

1. INTRODUCTION

This Environmental Impact Assessment Report (EIAR) accompanies a planning application that is submitted on behalf of Ardstone Homes Ltd. for a multi-unit residential development, including a childcare facility and associated site works and infrastructure provision, at Crodaun, Celbridge. A description of the site is provided in Chapter 2 of this EIAR.

1.1 Nature and Extent of Development Proposal

Ardstone Homes Ltd. is seeking planning permission for a proposed residential development comprising the delivery of 372 no. new residential dwellings that is accessed via new access road serving the proposed development off the R405 at Crodaun, Celbridge, County Kildare.

The proposed development includes the provision of associated site works, including soft landscaped open spaces (approximately 13,026 sq.m, or 14.2% of the site area) and ancillary services and infrastructure provision to serve the proposed development.

The proposed development and works assessed in this EIAR can be described under four broad headings; dwellings; associated road infrastructure, associated water and utilities infrastructure, and ancillary open spaces.

Proposed Dwellings: The proposed development will deliver 372 new dwellings, comprising as follows:

- 122 No. Apartments are provided in 3 no. apartment blocks that range in height up to 4-storeys in height at the north-eastern part of the site. The apartments provide a mix of one and two-bedroom units, comprising 46 x 1 bed units and 76 x 2 bed units.
- 12 No. 1 bed Maisonettes and 20 No. duplexes (comprising 10 x 1 bed units and 10 x 2 bed units).
- 218 No. houses, comprising a variety of housing forms to include detached, semi-detached and terraced houses. A mix of house sizes are proposed to include 20 x 2 bed; 140 x 3 bed houses and 58 x 4 bed houses.

A childcare facility measuring approximately 191 sq.m (GFA) at ground floor level of Apartment Block B is also proposed.

Road Infrastructure: The proposals incorporate a hierarchy of internal streets set within the context of the receiving environment. The R405-Maynooth Road will provide access to the proposed development as well as connections between the proposed development and the rest of Celbridge. The internal road network comprises local primary/secondary streets designed to provide appropriate access within the new development and to the external road network. All internal roads have been designed for a speed limit of 30km/h.

A new Priority T-Junction is proposed at the R405-Maynooth Road site access, considering the future development of lands opposite and proximate to the proposed development site. Street widths range from 4.8m (home zones) to 5.5m (local streets) to ensure traffic calming. No excessively long straight sections of road are provided, with a layout that has been designed to be self-regulating.

Water and Utilities Infrastructure: Foul, surface and potable water supply infrastructure, and electricity, natural gas and telecommunications infrastructure, are to be provided beneath the proposed footpaths and roadways.

Surface water discharge rates from the proposed surface water drainage network will be controlled by a Hydrobrake type flow control device and associated underground attenuation tanks (Stormtech Chambers). Surface water discharge will also pass via a full retention fuel / oil separator. The proposed surface water drainage network will collect surface water runoff from the site via a piped network prior to discharging off site via the attenuation tank, flow control device and separator arrangement.

Open Spaces: The proposed layout incorporates six main public open spaces that are distributed through the development, as follows:

- Open Space A measures 2,850m² - This open space provides a pathway along the perimeter of the site. Providing access to the amenity space to the north-east.
- Open Space B measures 1,823m² - This open space serves Apartment Block A and onlooking houses. There will be an element of play incorporated into this space.
- Open Space C measures 1,857m² - This central open space is a widening of the central axis. It provides a relief for pedestrians and cyclist making their way to the amenity space to the north. As an identifiable node it helps to organise the layout easing navigation throughout the site.
- Open Space D measures 2,617m² - This open space is in close proximity to many larger family homes. A kickabout area is provided to serve these families.
- Open Space E measures 1,042m² - This space serves Apartment Block B and provides a linking open space between Open Space F and D.
- Open Space F measures 2,837m² - This defined open space provides a welcoming approach to the development from Celbridge, an integrated layout with the entrance to Crodaun Forest Park and the interface of the original demesne wall.

1.2 Need for an Environmental Impact Assessment Report

In accordance with Part X of the Planning and Development Acts 2000-2016 (the Act), where a planning application is made in respect of a development or class of development referred to in the Regulations under Section 176, the application shall, in addition to meeting the requirements of the permission regulations, be accompanied by an Environmental Impact Assessment Report.

Schedule 5 of the Planning and Development Regulations 2001-2016, as amended (the Regulations), sets out the categories of development and thresholds for activities that require EIA for the purposes of Part X of the Act (above). In this regard, the proposed residential development of 372 units is significantly below the threshold for residential development as set out in Class 10 (b)(i) – ‘*Construction of more than 500 dwelling units*’.

Class 10(b)(iv) provides for ‘*urban development which would involve an area greater than 2 hectares in the case of a business district, 10 hectares in the case of other parts of a built-up areas and 20 hectares elsewhere*’.

The subject site has a developable area¹ of approximately 9.18ha and is situated within a suburban residential context. The total site area extends to approximately 9.55 ha and therefore falls below the

¹ Excluding the areas owned by Kildare County Council (0.232ha) for which consent has been given for its inclusion in the application and lands zoned Objective F (0.136ha).

10ha threshold for 'other parts of a built-up' area. Given that the subject site forms part of a larger site in the same ownership of the applicant it was agreed at the pre-application stage with Kildare County Council that pursuant to Section 172(b)(i) and (ii) of the Planning and Development Act 2000, as amended, that a sub-threshold EIAR will be carried out.

1.3 Scoping of EIAR

Ardstone Homes Ltd. is committed to ensuring that the development of the subject lands is undertaken and implemented in an environmentally responsible and sustainable manner.

The proposed development has been the subject of pre-planning meetings with various Departments of Kildare County Council. Informal scoping to identify the issues that are likely to be most important during the Environmental Impact Assessment process for the proposed development has been carried out between the Design Team and the consultants undertaking the EIA. This approach is consistent with the Environmental Protection Agency's 'Guidelines on the information to be contained in Environmental Impact Assessment Reports' which provides that formal scoping, as per section 173(2)(a) of the Act, is not mandatory and may be requested of the Planning Authority or the Board.

This EIAR has sought to comprehensively address the issues listed in Sixth Schedule of the Regulations, as amended by the European Union (Planning And Development) (Environmental Impact Assessment) Regulations 2018, S.I. No. 296 of 2018 having regard to the requirements of the Directive EIA (2014/52/EU). The following issues have been assessed in the context of the proposed development:

- Population & Human Health
- Biodiversity
- Land, Soil & Geology
- Water: Hydrogeology & Hydrology
- Air, Dust and Climatic Factors
- Noise & Vibration
- Material Asset: Traffic & Transport
- Material Asset: Water Supply. Drainage & Utilities
- Landscape & Visual Assessment

The scoping process undertaken has directed what information should be contained in the EIAR and the most appropriate mechanisms to gather and assess that information to ensure that all potential impacts are adequately identified and appropriately mitigated against where necessary.

In accordance with Section 3.3.4 'Key Scoping Criteria' of EPA Guidelines, the prescribed environmental factors² were assessed to identify core constraints and sensitivities.

² As per EIA Directive (2014/52/EU), the EIA shall identify, describe and assess the direct and indirect significant effects of a project on the following factors: Population and Human Health, Biodiversity, Land, Soil, Water, Air, Climate, Material Assets, Cultural Heritage, Landscape and Interactions between these factors,

It was agreed amongst the EIA team that none of the prescribed environmental factors could be scoped out in its entirety in carrying out the EIA of the subject site.

1.4 Structure and Content of EIAR

This EIAR comprises three volumes as follows:

- Volume 1: Written Statement
- Volume 2: Appendices
- Volume 3: Non-Technical Summary (NTS)

This EIAR has been prepared in accordance with the requirements of the following Statutory Instruments:

- Environmental Impact Assessment (EIA) Directive (2014/52/EU).
- European Communities (Environmental Impact Assessment) Regulations, 1989 (S.I. No. 349 of 1989), as amended.
- European Union (Planning And Development) (Environmental Impact Assessment) Regulations 2018, (S.I. No. 296 Of 2018)
- Planning and Development Regulations 2001 (SI No. 600 of 2001), as amended.
- The content of the EIAR has had regard to the information requirements specified in the Sixth Schedule of the Planning and Development Regulations (SI No. 600 of 2001), as amended.

The preparation of the EIAR has been informed by the *Guidelines On The Information To Be Contained In Environmental Impact Assessment Reports 2002 and Advice Notes On Current Practice In The Preparation Of Environmental Impact Assessment Reports (September 2003)* [Environmental Protection Agency].

The content of this EIAR has also had regard to the Revised Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (Draft), August 2017; the Advice Notice for Preparing Environmental Impact Assessment Reports (Draft), September 2015 and the Consultation Paper on Transposition of 2014 EIA Directive (2014/52/EU) in the Land Use Planning and EPA Licencing Systems. These documents are currently Consultation Drafts and it was considered appropriate that regard was had to them on the basis they take account of the revised EIA Directive (2014/52/EU).

The preparation of the EIAR has also been informed by the European Commission Impact Assessment Guidelines, 2009, and the Department of Environment, Community and Local Government (DoECLG) Guidelines for Planning Authorities & An Bord Pleanála on carrying out Environmental Impact Assessment.

The EIAR has been prepared in the 'Grouped Format' structure, which examines each aspect of the environment as a separate section referring to the existing environment, the proposed development, likely impacts, and mitigation measures. The EIAR has been systematically organised to provide the following information:

- Section 2: A description of the subject lands.
- Section 3: A description of the project.
- Section 4: Provides a Consideration of Alternatives

- Sections 5-14: Identification of likely significant adverse impacts during construction and operation of the proposed development together with a description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse impacts. Alternatives have been examined by reference to layouts, designs and processes, as appropriate.
- Section 15: An assessment of the interactions and interrelationships of the different environmental factors / impacts that may occur as a result of the proposed development.
- Section 16: A summary of all mitigation measures forming part of the proposed development.

Impacts arising from the existence of the proposed development, the use of natural resources, the emission of pollutants, the creation of nuisances and the elimination of waste are described as direct, indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative as appropriate.

An assessment of the environmental sensitivity of geographical areas likely to be affected, as set out in the Seventh Schedule of the Planning and Development Regulations (SI No. 600 of 2001), has also been undertaken. In this regard, particular consideration has been given to the cumulative impact of the development in the context of surrounding developments and future works at the site. The subject site is not within any area that has been designated for nature conservation at a national or international level. There are no examples of habitats listed on Annex I of the Habitats Directive or records of rare or protected plants. Furthermore, there is no evidence of species listed in Annex II of the Habitats Directive, nor are there any plants which are listed as alien invasive species. Boundary features are of local significance for a range of wildlife, including protected species (birds) – refer to Chapter 6, below.

1.4.1 Land

It is noted that the 'Land' has been introduced as a prescribed environmental factor by Directive 2014/52/EU amending the EIA Directive. Recital 9 of the Directive outlines the reasons for its inclusion and references *'the need to address the unsustainable increase of settlement areas over time ('land take')*. Recital 9 goes on to state that *'public and private projects should therefore consider and limit their impact on land, particularly as regards land take, and on soil, including as regards organic matter, erosion, compaction and sealing: appropriate land use plans and policies at national, regional and local level are also relevant in this regard'*.

The proposed development provides for residential development and associated works on lands that are located on the northern fringe of Celbridge town. The subject lands are currently surrounded on three sides by residential development, or public roads and comprise a series of agricultural fields with traditional field boundaries. There are no water courses or drainage ditches associated with these boundaries. Notwithstanding the natural state of the lands, it is located within the defined urban settlement of Celbridge and designated for residential development purposes under the Kildare County Development Plan, 2017-2023 and the Celbridge Local Area Plan, 2017-2023.

Matters relating to impacts on soil have been considered as relevant in the context of Land, Soil and Geology (Chapter 7) and Water: Hydrogeology and Hydrology (Chapter 8) Sections of this EIAR.

1.5 Difficulties in Compiling the Specified Information

No major difficulties were encountered in compiling the specified information as set out in Schedule 6 of SI 600 of 2001, as amended. Any relevant difficulties encountered have been identified in the respective sections of the EIAR, as appropriate.

1.6 Specialist Contributors

The EIAR has been prepared and co-ordinated by Declan Brassil & Company. Specialist Inputs have been provided by the following Consultants:

Table 1.1 Specialist Inputs

Specialist Consultants	Aspect of Environment
John Fleming Architects Mr. Robin Jardine Mr. John Fleming	Consideration of Alternatives Description of Development
Openfield Ecological Services Mr. Padraic Fogarty	Biodiversity Appropriate Assessment Screening and Natura Impact Statement
TMS Environment Ltd. Dr. Imelda Shanahan Mr. Tom Ryan	Air, Dust and Climatic Factors Noise and Vibration
DBFL Consulting Engineers Mr. Brendan Keogh Sayed Ahmad Saeed Mark Kelly	Description of Development Material Assets: Traffic and Transport Material Assets: Water Supply, Drainage and Utilities Engineering Reporting Stage 1 Flood Risk Assessment Lands, Soil and Geology Water: Hydrogeology and Hydrology
Archer Heritage Planning Ltd. Mr. Aidan O'Connell Mr Liam Coen	Cultural Heritage and Archaeology
Mullin Design Associates Mr. Pete Mullin	Landscape and Visual Impact Assessment Landscape Plan

All experts involved in the preparation of environmental impact assessment reports are qualified and competent in their respective fields of environmental assessment. Details of qualifications, expertise and experience of each of the contributing specialists has been provided in Table 1.2 below.

Table 1.2 Details of Contributing Specialists

Expert	Company	Aspect of the Environment	Qualifications	Summary of Professional Expertise
Aidan O'Connell	Archer Heritage	<ul style="list-style-type: none"> • Cultural Heritage and Archaeology 	BA, University College Dublin 1995	Aidan O'Connell BA MIAI, Senior Archaeologist, Archer Heritage Planning Ltd, an excavation licence eligible archaeologist with 20 years experience in archaeological assessment.
Mr Liam Coen	Archer Heritage	<ul style="list-style-type: none"> • Cultural Heritage and Archaeology 	BA MIAI	Excavation licence eligible archaeologist with over 10 years experience in archaeological assessment.
Mr Brendan Keogh	DBFL Consulting Engineers	<ul style="list-style-type: none"> • Land, Soils and Geology • Water, Hydrology and Hydrogeology • Material Assets: Utilities 	BA BAI PGradDip CEng MIEI	Brendan Keogh is a Chartered Professional Engineer with over 15 years' experience in the design and construction of civil engineering projects. Projects have included works associated with the commercial, industrial, energy, residential and public infrastructure sectors.
Sayed Ahmad Saeed	DBFL Consulting Engineers	<ul style="list-style-type: none"> • Traffic and Transport 	BEng Tech, BEng (Hons), MIEI	Sayed Ahmad Saeed is a Professional Engineer with over 2 years' experience in the design of traffic and transport engineering projects. Projects have included works associated with the commercial, industrial, residential and public infrastructure sectors.
Mark Kelly	DBFL Consulting Engineers	<ul style="list-style-type: none"> • Traffic and Transport 	BA, BAI (Hons), MSc, CEng MIEI	Mark Kelly is a Chartered Professional Engineer with over 7 years' experience in the design of traffic and transport engineering projects. Projects have included works associated with the commercial, industrial, residential and public infrastructure sectors
Dr Imelda Shanahan	TMS Environment Ltd	<ul style="list-style-type: none"> • Air, Dust and Climatic Factors • Noise and Vibration 	BSc PhD Chartered Chemist Fellow of the Royal Society of Chemistry	Environmental Consultant with over 30 years experience in environmental impact assessment, specialising in air quality and noise and vibration impact assessment, management and control
Mr. John Fleming	John Fleming Architects	<ul style="list-style-type: none"> • Project Architect • Consideration of Alternatives 	FRIAI RIAI 2015, L4G Duke University 2011, Grade 3 Conservation RIAI 2009, MA Trinity College 1999, MRIA I RIAI 1989, BArch Trinity College 1986, Dip Arch DIT 1986	John Fleming is project director at John Fleming Architects with over 29 years' experience and is the Principal in John Fleming Architects. Since its foundation in 1994, John Fleming has worked on a diverse body of work including bespoke commissioned buildings, multi unit residential, student residences, commercial, offices, hotels, hospitality/ leisure and retail projects, as well as many large scale master planning exercises. Within our portfolio of completed projects are commissions by private end users, property developers, state bodies and charities.
Mr Robin Jardine	John Fleming Architects	<ul style="list-style-type: none"> • Project Architect 	BArch (Hons) Dublin School of Architecture, DIT Bolton Street 2010	Robin Jardine of John Fleming Architects holds a BArch in Architecture from Dublin School of Architecture. Robin has 8 years of experience working in architectural practice, having worked as part of multi-disciplinary teams on residential, commercial and tourism projects.

Expert	Company	Aspect of the Environment	Qualifications	Summary of Professional Expertise
		<ul style="list-style-type: none"> • Consideration of Alternatives 		
Mr. Declan Brassil	Declan Brassil and Company Ltd.	<ul style="list-style-type: none"> • EIAR Co-Ordination & Compilation • 	BA (Hons) NUI Maynooth 1990 Masters of Regional and Urban Planning, University College Dublin 1992.	Declan Brassil is a Chartered Town Planner with over 20 years' experience and is the Principal in Declan Brassil & Company. During this time, he has worked in the private sector and as an Inspector with An Bord Pleanála. Declan has extensive experience in leading multi-disciplinary teams in the preparation of Environmental Impact Statements, Local Area Plans, Masterplans and planning applications for large scale mixed use developments throughout the country. He has also advised on statutory planning processes and policy development and analysis on behalf of state agencies and private clients and acted as planning expert witness at oral hearings
Hennie Kallmeyer	Declan Brassil and Company Ltd.	<ul style="list-style-type: none"> • Population & Human Health • Interactions 	B.Admin,- University of Pretoria, 1995; and M.TR.P – University of Stellenbosch, 1997	Hennie Kallmeyer is a Senior Planner at Declan Brassil & Co. Ltd. and has 20 years experience in both the public and private sectors in South Africa; United Kingdom; Australia and Ireland. Hennie has a wide range of experience in all main aspects of operational and advisory planning consultancy services. Hennie is experienced in co-ordinating large scale multi-disciplinary projects together with extensive experience of the preparation of large-scale planning applications that need to be subjected to Environmental Impact Assessment (EIA) through the preparation of Environmental Impact Assessment Report(s) (EIAR).
Mr. Pete Mullin	Mullin Design Associates	<ul style="list-style-type: none"> • Landscape and Visual Impact Assessment 	BA (Hons) Landscape Architecture, ECA, Edinburgh University CMLI - Chartered Member of the Landscape Institute	Pete Mullin – Principal of Mullin Design Associates (MDA), is a Chartered Landscape Architect with over 25 years' experience studying, teaching and practicing in the sector. He is a graduate of the internationally respected Landscape Architecture degree programme at Edinburgh University / Edinburgh College of Art; and has worked at all levels within the private sector, from large multidisciplinary practices to small private studios across the UK and Ireland. He is personally responsible for the design the successful completion of several hundred environmental design commissions. Pete has been past Chair of the Landscape Institute NI and the Landscape Institutes Policy Consultant for Ireland. Pete was also until recently the Chair of Northern Ireland Environment Links- Land Matters Task Force, a collective of NGOs with stakeholder interest in land use planning and policy development.
Mr. Pádraic Fogarty	Openfield Ecological Services	<ul style="list-style-type: none"> • Biodiversity • AA Screening and Natura Impact Statement 	BSc Analytical Science, Dublin City University, MSc Environmental Protection, Sligo Institute of Technology, Diploma in Environment and Geography, Open University, Diploma in Field Ecology, University College Cork.	Pádraic Fogarty of Openfield Ecological Services was awarded an MSc from Sligo Institute of Technology for research into Ecological Impact Assessment (EclA) in Ireland and holds a BSc in Analytical Science (DCU), and diplomas in Geography & Environment (OU) and Field Ecology (UCC). He has over 20 years of experience in industry and consultancy. As a full member of the Institute for Environmental Management & Assessment (IEMA) OPENFIELD is bound by that organisation's code of practice. Pádraic has an in depth knowledge of environmental issues and was chairman of the Irish Wildlife Trust from 2009 – 2012. He continues to edit the quarterly wildlife publication 'Irish Wildlife'.

