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

Strategic Housing Development at Clonattin, Gorey, Co. Wexford

January 2021

Prepared by

McGill Planning
Chartered Town Planners

In association with
CS Consulting Engineers,
The Big Space Landscape Architects,
Traynor Environmental,
IAC Archaeology and
Altemar

McGill Planning
Chartered Town Planners
45 Herbert Lane,
Dublin 2
Tel +353 1 2846464
Email info@mcgplanning.ie

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McGill Planning
Chartered Town Planners
45 Herbert Lane,
Dublin 2
Tel +353 1 2846464
Email info@mcgplanning.ie

1 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 of c.15.7ha gross in area located to the south of Clonattin Village, and north of the R742 Courtown Road, in the townlands of Goreybridge, Clonattin Upper and Raheenagurren East, Gorey, Co. Wexford.

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, Reddy Architecture + Urbanism, The Big Space Landscape Architects, CS Consulting Engineers, Visual Lab, Altemar, IAC Archaeology, Traynor Environmental and Treeline 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 subject site area for this application is above the threshold set out in Development Class 10 of Part 2 of Schedule 5 of the Planning & Development Regulations. An EIAR is therefore automatically required.

2 SITE CONTEXT

The subject site is located within Clonattin Upper, Gorey, Co. Wexford, less than 1km (or a c. 15 minute walk) from Gorey Town Centre.

The subject site measures c. 15.7ha and currently consists primarily of agricultural fields, including hedgerows and mixed vegetation. The north-western portion of the site has been partially cleared and contains a portion of an existing road. The north of the site fronts onto Clonattin village road, which separates the subject site from the existing residential development. Clonattin Stream marks the eastern and southern boundary of the site separating the site from the agricultural lands. The north-eastern portion of the site is covered mixed vegetation and scrub. A large attenuation pond is located within the southern area of the site. The site is bounded to the south and east by further agricultural lands, to the north and west by existing residential developments.

The subject site also includes a section for a new access road to the east and south of the site. This connects the site with Courtown Road to the south, through agricultural fields and the Movies@Gorey cinema lands.

The site is free from any protected structures or monuments and it is not located within a Conservation Area or an Architectural Conservation Area. There are two existing derelict buildings on site but these are not of any architectural or historical merit. The site is not within a Special Area of Conservation (SAC) or Special Protection Area (SPA).

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.

3 PROJECT DESCRIPTION

Axis Construction Limited intend to apply to An Bord Pleanála for permission for a strategic housing development at this site of c.15.7 ha located on lands to the south of Clonattin Village, and north of the R742 Courtown Road, in the townlands of Goreybridge, Clonattin Upper and Raheenagurren East, Gorey, Co. Wexford.

The proposed development will consist of demolition of the existing dwelling and shed on site (c.334.27sqm); construction of 363 no. residential units, comprising 42 no. 1 bed apartments, 59 no. 2 bed apartments, 134 no. 3 bed houses, 124 no. 4 bed houses and 4 no. 5 bed houses, in a range of building typologies ranging in height from 2 to 3 storeys. The proposed development also includes a single storey creche (c. 513 sq.m), new public open spaces, provision of 690 no. car parking spaces and 222 no. cycle parking spaces. The proposal includes for new vehicular and pedestrian accesses and upgrades along Clonattin Village Road to the north, and a new access road (including bridge) to the R472 Courtown Road to the south via the existing access road serving the cinema (with associated upgrades to the existing road and at the junction with the Courtown Road).

All associated site development works (including site reprofiling), landscaping, boundary treatments and services provision including ESB substations

4 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

Desk study

A desk study was undertaken to gather and assess ecological data prior to undertaking fieldwork elements. Sources of datasets and information included:

- The National Parks and Wildlife Service
- National Biological Data Centre
- Satellite, aerial and 6" map imagery

A provisional desk-based assessment of the potential species and habitats of conservation importance was carried in July 2019 and reviewed again in August 2020. Altemar assessed the project, the proposed construction methodology and the operation of the proposed development. It was determined that the proposed development had the potential to impact beyond the site outline and into the surrounding environment as a result of the proposed works, in the absence of mitigation measures. Works proposed include instream works including culvert installation.

Field Survey

Field surveys were carried out by Altemar Ltd. on the 29th September 2019, 28th September 2020 and the 1st October 2020, following completion of the desk-based assessment. Site visits were carried out by Bryan Deegan in relation to flora, fauna and included two bat emergent/detector surveys (29th September 2019 & 1st October 2020). Surveys were carried out in mild dry conditions and covered all the lands within the site outline and the land immediately outside the site. The purpose of the field survey was to identify habitat types according to the Fossitt (2000) habitat classification and map their extent. In addition, more detailed information on the species composition and structure of habitats, conservation value and other data were gathered.

Survey Limitations

The field surveys were carried out in September 2019, September 2020 and October 2020. This is within, but towards the end of, the period for full species assessments of the floral cover and bat surveys. Weather conditions were mild and dry and allowed a bat detector survey to take place. However, September and October are suboptimal season to observe terrestrial mammal activity.

Spatial Scope and Zone of Influence

Zone of Influence (ZoI) is the 'effect area' over which changes could give rise to potentially significant impacts. In order to define the extent of the study area for ecological assessment, all elements of the project were assessed and reviewed in order to identify the spatial scale at which ecological features could be impacted. The project would involve in stream works, excavations and construction, which may impact beyond the site through noise, dust, light and downstream impacts. Standard construction phase controls will need to be implemented to limit the potential impact of the proposed development into the surrounding environment including measures to protect from downstream impacts from the instream works in the Clonattin Stream/River and drainage ditch crossings. The potential ZOI of the construction phase of the project was deemed to be the site within the site outline, nearby sensitive receptors including the Clonattin Stream/River which borders the site with potential for downstream impacts. However, the ZOI of the operation of the proposed development would be the immediate area of the proposed development site.

Land, Soil and Geology

The assessment was carried out in accordance with the following best practice methodology and the following documents:

- Guidelines for the Preparation of Soil, Geology and Hydrogeology Chapters of Environment Impact Statements (Institute of Geologists of Ireland (IGI) 2013);
- Revised Guidelines on the Information to be contained in Environmental Impact Statements (EPA 2015a);
- Advice Notes for Preparing Environmental Impact Statements (EPA 2015b);
- Draft Guidelines on the Information to be contained in Environmental Impact Assessments Reports (EPA 2017).

Hydrology and Water Services

In preparing this chapter, CS Consulting has made reference to the following:

- Wexford County Development Plan 2013-2019; (including Strategic Flood Risk Assessment)
- Gorey Town & Environs Local Area Plan 2017-2023; (including Strategic Flood Risk Assessment)
- Greater Dublin regional Code of Practice for Works;
- Office of Public Works Flood Maps;
- Department of the Environment Flooding Guidelines;
- Geological Survey of Ireland Maps;
- Local Authority Drainage Records.

Noise and Vibration

This assessment meets the requirements for an EIAR, as outlined in the relevant National and EU legislation, and has been prepared in accordance with guidance documents.

- BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites - Part 1 – Noise.
- BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites - Part 2 -Vibration.
- BS 7385-2:1993 *Guide for measurement of vibrations and evaluation of their effects on buildings*.
- *BS 4142: 2014: Methods for Rating and Assessing Industrial and Commercial Sound.*
- BS 8233:2014 Guidance on Sound Insulation and Noise Reduction for Buildings.
- BS 6841 (1987): Measurement and evaluation of human exposure to whole-body mechanical vibration and repeated shock.
- *ISO 1996: 2017: Acoustics - Description, Measurement and Assessment of Environmental Noise.*
- ProPG: Planning & Noise.
- EPA Advice Notes for Preparing Environmental Impact Statements, (Draft, September 2015).

The study has been undertaken using the following methodology:

- Baseline Noise monitoring and an Environmental Noise Survey has been undertaken across the development area to determine the range of noise levels at varying locations across the site.
    - The equipment used was two Larson Davis Sound Expert LxT and a Larson Davis Expert 831.
    - The Baseline monitoring periods were from November 08th up to and including November 10th, 2019 at Locations A, B & C.
    - The Environmental Noise Survey monitoring period was carried out at four noise monitoring locations around the proposed development on November 11th, 2019 between 08:00hrs to 17:45hrs.

- A review of the most applicable standards and guidelines has been conducted in order to set a range of acceptable noise and vibration criteria for the construction and operational phases of the proposed development, this is summarised in the following sections.
- Predictive calculations have been performed to estimate the likely noise emissions during the construction phase of the project at the nearest sensitive locations (NSLs) to the site.
- Predictive calculations have been performed to assess the potential impacts associated with the operation of the development at the most sensitive locations surrounding the development site; and,
- A schedule of mitigation measures has been proposed, where relevant, to control the noise and vibration emissions associated with both the construction and operational phases of the proposed development.

Climate and Air Quality

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

- 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).
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (DoHPLG, August 2018).
- 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.
- Environmental Impact Assessment (EIA), Guidance for Consent Authorities Regarding Sub-Threshold Development (DoEHLG 2003).
- Development Management Guidelines (DoEHLG, 2007).
- European Union (Planning & Development) (Environmental Impact Assessment Regulations 2018).
- Design Manual for Roads and Bridges (DMRB).

The existing ambient air quality in the vicinity of the site has been characterised with information obtained from a number of sources including EPA Annual Air Quality in Ireland Reports and Local air monitoring stations data.

The ambient air quality data collected and reviewed for the purpose of this study focused on the principal substances (dust, vehicle exhaust emissions and boiler emissions) which may be released from the site during the construction and operation phases and which may exert an influence on local air quality.

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

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 magnitude of these effects is categorised as 'slight', 'moderate', 'substantial' or 'no perceived change'. 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

The methodology adopted for the assessment of traffic impact is summarised as follows:

1) A vehicular traffic count survey was undertaken at 5no. sites on the surrounding street network, to establish background traffic flows and existing peak hours.
2) A development trip generation assessment was carried out using survey-derived trip rates and TRICS data, to determine the potential vehicular trips to and from the proposed development site during peak hours. The vehicular trip generation of other nearby permitted developments was also assessed.
3) An appropriate distribution across the surrounding street network was assigned to vehicular trips generated by the subject development and by other permitted developments, based upon existing traffic characteristics. Allowance was also made for the redistribution of existing traffic via the new link road proposed as part of the subject development.
4) A spreadsheet model was created containing baseline year do-nothing traffic flow data. These traffic data were used to develop TRANSYT and PICADY models of 2no. surveyed junctions, as well

as a PICADY model of the junction at which the proposed link road shall connect to the existing road network.

5) Future year traffic forecasts were derived from TII growth factors and development trip generation figures. These traffic flows were applied to the TRANSYT and PICADY junction models. The performance of these junctions was assessed for the baseline year of 2020 and the design year of 2038 (15 years after opening).

Material Assets

The methodology followed for this section is in accordance with the EPA "Draft Guidelines on the Information to be contained in Environmental Impact Assessment Reports, Draft August 2017". Information on built assets in the vicinity of the development lands was assembled from the following sources:

- A desktop review of Irish Water Utility Plans, ESB Networks Utility Plans, Gas Networks Ireland Service Plans, Eir E-Maps and Virgin Media Maps;
- Consultation with Irish Water and Wexford County Council;
- Submission of a Pre-Connection Enquiry Application to Irish Water;
- Site Inspection / Walkover.

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 of2015)
    - 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.
- 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 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 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

The following legislation, standards and guidelines were consulted as part of this assessment.

- European Communities (EC) (Environmental Impact Assessment) (Amendment) Regulations 1999;
- National Monuments Acts 1930 (as amended);
- The Planning and Development Act 2000 (as amended);
- Heritage Act, 1995;
- Environmental Protection Agency (EPA) EPA Advice Notes on current practice in the preparation of Environmental Impact Statement (EIS) (EPA 2003) and draft revised notes (September 2015);
- EPA Guidelines on the Information to be contained in Environmental Impact Statement (EPA, 2002) and draft revised guidelines (August 2017);
- European Commission document 'Environmental Impact Assessment of Projects: Guidance on the preparation of the Environmental Impact Assessment Report' (2017)

- Frameworks and Principles for the Protection of the Archaeological Heritage, 1999, (formerly) Department of Arts, Heritage, Gaeltacht and the Islands; and
- Local Government (Planning and Development) Act 2000.

Desk Based Assessment
The following sources were examined and a list of areas of archaeological and cultural heritage potential was compiled:

- Record of Monuments and Places for County Wexford;
- Sites and Monuments Record for County Wexford;
- Monuments in State Care Database;
- Preservation Orders;
- Register of Historic Monuments;
- Topographical files of the National Museum of Ireland;
- Cartographic and written sources relating to the study area;
- Wexford County Development Plan 2013–2019;
- Place name analysis;
- Aerial photographs; and
- Excavations Bulletin (1970-2019)

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

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

Register of Historic Monuments was established under Section 5 of the 1987 National Monuments Act, which requires the Minister to establish and maintain such a record. Historic monuments and archaeological areas present on the register are afforded statutory protection under the 1987 Act. The register also includes sites under Preservation Orders and Temporary Preservation Orders. All registered monuments are included in the Record of Monuments and Places.

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

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

- Down Survey Map of the Parish of Liskin, Kilmaclogue, Kiltinen and part of Toome, c. 1655
- Ordnance Survey maps of County Wexford, 1839–40, 1936

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

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

Place Names are an important part in understanding both the archaeology and history of an area. Place names can be used for generations and in some cases have been found to have their root deep in the historical past.

Development Plans contain a catalogue of all the Protected Structures and archaeological sites within the county. The Wexford County Development Plan 2013-2019 was consulted to obtain information on cultural heritage sites in and within the immediate vicinity of the proposed development. The Gorey Local Area Plan 2017-2023 was also consulted. The Record of Protected Structures lists structures of architectural, cultural, scientific, historical or archaeological interest can be protected under the Planning and Development Act, 2000, where the conditions relating to the protection of the architectural heritage are set out in Part IV of the Act. This Act superseded the Local Government (Planning and Development) Act, 1999, and came into force on 1st January 2000.

Excavations Bulletin is a summary publication that has been produced every year since 1970. This summarises every archaeological excavation that has taken place in Ireland during that year up until 2010 and since 1987 has been edited by Isabel Bennett. This information is vital when examining the archaeological content of any area, which may not have been recorded under the SMR and RMP files. This information is also available online (www.excavations.ie) from 1970–2019.

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

The archaeological field inspection was conducted from 29 October 2019 and entailed:

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

Archaeological Testing
Archaeological Test Trenching can be defined as '*a limited programme... of intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site on land or underwater. If such archaeological remains are present test trenching defines their character and extent and relative quality*' (CIfA 2014a, 4). A program of archaeological testing was carried out within the proposed development area in October 2020. This was undertaken by John O'Neill of IAC Archaeology under licence 20E0560 (O'Neill 2020, Figure 14.5). Detailed results of the archaeological testing are included in Section 14.4 and the full report is reproduced in Appendix 1 of this chapter.

5 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

Standard construction and operational mitigation measures are proposed. These would ensure that water entering the Clonattin Stream, is clean and uncontaminated. However, given the proximity of numerous sensitive receptors and the watercourse leading to a pNHA, it should be noted that the early implementation of ecological supervision on site and consultation with IFI at initial mobilisation and enabling works is seen as an important element to the project, particularly in relation to the

implementation of surface water runoff mitigation. Bata are also present on site and the project will involve the loss of a roosting site for three bats.

With the successful implementation of standard mitigation measures to limit surface water impacts on the Clonattin Stream, biodiversity mitigation/supervision and the successful installation and initiation of the culverts, no significant impacts are foreseen from the construction or operation of the proposed project. Residual impacts of the proposed project will be localised to the immediate vicinity of the proposed works. Positive impacts would be seen through the implementation of an improved riparian corridor with greater potential for biodiversity than currently exists on site.

The construction and operational mitigation proposed for the development satisfactorily addresses the mitigation of potential impacts on biodiversity and designated conservation sites through the application the standard construction and operational phase controls as outlined in Section 5.7 of Vol 1. In particular, mitigation measures to ensure compliance with Water Pollution Acts and prevent silt and pollution entering the stream will satisfactorily address the potential impacts on downstream biodiversity and Natura 2000 sites. No significant adverse impacts on the conservation objectives of Natura 2000 sites are likely following the implementation of the mitigation measures outlined above.

It is essential that these measures outlined are complied with, to ensure that the proposed development does not have “downstream” environmental impacts. These measures are to protect the groundwater/surface water, which are potentially the primary vectors of impacts from the site, and ensure that it is not impacted during construction and /or operational phases of the proposed development. Ongoing consultation with IFI is essential.

Land, Soil and Geology

Construction Phase

The proposed development will alter the current land use from agricultural to a residential development and associated landscape areas. The impact on land, soil, geology and hydrogeology from accidental spillages of fuel and lubricants used during the construction phase of the development is predicted to be minimal when stored and used in a responsible manner. After implementation of the mitigation measures recommended above for the construction phase, the proposed development will not give rise to any significant long term adverse impact. Moderate negative impacts during the construction phase will be short term only in duration

Operational Phase

Residual Impacts such as loss of agricultural land and associated landscaped areas across the development lands.

Hydrology and Water Services

Construction Phase

In relation to the construction phase, the stripping of the existing ground surface and construction activities could potentially lead to increased sedimentation within nearby surface waters.

Operation of machinery and use of chemicals and concrete during the construction phase has the potential to pollute the nearby public surface water network and receiving watercourse.

However, the implementation of mitigation measures highlighted in this report will significantly reduce the likelihood and magnitude of the potential impacts on the surface water environment

occurring during the construction phase. The potential impact is therefore considered to be low with a short duration and therefore considered to be not significant.

Operational Phase
The sources of pollution that could potentially have an effect on surface or groundwater during the operational phase of the development will be oil and fuel leaks from parked cars, service vehicles, HGV delivery's etc. Hydrocarbon interceptors such as the tree pit drainage etc will be provided in storm water drainage network and Petrol interceptors will be installed within the development to cater for these oil/fuel leaks as required.

It is not anticipated that flooding of the site will occur, due to the fact that there is no historical data which refers to any past flooding on this site and that the site is located in Flood Zone C, please refer to the Flood Risk Assessment under separate cover included with this planning application.

As the applicant site is to be attenuated to greenfield runoff rates and that this flow rate from the existing attenuation pond to the Clonattin Upper Stream will remain unchanged from current flows, the proposed development will not adversely affecting the public drainage system or contributing to downstream flooding.

Noise and 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 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
Various elements associated with the construction phase of the proposed development have the potential to impact local ambient air quality, however the potential construction phase impacts shall be mitigated as detailed in Section 9.7 above to ensure there is a minimal impact on ambient air quality for the duration of all construction phase works.

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.
It is predicted that the operational phase of the development will not generate air emissions that would have an adverse impact on local ambient air quality or local human health.

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 residential development in the Local Area Plan.

The proposed development will add to the suburban character to the area and will help integrate the site into the surrounding landscape by providing a new residential development located south of the recently developed housing estates north of Clonattin Village Road.

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 10 photomontages have been prepared to assess the visual amenity impact of the proposed development (including proposed landscaping) from a variety of locations in the wider landscape. The predicted impact on each of these viewpoints is outlined in the table below.

	Location of Viewpoints	**Predicted Impact (Operational Phase)**
View 1a1	View from Courtown Road, looking north	No Perceived Change
View 1c1	View from Cinema site, looking north	Moderate-Neutral
View 2	View from Raheenagurren East road, looking west	No Perceived Change
View 3	View from Clonattin Village Road, looking south-west	Moderate – Positive
View 4	View from Clonattin Road, looking south-east	Slight-Neutral
View 5	View from Clonattin Village Road, looking south	Moderate-Positive
View 6	View from Millands Road, looking north-east	No Perceived Change
View 7	View from Blackstick Lane, looking west	No Perceived Change
View 8	View from field to east of site, along proposed road route, looking east	Significant-Positive

View 9	View from field to south west of site, looking east	Slight-Neutral

Table 1 Summary of Visual Impacts

Traffic and Transportation

Construction Phase

In traffic and transport terms, the predicted impacts of the proposed development on the surrounding environment during the construction phase are generally equivalent to the potential impacts described in section **Error! Reference source not found.** of Volume 2 of this EIAR.

It is however predicted that the construction phase mitigation measures detailed in section **Error! Reference source not found.** of Volume 2 shall reduce to a negligible level the risk of the surrounding roads being obstructed by construction activity or their condition degraded by construction-related dirt or debris.

Operational Phase

Table 3 shows the TRANSYT and PICADY modelling results for the design year 2038 under the Do-Nothing Scenario (without the subject development). Traffic flows modelled under this scenario include existing background traffic, scaled up to 2038 levels using standard TII growth factors, as well as predicted traffic flows generated by the permitted and planned developments previously described.

Junction Approach Arm	Degree of Saturation (%)		Maximum Queue (PCU)		Mean Delay per PCU (seconds)		Practical Reserve Capacity (%)	
	AM	PM	AM	PM	AM	PM	AM	PM
Junction 2								
Coach Road (to north)	51	59	0	0	2	2	78	53
Clonattin Road (to east)	64	57	1	0	6	5	40	57
Courtown Road (to south)	52	65	0	1	2	3	74	38
Esmonde Street (to west)	36	53	0	0	1	2	148	71
Junction 4								
Clonattin Road (to N-E)	n/a	n/a	n/a	n/a	n/a	n/a	129	213
Clonattin Village (to S-E)	34	20	1	0	10	8		
Clonattin Road (to S-W)	12	20	0	0	6	7		
Junction 6								
Courtown Road (to west)	n/a	n/a	n/a	n/a	n/a	n/a	900	215
Cinema Site (to north)	0	7	0	0	0	10		
Courtown Road (to east)	0	0	0	0	0	0		

Table 2 Junction assessment results for Design Year 2038 (Do-Nothing Scenario)

These results show that the 3no. existing junctions modelled shall continue to operate well within their effective capacities on all approaches during the AM and PM peak hour periods past the year

2038. Queues and delays on all junction approaches shall remain at levels similar to those currently existing.

Table 4 gives the TRANSYT and PICADY modelling results for the design year 2038. under the Do-Something Scenario (with the subject development in place). Traffic flows modelled under this scenario are those of the Do-Nothing Scenario, with the addition of the predicted traffic flows generated by the subject development and the redistribution of some existing background traffic via the proposed new link road that forms part of the development.

Junction Approach Arm	Degree of Saturation (%)		Maximum Queue (PCU)		Mean Delay per PCU (seconds)		Practical Reserve Capacity (%)	
	AM	PM	AM	PM	AM	PM	AM	PM
Junction 2								
Coach Road (to north)	55	57	0	0	2	2	63	57
Clonattin Road (to east)	76	54	1	0	11	4	19	66
Courtown Road (to south)	50	61	0	0	2	3	80	46
Esmonde Street (to west)	38	55	0	0	1	2	134	62
Junction 4								
Clonattin Road (to N-E)	n/a	n/a	n/a	n/a	n/a	n/a	41	105
Clonattin Village (to S-E)	61	35	2	1	17	11		
Clonattin Road (to S-W)	18	29	0	0	7	8		
Junction 6								
Courtown Road (to west)	n/a	n/a	n/a	n/a	n/a	n/a	234	131
New Link Road (to north)	17	26	0	0	7	9		
Courtown Road (to east)	11	14	0	0	6	6		

Table 3 Junction assessment results for Design Year 2038 (Do-Something Scenario)

These results show that the 3no. modelled junctions shall continue to operate well within their effective capacities on all approaches during the AM and PM peak hour periods past the year 2038, with the subject development in place. In the design year, the addition of vehicular traffic generated by the subject development, combined with the effect of traffic redistribution via the proposed new link road, shall result in a maximum increase of 1 Passenger Car Unit in any junction approach queue length, and a maximum increase of 7 seconds in mean vehicle delay on any junction approach.

During the operational phase, the subject development is therefore predicted to result in a long-term slight adverse impact on the operational efficiency of the 3no. junctions assessed, in comparison to the Do-Nothing Scenario. This impact should be considered reversible to a degree, as any future measures that reduce local vehicular traffic volumes (e.g. improvements in public transport or cycling infrastructure, junction redesign, or changes in general traffic flow restrictions) have the potential to improve the operational efficiency of these junctions generally, as well as to reduce vehicle trips to/from the subject development.

Material Assets

Construction Phase

Waste materials will be generated during the construction of the proposed development, including the initial site clearance and excavation. Careful management of these, including segregation at source, will help to ensure maximum recycling, reuse and recovery is achieved. It is expected, however, that a certain amount of waste will still need to be disposed of at landfill.

Implementation of the measures outlined in Section 12.7 will ensure that the potential impacts of the proposed development on the site's material assets do not occur during the construction phase and that any impacts will be short term.

Operational Phase

The likely effect on the storm water system post development will ensure that no unattenuated storm water flows leave the subject lands. This will aid in preventing the potential for off site flooding downstream.

The likely effects for the local wastewater system, is the reduction in spare capacity in the local system. However, the subject lands have been designed to follow the planning objectives for the subject lands. Upgrade works maybe required to facilitate the development, but these upgrade works shall be confirmed at the connection agreement stage by Irish Water. All upgrade works shall be carried out by Irish water and costs associated will form part of the connection agreement.

The likely effects for the local water supply system, is the reduction in spare capacity in the local water supply system. However, the subject lands have been designed to follow the planning objectives for the subject lands. Upgrade works maybe required to facilitate the development, but these upgrade works shall be confirmed at the connection agreement stage by Irish Water. All upgrade works shall be carried out by Irish water and costs associated will form part of the connection agreement.

The demand on the power supply and telecommunications supply will all increase due to the development of the lands. These demands will be assessed and factored into the new site infrastructure called up by the utility providers.

Waste Management

The implementation of the mitigation measures outlined in Section 13.7 of Volume 2 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 Section 13.7 of Volume 2and 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 Section 13.7 of Volume 2 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

Construction Phase

Following the implementation of the above mitigation measures, there would be no residual impacts on the archaeological, architectural or cultural heritage resource

Operational Phase

Not applicable.

6 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										

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 area interact with the landscape, such that they will be aware of a significant change at this site from a primarily greenfield 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 Gorey Town and Environs Local Area Plan 2017-2023. 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 Appropriate Assessment Screening Report submitted with the application there are no elements of the proposed development that are likely to give rise to significant effects on Natura 2000 sites in the wider area.

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 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.

7 CONCLUSION

In conclusion, the subject site exceeds the thresholds set out in set out in Annex I and Annex II of the EIA, Directive and an EIAR is therefore mandatory for the proposed development. The methodology is informed by the available guidance, legislation and directives.

An Appropriate Assessment screening report is also submitted as part of this application. It is concluded that this application, whether individually or in combination with other plans and projects, will have no impacts upon the Natura 2000 sites. Therefore, this application does not need to proceed to stage II of the appropriate assessment.

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.