert Breen of Archaeological Consultancy Services Unit Ltd (ACSU). The site's south boundary, which is also a townland boundary between Ballybane and Kilbride, consists of mature trees and a stream/wet ditch. Should this townland boundary be impacted by the development, a photographic record of the boundary and an assessment of its significance and depth should be carried out. No additional structures or features of an archaeological nature were identified within the site.

Overall, an examination of the recorded monuments located in the site's immediate environs and the results of archaeological investigations carried out within the immediate environs of the site suggest that the site has archaeological potential. It is therefore recommended that a geophysical survey and archaeological test trenching be conditioned within any grant of permission on the site and before construction. This should be carried out by a licence-eligible archaeologist working under licence from the Department of Housing, Local Government and Heritage in consultation with the National Museum of Ireland.

Contents

1. INTRODUCTION.....	1
2. THE DEVELOPMENT	1
2.1 Archaeological Requirements	1
2.2 Methodology	1
3. ARCHAEOLOGICAL ASSESSMENT	2
3.1 Archaeological & Historical Background	2
3.2 Recorded Monuments.....	4
3.3 Previous Archaeological Investigations.....	5
3.4 Protected Structures, National Inventory of Architectural Heritage (NIAH)	7
3.5 Topographical Files of the National Museum of Ireland.....	8
3.6 Cartographic Review.....	8
3.7 Aerial Photography Review.....	9
3.8 Field Survey.....	9
4. CONCLUSIONS & RECOMMENDATIONS	10
5. BIBLIOGRAPHY.....	12
5.1 References.....	12
5.2 Other Sources.....	12
5.3 Cartographic and Photographic Sources	13

List of Tables

Table 1	Recorded Monuments in the environs of the site
Table 2	Previous archaeological investigations in the environs of the site
Table 3	Protected Structures and National Inventory of Architectural Heritage (NIAH) sites

List of Figures

Figure 1	Location of site
Figure 2	Location of site, previous archaeological investigations and nearby <i>Sites and Monuments Record</i> sites
Figure 3	Extract from <i>An actual survey of the county of Dublin</i> by John Rocque – southeast sheet (1760), showing approximate location of site
Figure 4	Extract from 1st edition Ordnance Survey (OS) 6-inch map (surveyed 1836 - published 1843), showing location of site
Figure 5	Extract from 3rd edition Ordnance Survey (OS) 25-inch map (surveyed 1908 – published 1910), showing location of site
Figure 6	Extract from Cassini edition Ordnance Survey (OS) 6-inch map (1935–38), showing location of site
Figure 7	Aerial view of site, showing location of previously excavated trenches and excavated enclosure (Licence No. 21E0061)

Plates

Plate 1	Entrance from New Nangor Road, looking south
Plate 2	Main field, looking west
Plate 3	Main field, looking south
Plate 4	Property boundary of upstanding house, looking northwest
Plate 5	Roundabout and entrance, looking southwest towards the site
Plate 6	Roundabout at site entrance, looking west
Plate 7	Disused sheds and yard, looking southwest
Plate 8	Site entrance from New Nangor Road, looking south
Plate 9	Site entrance, looking south
Plate 10	Site entrance gate, looking south from New Nangor Road
Plate 11	Site, looking east

Plate 12	Site, looking north-northeast
Plate 13	Site, looking south from northwest
Plate 14	Site, looking south
Plate 15	Site, looking north towards New Nangor Road
Plate 16	Site, looking south-southeast
Plate 17	General shot of site, looking south-southwest
Plate 18	Northeast end of site, looking south
Plate 19	Overview of site, looking south
Plate 20	Townland boundary, looking west
Plate 21	Upstanding house, looking south-southwest from New Nangor Road
Plate 22	Upstanding house, looking west from field
Plate 23	Disused sheds at southwest corner of site, looking west
Plate 24	Domestic yard, looking west

1. INTRODUCTION

This report presents the findings of an archaeological impact assessment for a site at Profile Park, Grange Castle, Dublin 22 (ITM 703837, 730822, Figures 1–2). This assessment was carried out at the request of the client to accompany a planning application. It is based on the findings of a study of all available resources, including historical, cartographic and photographic sources, and field survey results. It aims to identify and describe known and potential archaeological and cultural heritage constraints within the study area and offer recommendations for the mitigation of such potential impacts.

The site is roughly rectangular in shape and lies within the northeast portion of Profile Park, on lands adjacent to and south of New Nangor Road (R134); west of the internal Profile Park Access Road and within the southeast portion of the townland of Ballybane.

2. THE DEVELOPMENT

2.1 Archaeological Requirements

This archaeological impact assessment was carried out at the request of the client at a pre-planning stage in order to assess the archaeological potential of the site in relation to a proposed development, inform the design team of any possible underlying archaeological issues, and determine if any archaeological constraints are apparent in relation to the proposed development works.

2.2 Methodology

An assessment was carried out involving a literature review and consultation of various sources. This included the Record of Monuments and Places (RMP) and Sites and Monuments Record (SMR) compiled and updated by the National Monuments Service and the National Historic Properties Service. The RMP is comprised of manuals that list all known archaeological sites and monuments in a county with accompanying maps (based on Ordnance Survey (OS) six-inch maps) locating these sites. All sites included in the RMP are protected under the National Monuments Acts (1930–2004). The SMR consists of all records stored in the Archaeological Survey of Ireland national database and is presented in the Historic Environment Viewer, which also includes sites listed in the National Inventory of Architectural Heritage (NIAH). The last published RMP for County Dublin is dated 1998, and as such many of the sites listed in the SMR are scheduled for inclusion in the next revision of the RMP.

The Topographical Files of the National Museum of Ireland were also consulted to assess the area's archaeological potential. These files list, on a townland basis, all archaeological artefacts in the care of or known to the museum. Such a record can provide evidence for human settlement or activity in the absence of physical remains or documentary references. The results of previous and ongoing archaeological investigations were also taken into account in order to evaluate the level of archaeological remains coming to light in the area.

Historical maps, including those held by the Map Library of Trinity College Dublin, and aerial photography from the Geological Survey of Ireland and Google Earth were also consulted. These sources can indicate areas of archaeological potential through features like curving field boundaries, crop marks and soil marks and can provide information regarding the nature and extent of recorded archaeological sites that have become denuded since the early 19th century. Historical maps are also useful in identifying other features of cultural heritage significance.

The *South Dublin County Development Plan 2016–2022* was consulted as this contains a Record of Protected Structures (RPS). Further buildings and features of architectural interest in the area, that are not included on the Record of Protected Structures, are detailed in the National Inventory of Architectural Heritage (NIAH).

A site visit was also carried out; its purpose was to assess whether or not the proposed development area contained any evidence for the presence of any previously unrecorded sites or features of historical or archaeological significance.

3. ARCHAEOLOGICAL ASSESSMENT

3.1 Archaeological & Historical Background

The study area is located within Profile Park, on lands to the north of Baldonnell Casement Aerodrome, c. 12km to the west-southwest of Dublin City Centre. The site is situated within the southeast extremity of the townland of Ballybane, which is within the Parish of Clondalkin, in the Barony of Uppercross. An examination of the Placenames Database of Ireland (www.logainm.ie) can reveal important information about an area's natural and cultural heritage. Ballybane townland (*An Baile Bán*) was first mentioned in 1326 as Balibayne (in Calendar of Archbishop Alen's Register (McNeill 1950)) and can be translated as 'white town'. It was depicted as 'Ballybawn' on the Rocque's 1760 Actual Survey of County Dublin (Figure 3).

The remains of sites dating to the medieval period are common in this area, however, some prehistoric activity has also been discovered through recent archaeological investigations in Ballybane and surrounding townlands. Commencing in 2014, for example, archaeological test trenching and excavation (Licence No. 13E0471) within Grange Castle Business Park revealed a number of prehistoric sites within the townland of Ballybane. These include three *fulachtaí fia* or burnt mound sites, a circular Bronze Age structure, a possible Neolithic structure and an isolated cremation pit. Between 2015 and 2016, two clusters of cremations pits were also excavated (Licence No. 14E0453) in an adjacent site within the townland of Nangor. In total, approximately nine cremation burial pits were excavated, yielding a Middle Bronze Age date.

Similar to the prehistoric site-types which have been discovered in recent years, a large number of medieval sites have also been uncovered in light of the archaeological investigations which took place in the surrounding townlands. In 2001, excavation (Licence No. 01E0754) exposed a series of medieval ditches/fields systems, pits and cobbled surfaces in the townland of Nangor. Finds retrieved from the fills of these features include approximately 1,600 sherds of Leinster Cooking Ware and Dublin-type wares, as well as assorted iron finds, including nails, an armour-piercing arrowhead, a buckle, a key and an intact iron sickle. In the same townland, a cereal-drying kiln and medieval field boundaries were also excavated between 2015 and 2016 (Licence No. 14E0453), while from 2014 onwards, a large complex of ditched

enclosures dating to the early medieval period were excavated in the townland of Ballybane (Licence No. 13E0471). In 2016, a geophysical survey followed by a programme of archaeological test trenching (Licence No. 16E0531) was conducted in areas within Grange Castle South Business Park, also within the townland of Ballybane. Two of the sites surveyed had previously been identified through aerial photography and both are Recorded Monuments: a concentric enclosure (DU021-108----) and an enclosure (DU021-109----) (see Figure 2). Two more enclosure sites were also discovered during these investigations and are scheduled for inclusion in the next revision of the Record of Monuments and Places. A number of internal features associated with the sites were also recorded. More recently, geophysical surveys, test trenching and excavation (Licence Nos 20R0006, 20R0080 and 21E0061) in areas directly adjacent and to the south and west of the current site have revealed archaeological remains, including a sub-circular enclosure and part of an early historic field system (see Figure 7).

There is little historical or written information in relation to the early history of the study area and the townland of Ballybane. Accordingly, an examination at the wider landscape surrounding the site is beneficial. The site is located c. 3km to the west-southwest of Clondalkin. Clondalkin is a historic town (DU017-041----) that contains 12 Recorded Monuments, such as a church, round tower, an unclassified water mill and an unclassified castle. One Recorded Monument within Clondalkin, a church (DU017-042----), was only discovered in 1962 ahead of a housing scheme by Dublin County Council. Excavation revealed that the site consisted of an irregular oval-shaped enclosure, within which were the remains of a small stone church (Rynne 1967). This ecclesiastical enclosure (DU017-042001-) was defined by a low earthen bank. Large quantities of human remains were also uncovered during the course of the investigations.

The townland of Kilbride is south of and adjacent to Ballybane. There are four Recorded Monuments within the townland; a church (DU021-005001-), an ecclesiastical enclosure (DU021-005003-), a graveyard (DU021-005002-) and a castle (DU021-004----) (see Figure 2). Kilbride church is a single cell church, which is a style that has existed in Ireland from Early Christian times and is found throughout the island. Their origins are the tiny oratories of the earliest monasteries, which were probably built of wood (Ní Mharcaigh 1997, 249). The remains of a tower is present at the western end of the church and next to this is an arched porch where a doorway would have opened into a curved recess where a spiral staircase would have been, but there are no remains of this now. This was likely the entrance to the residence of the priest (Ball 1906, 70).

This area was under the control of Leinster rulers until the 12th century when the Anglo-Normans arrived. The castle at Kilbride was built before the 16th century. There are records of a lease to John Gibbons in 1537 and then in 1570 to Thomas Bathe. In the 16th century, the Bathe family held the lands of Kilbride and Nangor. The Batches were still in possession of the Kilbride lands into the 17th century but by the time of the Restoration they had been succeeded by the family of Carberry (Ball 1906, 68). Today, this castle, within the townland of Kilbride, has no visible trace above ground.

3.2 Recorded Monuments

The site does not contain any Recorded Monuments listed within the Record of Monuments and Places (RMP) or Sites and Monuments Record (SMR). The nearest monument to the site is a field system (DU017-082----) identified during excavation in 2001.

Table 1 is a list of the Recorded Monuments located in the environs of the site (see Figure 2). The entries have been revised and updated in light of recent research and are available in the National Monuments Service Archaeological Survey Database (<http://webgis.archaeology.ie/historicenvironment/>).

Table 1: Recorded monuments in the environs of the site

RMP/SMR No.	Class/Site Type	Description
DU017-082----	Field system	Excavations in 2001 revealed a medieval ditch complex. This appeared to represent the remains of medieval field boundaries with associated water management gullies. Some 1,600 sherds of local medieval pottery were recovered and two sherds of imported ware.
DU021-108----	Concentric enclosure	Not indicated on any OS map, a large concentric enclosure is visible as a crop-mark on an aerial photo. A second enclosure (DU021-109----) is visible to the SW.
DU021-109----	Enclosure	Not indicated on any OS map, this enclosure is as a crop-mark on an aerial photo. A second larger enclosure (DU021-108----) is visible to the NE.
DU021-004	Castle – unclassified	Situated in a narrow valley. There are farm buildings on the site. There is no visible trace above ground (Ball 1906, 66).
DU021-005001-	Church	Located in a circular raised graveyard (L 42m, Wth 30m) on the edge of a valley (DU021-005002-). This may be the remains of an early ecclesiastical enclosure (DU021-005003-). In 1228 the archbishop of Dublin granted the church of Kilbride to Andrew de Monevea as a prebend and later conferred it on the Canons of St Patrick's Cathedral (McNeill 1950, 75). In 1630 it was described as ruinous (Ronan 1941, 80). This church was attached to St. Patrick's Cathedral and was described at the dissolution in 1547 as an old chapel (Ball 1906, 68–70). Consists of a small rectangular building (int. dims L5.8m, Wth 3.63m, T 0.85m) with a NW turret in ruinous condition. Formerly entered through an opening in the W end (now damaged). Built of randomly coursed masonry. There is an aumbry in the E end of the N wall of the church. The E window has a S jamb of tufa. There are remnants of another window in the W end of the S wall. The NW turret (L 1.35m, Wth 0.77m, H 1.78m) is entered through a lintelled doorway off the church. It has a corbelled roof. There are traces of a stairwell on the S side of the turret (Ní Mharcaigh 1997, 268–9).
DU021-005002-	Graveyard	Located in a circular raised graveyard (L 42m, Wth 30m) on the edge of a valley. Encloses the remains of a medieval church (DU021-005001-).

RMP/SMR No.	Class/Site Type	Description
DU021-005003-	Ecclesiastical enclosure	The church of Kilbride is located in a circular raised graveyard (L 42m, Wth 30m) on the edge of a valley. This may be the remains of an early ecclesiastical enclosure.
DU017-037----	Castle – unclassified	<p>Located in flat terrain. Named 'Nangor castle' on the 1837 edition OS 6-inch map and 'Nangor castle on site of castle' in the later edition. This indicates that the castle had been incorporated into an 19th-century mansion. All buildings on the site have been recently demolished leaving no surface trace of the earlier building. In 1532 Ffinian Bassenett was residing at Nangor (Ball 1906, 112; Healy 1974, 22; D'Alton 1976 (2nd ed.), 345). There are earthworks in the field to the south of the castle. Pre-development testing in the vicinity of the castle in 1996 produced evidence for a substantial ditch and an associated shallower linear feature of uncertain date.</p> <p>Trial-trenching in the field bounding the castle site to its south uncovered several lignite cores and slivers, early medieval pottery and metal slag suggesting a date in at least the early medieval period - twelfth/thirteenth century. Several trenches cut through a large ditch located on both the east and west of the field. Human skeletal remains were also uncovered, as were numerous charcoal-flecked irregular features (McConway 1997, 17).</p>

3.3 Previous Archaeological Investigations

The site has not been subject to archaeological investigations previously, however, it is adjacent to an area subject to recent assessments, including geophysical surveys (Licence Nos 20R0006, 20R0080), test trenching and excavation (Licence No. 21E0061). This work revealed archaeological remains, including a sub-circular enclosure and part of an early historic field system located c. 210m to the southwest of the current site (see below for details).

Table 2 lists previous archaeological investigations undertaken in the environs of the site (Figure 2). The details are derived from the *Summary Accounts of Archaeological Excavations in Ireland* (www.excavations.ie) and discussed further below.

Table 2: Previous archaeological investigations in the environs of the site

Site	Licence No.	Site Type	Investigation Type
2021:110 – Profile Park, Kilbride, Dublin	21E0061; 21E0061 ext.	Prehistoric enclosure	Test trenching and excavation
2021:111 – Profile Park, Ballybane and Kilbride, Dublin	21E0061	Non-archaeological	Test trenching
2019:755 – Milltown 1, Grange Castle	19E0680	Concentric enclosure, furnaces, kilns,	Excavation

Site	Licence No.	Site Type	Investigation Type
West, Dublin		pits, postholes and spreads	
2019:076 and :209 – Nangor Road, Clondalkin, Dublin	19E0170	Cobbled surfaces and stone-built wall foundations associated with 18th-century house built on site of Nangor Castle	Test excavation and monitoring
2020:440 – Castlebaggot sub-station, Dublin	17E0394	Pits, postholes, stakeholes, curvilinear ditch, and a spread of burnt stone and clay	Excavation
2016:084 – DSF, Grange Castle Business Park, Dublin 22	14E0453	Bronze Age cremation pits and medieval cereal-drying kiln	Excavation
2020:441 – Microsoft Campus, Grange Business Park, Ballybane, Dublin 2016:083 Dub06 Data Centre Grange Castle Business Park, Ballybane, Dublin 22	13E0471	Neolithic and Bronze Age features: stakeholes, postholes, pits, curvilinear ditch, burnt mound, and a cremation	Excavation
2007:530 – Nangor, Dublin	07E0588	Early medieval enclosure (see 96E0273 below) and possible remnants of Nangor Castle and/or 18th-century house, including landscaped garden features	Monitoring and test trenching
2001:455 – Grange Castle International Business Park	01E0754	Medieval ditch complex, pits and cobbled surfaces	Excavation
1996:068 – Nangor Castle, Clondalkin, Dublin	96E0273	A large ditch, possibly from a ploughed out rath or ring-ditch. Human skeletal remains were also uncovered.	Test trenching

In recent years, various archaeological assessments have been carried out within the Profile Park Business Park. This work, which was completed in Spring 2022, took the form of geophysical surveys, archaeological test trenching and archaeological excavation. Two large areas within the Park were subject to geophysical survey by ACSU (20R0080) and by TARGET and ACSU (20R0006). These identified the location of a number of previously unrecorded archaeological remains, including a sub-circular enclosure, part of an early historic field system and a pre-existing historic field boundary (Russell & Breen 2020). Part of the overall site was subsequently subject to test trenching and excavation (21E0061 and 21E0061 ext.) between 2020 and 2022. Test trenching in March 2021 of the land directly adjacent and to the west and south did not identify any features of archaeological significance (Murphy 2021a). The enclosure was also subject to targeted test trenching and excavation (Murphy 2021b). The latter confirmed the remains of an oval/circular enclosure, measuring 37m in length by 34m in width. Based on preliminary analysis of the pottery, the enclosure can be dated to the Bronze Age; post-excavation analyses are ongoing with a final report expected later this year.

There have also been several archaeological excavations carried out ahead of developments throughout the Grange Castle Business Park. Between 2000 and 2001, for example, excavations (01E0754) in the townland of Nangor revealed

a medieval ditch complex, contemporary pits and cobbled surfaces. The excavation recovered 1,600 sherds of medieval pottery comprised of Leinster Cooking Ware and Dublin-type wares. Test trenching in 2014, followed by excavations (13E0471) that carried on intermittently until 2016 also revealed several sites of prehistoric and early medieval date. One area consisted of two prehistoric *fulachtaí fia* or burnt mounds, preserved in a waterlogged field and including unlined troughs, pits, stakeholes and a well. Another area comprised a series of associated ditched enclosures, one of which was 48m in diameter, included iron knives, quern stones and animal bones, and was radiocarbon dated to the mid-seventh to mid-eight century AD. This site was enclosed by an outer ditch, measuring 86m in diameter, which also contained cattle skulls and had a large D-shaped enclosure abutting the southern side. A smaller enclosure, possibly representing a roundhouse, was also uncovered, as well as two inhumation burials within a shallow grave. Between 2015 and 2016, additional excavations (14E0453) uncovered a cereal-drying kiln, medieval field boundaries and two clusters of cremation pits. There was a total of nine cremation pits containing cremated bone in two separate clusters and these were dated to the Middle Bronze Age. Renewed development at this site in 2016 resulted in the excavation (13E0471) of additional sites of a prehistoric nature. This included stakeholes, postholes, pits, a curvilinear ditch, a truncated burnt mound, and an isolated cremation. One of the sites was a structure of likely Neolithic date in the form of postholes and pits. The postholes produced 38 sherds of pottery from 14 vessels of Early Neolithic type (Dunmurry-Ballymerlagh Type). They also produced numerous charred hazelnut shells and worked implements of flint, quartz, chert, sandstone, shale, and siltstone, a high proportion of which were blades. Ditch segments forming a U-shaped arrangement may also have represented the remains of a house, with three abraded sherds of pottery suggesting a Middle Bronze Age date.

To the far northwest of the current site, excavation (19E0680) in 2019 in advance of the construction of an access road associated with the Grange Castle West Business Park, also revealed two concentric enclosures. This comprised an outer ditch that was sub-circular in plan and enclosed an area measuring 32m in length by 28.6m in width. The inner ditch enclosed an area measuring c. 11m in diameter. The area between the two ditches had several features present, including a number of furnaces, kilns, pits, postholes and deposits that all appeared to relate to metalworking. Preliminary interpretation is that this site dated to the early medieval period, and post-excavation is ongoing.

3.4 Protected Structures, National Inventory of Architectural Heritage (NIAH)

The site contains no Protected Structures as listed within the *South Dublin County Development Plan 2016–2022* nor any structures listed in the National Inventory of Architectural Heritage for County Dublin. The nearest Protected Structure is Kilcarberry House (RPS ID 173; NIAH Reg. No 11209001) located c. 0.6km to the southeast of the site (Figure 2).

The following Table 3 provides a description of the nearest Protected Structures, as listed in the Record of Protected Structures (RPS) in the *South Dublin County Development Plan 2016–2022*.

Table 3: Protected Structures and National Inventory of Architectural Heritage (NIAH) sites

Full Address	NIAH ID	RPS ID	Description
Kilcarberry House, off Nangor road, Kilcarbery, Dublin	11209001	173	Detached three-bay two-storey Georgian house, c.1810, with projecting diagonally-set single-storey porch. Roughcast rendered walls. Single-pane timber sash windows. Timber panelled door with Ionic doorcase having radial elliptical fanlight. Hipped slate roof with brick chimney stacks. Lower two-storey rear section with lean-to slate roof forming catslide. Stone rubble outbuildings to rear in various states of dilapidation with pitched timber-framed slate roofs.
Castle Bagot House, Kilmactalway, Milltown, Dublin	11208010	180	Detached five-bay three-storey former country house, c.1800, with full-height canted entrance bay. Now in use as offices. Coursed rubble stone walls, originally rendered, with ashlar quoins. Timber casement windows with flat brick or stone arches and stone sills. Panelled timber doors with cut stone doric pilasters, fanlight and pediment. Hipped artificial slate roofs with two stone chimney stacks. Cast-iron gates with late twentieth-century cut stone piers having reused original frieze blocks with swags.

3.5 Topographical Files of the National Museum of Ireland

No archaeological finds are listed within the Topographical Files of the National Museum of Ireland for the townland of Ballybane. However, four are listed in relation to the adjacent townland of Kilbride and these include pottery (NMI ID 1873:29.1), human remains (NMI ID 1873:29.2 and NMI ID 4530:Wk176.2), and an urn (NMI ID 2676:Wk176.1). They are all noted as found at the 'Valley of the River Liffey near Kilbride'. Kilbride is located directly southeast of Ballybane.

3.6 Cartographic Review

A review of available historic mapping for the area was carried out to include the Rocque map of 1760 and various editions of those compiled by the Ordnance Survey of Ireland, including the 6-inch (1836 and 1935–38) and 25-inch (1908) maps. Potential archaeological or cultural heritage features are marked on such maps and provide a useful resource in identifying sites, particularly if they no longer have any above-ground remains.

The 1760 map shows the site within a pasture field, within the townland of 'Ballybawn', to the south side of the 'New Canal', between the settlements of 'Mill Town' and 'Nanger' (Figure 3). The area is depicted as predominantly pastureland. A road, originating southwest of the study area, leads from 'Mill Town' through 'Ballybawn' and passes 'Church in Ruins', which represents DU021-005001-. To the south of the church, the area is labelled as 'Killbride'.

On the Ordnance Survey maps of 1836, 1908 and 1935–38, the site is shown adjacent to and south of Nangor Road (Figures 4–6). The south boundary of the site is formed by a stream that is also a townland boundary between Ballybane and Kilbride. No buildings are shown within the site on examined mapping. The site is shown as a part of a large field that

remains unchanged from the mid-19th century onwards. Griffith's Valuation of 1847–64 records this as Church land, belonging to the Dean and Chapter of St. Patrick's (a Thomas Kiernan Esq.) and leased by Alexander Graydon Esq. of Newcastle, for grazing horses and cows.

No monuments of archaeological significance were identified during the examination of cartographical sources.

3.7 Aerial Photography Review

A review of the available aerial photography for the area was also undertaken as part of this assessment. Aerial photographs dating between 1995 and 2013 from the Ordnance Survey of Ireland and Google Earth imagery dating between 2009 and 2022 were assessed. Unrecorded archaeological sites can often be identified in aerial photographs as cropmarks or differential growth in a field. No such cropmarks were noted on the proposed development site or in any of the surrounding fields.

The site appears to be largely unchanged since the 1995 aerial photograph. In this, modern outbuildings with a yard are shown along the west boundary of the site and a dwelling is visible in the northwest corner of the site, surrounded by mature hedgerows. By 2003, a roundabout was added on New Nangor Road, with access to the south, and by 2009 the internal access road to the Profile Park was constructed. The site lies adjacent to and west of this inner road. The Google Earth aerial imagery from March 2022 shows excavated test trenches directly west of the site, as well as the enclosure to the south-west being excavated under Licence No. 21E0061 (Figure 7).

3.8 Field Survey

The purpose of this field survey was to assess whether or not the site contained evidence for previously unrecorded areas or features of archaeological significance. The site was inspected on 15th of July 2022 by Jeanne Rochford and Robert Breen of Archaeological Consultancy Services Unit Ltd (Plates 1–24).

The site is bound from the east by the internal Profile Park Access Road with a bike/footpath lined with trees, and from the north by the New Nangor Road (R134). There is an entrance (Plate 9) to the Profile Park within the northeast portion of the site, to the south and off the roundabout (Plate 5) on New Nangor Road. For ease of description the site was divided into three areas: eastern, central, and northwestern and southwestern.

The eastern area can be accessed via the internal road (Plates 5–6) and consists of a maintained green area that is within the active business park (Plates 11–19). To the west is a central, larger field that, up until recently, was used as pasture. The greenfield areas are divided by a metal fence aligned roughly north–south (Plates 17–19). The former pasture field can be accessed off New Nangor Road (Plates 1, 8 & 10) by two separate entrances. During the site inspection, it was noted that some groundworks, in the form of piling, had taken place recently onsite, including several environmental test pits. These were visible throughout the green fields.

In the northwestern corner of the site stands a two-storey dwelling that can be accessed from New Nangor Road. The east boundary of this plot within the pasture field is lined with mature trees. It was unclear if this property was vacant at the time of the site visit. To the south of this property, within the southwest portion of the site, are an associated tarmacked yard and disused sheds (Plates 21–24). The townland boundary between Ballybane and Kilbride is upstanding and extends northwest to southeast to form the south boundary of the site. It consists of mature trees and a stream/wet ditch (Plate 20). Should this townland boundary be impacted by the development, a photographic record of the boundary and an assessment of its significance and depth should be carried out by a licence-eligible archaeologist. This type of assessment would be undertaken during test trenching and include recording a small section of the ditch.

No structures or features of an archaeological nature were identified within the site and no artefacts were recovered during the walkover.

4. CONCLUSIONS & RECOMMENDATIONS

The site at Profile Park, Grange Castle, Dublin 22, is roughly rectangular in shape and lies within the northeast portion of the Profile Park, on lands directly south of the New Nangor Road (R134); west of the internal Profile Park Access Road, and within the southeast portion of the townland of Ballybane.

The site does not contain any Recorded Monuments listed within the Record of Monuments and Places (RMP) or Sites and Monuments Record (SMR). The nearest monument to the site is field system DU017-082----, which was identified during archaeological monitoring (00E0718) in 2001. The site contains no Protected Structures, as listed within the *South Dublin County Development Plan 2016–2022*, nor any structures included in the National Inventory of Architectural Heritage (NIAH) for County Dublin. The nearest Protected Structure is Kilcarberry House (RPS ID 173; NIAH Reg. No 11209001), located c. 0.6km to the southeast of the site.

The site was not subject to archaeological investigations previously, however, it lies adjacent to an area that was subject to assessments recently, including geophysical surveys (20R0006, 20R0080), test trenching and excavation (21E0061). Test trenching (21E0061) in March 2021, of the area directly adjacent and to the west and south, did not identify any features of archaeological significance. Approximately 210m to the southwest of the current site, however, geophysical survey (20R0080) confirmed the presence of archaeological remains, including a sub-circular enclosure and part of an early historic field system. This enclosure was since subject to targeted test trenching and excavation (21E0061). It measured 37m in length by 34m in width and based on artefactual evidence can be dated to the Bronze Age; post-excavation analyses are ongoing. In addition to this site, further prehistoric, medieval and post-medieval remains have also been uncovered in advance of developments within Grange Castle Business Park, including prehistoric *fulachtaí fia*, cremation burials and structures, an early medieval settlement complex comprising multiple ditched enclosures and evidence for cereal-drying kilns and metalworking.

Cartographic and aerial imagery was also reviewed as part of this assessment. No buildings were depicted on the examined maps, with the site as a large field remaining unchanged from the mid-19th century until the mid-20th century.

This is also reiterated by Griffith's Valuation of 1847–64, which records this as Church land leased for grazing horses and cows. An examination of aerial imagery did not show any cropmarks that could indicate archaeological monuments. Buildings have been depicted along the site's west boundary since 1995, and an access road was added sometime before 2009.

The site visit was carried out on 15th of July 2022 by Jeanne Rochford and Robert Breen of ACSU. The south boundary is also a townland boundary between Ballybane and Kilbride. It consists of mature trees and a stream/wet ditch. Should this townland boundary be impacted by the development, a photographic record of the boundary and an assessment of its significance and depth should be carried out by a licence-eligible archaeologist. This type of assessment would be undertaken during test trenching and include recording a small section of the ditch. No additional structures or features of an archaeological nature were identified within the site.

Overall, an examination of known monuments located in the site's immediate environs, including an assessment of the results of archaeological investigations carried out within the immediate environs, suggest that the Profile Park site has archaeological potential.

It is therefore recommended that a geophysical survey and archaeological test trenching should be conditioned within any grant of permission on the site and in advance of construction. This should be carried out by a licence-eligible archaeologist working under licence from the Department of Housing, Local Government and Heritage in consultation with the National Museum of Ireland.

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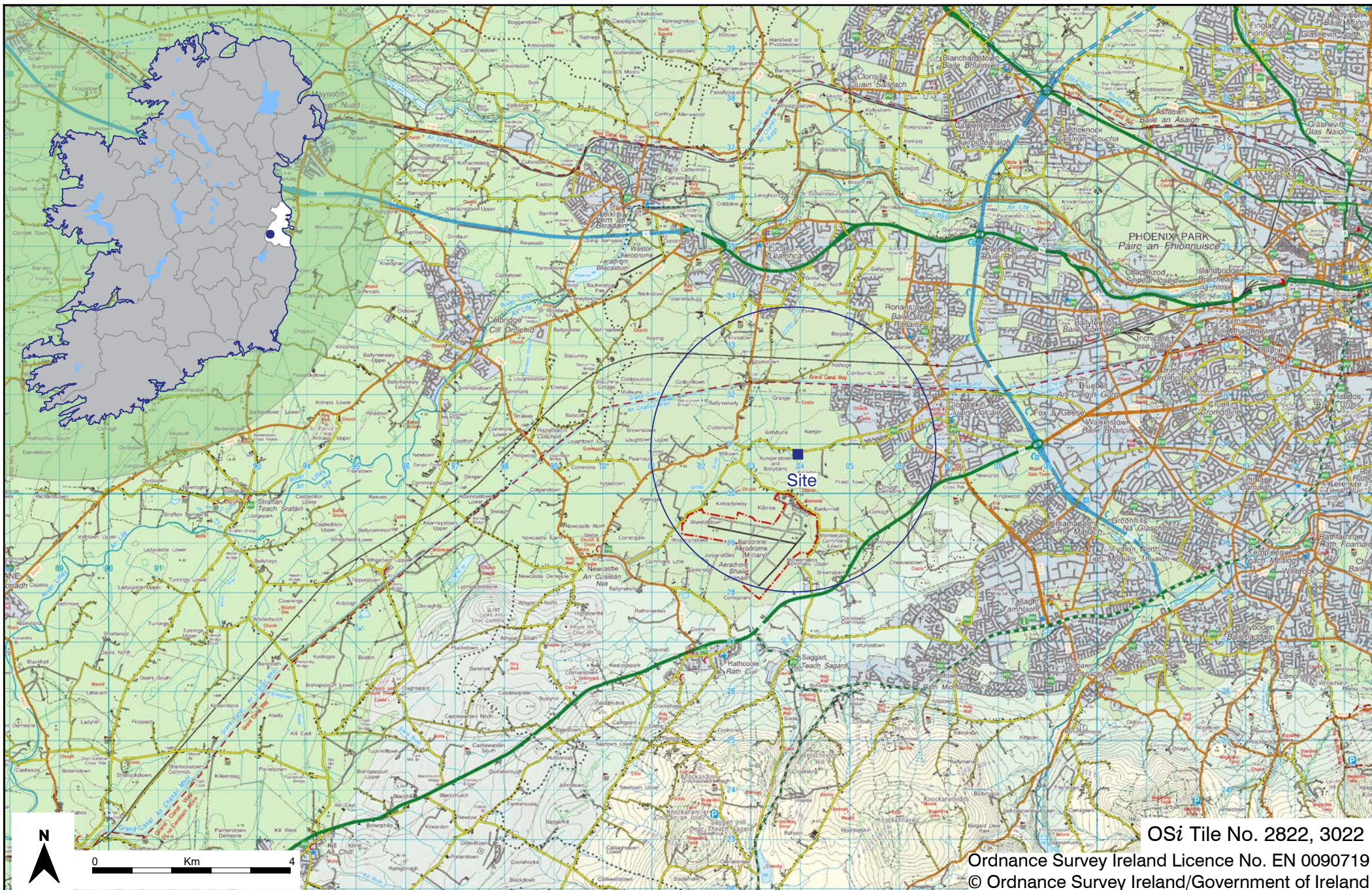
Rocque's Map of 1760 (An actual survey of the county of Dublin – southeast sheet).

First edition Ordnance Survey (OS) 6-inch map (surveyed 1836 - published 1843).

Third edition Ordnance Survey (OS) 25-inch map (surveyed 1908 - published 1910).

Cassini edition Ordnance Survey (OS) 6-inch map (1935–38).

South Dublin Historical Mapping – Fourth Edition Six Inch Maps (1938).



Project Northeast Profile Park, Grange Castle, Dublin 22

Date August 2022

Drawing No. 2272_C0001


Figure 1 Location of site

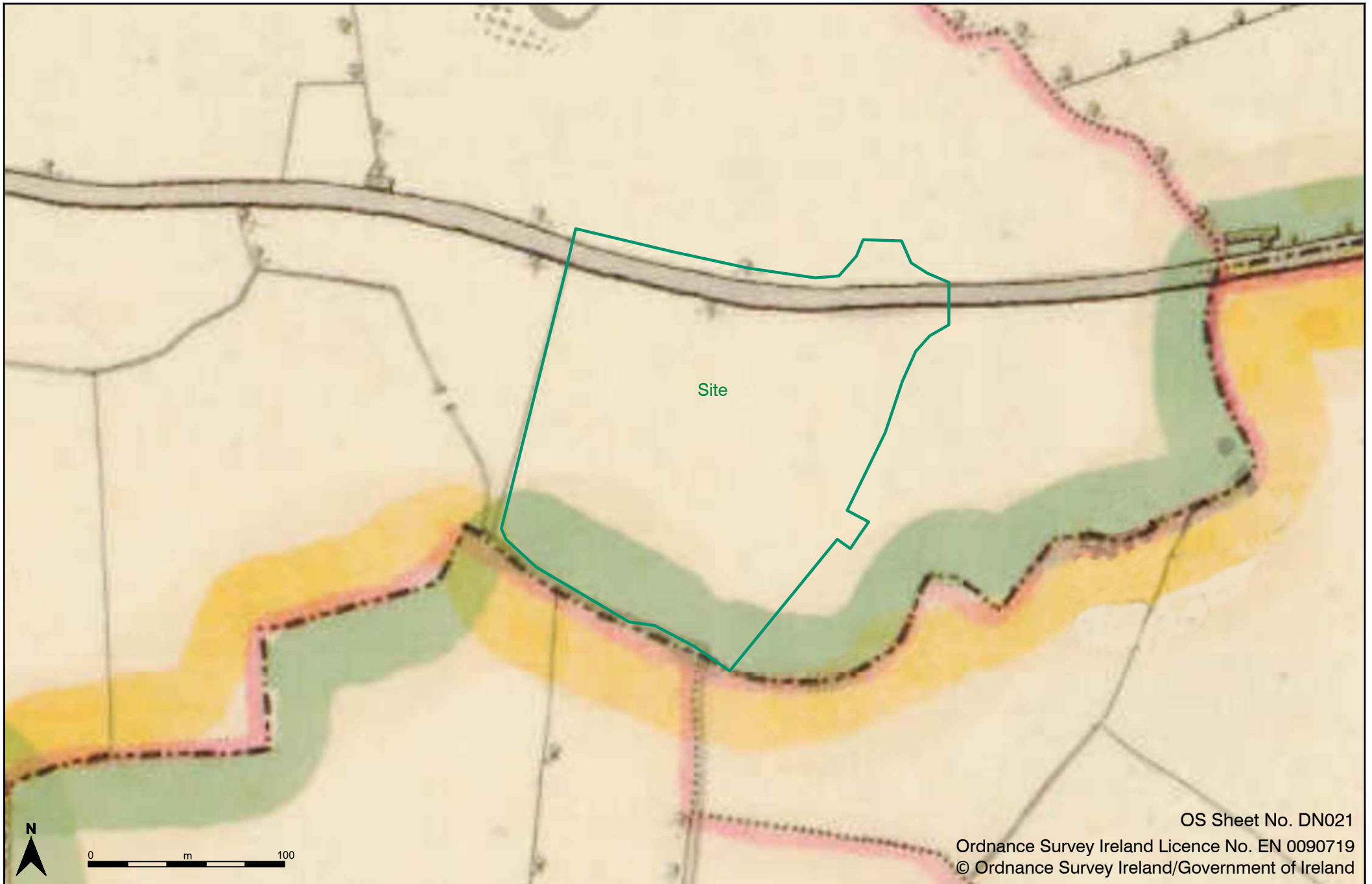
Scale 1:100,000 @ A4





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Project Northeast Profile Park, Grange Castle, Dublin 22	Date August 2022	Drawing No. 2272_C0003	
Figure 3 Extract from An actual survey of the county of Dublin by John Rocque - southeast sheet (1760) , showing approximate location of site		Scale Not to scale	



OS Sheet No. DN021

Ordnance Survey Ireland Licence No. EN 0090719

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Project Northeast Profile Park, Grange Castle, Dublin 22

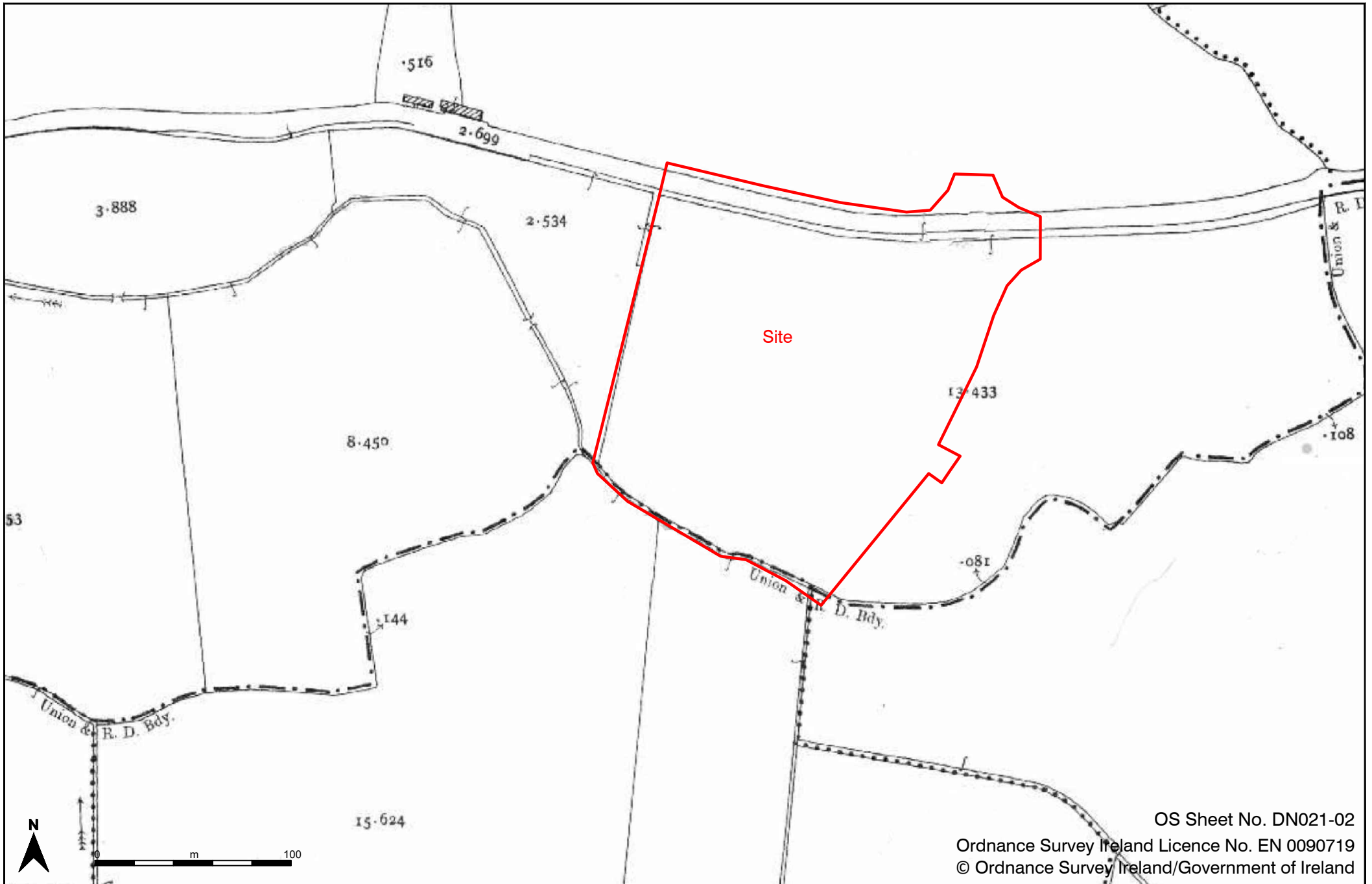
Date August 2022

Drawing No. 2272_C0004

Figure 4 Extract from 1st edition Ordnance Survey (OS) 6-inch map (surveyed 1836 - published 1843), showing location of site

Scale 1:2,500 @ A4





Project Northeast Profile Park, Grange Castle, Dublin 22

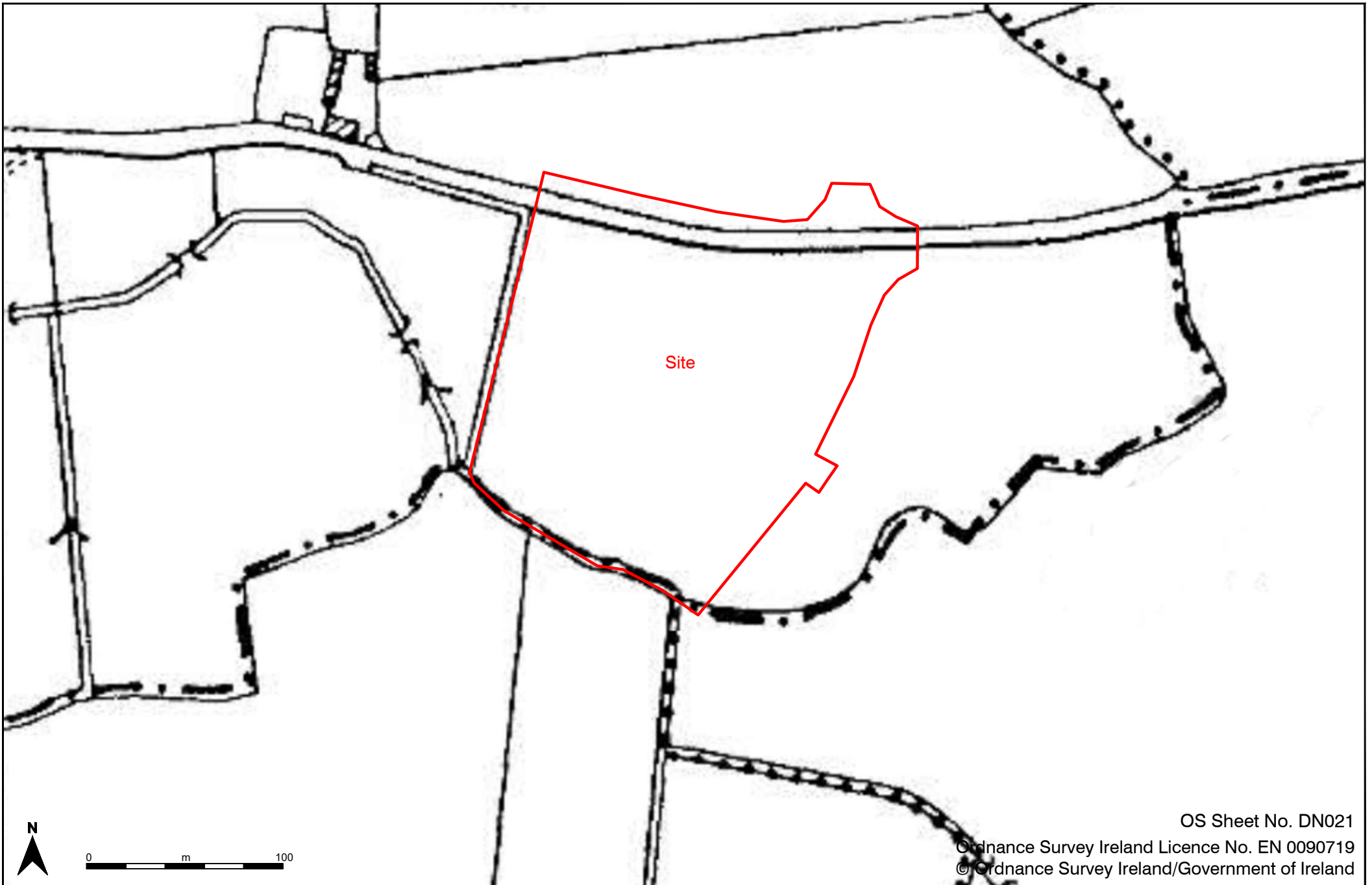
Date August 2022

Drawing No. 2272_C0005

Figure 5 Extract from 3rd edition Ordnance Survey (OS) 25-inch map (surveyed 1908 - published 1910), showing location of site

Scale 1:2,500 @ A4





OS Sheet No. DN021

Ordnance Survey Ireland Licence No. EN 0090719

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Project Northeast Profile Park, Grange Castle, Dublin 22

Date August 2022

Drawing No. 2272_C0006

Figure 6 Extract from Cassini edition Ordnance Survey (OS) 6-inch map (1935-38), showing location of site

Scale 1:2,500 @ A4





Project Northeast Profile Park, Grange Castle, Dublin 22

Date August 2022

Figure 7 Aerial view of site, showing location of previously excavated trenches and excavated enclosure (licence No. 21E0061)



Scale 1:2,500 @ A4

Drawing No. 2272_C0007



Plate 1: Entrance from New Nangor Road, looking south



Plate 2: Main field, looking west



Plate 3: Main field, looking south



Plate 4: Property boundary of upstanding house, looking northwest



Plate 5: Roundabout and entrance, looking southwest towards the site



Plate 6: Roundabout at site entrance, looking west



Plate 7: Disused sheds and yard, looking southwest



Plate 8: Site entrance from New Nangor Road, looking south



Plate 9: Site entrance, looking south



Plate 10: Site entrance gate, looking south from New Nangor Road



Plate 11: Site, looking east.



Plate 12: Site, looking north-northeast



Plate 13: Site looking south from northwest



Plate 14: Site, looking south



Plate 15: Site, looking north towards New Nangor Road



Plate 16: Site, looking south-southeast



Plate 17: General shot of site, looking south-southwest



Plate 18: Overview of site, looking south



Plate 19: Overview of site, looking southwest



Plate 20: Townland boundary, looking west



Plate 21: Upstanding house, looking south-southwest from New Nangor Road



Plate 22: Upstanding house, looking west from field



Plate 23: Disused sheds at southwest corner of site, looking west



Plate 24: Domestic yard, looking west

Technical Appendix 2.5: Archaeological Consultancy Services Unit, 2022, Report on Geophysical Survey at Profile Park, Grange Castle, Ballybane, Dublin

past | present | future

ACS



Report on Geophysical Survey at
Profile Park,
Grange Castle, Ballybane, Dublin

ARCHAEOLOGICAL
CONSULTANCY
SERVICES UNIT

Detection Licence No.: 22R0316

ITM: 703833, 730822

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30 September 2022

ACSU Ref.: 2272

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PROJECT DETAILS

Project	Geophysical Survey at Profile Park, Grange Castle, Ballybane, Co. Dublin
Report Type	Geophysical Survey Report
Licence No.	22R0316
Townland(s)	Ballybane
RMP No.	N/A
RPS Id.	N/A
ITM Ref.	703833, 730822
Consultant	Archaeological Consultancy Services Unit, 21 Boyne Business Park, Greenhills, Drogheda, County Louth
Archaeologist	Donald Murphy
Report Authors	Donald Murphy
Report Status	Final
Report Date	30 September 2022
ACSU Ref.	2272

Revision	Date	Description	Status	Author	Reviewed	Approved
0	30.09.2022	Geophysical Survey Report	Final	D.M	M.L	D.M

NON-TECHNICAL SUMMARY

This report details the results of a Geophysical Survey carried out on a site at Profile Park, Grange Castle, Ballybane, Co. Dublin (ITM 703833, 730822). The survey was carried out at the request of the client, to assess the archaeological potential of the site and inform the planning process and test trenching programme.

The site was subject to an Archaeological Impact Assessment carried out by Donald Murphy and Jeanne Rochford of Archaeological Consultancy Services Unit Ltd (ACSU) in August 2022 (Murphy and Rochford 2022). This recommended a programme of pre-development geophysical survey and archaeological test trenching targeting the anomalies identified.

The site does not contain any Recorded Monuments listed within the Record of Monuments and Places (RMP) or Sites and Monuments Record (SMR). The nearest monument to the site is field system DU017-082----, which was identified during excavation in 2001, approximately 0.5km to the northeast. The site contains no Protected Structures, as listed within the *South Dublin County Development Plan 2022–2028*, nor structures listed within the National Inventory of Architectural Heritage (NIAH) for County Dublin. The nearest Protected Structure is Kilcarberry House (RPS ID 173; NIAH Reg. No 11209001), located c. 0.6km to the southeast of the site.

The site was not subject to archaeological investigations previously. It does, however, lie adjacent to an area that was subject to recent assessments, including geophysical surveys (Licence Nos 20R0006 and 20R0080), test trenching and excavation (Licence No. 21E0061). Under the latter, test trenching in March 2021 of the area directly adjacent and to the west and south, did not identify any features of archaeological significance. However, a sub-circular enclosure and part of an early historic field system was identified c. 210m to the southwest of the site.

The geophysical survey was conducted on two fields (Fields 1 and 2) between 29th and 30th of September 2022 by Donald Murphy, Rob Breen and Jeanne Rochford of ACSU under licence 22R0316 issued by the Department of Housing, Local Government and Heritage in consultation with the National Museum of Ireland. A full detailed gradiometer survey was undertaken throughout the application area using a Bartington GRAD 601-2 dual-sensor fluxgate gradiometer cart system.

The survey identified two trends, a couple of positive responses of potential archaeological significance and a number of disturbances, particularly along the site edges. The trends were represented by two northwest to southeast aligned linears (Anomalies 1a, 1b). A scatter of positive responses (?Archaeology) that might be geological, modern in nature or represent iron in the topsoil were noted, but could equally represent cut features such as pits/post-holes, while large areas (Anomalies 2a, 2b) might represent large pits or spreads. Linear northeast to southwest aligned trends (Anomalies 3a, 3b) correspond with access to a former yard and are visible on aerial imagery, while a north to south aligned linear (Anomaly 3c) corresponds with wire fencing and represents associated ground disturbances. Bands of magnetic disturbance along the site edges, particularly the north and east extremities, are modern and derive from ground disturbance associated with road construction.

No definite signs of archaeology were identified. However, test trenching is recommended at a pre-construction phase targeting anomalies of potential archaeological significance (trends and ?Archaeology). This shall be carried out by a licence-eligible archaeologist working under licence from the Department of Housing, Local Government and Heritage. Should archaeological material be identified, further mitigation, preservation by record (excavation) or *in situ* preservation, might be recommended following discussion with the National Monuments Service.

Contents

1. INTRODUCTION.....	1
2. ARCHAEOLOGICAL CONDITION.....	1
3. METHODOLOGY.....	1
4. SURVEY OBJECTIVES.....	1
5. SOILS, GEOLOGY & TOPOGRAPHY.....	1
6. ARCHAEOLOGICAL ASSESSMENT.....	2
6.1 Archaeological and historical background.....	2
6.2 Previous Archaeological Investigations.....	4
6.3 Recorded Monuments.....	6
6.4 Protected Structures and National Inventory of Architectural Heritage (NIAH).....	7
6.5 Finds listed within the Topographical Files of the National Museum of Ireland.....	7
6.6 Cartographical evidence.....	8
6.7 Aerial photography.....	8
7. METHOD OF DATA INTERPRETATION.....	9
8. SURVEY RESULTS.....	9
9. CONCLUSIONS & RECOMMENDATIONS.....	10
10. REFERENCES.....	11
Appendix 1 - Summary Technical Information & Glossary of Terms.....	13

List of Tables

Table 1	Previous archaeological investigations in the environs of the site
Table 2	Recorded Monuments in the environs of the site

List of Figures

Figure 1	Location of site.
Figure 2	Location of site, previous archaeological investigations and nearby <i>Sites and Monuments Record</i> sites
Figure 3	Extract from An survey of the county of Dublin by John Rocque – southeast sheet (1760), showing approximate location of site
Figure 4	Extract from 1st edition Ordnance Survey (OS) 6-inch map (surveyed 1837 - published 1841), showing location of site
Figure 5	Extract from 3rd edition Ordnance Survey (OS) 25-inch map (surveyed 1892 - published 1893), showing location of site

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- Figure 6 Aerial view of site, showing geophysical survey results (greyscale image)
- Figure 7 Aerial view of site, showing interpretation of geophysical survey
- Figure 8 Detail of site development, showing interpretation of geophysical survey

1. INTRODUCTION

This report details the results of a Geophysical Survey carried out on a site at Profile Park, Grange Castle, Ballybane, Co. Dublin (ITM 703833, 730822, Figures 1–2). The site is located within Profile Park, on lands to the north of Baldonnell Casement Aerodrome, c. 12km to the west-southwest of Dublin City Centre. The site is situated within the southeast extremity of the townland of Ballybane, which is within the Parish of Clondalkin, in the Barony of Uppercross.

A full detailed gradiometer survey was undertaken throughout the application area using a Bartington GRAD 601-2 dual-sensor fluxgate gradiometer cart system. The geophysical survey was conducted in September 2022 by Donald Murphy, Rob Breen and Jeanne Rochford of Archaeological Consultancy Services Unit Ltd. (ACSU) under licence 22R0316 issued by the Department of Housing, Local Government and Heritage in consultation with the National Museum of Ireland.

2. ARCHAEOLOGICAL CONDITION

The geophysical survey is to be carried out at the request of the client to inform the planning process and test trenching programme.

3. METHODOLOGY

A full detailed gradiometer survey was undertaken throughout the application area using a Bartington GRAD 601-2 dual-sensor fluxgate gradiometer system, using a cart mounted on Bartington frame. A detailed survey was conducted with a sample interval of 0.25m and a traverse interval of 1m for all the survey areas within the site of the proposed development with variations in the magnetic field between (-100nT to +107.834nT).

4. SURVEY OBJECTIVES

The aim of the survey was to establish the presence of any archaeological features within this site and to further assess the extent and the nature of monuments if present within the area to be surveyed and to inform the archaeological test trenching programme to be carried out.

5. SOILS, GEOLOGY & TOPOGRAPHY

The site subjected to a geophysical survey is roughly rectangular in plan and lies within the northeast portion of Profile Park, on lands adjacent to and south of New Nangor Road (R134); west of the internal Profile Park Access Road and within the southeast portion of the townland of Ballybane. The site consists of two greenfields, bounded

by metal fencing and mature hedges from the west and a wet ditch from the south. A house and a former farmyard are located within the western portion of the site.

The site has an elevation of c. 75m OD. The underlying geology consists of dark limestone and shale and forms part of the Lucan Formation (undifferentiated). The formation comprises dark-grey to black, fine-grained, occasionally cherty, micritic limestones that weather paler, usually to pale grey. There are rare dark coarser grained calcarenitic limestones, sometimes graded, and interbedded dark-grey calcar. The dark limestone and shale are covered by mineral, poorly drained mainly basic soils (Geological Survey Ireland).

6. ARCHAEOLOGICAL ASSESSMENT

6.1 Archaeological and historical background

The site is located within Profile Park, on lands to the north of Baldonnell Casement Aerodrome, c. 12km to the west-southwest of Dublin City Centre. The site is situated within the southeast extremity of the townland of Ballybane, which is within the Parish of Clondalkin, in the Barony of Uppercross. An examination of the Placenames Database of Ireland (www.logainm.ie) can reveal important information about an area's natural and cultural heritage. Ballybane townland (*An Baile Bán*) was first mentioned in 1326 as Balibayne (in Calendar of Archbishop Alen's Register (McNeill 1950)) and can be translated as 'white town'. It was depicted as 'Ballybawn' on Rocque's 1760 *Actual Survey of County Dublin* (Figure 3).

The remains of sites dating to the medieval period are common in this area, however, some prehistoric activity has also been discovered through recent archaeological investigations in Ballybane and surrounding townlands. Commencing in 2014, for example, archaeological test trenching and excavation (Licence No. 13E0471) within Grange Castle Business Park revealed a number of prehistoric sites within the townland of Ballybane. These include three *fulachtaí fia* or burnt mound sites, a circular Bronze Age structure, a possible Neolithic structure and an isolated cremation pit. Between 2015 and 2016, two clusters of cremations pits were also excavated (Licence No. 14E0453) in an adjacent site within the townland of Nangor. In total, approximately nine cremation burial pits were excavated, yielding a Middle Bronze Age date.

Similar to the prehistoric site-types which have been discovered in recent years, a large number of medieval sites have also been uncovered in light of the archaeological investigations which took place in the surrounding townlands. In 2001, excavation (Licence No. 01E0754) exposed a series of medieval ditches/fields systems, pits and cobbled surfaces in the townland of Nangor. Finds retrieved from the fills of these features include approximately 1,600 sherds of Leinster Cooking Ware and Dublin-type wares, as well as assorted iron finds, including nails, an armour-piercing arrowhead, a buckle, a key and an intact iron sickle. In the same townland, a cereal-drying kiln and medieval field boundaries were also excavated between 2015 and 2016 (Licence No. 14E0453), while from 2014 onwards, a large complex of ditched enclosures dating to the early medieval period

were excavated in the townland of Ballybane (Licence No. 13E0471). In 2016, a geophysical survey followed by a programme of archaeological test trenching (Licence No. 16E0531) was conducted in areas within Grange Castle South Business Park, also within the townland of Ballybane. Two of the sites surveyed had previously been identified through aerial photography and both are Recorded Monuments: a concentric enclosure (DU021-108----) and an enclosure (DU021-109----) (see Figure 2). Two more enclosure sites were also discovered during these investigations and are scheduled for inclusion in the next revision of the Record of Monuments and Places. A number of internal features associated with the sites were also recorded. More recently, geophysical surveys, test trenching and excavation (Licence Nos 20R0006, 20R0080 and 21E0061) in areas directly adjacent and to the south and west of the current site have revealed archaeological remains, including a sub-circular enclosure and part of an early historic field system.

There is little historical or written information in relation to the early history of the site and the townland of Ballybane. Accordingly, an examination at the wider landscape surrounding the site is beneficial. The site is located c. 3km to the west-southwest of Clondalkin. Clondalkin is a historic town (DU017-041----) that contains 12 Recorded Monuments, such as a church, round tower, an unclassified water mill and an unclassified castle. One Recorded Monument within Clondalkin, a church (DU017-042----), was only discovered in 1962 ahead of a housing scheme by Dublin County Council. Excavation revealed that the site consisted of an irregular oval-shaped enclosure, within which were the remains of a small stone church (Rynne 1967). This ecclesiastical enclosure (DU017-042001-) was defined by a low earthen bank. Large quantities of human remains were also uncovered during the course of the investigations.

The townland of Kilbride is south of and adjacent to Ballybane. There are four Recorded Monuments within the townland; a church (DU021-005001-), an ecclesiastical enclosure (DU021-005003-), a graveyard (DU021-005002-) and a castle (DU021-004----) (see Figure 2). Kilbride church is a single cell church, which is a style that has existed in Ireland from Early Christian times and is found throughout the island. Their origins are the tiny oratories of the earliest monasteries, which were probably built of wood (Ni Mharcaigh 1997, 249). The remains of a tower are present at the western end of the church and next to this is an arched porch where a doorway would have opened into a curved recess where a spiral staircase would have been, but there are no remains of this now. This was likely the entrance to the residence of the priest (Ball 1906, 70).

This area was under the control of Leinster rulers until the 12th century when the Anglo-Normans arrived. The castle at Kilbride was built before the 16th century. There are records of a lease to John Gibbons in 1537 and then in 1570 to Thomas Bathe. In the 16th century, the Bathe family held the lands of Kilbride and Nangor. The Batches were still in possession of the Kilbride lands into the 17th century but by the time of the Restoration they had been succeeded by the family of Carberry (Ball 1906, 68). Today, this castle, within the townland of Kilbride, has no visible trace above ground.

6.2 Previous Archaeological Investigations

The site has not been subject to archaeological investigations previously, however, it is adjacent to an area subject to recent assessments, including geophysical surveys (Licence Nos 20R0006 and 20R0080), test trenching and excavation (Licence No. 21E0061). This work revealed archaeological remains, including a sub-circular enclosure and part of an early historic field system, located c. 210m to the southwest of the current site (see below for details).

The details of these investigations, derived from the Summary Accounts of Archaeological Excavations in Ireland (www.excavations.ie), are outlined below in Table 1.

Table 1: Previous archaeological investigations in the environs of the site

Excavation.ie reference	Licence No.	Site Type	Investigation type
2021:110 – Profile Park, Kilbride, Dublin	21E0061; 21E0061 ext.	Prehistoric enclosure	Test trenching and excavation
2021:111 – Profile Park, Ballybane and Kilbride, Dublin	21E0061	Non-archaeological	Test trenching
2019:755 – Milltown 1, Grange Castle West, Dublin	19E0680	Concentric enclosure, furnaces, kilns, pits, post-holes and spreads	Excavation
2019:076 and :209 – Nangor Road, Clondalkin, Dublin	19E0170	Cobbled surfaces and stone-built wall foundations associated with 18th-century house built on site of Nangor Castle	Test excavation and monitoring
2020:440 – Castlebaggot sub-station, Dublin	17E0394	Pits, post-holes, stake-holes, curvilinear ditch, and a spread of burnt stone and clay	Excavation
2016:084 – DSF, Grange Castle Business Park, Dublin 22	14E0453	Bronze Age cremation pits and medieval cereal-drying kiln	Excavation
2020:441 – Microsoft Campus, Grange Business Park, Ballybane, Dublin 2016:083 Dub06 Data Centre Grange Castle Business Park, Ballybane, Dublin 22	13E0471	Neolithic and Bronze Age features: stake-holes, post-holes, pits, curvilinear ditch, burnt mound, and a cremation	Excavation
2007:530 – Nangor, Dublin	07E0588	Early medieval enclosure (see 96E0273 below) and possible remnants of Nangor Castle and/or 18th-century house, including landscaped garden features	Monitoring and test trenching
2001:455 – Grange Castle International Business Park	01E0754	Medieval ditch complex, pits and cobbled surfaces	Excavation

In recent years, various archaeological assessments have been carried out within the Profile Park Business Park. This work, which was completed in Spring 2022, took the form of geophysical surveys, archaeological test trenching and archaeological excavation. Two large areas within the Park were subject to geophysical survey by ACSU (20R0080) and by TARGET and ACSU (20R0006). These identified the location of a number of previously unrecorded archaeological remains, including a sub-circular enclosure, part of an early historic field system and a pre-existing historic field boundary (Russell and Breen 2020). Part of the overall site was subsequently subject to test trenching and excavation (21E0061 and 21E0061 ext.) between 2020 and 2022. Test trenching in March 2021 of the land directly adjacent and to the west and south did not identify any features of archaeological significance (Murphy 2021a). The enclosure was also subject to targeted test trenching and excavation (Murphy 2021b). The latter confirmed the remains of an oval/circular enclosure, measuring 37m in length by 34m in width. Based on preliminary analysis of the pottery, the enclosure can be dated to the Bronze Age; post-excavation analyses are ongoing with a final report expected later this year.

There have also been several archaeological excavations carried out ahead of developments throughout the Grange Castle Business Park. Between 2000 and 2001, for example, excavations (01E0754) in the townland of Nangor revealed a medieval ditch complex, contemporary pits and cobbled surfaces. The excavation recovered 1,600 sherds of medieval pottery comprised of Leinster Cooking Ware and Dublin-type wares. Test trenching in 2014, followed by excavations (13E0471) that carried on intermittently until 2016 also revealed several sites of prehistoric and early medieval date. One area consisted of two prehistoric fulachtaí fia or burnt mounds, preserved in a waterlogged field and including unlined troughs, pits, stake-holes and a well. Another area comprised a series of associated ditched enclosures, one of which was 48m in diameter, included iron knives, quern stones and animal bones, and was radiocarbon dated to the mid-seventh to mid-eighth century AD. This site was enclosed by an outer ditch, measuring 86m in diameter, which also contained cattle skulls and had a large D-shaped enclosure abutting the southern side. A smaller enclosure, possibly representing a roundhouse, was also uncovered, as well as two inhumation burials within a shallow grave. Between 2015 and 2016, additional excavations (14E0453) uncovered a cereal-drying kiln, medieval field boundaries and two clusters of cremation pits. There was a total of nine cremation pits containing cremated bone in two separate clusters and these were dated to the Middle Bronze Age. Renewed development at this site in 2016 resulted in the excavation (13E0471) of additional sites of a prehistoric nature. This included stake-holes, post-holes, pits, a curvilinear ditch, a truncated burnt mound, and an isolated cremation. One of the sites was a structure of likely Neolithic date in the form of post-holes and pits. The post-holes produced 38 sherds of pottery from 14 vessels of Early Neolithic type (Dunmurry-Ballymerlagh Type). They also produced numerous charred hazelnut shells and worked implements of flint, quartz, chert, sandstone, shale, and siltstone, a high proportion of which were blades. Ditch segments forming a U-shaped arrangement may also have represented the remains of a house, with three abraded sherds of pottery suggesting a Middle Bronze Age date.

To the far northwest of the current site, excavation (19E0680) in 2019 in advance of the construction of an access road associated with the Grange Castle West Business Park, also revealed two concentric enclosures. This

comprised an outer ditch that was sub-circular in plan and enclosed an area measuring 32m in length by 28.6m in width. The inner ditch enclosed an area measuring c. 11m in diameter. The area between the two ditches had several features present, including a number of furnaces, kilns, pits, post-holes and deposits that all appeared to relate to metalworking. Preliminary interpretation is that this site dated to the early medieval period, and post-excavation analysis is ongoing.

6.3 Recorded Monuments

The site does not contain any Recorded Monuments listed within the Record of Monuments and Places (RMP) or Sites and Monuments Record (SMR). The nearest monument to the site is a field system (DU017-082----) identified during excavation in 2001.

The following is a list of the Recorded Monuments located within the site (Figure 2, Table 2). These descriptions are derived from the National Monuments Service Archaeological Survey Database (<http://maps.archaeology.ie/historicenvironment/>).

Table 2: Recorded Monuments in the environs of the site

RMP/SMR No.	Class/Site Type	Description
DU017-082----	Field system	Excavations in 2001 revealed a medieval ditch complex. This appeared to represent the remains of medieval field boundaries with associated water management gullies. Some 1,600 sherds of local medieval pottery were recovered and two sherds of imported ware.
DU021-108----	Concentric enclosure	Not indicated on any OS map, a large concentric enclosure is visible as a crop-mark on an aerial photo. A second enclosure (DU021-109----) is visible to the SW.
DU021-109----	Enclosure	Not indicated on any OS map, this enclosure is as a crop-mark on an aerial photo. A second larger enclosure (DU021-108----) is visible to the NE.
DU021-004	Castle – unclassified	Situated in a narrow valley. There are farm buildings on the site. There is no visible trace above ground (Ball 1906, 66).
DU021-005001-	Church	Located in a circular raised graveyard (L 42m, Wth 30m) on the edge of a valley (DU021-005002-). This may be the remains of an early ecclesiastical enclosure (DU021-005003-). In 1228 the archbishop of Dublin granted the church of Kilbride to Andrew de Monevea as a prebend and later conferred it on the Canons of St Patrick's Cathedral (McNeill 1950, 75). In 1630 it was described as ruinous (Ronan 1941, 80). This church was attached to St. Patrick's Cathedral and was described at the dissolution in 1547 as an old chapel (Ball 1906, 68–70). Consists of a small rectangular building (int. dims L5.8m, Wth 3.63m, T 0.85m) with a NW turret in ruinous condition. Formerly entered through an opening in the W end (now damaged). Built of randomly coursed masonry. There is an aumbry in the E end of the N wall of the church. The E window has a S jamb of tufa. There are remnants of another window in the W end of the S wall. The NW turret (L 1.35m, Wth 0.77m, H

RMP/SMR No.	Class/Site Type	Description
		1.78m) is entered through a lintelled doorway off the church. It has a corbelled roof. There are traces of a stairwell on the S side of the turret (Ni Mharcaigh 1997, 268–9).
DU021-005002-	Graveyard	Located in a circular raised graveyard (L 42m, Wth 30m) on the edge of a valley. Encloses the remains of a medieval church (DU021-005001-).
DU021-005003-	Ecclesiastical enclosure	The church of Kilbride is located in a circular raised graveyard (L 42m, Wth 30m) on the edge of a valley. This may be the remains of an early ecclesiastical enclosure.
DU017-037----	Castle – unclassified	<p>Located in flat terrain. Named 'Nangor castle' on the 1837 edition OS 6-inch map and 'Nangor castle on site of castle' in the later edition. This indicates that the castle had been incorporated into an 19th-century mansion. All buildings on the site have been recently demolished leaving no surface trace of the earlier building. In 1532 Ffinian Bassenett was residing at Nangor (Ball 1906, 112; Healy 1974, 22; D'Alton 1976 (2nd ed.), 345). There are earthworks in the field to the south of the castle. Pre-development testing in the vicinity of the castle in 1996 produced evidence for a substantial ditch and an associated shallower linear feature of uncertain date.</p> <p>Trial-trenching in the field bounding the castle site to its south uncovered several lignite cores and slivers, early medieval pottery and metal slag suggesting a date in at least the early medieval period - twelfth/thirteenth century. Several trenches cut through a large ditch located on both the east and west of the field. Human skeletal remains were also uncovered, as were numerous charcoal-flecked irregular features (McConway 1997, 17).</p>

6.4 Protected Structures and National Inventory of Architectural Heritage (NIAH)

The site contains no Protected Structures, as listed within the *South Dublin County Development Plan 202216–2028*, nor any structures listed in the National Inventory of Architectural Heritage for County Dublin. The nearest Protected Structure is Kilcarberry House (RPS ID 173; NIAH Reg. No 11209001), located c. 0.6km to the southeast of the site (Figure 2).

6.5 Finds listed within the Topographical Files of the National Museum of Ireland

No archaeological finds are listed within the Topographical Files of the National Museum of Ireland for the townland of Ballybane. However, four are listed in relation to the adjacent townland of Kilbride, and these include pottery (NMI ID 1873:29.1), human remains (NMI ID 1873:29.2 and NMI ID 4530:Wk176.2), and an urn (NMI ID 2676:Wk176.1). They are all noted as found at the 'Valley of the River Liffey near Kilbride'. Kilbride is located directly southeast of Ballybane.

6.6 Cartographical evidence

A review of available historic mapping for the area was carried out to include the Rocque map of 1760 and various editions of those compiled by the Ordnance Survey of Ireland, including the 6-inch (1836 and 1935–38) and 25-inch (1908) maps. Potential archaeological or cultural heritage features are marked on such maps and provide a useful resource in identifying sites, particularly if they no longer have any above-ground remains.

The 1760 map (Figure 3) shows the site within a pasture field, within the townland of 'Ballybawn', to the south side of the 'New Canal', between the settlements of 'Mill Town' and 'Nanger'. The area is depicted as predominantly pastureland. A road, originating southwest of the study area, leads from 'Mill Town' through 'Ballybawn' and passes 'Church in Ruins', which represents DU021-005001-. To the south of the church, the area is labelled as 'Killbride'.

On the Ordnance Survey maps of 1836, 1908 and 1935–38, the site is shown adjacent to and south of Nangor Road (Figures 4–6). The south boundary of the site is formed by a stream that is also a townland boundary between Ballybane and Kilbride. No buildings are shown within the site on examined mapping. The site is shown as part of a large field that remains unchanged from the mid-19th century onwards. Griffith's Valuation of 1847–64 records this as Church land, belonging to the Dean and Chapter of St. Patrick's (a Thomas Kiernan Esq.) and leased by Alexander Graydon Esq. of Newcastle, for grazing horses and cows.

No monuments of archaeological significance were identified during the examination of cartographical sources.

6.7 Aerial photography

A review of the available aerial photography for the area was also undertaken as part of this assessment. Aerial photographs dating between 1995 and 2013 from the Ordnance Survey of Ireland and Google Earth imagery dating between 2009 and 2022 were assessed. Unrecorded archaeological sites can often be identified in aerial photographs as cropmarks or differential growth in a field. No such cropmarks were noted on the proposed development site or in any of the surrounding fields.

The site appears to be largely unchanged since the 1995 aerial photograph. In this, modern outbuildings with a yard are shown along the west boundary of the site and a dwelling is visible in the northwest corner of the site, surrounded by mature hedgerows. By 2003, a roundabout was added on New Nangor Road, with access to the south, and by 2009 the internal access road to the Profile Park was constructed. The site lies adjacent to and west of this inner road. The Google Earth aerial imagery from March 2022 shows excavated test trenches directly west of the site, as well as the enclosure to the south-west being excavated under Licence No. 21E0061.

7. METHOD OF DATA INTERPRETATION

The gradiometer survey was conducted with a Bartington GRAD 601-2 dual-sensor fluxgate gradiometer cart system. A detailed survey was conducted with a sample interval of 0.25m and a traverse interval of 0.5m for all the survey area (Figure 7). This allows the detection of potential archaeological responses.

The Bartington GRAD 601-2 instrument is a specifically designed gradiometer for use in archaeological prospection. Extremely sensitive, these instruments can detect variations in soil magnetism to 0.01nT, affording diverse applications throughout a variety of archaeological, soil morphological and geological conditions. The survey was geo-referenced with a Trimble R10 unit accurate to within 1cm.

A constant high quality of data was assured by experienced field staff operating in accordance with English Heritage guidelines *Geophysical Survey In Archaeological Field Evaluation* (2008) and *EAC Guidelines for the use of Geophysics in Archaeology* (Schmidt et al. 2016).

8. SURVEY RESULTS

The geophysical survey was conducted by Donald Murphy, Rob Breen and Jeanne Rochford of ACSU in September 2022 under licence 22R0316 (Figures 7–8). A full detailed gradiometer survey was undertaken throughout the application area using a Bartington GRAD 601-2 dual-sensor fluxgate gradiometer system mounted on a Bartington cart. A detailed survey was conducted with a sample interval of 0.25m and a traverse interval of 1m for all the survey areas within the site with variations in the magnetic field between (-100nT to +107.834nT).

The portion of the site suitable for geophysical survey consisted of two pasture fields; the southwest portion of the site was not suitable to survey.

The survey identified two trends, a couple of positive responses of potential archaeological significance and a number of disturbances, particularly along the edges of the site. The trends were represented by two northwest to southeast aligned linears (Anomalies 1a, 1b). A scatter of positive responses (?Archaeology) that might be geological, modern in nature or represent iron in the topsoil were noted, but could equally represent cut features such as pits/post-holes, while large areas (Anomalies 2a, 2b) might represent large pits or spreads. Linear northeast to southwest aligned trends (Anomalies 3a, 3b) correspond with access to the former yard and are visible on aerial imagery, while a north to south aligned linear (Anomaly 3c) corresponds with wire fencing and represents associated ground disturbances. Bands of magnetic disturbance along the site edges, particularly the north and east extremities, are modern and derive from ground disturbance associated with road construction.

No definite signs of archaeology were identified.

9. CONCLUSIONS & RECOMMENDATIONS

The geophysical survey of a site at Profile Park, Grange Castle, Dublin 22, was carried out to assess the archaeological potential of the site.

No definite signs of archaeology were identified. However, test trenching is recommended at a pre-construction phase targeting anomalies of potential archaeological significance (trends and ?Archaeology). This shall be carried out by a licence-eligible archaeologist working under licence from the Department of Housing, Local Government and Heritage. Should archaeological material be identified, further mitigation, preservation by record (excavation) or *in situ* preservation, might be recommended following discussion with the National Monuments Service.

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- National Library of Ireland, 7–8 Kildare Street, Dublin 2.

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First edition Ordnance Survey (OS) 6-inch map (surveyed 1836 - published 1843).

Third edition Ordnance Survey (OS) 25-inch map (surveyed 1908 - published 1910).

Cassini edition Ordnance Survey (OS) 6-inch map (1935–38).

South Dublin Historical Mapping – Fourth Edition Six Inch Maps (1938).

Appendix 1 - Summary Technical Information & Glossary of Terms

Fluxgate Gradiometer Survey is a non-intrusive method of archaeological prospection that is most often used in Irish Archaeology. This method allows for rapidly mapping archaeological objects, structures, deposits and other features, including geological anomalies, that survive beneath the ground. It allows the most rapid ground coverage and records a variety of anomalies caused by human activity and changes in the natural subsoil. The results are presented as a greyscale map of anomalies detected that are interpreted by an experienced archaeologist.

Surveys are undertaken using GPS based lightweight Bartington Grad 601-2 mounted on Bartington Cart system. Ground cover has to be 0.30m or less. The instrument used is operated by an experienced, skilled geophysical survey technician. The data is collected by hand wheeling the cart over the survey area in evenly spaced parallel transects. The equipment was specifically designed for archaeological prospection. It includes sensors that are highly stable, minimizing requirements for excess data processing. The instrument has a vertical 1 m sensor separation permitting finite resolution of buried archaeological features. Surveys can be undertaken in scan or detailed (zig-zag traverse) modes for reconnaissance or high-density mapping. The fluxgate enables reliable flexibility during fieldwork. Frequent realignment of the instruments and zero drift correction ensure a constant high quality of data. These extremely sensitive instruments can detect variations in soil magnetism to 0.1nT, affording diverse application throughout a variety of archaeological, soil morphological and geological conditions.

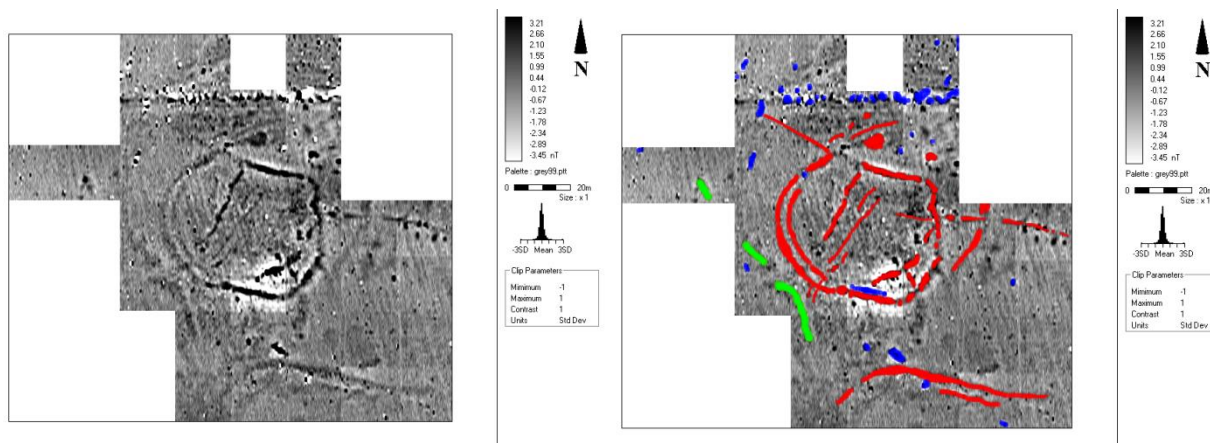
The instrument can be employed in both commercial and research-based investigations allowing for the completion of projects within short timescales. Regular grid sample densities from standard 1600 readings to 12800 readings per 20m by 20m grid are permitted. A constant high quality of data is assured by experienced field staff operating in accordance with English Heritage guidelines *Geophysical Survey In Archaeological Field Evaluation* (2008) and *EAC Guidelines for the use of Geophysics in Archaeology* (Schmidt et al. 2016).



Bartington Grad 601-2 mounted on Bartington Cart system

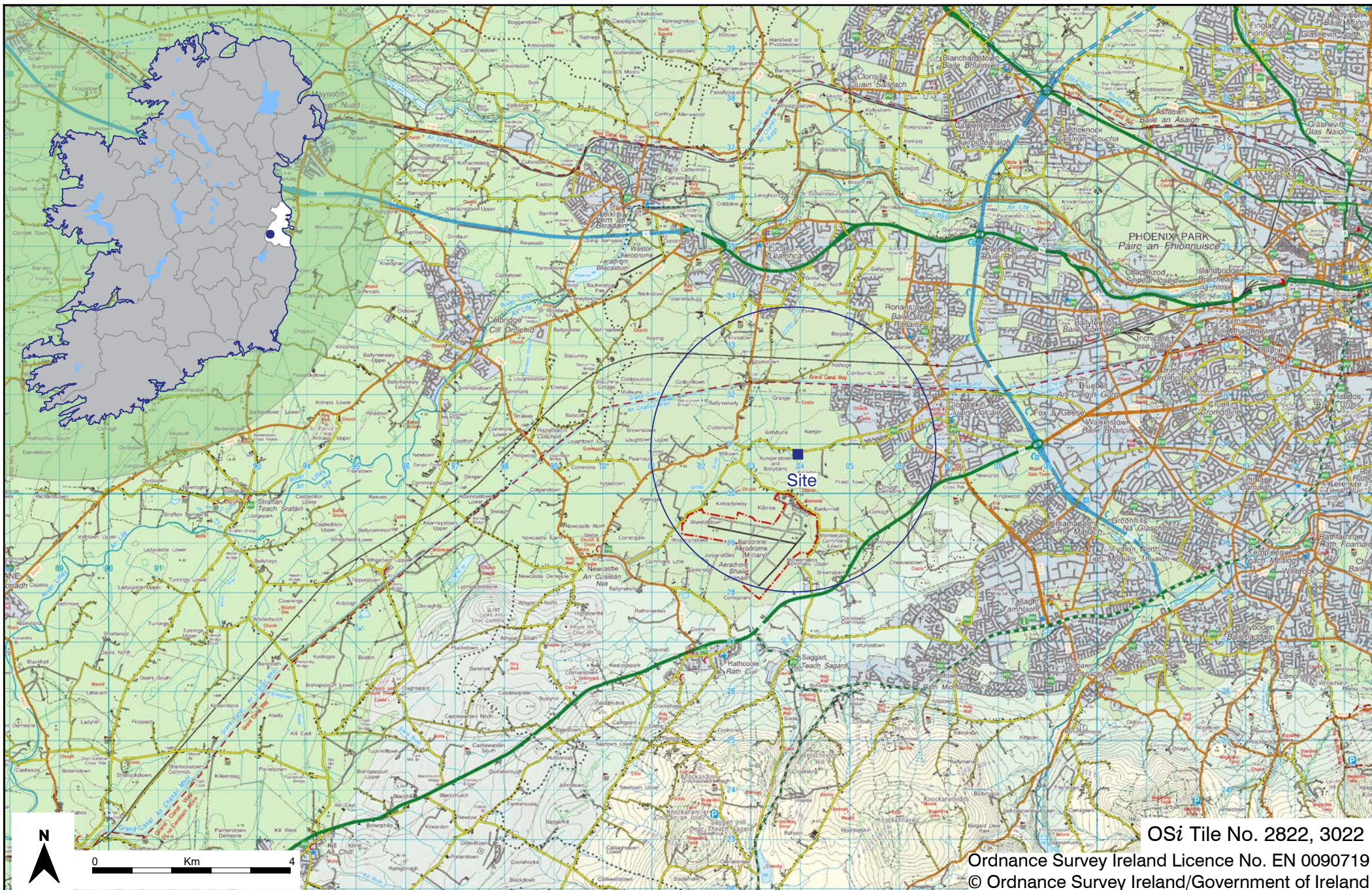
Data Display Format

Greyscale: The greyscale format assigns a cell to each datum according to its location on the grid. The display of each data point is conducted at very fine increments, allowing the full range of values to be displayed within the given data set. This display method also enables the identification of discrete responses that may be at the limits of instrument detection.



Early medieval enclosure greyscale

Dot Density Plot : Each datum is assigned a cell in which the intensity or number of dots displayed is proportional to the magnitude of the individual response. The visibility or presentation of responses within a given survey area is governed by numeric parameters specific to both soil morphological and archaeological conditions observed on site. Typically, the range of weak to strong responses is manifested by a low to high level of dot density. The format is useful for displaying gradiometer and resistance data particularly for identifying low-level responses.



OSi Tile No. 2822, 3022

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Project Notheast Profile Park, Grange Castle, Dublin 22

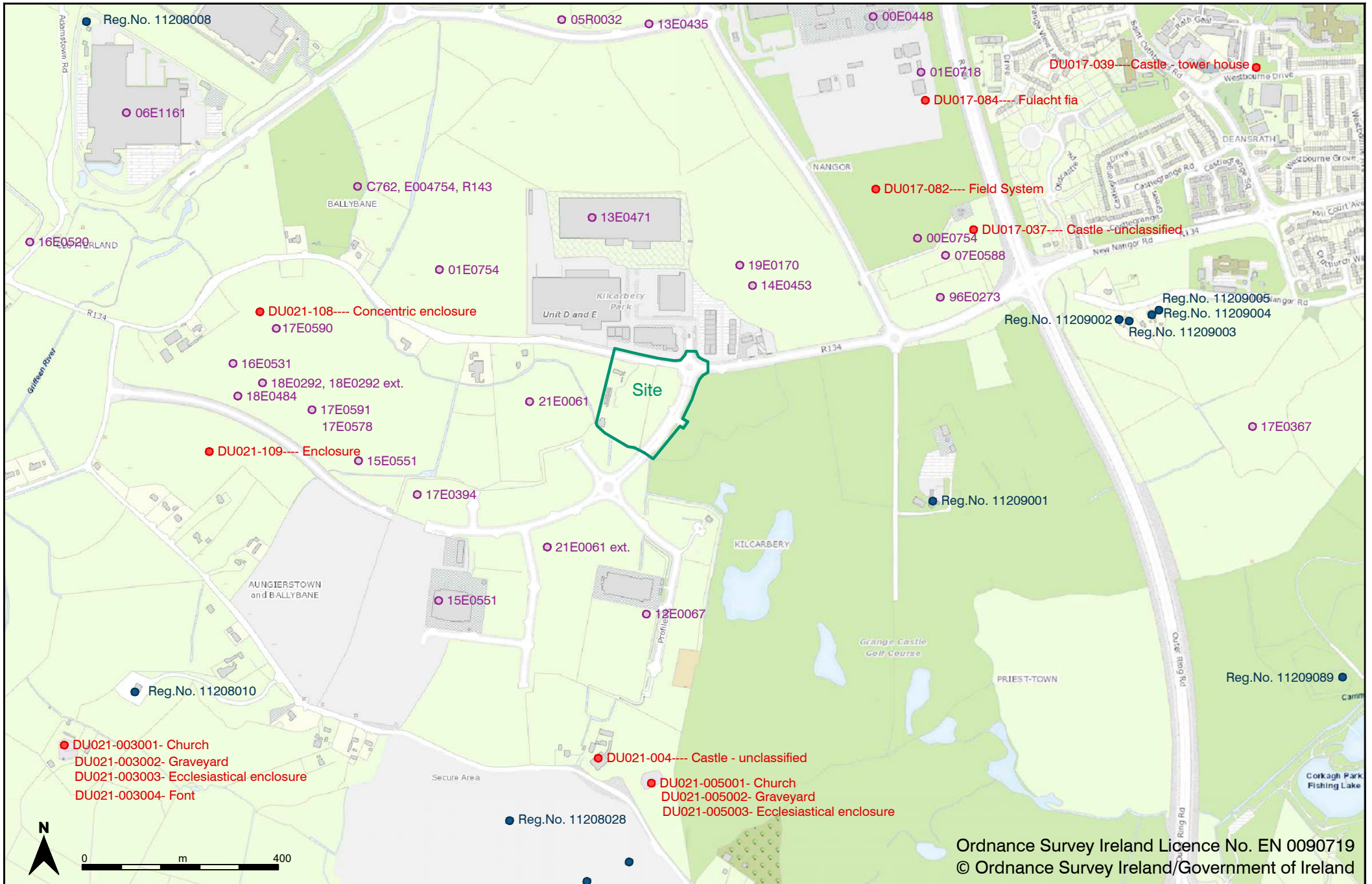
Date October 2022

Drawing No. 2272_C1011


Figure 1 Location of site

Scale 1:100,000 @ A4





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Project Notheast Profile Park, Grange Castle, Dublin 22	Date October 2022	Drawing No. 2272_C1012	
Figure 2 Location of site, previous archaeological investigations and nearby Sites and Monuments Record sites		Scale 1:10,000 @ A4	



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Project Notheast Profile Park, Grange Castle, Dublin 22

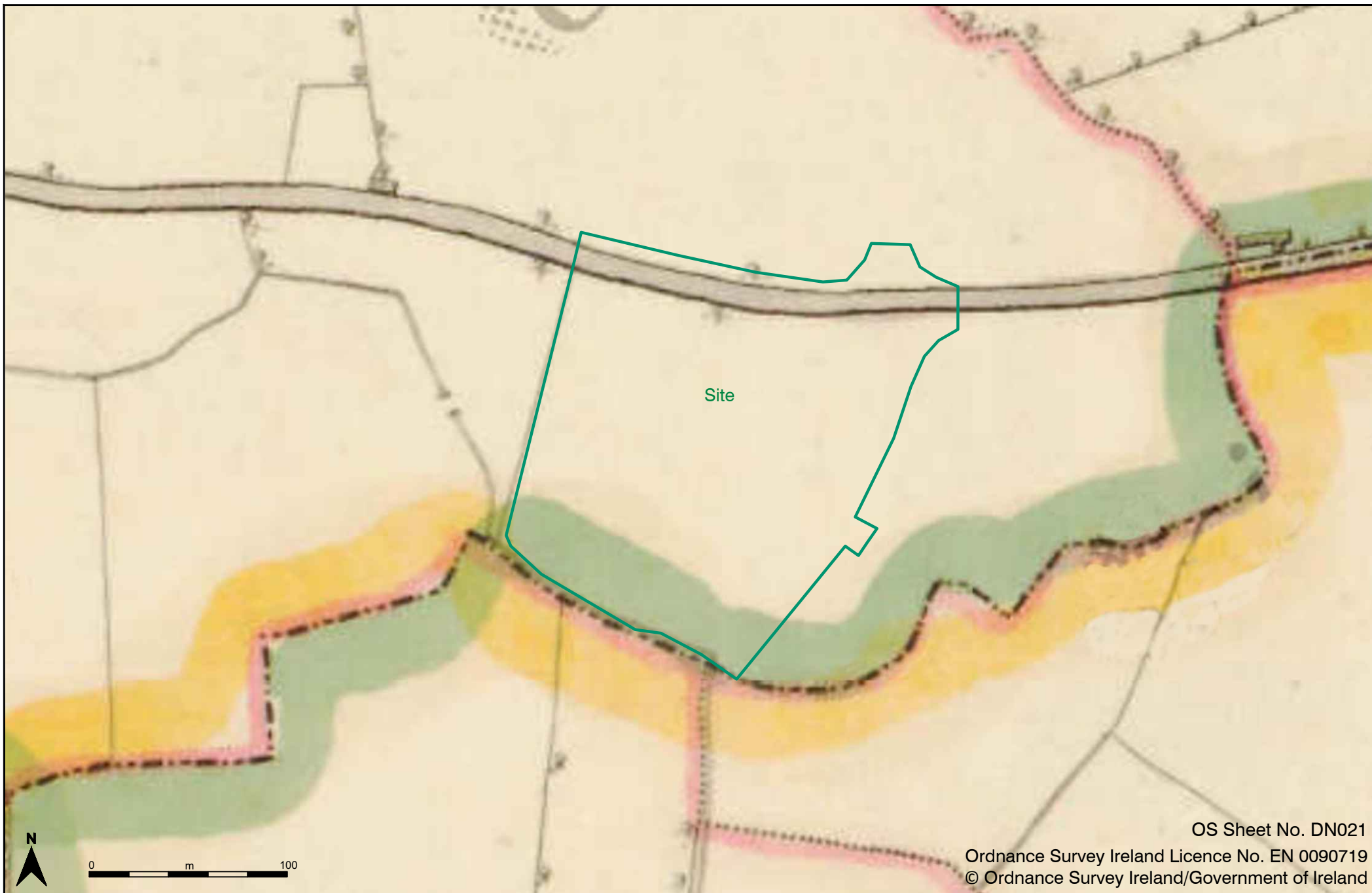
Date October 2022

Drawing No. 2272_C1013

Figure 3 Extract from An actual survey of the county of Dublin by John Rocque - southeast sheet (1760) , showing approximate location of site

Scale Not to scale





OS Sheet No. DN021

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Project Notheast Profile Park, Grange Castle, Dublin 22

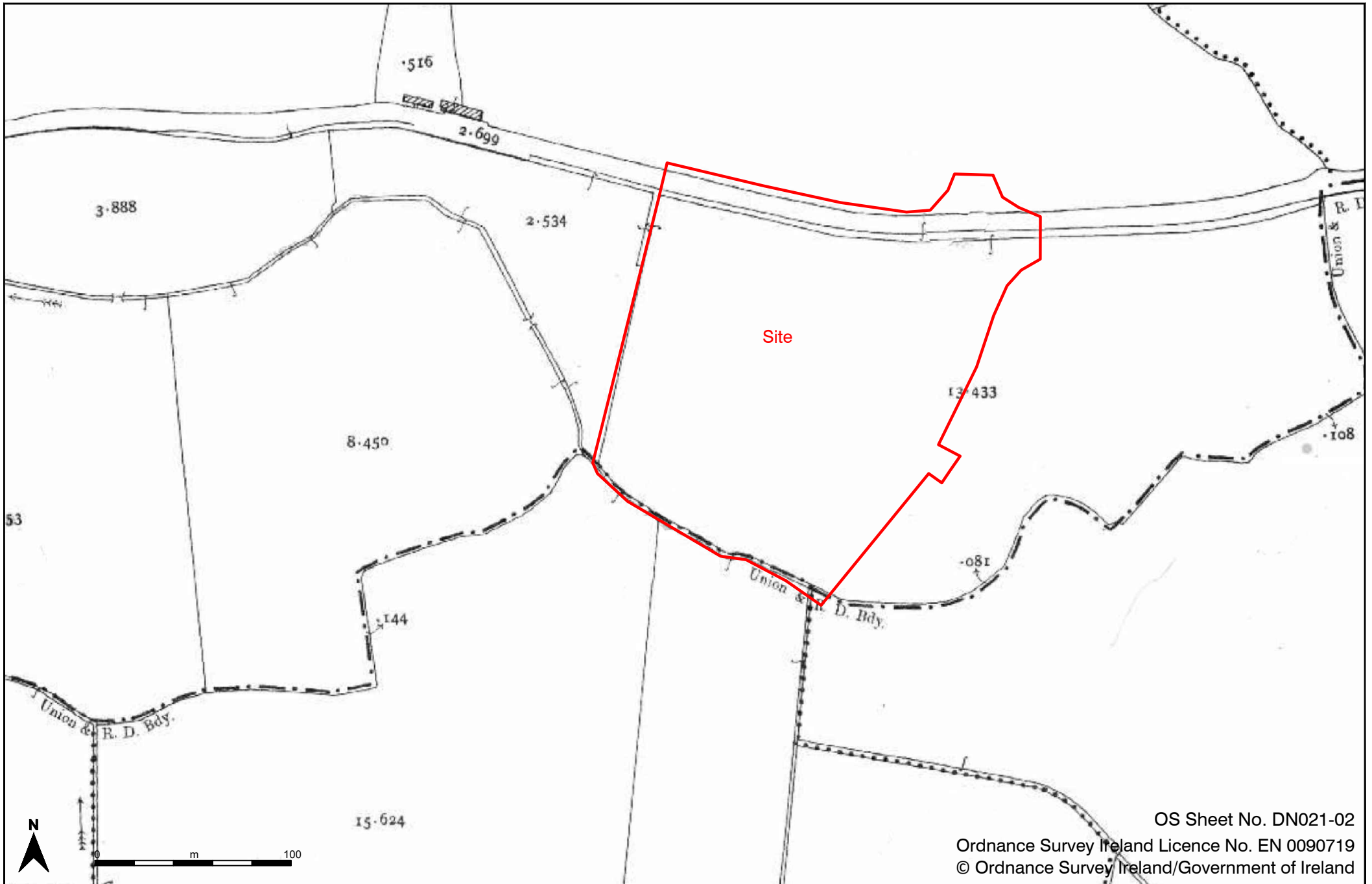
Date October 2022

Drawing No. 2272_C1014

Figure 4 Extract from 1st edition Ordnance Survey (OS) 6-inch map (surveyed 1836 - published 1843), showing location of site

Scale 1:2,500 @ A4





OS Sheet No. DN021-02

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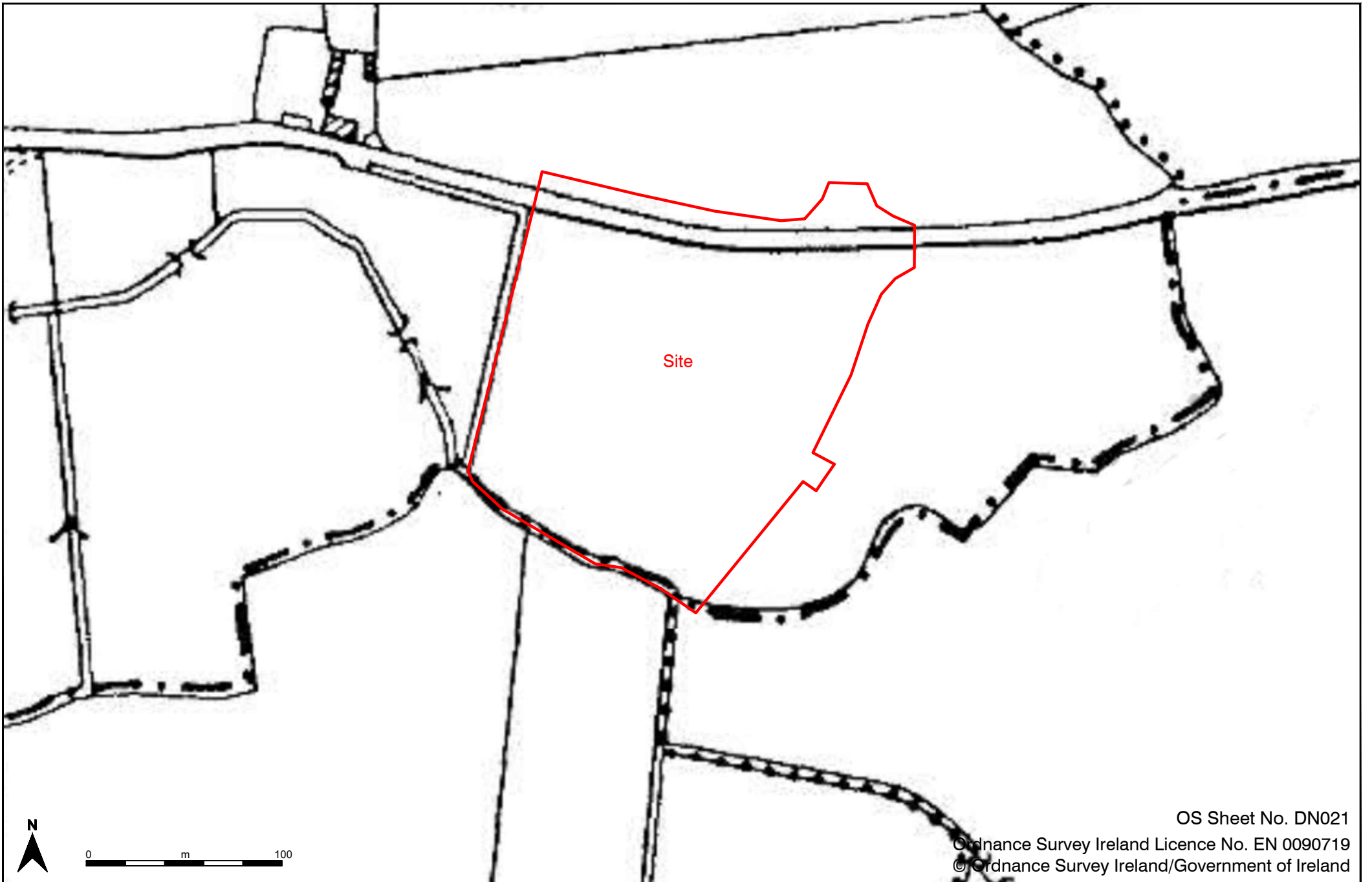
Date October 2022

Drawing No. 2272_C1015

Figure 5 Extract from 3rd edition Ordnance Survey (OS) 25-inch map (surveyed 1908 - published 1910), showing location of site

Scale 1:2,500 @ A4





OS Sheet No. DN021

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Project Notheast Profile Park, Grange Castle, Dublin 22

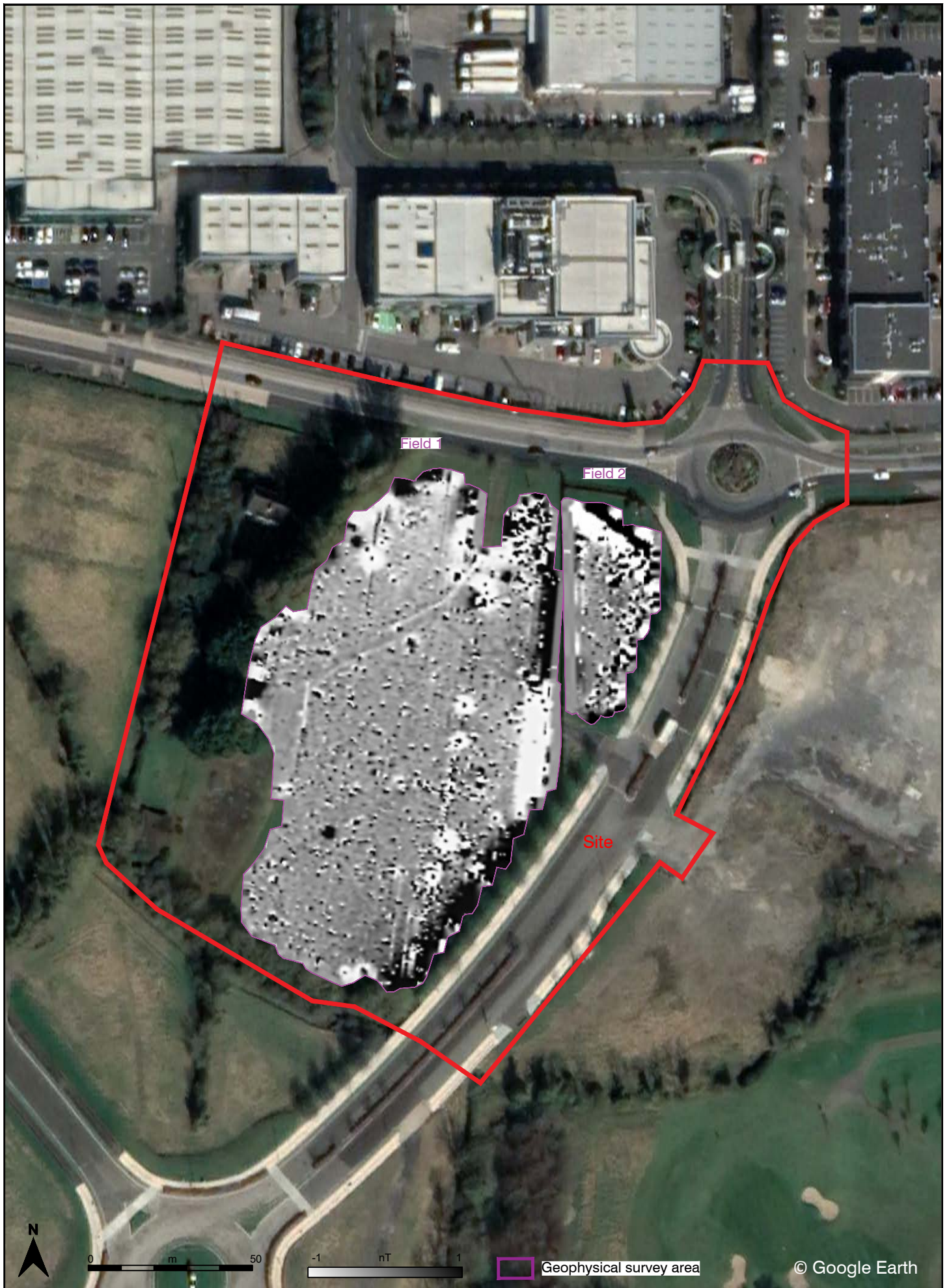
Date October 2022

Drawing No. 2272_C1016

Figure 6 Extract from Cassini edition Ordnance Survey (OS) 6-inch map (1935-38), showing location of site

Scale 1:2,500 @ A4

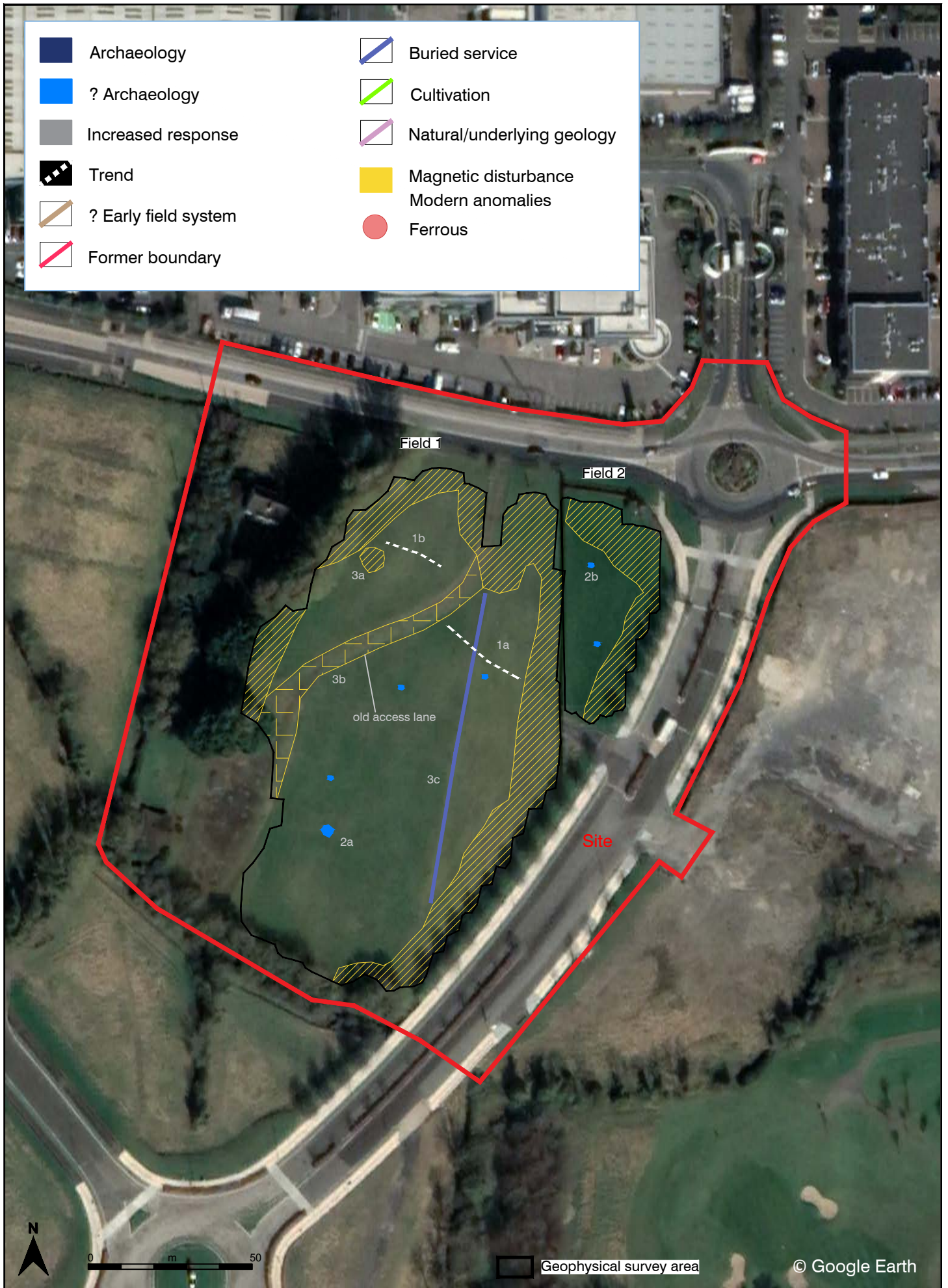




Project Notheast Profile Park, Grange Castle, Dublin 22

Date October 2022

Figure 7 Aerial view of site, showing geophysical survey results (greyscale image)



Project Notheast Profile Park, Grange Castle, Dublin 22

Date October 2022

Figure 8 Aerial view of site, showing geophysical survey interpretation

Technical Appendix 2.6: Archaeological Consultancy Services Unit, 2022, Report on Test Trenching at New Nangor Road, Ballybane, Dublin

past | present | future

ACS



Report on Test Trenching at New Nangor Road, Ballybane, Co. Dublin

Licence No.: 22E0760

ARCHAEOLOGICAL
CONSULTANCY
SERVICES UNIT

ITM: 703833, 730822

RMP No.: N/A

Deirdre Murphy

10 October 2022

Report Status: Final

ACSU Ref.: 2272

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PROJECT DETAILS

Project	Archaeological Assessment of a site at Profile Park, New Nangor Road, Ballybane, Co. Dublin
Report Type	Archaeological Test Trenching
Licence No.	22E0760
Site	Profile Park, New Nangor Road, Ballybane, Co. Dublin
Townland	Ballybane
RMP	N/A
ITM	703833, 730822
Consultant	Archaeological Consultancy Services Unit, 21 Boyne Business Park, Greenhills, Drogheda, County Louth
Excavation Director	Deirdre Murphy
Report Authors	Deirdre Murphy
Report status	Final
Report Date	10 October 2022
ACSU Ref.	2272

Revision	Date	Description	Status	Author	Reviewed	Approved
0	10/10/2022	Archaeological Testing Report	Final	D.M.	M.L	I.R.

EXECUTIVE SUMMARY

This final report details the results of archaeological test trenching carried out at Profile Park, New Nangor Road, Ballybane, Co. Dublin (ITM 703833, 730822).

Test trenching was undertaken following a geophysical survey carried out by Donald Murphy of Archaeological Consultancy Services Unit (ACSU) under licence number 22R0316. The site was also subject to an Archaeological Impact Assessment carried out by Donald Murphy and Jeanne Rochford of ACSU in August 2022 (Murphy and Rochford 2022).

Archaeological test trenching was undertaken by Deirdre Murphy of ACSU on 6th–7th of October 2022 under licence number 22E0760 issued by the Department of Housing, Local Government and Heritage in consultation with the National Museum of Ireland.

A total of 11 test trenches were excavated within the site. Each trench measured 1.8m in width, and in total 597m of linear trenches were excavated. In general, the sod and topsoil measured 0.34–0.50m in thickness and lay above a mid-grey natural clay and stone. Only one potential archaeological feature was identified within Trenches 5, 6 and 11. It consisted of a linear feature or ditch (C3), aligned northwest–southeast and measuring c.25.0m in length, 1.70m in width and 0.32m in depth. It was filled with a mid-brown silty clay containing occasional inclusions of decayed stone and a few small fragments of animal bone (C4).

It is therefore recommended that archaeological monitoring is conducted of topsoil stripping in the area immediately surrounding the possible prehistoric or early historic ditch and, once exposed, that it is fully preserved by record (excavation) prior to construction.

NON-ARCHAEOLOGICAL INFORMATION



An Roinn Tithíochta,
 Rialtais Áitiúil agus Oidhreachta
 Department of Housing,
 Local Government and Heritage

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Site Owner:	Vantage Data Centers DUB11 Ltd.
Address:	Victoria Buildings, Haddington Road, Dublin 4.
Planning Authority:	n/a
Planning Reg. No.:	Pre-Planning.
Excavation Type:	Test Trenching
Contractor/Developer:	As above
Site	Profile Park, New Nangor Road, Ballybane, Co. Dublin.

Description of Proposed Development

The works were carried out at a pre-planning stage.

Archaeological Condition

The works were carried out at a pre-planning stage.

Impact Statement and recommendations

A total of 11 test trenches were excavated within the site. Each trench measured 1.8m in width, and in total 597m of linear trenches were excavated. In general, the sod and topsoil measured 0.34–0.50m in thickness and lay above a mid-grey natural clay and stone. Only one potential archaeological feature was identified within Trenches 5, 6 and 11. It consisted of a linear feature or ditch (C3), aligned northwest-southeast and measuring c. 25.0m in length, 1.70m in width and 0.32m in depth. It was filled with a mid-brown silty clay containing occasional inclusions of decayed stone and a few small fragments of animal bone (C4).

It is therefore recommended that archaeological monitoring is conducted of topsoil stripping in the area immediately surrounding the possible prehistoric or early historic ditch and, once exposed, that it is fully preserved by record (excavation) prior to construction.

CONTENTS

1.	INTRODUCTION	1
1.1	Site Location	1
2.	NATURAL & CULTURAL LANDSCAPE	2
2.1	Archaeological background	2
2.2	Previous archaeological investigations	3
2.3	Record of Monuments and Places (RMP)	6
2.4	Protected Structures and National Inventory of Architectural Heritage (NIAH)	7
2.5	Stray finds	7
2.6	Cartographic review	8
3.	ARCHAEOLOGICAL ASSESSMENT	8
3.1	Site description.....	8
3.2	Test excavation methodology	8
3.3	Geophysical survey results	9
3.4	Test excavation results	9
4.	TOWNLAND BOUNDARY	11
5.	MATERIAL CULTURE	11
6.	DATING	11
7.	DISCUSSION.....	11
8.	RECOMMENDATIONS	12
9.	POST-EXCAVATION PROGRAMME	12
10.	EXCAVATION BULLETIN.....	12
11.	PUBLICATION PLAN	13
12.	REFERENCES	13
12.1	References.....	13
12.2	Other sources	14
12.3	Cartographic and photographic Sources	14

LIST OF TABLES

Table 1	Previous Archaeological Investigations in the environs of the site.
Table 2	Recorded Monuments in the environs of the site.
Table 3	Trench descriptions.

LIST OF FIGURES

Figure 1	Location of site.
Figure 2	Location of site, previous archaeological investigations and <i>nearby Sites and Monuments Record</i> sites.
Figure 3	Extract from An survey of the county of Dublin by John Rocque – southeast sheet (1760), showing approximate location of site.
Figure 4	Extract from 1st edition Ordnance Survey (OS) 6-inch map (surveyed 1836 - published 1843), showing location of site.
Figure 5	Extract from 3rd edition Ordnance Survey (OS) 25-inch map (surveyed 1908 - published 1910), showing location of site.
Figure 6	Extract from Cassini edition Ordnance Survey (OS) 6-inch map (1935–38), showing location of site.
Figure 7	Aerial view of site, showing location of excavated test trenches (1–11) overlying geophysical survey interpretation.

LIST OF PLATES

Plate 1	Trench 1 looking north.
Plate 2	Trench 2 looking south.
Plate 3	Trench 3 looking south.
Plate 4	Trench 4 looking north.
Plate 5	Trench 5 looking southeast.
Plate 6	Trench 6 looking southeast.
Plate 7	Trench 7 looking south.
Plate 8	Trench 8 looking southwest.
Plate 9	Trench 9 looking south.
Plate 10	Trench 10 looking north.
Plate 11	Trench 11 looking north.
Plate 12	Trench 11, ditch C3 looking south.
Plate 13	General view of townland boundary looking southwest.
Plate 14	Detail of townland boundary looking southwest.

Plate 15 Detail of banks and stream within townland boundary looking east.

Plate 16 General view of townland boundary looking northwest.

1. INTRODUCTION

This final report details the results of archaeological test trenching carried out at Profile Park, New Nangor Road, Ballybane, Co. Dublin (ITM 703833, 730822, Figures 1–2).

Test trenching was undertaken following a geophysical survey carried out by Donald Murphy of Archaeological Consultancy Services Unit (ACSU) under licence number 22R0316 (see Section 3.3). The site was also subject to an Archaeological Impact Assessment carried out by Donald Murphy and Jeanne Rochford of ACSU in August 2022 (Murphy and Rochford 2022).

The site does not contain any Recorded Monuments listed within the Record of Monuments and Places (RMP) or Sites and Monuments Record (SMR). The nearest monument to the site is field system DU017-082, which was identified during excavations in 2001, approximately 0.5km to the northeast. The site contains no Protected Structures, as listed within the *South Dublin County Development Plan 2016–2022*, nor structures listed within the National Inventory of Architectural Heritage (NIAH) for County Dublin. The nearest Protected Structure is Kilcarberry House (RPS ID 173; NIAH Reg. No 11209001), located c. 0.6km to the southeast.

The site was not subject to archaeological investigations previously. It does, however, lie adjacent to an area that was subject to a number of recent assessments, including geophysical surveys (Licence Nos 20R0006 and 20R0080) and test trenching and excavation (Licence No. 21E0061). Under the latter, test trenching in March 2021 of the area directly adjacent and to the west and south, did not identify any features of archaeological significance. However, a sub-circular enclosure and part of an early historic field system was identified c. 210m to the southwest of the site and was subject to targeted test trenching and excavation.

Archaeological test trenching of the current site was carried out by Deirdre Murphy of ACSU on 6th–7th of October 2022 under licence number 22E0760 issued by the Department of Housing, Local Government and Heritage in consultation with the National Museum of Ireland.

1.1 Site Location

The site is located at Profile Park, Grange Castle, Dublin 22 (ITM 703833, 730822, Figures 1–2). It is roughly rectangular in plan and lies within the northeast portion of Profile Park, on lands adjacent to and south of New Nangor Road (R134); west of the internal Profile Park Access Road and within the southeast portion of the townland of Ballybane. The site consists of two greenfields, bounded by metal fencing and mature hedges from the west and a wet ditch from the south. A house and a former farmyard are located within the western portion of the site.

2. NATURAL & CULTURAL LANDSCAPE

2.1 Archaeological background

The site is located within Profile Park, on lands to the north of Baldonnell Casement Aerodrome, c. 12km to the west-southwest of Dublin City Centre. The site is situated within the southeast extremity of the townland of Ballybane, which is within the Parish of Clondalkin, in the Barony of Uppercross. An examination of the Placenames Database of Ireland (www.logainm.ie) can reveal important information about an area's natural and cultural heritage. Ballybane townland (*An Baile Bán*) was first mentioned in 1326 as Balibayne (in Calendar of Archbishop Alen's Register (McNeill 1950)) and can be translated as 'white town'. It was depicted as 'Ballybawn' on Rocque's 1760 *Actual Survey of County Dublin* (Figure 3).

The remains of sites dating to the medieval period are common in this area, however, some prehistoric activity has also been discovered through recent archaeological investigations in Ballybane and surrounding townlands. Commencing in 2014, for example, archaeological test trenching and excavation (Licence No. 13E0471) within Grange Castle Business Park revealed a number of prehistoric sites within the townland of Ballybane. These include three *fulachtaí fia* or burnt mound sites, a circular Bronze Age structure, a possible Neolithic structure and an isolated cremation pit. Between 2015 and 2016, two clusters of cremations pits were also excavated (Licence No. 14E0453) in an adjacent site within the townland of Nangor. In total, approximately nine cremation burial pits were excavated, yielding a Middle Bronze Age date.

Similar to the prehistoric site-types which have been discovered in recent years, a large number of medieval sites have also been uncovered in light of the archaeological investigations which have taken place in the surrounding townlands. In 2001, excavation (Licence No. 01E0754) exposed a series of medieval ditches/fields systems, pits and cobbled surfaces in the townland of Nangor. Finds retrieved from the fills of these features include approximately 1,600 sherds of Leinster Cooking Ware and Dublin-type wares, as well as assorted iron finds, including nails, an armour-piercing arrowhead, a buckle, a key and an intact iron sickle. In the same townland, a cereal-drying kiln and medieval field boundaries were also excavated between 2015 and 2016 (Licence No. 14E0453), while from 2014 onwards, a large complex of ditched enclosures dating to the early medieval period were excavated in the townland of Ballybane (Licence No. 13E0471). In 2016, a geophysical survey followed by a programme of archaeological test trenching (Licence No. 16E0531) was conducted in areas within Grange Castle South Business Park, also within the townland of Ballybane. Two of the sites surveyed had previously been identified through aerial photography and both are Recorded Monuments: a concentric enclosure (DU021-108---) and an enclosure (DU021-109---) (see Figure 2). Two more enclosure sites were also discovered during these investigations and are scheduled for inclusion in the next revision of the Record of Monuments and Places. A number of internal features associated with the sites were also recorded. More recently, geophysical surveys, test trenching and excavation (Licence Nos 20R0006, 20R0080 and 21E0061) in areas directly adjacent and to the south and west of the current site have revealed archaeological remains, including a sub-circular enclosure and part of an early historic field system.

There is little historical or written information in relation to the early history of the site and the townland of Ballybane. Accordingly, an examination at the wider landscape surrounding the site is beneficial. The site is located c. 3km to the west-southwest of Clondalkin. Clondalkin is a historic town (DU017-041----) that contains 12 Recorded Monuments, such as a church, round tower, an unclassified water mill and an unclassified castle. One Recorded Monument within Clondalkin, a church (DU017-042----), was only discovered in 1962 ahead of a housing scheme by Dublin County Council. Excavation revealed that the site consisted of an irregular oval-shaped enclosure, within which were the remains of a small stone church (Rynne 1967). This ecclesiastical enclosure (DU017-042001-) was defined by a low earthen bank. Large quantities of human remains were also uncovered during the course of the investigations.

The townland of Kilbride is south of and adjacent to Ballybane. There are four Recorded Monuments within the townland; a church (DU021-005001-), an ecclesiastical enclosure (DU021-005003-), a graveyard (DU021-005002-) and a castle (DU021-004----) (see Figure 2). Kilbride church is a single cell church, which is a style that has existed in Ireland from Early Christian times and is found throughout the island. Their origins are the tiny oratories of the earliest monasteries, which were probably built of wood (Ní Mharcaigh 1997, 249). The remains of a tower are present at the western end of the church and next to this is an arched porch where a doorway would have opened into a curved recess where a spiral staircase would have been, but there are no remains of this now. This was likely the entrance to the residence of the priest (Ball 1906, 70).

This area was under the control of Leinster rulers until the 12th century when the Anglo-Normans arrived. The castle at Kilbride was built before the 16th century. There are records of a lease to John Gibbons in 1537 and then in 1570 to Thomas Bathe. In the 16th century, the Bathe family held the lands of Kilbride and Nangor. The Batches were still in possession of the Kilbride lands into the 17th century but by the time of the Restoration they had been succeeded by the family of Carberry (Ball 1906, 68). Today, this castle, within the townland of Kilbride, has no visible trace above ground.

2.2 Previous archaeological investigations

Prior to the current assessment and geophysical survey, the site has not been subject to archaeological investigations previously, however, it is adjacent to an area subject to recent assessments, including geophysical surveys (Licence Nos 20R0006, 20R0080), test trenching and excavation (Licence No. 21E0061). This work revealed archaeological remains, including a sub-circular enclosure and part of an early historic field system, located c. 210m to the southwest of the current site (see below for details).

The details of relevant investigations are listed below in Table 1 and derived from the Summary Accounts of Archaeological Excavations in Ireland (www.excavations.ie).

Table 1: Previous archaeological investigations in the environs of the site

Excavation.ie	Licence No.	Site Type	Investigation type
2021:110 – Profile Park, Kilbride, Dublin	21E0061; 21E0061 ext.	Prehistoric enclosure.	Test trenching and excavation
2021:111 – Profile Park, Ballybane and Kilbride, Dublin	21E0061	Non-archaeological.	Test trenching
2019:755 – Milltown 1, Grange Castle West, Dublin	19E0680	Concentric enclosure, furnaces, kilns, pits, post-holes and spreads.	Excavation
2019:076 and :209 – Nangor Road, Clondalkin, Dublin	19E0170	Cobbled surfaces and stone-built wall foundations associated with 18th-century house built on site of Nangor Castle.	Test excavation and monitoring
2020:440 – Castlebaggot sub-station, Dublin	17E0394	Pits, post-holes, stake-holes, curvilinear ditch, and a spread of burnt stone and clay.	Excavation
2016:084 – DSF, Grange Castle Business Park, Dublin 22	14E0453	Bronze Age cremation pits and medieval cereal-drying kiln.	Excavation
2020:441 – Microsoft Campus, Grange Business Park, Ballybane, Dublin 2016:083 Dub06 Data Centre Grange Castle Business Park, Ballybane, Dublin 22	13E0471	Neolithic and Bronze Age features: stake-holes, post-holes, pits, curvilinear ditch, burnt mound, and a cremation.	Excavation
2007:530 – Nangor, Dublin	07E0588	Early medieval enclosure (see 96E0273) and possible remnants of Nangor Castle and/or 18th-century house, including landscaped garden features.	Monitoring and test trenching
2001:455 – Grange Castle International Business Park	01E0754	Medieval ditch complex, pits and cobbled surfaces.	Excavation
1996:068 – Nangor Castle, Clondalkin, Dublin	96E0273	Historic ditch and shallower linear features, and finds of lignite cores and slivers, early medieval pottery, metal slag and human remains.	Test trenching

In recent years, various archaeological assessments have been carried out within the Profile Park Business Park. This work, which was completed in Spring 2022, took the form of geophysical surveys, archaeological test trenching and archaeological excavation. Two large areas within the Park were subject to geophysical survey by ACSU (20R0080) and by TARGET and ACSU (20R0006). These identified the location of a number of previously unrecorded archaeological remains, including a sub-circular enclosure, part of an early historic field system and a pre-existing historic field boundary (Russell and Breen 2020). Part of the overall site was subsequently subject to test trenching and excavation (21E0061 and 21E0061 ext.) between 2020 and 2022. Test trenching in March 2021, of the land directly adjacent and to the west and south, did not identify any features of archaeological significance (Murphy 2021a). The enclosure was also subject to targeted test trenching and excavation (Murphy 2021b). The latter confirmed the remains of an oval/circular enclosure, measuring 37m in length by 34m in width. Based on preliminary analysis of the pottery, the enclosure can be dated to the Bronze Age; post-excavation analyses are ongoing with a final report expected later this year.

There have also been several archaeological excavations carried out ahead of developments throughout the Grange Castle Business Park. Between 2000 and 2001, for example, excavations (01E0754) in the townland of Nangor revealed a medieval ditch complex, contemporary pits and cobbled surfaces. The excavation recovered 1,600 sherds of medieval pottery comprised of Leinster Cooking Ware and Dublin-type wares. Test trenching in 2014, followed by excavations (13E0471) that carried on intermittently until 2016 also revealed several sites of prehistoric and early medieval date. One area consisted of two prehistoric *fulachtaí fia* or burnt mounds, preserved in a waterlogged field and including unlined troughs, pits, stake-holes and a well. Another area comprised a series of associated ditched enclosures, one of which was 48m in diameter, included iron knives, quern stones and animal bones, and was radiocarbon dated to the mid-seventh to mid-eight century AD. This site was enclosed by an outer ditch, measuring 86m in diameter, which also contained cattle skulls and had a large D-shaped enclosure abutting the southern side. A smaller enclosure, possibly representing a roundhouse, was also uncovered, as well as two inhumation burials within a shallow grave. Between 2015 and 2016, additional excavations (14E0453) uncovered a cereal-drying kiln, medieval field boundaries and two clusters of cremation pits. There was a total of nine cremation pits containing cremated bone in two separate clusters and these were dated to the Middle Bronze Age. Renewed development at this site in 2016 resulted in the excavation (13E0471) of additional sites of a prehistoric nature. This included stake-holes, post-holes, pits, a curvilinear ditch, a truncated burnt mound, and an isolated cremation. One of the sites was a structure of likely Neolithic date in the form of post-holes and pits. The post-holes produced 38 sherds of pottery from 14 vessels of Early Neolithic type (Dunmurry-Ballymerlagh Type). They also produced numerous charred hazelnut shells and worked implements of flint, quartz, chert, sandstone, shale, and siltstone, a high proportion of which were blades. Ditch segments forming a U-shaped arrangement may also have represented the remains of a house, with three abraded sherds of pottery suggesting a Middle Bronze Age date.

To the far northwest of the current site, excavation (19E0680) in 2019 in advance of the construction of an access road associated with the Grange Castle West Business Park, also revealed two concentric enclosures.

This comprised an outer ditch that was sub-circular in plan and enclosed an area measuring 32m in length by 28.6m in width. The inner ditch enclosed an area measuring c. 11m in diameter. The area between the two ditches had several features present, including a number of furnaces, kilns, pits, post-holes and deposits that all appeared to relate to metalworking. Preliminary interpretation is that this site dated to the early medieval period, and post-excavation analysis is ongoing.

2.3 Record of Monuments and Places (RMP)

The site does not contain any monuments listed within the Record of Monuments and Places (RMP) or Sites and Monuments Record (SMR). The nearest monument to the site is a field system (DU017-082----) identified during excavation in 2001.

The following is a list of the monuments located within immediate environs (Table 2, Figure 2). All of these sites add to the general assessment of the archaeological potential of the development area. These descriptions are derived from the National Monuments Service Archaeological Survey Database (<http://maps.archaeology.ie/historicenvironment/>).

Table 2: Recorded Monuments in the environs of the site

DU017-082----	Field system
Excavations in 2001 revealed a medieval ditch complex. This appeared to represent the remains of medieval field boundaries with associated water management gullies. Some 1,600 sherds of local medieval pottery were recovered and two sherds of imported ware.	
DU021-108----	Concentric enclosure
Not indicated on any OS map, a large concentric enclosure is visible as a crop-mark on an aerial photo. A second enclosure (DU021-109----) is visible to the SW.	
DU021-109----	Enclosure
Not indicated on any OS map, this enclosure is as a crop-mark on an aerial photo. A second larger enclosure (DU021-108----) is visible to the NE.	
DU021-004	Castle – unclassified
Situated in a narrow valley. There are farm buildings on the site. There is no visible trace above ground (Ball 1906, 66).	
DU021-005001-	Church
Located in a circular raised graveyard (L 42m, Wth 30m) on the edge of a valley (DU021-005002-). This may be the remains of an early ecclesiastical enclosure (DU021-005003-). In 1228 the archbishop of Dublin granted the church of Kilbride to Andrew de Monevea as a prebend and later conferred it on the Canons of St Patrick's Cathedral (McNeill 1950, 75). In 1630 it was described as ruinous (Ronan 1941, 80). This church was attached to St. Patrick's Cathedral and was described at the dissolution in 1547 as an old chapel (Ball 1906, 68–70). Consists of a small rectangular building (int. dims L5.8m, Wth 3.63m, T 0.85m) with a NW	

<p>turret in ruinous condition. Formerly entered through an opening in the W end (now damaged). Built of randomly coursed masonry. There is an aumbry in the E end of the N wall of the church. The E window has a S jamb of tufa. There are remnants of another window in the W end of the S wall. The NW turret (L 1.35m, Wth 0.77m, H 1.78m) is entered through a lintelled doorway off the church. It has a corbelled roof. There are traces of a stairwell on the S side of the turret (Ní Mharcaigh 1997, 268–9).</p>	
DU021-005002-	Graveyard
<p>Located in a circular raised graveyard (L 42m, Wth 30m) on the edge of a valley. Encloses the remains of a medieval church (DU021-005001-).</p>	
DU021-005003-	Ecclesiastical enclosure
<p>The church of Kilbride is located in a circular raised graveyard (L 42m, Wth 30m) on the edge of a valley. This may be the remains of an early ecclesiastical enclosure.</p>	
DU017-037----	Castle – unclassified
<p>Located in flat terrain. Named 'Nangor castle' on the 1837 edition OS 6-inch map and 'Nangor castle on site of castle' in the later edition. This indicates that the castle had been incorporated into an 19th-century mansion. All buildings on the site have been recently demolished leaving no surface trace of the earlier building. In 1532 Ffinian Bassenett was residing at Nangor (Ball 1906, 112; Healy 1974, 22; D'Alton 1976 (2nd ed.), 345). There are earthworks in the field to the south of the castle. Pre-development testing in the vicinity of the castle in 1996 produced evidence for a substantial ditch and an associated shallower linear feature of uncertain date.</p> <p>Trial-trenching in the field bounding the castle site to its south uncovered several lignite cores and slivers, early medieval pottery and metal slag suggesting a date in at least the early medieval period - twelfth/thirteenth century. Several trenches cut through a large ditch located on both the east and west of the field. Human skeletal remains were also uncovered, as were numerous charcoal-flecked irregular features (McConway 1997, 17).</p>	

2.4 Protected Structures and National Inventory of Architectural Heritage (NIAH)

The site contains no Protected Structures, as listed within the *South Dublin County Development Plan 2016–2022*, nor any structures listed in the National Inventory of Architectural Heritage for County Dublin. The nearest Protected Structure is Kilcarberry House (RPS ID 173; NIAH Reg. No 11209001) located c. 0.6km to the southeast of the site (Figure 2).

2.5 Stray finds

No archaeological finds are listed within the Topographical Files of the National Museum of Ireland for the townland of Ballybane. However, four are listed in relation to the adjacent townland of Kilbride and these include pottery (NMI ID 1873:29.1), human remains (NMI ID 1873:29.2 and NMI ID 4530:Wk176.2), and an urn (NMI ID 2676:Wk176.1). They are all noted as found at the ‘Valley of the River Liffey near Kilbride’. Kilbride is located directly southeast of Ballybane.

2.6 Cartographic review

A review of available historic mapping for the area was carried out to include the Rocque map of 1760 and various editions of those compiled by the Ordnance Survey of Ireland, including the 6-inch (1836 and 1935–38) and 25-inch (1908) maps. Potential archaeological or cultural heritage features are marked on such maps and provide a useful resource in identifying sites, particularly if they no longer have any above-ground remains.

The 1760 map (Figure 3) shows the site within a pasture field, within the townland of ‘Ballybawn’, to the south side of the ‘New Canal’, between the settlements of ‘Mill Town’ and ‘Nanger’. The area is depicted as predominantly pastureland. A road, originating southwest of the study area, leads from ‘Mill Town’ through ‘Ballybawn’ and passes ‘Church in Ruins’, which represents DU021-005001-. To the south of the church, the area is labelled as ‘Killbride’.

On the Ordnance Survey maps of 1836, 1908 and 1935–38, the site is shown adjacent to and south of Nangor Road (Figures 4–6). The south boundary of the site is formed by a stream that is also a townland boundary between Ballybane and Kilbride (see Section 4). No buildings are shown within the site on examined mapping. The site is shown as part of a large field that remains unchanged from the mid-19th century onwards. Griffith’s Valuation of 1847–64 records this as Church land, belonging to the Dean and Chapter of St. Patrick’s (a Thomas Kiernan Esq.) and leased by Alexander Graydon Esq. of Newcastle, for grazing horses and cows.

No monuments of archaeological significance were identified during the examination of cartographical sources.

3. ARCHAEOLOGICAL ASSESSMENT

3.1 Site description

The site is roughly rectangular in plan and consists of two greenfields that lie within the northeast portion of Profile Park, on lands adjacent to and south of the R134 road and west of the internal Profile Park Access Road. The site is bounded by metal fencing and mature hedges from the west and a wet ditch from the south.

3.2 Test excavation methodology

Test excavation was carried out in accordance with the *IAI Code of Conduct for Archaeological Assessment Excavation* (IAI 2006). The test trench layout targeted anomalies of archaeological significance identified during the geophysical survey (see Section 3.3; Figure 7) as well as the overall footprint of the proposed development.

Excavation of the trenches, using a tracked excavator equipped with a 1.8-m wide toothless (smooth blade) ditching bucket, was carried out under direct supervision of a suitably qualified archaeologist (Deirdre Murphy). The test trenches were excavated to the natural subsoil and/or surface of archaeological features. Spoil from excavated test trenches was examined for finds. Where a potential archaeological feature (ditch C3) was

identified, it was cleaned by hand to determine its horizontal extent, test excavated by hand to determine its vertical extent, nature, character, possible date, and significance, surveyed, recorded and photographed.

All excavated trenches were recorded using digital photography. Digital photography images were taken using a high-resolution digital camera with a minimum resolution of 10 Megapixels.

Archaeological test trenching was carried out by Deirdre Murphy of ACSU on 6th–7th of October 2022 under licence number 22E0760 issued by the Department of Housing, Local Government and Heritage in consultation with the National Museum of Ireland.

3.3 Geophysical survey results

The geophysical survey was conducted between 29th and 30th of September 2022 by Donald Murphy, Rob Breen and Jeanne Rochford of ACSU under licence 22R0316 issued by the Department of Housing, Local Government and Heritage in consultation with the National Museum of Ireland (Murphy 2022). A full detailed gradiometer survey was undertaken throughout the application area using a Bartington GRAD 601-2 dual-sensor fluxgate gradiometer cart system.

The survey identified two trends, a couple of positive responses of potential archaeological significance and a number of disturbances, particularly along the edges of the site (Figure 7). The trends were represented by two northwest to southeast aligned linears (Anomalies 1a, 1b). A scatter of positive responses (?Archaeology) that might be geological, modern in nature or represent iron in the topsoil were also noted, but these could equally represent cut features like pits/post-holes, while large areas (Anomalies 2a, 2b) might represent large pits or spreads. Linear northeast to southwest aligned trends (Anomalies 3a, 3b) correspond with access to the former yard and are visible on aerial imagery, while a north to south aligned linear (Anomaly 3c) corresponds with wire fencing and represents ground disturbances associated with it. Bands of magnetic disturbance along the edges of the site, particularly the north and east extremities, are modern and derive from ground disturbance associated with road construction.

3.4 Test excavation results

A total of 11 test trenches were excavated within the site, targeting the trends identified in the geophysical survey (Figure 7). Each trench measured 1.8m in width, and in total 597m of linear trenches were excavated. In general, the sod and topsoil measured 0.34–0.50m in thickness and lay above a mid-grey natural clay and stone (Table 3; Plates 1–12). Only one potential archaeological feature was identified, within Trenches 5, 6 and 11. This feature corresponded with a geophysical trend (Anomaly 1a). It consisted of a linear feature or ditch (C3), aligned northwest–southeast and measuring c.25.0m in length, 1.7m in width and 0.32m in depth. It was filled with a mid-brown silty clay containing occasional inclusions of decayed stone and a few small fragments of animal bone (C4; Plate 12).

Table 3: Trench descriptions

Trench Number	Length (m)	Trench depth (m)	Description
1	62.0m	0.53m	The sod and topsoil (C1) measured 0.38m in thickness and lay above the natural mid-grey natural clay and stone (C2). No archaeological features or deposits were exposed or identified, and no finds were recovered.
2	40.0m	0.50m	The sod and topsoil (C1) measured 0.37m in thickness and lay above the natural mid-grey natural clay and stone (C2). No archaeological features or deposits were exposed or identified, and no finds were recovered.
3	73.0m	0.58m	The sod and topsoil (C1) measured 0.35m in thickness and lay above the natural mid-grey natural clay and stone (C2). No archaeological features or deposits were exposed or identified, and no finds were recovered.
4	88.0m	0.40m	The sod and topsoil (C1) measured 0.34m in thickness and lay above the natural mid-grey natural clay and stone (C2). No archaeological features or deposits were exposed or identified, and no finds were recovered.
5	78.0m	0.56m	The sod and topsoil (C1) measured 0.43m in thickness and lay above the natural mid-grey natural clay and stone (C2). Only one potential archaeological feature was identified within Trench 5 (and also across Trenches 6 and 11). It consisted of a linear feature or ditch (C3), aligned northwest–southeast and measuring c.25.0m in length, 1.70m in width and 0.32m in depth. It was filled with a mid-brown silty clay containing occasional inclusions of decayed stone and a few small fragments of animal bone (C4).
6	100.0m	0.53m	The sod and topsoil (C1) measured 0.44m in thickness and lay above the natural mid-grey natural clay and stone (C2). Only one potential archaeological feature was identified within Trench 6 (and also across Trenches 5 and 11). It consisted of a linear feature or ditch (C3), aligned northwest–southeast and measuring c.25.0m in length, 1.70m in width and 0.32m in depth. It was filled with a mid-brown silty clay containing occasional inclusions of decayed stone and a few small fragments of animal bone (C4).
7	60.0m	0.62m	The sod and topsoil (C1) measured 0.50m in thickness and lay above the natural mid-grey natural clay and stone (C2). No archaeological features or deposits were exposed or identified, and no finds were recovered.
8	28.0m	1.00m	The sod and topsoil (C1) measured 0.48m in thickness and lay above the natural mid-grey natural clay and stone (C2). No archaeological features or deposits were exposed or identified, and no finds were recovered.
9	18.0m	0.56m	The sod and topsoil (C1) measured 0.46m in thickness and lay above the natural mid-grey natural clay and stone (C2). No archaeological features or deposits were exposed or identified, and no finds were recovered.
10	20.0m	0.50m	The sod and topsoil (C1) measured 0.38m in thickness and lay above the natural mid-grey natural clay and stone (C2). No archaeological features or deposits were exposed or identified, and no finds were recovered.

Trench Number	Length (m)	Trench depth (m)	Description
11	30.0m	0.54m	The sod and topsoil (C1) measured 0.39m in thickness and lay above the natural mid-grey natural clay and stone (C2). Only one potential archaeological feature was identified within Trench 11 (and also across Trenches 5 and 6). It consisted of a linear feature or ditch (C3), aligned northwest–southeast and measuring c.25.0m in length, 1.70m in width and 0.32m in depth. It was filled with a mid-brown silty clay containing occasional inclusions of decayed stone and a few small fragments of animal bone (C4).

4. TOWNLAND BOUNDARY

The townland boundary between Ballybane and Kilbride, forming the south boundary of the site, consists of a mature hedgerow and tree line on either side of an extant ditch/stream (Plates 13–16). The stream is V-shaped in profile and measures 1.8m wide at the base rising to c.4.35m at the top and is 2.24m in depth. The trees and hedgerow are more prevalent on the northern side, with less trees present on the southern side of the boundary. No banks were visible on either side of the stream.

5. MATERIAL CULTURE

One potential archaeological feature was identified within Trenches 5, 6 and 11. It consisted of a linear feature or ditch (C3) filled with a mid-brown silty clay containing occasional inclusions of decayed stone and a few small fragments of animal bone (C4). No other material culture was identified from the site.

6. DATING

No finds were recovered but the possible ditch (C3) identified within Trenches 5, 6 and 11 did contain very occasional inclusions of small fragments of animal bone and could be prehistoric or early historic in origin given that no modern field boundaries were present within the field or illustrated on any of the Ordnance Survey (OS) mapping.

7. DISCUSSION

Only one potential archaeological feature was identified within Trenches 5, 6 and 11. It consisted of a linear feature or ditch (C3), aligned northwest–southeast and measuring 1.70m in width and 0.32m in depth. It was filled with a mid-brown silty clay containing occasional inclusions of decayed stone and animal bone (C4). The ditch did not extend fully across the field and was not identified within Trenches 1 or 4, but appeared to represent a short length of ditch measuring c.25.0m in length only, tapering to an end towards the northwest (Figure 7).

This feature is likely to be of prehistoric or early historic date given that no modern field boundaries were present within the field or illustrated on any of the Ordnance Survey (OS) mapping and the substantial number of archaeological features discovered in the surround areas, which includes enclosures, curvilinear ditches and linear features of various ages.

8. RECOMMENDATIONS

It is recommended that archaeological monitoring is conducted of topsoil stripping in the area immediately surrounding the possible prehistoric or early historic ditch and, once exposed, that it is fully preserved by record (excavation) prior to construction.

9. POST-EXCAVATION PROGRAMME

All post-excavation analysis will be completed following preservation by record (excavation) of ditch C3.

10. EXCAVATION BULLETIN

Profile Park, New Nangor Road, Ballybane, Co. Dublin

22E0760

ITM. 703833, 730822

RMP No. n/a

Prehistoric/early historic ditch (possible)

10 October 2022

This summary details the results of archaeological test trenching carried out at Profile Park, New Nangor Road, Ballybane, Co. Dublin. This was undertaken following an Archaeological Impact Assessment in August 2022 and a geophysical survey carried out by Donald Murphy under licence number 22R0316 in September 2022.

Archaeological test trenching was carried out on 6th–7th of October 2022. A total of 11 test trenches were excavated within the site. In general, the sod and topsoil measured 0.34–0.50m in thickness and lay above a mid-grey natural clay and stone. Only one potential archaeological feature was identified within Trenches 5, 6 and 11. It consisted of a linear feature or ditch (C3), aligned northwest–southeast and measuring c.25.0m in length, 1.70m in width and 0.32m in depth. It was filled with a mid-brown silty clay containing occasional inclusions of decayed stone and a few small fragments of animal bone (C4).

Deirdre Murphy, Archaeological Consultancy Services Unit, Unit 21, Boyne Business Park, Greenhills, Drogheda, Co Louth

11. PUBLICATION PLAN

An account of this licensed test trenching assessment and its results will be published online as an excavation bulletin at www.excavations.ie (see Section 10).

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12.3 Cartographic and photographic Sources

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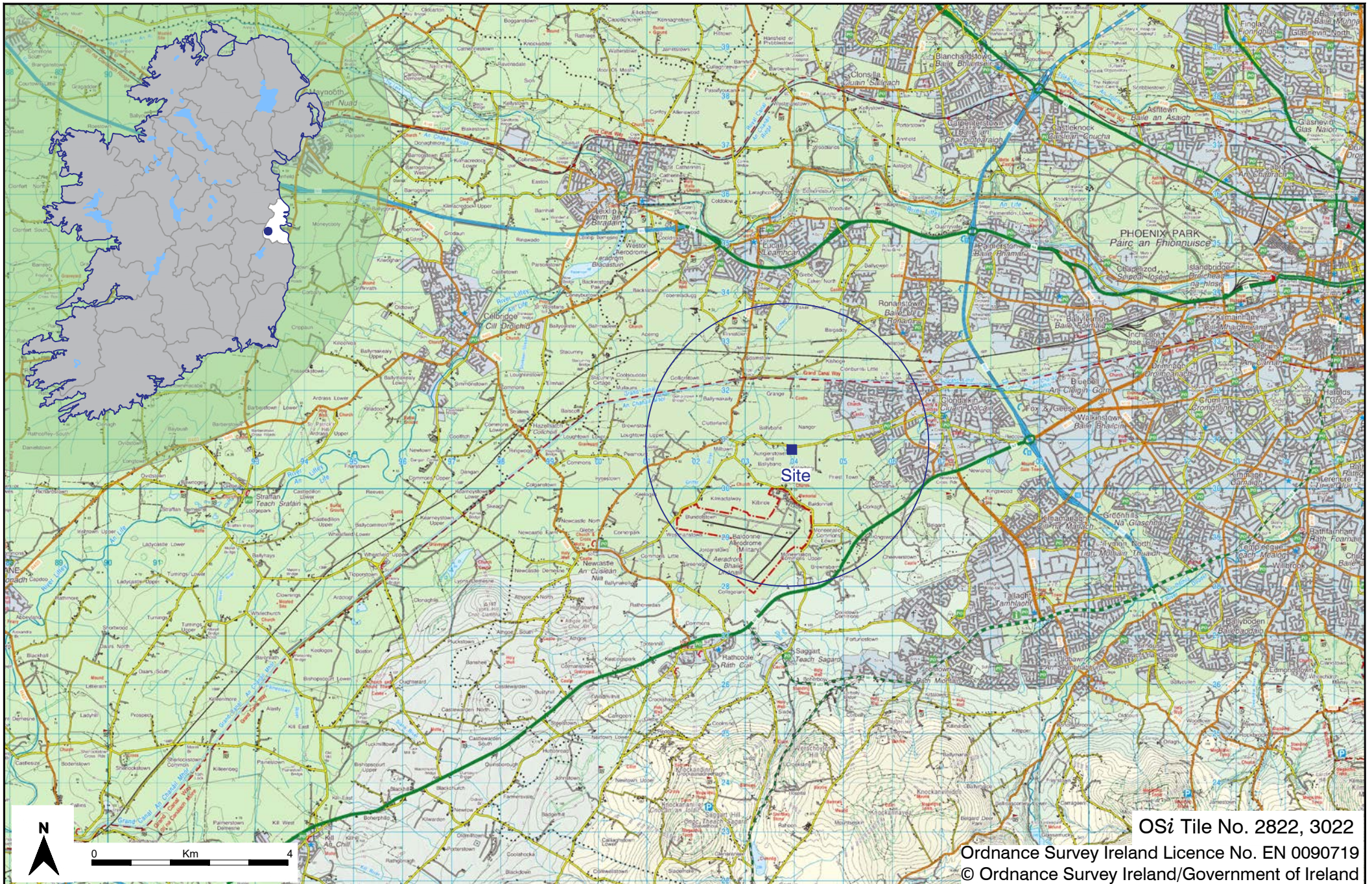
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Third edition Ordnance Survey (OS) 25-inch map (surveyed 1908 - published 1910).

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Project Notheast Profile Park, Grange Castle, Dublin 22

Date October 2022

Drawing No. 2272_C1021


Figure 1 Location of site

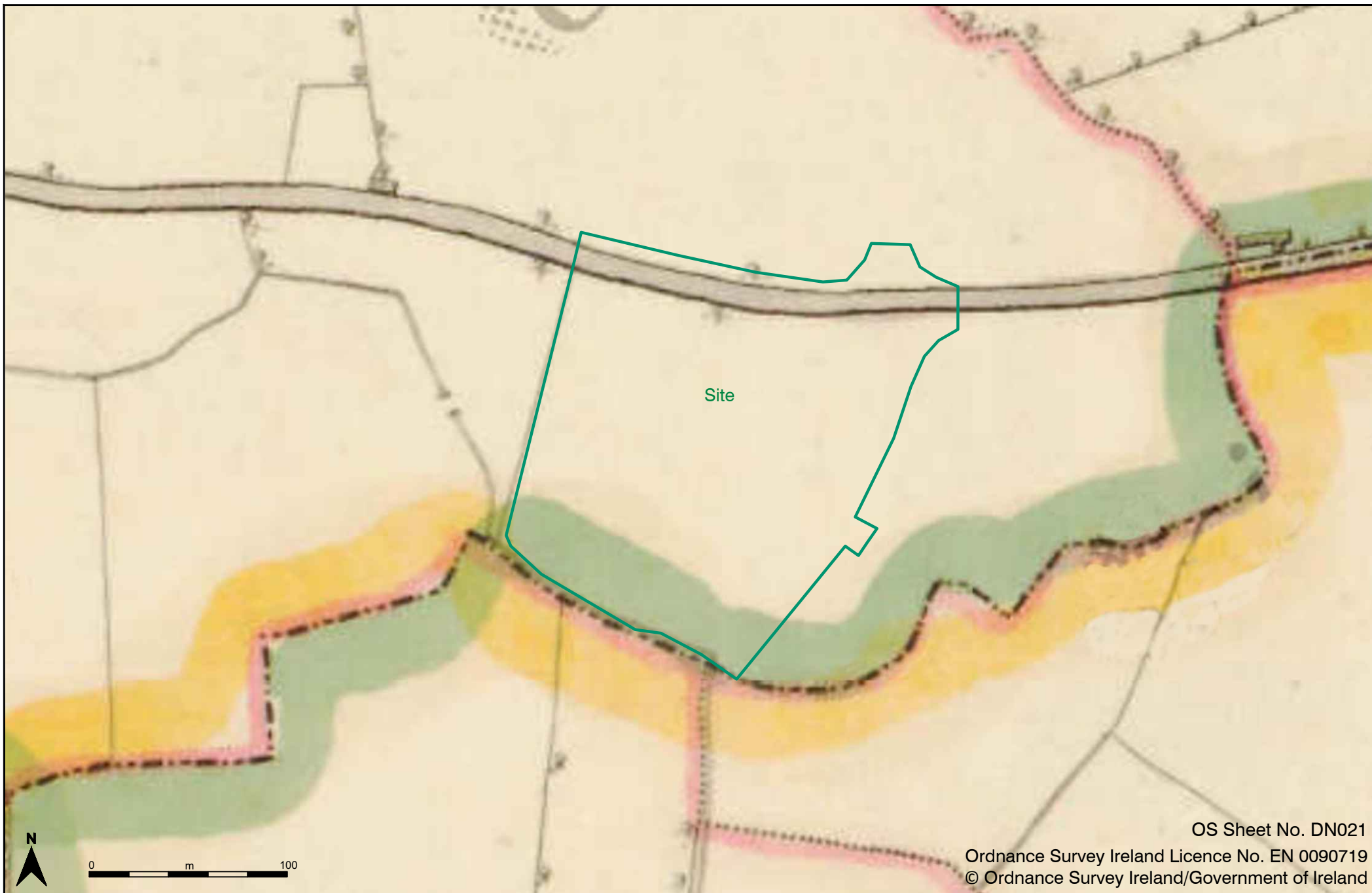
Scale 1:100,000 @ A4





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Project Notheast Profile Park, Grange Castle, Dublin 22	Date October 2022	Drawing No. 2272_C1023	
Figure 3 Extract from An actual survey of the county of Dublin by John Rocque - southeast sheet (1760) , showing approximate location of site		Scale Not to scale	



Project Notheast Profile Park, Grange Castle, Dublin 22

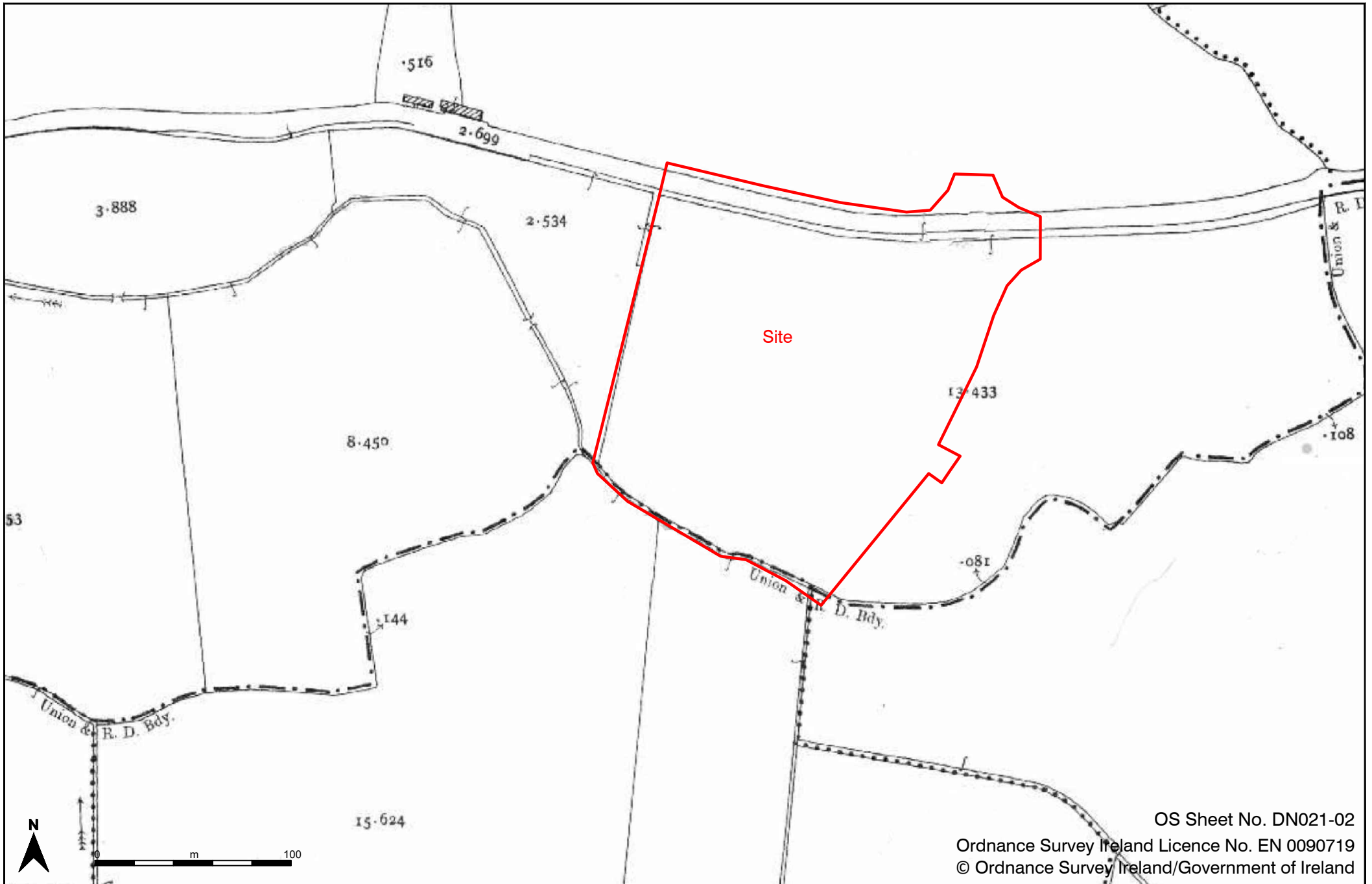
Date October 2022

Drawing No. 2272_C1024

Figure 4 Extract from 1st edition Ordnance Survey (OS) 6-inch map (surveyed 1836 - published 1843), showing location of site

Scale 1:2,500 @ A4





OS Sheet No. DN021-02

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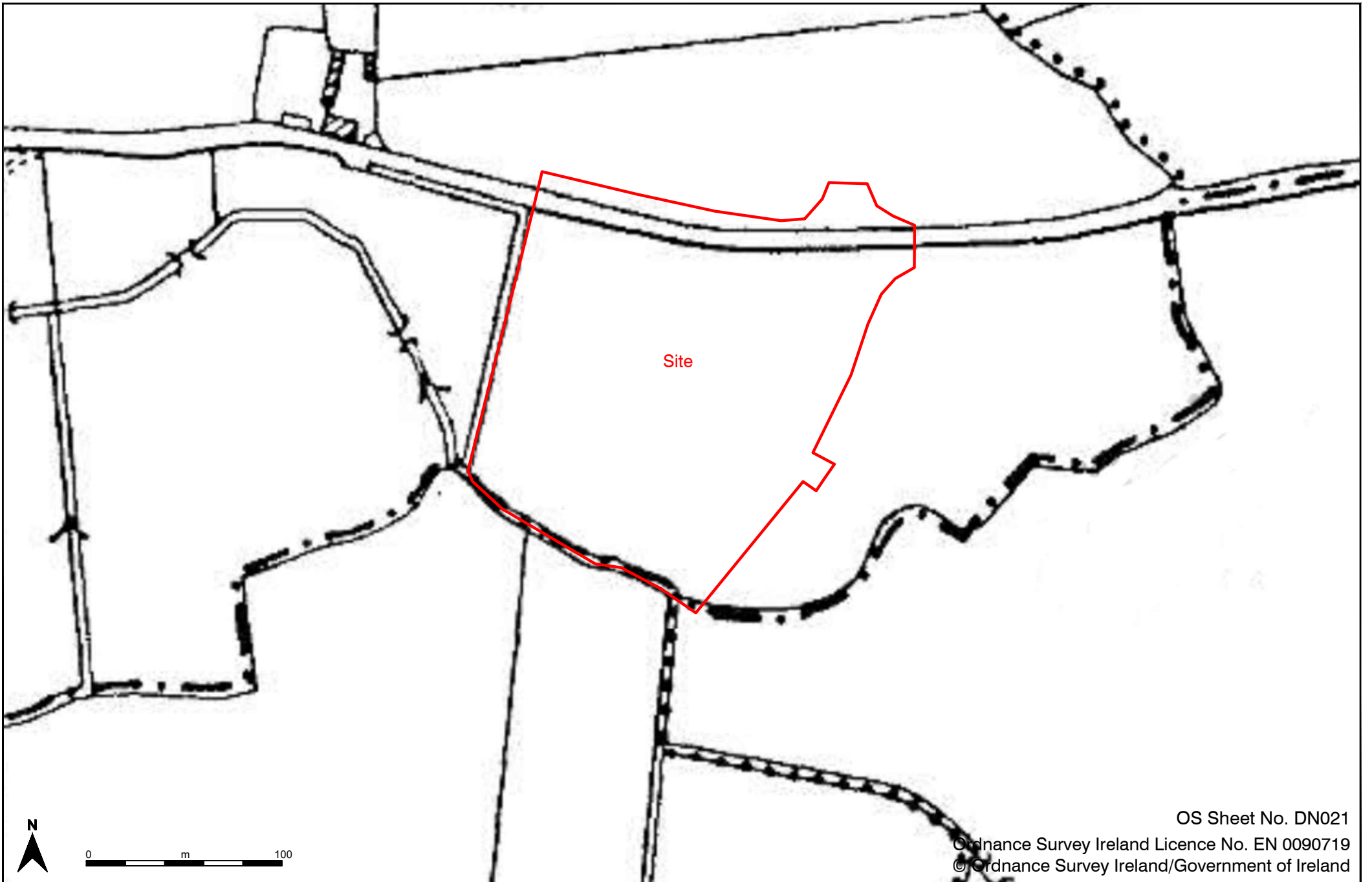
Date October 2022

Drawing No. 2272_C1025

Figure 5 Extract from 3rd edition Ordnance Survey (OS) 25-inch map (surveyed 1908 - published 1910), showing location of site

Scale 1:2,500 @ A4





OS Sheet No. DN021

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Drawing No. 2272_C1026

Figure 6 Extract from Cassini edition Ordnance Survey (OS) 6-inch map (1935-38), showing location of site

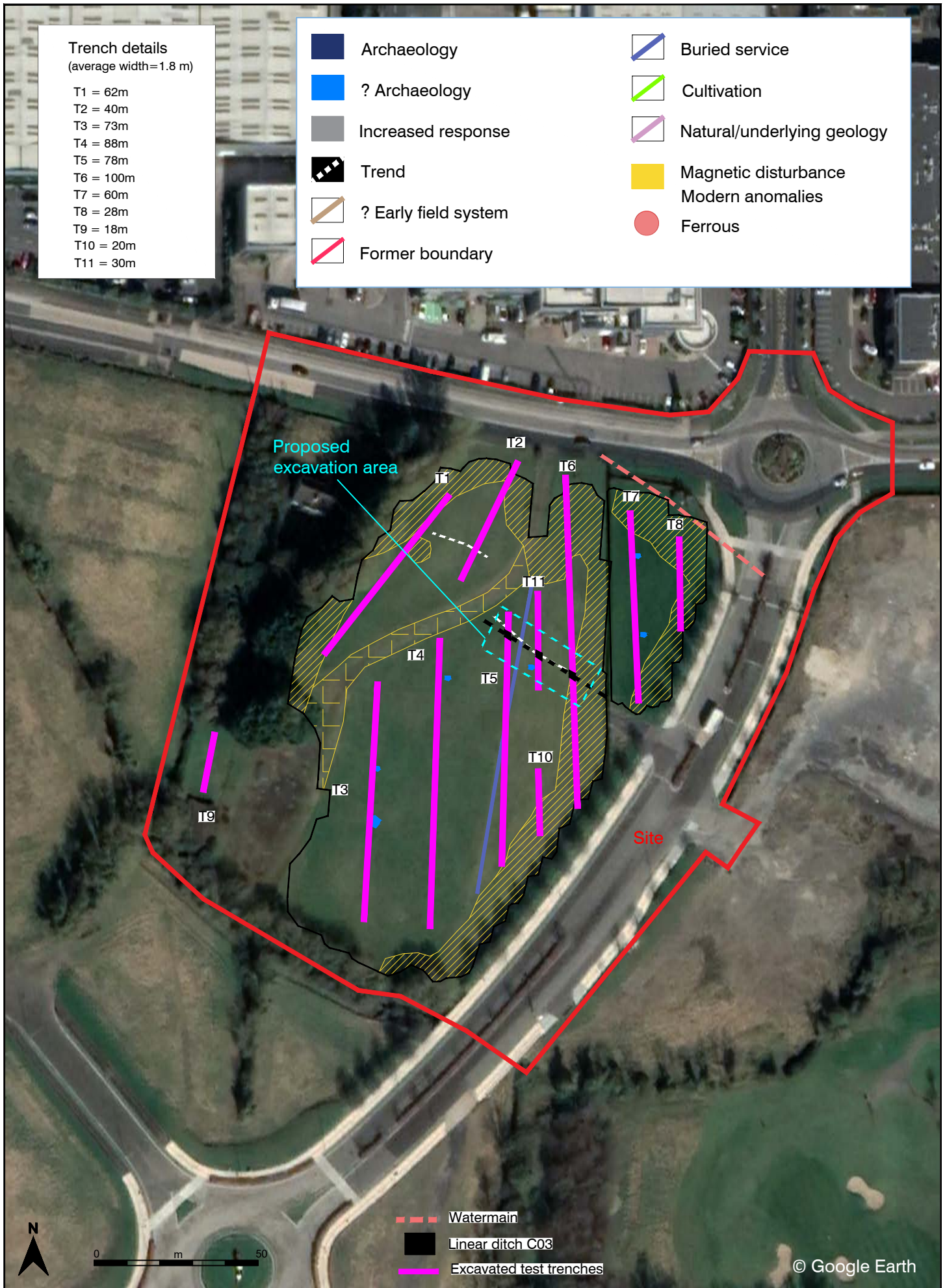
Scale 1:2,500 @ A4



Trench details
(average width=1.8 m)

- T1 = 62m
- T2 = 40m
- T3 = 73m
- T4 = 88m
- T5 = 78m
- T6 = 100m
- T7 = 60m
- T8 = 28m
- T9 = 18m
- T10 = 20m
- T11 = 30m

- Archaeology
- ? Archaeology
- Increased response
- Trend
- ? Early field system
- Former boundary
- Buried service
- Cultivation
- Natural/underlying geology
- Magnetic disturbance
Modern anomalies
- Ferrous



- Watermain
- Linear ditch C03
- Excavated test trenches

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Project Notheast Profile Park, Grange Castle, Dublin 22

Date October 2022

Figure 7 Aerial view of site, showing location of excavated test trenches (1-11) overlying geophysical survey interpretation.



Plate 1: Trench 1 looking north.



Plate 2: Trench 2 looking south.



Plate 3: Trench 3 looking south.



Plate 4: Trench 4 looking north.



Plate 5: Trench 5 looking southeast.



Plate 6: Trench 6 looking southeast.



Plate 7: Trench 7 looking south.



Plate 8: Trench 8 looking southwest.



Plate 9: Trench 9 looking south.



Plate 10: Trench 10 looking north.



Plate 11: Trench 11 looking north.



Plate 12: Trench 11, ditch C03 looking south.



Plate 13: General view of townland boundary looking southwest.



Plate 14: Detail of townland boundary looking southwest.



Plate 15: Detail of banks and stream within townland boundary looking east.



Plate 16: General view of townland boundary looking northwest.