

# **Environmental Impact Assessment Report (EIAR) Volume 3 Non-Technical Summary (NTS)**

Strategic Housing Development at Woodtown, Ballycullen,  
Dublin 16.

JUNE 2021

Prepared by



In association with

- POGA Consulting Engineers
- Traynor Environmental
- Whitehill Ecology
- IAC Archaeology
- NRB Consulting Engineers

## TABLE OF CONTENTS

INTRODUCTION .....	3
SITE LOCATION AND CONTEXT .....	4
PROJECT DESCRIPTION .....	4
DATA REQUIRED TO IDENTIFY AND ASSESS THE MAIN EFFECTS WHICH THE PROPOSED DEVELOPMENT IS LIKELY TO HAVE ON THE ENVIRONMENT .....	5
PREDICTED IMPACTS OF THE PROPOSED DEVELOPMENT .....	14

## **LIST OF FIGURES**

Figure 1 Site Location. Note the red line shown is for indicative purposes only. Please refer to the architects drawings for an accurate red line boundary. ....4

## **LIST OF TABLES**

Table 1 Summary of Locations of Viewpoints and Predicted Impact .....18  
Table 2 Interaction Matrix .....20

## Introduction

This is the Non-Technical Summary (NTS) of the Environmental Impact Assessment Report (EIAR) prepared in relation to a Strategic Housing development application to An Bord Pleanála for a new residential development on a site at Woodtown, Ballycullen, Dublin 16.

Each EIAR Chapter outlines the receiving environment; the potential impacts of the proposed development; the mitigation measures deemed necessary; and the predicted impacts once the mitigation measures are implemented. The purpose of the NTS is to summarise and explain in non-technical language, the likely and significant effects to the environments arising from this project. Section 2 of this EIAR provides a brief site context and section 3 outlines the proposed development description. Section 4 outlines the data required for each EIAR chapter and section 5 outlines the predicted impacts relating to each chapter.

This NTS is prepared with direct input from the design team who include McGill Planning, Mc Crossan O' Rourke Manning Architects, Pat O' Gorman Consulting Engineers, Ronan Mc Diarmada & Associates Landscape Architects, NRB Consulting Engineers, 3D Design Bureau, Whitehill Environmental Wildlife Surveys, The Tree File, Traynor Environmental, IAC Archaeology to ensure that the possible effect on the environment has been examined through the process of an EIAR (detailed below) and the most appropriate form of development is delivered at this site.

The EIAR has been prepared in accordance with the provisions of the Planning and Development Act (as amended) and the Planning & Development Regulations 2001(as amended), which give effect in national planning legislation to the EU Directives on EIA.

EIA requirements originate from Council Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, as amended by Directive 97/11/EC, 2003/35/EC and 2009/31/EC. The Directive and its amendments were subsequently codified and replaced by Directive 2011/92/EU, as amended in turn by Directive 2014/52/EU. This amending Directive was transposed into national planning consent procedures in September 2018 through the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018).

The objective of the EIA Directive is to ensure a high level of protection of the environment and human health, through the establishment of minimum requirements for environmental impact assessment prior to development consent being given, of public and private developments that are likely to have significant effects on the environment.

An EIA is mandatory for certain projects and for other projects that meet or exceed a stated threshold as set out in Annex I and Annex II of the Directive (and Part 1 and Part 2 of Schedule 5 of the Planning and Development Regulations 2001, as amended). Projects that do not meet or exceed a stated threshold are subject to Screening for the requirement, or not, for 'sub-threshold' EIA.

The gross area of the application site is c. 10.41 ha, which is above the 10ha threshold for a built-up area and therefore it is deemed necessary to prepare an EIAR to accompany this application.

## SITE LOCATION AND CONTEXT

The subject lands are located at the foothills of the Dublin Mountains in an area known as Ballycullen.

The lands are located at the periphery of the urban area of South County Dublin with lands to the south forming the rural hinterland of the county and the foothills of the Dublin Mountains.

It is south/south-east of the M50 motorway and Stocking Avenue. Stocking Lane is further to the south and Ballycullen Road is to the west.

The Stocking Wood residential estate (comprising Stocking Wood Copse/Green/Hall/Drive/Walk/Manor) is located to north-east of the site. The Abbot's Grove residential development (currently under construction) is located to the northwest and west. A vacant site also zoned residential is located immediately north of the site between Stocking Wood and Abbot's Grove.

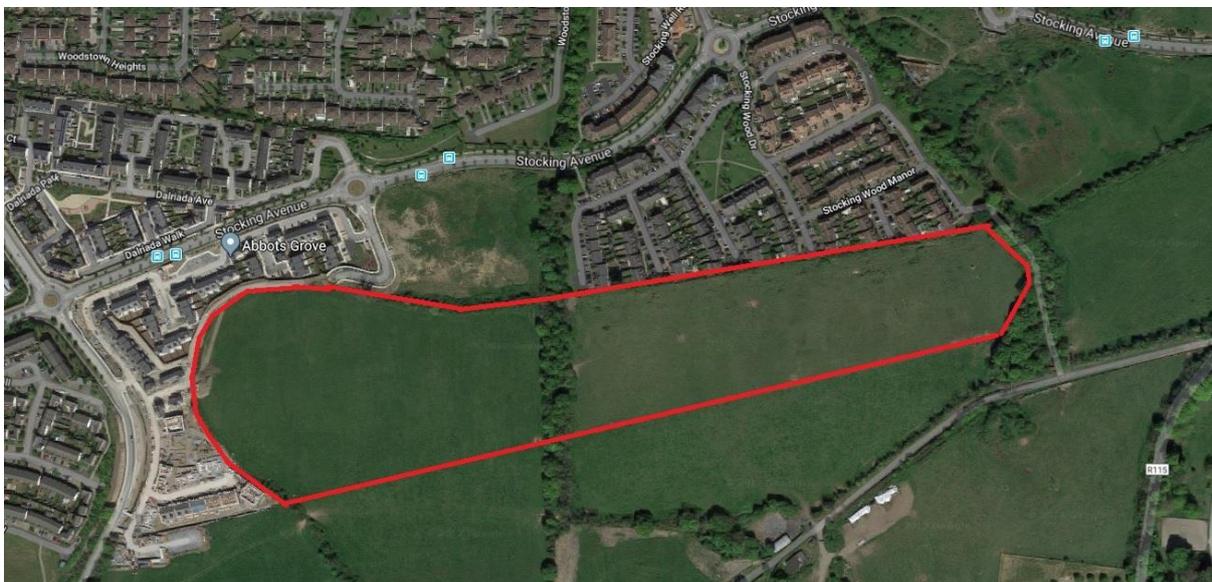


Figure 1: Aerial Photo of Application Site

## PROJECT DESCRIPTION

The development will consist of 329 no. residential units comprising 140 no. 2 storey houses (terraced/ semi-detached / detached) (85 no. 3-bed; 53 no. 4-bed and 2 no. 5-bed) and 4 no. 2-5 storey apartment blocks comprising 57 no. 1-bed apartments and 132 no. 2-bed apartment/duplexes.. The proposed development also includes a 2-storey crèche (c.295.5 sq.m), a new public park ("Ballycullen Park"), residential pocket parks, communal open space, car parking (surface/undercroft), bicycle parking, bin stores, plant areas/utilities infrastructure. Vehicular access to be provided from the existing road connection to Stocking Avenue to the west of the site, and via Stocking Wood Drive to the east of the site (with relocation of existing ESB kiosk and associated works to the existing hammerhead providing additional visitor parking for the existing estate). Pedestrian routes to the boundaries with Abbot's Grove Park, Stocking Wood Copse and White Pines Park also proposed. All associated site development works (including site reprofiling), landscaping, boundary treatments and services provision.

## DATA REQUIRED TO IDENTIFY AND ASSESS THE MAIN EFFECTS WHICH THE PROPOSED DEVELOPMENT IS LIKELY TO HAVE ON THE ENVIRONMENT

Data is required to identify and assess the main impacts which the proposed development is likely to have on the environment. The following is a synopsis of the data and information available and sourced for this Environmental Impact Assessment. This is in line with the following regulations and guidelines which were considered:

- The EU Directives and Irish regulations regarding Environmental Impact Assessment;
- Environmental Impact Assessment of Projects Guidance on the preparation of the Environmental Impact Assessment Report (European Commission, 2017)
- Guidelines on the Information to be Contained in the Environmental Impact Assessment Reports – Draft (Environmental Protection Agency, 2017)
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (Department of Housing, Planning and Local Government, 2018)

### Population and Human Health

To establish the existing receiving environment/baseline for the subject site, the methodology included site visits to evaluate the location and likely significant potential impact upon the human sources in the area. Desk base study of the Central Statistics Office Census (CSO) data, the ESRI Quarterly Economic Commentary, and national, regional and local planning policy, school and creche enrolment figures.

Different local catchment areas were established for analysing population data, creche demand and capacity, and school demand and capacity. These areas were chosen to gather the most relevant data for each factor. A general local catchment area of 1km from the subject site forms the basis of most areas of analysis.

### Biodiversity

The desk study involved the examination of aerial photographs, current and historical maps and plans and drawings of the site. In addition, information was collated on designated nature sites within a 10-15 km radius of the proposed site and on protected and rare species within the 1km square of the site.

A visit to the site of the proposed application at Ballycullen was initially undertaken on October 26th 2017 when field notes, species lists and photographs were taken. A second visit to the site was undertaken in May 5th 2021 to update this work and to ascertain if any changes in the habitats on the site had arisen in the intervening time. The site was surveyed in accordance with the Heritage Council's Habitat Survey Guidelines (Smith et al., 2010) and the Institute of Environmental Assessment's Guidelines for Baselines Ecological Assessment (IEA, 1995). Habitats within the application site were classified in accordance to Level 3 of A Guide to Habitats in Ireland (Fossit, 2000). These habitats are denoted in the text along with their habitat code, e.g., the habitat code for improved agricultural grassland is GA1. A species list was compiled and target notes were made. Mammal and bird activity was also noted. The species nomenclature for vascular plants conforms with The New Flora of the British Isles' (Stace, 2010).

An initial bat survey of the site was also carried out by Brian Keely of Wildlife Surveys Ireland in October 2017. An updated survey was carried out in September 2020. The bat detector assessment that

commenced prior to sunset was undertaken equipped with two Echometer 3 (EM3) full spectrum receivers with a screen displaying the ultrasonic signals received and recording all ultrasonic signals received to a SD card for later analysis. The surveyors firstly examined the trees for evidence of bat occupancy (staining, droppings, squeaks, actual bats etc.) and subsequently observed the trees and nearby buildings while walking around the perimeter of all trees observing the buildings while doing so.

A third detector, a Songmeter Mini was positioned within the tree cover and later moved out to the northern end of the trees within a gap between the tree line and surrounding hedges. Data from 2017 was also considered for comparison and similarity and differences of activity levels and species composition.

## Soil and Geology

A desk study of the subject site and the surrounding study area was largely completed in advance of undertaking a site survey. The desk study involved collecting all the relevant geological data for the project and study area. The principal attributes (and impacts) to be assessed include the following:

- Geological heritage sites in the vicinity of the perimeter of the subject site;
- Landfills, industrial sites in the vicinity of the site and the potential risk of encountering contaminated ground;
- The quality, drainage characteristics and range of agricultural uses of soil around the subject site;
- Quarries or mines in the vicinity, the potential implications (if any) for existing activities and extractable reserves;
- The extent of topsoil and subsoil cover and the potential use of this material on site or requirement to remove it off-site as waste for disposal or recovery;
- High yielding water supply springs/ wells in the vicinity of the subject site to within a 2 km radius and the potential for increased risk presented by the proposed development;
- Classification (regionally important, locally important) and extent of aquifers underlying the study area perimeter and increased risks presented to them by construction and operation related activities associated with aspects such as for example removal of subsoil cover, removal of aquifer (in whole or part), drawdown in water levels, alteration in established flow regimes, change in groundwater quality;
- Natural hydrogeological/ karst features in the area and potential for increased risk presented by the activities at the proposed development site; and Groundwater-fed ecosystems and the increased risk presented by the construction and operational phases of the proposed development both spatially and temporally.

The following sources of information were consulted to establish the baseline environment:

- Environmental Protection Agency database ([www.epa.ie](http://www.epa.ie));
- Geological Survey of Ireland - National Draft Bedrock Aquifer map;
- Geological Survey of Ireland - Groundwater Database ([www.gsi.ie](http://www.gsi.ie));
- Bedrock Geology 1:100,000 Scale Map Series, Geological Survey of Ireland (GSI, 2003);

- Geological Survey of Ireland – 1:25,000 Field Mapping Sheets; and,
- OPW Flood Mapping ([www.floodinfo.ie](http://www.floodinfo.ie)).

From the GSI /EPA website, the following information was obtained:

- Soil Map;
- Bedrock Geology Maps;
- Quaternary (Subsoils) Maps;
- Well Card Database (Groundwater Wells);
- Historical Geological 6 inch:1-mile maps;
- Database of Site
- Investigations/Surveys;
- Waste sites, mine sites and industrial locations;
- Geological heritage locations
- Water features.

### Hydrology and Water Services

A desk study of the available reports for subject site was completed in advance of undertaking this chapter. The study involved reviewing the relevant existing mapping, engineering reports and geological data. They include:

- Geological Survey of Ireland – Existing Watercourses ([www.gsi.ie](http://www.gsi.ie)).
- OPW Flood Mapping ([www.floodinfo.ie](http://www.floodinfo.ie)).
- Existing Drainage Mapping from SDCC.
- POGA Consulting Engineers (2021) Site Specific Flood Risk Assessment (submitted with this planning application).
- POGA Consulting Engineers (2021) Engineering Services Report (submitted with this planning application).

### Noise and Vibration

The general assessment methodology of the potential noise and vibrational impacts that the proposed development will have on the receiving environment has been prepared in accordance with:

- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (DoHPLG, August 2018).
- 2017 EPA Draft Guidelines on information to be contained in Environmental Impact Assessment Reports.
- Guidelines on Information to be Contained in an Environmental Impact Statement (EPA 2002).
- Advice Notes on Current Practice (in preparation of Environmental Impact Statements) (EPA 2003).
- Environmental Protection Agency, 2015. Revised Guidelines on the Information to be Contained in Environmental Impact Statements
- Environmental Protection Agency, 2015. Draft Advice Notes for Preparation of Environmental Impact Statements
- Development Management Guidelines (DoEHLG, 2007).

- Planning and Development Regulations 2001, as amended by European Union (Planning & Development)(Environmental Impact Assessment) Regulations 2018.

### Climate and Air Quality

The general assessment methodology of the potential impact of the proposed development on air quality and climate has been conducted in accordance with:

- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (DoHPLG, August 2018).
- 2017 EPA Guidelines on information to be contained in Environmental Impact Assessment Reports.
- Guidelines on Information to be Contained in an Environmental Impact Statement (EPA 2002).
- Advice Notes on Current Practice (in preparation of Environmental Impact Statements) (EPA 2003).
- Environmental Protection Agency, 2015. Revised Guidelines on the Information to be Contained in Environmental Impact Statements.
- Planning and Development Regulations 2001, as amended, in particular by the European Union (Planning & Development)(Environmental Impact Assessment) Regulations 2018 (SI No. 296 of 2018).
- Environmental Impact Assessment of Projects – Guidance on the preparation of the EIAR, European Commission, 2017.
- Climate Action and Low Carbon Development Act 2015

The development area is located within a zone which includes sources of existing transportation related air emissions principally from local road infrastructure and sources of domestic, retail and commercial building heating. It is noted that there are no other major sources of industrial air emissions within 1km of the site. The largest local industrial development is the CRH Roadstone quarry located c. 1.5km northeast of the subject site.

### Landscape and Visual

This assessment has been prepared based on the following guidelines and documents:

- *Guidelines on the Information to be contained in and Environmental Impact Statement*, by the Environmental Protection Agency, 2002
- *Revised Guidelines on the information to be contained in Environmental Impact Statements- Draft*, by the Environmental Protection Agency, 2015
- *Advice Notes on Current Practice in the preparation of Environmental Impact Statements*, by the Environmental Protection Agency, 2015.
- *Guidelines on Environmental Impact Assessment*, Draft, by the Environmental Protection Agency, 2017.
- *Guidelines for Landscape and Visual Assessment*, 3rd Ed., Landscape Institute and Institute of Environmental Management and Assessment, 2013.
- *National Landscape Strategy for Ireland*, Department of Arts, Heritage and the Gaeltacht, 2015-25
- *South Dublin County Development Plan 2016-2022*

The Landscape and Visual Assessment involved:

- Visiting the area;
- Undertaking a desk study of the subject site and its immediate environs in relation to its local and urban significance using the information gathered from site visits, studying aerial photography and Ordnance Survey mapping;
- Establishing and describing the receiving environment in terms of the existing landscape and its visual amenity;
- Assessing the nature, scale and quality of the proposed development through examination of the design team's drawings, illustrations and descriptions of the proposed scheme;

The EPA Guidelines recommend using descriptive terminology to determine the types, quality and significance of effects. This guidance is also included in the GLVA which recommends using categories of significance to describe effects.

Once the receiving environment has been established, the proposed development is then applied to allow the identification of potential positive, negative and neutral effects, prediction of their magnitude and the assessment of their significance on the environment. The definition of these effects is defined are given in Table 10.1. The magnitude of these effects is categorised as 'slight', 'moderate', 'substantial' or 'no perceived change' and the criteria for each category is given in Table 10.2. Mitigation measures can then be identified, usually forming the main elements of the landscape masterplan, to reduce as far as possible any potential negative environmental effects. The effects of the proposal are considered during both the construction and operational phase of the proposed development.

## Traffic and Transportation

This Transportation Assessment (TA) has been prepared by NRB Consulting Engineers Ltd and addresses the Traffic / Transportation issues arising from the proposal to construct and occupy a total of 140 Houses and 189 apartments with an ancillary Creché, on the zoned lands at Ballycullen. The report and study has been prepared in accordance with the TII Traffic & Transport Assessment Guidelines (2014).

In describing the Receiving Environment and the Proposed Future Environment, this report addresses the following aspects of the proposed development:

- Relatively Small Scale of the development in Traffic terms (conscious of the long-established residential nature of the area);
- Location of the development with High Quality pedestrian and cycle infrastructure and with High Quality Public Transport Links;
- Traffic & Transportation impact;
- Capacity of the proposed vehicular accesses to accommodate the worst-case development traffic flows;
- Capacity of the Existing Road Network;
- Adequacy and safety of the existing roads and junctions locally, within the area of influence,;

Recommendations contained within this Transportation Assessment are based on the following sources of information and industry-standard practices:-

- The TII Traffic & Transport Assessment Guidelines,
- Design Manual for Urban Roads and Streets,
- Recent Weekday AM and PM Peak Classified Turning Movements Traffic Survey Data commissioned,
- TII Design Guidance,
- Our experience in assessing the impact of Developments of this Nature, and
- Site Visits and Observations

## Material Assets

A desktop study was conducted in relation to the material assets associated with the proposed development and their capacities. Projections of the resources were made for the construction and operational phase of the development. The Guidelines on information to be contained in an Environment Impact Statement (EPA 2002), the advice notes on current practice and Draft EPA guidelines published in 2017 requires assessment of 'economic assets of human origin' to be included in the impact study as a desktop study of material assets associated with the development.

The impacts are assessed in terms of their scale, duration and significance to the site context. During the construction phase assessments are undertaken on the impact of the proposal likelihood in incurring loss or disturbance to material assets due to construction activities. It is unlikely that there will be any major impacts during the operation phase of the development. Economic assets of natural origin that includes biodiversity, soil and water are addressed specifically in the chapters 5, 6 and 7.

## Waste Management

The assessment of the impacts of the proposed development arising from the consumption of resources and the generation of waste materials, was carried out taking into account the methodology specified in relevant guidance documents, along with an extensive document review to assist in identifying current and future requirements for waste management including national and regional waste policy, waste strategies, management plans, legislative requirements and relevant reports.

The primary legislative instruments that govern waste management in Ireland and applicable to the project are:

- Waste Management Act 1996 (No. 10 of 1996) as amended. Sub-ordinate legislation includes:
  - European Communities (Waste Directive) Regulations 2011 (SI 126 of 2011) as amended
  - Waste Management (Collection Permit) Regulations (S.I No. 820 of 2007) as amended
  - Waste Management (Facility Permit and Registration) Regulations 2007, (S.I No. 821 of 2007) as amended
  - Waste Management (Licensing) Regulations 2004 (S.I. No. 395 of 2004) as amended
  - Waste Management (Packaging) Regulations 2014 (S.I. 282 of 2014) as amended
  - Waste Management (Planning) Regulations 1997 (S.I. No. 137 of 1997)
  - Waste Management (Landfill Levy) Regulations 2015 (S.I. No. 189 of 2015)

- European Union (Waste Electrical and Electronic Equipment) Regulations 2014 (S.I. No. 149 of 2014)
- European Union (Batteries and Accumulators) Regulations 2014(S.I. No. 283 of 2014) as amended
- Waste Management (Food Waste) Regulations 2009 (S.I. 508 of 2009), as amended
- European Union (Household Food Waste and Bio-waste) Regulation 2015 (S.I. No. 191 of 2015)
- Waste Management (Hazardous Waste) Regulations, 1998 (S.I. No. 163 of 1998) as amended
- Waste Management (Shipments of Waste) Regulations, 2007 (S.I. No. 419 of 2007) as amended
- Waste Management (Movement of Hazardous Waste) Regulations, 1998 (S.I. No. 147 of 1998)
- European Communities (Transfrontier Shipment of Waste) Regulations 1994 (SI 121 of 1994)
- European Union (Properties of Waste which Render it Hazardous) Regulations 2015 (S.I. No. 233 of 2015)
- Environmental Protection Act 1992 (No. 7 of 1992) as amended.
- Litter Pollution Act 1997 (No. 12 of 1997) as amended.
- Planning and Development Act 2000 (No. 30 of 2000) as amended.

This Chapter is based on the proposed development and considers the following aspects:

- Legislative context;
- Demolition phase;
- Construction phase (including site preparation, excavation and levelling); and,
- Operational phase.

A desk study was carried out which included the following:

- Review of applicable policy and legislation which creates the legal framework for resource and waste management in Ireland;
- Description of the typical waste materials that will be generated during the demolition, construction and operational phases; and
- Identification of mitigation measures to prevent waste generation and promote management of waste in accordance with the waste hierarchy.

Estimates of waste generation during the demolition, construction and operational phases of the proposed development have been calculated. The waste types and estimated quantities are based on published data by the EPA in *National Waste Reports*, data recorded from similar previous developments, Irish and US EPA waste generation research, other available research sources and waste collection data from the current facilities on site.

Mitigation measures are proposed to minimise the effect of the proposed development on the environment during the construction and operational phases, to promote efficient waste segregation and to reduce the quantity of waste requiring disposal.

## Cultural Heritage & Archaeology

Research has been undertaken in three phases. The first phase comprised a paper survey of all available archaeological, architectural and cartographic sources. The second phase involved a field inspection of the proposed development area. The third phase comprised a geophysical survey of the site.

### Paper Survey

- Record of Monuments and Places for County Dublin;
- Sites and Monuments Record for County Dublin;
- National Monuments in State Care Database;
- Preservation Orders List;
- Topographical files of the National Museum of Ireland;
- Cartographic and written sources relating to the study area;
- South Dublin County Council Development Plan 2016 – 2022;
- Ballycullen – Oldcourt Local Area Plan (2014) Extended;
- Aerial photographs;
- National Inventory of Architectural Heritage; and
- Excavations Bulletin (1970-2020)

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

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

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

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

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

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

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

- William Petty, Down Survey, Barony of Newcastle and Uppercross, 1655
- John Rocque's Map of the City and County of Dublin, 1760
- John Taylor's Map of the Environs of Dublin 1816
- Ordnance Survey Maps, 1844, 1871, 1909

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

**Development Plans** contain a catalogue of all the Protected Structures and archaeological sites within the county/city. The South Dublin County Council Development Plan (2016-2022) and Ballycullen – Oldcourt Local Area Plan (2014) (Extended) were consulted to obtain information on cultural heritage sites in and within the immediate vicinity of the proposed development.

**The National Inventory of Architectural Heritage (NIAH)** is a state initiative established under the provisions of the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999 tasked with making a nationwide record of significant local, regional, national and international structures, which in turn provides county councils with a guide as to what structures to list within the Record of Protected Structures.

**Excavations Bulletin** is a summary publication that has been produced every year since 1970. This summarises every archaeological excavation that has taken place in Ireland during that year up until 2010 and since 1987 has been edited by Isabel Bennett. This information is vital when examining the archaeological content of any area, which may not have been recorded under the SMR and RMP files. This information is also available online ([www.excavations.ie](http://www.excavations.ie)) from 1970-2020.

#### Field Inspection

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

The archaeological field inspection entailed:

- Inspecting the proposed development area and its immediate environs.
- Recording the terrain type and land usage.
- Recording the presence of features of archaeological significance and potential significance
- Verifying the extent and condition of any recorded sites/ features.
- Visually investigating any suspect landscape anomalies to determine the possibility of their being anthropogenic in origin.

#### Geophysical Survey

Geophysical survey is used to create 'maps' of subsurface archaeological features. Features are the non-portable part of the archaeological record, whether standing structures or traces of human activities left in the soil. Geophysical instruments can detect buried features when their electrical or magnetic properties contrast measurably with their surroundings. In some cases, individual artefacts,

especially metal, may be detected as well. Readings, which are taken in a systematic pattern, become a dataset that can be rendered as image maps. Survey results can be used to guide excavation and to give archaeologists insight into the pattern of non-excavated parts of the site. Unlike other archaeological methods, the geophysical survey is not invasive or destructive. A geophysical survey was undertaken to inform this assessment in March 2021 within the proposed development (Licence Ref.: 21R0017). A summary of the geophysical report is presented in this chapter and the full text included in Appendix 1.

## PREDICTED IMPACTS OF THE PROPOSED DEVELOPMENT

### Population and Human Health

#### Construction Phase

Any adverse likely and significant environmental impacts will be avoided by the implementation of the remedial and mitigation measures proposed throughout this EIAR. Positive impacts are likely to arise due to an increase in employment and economic activity associated with the construction of the proposed development. The overall predicted likely and significant impact of the construction phase will be short-term, temporary and neutral.

#### Operational Phase

The proposed development will contribute to further growth and expansion of the neighbourhood contributing to the existing and future populations. The predicted impacts of the Operational Phase are considered to be long term and positive to population and human health.

### Biodiversity

#### Construction Phase

Should the developments at Ballycullen be allowed to proceed then the following impacts will / may occur during the site preparation and construction of the proposed development.

- Habitat loss and fragmentation – In identifying these impacts, the arborist's report accompanying this application was referred to (The Tree File, Consulting Arborists).

The majority of the site will be cleared to facilitate the development, resulting in the permanent loss of the grassland habitats. These habitats are of no ecological value; therefore their loss will be neutral. This will however reduce the open space of the landscape, reducing the areas that currently allow for the free and unimpeded movement of mammals.

Sections of the woodland habitats (21 trees / groups of trees) within the site will also be lost and fragmented due to the construction of an access road and pathway through the woodland that traverses the site. No Category A trees will need to be removed. 9 Category B trees and 2 Category C trees will need to be removed, along with 10 Category U trees.

This fragmentation will have a permanent negative impact upon the biodiversity of the local area. Local populations of birds will also be affected as the availability of local nesting and feeding sites will be slightly reduced. In addition, small terrestrial mammals might be affected as they would use the

woodland to commute and feed in safety. Bats that use the trees as roosting or hibernating sites would also be affected and the safe commuting corridor within the site would be fragmented.

- Disturbance to local wildlife – During the development phase, there will be an increase in human activity and noise on the site. This will be disruptive to local populations of birds and mammals. Bats will also be impacted upon due to:

- Roost loss - Tree felling and tree surgery may lead to roost loss albeit that no roosts were evident in the bat assessment. If bats are present at the time of felling, this could lead to injury or death to a species protected under the Wildlife Act and Habitats Directive and would therefore constitute a breach of the Irish and EU legislation;
- Disturbance from Lighting – The lighting scheme associated with the proposed development may affect light-intolerant bat species during foraging and if directed at emergence points would affect all bat species, even those that will feed in illuminated areas. Species such as Leisler’s bat and common pipistrelle are less affected than almost all other Irish bat species and this would not be a significant impact while Natterer’s bat, whiskered bats and brown long-eared bats would be more affected. At worst, it would be a permanent moderately negative impact.
- Reduced feeding - Reduced vegetation including the removal of grazing stock and of any of the trees within the site will lead to reduced insect abundance. This will be a permanent slight negative impact.

- Decrease in Water Quality – The preparation and development of the site will involve the excavation of soil and the pouring of concrete for foundations and other hard surfaces. A bridge (Open bed box culvert type) will also need to be constructed over the stream that is mid-site. These works have the potential to generate run-off into this stream. If appropriate mitigation measures are not taken during the construction of the proposed development, then there is the possibility that water quality in may be negatively impacted upon. Possible direct impacts include the pollution of the waters during construction with silt, oil, cement, hydraulic fluid etc. This would directly affect the habitat of species by reducing water quality. These substances would also have a toxic effect on the ecology of the water in general, directly affecting certain species and their food supplies. In addition, an increase in the siltation levels of the watercourses in the site could result in the smothering of fish eggs, an increase in the mortality rate in fishes of all ages, a reduction in the amount of food available for fish and the creation of impediments to the movement of fish. Pollution of the water with hydrocarbons, cement and concrete during the construction phase of this proposed development could also have a significant negative effect on the fish and aquatic invertebrate populations. The potential for pollution run-off, in the absence of mitigation measures, will constitute a short-term negative effect.

#### Operational Phase

The majority of impacts will occur during the development phase of this development. However, certain impacts on local habitats / wildlife may occur during the operation of the development.

- Disturbance to local wildlife – Once operational, the development at Ballycullen will facilitate many new buildings, all of which are associated with human activity. This will deter wildlife from the

site, particularly mammals. There will also be a number of ongoing impacts upon the bats occurring within the site. These include:

- The interruption of commuting routes
  - The loss of foraging areas within or adjacent to lighting
  - Reduced competitiveness
- Landscaping – Inappropriate landscaping of the application site may inadvertently result in the introduction of non-native and invasive plant species. However, appropriate landscaping could also provide new beneficial habitats for wildlife if it is done with suitable trees and shrubs that provide nesting and foraging opportunities for birds. The management of the verges for wildlife would also be beneficial for local pollinators. A comprehensive landscaping plan has been prepared for the site by Ronan Mac Dairmada Landscape Architects, and this considers the green infrastructure that exists on the site. Supplemental planting and the creation of additional habitats on the site have been included, such as a new woodland area along the southern site boundary that will be planted with trees that are native.
  - Decrease in Water Quality – During the operation of the site, pollution to the stream on site may occur due to run-off of silt and oil from hard surfaces.

## Land, Soil and Geology

### **Construction Phase**

The proposed development is currently in agricultural use. Thus, there will be a loss of approximately c.10.41 ha of agricultural lands as a result of the proposed development. This loss is not deemed to be significant on a regional level or on a national level.

### **Operational Phase**

There are no predicted impacts arising from the operational phase.

## Hydrology and Water Services

### **Construction Phase**

There are no predicted significant impacts arising from the construction phase due to the temporary nature of construction and the expected use of portable or temporary toilets only, which will be contracted out to an authorised disposal agent.

A wide range of mitigation measures have been specified for the construction and operational phases of the project. These mitigation methods seek to ensure that construction and operational discharges are controlled to prevent potential pollution impacts to all receiving surface water systems.

### **Operational Phase**

No negative residual impacts are anticipated with the implementation of the construction and operational mitigation measures as stated.

## Noise & Vibration

### **Construction Phase**

During the construction phase of the project there is the potential for significant and moderate impacts on nearby noise sensitive properties due to noise emissions from site activities. The application of binding noise limits, hours of operation, along with implementation of appropriate noise and vibration control measures, will ensure that noise and vibration impact will have a negative, moderate and short-term impact on the surrounding environment.

### **Operational Phase**

#### Additional Vehicular Traffic

The predicted change noise levels associated with additional traffic is predicted to be of imperceptible impact along the existing road network. In the context of the existing noise environment, the overall contribution of induced traffic is considered to be of neutral, imperceptible and long-term impact to nearby residential locations.

#### Mechanical Plant & Creche

Noise levels associated with operational plant are expected to be well within the adopted day and night-time noise limits at the nearest noise sensitive properties taking into account the site layout, the nature and type of units proposed and distances to nearest residences. Assuming the operational noise levels do not exceed the adopted design goals, the resultant residual noise impact from this source will be of neutral, Imperceptible, long term impact.

## Climate and Air Quality

### Construction Phase

#### Air Quality

When the dust minimisation measures detailed in the mitigation section of this Chapter (Section 9.7) are implemented, fugitive emissions of dust from the site will be insignificant and pose no nuisance at nearby receptors.

#### Climate

Impacts to climate during the construction phase are considered imperceptible and therefore residual impacts are not predicted.

### Operational Phase

The results of the air dispersion modelling study indicate that the impacts of the proposed development on air quality and climate is predicted to be imperceptible with respect to the operational phase for the long and short term.

## Landscape and Visual

### Landscape

The proposed development will constitute a significant alteration to the existing landscape character of the site and its immediate context. However, this level of change has been pre-empted in the underlying planning context for the site with the large site zoned for modern residential development.

The proposed development will add to the suburban character to the area and will help integrate the site into the surrounding landscape by removing a vacant and long underutilised greenfield site located in developing location well served by public transport and social infrastructure.

In light of the underlying planning objectives for the zoned lands, and the specific design employed, the predicted change on landscape character is expected to be Moderate-Neutral.

### Visual

A series of 14 photomontages have been prepared by 3DDesignBureau to assess the visual amenity impact of the proposed development (including proposed landscaping) from a variety of locations in the wider landscape.

Locations of Viewpoints		Predicted Impact (Operational Phase)
View 1	View from Stocking Wood Drive (roundabout) looking south east	No Perceived Change
View 2	View from Stocking Wood Drive looking south west	Moderate – Neutral
View 3	View from Stocking Avenue looking south west	No Perceived Change
View 4	View from Woodtown Way / Stocking Lane looking north west	No Perceived Change
View 5	View from Abbots Grove Park looking east	Moderate – Neutral
View 6	View from Stocking Wood Avenue (roundabout) looking south	Moderate – Neutral
View 7	View from Stocking Wood Copse looking south	Slight – Positive
View 8	View from Stocking Lane looking north west	No Perceived Change
View 9	View from Killakee Road looking north	No Perceived Change
View 10	View from R113 looking north east	No Perceived Change
View 11	View from Abbots Grove Avenue looking south west	Moderate – Neutral
View 12	View from Abbots Grove Avenue looking south east	Moderate – Neutral
View 13	View from Abbots Grove Park looking east	Moderate – Neutral
View 14	View from Abbots Grove Park looking north east	Moderate – Neutral

*Table 1 Summary of Locations of Viewpoints and Predicted Impact*

It is considered that the proposed development will have a moderate impact on the landscape at the local level by replacing an undeveloped vacant site with a large residential development. This will have a positive impact by contributing to the suburban character of the area.

The design of the proposed development and the planting contained throughout the scheme will work to integrate the development into the wider suburban landscape.

Overall, it is considered that the development will not negatively impact on the existing character of the wider landscape.

### Traffic and Transport

### **Operational Phase**

The Assessment has been undertaken of the Operational Phase of the development, ie with all of the elements fully occupied and operational. There is the potential for the operation and occupation of the development itself to have an adverse impact upon the safety, capacity & operation of the adjacent road network. In these terms, the assessment undertaken was to determine whether there was likely to be an adverse or significant impact, with the assessment of impact during a selected opening year and an assessment during the associated design year 15 years following opening.

### **Construction Phase**

In the construction of developments of this nature proposed, if they are large generators of construction vehicle movements, there is the potential for the construction to have an adverse impact upon the safety, capacity and operation of the adjacent road network. In these terms, the assessment undertaken was to determine whether there was likely to be an adverse or significant impact.

## Material Assets

### **Construction Phase**

On the basis that the specified mitigation measures are incorporated during the construction of the proposed development, the predicted impact will be neutral.

### **Operational Phase**

Whilst the demand on water services, power, telecommunications and transport infrastructure will all increase due to the development, on the basis that the specified mitigation measures are incorporated then the operation of the proposed development is predicted to have a neutral-long term impact on material assets.

## Waste Management

The implementation of the mitigation measures outlined in Chapter 13 will ensure that a high rate of reuse, recovery and recycling is achieved at the development during the construction phases as well as during the operational phase. It will also ensure that European, National and Regional legislative waste requirements with regard to waste are met and that associated targets for the management of waste are achieved.

### **Construction Phase**

A carefully planned approach to waste management as set out in Chapter 13.7 and adherence to the C&D WMP during the construction phase will ensure that the impact on the environment will be *short-term, neutral and imperceptible*.

### **Operational Phase**

During the operational phase, a structured approach to waste management as set out in Chapter 13.7 will promote resource efficiency and waste minimisation. Provided the mitigation measures are implemented and a high rate of reuse, recycling and recovery is achieved, the predicted impact of the operational phase on the environment will be *long-term, neutral and imperceptible*.

## Cultural Heritage & Archaeology

### Construction Phase

The results of the overall assessment and geophysical survey indicate that there are no significant archaeological remains within the proposed development area. It remains possible that ground disturbances associated with the development may directly impact on small or isolated archaeological features that have the potential to survive within the site with no surface expression. Prior to the application of mitigation, impacts may range from moderate to significant negative.

### Operational Phase

No direct or indirect negative impacts are predicted as a result of the construction or operation of the proposed development, in relation to recorded archaeological and architectural heritage sites. The development of the eastern section of part of the demesne associated with Woodtown Manor will result in a direct moderate negative impact on the former demesne. The landscape is not maintained as an active demesne and has been partially subsumed into an arable landscape, bordered by modern residential development.

## INTERACTIONS

Where an interaction is both likely and significant, it is given a reference number in the matrix and detail of the interaction is recorded below. The interactions are listed in numerical sequence, purely for referencing purposes.

	Population	Biodiversity	Soil	Hydrology	Noise	Air and Climate	Landscape	Traffic	Waste	Cultural Heritage	Material Assets
Population											
Biodiversity											
Soil	1	7									
Hydrology	2	8	11								
Noise	3	9									
Air and Climate	4		12								
Landscape	5	10	13								
Traffic											
Waste											
Cultural Heritage							14				
Material Assets	6										

Table 2 Interaction Matrix

#### 1. Population & Human Health / Soils

There is potential for dust generation during construction works, which under dry and windy conditions could lead to localised dust impacts for the small number of properties proximate to the development site. However, the implementation of dust management and dust control measures will ensure that the proposed development will not give rise to the generation of any significant quantities of dust. Therefore, there will be minimal impacts on local residents.

#### 2. Population & Human Health / Water

Failure or mismanagement of the potable water supply could lead to its contamination during the construction phase. A range of mitigation measures will be put in place during the construction phase of the development to ensure this does not occur.

### **3. Population & Human Health / Noise**

Increased noise levels during the construction phase will be temporary and are not expected to have a long-term significant adverse effect upon the local population. Construction noise will be audible at a low level in the ambient noise. However, the impact is predicted to be minor. The impact due to the increased traffic associated with the operational development is expected to be minor.

### **4. Population & Human Health / Air**

The completed development will generate additional emissions to the atmosphere due to traffic associated with the development. However, air quality in the vicinity of the site is expected to remain within air quality standards.

During construction, there may be potential for slight dust nuisance in the immediate vicinity of the site. However, dust control measures, such as wheel washes, covering of fine material etc. will minimise the impacts on air quality.

### **5. Population & Human Health / Landscape**

Existing residents and visitors to the Ballycullen area interact with the landscape, such that they will be aware of a significant change at this site from a vacant site to a new residential development with a mix of unit types, building heights, open spaces etc. Such a transformation, whilst significant, is designated for this site in the South Dublin County Development Plan 2016-22 and Ballycullen-Oldcourt LAP 2012. It is expected that the design of the proposed scheme will over time integrate with the surrounding area.

### **6. Population & Human Health / Materials Assets**

It is expected that the proposed development will benefit the materials assets with the additional population helping to sustain and generate improvements to the physical infrastructure of the area.

### **7. Biodiversity / Soils**

Potential construction stage effects arising from the general loss and fragmentation of some habitats and reduction of associated opportunities for biodiversity are considered neutral to slight negative during the construction phase, while potential operational stage effects are considered imperceptible neutral as new planting/landscaping matures.

### **8. Biodiversity / Water**

As concluded in the Natura Impact Statement, in order to avoid any reductions in water quality in the area, a number of mitigation measures must be implemented and followed. These mitigation measures for the construction and operational phases are listed in the Natural impact Statement by Whitehill Environmental.

The implementation of construction and operational phase soils and water management proposals, together with the site drainage design will adequately reduce such potential impacts arising from the development site on these aquatic habitats in the wider area. Potential construction and operational phase effects on biodiversity associated with aquatic habitats in the wider area are considered imperceptible/neutral with the implementation of soils and water management proposals.

### **9. Biodiversity / Noise**

Increased noise levels during the construction phase will only be temporary and are not expected to have a long-term significant adverse effect upon remaining fauna within the wider landscape.

Operational noise will be audible at a low level in the ambient noise and the impact is predicted to be minor.

#### **10. Biodiversity / Landscape**

The changes to the landscape of the subject site has the potential to negatively impact the biodiversity in the immediate are, as outlined in Chapter 5.

The proposed landscape masterplan including the retention of existing trees where feasible will help to mitigate this loss of habitats and biodiversity in the area. New planting will provide new habitats for local species.

#### **11. Soils / Water**

When soil is exposed after vegetative clearance there will also be increased run-off and evaporation. Mitigation measures will be implemented during construction to prevent this run-off water from discharging directly to watercourses.

#### **12. Soils / Air**

Exposed soil during the construction phase of the proposed scheme may give rise to increased dust emissions. However, the implementation of dust management and dust control measures will ensure that the proposed development will not give rise to the generation of any significant quantities of dust.

#### **13. Soils/Landscape**

Residual soils arising as a result of excavation at the development site will be used in landscaping works in the proposed public open spaces as much as possible rather than transporting off-site.

#### **14. Landscape/Cultural Heritage**

Careful consideration has been given to minimizing the visual impact of the proposed scheme on architectural heritage in the wider area.

## **CONCLUSION**

In conclusion, the gross area of the application site is c. 10.41 ha, which is above the 10ha threshold for a built-up area and therefore it is deemed necessary to prepare an EIAR to accompany this application.

A Natura Impact Statement is also submitted as part of the planning application, and has evaluated the potential impacts of the proposed development with regard to the effects upon the conservation objectives and qualifying interests (including the habitats and species) of the South Dublin Bay / River Tolka Estuary SPA, the South Dublin Bay SAC, North Bull Island SPA and North Dublin Bay SAC. It is considered that following mitigation, that the proposed project does not have the potential to significantly affect the conservation objectives of these aforementioned Natura 2000 sites and the integrity of these sites as a whole will not be adversely impacted.

The implementation of the mitigation measures outlined in each EIAR chapter will reduce the potential negative impacts of the proposed development in both the construction and operational phases of the development.