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ENVIRONMENTAL IMPACT ASSESSMENT SCREENING

RESIDENTIAL DEVELOPMENT: HOLYWELL, SWORDS, FINGAL

October 2023

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1.0 INTRODUCTION

Fingal County Council as Local Authority is to deliver a Residential Development (5,189 sq m Gross Floor Space) arranged over 3 no. buildings ranging in height from 4 to 6 storeys, consisting of no. 57 no. residential units (20 no. 1-bedroom apartments, 29 no. 2-bedroom apartments, and 8 no. 3-bedroom apartments), ancillary infrastructure and all associated site development works, at a site of approximately 0.77 ha located in the Townland of Crowcastle, Holywell, Swords, Co. Dublin. The site is located in a prominent position to deliver and cater for existing and projected population growth of Swords.

The population of Fingal has been projected to grow by a further 369,000 people by 2031 which is a continuation in the trend that has been made visible over the last 10 years. Airport related business, commercial facilities and employment linked to the future development of the MetroLink is conducive to an increased demand for residential developments.

The following Environmental Impact Assessment (EIA) Screening is presented as part of the delivery of a new Residential Development within Holywell, Swords. All such development as confirming the requirement or otherwise for Environmental Impact Assessment requires a determination by the 'competent authority' and an assessment of the likely significant effects.

1.1 Purpose of this Report

Since the Transposition into Irish Planning Law of *Directive 2014/52/EU* amending *Directive 2011/92/EU* on the effects of certain public and private projects on the environment (the EIA Directive), effective as of 1st September 2018 (DHPLG – *Circular Letter PL 05/2018*), accordingly planning authorities are required to have regard to same in the performance of their planning functions. Since the project is a local authority own development, the requirement for sub-threshold EIA is addressed in Article 120 of the *Planning and Development Regulations 2001* as amended).

In this instance we present that there is no specific requirement to undertake EIA and the determining authority and competent authority on matters of environmental effects are respectfully enabled to 'screen out' the requirement for EIA.

We trust the associated documentation further refines our presented understanding, that the proposed development does not fall within the 'project' categories of development intended for the EIA process as an objective of *Directive 2014/52/EU* amending *Directive 2011/92/EU*.

Circular Letter PL 05/2018 highlights, in particular:

> *Strengthened screening procedures to determine whether EIA is required in respect of development consent proposals. In this regard, there are new requirements on the information to be provided by the developer to the competent authority for the purposes of a screening determination (Annex IIA of the Directive), and expanded selection criteria to be used by the competent authority in making a screening determination (Annex III). Where a structured screening determination on the foregoing basis is not required, it will be necessary, in the case of each planning application or appeal, for the competent authority to conclude, based on a preliminary examination, that there is no real likelihood of significant effects on the environment arising from the proposed development.*

This EIA Screening Report has been prepared with regard to the following guidance documents:

- Office of the Planning Regulator OPR *Practice Note PN02 Environmental Impact Assessment Screening* (incorporating amendment of September 2022).
- *Guidelines on the Information to be contained in Environmental Impact Assessment Reports* (EPA, May 2022).
- Department of Housing, Planning and Local *Government Guidelines for Planning Authorities and an Bord Pleanála on carrying out Environmental Impact Assessment* (2018).
- European Commission (EC) *Environmental Impact Assessment of Project: Guidance on Screening* (2017).
- European Commission *Interpretation of definitions of project categories of Annex I and II of the EIA Directive* (2015).

It is our professional planning opinion that the categories of development to be determined as requiring EIA as laid out in Annex I and Annex II of the EIA Directive and as respectively referred and logically transposed within, Schedule 5, Parts 1 and 2 of the *Planning and Development Regulations 2001* (as amended), are specific in terms of the likely environmental effects via emissions and outputs as effecting the environment, or are of such a scale and location that they have a consequential impact on a particular and sensitive receiving environment.

We present that the subject proposal neither falls within the types of projects as requiring an EIA and where the nature of the presented Residential Development at a site of approximately 0.77 ha located in the Townland of Crowcastle, Holywell, Swords, Co. Dublin, and the delivery and construction operations associated with same, are unlikely to have any particular 'environmental impact' occurring on foot of the proposal, such as for example an impact on an ecologically species rich or pristine and significant European Designated environment, or where there are no predicted residues or emissions from any operation as to cause any likely significant effects.

It appears in this instance and without evidence to the contrary, that no obvious and likely significant environmental effects would occur as a result of the proposed development as to require an EIAR (*Circular Letter PL 1/2017 – Implementation of Directive 2014/52/EU*). The terms of the proposed development as presented are clearly sub-threshold in respect of the presented Residential Development at Holywell, Swords, and do not fall under *Annex II projects* as referred both in *Directive 2014/52/EU* amending *Directive 2011/92/EU*, and as cross referenced in Schedule 5 of the *Planning and Development Regulations 2021* (as amended).

Notwithstanding the above, it is clear from the *Guidelines for Planning Authorities on carrying out Environmental Impact Assessment* (August 2018) as outlined on Page 14, Paragraph 3.2, that:

> *A screening determination that EIA is not required must not undermine the objective of the Directive that no project likely to have significant effects on the environment, within the meaning of the Directive, should be exempt from assessment.*

Therefore, in this regard this screening exercise is undertaken to determine the likely 'significant environmental effects' which may arise due to the location or characteristics of the proposed development.

1.2 Statement of Authority

This Report and EIA Screening Exercise has been presented and undertaken by Wessel Vosloo MIPI, Principal Planner with The Planning Partnership a practice of chartered Town Planners operating throughout Ireland, since June 2011. Wessel Vosloo holds the degrees B.Sec.Ed. (Graphical Engineering and Geography) and MSS (MURP Master of Urban and Regional Planning), is a Corporate Member of the Irish Planning Institute (MIPI) and Registered Charted Town and Regional Planner with the South African Council for Planners. Having in excess of 30 years' experience in planning in both the Public and Private Sector development environments, locally and internationally, which includes town planning, project management, environmental planning and environmental management. Wessel have significant experience Environmental Planning matters in both urban and rural projects and is involved on development projects within Ireland and the UK, which include the undertaking of Environmental Impact Assessments and the preparation of Environmental Impact Assessment Reports, Strategic Environmental Assessments and Appropriate Assessments.

1.3 Specialist Assessments Undertaken informing EIA Screening

Schedule 7, paragraph 3(h) of the *Planning and Development Regulations 2001* (as amended) details that mitigation measures to reduce the impact of the project on the factors specified in paragraph (b)(i)(I) to (V) of the definition of 'environmental impact assessment report' in section 171A of the *Planning and Development Act 2000* (as amended), must be considered in EIA Screening:

> *3(h) the possibility of effectively reducing the impact.*

This EIA Screening is informed by and refers to further specialist reports assessing the presented Residential Development at Holywell, Swords, and forms part of the documentation being considered for development consent. These all feed into the conclusions presented within this EIA Screening report and should be considered in conjunction. These drawings and reports are listed as:

- *Site Layout Drawings*, prepared by Henchion Reuter Architects.
- *Housing at Holywell Swords, Co. Dublin, Stage #2 Submission to FCC Planning Department* Sept 2023 report, prepared by Henchion Reuter Architects.
- *Engineering and Services Drawings*, prepared by Roughan & O'Donovan.
- *Engineering Report for Planning*, prepared by Roughan & O'Donovan.
- *Initial Site Specific Flood Risk Assessment*, prepared Roughan & O'Donovan.
- *Preliminary Construction & Environmental Management Plan*, prepared Roughan & O'Donovan.
- *Site Landscape Drawings*, prepared by DFLA Landscape Architects.
- *Design Rationale – Landscape Architecture*, prepared by DFLA Landscape Architects.
- *The Planning Statement* dated September 2023, prepared by The Planning Partnership.
- *Ecological Impact Assessment (EcIA) for proposed Residential Development at Holywell, Swords, Co. Dublin*, dated 20th October 2023, prepared by Altemar Marine & Environmental Consultancy.
- *Appropriate Assessment Screening for proposed Residential Development at Holywell, Swords, Co. Dublin*, dated 20th October 2023, prepared by Altemar Marine & Environmental Consultancy.

1.4 Summary of Findings

We present that the subject proposal neither falls within the types of projects as requiring EIA as laid out in Annex I and Annex II of the EIA Directive and as respectively referred and logically transposed within, Schedule 5, Parts 1 and 2 of the *Planning and Development Regulations 2001* (as amended), and is of a scale where the presented Residential Development at Holywell, Swords, the delivery and construction operations associated with such, are unlikely to have any particular 'environmental impact' occurring on foot of the proposal, such as for example an impact on an ecologically species rich or pristine and significant European Designated environments, or where there are no predicted residues or emissions from any operation as to cause any likely significant effects.

Accordingly, and whilst undertaking the requisite screening exercise, it has been found, using the requisite professional judgement as relying on the available information, that no significant negative effects have been found or identified as to cause the requirement for an Environmental Impact Assessment.

2.0 DESCRIPTION OF THE PROPOSED DEVELOPMENT

2.1 Site Location and Context

The lands are located to the southeast of Swords Town Centre approximately 2.2km distance from the town centre. The lands are formed by a greenfield site and bordered by Holywell North Park and residential development on the east and south sides of the site, and to the north and west by the link road section that links to the R125 to the south and Mountgorry Way to the east.

It is also noted that the site is bordered by hedgerows located along the southern and eastern edge of the site. To the north and northwest of the site, the area is characterised by extensive commercial uses.

The subject site is considered an infill 'greenfield site' which is suitable for development.

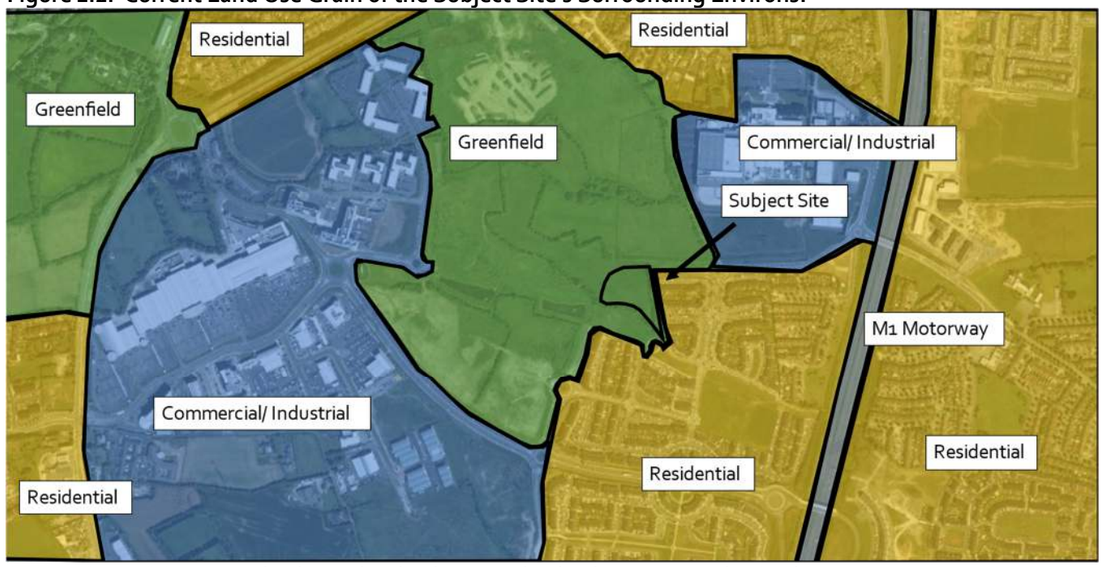
Figure 1.1: Subject Site.

Source: ESRI ArcGIS, Annotated and Reproduced under Licence by The Planning Partnership October 2023

The surrounding built environment can be characterised by greenfield sites, residential developments and industrial/ commercial developments, a development pattern is emerging that supports the different industries that can be located to the north of Dublin City, the result of this is an increased demand for housing.

Regarding connectivity the site is serviced by a series of roads for private vehicle use, public transport, the M1 motorway and the proposed Metrolink. This will result in further pressure on the area for residential development. If the area is to continue to grow in a manner that is sustainable and fulfil the projections that have been detailed as part of *Regional Spatial and Economic Strategy for the Eastern and Midland Regional Area*, then further residential development will need to be facilitated.

Figure 1.2: Current Land Use Grain of the Subject Site's Surrounding Environs.



Source: ESRI ArcGIS, Annotated and Reproduced under Licence by The Planning Partnership October 2023

This Residential Development is to accommodate population and economic growth in the area while reducing potential impacts on the receiving environment and neighbouring developments.

2.2 Residential Demand in Fingal

The surrounding built environment can be characterised by greenfield sites, residential developments and industrial/ commercial developments, a development pattern is emerging that supports the different industries that can be located to the north of Dublin City, the result of this is an increased demand for housing.

Regarding connectivity the site is serviced by a series of roads for private vehicle use, public transport, the M1 motorway and the proposed Metrolink. This will result in further pressure on the area for residential development. If the area is to continue to grow in a manner that is sustainable and fulfil the projections that have been detailed as part of RSES then further residential development will need to be facilitated.

In recent times, there has been much more focus on core policies for support of increases in residential developments. *Fingal Development Plan 2023-2029* has established that all zoned lands including the subject site are serviced and located alongside existing or planned public transport routes. Fingal County Council also aims to continue to pursue the goals of the consolidation of Dublin City through the compact development of the Dublin City and suburbs area within Fingal. It has been stated that one of the roles of Swords is to accommodate 20% of the phased population growth targeted in the principal city or suburban area to be accommodated in the wider metropolitan area. This will be subject to:

- Any relocated growth being in the form of compact development, such as infill or a sustainable urban extension.
- Any relocated growth being served by high-capacity public transport and/ or related to significant employment provision.
- National Policy Objective 9, as set out in Chapter 4 of the NPF.

The population of Fingal has been projected to grow by a further 369,000 people by 2031 which is a continuation in the trend that has been made visible over the last 10 years. Airport related business, commercial facilities and employment linked to the future development of the MetroLink is conducive to an increased demand for residential developments.

2.3 Overview of the Proposed Development

The objective of the project is to provide a Residential Development (5,189 sq m Gross Floor Space) arranged over 3 no. buildings ranging in height from 4 to 6 storeys, consisting 57 no. residential units (20 no. 1-bedroom apartments, 29 no. 2-bedroom apartments, and 8 no. 3-bedroom apartments), ancillary infrastructure and all associated site development works, at a site of approximately 0.77 ha located in the Townland of Crowcastle, Holywell, Swords, Co. Dublin, located to serve the projected growth in the population and to cater for any economic expansion in the area.

This development will facilitate the expansion and growth of Swords whilst working to consolidate its suburbs as part of this.

It is expected that the working population in Fingal will increase with an additional 18,612 people by 2029, with forecasted local employment availability of 13,090 between 2020 and 2029. In order to cater for this economic expansion, residential infrastructure is to be in place to cater for such projected demands.

3.0 RELEVANT LEGISLATION

3.1 EU Directives

The original EIA *Directive 85/337/EEC* (adopted 27th June 1985) provides for the assessment of the effects of certain public and private projects on the environment. The originating Directive was subsequently amended by further Directives in 1997, 2003 and 2009 then ultimately these amendments were consolidated in 2011 by *Directive 2011/92/EU*. The current *Directive 2014/52/EU* amends the 2011 Directive but does not replace it, and where there is retained emphasis to ensure a high level of protection of the environment and human health.

An important European Commission Document, *Interpretation of Definitions of project categories of Annex I and II of the EIA Directive, European Union 2015* was produced and refers to its purpose as:

> *to reduce the uncertainty surrounding the scope of the EIA Directive and the meaning of certain project definitions in the EIA Directive so as to ensure that those projects likely to have significant effects on the environment do not fall outside the scope of the Directive due to issues of interpretation*
>
> and
>
> *this guidance document does not address the issue of how the screening of Annex II projects should be carried out. It aims to help in deciding whether specific projects fall within the scope of the EIA Directive, but not (for Annex II projects) whether they should undergo an EIA.*

The relevance of this document is important in the EU's attempts to assist member states in reducing the administrative burden of potentially unnecessary EIAR process (EIS at that time).

Amendments to Article 4 of EU Directive under 2014/52 are noted as follows:

> *4. Where Member States decide to require a determination for projects listed in Annex II, the developer shall provide information on the characteristics of the project and its likely significant effects on the*

environment. The detailed list of information to be provided is specified in Annex IIA. The developer shall take into account, where relevant, the available results of other relevant assessments of the effects on the environment carried out pursuant to Union legislation other than this Directive. The developer may also provide a description of any features of the project and/or measures envisaged to avoid or prevent what might otherwise have been significant adverse effects on the environment.

ANNEX II.A - INFORMATION REFERRED TO IN ARTICLE 4(4)
(INFORMATION TO BE PROVIDED BY THE DEVELOPER ON THE PROJECTS LISTED IN ANNEX II)

1. *A description of the project, including in particular:*

   (a) *a description of the physical characteristics of the whole project and, where relevant, of demolition works;*

   (b) *a description of the location of the project, with particular regard to the environmental sensitivity of geographical areas likely to be affected.*

2. *A description of the aspects of the environment likely to be significantly affected by the project.*

3. *A description of any likely significant effects, to the extent of the information available on such effects, of the project on the environment resulting from:*

   (a) *the expected residues and emissions and the production of waste, where relevant;*

   (b) *the use of natural resources, in particular soil, land, water and biodiversity.*

4. *The criteria of Annex III shall be taken into account, where relevant, when compiling the information in accordance with points 1 to 3.*

3.2 National Provisions for Transposing EU Legislation

It is important to note that the provisions of the EIA Directive(s) have been transposed into Irish Legislation via the planning legislation under both the *Planning and Development Act 2000* (as amended) [Part X Environmental Impact Assessment] and its delivery document the *Planning and Development Regulations 2001* (as amended) [Part 10 Environmental Impact Assessment] and the consequential *European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018*.

Significantly and importantly the types of projects referred under the EU (EIA) Directives Annex I and II, as meriting EIA, predictably due to nature, scale and location of development are found under Schedule 5 Parts 1 and 2 of the *Planning and Development Regulations 2001* (as amended).

The *European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018)*, transpose the requirements of Directive 2014/52/EU, amending previous Directive 2011/52/EU, on the assessment of the effects of certain public and private projects on the environment (the EIA Directive) into planning law.

Schedule 5 of the *Planning and Development Regulations 2001* (as amended) details the prescribed classes of development which are subject to Environmental Impact Assessment. Those listed in Part 1 of Schedule 5 are automatically subject to Environmental Impact Assessment. Those listed in Part 2 of Schedule 5 are also likely to have significant environmental effects based on the nature and size of the development set out by threshold criteria.

Schedule 7A of the *Planning and Development Regulations 2001* (as amended) details the information to be provided for the purposes of screening sub-threshold development for the purposes of Environmental Impact Assessment.

Schedule 7 of the *Planning and Development Regulations 2001* (as amended) details the criterial for determining whether development listed in Part 2 of Schedule 5 should be subject to Environmental Impact Assessment.

3.3 Relevant EIA Guidance

The European Commission published in 2017 the Environmental *Impact Assessment of Projects Guidance on the preparation of the Environmental Impact Assessment Report (Directive 2011/92/EU as amended by 2014/52/EU).*

> *Screening is not necessary for Projects listed under Annex I to the Directive, and the Directive only foresees Scoping to be mandatory when it is requested by the Developer to the Competent Authority.*

Article 4(4) of the EIA Directive relating to the Screening stage of the EIA process, as well as Article 5(1) of the EIA Directive on the preparation of the EIA Report, requires practitioners to take the available results of other relevant assessments under other EU and national legislation into account.

When transposing into Irish Planning Law of the EIA Directive, the Department of Housing, Planning and Local Government (DHPLG) also formally launched by *Circular Letter PL 05/2018* the revised *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment*, dated August 2018. Key amendments reflected in these guidelines refer:

> *Strengthening of the procedures for screening, particularly through the introduction of new information requirements to be provided by the developer (Annex IIA) and revised selection criteria to be used by the competent authority in making a determination (Annex III of Directive)*

In effect, Schedule 7A of the *Planning and Development Regulations 2001* (as amended), reflects Annex IIA referred above in 3.1. The EIA Guidelines detail the Screening Process in paragraphs 3.1 through to 3.19, and states importantly at paragraph 3.4:

> *For all sub-threshold developments listed in Schedule 5 Part 2, where no EIAR is submitted or EIA determination requested, a screening determination is required to be undertaken by the competent authority unless, on preliminary examination it can be concluded that there is no real likelihood of significant effects on the environment*

This EIA Screening is presented as enabling the relevant competent authority to conclude that there is no real likelihood of significant effects on the environment.

4.0 PLANNING HISTORY

To derive an understanding of development trends and potential interactions between different forms of development associated with the subject site, a review of recent relevant Planning History was undertaken and presented below.

It is our professional planning opinion that none of the extant granted planning permissions outlined above would generate potential effects associated with water pollution, waste, dust and noise that would likely be considered to be significant.

File No.	Application Status	Decision Date	Development Description
F18A/0335	This application was received by Fingal County Council on 18 Jun 2018 and registered on 30 Oct 2018. On 21 Nov 2018, the decision GRANT PERMISSION was made by Fingal County Council.	21/11/2018	A residential development on a 0.77 ha site in the Townland of Crowcastle, Holywell, Swords, Co. Dublin, and to the north and west by the recently constructed link road section that links to the R125 to the south and Mountgorry Way to the east. Access to the site is from the recently constructed link road section that bounds the development to the north. The proposed development comprises 29 dwellings in the following mix: A 2/3 storey duplex/apartment building 7 no. 2-bedroom ground floor apartments, 2 no. 1-bedroom ground floor apartments, 9 no. 3-bedroom duplex units and 2 no. 2-bedroom two storey apartments. The development also consists of 9 no. two houses comprising 3 no. 3-bedroom mid-terraced Type B units; 2 no. 3-bedroom end of terrace Type B1 units; 2 no. 4-bedroom semi-detached Type C units and 2 no. 3-bedroom semi-detached Type D units together with site development/car parking/landscaping works.
F02A/0729	On 18 Feb 2003, a decision GRANT PERMISSION & REFUSE PERMISSION was made by Fingal County Council on this application. Subsequently, an appeal was lodged on 18 Mar 2003 and a decision to Appeal Withdrawn was made by An Bord Pleanála on 02 Apr 2003.	18/02/2003	Residential development including local services centre, site for proposed primary school and open space. The site is bounded by proposed link road from Malahide to Feltrim to the north, The Melrose Housing Estate at Kinsealy, and M1 Motorway (presently under construction) at Drinan, to the west. The lands comprise those contained within the Nevinstown A1 Residential Action Plan. The residential development provides for a total of 1183 residential units, comprising 548 houses and 635 apartments, of which there are 46 one bedroom, 741 two bedroom, 386 three bedroom and 10 four-bedroom units ranging in height from 2/2 1/2 and 3 storeys. The development comprises one local services centre (697.2 sq.m.) containing 1 creche (390.2sq.m.), 1 retail unit (113 sq.m.), 1 medical facility (97 sq.m.) and a pharmacy (97 sq.m.) in a single building of 1 1/2 storeys. Access to the development is from the existing main road through Airside Business Park to form a new distributor road, extending from the existing N1 to the M1 motorway. Pedestrian/cycle provisions will be incorporated alongside the proposed distributor road. An Environmental Impact Statement is being submitted with this planning application.
F03A/0936	This application was received by Fingal County Council on 23 Jul 2003 and registered on 23 Jul 2003. On 10 Mar 2004, the decision GRANT PERMISSION was made by Fingal County Council.	10/03/2004	A residential development including local services centre, site for proposed primary school and open space. The site is bounded by the proposed link road from the N1 to the realigned Feltrim Road, to the north and the Melrose housing estate at Kinsealy, and M1 motorway at Drinan to the east. The lands comprise those contained within the Nevinstown A1 Residential Action Plan. The residential development provides for a total of 1188 residential units, comprising 546 houses and 642 apartments, of which there are 44 one bedroom, 754 two bedroom, 380 three bedroom and 10 four bedroom units ranging in height from two to two and a half and three storeys. The development comprises 1 local services centre (730.95 sq.m.), containing 1 creche, (423.95 sq.m.), 1 retail unit (113 sq.m.), 1 medical facility (97sq.m.) and a pharmacy (97 sq.m.) in a single building of one and a half storeys. Access to the development is from the existing main road through Airside Business Park to form a new distributor road, extending from the existing N1 to a proposed interchange at the M1 motorway. Pedestrian/cycle provisions will be incorporated alongside the proposed distributor road. An Environmental Impact Statement is being submitted with the planning application.

5.0 FURTHER SPECIALIST REPORTS ASSESSING THIS PROPOSED DEVELOPMENT

As outlined 1.3 above, paragraph 3(h) of Schedule 7 of the *Planning and Development Regulations 2001* (as amended) details that mitigation measures to reduce the impact of the project on the factors specified in paragraph (b)(i)(I) to (V) of the definition of 'environmental impact assessment report' in section 171A of the *Planning and Development Act 2000* (as amended), must be considered in EIA Screening:

> *(h) the possibility of effectively reducing the impact.*[1]

This EIA Screening is informed by and refers to further specialist reports assessing the presented Residential Development for Holywell, Swords, and forms part of the documentation being considered under the provisions of Part XI of the *Planning and Development Act 2000* (as amended) and Part 8 of the *Planning and Development Regulations 2001* (as amended), to include:

- *Site Layout Drawings*, prepared by Henchion Reuter Architects.
- *Housing at Holywell Swords, Co. Dublin, Stage #2 Submission to FCC Planning Department* Sept 2023 report, prepared by Henchion Reuter Architects.

[1] Schedule 7, paragraph 3(h) of the *Planning and Development Regulations 2001* (as amended)

- *Engineering and Services Drawings,* prepared by Roughan & O'Donovan.
- *Engineering Report for Planning*, prepared by Roughan & O'Donovan.
- *Initial Site Specific Flood Risk Assessment*, prepared Roughan & O'Donovan.
- *Preliminary Construction & Environmental Management Plan*, prepared Roughan & O'Donovan.
- *Site Landscape Drawings*, prepared by DFLA Landscape Architects.
- *Design Rationale – Landscape Architecture*, prepared by DFLA Landscape Architects.
- *The Planning Statement* dated September 2023, prepared by The Planning Partnership.
- *Ecological Impact Assessment (EcIA) for proposed Residential Development at Holywell, Swords, Co. Dublin, dated 20th October 2023, prepared by Altemar Marine & Environmental Consultancy.*
- *Appropriate Assessment Screening for proposed Residential Development at Holywell, Swords, Co. Dublin, dated 20th October 2023, prepared by Altemar Marine & Environmental Consultancy*.

5.1 *Housing at Holywell Swords report*, prepared by Henchion Reuter Architects

A previous planning application has been made for residential development on this site (Fingal County Council Reg. Ref. No. F18A/0335) and in pre-planning discussions that took place between consultants and Fingal County Council it was made clear that the proposed development could substantially improve on this previous design.

A Pre-Planning Meeting with Fingal County Council on the 16th June 2023 clarified the planning and environmental requirements at the site. The requirements included issues such as tree and hedgerow retention, development impact on the neighbourhood, the importance of day light and sunlight assessments and the improvement of the SUDs plan set out in previous applications.

The relationship between the development site and the ongoing development of the area to the north and northeast of the site was discussed as length. FCC have set out their vision for this territory in the Barryspark and Crowcastle Masterplan. The importance of active travel and the opportunity to integrate the development into current ongoing developments in this regard was emphasised. FCC Planning Dept were supportive of the proposed pavilion typology due to the high residential amenity achieved. The preference to avoid 'stuck-on' type balconies was clearly expressed and the proposed brick external finish to was deemed appropriate.

The objective of the project is to provide a Residential Development (5,189 sq m Gross Floor Space) arranged over 3 no. buildings ranging in height from 4 to 6 storeys, consisting 57 no. residential units (20 no. 1-bedroom apartments, 29 no. 2-bedroom apartments, and 8 no. 3-bedroom apartments), ancillary infrastructure and all associated site development works, at a site of approximately 0.77 ha located in the Townland of Crowcastle, Holywell, Swords, Co. Dublin, located to serve the projected growth in the population and to cater for any economic expansion in the area.

A study carried out by Fingal County Council concluded that Fingal will increase its working population by 18,612 people by 2029 and that there is a forecast of 13,090 local jobs to be available between 2020 and 2029. In order to cater for this economic expansion there will need to be the correct residential infrastructure in place to be able to cater for the increase in population. The subject site has the potential to be able to facilitate economic and population growth in a manner that does not have a detrimental impact on the receiving environment with careful design and proper planning.

5.2 *Engineering Report for Planning* September 2023, and *Initial Site Specific Flood Risk Assessment* September 2023, both prepared by Roughan & O'Donovan

5.2.1 Site Hydrology and Flood Risk Assessment

The site is located within the catchment of the River Gaybrook. The River Gaybrook rises approximately 930m southwest of the development site within the Airside Retail Park. The river generally flows in a north easterly direction, where it ultimately discharges to the Malahide Estuary, approximately 3.4km northeast of the development site. According to the OPW Flood Studies Update (FSU) Web Portal, the catchment measures approximately 5.26km2 in size. A detailed Flood Risk Assessment has been prepared to supplement the Engineering Report with compensatory flood storage provided on the site.

Fluvial Flooding

A number of sources of information including previous Site-Specific Flood Risk Assessment and Fingal Strategic Flood Risk Assessment Flood Extents maps indicates that the site is at risk of fluvial flooding. Therefore, the risk of fluvial flooding at the site is classified as medium and a Stage 2 – Initial Fluvial Flood Risk Assessment is required for the development.

Coastal Flooding

Coastal flooding was not identified as a source of flooding affecting the site in any of the sources of information consulted including CFRAM maps. The site is more than 20m above sea level. Therefore, the risk of coastal flooding at the site is classified as low and further assessment is not required.

Surface Water / Pluvial Flooding

The sources consulted indicate that the site may be subject to surface water derived flooding. Flood maps from the SFRA of Fingal County Development Plan, show flood affecting the surrounding developments and road infrastructures on the southern part of the site, this might be related to inadequate drainage capacity of the existing drainage infrastructures and may result in increased runoff volume routed towards the site object of this study. Therefore, the risk of Surface Water flooding at the site is classified as medium and a stage 2 – Initial Surface Water Flood Risk Assessment is required for the development.

Groundwater Flooding

Groundwater flooding was not identified as a source of flooding affecting the site. Therefore, the risk of groundwater flooding is classified as Low and no further assessment is required.

Sources of Flooding - Flooding from Fluvial / Surface Water

The subject site is situated within the catchment of the Gaybrook Stream. The sources consulted as part of this assessment indicate that as portion of the subject site is at risk of flooding in the present day 1 in 1000 year fluvial event, it is therefore within Flood Zone B as defined in the OPW Guidelines. Flooding of the surface water network upstream of the site also appears to create flow paths that converge on the subject site. The FEM FRAMS flood map includes model nodes along the Gaybrook Stream indicating flood levels for the 1% AEP and the 0.1% AEP present day. As per the Strategic Flood Risk Assessment for the *Fingal Development Plan 2023-2029*, the development is to include an appropriate freeboard. As per the Fingal SFRA, freeboard for Highly Vulnerable developments is the greater of:

- 500mm freeboard above current scenario; or
- 250mm above the HEFS (for Highly vulnerable developments).

As the proposed finished floor level is set at 26.4mOD, the highest water level anticipated from fluvial flooding is 0.27m below the proposed finished floor level.

The layout of the proposed building includes minor areas of structures within the floodplain as derived from the FEMFRAM levels. These structures may displace flood waters within the subject lands in extreme events. A Civils 3D surface model was created to overlay the flood level on the site layout to determine the volume of water displaced by the proposed buildings. Based on this and upon a desktop survey of hydraulic and topographic conditions, the site layout design includes for 150m^3 of compensatory storage.

Surface water flooding occurs when the local drainage system cannot convey stormwater flows from extreme rainfall events. The rainwater does not drain away through the normal drainage pathways or infiltrate into the ground but instead ponds on or flows over the ground instead. Surface water flooding is unpredictable as it depends on a number of factors including ground levels, rainfall and the local drainage network. The drainage network for any development on the site will incorporate Sustainable Drainage Systems (SuDS) for the purpose for managing surface water in terms of both flow and quality.

Conclusion of Stage 2 SFRA

The available sources consulted above indicate that a portion of the proposed development site is liable to flood in the 1 in 1000 year current climate scenario from fluvial sources. Flood risk management measures incorporated within the design will protect the development up to the design flood event (1 in 1000 year + 20% climate change factor) with an appropriate freeboard and shall ensure flood risk is not increased upstream or downstream of the site. Details of the proposed compensatory storage measures (~150m^3) shall be provided at compliance stage.

5.2.2 Water Supply

The development lands are not currently served by a water supply, however there is an existing 300mm dia. watermain pipe located at Holywell Distributor Road, immediately to the north of the site. The records indicate that there is a spur from this watermain that crosses the Holywell Distributor Road to the north of the site and is capped at the northern site boundary.

The site is to be connected to the spur at the northern boundary of the site. This spur is connected to the existing water supply network on Holywell Distributer Road, which is indicated to be 300 mm in diameter from Irish Water records. It is proposed to provide a new 100mm dia. watermain to serve the proposed development.

A Pre-Connection Enquiry form was submitted to Irish Water and a Confirmation of Feasibility letter was subsequently received on the 2nd March 2023 which states that a connection to public water supply infrastructure is feasible without any upgrade works being required.

All watermains will be constructed in accordance with Irish Water requirements.

5.2.3 Foul Drainage

Drainage records obtained from Fingal County Council have identified an existing 225mm dia. foul water sewer located at Holywell Distributer Road, immediately north of the site. The records indicate that the existing asset flows in an eastly direction.

It is proposed to construct a new foul sewer network to serve the development. Foul effluent from the site will discharge to the existing 225mm dia. foul sewer on Holywell Distributer Road.

A Confirmation of Feasibility letter received from Irish Water on the 2nd March 2023 states that a connection to the public foul infrastructure is feasible without any upgrade works being required. All foul drainage will be constructed in accordance with Greater Dublin Region Code of Practice for Drainage Works and Irish Water requirements.

5.2.4 Surface Water Drainage

It is proposed to provide new separate surface and foul drainage systems to serve the proposed development. The site appears to have no existing surface water drainage infrastructure within the boundary. The nearest surface water networks are located immediately west and north of the site on Holywell Distributer Road.

It appears that the current drainage regime for the subject site is that surface water drains via infiltration and via overland flow routes to the surrounding surface water network.

As part of the development, a number of different SuDS measures are proposed to minimise the impact on water quality and water quantity of the runoff and maximise the amenity and biodiversity opportunities within the site. The existing topography will allow for the site to drain by gravity to the nearby existing 1200 mm dia. surface water pipe located at Holywell Distributer Road to the southwest of the site.

It is proposed to construct a new surface water drainage system for the development to collect and convey runoff to the outfall location. The site will be served by a new network consisting of surface water pipes, blue / green roofs, permeable paving areas and a detention basin. The lower sub-base levels of the permeable paving, the blue/green roofs and detention basin will provide for the attenuation storage requirements on site as a result of the residential development.

The proposed SuDS measures for the site will include Source Control measures as part of a Management Train whereby the surface water is managed locally in small sub-catchments rather than being conveyed to and managed in large systems further down the catchment. The combination of the SuDS measures listed below will maximise the potential for surface water attenuation, reducing the impact on the existing surface water drainage network downstream. The proposed techniques will offer high level of treatment processes and nutrient removal of the runoff, particularly during the 'first flush'. Finally, the various measures will offer significant amenity and biodiversity opportunities compared to other drainage systems.

It is proposed to provide the following SuDS measures:

- Blue/green roof systems
- Permeable paving to all footway and parking bay areas
- Detention basin
- Flow control devices to limit discharge

A total of 297m^3 of storage will be provided for the 1 in 100-year event (including 20% for climate change). This storage will be provided within the permeable paving subbase layers, the detention basin and the blue/green roofs. The permeable paving for the footpaths and parking bays and blue/green roofs for the buildings will attenuate the associated runoff from these areas at source. The runoff associated with the access road will be attenuated in the detention basin. The rate of surface water discharge shall be restricted to QBAR (2.13 l/s/ha) for the 1 in 100-year rainfall event in accordance with GDSDS Volume 2 New Development. This equates to a total permitted discharge of approximately 0.8 l/s from the site.

The provision of SuDS measures to convey, store and manage the discharge of surface water to the receiving surface water network will aid in managing flood risk. The SuDS measures outlined suffice to prevent contamination of surface water prior to discharge to public stormwater network.

5.2.5 Utilities

Existing utility records from major utility providers in Ireland were obtained for the purpose of this planning engineering report. The records obtained indicate that ESB, Eir, Gas Networks Ireland, and Virgin Media have existing services in the vicinity of the subject site. These services are located on Holywell Distributor Road adjacent to the site and in the adjacent residential developments. As part of the development, utility infrastructure will be provided to serve the subject site. Consultations at detailed design stage will be undertaken with the relevant utility providers.

5.3 *Preliminary Construction & Environmental Waste Management Plan*, prepared Roughan & O'Donovan

The Preliminary Construction & Environmental Management Plan (CEMP) has been prepared to outline the envisaged procedures, sequencing, construction methodology and environmental control measures anticipated by the Project Team engaged in the planning, liaison, and construction of the proposed residential development at Holywell, Swords, Co. Dublin. The plan outlines proposals on traffic and environmental management measures to be adopted during construction. The appointed construction Contractor will prepare and be responsible for implementing the Final Construction & Environmental Management Plan for Construction.

This document is designed to be a live document which will eventually address how any planning conditions imposed on the project will be managed or discharged by the construction team.

5.3.1 Protection of Watercourses

There is an existing drainage ditch located along the southern boundary of the site. However, following a number of site visits and discussions with FCC, the ditch appears to be dry. Flow from the Gaybrook steam is culverted to bypass the subject site. Runoff or surface water that is generated within the site will be discharged to the existing storm water network rather than to the ditch or other open watercourses.

Even though the ditch appears to be dry, as a further precaution, all works in proximity to the existing drainage ditch shall follow the generic best practice guidance outlined in the following documents:

- Guidelines for Crossing Watercourses during the Construction of National Road Schemes (NRA, 2008c).
- Guidelines on Protection of Fisheries during Construction Works in and Adjacent to Waters (IFI, 2016).
- CIRIA C648 Control of water pollution from linear construction projects: technical guidance (CIRIA, 2006).

The following protection measures will also be followed to ensure water quality in the river is maintained:

- All machinery will be refuelled from mobile tankers on the local/access/haul/site roads. No refuelling will take place within 50m the watercourse.
- Mobile storage facilities, such as fuel bowsers, will be bunded to 110% capacity to prevent spills. Tanks for bowsers and generators will be double skinned.
- When not in use, all valves and fuel trigger guns from fuel storage containers will be locked.
- Only dedicated trained and competent personnel will carry out refuelling operations. A spill kit and drip tray will be on site at all times and available for all refuelling operations. Equipment will not be left unattended during refuelling. All pipework from containers to pump nozzles will have anti siphon valves fitted.
- Strict procedures for plant inspection, maintenance and repairs will be detailed in the contractor's method statements and machinery will be checked for leaks before arrival on site.
- All site plant will be inspected at the beginning of each day prior to use. Defective plant will not be used until the defect is satisfactorily fixed.
- All major repair and maintenance operations will take place off site.
- Care will be taken at all times to avoid contamination of the environment with contaminants other than hydrocarbons, such as uncured concrete and other chemicals.
- Surface water from the site be treated in attenuation ponds prior to discharging to the storm water network.

5.3.2 Waste / Demolition Management

The proper management and handling of waste on site is essential to ensure that pollution and increased levels of contamination are minimised. Effective management of waste on site will consist of the following measures:

- Closed skip containers
- Non dumping/littering policy on site
- Waste segregation
- Regular clean-up of the site
- Careful handling and transportation to avoid damage to raw materials
- Efficient ordering

Excavated material from the site will be tested accordingly. Acceptable material can be recycled and used as part of the development or as import on other schemes, while unacceptable material will be transported off site to a licensed waste disposal facility.

5.3.3 Traffic Management

The proposed development will be accessed from the existing access off the Holywell Distributor Road. Once all the necessary earth moving (minimal cut/fill) is completed, there will be limited construction traffic on the existing road network as the initial phase involves processing and moving aggregates within the site boundary. Typical construction associated traffic would include operatives travelling to and from work and deliveries and removal of materials.

All Traffic Management proposals shall be agreed with Fingal County Council and An Garda Síochána prior to construction of the development.

The main constraints for construction activities relates to the construction of the new services connections to the site and the construction of the new site entrance. There are a number of residential and industrial developments served by the Hollywell Distributor Road located within the vicinity of the development site. Road users will need to be accommodated throughout the works.

The site will be accessed from the existing access off the Hollywell Distributor Road. There will be no other access points to the site.

As with any construction project, the contractors will be obliged to carry out a comprehensive Construction Traffic Management Plan (CTMP) in consultation with FCC as local authority, before the commencement of the construction phase. The purpose of such a plan is to outline the measures to manage the expected construction traffic during the construction period and will be revised accordingly as works progress. The CTMP will also detail how facilities for existing road users will be maintained whilst construction operations are proceeding.

5.3.4 Dust, Noise and Vibration

Dust is a nuisance and can be damaging to humans, machinery, plants and animals. All workers on site are to consider the nuisance caused by the impacts of dust. The effects of dust will be minimised using the following techniques:

- Avoid creating unnecessary dust.
- Cover materials which could create dust when windy.
- Dampen down dust in operations which create dust.
- Ensure that vehicles leaving site do not leave mud on the road.

Noise will be generated from delivery vehicles and from concreting operations (vibrating concrete pokers etc). Noise hoarding will be erected around noisy equipment/activities where necessary. Effective management of noise on site will consist of the following measures:

- Ensure plant and equipment have properly operating silencers / mufflers.
- Do not leave plant and other vehicles / machinery running needlessly. This causes unnecessary pollution.
- Consider the location of noisy plant in order to minimise nuisance to nearby houses, motorists, and wildlife.

5.4 *Design Rationale – Landscape Architecture*, prepared by DFLA Landscape Architects

The proposed landscape strategy has been formulated by the entire design team and client in order to integrate residential amenity, civil engineering, and ecological considerations. The landscape design facilitates circulation, seating, bicycle parking, fire tender access and at the same time ensures abundance of vegetation and flexibility of use and provides opportunities for passive and active recreation and visual amenity.

- The existing vegetation along the southern and eastern site boundaries is proposed to be retained. In addition, substantial tree planting is proposed as part of the new development, to improve the proportion of native species on site and to build on the existing character of the area.
- Tree species are selected for longevity, suitability to local soil conditions and microclimate, biodiversity (native species) and suitability for proximity to residential buildings. Proposed tree sizes range from semi-mature (35-40cm girth) specimen trees to multi-stems.
- Low planting is utilised to create and reinforce sub-spaces within the larger landscape; for visual screening, defensible space, visual interest, ecological purposes and to guide or direct pedestrian's movement. The low planting is conceived as subtle layering of greens within the open spaces. The planting is layered as follows; lowest - bulb planting, groundcover planting, highest - clipped hedge planting.
- The landscape strategy incorporates the full range of functions required by the proposed development. These include circulation, parking, bicycle parking, access for delivery and emergency vehicles and sustainable drainage systems. The surface water drainage strategy has been designed by the engineers to slow down run-off and retain stormwater on site. The choice of landscape materials reflects this strategy with porous/permeable products used where possible.
- The selection of hard landscape materials is determined by function but also to provide a cohesive palette of materials across the site. The open spaces are proposed to incorporate several different hard landscape finishes to delineate the different spaces and recreational zones. The materials and furniture in these locations are chosen to create an intimate environment and encourage communal activities. Materials are chosen for permeability, durability, but where practical, are proposed to be constructed in a way which is sensitively integrated with lawn and soft landscape, in order to minimise the impact of hard landscape surfaces.

5.5 The *Planning Statement* dated September 2023, prepared by The Planning Partnership

The primarily residentially zoned subject site, while acknowledging the public open space amenity lands in the south, is considered an infill 'greenfield site' which is suitable for development, bordered by hedgerows located along the southern and eastern edge of the site. To the north and northwest of the site, the area is characterised by extensive commercial uses.

The surrounding built environment is characterised by greenfield sites, residential developments and industrial/ commercial developments, a development pattern is emerging that supports the different industries that can be located to the north of Dublin City, the result of this is an increased demand for housing.

In recent times, there has been much more focus on core policies for support of increases in residential developments. *Fingal Development Plan 2023-2029* has established that all zoned lands including the subject site are serviced and located alongside existing or planned public transport routes. Fingal County Council also aims to continue to pursue the goals of the consolidation of Dublin City through the compact development of the Dublin City and suburbs area within Fingal. It has been stated that one of the roles of Swords is to accommodate 20% of the phased population growth targeted in the principal city or suburban area to be accommodated in the wider metropolitan area.

It is expected that the working population in Fingal will increase with an additional 18,612 people by 2029, with forecasted local employment availability of 13,090 between 2020 and 2029. In order to cater for this economic expansion, residential infrastructure is to be in place to cater for such projected demands.

The site which is the focus for delivery of the new Residential Development in Holywell, is primarily subject to *RS – Residential* land use zoning designation in terms of the *Fingal Development Plan 2023-2029*, the stated objective of which is to*: " Provide for residential development and protect and improve residential amenity".*

As illustrated within Figure 1.2 above, and Figure 5.1 below, the character of this area is a mixture of residential, commercial, open space and greenfield in nature.

The most southern tip/part of the subject site is subject to *OS – Open Space* land use zoning designation in terms of the *Fingal Development Plan 2023-2029*, the stated objective of which is to*: " Preserve and provide for open space and recreational amenities".*

No residential construction is proposed on this small part of the site, being physically severed from the new Residential Development by the existing hedgerow vegetation and thereby integrated within the overall open space features of the existing Holywell Residential developed area.

Statement of Consistency – National Planning Framework: The development is presented as an attractive, liveable, safe, and well-designed extension of an expanding residential neighbourhood on a primarily residentially zoned infill opportunity site, while acknowledging the public open space amenity lands in the south. It is respectfully presented to be in accordance with National Policy Objectives of achieving a significant proportion

of future urban development in existing towns and as allowing for an increase in residential density which will build the critical mass of population growth as to support the projected expansion of Swords.

Statement of Consistency – RSES: The residential development presented is consistent with the provisions of Sword's role in the *Regional Spatial and Economic Strategy for the Eastern and Midland Regional Area* in providing for high quality residential development and will provide for the population growth, and critical mass required, to drive economic development and a sustainable economy, while making the best us of under-utilised primarily residentially zoned infill lands and of economic investment in critical infrastructure to date.

Figure 5.1: Land Use Zoning Designation of the Subject Site and the Surrounding Area

Source: *Fingal Development Plan 2023-2029*, extracted, reproduced and annotated under ESRI ArcGIS and OSI Licence by The Planning Partnership October 2023

Statement of Consistency – County Policy (*Fingal Development Plan 2023-2029*): The presented development will provide a greater variety and mix of available residential units proximate to the existing and expanding residential neighbourhoods, which can be supported due to the proximity of active travel options and public transport such as bus services and the planned MetroLink. Accessibility to a range of community infrastructure, employment opportunities, and educational institutes benefits and supports the presented development.

Statement of Consistency – Ministerial Guidelines 19: The presented development is consistent with the policies outlined for large towns and cities in the *Guidelines for Planning Authorities on Sustainable Urban Development in Urban Areas 2009*. As well as being plan-led, the presented development contributes to the densification of the site and lands in a manner intended and which is envisaged by the Local Authority in Fingal.

Statement of Consistency – *Housing for All*: The presented scheme presents an opportunity to increase housing supply within the confines of the existing town on an infill greenfield site, appropriately serviced by existing road, transport and services infrastructure. All of these can be activated to assist in increasing new housing supply.

Statement of Consistency - *Urban Development and Building Heights – Guidelines for Planning Authorities*: The three pavilion blocks present Block A to the west at five storeys, the central Block B at 6 storeys, and Block C to the east is 4 storeys. This distribution of height and mass supports the articulation of the individual pavilions (thereby avoiding the perception of one large mass), appropriately scaled in keeping with the distance between them and the existing neighbouring residences. The presented scheme is in compliance with the guidelines that have been set out and presents an opportunity to fulfil the objectives that have been outlined within the Guidelines above in relation to increasing building heights and density in areas that are appropriate. As a result of this it will be possible for it to remain consistent with national statutory guidance. The presented Residential Development offers an opportunity to accommodate projected population increases in Fingal through the implementation and use of height and density with a minimal impact on the surrounding environment and residential amenity.

Statement of Consistency – *Sustainable Urban Housing: Design Standards for New Apartments (2022)*: The presented scheme demonstrates that it is in compliance and support of the goals and the development criteria that has been outlined in the guidance document above through careful design and adherence. By developing to the aforementioned standards, it will allow for projected areas of expansion to be fulfilled as well as population growth and demographic trends to be accounted for to a manner that is in line with proper planning and sustainable development. The result of this will be the delivery of a series of high-quality residential units that are attractive in an area that is accessible and has been projected to expand.

Principle of Development Acceptable – Plan Led and Policy Consistent: The presented development is consistent with the zoning objectives for the subject site as discussed in the above sections as well as being in alignment with local and national planning policy. The presented use of this zoned land is primarily for residential development, with the most southern tip/part zoned open space and physically severed from the new Residential Development by the existing hedgerow vegetation and thereby integrated within the overall open space features of the existing Holywell Residential developed area. The typology of the residential units presented reflects the needs of the area. The presented development fully accords with the land use categories as set out by the *Fingal Development Plan 2023-2029*, and as such supports the rationale for the application as being 'Plan-Led' and as presented in terms of consistency herein.

Sustainable Neighbourhoods: The presented density of the subject application represents an efficient and sustainable use of serviced infill zoned lands, primarily residential while acknowledging the public open space amenity lands in the south, and would be in keeping the proper planning and sustainable development of the area.

Having regard to the *Fingal Development Plan 2023-2029* and the development of a Residential Development as presented for the Holywell, Swords, site primarily subject to the *RS – Residential* zoning designation confirming *inter alia* that a *Residential Development* is 'Permitted in Principle', whilst acknowledging the *OS – Open Space* zoned public open space amenity lands in the south, Statutory Guidelines for Planning Authorities on residential development in response to *Project Ireland 2040*, National Policy Objectives contained within the *National Planning Framework*, as well as the availability of public services, amenities and facilities, it is considered that the presented development of a new residential development at a site in Holywell, Swords, will enhance both the character and amenity of the area and provide much needed housing to satisfy plans for local expansion and future housing targets.

Accordingly, the presented development integrates successfully within its receiving environment and neighbouring sites, is not detrimental to the visual or landscape amenities of the area, does not seriously injure the residential amenities of property in the vicinity, will not adversely impact on the cultural and build heritage of the area, is not prejudicial to public health and does not interfere with the existing land uses in the area. The presented development would, therefore, be in accordance with the proper planning and sustainable development of the area while integrating within the current Swords built environment.

5.6 *Ecological Impact Assessment (EcIA) for proposed Residential Development at Holywell, Swords, Co. Dublin*, dated 20th October 2023, prepared by Altemar Marine & Environmental Consultancy

Habitats, Flora and Avian Ecology field surveys were carried out in August and September 2023, with a bat survey in September 2023.

The potential Zone of Influence of the construction phase of the project in the absence of mitigation was deemed to be within the site outline and, out of an abundance of caution, nearby sensitive receptors including the River Gaybrook.

However, due to the self-contained nature and limited temporal/ geographical scale of the project, within a suburban/agricultural environment with set boundaries, in addition to compliance requirements in relation to SUDS, Water Pollution Acts and on site discharges, it is considered that the impacts of the proposed works, following mitigation, would not extend beyond site outline, with the exception of mammal and avian activity where the proposed site may form part of a larger territorial range. The project would also involve reprofiling, excavations and construction, which may impact beyond the site through noise, dust, light and surface water impacts. Standard but robust construction phase controls need to be implemented to limit the potential impact of the proposed development into the surrounding environment.

The majority of the site consisted of GS2 - Dry meadows and grassy verges – habitat. This habitat is largely unsuitable as foraging grounds for significant numbers of SCI from nearby SPAs, such as Brent geese, who typically prefer well managed grassland.

- No protected habitats were noted on site.
- No pond and pools were found onsite.
- No rare or plant species of conservation value were noted during the field assessment.
- No rare or threatened plant species were recorded within the proposed development site.
- No invasive plant species were noted on site.
- No mammal of conservation importance was noted on site.
- No rare or threatened terrestrial faunal species were recorded within the proposed site.
- No evidence of the resting or breeding places of badgers (*Meles meles*) was noted on site during the in season faunal assessment. Pathways through the hedges and shrubs were noted on this sight. Although no living areas of terrestrial animals were sighted, this site is likely used for foraging and a wildlife corridor.
- Bat foraging was noted across the site by one species of bat, the Lesser Noctule (*Nyctalus leisleri*).
- Foraging activity was noted along the southern hedgerow.
- Due to the lack of any watercourse within the site boundary, and the lack of direct hydrological pathway to a watercourse, there is little potential for significant downstream impacts on biodiversity from silt or petrochemicals.
- No species of biodiversity and/or species of interest and conservation importance were noted within the site boundaries.

The overall development of the site is likely to have direct negative impacts upon the existing habitats, fauna and flora. Direct negative effects will be manifested in terms of the removal of a substantial portion of the site's internal habitats. The removal of these habitats will result in a loss of species and habitats of low biodiversity importance. However, the removal of hedgerows will result in the loss of nesting foraging habitat for bird species.

Once constructed all onsite drainage will be connected to separate foul and surface water systems. Surface water runoff will comply with SUDS and discharge to the existing public surface water network located to the southeast of the site. The biodiversity value of the site would be expected to improve as the landscaping matures. It would be expected that the ecological impacts in the long term would be positive once landscaping has established.

The construction and operational mitigation proposed for the development satisfactorily addresses the mitigation of potential impacts on terrestrial and aquatic biodiversity and nationally designated conservation sites through the application of the standard construction and operational phase controls as outlined above. In particular, mitigation measures to ensure compliance with Water Pollution Acts and prevent silt and pollution entering the existing surface water concrete pipe and downstream watercourses will satisfactorily address the potential impacts on downstream biodiversity.

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.

The construction and operational mitigation proposed for the development satisfactorily addresses the mitigation of potential effects on the terrestrial, mammalian, avian and aquatic sensitive receptors through the application of the standard construction and operational phase controls outlined in this report. No significant effects on biodiversity are likely. Residual effects on biodiversity are considered to be: Slight adverse / site / Negative Impact / Not significant / short term.

5.7 *Appropriate Assessment Screening for proposed Residential Development at Holywell, Swords, Co. Dublin*, dated 20th October 2023, prepared by Altemar Marine & Environmental Consultancy

The AA screening assessment undertaken was a desk-based study but was informed by ecological surveys undertaken as outlined above.

There is an indirect hydrological connection to marine-based Natura 2000 sites via the proposed foul and surface water drainage strategy. Foul wastewater will be directed to an existing public foul network. Foul wastewater will ultimately be treated along this public network. After attenuation onsite, surface water drainage will be directed to an existing 1200mm dia. public surface water drainage pipe located to the south-east of the subject site. This network is located within the River Gaybrook catchment, a watercourse that ultimately discharges to the marine environment at Malahide Estuary.

The Zone of Influence of the proposed project would be seen to be restricted to the site outline, with potential for minor localised noise and surface water impacts during construction which do not extend significantly beyond the site outline nor are they likely to have any significant effects on any European sites.

Despite a lack of direct hydrological connection to European Sites, but in the interest of carrying out a thorough assessment in line with both the Habitats Directive, and the precautionary principle, the area of assessment was expanded beyond the Zone of Influence to include designated sites within 15km of the proposed development site, and sites beyond 15km with the potential for a hydrological connection. This was done in the interest of ensuring that any pathways, however indirect or remote, were taken into account. The qualifying interests, and the potential impact of the proposed development on each European site and qualifying interest, are screened out.

No potential impacts are foreseen on European sites beyond 15km as there is no direct or indirect pathways to these sites.

The proposed development site is located within suburban environment with the nearest European sites that of Malahide Estuary SAC & SPA (1.9 km). There is no direct hydrological pathway to any European Sites.

There is an indirect hydrological connection to marine-based Natura 2000 sites via the proposed foul and surface water drainage strategy. Foul wastewater will be directed to an existing public foul network. Foul wastewater will ultimately be treated along this public network.

After attenuation onsite, surface water drainage will be directed to an existing 1200mm dia. public surface water drainage pipe located to the south-east of the subject site. This network is located within the River Gaybrook catchment, a watercourse that ultimately discharges to the marine environment at Malahide Estuary.

However, given the minimum distance to European Sites within Malahide Estuary along this pathway (1.9 km), the scale of the proposed development, any silt or pollutants that may enter the Gaybrook Stream will settle, be dispersed, or diluted within the marine environment in the Irish Sea and will not impact on this downstream European Sites.

In the absence of mitigation, no significant effects on European sites are likely. No specific mitigation is required to prevent impacts on European sites.

Having taken into consideration foul and surface water drainage from the proposed development, the distance between the proposed development to designated conservation sites, lack of direct hydrological pathway or biodiversity corridor link to conservation sites, and the dilution effect with other effluent and surface runoff, it is concluded that the proposed development would not give rise to any significant effects to designated sites.

The construction and operation of the proposed development will not impact on the conservation objectives of qualifying interests of European sites.

On the basis of the content of AA screening assessment undertaken, the competent authority is enabled to conduct a Stage 1 Screening for Appropriate Assessment and consider whether, in view of best scientific knowledge and in view of the conservation objectives of the relevant European sites, the Proposed Development, individually or in combination with other plans or projects is likely to have a significant effect on any European site.

6.0 EIA SCREENING EXERCISE

6.1 Methodology

The project type, scale, nature and location are firstly assessed against the targeted developments necessarily requiring EIA as laid out in Annex I and Annex II of the EIA Directive and as respectively referred and logically transposed within, *Schedule 5, Parts 1 and 2* of the *Planning and Development Regulations 2001* (as amended).

If the project does not fall within any of the mandatory classes listed this is necessarily established by reference to the above Annex and Schedules herein and referred and confirmed under 6.2 Mandatory EIA Thresholds below.

Following same and to further determine and 'screen out' the requirement for a 'non-mandatory sub-threshold EIAR' the screening exercise is undertaken set against Schedules 7 and 7A of the *Planning and Development Regulations 2001* (as amended) and presented under 6.3 Sub-Threshold Considerations / Screening Exercise / Potential of Impacts, onwards below.

6.2 Mandatory EIA Thresholds

The *Planning and Development Act 2000* (as amended) (Section 172) informs the requirement for an environmental impact statement:

> ***172.***—*(1) An environmental impact assessment shall be carried out by the planning authority or the Board, as the case may be, in respect of an application for consent for proposed development where either—*
>
> *(a) the proposed development would be of a class specified in—*
>
> *(i)* ***Part 1 of Schedule 5*** *of the Planning and Development Regulations 2001, and either—*
>
> *(I) such development would equal or exceed, as the case may be, any relevant quantity, area or other limit specified in that Part, or*
>
> *(II) no quantity, area or other limit is specified in that Part in respect of the development concerned,*
>
> *or*
>
> *(ii)* ***Part 2 of Schedule 5*** *of the Planning and Development Regulations 2001and either—*
>
> *(I) such development would equal or exceed, as the case may be, any relevant quantity, area or other limit specified in that Part, or*
>
> *(II) no quantity, area or other limit is specified in that Part in respect of the development concerned,*
>
> *or*
>
> *(b) (i) the proposed development would be of a class specified in Part 2 of Schedule 5 of the Planning and Development Regulations 2001 but does not equal or exceed, as the case may be, the relevant quantity, area or other limit specified in that Part, and*
>
> *(ii) it is concluded, determined or decided, as the case may be, that the proposed development is likely to have a significant effect on the environment.*

Local authority own development - Section 179 of the *Planning and Development Act 2000* (as amended) refers:

> ***179.***— *(1) (a) The Minister may prescribe a development or a class of development for the purposes of this section where he or she is of the opinion that by reason of the likely size, nature or effect on the surroundings of such development or class of development there should, in relation to any such development or development belonging to such class of development, be compliance with the provisions of this section and regulations under this section.*
>
> *(b) Where a local authority that is a planning authority proposes to carry out development, or development belonging to a class of development prescribed under paragraph (a) (hereafter in this section referred to as "proposed development") it shall in relation to the proposed development comply with this section and any regulations under this section.*
>
> *(d) This section shall also apply to proposed development which is carried out within the functional area of a local authority which is a planning authority, on behalf of, or in partnership with the local authority, pursuant to a contract with the local authority.*
>
> *(3) (b) A report prepared in accordance with paragraph (a) shall—*

(i) describe the nature and extent of the proposed development and the principal features thereof, and shall include an appropriate plan of the development and appropriate map of the relevant area,

(ii) evaluate whether or not the proposed development would be consistent with the proper planning and sustainable development of the area to which the development relates, having regard to the provisions of the development plan and giving the reasons and the considerations for the evaluation,

(iia) include the screening determination on why an environmental impact assessment is not required and specify the features, if any, of the proposed development and the measures, if any, envisaged to avoid or prevent what might have otherwise been significant adverse effects on the environment of the development,

Furthermore, as the proposed scheme is presented as a sub-threshold Local Authority Own Development Article 120 of the *Planning and Development Regulations 2001* (as amended) refers, as follows:

***120.** (1) (a) Where a local authority proposes to carry out a subthreshold development, the authority shall carry out a preliminary examination of, at the least, the nature, size or location of the development.*

(b) Where the local authority concludes, based on such preliminary examination, that—

(i) there is no real likelihood of significant effects on the environment arising from the proposed development, it shall conclude that an EIA is not required,

(ii) there is significant and realistic doubt in regard to the likelihood of significant effects on the environment arising from the proposed development, it shall prepare, or cause to be prepared, the information specified in Schedule 7A for the purposes of a screening determination, or

(iii)there is a real likelihood of significant effects on the environment arising from the proposed development, it shall—

(I) conclude that the development would be likely to have such effects, and

(II) prepare, or cause to be prepared, an EIAR in respect of the development.

Schedule 5 of the *Planning and Development Regulations 2001* (as amended) details the prescribed classes of development which are subject to Environmental Impact Assessment. Those listed in Part 1 of Schedule 5 are automatically subject to Environmental Impact Assessment. Those listed in Part 2 of Schedule 5 are also likely to have significant environmental effects based on the nature and size of the development set out by threshold criteria.

Development not listed under Schedule 5 of the *Planning and Development Regulations 2001* (as amended), is not subject to any Environmental Impact Assessment in terms of Pat X of the *Planning and Development Act 2000* (as amended).

Development similar to that as proposed as part of the development, i.e. the presented 57 no. unit Residential Development at a site of approximately 0.77 ha located in the Townland of Crowcastle, Holywell, Swords, is **not** listed in Part 1 of Schedule 5 of the *Planning and Development Regulations 2001* (as amended), and as such Part 1 is not relevant in this instance.

The only reference to the provision of urban development is found under Part 2, Class 10 Infrastructure Projects and where the relevant quantity to be assessed would involve the construction of more than 500 dwelling units, or development of 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 area and 20 hectares elsewhere.

The presented 57 no. unit Residential Development at Holywell, Swords, does not fall within the assigned quantum's as detailed below.

10. Infrastructure projects

(a) Industrial estate development projects, where the area would exceed 15 hectares.

(b) (i) Construction of more than 500 dwelling units.

(ii) Construction of a car-park providing more than 400 spaces, other than a car-park provided as part of, and incidental to the primary purpose of, a development.

(iii) Construction of a shopping centre with a gross floor space exceeding 10,000 square metres.

(iv) ***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 area and 20 hectares elsewhere.*

(In this paragraph, "business district" means a district within a city or town in which the predominant land use is retail or commercial use.)

[Our Emphasis]

The presented 57 no. unit Residential Development at Holywell, Swords, does not comprise 500 dwelling units or more.

In relation to Urban Development under Infrastructure Projects, the proposed development does not involve an area in excess of 10 ha in a built-up area, or 20 ha elsewhere, and the presented 57 no. unit Residential Development at Holywell, Swords, site is approximately 0.77 ha in extent, and is considered sub-threshold under Class 10 (b) (iv), Part 2, of Schedule 5 of the *Planning and Development Regulations 2001 (as amended)*.

With reference to Urban development within a business district within Class 10(b)(iv.), it is important to refer to the definition of business district and in this sense the subject site would not be captured by the corresponding *"Central Business District - CBD"* or *"Town Centre"* definition intended to be accrued in this instance.

Furthermore, the threshold for urban development, which in this instance could include the presented 57 no. unit Residential Development at Holywell, Swords, is clearly stated at a level of 2 hectare or more, i.e. an area greater than 2 hectares.

Development similar to that as presented, i.e. 57 no. unit Residential Development at Holywell, Swords, is **not** listed in Part 2 of Schedule 5 of the *Planning and Development Regulations 2001* (as amended), and as such Part 2 is not relevant in this instance.

Development similar to that as presented as part of the development, i.e. 57 no. unit Residential Development at Holywell, Swords, is **not** listed in Part 1 or Part 2 of Schedule 5 of the *Planning and Development Regulations 2001* (as amended), and as such the requirement for Environmental Impact Assessment, or even Screening for Environmental Impact Assessment, does **not** apply in this instance. It is thus interpreted that the presented 57 no. unit Residential Development at Holywell, Swords, is therefor not subject to any Environmental Impact Assessment in terms of Pat X of the *Planning and Development Act 2000* (as amended).

6.3 Sub-Threshold Considerations / Screening Exercise / Potential of Impacts

Notwithstanding, the confirmation that the project proposals are sub-threshold, the *EIA Guidelines* state:

> *For all sub-threshold developments listed in Schedule 5 Part 2, where no EIAR is submitted or EIA determination requested, a screening determination is required to be undertaken by the competent authority unless, on preliminary examination it can be concluded that there is no real likelihood of significant effects on the environment. (Para 3.4)*
>
> *Criteria to determine whether projects by virtue, inter alia, of their nature, size or location should be subject to EIA, are set out in Schedule 7 to the 2001 Regulations, as amended (Annex III of the 2014 Directive); Annex III is amended from the 2011 Directive. The determination made by the competent authority must include reasons with reference to Schedule 7 criteria and make reference to any mitigation features or design factors influential to the making of the determination. Particular attention should be given to potential significant impacts on sensitive areas (e.g. areas identified as important to nature conservation and/or areas of particular archaeological interest in the relevant Development Plan), and also to cumulative effects with relevant existing and/or approved projects. (Para 3.12)*

The Screening Exercise presented herein below represents a combination of the Schedule 7 Criteria listed in the *Planning and Development Regulations 2001* (as amended) and incorporating the EU EIA Screening Guidelines as referred under the weblink presented below.

Screening Checklist (europa.eu)

In effect, the screening considers the 1. *Characteristics of the Proposed Development*, 2. the *Location of Proposed Development* and 3. the resulting *Types and Characteristics of Potential Impacts*.

Table 5.1: Screening Checklist

SCHEDULE 7 - CRITERIA FOR DETERMINING WHETHER DEVELOPMENT LISTED IN PART 2 OF SCHEDULE 5 SHOULD BE SUBJECT TO AN ENVIRONMENTAL IMPACT ASSESSMENT			
1. Characteristics of the Proposed Development			
Question considered		**Subject of Environmental Impact** Yes / No? Briefly describe	**3. Types and Characteristics of Potential Impacts** Yes / No – Why
1.	Is the scale, size and design of the proposed development significant?	**No:** As described, the presented development is a Residential Development (5,189 sq m Gross Floor Space) arranged over 3 no. buildings ranging in height from 4 to 6 storeys, consisting of no. 57 no. residential units (20 no. 1-bedroom apartments, 29 no. 2-bedroom apartments, and 8 no. 3-bedroom apartments), ancillary infrastructure and all associated site development works, at a site of approximately 0.77 ha located in the Townland of Crowcastle, Holywell, Swords, Co. Dublin. The presented development does not fall within the assigned classes or quantum of development that require EIA set out in Parts 1 and 2 of Schedule 5 of the *Planning and Development Regulations 2001* (as amended).	**No:** The likely impact of the proposed development is the provision of an adequate supply of housing in keeping and complementing neighbouring development. The development as presented, i.e. 57 no. unit Residential Development at Holywell, Swords, is to occur on a site considered an infill 'greenfield site' which is primarily subject to *RS – Residential* land use zoning designation in terms of the *Fingal Development Plan 2023-2029*. The most southern tip/part of the subject site is subject to *OS – Open Space* land use zoning designation in terms of the *Fingal Development Plan 2023-2029*, the stated objective of which is to*: "Preserve and provide for open space and recreational amenities".* No residential construction is proposed on this small part of the site, being physically severed from the new Residential Development by the existing hedgerow vegetation and thereby integrated within the overall open space features of the existing Holywell Residential developed area. Acknowledging the associated details as outlined in specialist reports assessing the presented Residential Development at Holywell, Swords, the proposed development is considered to be **Positive Slight Effects** which will result in **Likely Long-term Residual Effects** and would not raise issues of Environmental Impact.
2.	Is there potential for cumulative impacts with other existing or planned development locally?	**No:** The scale of the development as presented, i.e. 57 no. unit Residential Development at Holywell, Swords, within the subject site of 0.77 ha, is limited to an infill 'greenfield site'. As outlined within the AA Screening undertaken, the Zone of Influence of the presented project would be seen to be restricted to the site outline. Acknowledging the suitable *RS – Residential* zoning applied to the part of the subject site in terms of the *Fingal Development Plan 2023-2029* on which the new Residential Development is to be located, the resultant quantum of development would not exceed accepted thresholds and development would not raise issues of Environmental Impact.	**No:** The presented development presents a better use of existing residentially zoned infill 'greenfield site', and complement the provision of housing supply serving the local area. The effective utilisation of the serviced primarily residentially zoned infill 'greenfield site' on which the new Residential Development is to be located, together with addition to the supply of housing in keeping and complementing neighbouring development, while respecting the character and sensitivity of the existing landscape through the retention and protection of existing hedgerows along the southern and eastern site boundaries, complemented with substantial tree planting in the landscape proposals to improve the proportion of native species on site and to build on the existing character of the area, allow for positive impacts respecting the character and sensitivity of the existing *RS – Residential* land use zoning designation. No residential construction is proposed on a small part of the site zoned *OS – Open Space* in the south, being physically severed from the new Residential Development by the existing hedgerow vegetation and thereby integrating within the overall open space features of the existing Holywell Residential developed area. The development would not raise issues of Environmental Impact. The cumulative impacts are considered to be **Positive Slight Effects** which will result in **Likely Long-term Residual Effects**.

Question considered		Subject of Environmental Impact Yes / No? Briefly describe	3. Types and Characteristics of Potential Impacts Yes / No – Why
3.	If the development includes demolition works are these considered significant?	**No:** No significant demolition works are proposed. The project would also involve reprofiling, excavations and construction, which may impact beyond the site through noise, dust, light and surface water impacts, with standard construction and operational controls incorporated into the presented development project to minimise the potential negative impacts, and would not raise issues of Environmental Impact.	**No:** There are no resulting environmental impacts from the presented project. Excavations may generate unsuitable fill material which will be transported by tipper lorries back to the site for use in landscaping or transported off site to a licensed waste disposal facility. The proposed development would not raise issues of Environmental Impact as the effective management of waste on site is considered to be **Positive Not significant Effects** which will result in **Likely Brief Residual Effects**.
4.	Does the proposed development represent a good use of existing natural resources (i.e. land, water)?	**No:** The effective utilisation of the serviced primarily residentially zoned infill 'greenfield site', together with addition to the supply of housing only on the lands suitable zoned *RS – Residential* in terms of the *Fingal Development Plan 2023-2029*, is promoted while acknowledging the small part of the site in the south zoned *OS – Open Space*. No residential construction is proposed on the small part of the public open space amenity lands in the south. The development lands are not currently served by a water supply, however there is an existing watermain pipe located at Holywell Distributor Road, immediately to the north of the site. A Pre-Connection Enquiry from Irish Water confirmed that a connection to public water supply infrastructure is feasible without any upgrade works being required The development would not raise issues of Environmental Impact.	**No:** Any potential impacts associated with the proposed development and in combination with other uses locally combine to facilitate the best use of lands and water where infrastructural capacity exists. The effective utilisation of the serviced primarily residentially zoned infill 'greenfield site' while acknowledging the public open space amenity lands on a small part of the site in the south, together with addition to the supply of housing and infrastructure, retention and protection of existing hedgerows along the southern and eastern site boundaries, complemented with substantial tree planting in the landscape proposals, presents a positive long-term impact on the use of land and water at the subject site and surrounds. The proposed development's use of natural resources is considered to be **Positive Slight Effects** which will result in **Likely Long-term Residual Effects**. The development would not raise issues of Environmental Impact.
5.	Will the project produce significant waste during construction, operation or decommissioning?	**No:** The implementation of the project will result in wastes generated from short term construction and civic waste streams emanating from operational activities of the presented 57 no. unit Residential Development at Holywell, Swords. The presented development presents a better use of an existing serviced residentially zoned infill 'greenfield site', seeking to provide additional supply of housing complemented by sub-spaces within the larger landscape realm and does not raise issues of Environmental Impact. The development would not raise issues of Environmental Impact.	**No:** The types and characteristics of the construction and demolition waste streams / impacts are short term, which are manageable and will be dealt with in terms of a final Construction and Environmental Management Plan for Construction as outlined per the *Preliminary Construction & Environmental Waste Management Plan* prepared Roughan & O'Donovan. Best practice construction methodologies and compliance with waste management statutory requirements will reduce waste and ensure that construction waste streams are managed, contained, and transported safely to an Authorised Waste Facility. From an operational perspective, the proposed development will enable better management of the long-term civic waste streams and is considered to be **Positive Slight Effects** which will result in **Likely Long-term Residual Effects**. The development would not raise issues of Environmental Impact.

Question considered		Subject of Environmental Impact Yes / No? Briefly describe	3. Types and Characteristics of Potential Impacts Yes / No – Why
6.	Will the project release pollutants or any hazardous substances to air or receiving waters?	**No:** The presented development presents a better use of an existing serviced primarily residentially zoned infill 'greenfield site', seeking to provide additional supply of housing only on the lands suitable zoned *RS – Residential* and which is complemented by sub-spaces within the larger landscape realm, does not raise issues of Environmental Impact. Acknowledging the small part of the site in the south zoned *OS – Open Space* where no residential construction is proposed, there is an existing drainage ditch located along the southern boundary of the site. However, following a number of site visits and discussions with FCC, the ditch appears to be dry. Flow from the Gaybrook steam is culverted to bypass the subject site. Runoff or surface water that is generated within the site will be discharged to the existing storm water network rather than to the ditch or other open watercourses. Surface water and wastewater systems will be enhanced and connected to existing public services as referred to in the *Engineering Report for Planning* prepared by Roughan & O'Donovan. As such, no threats to air or receiving waters are associated with the presented development is expected. The development would not raise issues of Environmental Impact.	**No:** The characteristics of the presented development as improving and enhancing the surface water network and the 'green' potential of the site will reduce concerns through: • Blue/green roof systems • Permeable paving to all footway and parking bay areas • Detention basin • Flow control devices to limit discharge The SuDS measures outlined suffice to prevent contamination of surface water prior to discharge to public stormwater network. The construction phase will raise risks of short-term minor negative impacts from construction working and risks to receiving waters from construction plant. These will be minimised by best practice in line with the *Preliminary Construction & Environmental Waste Management Plan* prepared Roughan & O'Donovan, and the *Engineering Report for Planning* prepared by Roughan & O'Donovan. The proposed development's release of pollutants or any hazardous substances, is considered to be **Neutral Imperceptible Effects** which will result in **Likely Brief Residual Effects**. The development would not raise issues of Environmental Impact.
7.	Will there be any risks of accidents during construction/operation of project (as might include flood risk)?	**No:** Best practice construction contractor and health and safety in the workplace guidelines will be operated during construction, with associated best practice Construction and Demolition Waste Management Procedures and Construction Management further reducing any risks of accident of potential contamination. The sources consulted as part of this assessment indicate that a portion of the subject site is at risk of flooding in the present day 1 in 1000 year fluvial event, it is therefore within Flood Zone B as defined in the OPW Guidelines. Therefore, the risk of Surface Water flooding at the site is classified as medium and a stage 2 – Initial Surface Water Flood Risk Assessment is required for the development. As per the Strategic Flood Risk Assessment for the *Fingal Development Plan 2023-2029*, the development is to include an appropriate freeboard. As the proposed finished floor level is set at 26.4mOD, the highest water level anticipated from fluvial flooding is 0.27m below the proposed finished floor level. Flood risk management measures incorporated within the design will protect the proposed structures up to the design flood event with an appropriate freeboard. The layout of the proposed building includes minor areas of structures within the floodplain as derived from the FEMFRAM levels. These structures may displace flood waters within the subject lands in extreme events. A Civils 3D surface model was created to overlay the flood level on the site layout to determine the volume of water displaced by the proposed buildings. Based on this and upon a desktop survey of hydraulic and topographic conditions, the site layout design includes for 150m^3 of compensatory storage. Appropriate measures in the form of Sustainable Drainage Systems (SuDS) for the purpose for managing surface water in terms of both flow and quality, have been adopted as part of the development design in line with Fingal Country Council requirements and the GDSDS. In any case, should an extreme storm event occur, the overground attenuation areas will overflow, and surface water is directed away from	**No:** The type and form of development always presents risks during the construction stage due to the drainage network and human error. It may be assessed in this case as moderate short term but not to a degree as to initiate the need for EIA. Any risks of accident of potential contamination are addressed in line with the *Preliminary Construction & Environmental Waste Management Plan* prepared Roughan & O'Donovan, and by best practice Construction Management will further reduce such. There is an existing drainage ditch located along the southern boundary of the site. However, following a number of site visits and discussions with FCC, the ditch appears to be dry. Flow from the Gaybrook steam is culverted to bypass the subject site. Runoff or surface water that is generated within the site will be discharged to the existing storm water network rather than to the ditch or other open watercourses. During construction, surface water from the site be treated in attenuation ponds prior to discharging to the storm water network. The subject site is situated within the catchment of the Gaybrook Stream. The *Initial Site-Specific Flood Risk Assessment* prepared Roughan & O'Donovan details that flood risk management measures incorporated within the design will protect the development up to the design flood event (1 in 1000 year + 20% climate change factor) with an appropriate freeboard and shall ensure flood risk is not increased upstream or downstream of the site. The Rogan & O'Donovan Consulting Engineers' *Initial Site-Specific Flood Risk Assessment* confirms that: *The available sources consulted above indicate that a portion of the proposed development site is liable to flood in the 1 in 1000 year current climate scenario from fluvial sources. Flood risk management measures incorporated within the design will protect the development up to the design flood event (1 in 1000 year + 20%*

		the building to compensatory flood storage landscape areas, thereby ensuring that the buildings do not experience flooding from surface water sources. The development would not raise issues of Environmental Impact.	*climate change factor) with an appropriate freeboard and shall ensure flood risk is not increased upstream or downstream of the site. Details of the proposed compensatory storage measures (~150m³) shall be provided at compliance stage.* The *Engineering Report for Planning* prepared by Roughan & O'Donovan, details that a detailed Flood Risk Assessment has been prepared and that 150 m3 compensatory flood storage will be provided on the site as presented on Roughan & O'Donovan *Surface Water Drainage Layout* Drawing No.: 0030. The proposed development's risks of accidents during construction/operation, is considered to be **Neutral Imperceptible Effects** which will result in **Likely Brief Residual Effects**. The development would not raise issues of Environmental Impact.
8.	Will the project result in social changes, traditional lifestyles, employment etc.?	**No:** The development as presented, i.e. 57 no. unit Residential Development at Holywell, Swords, is to occur on a site considered an infill 'greenfield site' which is primarily subject to *RS – Residential* land use zoning designation in terms of the *Fingal Development Plan 2023-2029,* presenting an opportunity to increase housing supply within the confines of the existing town on an infill greenfield site, appropriately serviced by existing road, transport and services infrastructure. All of these can be activated to assist in increasing new housing supply. The most southern tip/part of the subject site is subject to *OS – Open Space* land use zoning designation in terms of the *Fingal Development Plan 2023-2029.* No residential construction is proposed on this small part of the site, being physically severed from the new Residential Development by the existing hedgerow vegetation and thereby integrated within the overall open space features of the existing Holywell Residential developed area. The development would not raise issues of Environmental Impact.	**No:** The location, scale and nature of the presented development will have benefits for the surrounding residential population, by providing and increase housing supply within the confines of the existing town on lands suitable zoned *RS – Residential*, on which the 57 no. unit Residential Development at Holywell, Swords, is to occur. The presented Residential Development has the long-term positive benefit to increase housing supply within a physical appropriately designed environment that improves the quality of life for future residents and the surrounding residential population, and ultimately broaden the social benefits. No residential construction is proposed on a small part of the site zoned *OS – Open Space* in the south, being physically severed from the new Residential Development by the existing hedgerow vegetation and thereby integrating within the overall open space features of the existing Holywell Residential developed area. In the short term, positive benefits into local communities through providing and increase housing supply while acknowledging the public open space amenity lands in the south, will result in the delivery of sustainable communities. The proposed development's impact on social changes, traditional lifestyles, housing, employment etc., is considered to be **Positive Moderate Effects** which will result in **Likely Long-term Residual Effects**. The development would not raise issues of Environmental Impact.

2. Location of Proposed Development – Sensitivity of Geographical Areas			
Question considered		**Subject of Environmental Impact** Yes / No? Briefly describe	**3. Types and Characteristics of Potential Impacts** Yes / No – Why
9.	Is the proposed project in keeping with the existing and approved land uses locally?	**No:** The site which is the focus for delivery of the presented 57 no. unit Residential Development at Holywell, Swords, is to occur on a site considered an infill 'greenfield site' which is primarily subject to *RS – Residential* zoning designation in terms of the *Fingal Development Plan 2023-2029*, the stated objective of which is to: *"Provide for residential development and protect and improve residential amenity"*. The presented new Residential Development for Holywell, Swords, is permitted in principle on the *RS – Residential* land use zoning designation of the lands at this location. The most southern tip/part of the subject site is subject to *OS – Open Space* land use zoning designation in terms of the *Fingal Development Plan 2023-2029*, the stated objective of which is to*: " Preserve and provide for open space and recreational amenities".* No residential construction is proposed on this small part of the site, being physically severed from the new Residential Development by the existing hedgerow vegetation and thereby integrated within the overall open space features of the existing Holywell Residential developed area. In presenting the proposal on the basis of the first principles, the design and the layout of the scheme (3 no. buildings ranging in height from 4 to 6 storeys) have sought to positively respond to the challenges and character of the surrounding areas, to preserve and enhance residential amenity and connectivity, whilst achieving an appropriate increase in density at this zoned residential infill opportunity site as to reflect both the best use of urban lands whilst respectful of neighbouring amenities and surrounds. The subject site and its surrounding context present a rapidly growing network of business and residential developments. The provision of an adequate supply of housing in keeping and complementing neighbouring development, will not only contribute positively to an enhanced quality of life in the community but will ensure that the growth that does take place is sustainable and healthy. The proposed development has been conceptualised acknowledging its unique infill 'greenfield site' location and is subject to an array of technical and environmental assessments. The proposed development would not raise issues of Environmental Impact.	**No:** The nature and characteristics of the presented development is in keeping with existing and proposed development and do not raise issues of environmental impact other than positive permanent sustainable social interactions, in a design which is respectful of neighbouring amenities and surrounds, quality of life benefits to the surrounding residential population and local community, has the long-term positive benefit to increase housing supply within a physical appropriately designed environment, protected the Natura 2000 environment, whilst achieving an appropriate increase in density at this zoned residential infill opportunity site. The proposed development's impact on the existing, permitted and future intended land uses locally, is considered to be **Positive Moderate Effects** which will result in **Likely Long-term Residual Effects**. The development would not raise issues of Environmental Impact.
10.	Are there any Natura 2000 / EU Designated Sites in proximity or likely affected by the proposals?	**No:** The Stage 1 Appropriate Assessment Screening undertaken by Altemar Marine & Environmental Consultancy, entitled *Appropriate Assessment Screening for proposed Residential Development at Holywell, Swords, Co. Dublin*, dated 20th October 2023, details: • There is an indirect hydrological connection to marine-based Natura 2000 sites via the proposed foul and surface water drainage strategy. • The Zone of Influence of the proposed project would be seen to be restricted to the site outline, with potential for minor localised noise and surface water impacts during	**No:** The type and characteristics of potential impacts could be associated with construction phase and operational phase impacts to receiving waters and potential pathways to Natura sites. Individual elements of the project (either alone or in combination with other projects) likely to give rise to impacts on a Natura 2000 site are: • Wastewater discharges (via Ringsend WWTP). • Surface water discharges (to Malahide Estuary SAC via the River Gaybrook catchment).

		construction which do not extend significantly beyond the site outline nor are they likely to have any significant effects on any European sites. • Despite a lack of direct hydrological connection to European Sites, but in the interest of carrying out a thorough assessment in line with both the Habitats Directive, and the precautionary principle, the area of assessment was expanded beyond the Zone of Influence to include designated sites within 15km of the proposed development site, and sites beyond 15km with the potential for a hydrological connection. The proposed development site is located within suburban environment with the nearest European sites that of Malahide Estuary SAC & SPA (1.9 km). There is no direct hydrological pathway to any European Sites. There is an indirect hydrological connection to marine-based Natura 2000 sites via the proposed foul and surface water drainage strategy. Foul wastewater will be directed to an existing public foul network. Foul wastewater will ultimately be treated along this public network. After attenuation onsite, surface water drainage will be directed to an existing 1200mm dia. public surface water drainage pipe located to the south-east of the subject site. This network is located within the River Gaybrook catchment, a watercourse that ultimately discharges to the marine environment at Malahide Estuary. However, given the minimum distance to European Sites within Malahide Estuary along this pathway (1.9 km), the scale of the proposed development, any silt or pollutants that may enter the Gaybrook Stream will settle, be dispersed, or diluted within the marine environment in the Irish Sea and will not impact on this downstream European Sites. In the absence of mitigation, no significant effects on European sites are likely. No specific mitigation is required to prevent impacts on European sites. Having taken into consideration foul and surface water drainage from the proposed development, the distance between the proposed development to designated conservation sites, lack of direct hydrological pathway or biodiversity corridor link to conservation sites, and the dilution effect with other effluent and surface runoff, it is concluded that the proposed development would not give rise to any significant effects to designated sites. The construction and operation of the proposed development will not impact on the conservation objectives of qualifying interests of European sites. The Stage 1 Appropriate Assessment Screening concludes as follows: *"On the basis of the content of AA screening assessment undertaken, the competent authority is enabled to conduct a Stage 1 Screening for Appropriate Assessment and consider whether, in view of best scientific knowledge and in view of the conservation objectives of the relevant European sites, the Proposed Development, individually or in combination with other plans or projects is likely to have a significant effect on any European site."* The proposed development <u>would not</u> raise issues of Environmental Impact.	Foul wastewater will be connected to an existing public foul sewer network. Any silt or pollutants will be treated along this network. The impacts are likely to be N**eutral Imperceptible Effects** which will result in **Likely Long-term Residual Effects**. The characteristics of the presented development as improving and enhancing the surface water network and the 'green' potential of the site will reduce concerns through: • Blue/green roof systems • Permeable paving to all footway and parking bay areas • Detention basin • Flow control devices to limit discharge The SuDS measures outlined suffice to prevent contamination of surface water prior to discharge to public stormwater network. After attenuation onsite, surface water drainage will be directed to an existing 1200mm dia. public surface water drainage pipe located to the south-east of the subject site, the existing public storm water network, rather than to the dry drainage ditch located along the southern boundary of the site or other open watercourses. This network is located within the River Gaybrook catchment, a watercourse that ultimately discharges to the marine environment at Malahide Estuary. Given the minimum distance to the Natura 2000 / EU Designated site network along the part to Malahide Estuary (1.9 km), the scale of the proposed development, any silt or pollutants that may enter the Gaybrook Stream will settle, be dispersed, or diluted within the marine environment in the Irish Sea and will not impact on the downstream European Sites the Natura 2000 site network. The majority of the site consisted of GS2 - Dry meadows and grassy verges – habitat. This habitat is largely unsuitable as foraging grounds for significant numbers of SCI from nearby SPAs, such as Brent geese, who typically prefer well managed grassland. In the absence of mitigation, no significant impacts on the conservation objectives or qualifying interests of the Natura 2000 / EU Designated site network are likely as a result of this indirect hydrological pathway. The impacts are likely to be **Neutral Imperceptible Effects** which will result in **Likely Long-term Residual Effects**. The development <u>would not</u> raise issues of Environmental Impact.

Question considered		Subject of Environmental Impact Yes / No? Briefly describe	3. Types and Characteristics of Potential Impacts Yes / No – Why
11.	Are there any proximate locally designated conservation sites or areas affected?	**No:** The Stage 1 Appropriate Assessment Screening undertaken by Altemar Marine & Environmental Consultancy, entitled *Appropriate Assessment Screening for proposed Residential Development at Holywell, Swords, Co. Dublin*, dated 20th October 2023, details: • There is an indirect hydrological connection to marine-based Natura 2000 sites via the proposed foul and surface water drainage strategy. • The Zone of Influence of the proposed project would be seen to be restricted to the site outline, with potential for minor localised noise and surface water impacts during construction which do not extend significantly beyond the site outline nor are they likely to have any significant effects on any European sites. • Despite a lack of direct hydrological connection to European Sites, but in the interest of carrying out a thorough assessment in line with both the Habitats Directive, and the precautionary principle, the area of assessment was expanded beyond the Zone of Influence to include designated sites within 15km of the proposed development site, and sites beyond 15km with the potential for a hydrological connection. The majority of the site consisted of GS2 - Dry meadows and grassy verges – habitat. In the absence of mitigation, no significant effects on European sites are likely. No specific mitigation is required to prevent impacts on European sites. The proposed development has been conceptualised acknowledging its unique infill 'greenfield site' location and is subject to an array of technical and environmental assessments. The proposed development would not raise issues of Environmental Impact.	**No:** The Stage 1 Appropriate Assessment Screening confirms that the Zone of Influence of the proposed project would be seen to be restricted to the site outline, with potential for minor localised noise and surface water impacts during construction which do not extend significantly beyond the site outline nor are they likely to have any significant effects on any European sites. The type and characteristics of potential impacts as well as habitats or species on locally designated conservation sites, are considered tenuous and low risk, and with foul and storm water connecting to public services confirmed to have adequate capacity without the requirement for upgrading of infrastructure (Irish Water Pre-connection Enquiry). The GS2 - Dry Meadow habitat is largely unsuitable as foraging grounds for significant numbers of SCI from nearby SPAs, such as Brent geese, who typically prefer well managed grassland. The presented development's impact on locally designated conservation sites or areas, is considered to be **Neutral Not significant Effects** which will result in **Likely Long-term Residual Effects**. The development would not raise issues of Environmental Impact.
12.	Are there any features or areas of high landscape value proximate as could be affected?	**No:** The surrounding built environment can be characterised by greenfield sites, residential developments and industrial/ commercial developments, a development pattern is emerging that supports the different industries that can be located to the north of Dublin City, the result of this is an increased demand for housing. The subject site is considered an infill 'greenfield site' which is subject to *RS – Residential* zoning designation in terms of the *Fingal Development Plan 2023-2029*, the stated objective of which is to: *"Provide for residential development and protect and improve residential amenity"*. The most southern tip/part of the subject site is subject to *OS – Open Space* land use zoning designation in terms of the *Fingal Development Plan 2023-2029*, the stated objective of which is to*: " Preserve and provide for open space and recreational amenities".* No residential construction is proposed on this small part of the site, being physically severed from the new Residential Development by the existing hedgerow vegetation and thereby integrated within the overall open space features of the existing Holywell Residential developed area. To the north and northwest of the site, the area is characterised by extensive commercial uses. The GS2 - Dry Meadow habitat is largely unsuitable as foraging grounds for significant numbers of SCI from nearby SPAs, such as Brent geese, who typically prefer well managed grassland. The existing vegetation along the southern and eastern site boundaries is proposed to be retained. In addition, substantial tree planting is proposed as part of the new development, to improve the proportion of native species on site and to build on the existing character of the area. The presented development is in keeping with the Development Plan objectives set for the area and there are no features or areas of high landscape value proximate that could be affected. The development would not raise issues of Environmental Impact.	**No:** Landscapes are dynamic environments and continuously evolving. Objectives should not attempt to prevent new uses or changes, but rather manage the change ensuring that the past remains visible for future generations. The nature and characteristics of the presented development is in keeping with existing and proposed development and do not raise issues of environmental impact other than positive permanent sustainable social interactions, in a design which is respectful of neighbouring amenities and surrounds, quality of life benefits to the surrounding residential population and local community, has the long-term positive benefit to increase housing supply within a physical appropriately designed environment, protected the Natura 2000 environment, whilst achieving an appropriate increase in density at this zoned residential infill opportunity site. The characteristics of the presented development are of a scale and setting that effectively within its receiving environment, the existing surrounding residential developments, and existing pedestrian and cycle permeability footpath network around the site. The presented 57 no. unit Residential Development at Holywell, Swords, is in keeping with the nature of existing uses within the landscape of the local area and acknowledging the public open space amenity lands in the south, with the design and integration of the buildings minimising the potential loss of residential amenity for surrounding residences. The proposed development's impact on features or areas of features or areas of high landscape value proximate, is considered to be **Neutral Not significant Effects** which will result in **Likely Long-term Residual Effects**. The development would not raise issues of Environmental Impact.

Question considered		Subject of Environmental Impact Yes / No? Briefly describe	3. Types and Characteristics of Potential Impacts Yes / No – Why
13.	Are there any areas proximate of historic, cultural or archaeological significance affected?	**No:** The subject site does not include any Protected Structures, Recorded Monuments, or Recorded Monuments Constraints and neither are there any proximate. The proposed development would not raise issues of Environmental Impact.	**No:** The closest Protected Structure is St. Werburgh's Well, some 0.4km northwest of the development site. The closest Ring-ditch is located some 0.27km northwest of the development site. The presented development's impact on the Protected Structures, Recorded Monuments, or Recorded Monuments Constraints, is considered to be **Neutral Not significant Effects** which will result in **Unlikely Brief Residual Effects**. The development would not raise issues of Environmental Impact.
14.	Is the carrying capacity of the existing available land mass, soil, water and biodiversity affected?	**No:** The development of the primarily suitable *RS – Residential* zoned infill 'greenfield site' for the purposes of the presented 57 no. unit Residential Development with ancillary infrastructure and associated site development works, can be accommodated on the subject lands with no negative effects on the abundance, availability, or regenerative effects of the receiving environment. The most southern tip/part of the subject site is subject to *OS – Open Space* land use zoning designation in terms of the *Fingal Development Plan 2023-2029.* No residential construction is proposed on this small part of the site, being physically severed from the new Residential Development by the existing hedgerow vegetation and thereby integrated within the overall open space features of the existing Holywell Residential developed area. Surface water and wastewater systems will connect to existing public services as referred to in the *Engineering Report for Planning* prepared by Roughan & O'Donovan. The presented development presents a better use of an existing serviced residentially zoned infill 'greenfield site', seeking to provide additional supply of housing complemented by sub-spaces within the larger landscape realm and does not raise issues of Environmental Impact. The existing vegetation along the southern and eastern site boundaries is proposed to be retained. In addition, substantial tree planting is proposed as part of the new development, to improve the proportion of native species on site and to build on the existing character of the area. The Stage 1 Appropriate Assessment Screening undertaken by Altemar Marine & Environmental Consultancy, entitled *Appropriate Assessment Screening for proposed Residential Development at Holywell, Swords, Co. Dublin*, dated 20th October 2023, concludes that no specific mitigation is required to prevent impacts on European sites. The proposed development would not raise issues of Environmental Impact.	**No:** The effective utilisation of the serviced primarily residentially zoned infill 'greenfield site', together with addition to the supply of housing on lands suitable zoned *RS – Residential* in terms of the *Fingal Development Plan 2023-2029*, is promoted while acknowledging the public open space amenity lands in the south. The *Ecological Impact Assessment (EcIA) for proposed Residential Development at Holywell, Swords, Co. Dublin*, dated 20th October 2023, prepared by Altemar Marine & Environmental Consultancy details: • No protected habitats were noted on site. • No pond and pools were found onsite. • No rare or plant species of conservation value were noted during the field assessment. • No rare or threatened plant species were recorded within the proposed development site. • No invasive plant species were noted on site. • No mammal of conservation importance was noted on site. • No rare or threatened terrestrial faunal species were recorded within the proposed site. • No evidence of the resting or breeding places of badgers (*Meles meles*) was noted on site during the in season faunal assessment. Pathways through the hedges and shrubs were noted on this sight. Although no living areas of terrestrial animals were sighted, this site is likely used for foraging and a wildlife corridor. • Bat foraging was noted across the site by one species of bat, the Lesser Noctule (*Nyctalus leisleri*). • Foraging activity was noted along the southern hedgerow. • No species of biodiversity and/or species of interest and conservation importance were noted within the site boundaries. Connection to public water supply infrastructure, as set out in *the Engineering Report for Planning* prepared by Roughan & O'Donovan, is feasible without Irish Water confirming that adequate capacity currently exists without the requirement for upgrading of infrastructure (Irish Water Pre-connection Enquiry). Operationally wastewater will connect to existing public services, as set out in *the Engineering Report for Planning* prepared by Roughan & O'Donovan, with Irish Water confirming that adequate capacity currently exists without the requirement for upgrading of infrastructure (Irish Water Pre-connection Enquiry). The existing landscape through the retention and protection of existing hedgerows along the southern and eastern site boundaries are retained, complemented with substantial tree planting in the landscape proposals to improve the proportion of native species on site and to build on the existing character of the area. The GS2 - Dry Meadow habitat is largely unsuitable as foraging grounds for significant numbers of SCI from nearby SPAs, such as Brent geese, who typically prefer well managed grassland. The proposed development's impact on the carrying capacity of the existing available land mass, soil, water and biodiversity, is considered to be **Positive Slight Effects** which will result in **Likely Long-term Residual Effects**. The development would not raise issues of Environmental Impact.

Question considered		Subject of Environmental Impact Yes / No? Briefly describe	3. Types and Characteristics of Potential Impacts Yes / No – Why
15.	Are any recreational land masses affected by way of removal or access to same?	**No:** The potential for the presented Residential Development to effectively integrate within its receiving environment and neighbouring sites, was identified early in the design process as something that the building design should promote. Whilst acknowledging the provision of an adequate supply of housing in keeping and complementing neighbouring development, the presented development will not only contribute positively to an enhanced quality of life in the community but will ensure that the growth that does take place is sustainable and healthy. The proposed development has been conceptualised acknowledging its unique primarily *RS – Residential* zoned infill 'greenfield site' location and is subject to an array of technical and environmental assessments, while acknowledging the public open space amenity lands in the south. The most southern tip/part of the subject site is subject to *OS – Open Space* land use zoning designation. The development would not raise issues of Environmental Impact.	**No:** The presented Residential Development will function as part of an overall residential urban environment, thereby providing a key supply of housing in keeping and complementing existing surrounding residential developments and the wider catchment. The landscape design presented as part of the Residential Development facilitates circulation, seating, bicycle parking, fire tender access and at the same time ensures abundance of vegetation and flexibility of use and provides opportunities for passive and active recreation and visual amenity. No residential construction is proposed on the most southern tip/part of the subject site acknowledging the public open space amenity of these lands, being physically severed from the new Residential Development by the existing hedgerow vegetation and thereby integrated within the overall open space features of the existing Holywell Residential developed area. The promoted development will this enhance the recreational land masses and does not affect access to same, is considered to be **Positive Moderate Effects** within the **Context** of the overall receiving environment, which will result in **Likely Long-term Residual Effects**. The development would not raise issues of Environmental Impact.
16.	Is the development likely to affect by way of outlook any large, populated areas?	**No:** The surrounding built environment is characterised by individual housing areas delivered by independent landowners, a typical suburban development pattern seen in recent decades within many Irish towns. The provision of an adequate supply of housing in keeping and complementing neighbouring development, will not only contribute positively to an enhanced quality of life in the community but will ensure that the growth that does take place is sustainable and healthy. The existing vegetation along the southern and eastern site boundaries is proposed to be retained. In addition, substantial tree planting is proposed as part of the new development, to improve the proportion of native species on site and to build on the existing character of the area. The development would not raise issues of Environmental Impact.	**No:** Scheme Architects Henchion + Reuter Architects details that three pavilion blocks present Block A to the west at five storeys, the central Block B at 6 storeys, and Block C to the east is 4 storeys and that this distribution of height and mass supports the articulation of the individual pavilions (thereby avoiding the perception of one large mass), appropriately scaled in keeping with the distance between them and the existing neighbouring residences. The presented development does not create any blank gables, with the distribution of the landscaping 'softening' the visual impact of the new buildings. The facades of the buildings have been broken up with large windows and balconies creating an active frontage which improves how the building is received into its environment. The presented scheme presents an opportunity to increase housing supply within the confines of the existing town on an infill greenfield site, appropriately serviced by existing road, transport and services infrastructure. All of these can be activated to assist in increasing new housing supply, thereby enhancing the surrounding populated area by increasing social interactions that improve the quality of life. To further mitigate the visual disruption for neighbours, existing hedgerows along the southern and eastern site boundaries are to be retained. In addition, substantial tree planting is introduced in the landscape proposals to improve the proportion of native species on site and to build on the existing character of the area. The landscape design facilitates circulation, seating, bicycle parking, fire tender access and at the same time ensures abundance of vegetation and flexibility of use and provides opportunities for passive and active recreation and visual amenity, with impact considered to be **Positive Imperceptible Effects**, which will result in **Likely Medium-term Residual Effects**. The development would not raise issues of Environmental Impact.

Question considered		Subject of Environmental Impact Yes / No? Briefly describe	3. Types and Characteristics of Potential Impacts Yes / No – Why
17.	Are any transport routes affected or could the development lead to traffic congestion locally?	**No:** The promoted Residential Development will not affect capacity at existing junctions as could lead to traffic congestion, and will be accessed from the existing access off the Holywell Distributor Road. The development would not raise issues of Environmental Impact.	**No:** The promoted Residential Development provides for extensive pedestrian and cycle permeability enhanced through the existing footpath and cycle network around the site. Walking and cycling are the most efficient modes of travel in terms of use of road-space, and the most sustainable in terms of environmental impacts. Cycle parking facilities have been conveniently located within a secure, easy to use, adequately lit and in a well signposted area. A total of 223 no. bicycle storage spaces are presented (167 no. long term secure storage spaces internally within the residential buildings, and 56 no. short term spaces peppered throughout the presented site). A total of 34 no. vehicle parking spaces are presented (3 no. accessible/disabled parking, 1 no. accessible/disabled EV parking and charging, 7 no. EV parking and charging, and 23 no. traditional vehicle parking). Through the mechanism of enhanced pedestrian and cycle permeability, the flow of vehicles using the local road network will not grow overwhelmingly and it is not anticipated that vehicular access will be negatively affected. The proposed development's impact on transport routes affected or traffic congestion locally, is considered to be **Positive Imperceptible Effects**, which will result in **Likely Medium-term Residual Effects**. The development would not raise issues of Environmental Impact.
18.	Are there any sensitive neighbouring land uses as could be affected by the development?	**No:** The established patterns of development locally will not be deleteriously affected by the design and layout of the presented development as it represents an appropriate residential development on an infill 'greenfield site', appropriately and primarily zoned *RS – Residential* in terms of the *Fingal Development Plan 2023-2029*, with the stated objective to: *"Provide for residential development and protect and improve residential amenity"*. The most southern tip/part of the subject site is subject to *OS – Open Space* land use zoning designation in terms of the *Fingal Development Plan 2023-2029*, the stated objective of which is to*: " Preserve and provide for open space and recreational amenities".* No residential construction is proposed on this small part of the site, being physically severed from the new Residential Development by the existing hedgerow vegetation and thereby integrated within the overall open space features of the existing Holywell Residential developed area. The presented scheme presents an opportunity to increase housing supply within the confines of the existing town on an infill greenfield site, appropriately serviced by existing road, transport and services infrastructure. All of these can be activated to assist in increasing new housing supply while effectively integrating within its receiving environment by acknowledging existing neighbouring residential amenity. The existing vegetation along the southern and eastern site boundaries is proposed to be retained. In addition, substantial tree planting is proposed as part of the new development, to improve the proportion of native species on site and to build on the existing character of the area. The proposed development would not raise issues of Environmental Impact.	**No:** The 57 no. units are considered an appropriate design response presenting a high-quality housing scheme with a range of unit size, increasing the opportunity to access the housing market by providing housing units at a requisite scale and massing, with a permeable layout that allows the area to become more accessible for pedestrians while effectively integrating within its receiving environment by acknowledging existing neighbouring residential amenity and the public open space amenity lands in the south. The impact of the development is mitigated through careful and considerate design protocol. Statutory guidance and precedence set by neighbouring developments has guided the development to be implemented, and the design proposal anticipates the future development by adopting a pavilion typology with a landscape flowing between the pavilion blocks. The three pavilion blocks present Block A to the west at five storeys, the central Block B at 6 storeys, and Block C to the east is 4 storeys. This distribution of height and mass supports the articulation of the individual pavilions (thereby avoiding the perception of one large mass), appropriately scaled in keeping with the distance between them and the existing neighbouring residences, while acknowledging the public open space amenity lands in the south. The presented development does not create any blank gables, with the distribution of the landscaping 'softening' the visual impact of the new buildings. The facades of the buildings have been broken up with large windows and balconies creating an active frontage which improves how the building is received into its environment. The proposed development's impact on sensitive neighbouring land uses, is considered to be **Neutral Imperceptible Effects** which will result in **Likely Long-term Residual Effects** and would not raise issues of Environmental Impact.

6.4 EIA Screening Outcomes

It is concluded that the nature of the proposed development is not considered to have likely significant effects on the environment (direct or indirect).

The presented development is a Residential Development (5,189 sq m Gross Floor Space) arranged over 3 no. buildings ranging in height from 4 to 6 storeys, consisting of no. 57 no. residential units (20 no. 1-bedroom apartments, 29 no. 2-bedroom apartments, and 8 no. 3-bedroom apartments), ancillary infrastructure and all associated site development works, at a site of approximately 0.77 ha located in the Townland of Crowcastle, Holywell, Swords, Co. Dublin. The development as presented is to occur on a site considered an infill 'greenfield site' which is primarily subject to *RS – Residential* land use zoning designation in terms of the *Fingal Development Plan 2023-2029*. The most southern tip/part of the subject site is subject to *OS – Open Space* land use zoning designation in terms of the *Fingal Development Plan 2023-2029*, the stated objective of which is to*: " Preserve and provide for open space and recreational amenities".* No residential construction is proposed on this small part of the site, being physically severed from the new Residential Development by the existing hedgerow vegetation and thereby integrated within the overall open space features of the existing Holywell Residential developed area.

The scale of the presented development, when viewed individually and cumulatively, is considered minor and the proposed development does not fall within the assigned classes or quantum of development that require EIA set out in Parts 1 and 2 of Schedule 5 of the Schedule 5 of the *Planning and Development Regulations 2001* (as amended), while providing additional housing supply in keeping and complementing neighbouring development.

As outlined, the characteristics of the presented development are not of a nature and scale that will give rise to significant effects on the environment by way of its size or design, and is considered to be **Positive Slight Effects** which will result in **Likely Long-term Residual Effects**.

In terms of other environmental sensitivities, e.g. landscapes/sites of historical, cultural or archaeological significance, the proposed development will not give rise to any significant effects, and its impact on features or areas of features or areas of high landscape value proximate, is considered to be **Neutral Not significant Effects** which will result in **Likely Long-term Residual Effects**, and **Neutral Not significant Effects** on historic, cultural or archaeological due to extensive separation distance which will result in **Unlikely Brief Residual Effects**.

From a land use planning perspective, the presented development, being the delivery of a new Residential Development within Holywell, Swords, on an infill 'greenfield site', is envisaged in Development Plan Objectives in the *Fingal Development Plan 2023-2029*, is and will be consistent with the relevant policy provisions of said the *Fingal Development Plan 2023-2029* and is also consistent with the existing pattern of development in the general area acknowledging the public open space amenity lands in the south. The proposed development's impact on the existing and approved land uses locally, is considered to be **Positive Moderate Effects** within the overall landholding **Extent** which will result in **Likely Long-term Residual Effects**.

Acknowledging the suitable *RS – Residential* zoning primarily applied to the subject site and the *OS – Open Space* land use zoning designation on the most southern tip/part of the subject site in terms of the *Fingal Development Plan 2023-2029* for development, the resultant quantum of development would not exceed accepted thresholds while acknowledging the public open space amenity lands in the south. The presented development presents a better use of existing primarily residentially zoned infill 'greenfield site', and complement the provision of housing supply serving the local area. The cumulative impacts are considered to be **Positive Slight Effects** which will result in **Likely Long-term Residual Effects**.

The type of characteristics of the potential impacts are not considered likely to have significant effects on the environment during construction phase. Good construction site practices will be in place to prevent any risk of pollution to the receiving environment. Temporary disturbance in relation to noise levels, dust and traffic disturbance are typical of any construction phase and can appropriately be managed by best practice Construction Management Methodologies and Procedures.

The proposed development's release of pollutants or any hazardous substances, is considered to be **Neutral Imperceptible Effects** which will result in **Likely Brief Residual Effects**. The proposed development's risks of accidents during construction/operation, is considered to be **Neutral Imperceptible Effects** which will result in **Likely Brief Residual Effects**.

Foul wastewater will be connected to an existing public foul sewer network. Any silt or pollutants will be treated along this network. The impacts are likely to be N**eutral Imperceptible Effects** which will result in **Likely Long-term Residual Effects**. From an operational perspective, the proposed development will enable better management of the long-term civic waste streams and is considered to be **Positive Slight Effects** which will result in **Likely Long-term Residual Effects**.

After attenuation onsite, surface water drainage will be directed to an existing 1200mm dia. public surface water drainage pipe located to the south-east of the subject site. This network is located within the River Gaybrook catchment, a watercourse that ultimately discharges to the marine environment at Malahide Estuary. Given the minimum distance to the Natura 2000 / EU Designated site network along the part to Malahide Estuary (1.9 km), the scale of the proposed development, and the fact that there is no requirement to discharge surface water offsite during construction, any silt or pollutants that may enter the Gaybrook Stream will settle, be dispersed, or diluted within the estuarine environment of Malahide Estuary and the marine environment in the Irish Sea and will not impact on the Natura 2000 site network. In the absence of mitigation, no significant impacts on the conservation objectives or qualifying interests of the Natura 2000 / EU Designated site network are likely as a result of this indirect hydrological pathway. The impacts are likely to be **Neutral Imperceptible Effects** which will result in **Likely Long-term Residual Effects**.

The GS2 - Dry Meadow habitat is largely unsuitable as foraging grounds for significant numbers of SCI from nearby SPAs, such as Brent geese, who typically prefer well managed grassland. The type and characteristics of potential impacts as well as habitats or species on locally designated conservation sites, are considered tenuous and low risk, and with foul and storm water connecting to public services confirmed to have adequate capacity without the requirement for upgrading of infrastructure (Irish Water Pre-connection Enquiry). The presented development's impact on locally designated conservation sites or areas, is considered to be **Neutral Not significant Effects** which will result in **Likely Long-term Residual Effects**.

The presented Residential Development at Holywell, Swords, is to occur on a site considered an infill 'greenfield site' which is primarily zoned for residential development, while no residential development will occur on the most southern tip/part of the subject site zoned for open space purposes, being physically severed from the new Residential Development by the existing hedgerow vegetation and thereby integrated within the overall open space features of the existing Holywell Residential developed area. It presents an opportunity to increase housing supply within the confines of the existing town on an infill greenfield site, appropriately serviced by existing road, transport and services infrastructure. All of these can be activated to assist in increasing new housing supply. The proposed development's impact on social changes, traditional lifestyles, housing, employment etc., is considered to be **Positive Moderate Effects** which will result in **Likely Long-term Residual Effects**. The proposed development's impact on the existing, permitted and future intended land uses locally, while acknowledging the public open space amenity lands in the south, is considered to be **Positive Moderate Effects** which will result in **Likely Long-term Residual Effects**.

The presented development site can therefore accommodate the presented Residential Development, being primarily zoned RS – *Residential* and *OS – Open Space* in the most southern tip/part of the subject site in terms of the *Fingal Development Plan 2023-2029* and considered an appropriately serviced infill 'greenfield site', without significant impact and a detailed Environmental Impact Assessment Report (EIAR) is not required in this instance.

Screening for appropriate assessment is a matter for Fingal County Council as Competent Authority. The Stage 1 Appropriate Assessment Screening undertaken by Altemar Marine & Environmental Consultancy, entitled *Appropriate Assessment Screening for proposed Residential Development at Holywell, Swords, Co. Dublin*, dated 20th October 2023, *inter alia* concludes as follows:

- In the absence of mitigation, no significant effects on European sites are likely. No specific mitigation is required to prevent impacts on European sites.
- The construction and operation of the proposed development will not impact on the conservation objectives of qualifying interests of European sites.

8.0 CONCLUSION

The presented development has been reviewed and considered under the terms of the requisite EU Directives, the respective transposition into Irish Legislation via the *Planning and Development Act 2000* (as amended) and *Planning and Development Regulations 2001* (as amended), and the consequential DHPLG, *Guidelines for Planning Authorities on carrying out Environmental Impact Assessment* (August 2018).

It is my professional planning opinion that the categories of development to be determined as requiring EIA as laid out in Annex I and Annex II of the EIA Directive and as respectively referred and logically transposed within, Schedule 5, Parts 1 and 2 of the *Planning and Development Regulations 2001* (as amended), are specific in terms of the likely environmental effects via emissions and outputs as effecting the environment, or are of such a scale and location that they have a consequential impact on a particular and sensitive receiving environment.

The presented 57 no. unit Residential Development at Holywell, Swords, falls significantly below the level of **500 dwelling units or more** threshold for EIA as set out in under Class 10 (b) (i), Part 2, of Schedule 5 of the *Planning and Development Regulations 2001 (as amended).*

The presented 57 no. unit Residential Development at Holywell, Swords, being located within a site area of approximately 0.77 ha in extent, falls significantly below the level of **2 hectare or more** threshold for EIA as set out in under Class 10 (b) (iv), Part 2, of Schedule 5 of the *Planning and Development Regulations 2001 (as amended)*.

In support of same and to definitively determine for the benefit of the competent authority, Fingal County Council as Planning Authority, that the development would not give rise to significant environmental effects, the relevant screening exercise has been undertaken.

The Screening Exercise undertaken as required under Section 179 of the *Planning and Development Act 2000* (as amended), and Article 120 of the *Planning and Development Regulations 2001* (as amended), regarding Local Authority Own Development and as considering the relevant scale of development (sub-threshold), represents the relevant consideration of, the 1. *Characteristics of the Proposed Development*, 2. the *Location of Proposed Development* and 3. the resulting *Types and Characteristics of Potential Impacts*.

The exercise has been informed by the proposals for the presented 57 no. unit Residential Development at Holywell, Swords, as supported by a suite of accompanying documentation by the Design Team as includes, *inter alia*, Architectural and Engineering Drawings, supported by a Planning Statement Report, Architectural Design Report, Engineering Report for Planning, and the Stage 1 Appropriate Assessment Screening Report, and with necessary reference to the *Fingal Development Plan 2023-2029* and available online sources of information regarding specific localised and environmental designations.

Accordingly, it has been found using the requisite professional judgement, as relying on the available information, that no significant negative effects have been found or identified as to cause the requirement for an Environmental Impact Assessment, and whilst undertaking the requisite Screening exercise.

Wessel Vosloo
Principal
The Planning Partnership

Dated: Friday, 20th October 2023

Encl.

Appendix

- *Site Layout Drawings*, prepared by Henchion Reuter Architects.
- *Housing at Holywell Swords, Co. Dublin, Stage #2 Submission to FCC Planning Department Sept 2023 report, prepared by Henchion Reuter Architects*.
- *Engineering and Services Drawings,* prepared by Roughan & O'Donovan.
- *Engineering Report for Planning*, prepared by Roughan & O'Donovan.
- *Initial Site Specific Flood Risk Assessment*, prepared Roughan & O'Donovan.
- *Preliminary Construction & Environmental Management Plan*, prepared Roughan & O'Donovan.
- *Site Landscape Drawings*, prepared by DFLA Landscape Architects.
- *Design Rationale – Landscape Architecture*, prepared by DFLA Landscape Architects.
- *The Planning Statement* dated September 2023, prepared by The Planning Partnership.
- *Ecological Impact Assessment (EcIA) for proposed Residential Development at Holywell, Swords, Co. Dublin, dated 20th October 2023, prepared by Altemar Marine & Environmental Consultancy.*
- *Appropriate Assessment Screening for proposed Residential Development at Holywell, Swords, Co. Dublin, dated 20th October 2023, prepared by Altemar Marine & Environmental Consultancy*.

SITE BOUNDARY
PROPOSED APARTMENT BUILDING
PROPOSED BIN STORE \ TRANSFORMER STATION
ENTRANCE TO THE SITE
ENTRANCE TO THE MAIN LOBBY
ENTRANCE TO THE BICYCLE ROOM
EXISTING HEDGEROW
OVERGROWTH TO BE TRIMMED BACK
EXISTING FENCE
PROPOSED FENCE
FIRE TENDER ACCESS
ELECTRIC CAR CHARGING

Site area = 7 700m^2

GENERAL NOTES

±0.00 = FINISHED GROUND FLOOR LEVEL
= OS +26.4

TO BE READ IN CONJUNCTION WITH ALL TENDER INFORMATION FROM ALL OTHER DESIGN CONSULTANTS.

NOTIFY ARCHITECT OF ANY DISCREPANCIES.

CHECK DIMENSIONS ON SITE.

DO NOT SCALE.

USE FIGURED DIMENSIONS ONLY.

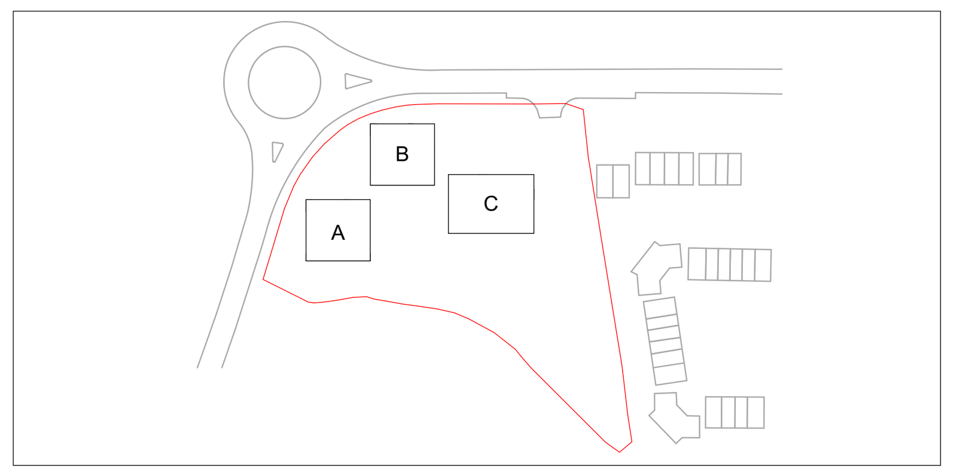
COPYRIGHT RESERVED.

SIX DIGIT CODE IN EACH PRODUCT DESCRIPTION REFERS TO THE RELEVANT SECTION IN THE HRA SPEC.

Structural level	Kitchen type
Finished level	Bathroom type
Structural level	Window type
Finished level	Door type

SURVEY DRAWING

APEX SURVEY TOPOGRAPHICAL SURVEY DRAWING NUMBER 3889 - 31.05.19



No.	Revision	Date	By	Chk'd	App'd

CLIENT: FINGAL COUNTY COUNCIL	
PROJECT: HOLYWELL HOUSING PROJECTS	
DRAWING TITLE: Site Plan	
DRAWING NO.: HHP-HRA-ZZ-XX-DR-A-001-Site	STAGE: PLANNING
SCALE: 1:500 @ A1; 1:1000 @ A3	DRAWING DIMENSIONS: 594 x 841mm; 297 x 420mm
DRAWN: KKP / CHECKED: MH	DATE: 14/09/2023

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www.henchion-reuter.com

- SITE BOUNDARY
- PROPOSED APARTMENT BUILDING
- PROPOSED BIN STORE \ TRANSFORMER STATION
- ENTRANCE TO THE SITE
- ENTRANCE TO THE MAIN LOBBY
- ENTRANCE TO THE BICYCLE ROOM
- EXISTING HEDGEROW
- OVERGROWTH TO BE TRIMMED BACK
- EXISTING FENCE
- PROPOSED FENCE
- FIRE TENDER ACCESS
- ELECTRIC CAR CHARGING

Site area = 7 700m^2

GENERAL NOTES

±0.00 = FINISHED GROUND FLOOR LEVEL
= OS +26.4

TO BE READ IN CONJUNCTION WITH ALL TENDER INFORMATION FROM ALL OTHER DESIGN CONSULTANTS.

NOTIFY ARCHITECT OF ANY DISCREPANCIES.

CHECK DIMENSIONS ON SITE.

DO NOT SCALE.

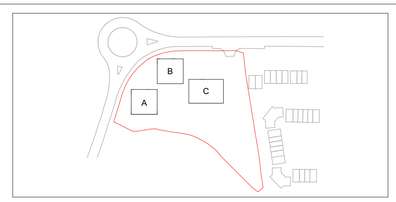
USE FIGURED DIMENSIONS ONLY.

SIX DIGIT CODE IN EACH PRODUCT DESCRIPTION REFERS TO THE RELEVANT SECTION IN THE HRA SPEC.

- Structural level
- Finished level
- Structural level
- Finished level
- (A) Kitchen type
- [A] Bathroom type
- (W.1) Window type
- (D.1) Door type

SURVEY DRAWING

APEX SURVEY TOPOGRAPHICAL SURVEY DRAWING NUMBER 3889 - 31.05.19



No.	Revision	Date	By	Chk'd	App'd

CLIENT
FINGAL COUNTY COUNCIL

PROJECT
HOLYWELL HOUSING PROJECTS

DRAWING TITLE
Site Layout Plan

DRAWING NO.	HHP-HRA-ZZ-XX-DR-A-002-Site
STAGE	PLANNING
SCALE	1:250 @ A1 1:500 @ A3
DRAWING DIMENSIONS	594 x 841mm 297 x 420mm
DRAWN	KKP
CHECKED	MH
DATE	14/09/2023

HRA
Henchion + Reuter Architects
Dublin + Berlin
The Barracks, 76 Irishtown Road, Dublin 4, Ireland
+353 (0)1 6674740
info@henchion-reuter.com
www.henchion-reuter.com

GENERAL NOTES

±0.00 = FINISHED GROUND FLOOR LEVEL
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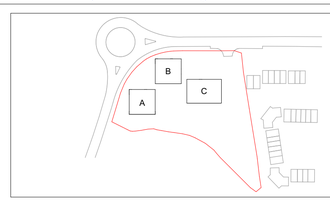
SURVEY DRAWING

APEX SURVEY TOPOGRAPHICAL SURVEY DRAWING NUMBER 3889 - 31.05.19



No.	Revision	Date	By	Chk'd	Appr'd

CLIENT
FINGAL COUNTY COUNCIL

PROJECT
HOLYWELL HOUSING PROJECTS

DRAWING TITLE
Site Plan in the context of the Barryparks & Crowscastle Masterplan

DRAWING NO.
HHP-HRA-ZZ-XX-DR-A-003-Site-Plan

STAGE
PLANNING

SCALE
1:1000 @ A1
1:2000 @ A3

DRAWING DIMENSIONS
594 x 841mm
297 x 420mm

DRAWN
KKP

CHECKED
MH

DATE
14/09/2023

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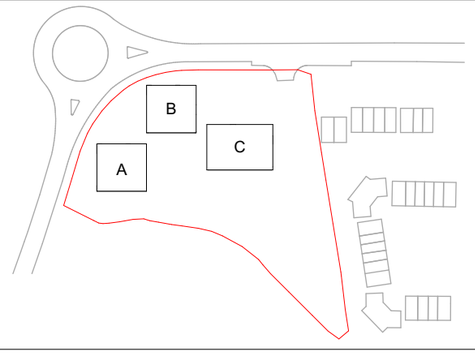
REGISTERED ARCHITECT RIAI
ARCHITECTS ACCREDITED IN CONSERVATION RIAI
RIAI ACCREDITATION RIAI



CLIENT	FINGAL COUNTY COUNCIL		
PROJECT	HOLYWELL HOUSING PROJECTS		
DRAWING TITLE	Aerial view		
DRAWING NO.	HHP-HRA-ZZ-XX-DR-A-004-Aerial_View	STAGE	PLANNING
SCALE	1:1000 @ A3	DRAWING DIMENSIONS	297 x 420mm
DRAWN	KKP	CHECKED	MH
DATE	10/11/2023		

HRA

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HHP-HRA-ZZ-RP-A-001-PLR-P10

Housing at Holywell

SWORDS, Co. DUBLIN

Stage #2 SUBMISSION TO FCC PLANNING DEPARTMENT

SEPT 2023

Prepared by:

Henchion Reuter Architects

1.0 CONTENTS:

1.1 PROJECT DEVELOPMENT:

Henchion Reuter Architects, has been retained by Fingal County Council to lead a multi-disciplinary consultancy team to deliver a residential development consisting of no. 57 units across three different blocks varying in height at a site of approximately 0.77 ha located to the north of Holywell and to the northeast of Airside Business Park.

A previous planning application has been made for residential development on this site (Fingal County Council Reg. Ref. No. F18A/0335) and in pre-planning discussions that took place between consultants and Fingal County Council it was made clear that the proposed development could substantially improve on this previous design.

1.2 PROJECT DEVELOPMENT:

A Pre-Planning Meeting with Fingal County Council on the 16th of June 2023 Clarified the planning and environmental requirements at the site clear, The requirements included issues such as tree and hedgerow retention, development impact on the neighbourhood, the importance of day light and sunlight assessments and the improvement of the SUDs plan set out in previous applications.

The relationship between the candidate site and the ongoing development of the area to the north and northeast of the site was discussed as length. FCC have set out their vision for this territory in the Barryspark and Crowcastle Masterplan. The important of active travel and the opportunity to integrate the development into current ongoing developments in this regard was emphasised. FCC Planning Dept were supportive of the proposed pavilion typology due to the high residential amenity achieved. The preference to avoid ‘stuck-on’ type balconies was clearly expressed and the proposed brick external finish to was deemed appropriate.

1.3 PROJECT TEAM:

Client:
Fingal County Council Housing Department:

For Fingal County Council Architects Department:
Carmel Brennan, Patrick Conway

Architects
Henchion Reuter Architects:
Martin Henchion, Elizabeth Wheeler, Karina Krestinov Priddle

Civil and Structural Engineers:
ROD Ltd
Andrew Thompson. Ben gallery, Nicholas McCann.

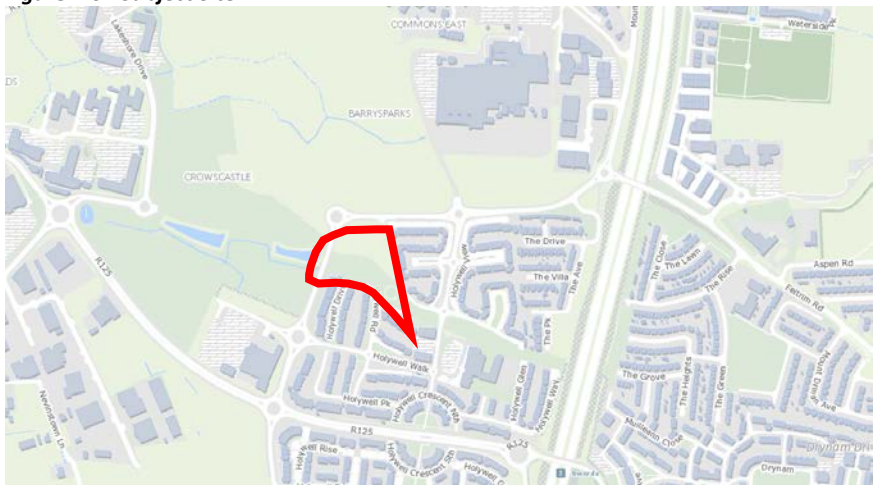
M&E Engineers
MOMA Ltd
Sean O Sullivan

Planning and Environmental Assessment:
The Planning Partnership
Wessel Vosloo.

Quantity Surveyor
Walsh Associates
Paul Malone, Martin Ruane

Fire Safety Consultant & Disability Access Consultant
EOBA
Stephen Lee

Figure 1.0: Subject Site



Source: ESRI ArcGIS, Annotated and Reproduced under Licence by The Planning Partnership July 2023

1.4 SITE LOCATION AND CONTEXT:

The subject site, considered a 'greenfield site', is located to the northwest of Holywell being framed by residential developments to the east and south of the subject site, further greenfield to the west and commercial and industrial uses to the north and east. The site is also in close proximity to the M1 motorway, the proposed Metrolink as well as Airside Business Park.

The objective of the project is to provide a residential development which consists of 3. no. apartment buildings, ancillary infrastructure and all associated site development works (all totalling 5189 sqm Gross Floor Area and ranging in height equivalent 4 to 6 storeys, located to serve the projected growth in the population and to cater for any economic expansion as part of this.

A study carried out by Fingal County Council concluded that Fingal will increase its working population by 18,612 people by 2029 and that there is a forecast of 13,090 local jobs to be available between 2020 and 2029. In order to cater for this economic expansion there will need to be the correct residential infrastructure in place to be able to cater for the increase in population.

The subject site has the potential to be able to facilitate economic and population growth in a manner that does not have a detrimental impact on the receiving environment with careful design and proper planning.

1.5 PROJECT SCOPE:

Fingal County Council, as Local Authority, intends to develop a new residential development at a site of approximately 0.77 Ha located as part of Holywell, Swords.

The proposed works to be carried out consist of the construction of 3 no. pavilion blocks (Heights varying between 4 and 6 storeys and totalling 5189 sq m Gross Floor Space) with ancillary infrastructure and associated site development work, consisting of:

- 20 no. 1 bed apartments;
- 29 no. 2 bed apartments;
- 8 no. 3 bed apartments;
- Entrance lobby and hallways;
- 34 no. car parking spaces;
- 166 no. long stay bike spaces;
- 57 no. short stay bike spaces;
- Communal amenity space totalling 373 sq m;
- Public open space totalling minimum 1155 sq m

The proposed development will achieve 74 units per Hectare

1.6 DESIGN JUSTIFICATION:

Holywell has a rapidly growing network of business and residential developments that are utilised by a significant number of the County's population. The provision of an adequate supply of housing that does not have a detrimental impact on neighbouring development is vital because it will not only contribute positively to an enhanced quality of life in the community but will ensure that the growth that does take place is sustainable.

To achieve these aims it will be crucial to ensure that the impact of development that takes place is mitigated through careful and considerate design protocol. The key principles that have been followed in design are:

- Universal access;
- Healthy placemaking;
- Sustainable design and;
- Safety and security

Regarding building heights and building densities Fingal Development Plan 2023-2029 aims to promote growth and consolidation through the guidance of *Urban Development and Building Heights – Guidelines for Planning Authorities 2018.*

A mix of dwellings which includes Universal Design has been proposed to reflect the need to support different varieties of households through the inclusion of two and three bed apartments. Regarding residential density, the proposed development will achieve 74 units per Hectare, this has been determined to be in line with the *Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas 2009,* it is also in line with the aims of the National Planning Framework (NPF) to see increases in building heights and densities which is a key part in ensuring its implementation.

1.6 DESIGN JUSTIFICATION:

The site which is the focus for the delivery of the residential development is subject *to RS Residential* land use zoning designation of *the Fingal Development Plan 2023-2029*. A residential development within such zoning is therefore identified as a use that is 'Permitted in Principle' as it states that its vision is to:

> *"Provide for residential development and protect and improve residential amenity."*

The vision is to:

> *"Ensure that any new development in existing areas would have a minimal impact on and enhance existing residential amenity.'*

The most southern tip/part of the subject site is subject to OS – Open Space land use zoning designation in terms of the *Fingal Development Plan 2023-2029*, the stated objective of which is to*: " Preserve and provide for open space and recreational amenities".*

No residential construction is proposed on this small part of the site, being physically severed from the new Residential Development by the existing hedgerow vegetation and thereby integrated within the overall open space features of the existing Holywell Residential developed area.

1.6 DESIGN JUSTIFICATION:

Proposal in the context of the Barryspark/Crowcastle Masterplan:

In 2019, FCC publish a comprehensive masterplan for the future development of the lands to the north and west of the subject site:

The lands at Barryspark and Crowcastle will accommodate a mixed use commercial and residential development that will grow into a key economic cluster both for swords and the greater Dublin area. The vision for the masterplan lands is the creation of a unique business campus with complimentary residential development, capable of attracting top-tier employers, set in a high quality green environment, strong transport connection from Metrolink and BusConnects coupled with the nature and scale of development envisaged, will enable the lands to play a key role in the economic life of the region.

Text extracted from the Barryspark & Crowcastle Masterplan, 2019:

The design proposal anticipates the future development by adopting a pavilion typology with a landscape flowing between the pavilion blocks.

A synergy with the future development to the north is thereby expected. The Holywell Link Road may in due course be re-designed to adjust to the new context by the removal of the roundabout and greater emphasis on pedestrian and cyclists.

The drawings include with this submission include a site plan with the future Barryspark & Crowcastle Masterplan Illustrated.
See HHP-HRA-ZZ-00-DR-A-003-Siteplan.

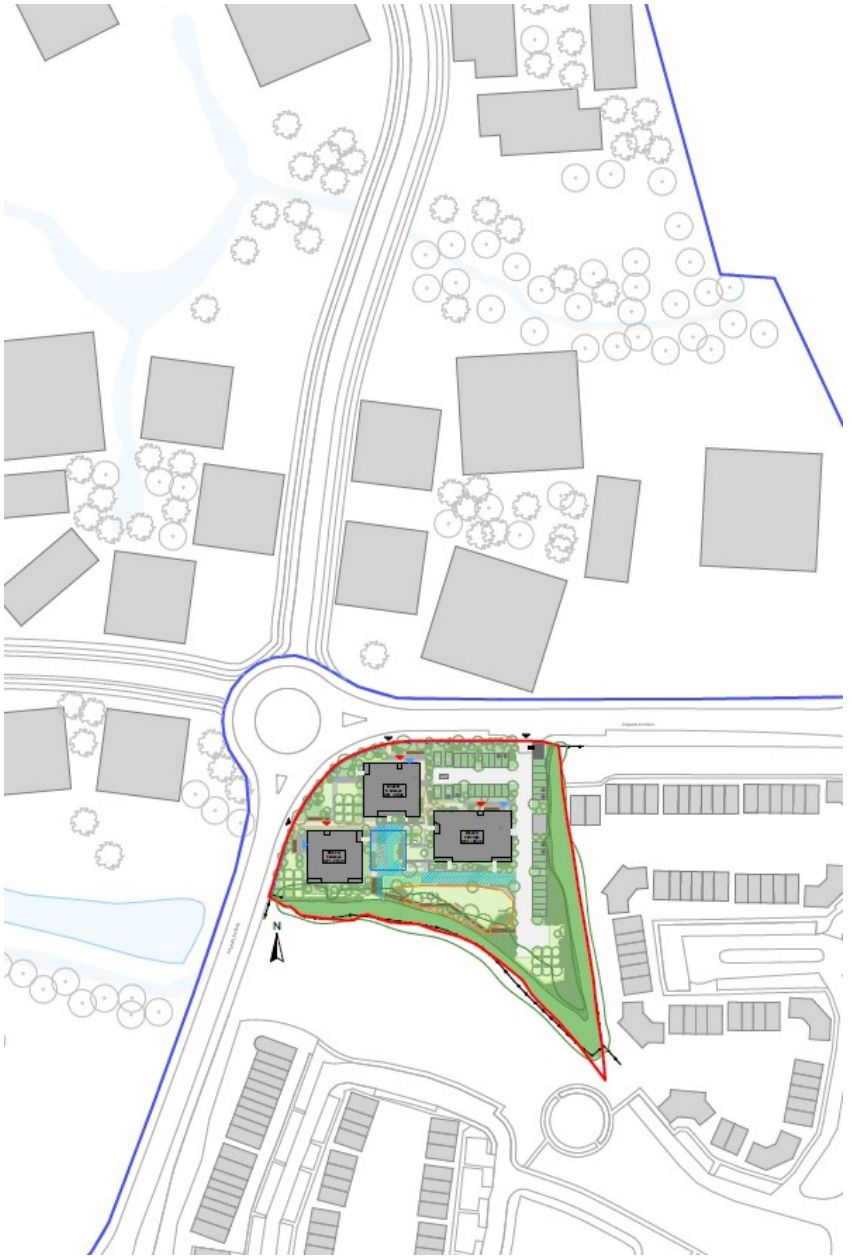


Fig. 1.1 Proposal in the context of the Barryspark & Crowcastle Masterplan

1.6 DESIGN JUSTIFICATION:

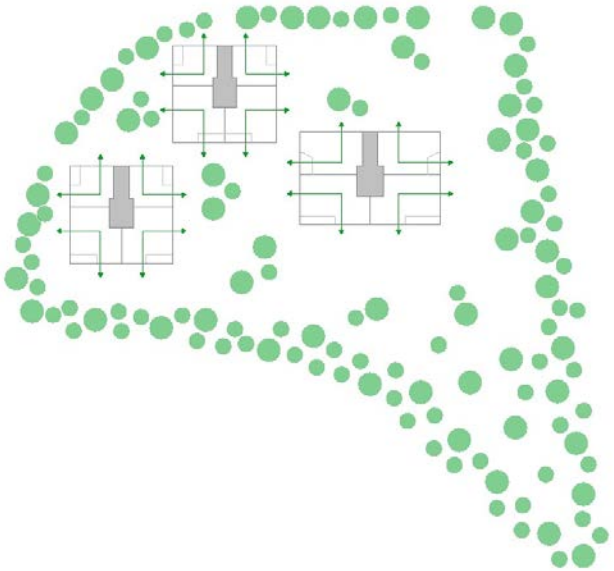


Figure 1.2: All Apartments enjoy a garden aspect.

Pavilion Typology:
To achieve a high repetition of apartment types, a pavilion typology has been developed for the Hollywell site. Three detached blocks each with 4 apartments per floor are distributed on the site to allow a continuous landscape to be threaded between them. In this way all apartments look out onto the shared landscape rather than being orientated to the street. There are only 5 different apartment types in a simple orthogonal geometry allowing for the potential application of prefabricated solutions.

1.6 DESIGN JUSTIFICATION:

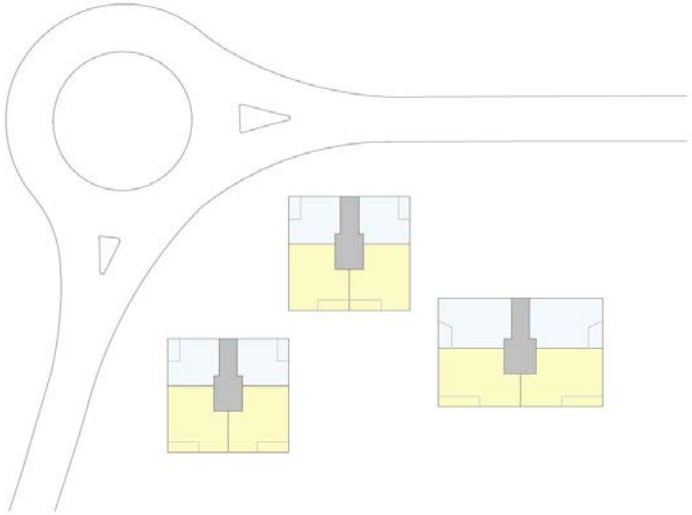


Figure 1.3 : Larger Apartments(yellow) oriented to the south and the garden

Family Apartments Orientated to the Garden Side.
Within each apartment block, the larger apartments are placed on the southern side so that families have the benefit of the southern aspect and the deeper garden aspect. The southern side is also the quieter side of the building.

1.6 DESIGN JUSTIFICATION:

Height & Massing:
In the attached documentation the three pavilion blocks are labelled A,B & C. Block A to the west is five storeys, the central block B is 6 storeys and block C to the east is 4 storeys. This distribution of height and mass supports the articulation of the individual pavilions (thereby avoiding the perception of one large mass). Blocks A & C have been appropriately scaled in keeping with the distance between them and the adjacent 2&3 storeys housing. In order to ensure that there is not a detrimental impact as a result of overshadowing, privacy and loss of light; the distribution of the blocks in plan (by applying appropriate set-backs) has been carefully judged. This is to the benefit of the residential amenity of the candidate site as well as neighbouring residents. The scheme does not create any blank gables. Furthermore, the distribution of the landscaping will 'soften' the visual impact of the new buildings.

1.6 DESIGN JUSTIFICATION:

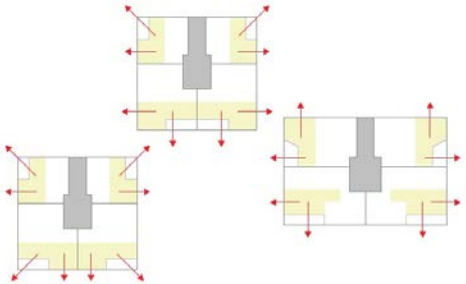


Figure 1.4 : All Apart are double aspect – All living rooms are double aspect.

Double Aspect Throughout:
The pavilion typology with a compact central core in each block leading to 4 apartments per floor means that 100% of the apartments are double aspect. In fact, most of the living spaces enjoy double aspect. All apartments enjoy a view of the shared landscape.

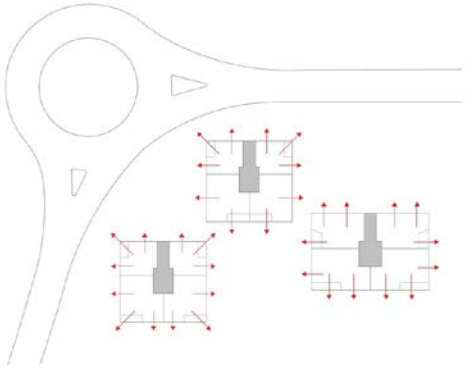


Figure 1.5: The block typology provides optimal passive surveillance of the public realm.

Passive Surveillance:
The pavilion typology has windows and balconies on all facades. There are therefore no blind corners within the site and optimal passive surveillance will thereby ensure there are few opportunities for anti-social behaviour.

1.6 DESIGN JUSTIFICATION:

Circulation & Plan Efficiency:
The pavilion typology with a compact central core in each block leading to 4 apartments per floor also means that the design delivers a very efficient net to gross ratio of 88%.
Meandering shared corridors have been avoided, thereby avoiding the opportunity for anti-social behaviour. The shared lobbies enjoy natural light through the adjacent stairway. The distribution of lifts is efficient with 19 apartments sharing one lift in block A, 23 apartments sharing a lift in Block B and 15 apartments sharing a lift in Block C.

Compact Building Form: the 3 blocks are compact; Blocks A and B are close to a cube. This has optimal façade to volume ratio, being thereby cost- and energy-efficient.

Building Façade: Finishes and Balcony Type.
In keeping with the requirements of FCC Planning Department, it is proposed that all three blocks would be finished with a light-coloured brick. The balconies are integrated into the building form rather that 'stuck-on'.

Universal Design
The Fingal County Development Plan requires that 30% of the units(by area) are designed to be to Universal Design standard.

1.6 DESIGN JUSTIFICATION:

Gross Floors Areas:
Gross floor Areas are set out below per block and per floor:

	Block A	Block B	Block C
GF	327.5	328.9	448.2
1. Floor	314	315.2	427.6
2. Floor	314	315.2	427.6
3. Floor	314	315.2	418.1
4. Floor	303.4	315.2	0
5. Floor	0	304.9	0
Total	**1572.9**	**1894.6**	**1721.5**

Apartment Areas:
The area of each apartment type is set out in Appendix A.

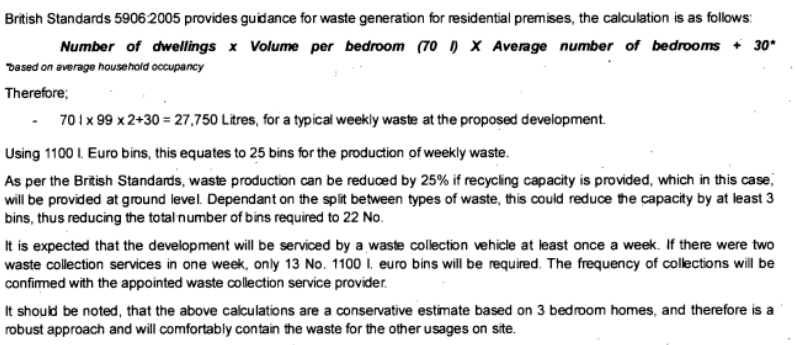
Fire Safety and Universal Access:
The current design has been reviewed as regards compliance with Building Regulations.

Car and Bike Parking Provision:
The provision of carparking has been calculated as:
49 (1&2 beds) x 0.5 = 25 spaces & 8 (3 beds) x1 = total 33 spaces. – 34 spaces have been provided for in the site layout.
The provision of bike parking has been calculated as:
21 (1 beds) x 2 & 28 (2 beds) x3 & 8 (3 beds) x5 = 166 bikes long-stay. Dedicated space has been provided per block at GF: these spaces will be fitted with 2-tier bike racking system. Please refer to drawings HHP-HRA-ZZ-00-DR-A-101-GF for the location.
A further 57 short-stay bike parking spaces will be dispersed through the site landscaping. Refer to landscape design Fc.10_2001 Landscape Plan for further detail.

1.6 DESIGN JUSTIFICATION:

Refuse Storage

Refuse storage has been calculated based on BS 5906:2005:



British Standards 5906:2005 provides guidance for waste generation for residential premises, the calculation is as follows:

Number of dwellings x Volume per bedroom (70 l) X Average number of bedrooms + 30*

**based on average household occupancy*

Therefore;

- 70 l x 99 x 2+30 = 27,750 Litres, for a typical weekly waste at the proposed development.

Using 1100 l. Euro bins, this equates to 25 bins for the production of weekly waste.

As per the British Standards, waste production can be reduced by 25% if recycling capacity is provided, which in this case, will be provided at ground level. Dependant on the split between types of waste, this could reduce the capacity by at least 3 bins, thus reducing the total number of bins required to 22 No.

It is expected that the development will be serviced by a waste collection vehicle at least once a week. If there were two waste collection services in one week, only 13 No. 1100 l. euro bins will be required. The frequency of collections will be confirmed with the appointed waste collection service provider.

It should be noted, that the above calculations are a conservative estimate based on 3 bedroom homes, and therefore is a robust approach and will comfortably contain the waste for the other usages on site.

To facilitate this an enclosed compound of 40m2 has been provided. The size and location of this location of this is indicated in drawing HHP-HRA-ZZ-00-DR-A-002-SitelayoutPlan.

Daylight Assessment

A daylight, sunlight and overshadowing analysis has been completed by GIA Ltd. Its summary conclusion states that:

upon completion of the Proposed Development the neighbouring residential properties will not experience a noticeable impact to their current levels of daylight and sunlight, in line with the BRE recommendations. In addition, the Proposed Development provides future occupants with well daylit and sunlit accommodation, along with excellent access to sunlight in the planned open spaces throughout the year.

For further detail refer to:

HHP-GIA-ZZ-00-RP-A-501(DSO Planning Report).
HHP-GIA-ZZ-00-RP-A-502(DLSL Appendices).

Architects Design Statement:

For Housing at Holywell, Swords, Co. Dublin

Henchion Reuter Architects

1.6 DESIGN JUSTIFICATION:

Distances to Neighbouring Properties:

Distances to Neighbouring Properties and between the 3 blocks are set out on HHP-HRA-ZZ-00-DR-A-002-SitelayoutPlan.

1.7 CIVIL AND STRUCTURAL DESIGN:

Ground Conditions (Geotechnical):

A desktop study of the Geological Survey Ireland (GSI) website has been carried out. Site investigation reports for two nearby sites were available and the findings are summarised below.

Airside Business Park Phase 4 Development – Site investigation 1999. (450m west of the subject site)

The following is a description of the soil from the site investigation report for the above development carried out in 1999.*The borehole findings are quite consistent. Top soil (300mm) covers the site and is generally underlain by clayey fill. Firm to stiff brown or grey brown gravelly clay is encountered. This brown gravelly clay is followed by very stiff to hard grey black gravelly clay, typically containing cobbles and occasional boulders. Borings were terminated at depths between 6.00 and 7.00 metres, probably on obstructions within the clay matrix. . The final bored depths should not be taken as indicative of the rock horizon. The brown and black gravelly clay strata represent the glacial till deposits typical of the region, the soils are more commonly referred to as brown and black boulder clay.*

Borehole logs describe the soil typically as firm to stiff gravelly CLAY. But there are instances of boreholes showing soft and very loose CLAYS.

Based on the above information, at this stage we are of the view that the soil conditions will allow the use of simple spread foundations and piling will not be required. However, a site investigation of the subject site is required to confirm these assumptions.

1.7 CIVIL AND STRUCTURAL DESIGN:

Structural Scheme:

The proposed layout comprises three apartment blocks of three, four and five storeys. The layout of each floor is replicated going up the building. In this scenario we would envisage a stacked load bearing wall solution with concrete floor slabs spanning between to be optimal.

Roads:

A new site access, internal roads, and footpaths will need to be provided in order to serve future development. These shall be designed in accordance with the following publications:

- Design Manual for Urban Roads and Streets (DMURS)
- Recommendations for Site Development works for Housing Areas

The new site access shall be located a minimum of 50m from the roundabout junction, in accordance with TII document DN-GEO-03060 “Geometric Design of Junctions (priority junctions, direct accesses, roundabouts, grade separated and compact grade separated junctions)”

1.7 CIVIL AND STRUCTURAL DESIGN:

Surface Water Drainage:

Surface water drainage records received indicate that there is existing surface water drainage infrastructure located within the vicinity of the site. There is also an existing surface water drainage ditch located along the southern boundary of the site which the site generally drains towards in a southernly direction. For the proposed development, on-site attenuation will need to be provided to restrict flows to QBAR or 2l/sec/ha (whichever is greater) in line with the Greater Dublin Strategic Drainage Study. SuDS features, such as blue / green roofs, shallow swales, permeable paving, shallow detention basins and bio-retention areas, can be incorporated on site to reduce the quantity of discharge from the site and also to improve discharge water quality.

Flooding:

The lands are within the catchment of the River Gaybrook.

The Fingal East Meath FRAM Study shows that the site is located within Flood Zone C for the Current Scenario Fluvial Flood Event.

The Fingal County Development Plan 2023-2029 Strategic Flood Risk Assessment shows that the site is located within Flood Zone C for the Current Scenario Fluvial Flood Event. The southern end of the site is within Flood Zone B for the Mid-Range Future Scenario (20% Climate Change). The southern portion of the site is within Flood Zone B for the High-End Future Scenario (30% Climate Change).

1.7 CIVIL AND STRUCTURAL DESIGN:

Flooding (cont.):

There is no record of historic flooding events at the site on the OPW FloodInfo website. It is recommended that climate change be considered when assessing the site for the proposed development, as outlined in the Fingal County Development Plan 2023-2029 Strategic Flood Risk Assessment and the OPW Flood Risk Management Guidelines.
The minimum Design Level on the site is 26.4m, which is above the minimum Design Level required in order to comply with Table 6.5 of the Fingal County Development Plan 2023-2029 Strategic Flood Risk Assessment. Table 6.5 calculates the minimum design level from the High-End Future Scenario Climate Change flood level and as such the proposed buildings will be located outside of these flood extents and not alter levels within the flood extents.

Foul Drainage:

Foul drainage records obtained indicate that there is existing foul drainage infrastructure within the vicinity of the site. A new foul water drainage network in accordance with Irish Water Requirements will be provided to serve the development. A pre-connection enquiry for 62 no. units was previously submitted to Irish Water and a Confirmation of Feasibility Letter was ultimately received in March 2023 stating that a connection to the existing network was feasible without infrastructure upgrade by Irish Water.

Water Supply:

Water supply records obtained by Irish water indicate that there is existing water supply infrastructure within the vicinity of the site. A new water supply network in accordance with Irish Water Requirements will be provided to serve the development. A pre-connection enquiry for 62 no. units was previously submitted to Irish Water and a Confirmation of Feasibility Letter was received in March 2023 stating that a connection to the existing network was feasible without infrastructure upgrade by Irish Water

1.8 MECHANICAL AND ELECTRICAL DESIGN:

Mechanical Services:

Heating Systems:
Each unit in the apartment blocks will be equipped with an air-to-water heat pump system for heating purposes. These heat pumps utilize energy from the surrounding air to heat water, which is then circulated to provide warmth. The use of air-to-water heat pumps offers energy-efficient heating solutions for the residents.

Radiators:
To ensure effective heat distribution, radiators will be incorporated throughout the units. Radiators provide a comfortable and controllable means of delivering heat to individual rooms. They are a popular choice for heating systems and contribute to a comfortable living environment within each apartment.

Ventilation System:
A demand control ventilation system will be installed in each unit. This system ensures optimal indoor air quality by adjusting the ventilation rate based on occupancy, CO2, or humidity levels. Wall inlets will be strategically placed in bedrooms and living areas to facilitate proper air circulation and maintain a healthy living environment.

Water Supply:
Mains water will be supplied to each unit, ensuring a reliable source of clean water for the residents. Additionally, a boosted cold water tank system will be installed to each unit to enhance the water pressure for cold water services, ensuring consistent water flow throughout the apartments.

Drainage:
The mechanical package includes drainage systems from above the ground floor slab, from wash hand basins, toilets, etc., which will tie up with the Civil Engineers drainage layouts.

1.8 MECHANICAL AND ELECTRICAL DESIGN:

Electrical Services:

Power Distribution:
Electrical power for the apartment blocks will be supplied from a new on-site substation. The power will then be distributed to a landlord meter cabinet located at each building's entrance hall. From there, it will be further distributed to each unit and landlord equipment, ensuring a reliable and efficient supply of electricity.

Telecoms:
The electrical scope of services includes the provision of telecoms infrastructure, enabling residents to access communication services such as telephone, internet, and other data connections within their apartments.

Fire Alarm and Intruder Alarm:
To ensure the safety and security of residents, a comprehensive fire alarm system to all areas and intruder alarm system to landlord areas will be installed. The lift will incorporate an Aspirating Smoke Detection system. These systems will provide early detection of fire and unauthorized access, enabling prompt response and evacuation if necessary.

Lighting:
Internally, the electrical services encompass lighting solutions for each unit. Adequate LED lighting will be installed in bedrooms, living areas, kitchens, and bathrooms to meet the residents' lighting needs. External lighting will also be provided to ensure safety and security in common areas such as parking, walkways, and entrances.

Emergency Lighting:
Emergency lighting systems will be incorporated to provide illumination during power outages or emergency situations. These systems will guide residents to safety and help prevent accidents or panic in low-light conditions.

1.9 LANDSCAPE DESIGN:

Landscape Design:

The Pavilion Typology anticipates a continuous landscape design that is threaded through the individual blocks. In this way the garden experience is shared by all residents.

Existing hedgerows to the south and east will be retained as significant ecology habitats. The project has been set out to avoid critical tree roots.

Carparking will be integrated with shrub planting; with the parking broken up to max 6 places with planted islands in line with DMURS.

Approximately 200 m2 play activity will be provide for children up to 12 years with a mix of nature play and standard equipment.

For further detail on the landscape design, please refer to the following documentation production by DFLA:

FC.10_2001 Landscape Plan

FC.10_2002 Boundary Treatments

FC.10_2400 Landscape Sections

FC.10_2500 Typical Landscape Details

FC.10_2001 Design Rationale

1.10 PERSPECTIVE VIEWS:

Detail view of the landscaping between blocks A,B&C.

Architects Design Statement:

For Housing at Holywell, Swords, Co. Dublin

Henchion Reuter Architects

1.10 PERSPECTIVE VIEWS:

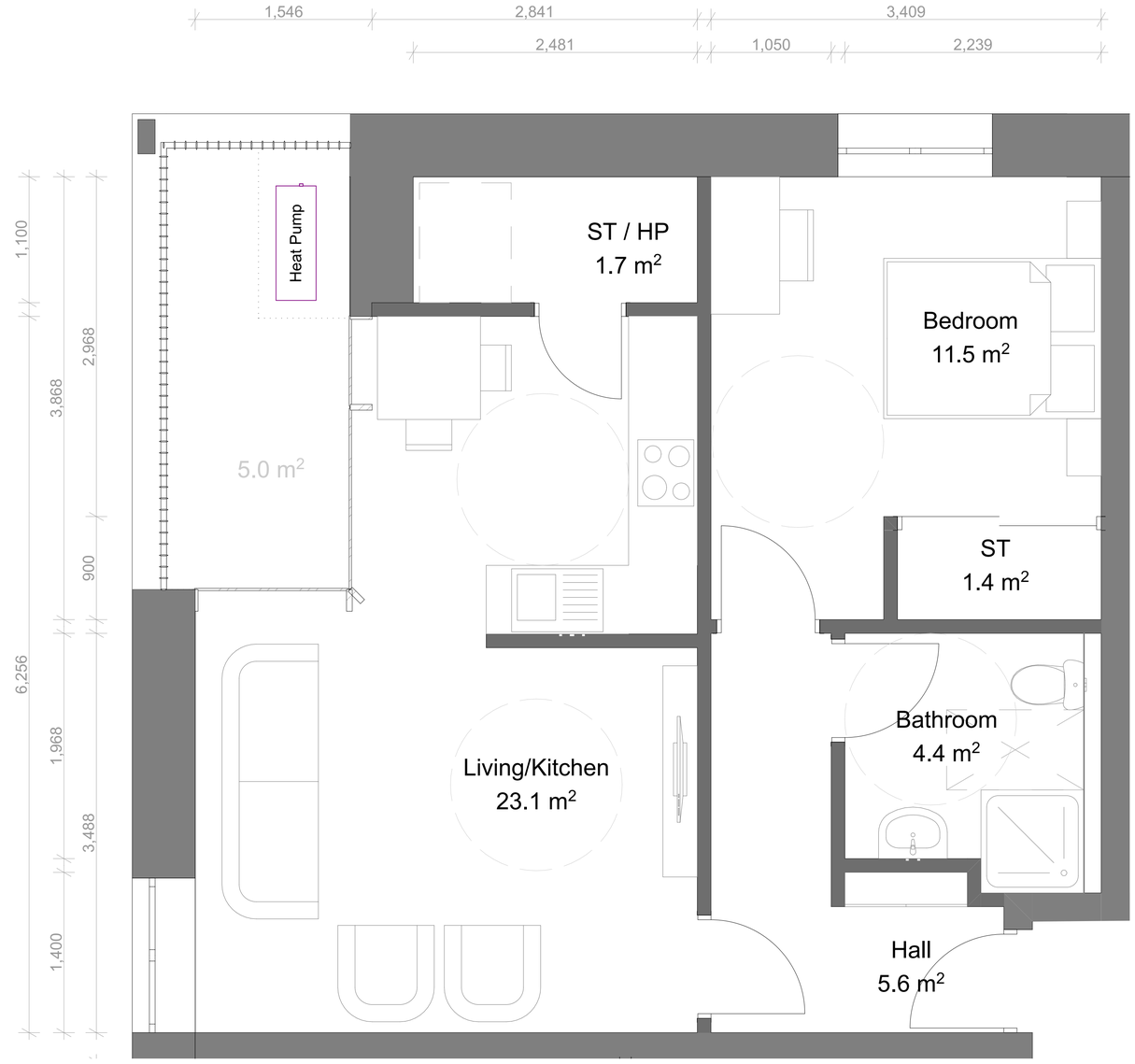
View from Holywell Link Road: Side Entrance between Blocks A&B.

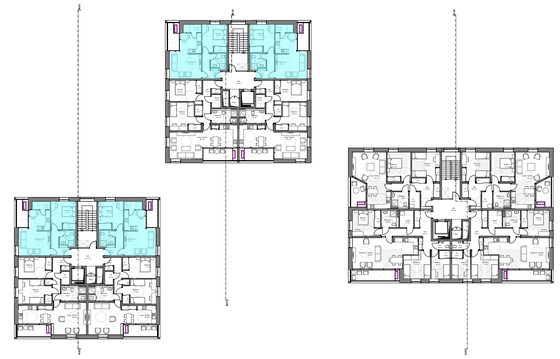
1.10 PERSPECTIVE VIEWS:

View of the proposed design from the South.

Detail view of the landscaping between blocks B&C.

1.11: Individual Apartment Plans with Areas





TYPE 1

1BED / 2P

	Target	Proposed
Gross internal area (m^2)	45	51.7
Aggregate living area (m^2)	23	23.1
Aggregate bedroom area (m^2)	11	11.5
Storage (m^2)	3	3.1
Balcony (m^2)	5	5

GENERAL NOTES

±0.00 = FINISHED GROUND FLOOR LEVEL
= OS +26.4

TO BE READ IN CONJUNCTION WITH ALL TENDER INFORMATION FROM ALL OTHER DESIGN CONSULTANTS.

NOTIFY ARCHITECT OF ANY DISCREPANCIES.

CHECK DIMENSIONS ON SITE.

DO NOT SCALE.

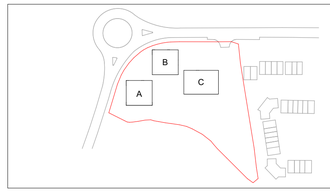
USE FIGURED DIMENSIONS ONLY.

SIX DIGIT CODE IN EACH PRODUCT DESCRIPTION REFERS TO THE RELEVANT SECTION IN THE HRA SPEC.

- Structural level
- Finished level
- Structural level
- Finished level
- (A) Kitchen type
- [A] Bathroom type
- W1 Window type
- D1 Door type

SURVEY DRAWING

APEX SURVEY TOPOGRAPHICAL SURVEY DRAWING NUMBER 3889 - 31.05.19



No.	Revision	Date	By	Chk'd	App'd

CLIENT
FINGAL COUNTY COUNCIL

PROJECT
HOLYWELL HOUSING PROJECTS

DRAWING TITLE
Type 1

DRAWING NO.
HHP-HRA-ZZ-ZZ-DR-A-25-Type-1

STAGE
PLANNING

SCALE
1:25 @ A1
1:50 @ A3

DRAWING DIMENSIONS
594 x 841mm
297 x 420mm

DRAWN
KKP

CHECKED
MH

DATE
28/09/2023

HRA
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info@henchion-reuter.com
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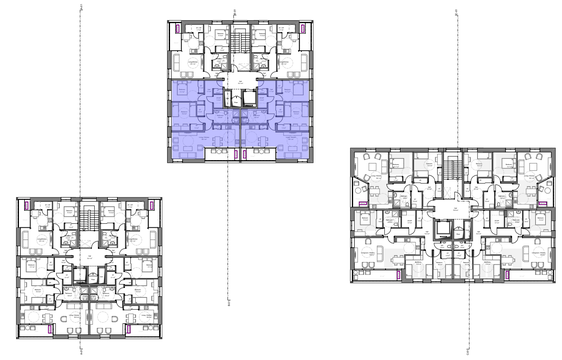


TYPE 2		
2BED / 4P		
	Target	Proposed
Gross internal area (m^2)	73	84
Aggregate living area (m^2)	30	30.1
Aggregate bedroom area (m^2)	25	25
Storage (m^2)	7	7
Balcony (m^2)	7	7

GENERAL NOTES

±0.00 = FINISHED GROUND FLOOR LEVEL
= OS +26.4

TO BE READ IN CONJUNCTION WITH ALL TENDER INFORMATION FROM ALL OTHER DESIGN CONSULTANTS.

NOTIFY ARCHITECT OF ANY DISCREPANCIES.

CHECK DIMENSIONS ON SITE.

DO NOT SCALE.

USE FIGURED DIMENSIONS ONLY.

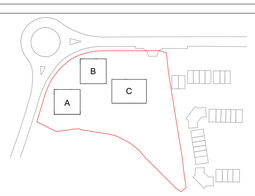
SIX DIGIT CODE IN EACH PRODUCT DESCRIPTION REFERS TO THE RELEVANT SECTION IN THE HRA SPEC.

Structural level
Finished level
Structural level
Finished level

A Kitchen type
A Bathroom type
W1 Window type
D1 Door type

SURVEY DRAWING

APEX SURVEY TOPOGRAPHICAL SURVEY DRAWING NUMBER 3889 - 31.05.19



No.	Revision	Date	By	Chk'd	App'd

CLIENT
FINGAL COUNTY COUNCIL

PROJECT
HOLYWELL HOUSING PROJECTS

DRAWING TITLE
Type 2

DRAWING NO.
HHP-HRA-ZZ-ZZ-DR-A-26-Type-2

STAGE
PLANNING

SCALE
1:25 @ A1
1:50 @ A3

DRAWING DIMENSIONS
594 x 841mm
297 x 420mm

DRAWN
KKP

CHECKED
MH

DATE
28/09/2023

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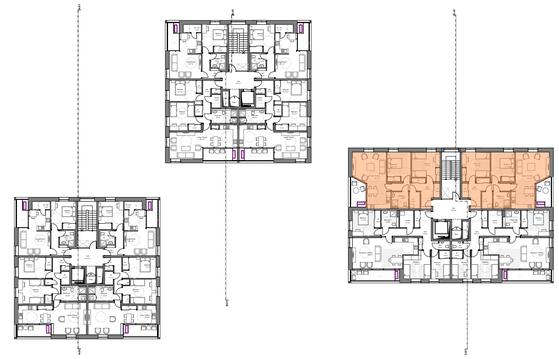


TYPE 3 Universal Design		
2BED / 4P		
	Target	Proposed
Gross internal area (m^2)	73	83.8
Aggregate living area (m^2)	30	30.1
Aggregate bedroom area (m^2)	25	25
Storage (m^2)	7	7
Balcony (m^2)	7	7

GENERAL NOTES

±0.00 = FINISHED GROUND FLOOR LEVEL
= OS +26.4

TO BE READ IN CONJUNCTION WITH ALL TENDER INFORMATION FROM ALL OTHER DESIGN CONSULTANTS.

NOTIFY ARCHITECT OF ANY DISCREPANCIES.

CHECK DIMENSIONS ON SITE.

DO NOT SCALE.

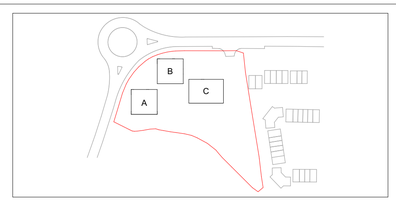
USE FIGURED DIMENSIONS ONLY.

SIX DIGIT CODE IN EACH PRODUCT DESCRIPTION REFERS TO THE RELEVANT SECTION IN THE HRA SPEC.

- Structural level
- Finished level
- Structural level
- Finished level
- (A) Kitchen type
- [A] Bathroom type
- W1 Window type
- D1 Door type

SURVEY DRAWING

APEX SURVEY TOPOGRAPHICAL SURVEY DRAWING NUMBER 3889 - 31.05.19



No.	Revision	Date	By	Chk'd	App'd

CLIENT
FINGAL COUNTY COUNCIL

PROJECT
HOLYWELL HOUSING PROJECTS

DRAWING TITLE
Type 3

DRAWING NO.
HHP-HRA-ZZ-ZZ-DR-A-27-Type-3

STAGE
PLANNING

SCALE
1:25 @ A1
1:50 @ A3

DRAWING DIMENSIONS
594 x 841mm
297 x 420mm

DRAWN
KKP

CHECKED
MH

DATE
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TYPE 4 Universal Design

3BED / 5P

	Target	Proposed
Gross internal area (m^2)	86	106
Aggregate living area (m^2)	34	34.0
Aggregate bedroom area (m^2)	32	32.6
Storage (m^2)	9	9.3
Balcony (m^2)	9	9.1

GENERAL NOTES

±0.00 = FINISHED GROUND FLOOR LEVEL
= OS +26.4

TO BE READ IN CONJUNCTION WITH ALL TENDER INFORMATION FROM ALL OTHER DESIGN CONSULTANTS.

NOTIFY ARCHITECT OF ANY DISCREPANCIES.

CHECK DIMENSIONS ON SITE.

DO NOT SCALE.

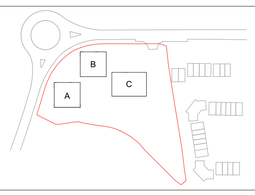
USE FIGURED DIMENSIONS ONLY.

SIX DIGIT CODE IN EACH PRODUCT DESCRIPTION REFERS TO THE RELEVANT SECTION IN THE HRA SPEC.

- Structural level
- Finished level
- Structural level
- Finished level
- (A) Kitchen type
- [A] Bathroom type
- (W1) Window type
- (D1) Door type

SURVEY DRAWING

APEX SURVEY TOPOGRAPHICAL SURVEY DRAWING NUMBER 3889 - 31.05.19



No.	Revision	Date	By	Chk'd	Appr'd

CLIENT
FINGAL COUNTY COUNCIL

PROJECT
HOLYWELL HOUSING PROJECTS

DRAWING TITLE
Type 4

DRAWING NO.
HHP-HRA-ZZ-ZZ-DR-A-28-Type-4

STAGE
PLANNING

SCALE
1:25 @ A1
1:50 @ A3

DRAWING DIMENSIONS
594 x 841mm
297 x 420mm

DRAWN
KKP

CHECKED
MH

DATE
28/09/2023

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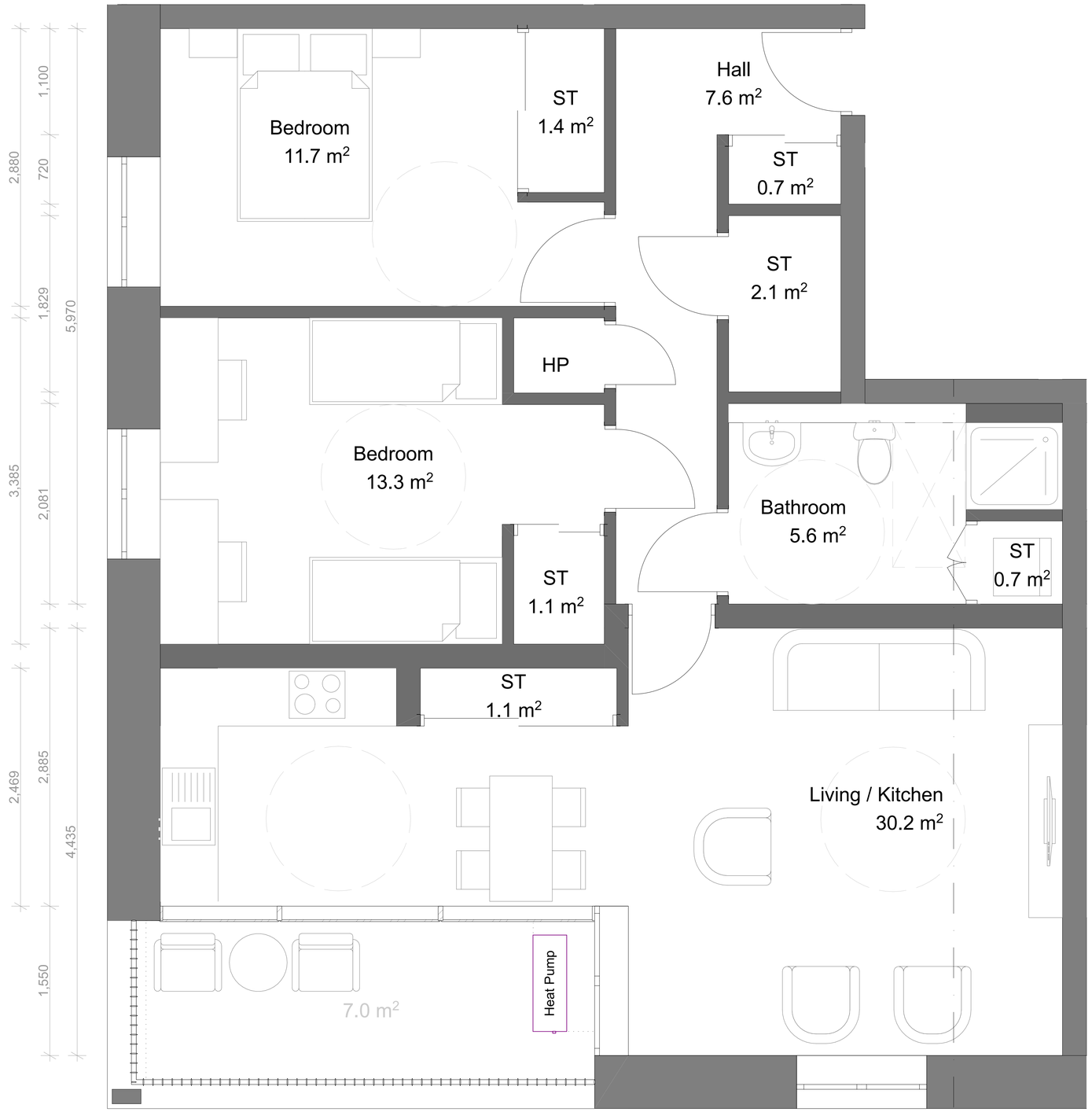

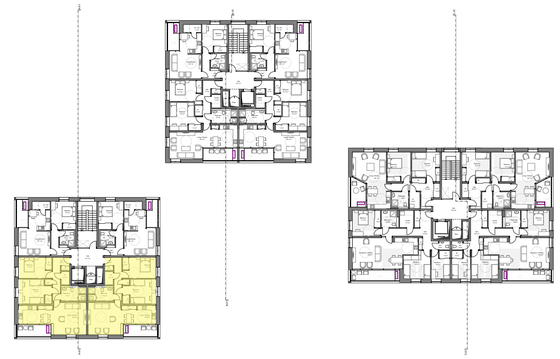

TYPE 5		
2BED / 4P		
	Target	Proposed
Gross internal area (m^2)	73	83
Aggregate living area (m^2)	30	30.2
Aggregate bedroom area (m^2)	25	25
Storage (m^2)	7	7.1
Balcony (m^2)	7	7

GENERAL NOTES

±0.00 = FINISHED GROUND FLOOR LEVEL
= OS +26.4

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NOTIFY ARCHITECT OF ANY DISCREPANCIES.

CHECK DIMENSIONS ON SITE.

DO NOT SCALE.

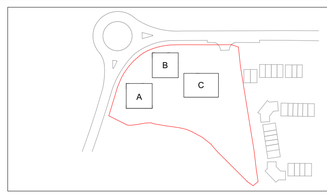
USE FIGURED DIMENSIONS ONLY.

SIX DIGIT CODE IN EACH PRODUCT DESCRIPTION REFERS TO THE RELEVANT SECTION IN THE HRA SPEC.

- Structural level
- Finished level
- Structural level
- Finished level
- (A) Kitchen type
- [A] Bathroom type
- (W1) Window type
- (D1) Door type

SURVEY DRAWING

APEX SURVEY TOPOGRAPHICAL SURVEY DRAWING NUMBER 3889 - 31.05.19



No.	Revision	Date	By	Chk'd	App'd

CLIENT
FINGAL COUNTY COUNCIL

PROJECT
HOLYWELL HOUSING PROJECTS

DRAWING TITLE
Type 5

DRAWING NO.
HHP-HRA-ZZ-ZZ-DR-A-29-Type-5

STAGE
PLANNING

SCALE
1:25 @ A1
1:50 @ A3

DRAWING DIMENSIONS
594 x 841mm
297 x 420mm

DRAWN
KKP

CHECKED
MH

DATE
28/09/2023

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Notes:

1. This drawing is to be read in conjunction with the all relevant engineer's and architect's drawings, specifications and designer's risk assessments.
2. All levels are in metres to ordnance datum Malin Head.
3. The topographical information is replicated from information received from others and is issued as background information only.

LEGEND:

- Redline Boundary
- Proposed Road
- Proposed Permeable Paving - 220mm Thick Sub-base Storage Layer
- Proposed Landscaping. Refer to landscaping drawings.
- Proposed Pedestrian Footway

Block **B**
6 storeys
FFL +26.40

Block **C**
4 storeys
FFL +26.40

Block **A**
5 storeys
FFL +26.40

FOOTWAY TO BE WIDENED TO ALLOW FIRE TENDER ACCESS

HOLYWELL AVENUE

PLAN LAYOUT
SCALE: 1:200@A1

No.	Revision	Date	By	Chk'd	App'd
P01	WORK IN PROGRESS	16/08/2023	AS	CMG	SK
P02	PLANNING SUBMISSION	29/09/2023	AS	CMG	SK

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Project Title: HOUSING AT HOLYWELL, SWORDS, COUNTY DUBLIN

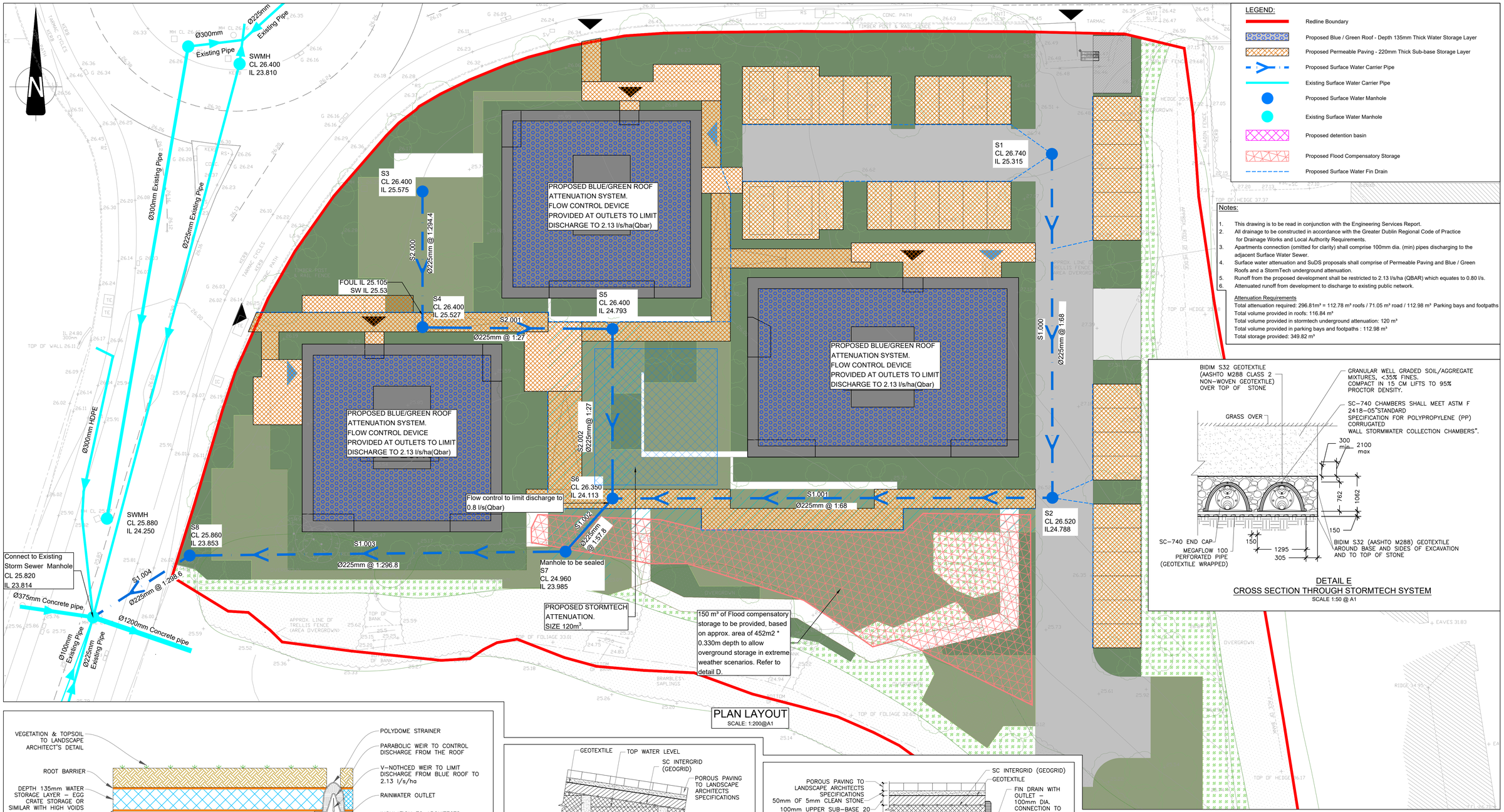
Drawing Title: PROPOSED LAYOUT
Sheet 1 of 1

Drawing Number: Project | Originator | Volume | Location | Type | Role | Number
HHP - ROD - XX - XX - DR - C - 0001

Drawn:	Designed:	Checked:	Approved:	Status:	Scale (A1)	Date:	Job No:	Rev:
MA	AS	CMG	SK	S4 - Stage Approval	1:200	AUGUST 2023	23.130	P02

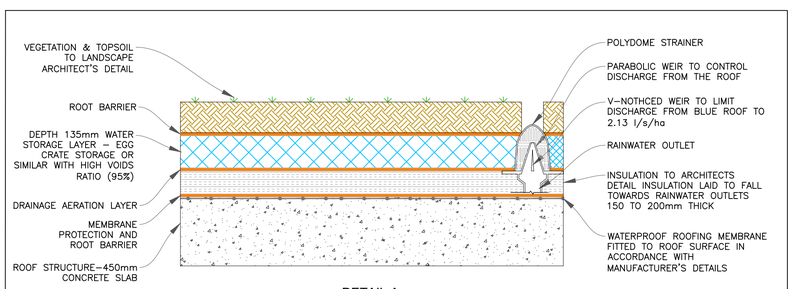
Thursday 12 October 2023 14:27:37 J:\2023\23130\23130-02_WIP\01 MODELS\01 CAD\01 DWG\01 STG 1 - EDIT AS NEEDED\HHP-ROD-XX-XX-DR-C-0001.DWG

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

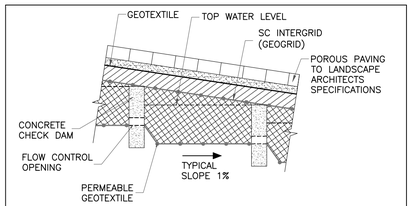


DETAIL E
CROSS SECTION THROUGH STORMTECH SYSTEM
SCALE 1:50 @ A1

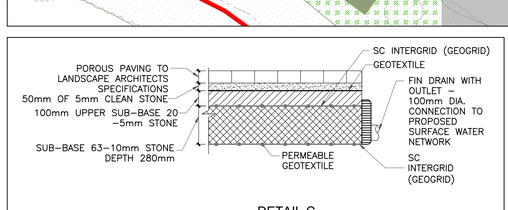
PLAN LAYOUT
SCALE: 1:200@A1



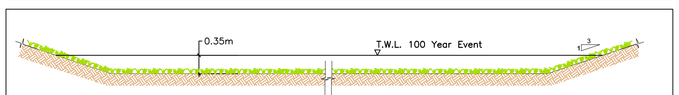
DETAIL A
BLUE AND GREEN ROOF BUILD UP
SCALE 1:20 @ A1



DETAIL B
TYPICAL PERMEABLE PAVING DETAIL
(RAMPED/SLOPE AREAS)
SCALE 1:20 @ A1



DETAIL C
TYPICAL PERMEABLE PAVING DETAIL
(PARKING BAYS & FOOTPATHS)
SCALE 1:20 @ A1



DETAIL D
TYPICAL SECTION THROUGH
COMPENSATORY STORAGE AREA
SCALE : 1:100

No.	Revision	Date	By	Chk'd	App'd
P01	WORK IN PROGRESS	16/08/2023	AS	CMG	SK
P02	WORK IN PROGRESS - ISSUED FOR CO-ORDINATION PURPOSES	29/08/2023	AS	CMG	SK
P03	PLANNING SUBMISSION	29/09/2023	AS	CMG	SK

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Drawn: MA | Designed: AS | Checked: CMG | Approved: SK | Status: S4 - Stage Approval

Project Title: HOUSING AT HOLYWELL, SWORDS, COUNTY DUBLIN

Drawing Title: SURFACE WATER DRAINAGE LAYOUT
Sheet 1 of 1

Drawing Number: HHP - ROD - XX - XX - DR - C - 0030

Scale (A1): 1:200 | Date: AUGUST 2023 | Job No: 23.130 | Rev: P03

Thursday 12 October 2023 14:30:56 S:\2023\23130\23130-02_WIP\01 MODELS\01 CAD\01 DWG\01 STG 1 - EDIT AS NEEDED\HHP-ROD-XX-XX-DR-C-0030.DWG

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

Notes:

1. This drawing is to be read in conjunction with the all relevant engineer's and architect's drawings, specifications and designer's risk assessments.
2. All levels are in metres to ordnance datum Malin Head.
3. The topographical information is replicated from information received from others and is issued as background information only.

LEGEND:

- Redline Boundary
- Proposed Foul Gravity Pipe
- Existing Public Foul Drainage Pipe
- Proposed Foul Manhole
- Existing Foul Manhole

Ø225mm EXISTING FOUL

Connect to Existing Sewer Manhole
CL 26.490
IL 24.040

Ø225mm EXISTING FOUL

Ø225mm EXISTING FOUL

Block **B**
6 storeys
FFL +26.40

Block **C**
4 storeys
FFL +26.40

Block **A**
5 storeys
FFL +26.40

F1
CL 26.250
IL 25.105

F1.000
Ø225mm @ 1:80

F1.001
Ø225mm @ 1:100

F2
CL 26.250
IL 24.585

F3
CL 26.250
IL 24.529

F1.002
Ø225mm @ 1:150.2

F4
CL 27.290
IL 24.252

F1.003
Ø225mm @ 1:137

F2.000
Ø225mm @ 1:150.5

F4
CL 26.520
IL 25.095

HOLYWELL AVENUE

PLAN LAYOUT
SCALE: 1:200@A1

No.	Revision	Date	By	Chk'd	App'd
P01	WORK IN PROGRESS	16/08/2023	AS	CMG	SK
P02	WORK IN PROGRESS - MINOR CHANGES TO COVER LEVELS & GRADIENTS	23/08/2023	AS	CMG	SK
P03	PLANNING SUBMISSION	29/09/2023	AS	CMG	SK

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www.rod.ie

Drawn: MA | Designed: AS | Checked: CMG | Approved: SK | Status: S4 - Stage Approval

Project Title: HOUSING AT HOLYWELL, SWORDS, COUNTY DUBLIN

Drawing Title: FOUL WATER DRAINAGE LAYOUT
Sheet 1 of 1

Drawing Number: Project HHP - Originator ROD - Volume XX - Location XX - Type DR - Role C - Number 0031

Scale (A1): 1:200 | Date: AUGUST 2023 | Job No: 23.130 | Rev: P03

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

Thursday 12 October 2023 14:31:30 J:\2023\23130\23130-02_WIP\01 MODELS\01 CAD\01 DWG\01 STG 1 - EDIT AS NEEDED\HHP-ROD-XX-XX-DR-C-0031.DWG

LEGEND:

- REDLINE BOUNDARY
- EXISTING WATERMAIN
- PROPOSED 100mm DIA.WATERMAIN TO IRISH WATER CODE OF PRACTICE
- SCV — PROPOSED SCOUR VALVE
- AV — PROPOSED AIR VALVE
- SV — PROPOSED SLUICE VALVE
- H — PROPOSED HYDRANT
- M — PROPOSED METER
- MC — PROPOSED MANIFOLD CHAMBER
- 46M HYDRANT RADIUS

NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING SERVICES REPORT.
2. ALL WATERMAINS TO BE CONSTRUCTED IN ACCORDANCE WITH IRISH WATER CODE OF PRACTICE AND STANDARD DETAILS.
3. HYDRANTS TO BE CONSTRUCTED IN ACCORDANCE WITH IRISH WATER DETAIL STD-W-18.
4. SLUICE VALVES TO BE CONSTRUCTED IN ACCORDANCE WITH IRISH WATER DETAIL STD-W-15.
5. PIPE BEDDING AND BACKFILL TO BE CONSTRUCTED IN ACCORDANCE WITH IRISH WATER DETAIL STD-W-13.
6. MARKER POSTS TO BE CONSTRUCTED IN ACCORDANCE WITH IRISH WATER DETAIL STD-W-27.
7. THRUST BLOCKS TO BE CONSTRUCTED IN ACCORDANCE WITH IRISH WATER DETAIL STD-W-28.
8. WATERMAIN PIPE MATERIAL, THE SPECIFICATION SHALL BE IN ACCORDANCE WITH SECTION 3.9 OF WATER CODE OF PRACTICE.
9. ALL HYDRANT COVERS, WHERE LOCATED IN GRASS AREAS, SHALL BE SURROUNDED BY A CONCRETE PLINTH, 200mm ALL ROUND AND 100mm DEEP FORMED WITH C20/25 CONCRETE, IN ACCORDANCE WITH SECTION 3.18 OF WATER CODE OF PRACTICE.
10. AIR VALVES TO BE CONSTRUCTED IN ACCORDANCE WITH IRISH WATER DETAIL STD-W-22.
11. SCOUR VALVES TO BE CONSTRUCTED IN ACCORDANCE WITH IRISH WATER DETAIL STD-W-30A.

Ø300mm PIPE WATERMAIN

Connect to Existing Spur Watermain on Holywell Distributor Road in Accordance with Irish Water Standard Detail STD-W-04

NOTE :
Fire-fighting flow rate of 2100l/min/2hrs (35l/s) required across the hydrant system, assuming low pressure this will result in a tank volume of 252m^3.

Requirement of Fire Storage Tank to be confirmed following Fire Cert Applicaiton.
Proposed 252m³ Fire Fighting Tank in lieu of above. Detail and manufacturer TBC. Shown as indicative only.

100mm OD PE PIPE WATERMAIN

Fire Tender Connection

Block **B**
6 storeys
FFL +26.40

Block **C**
4 storeys
FFL +26.40

Block **A**
5 storeys
FFL +26.40

SCV

Scour Valve to Discharge to Nearest SW Manhole

NOTE :
The distance from a hydrant to a vehicle access roadway or hard standing area for fire appliances is not more than 30m (Kilkenny Fire and Rescue Service Guidance Specification for Fire Hydrants and Fire Fighting)

6.000
6.764
30.000

FOOTWAY TO BE WIDENED TO ALLOW FIRE TENDER ACCESS (EXTENT TO BE AGREED)

PLAN LAYOUT
SCALE: 1:200@A1

No.	Revision	Date	By	Chk'd	App'd
P01	WORK IN PROGRESS	16/08/2023	AS	CMG	SK
P02	PLANNING SUBMISSION	29/09/2023	AS	CMG	SK

ROD ROUGHAN & O'DONOVAN
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Project Title: HOUSING AT HOLYWELL, SWORDS, COUNTY DUBLIN

Drawing Title: WATER MAIN SUPPLY LAYOUT
Sheet 1 of 1

Drawing Number: Project HHP - Originator ROD - Volume XX - Location XX - Type DR - Role C - Number 0040

Drawn: MA | Designed: AS | Checked: CMG | Approved: SK | Status: S4 - Stage Approval

Scale (A1): 1:200 | Date: AUGUST 2023 | Job No: 23.130 | Rev: P02

Thursday 12 October 2023 14:32:04 2023\2313\23130-02_WIP\01 MODELS\01 CAD\01 DWG\01 STG 1 - EDIT AS NEEDED\HHP-ROD-XX-XX-DR-C-0040.DWG

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

Notes:

1. This drawing is to be read in conjunction with the all relevant engineer's and architect's drawings, specifications and designer's risk assessments.
2. All levels are in metres to ordnance datum Malin Head.
3. The topographical information is replicated from information received from others and is issued as background information only.

LEGEND:

- Redline Boundary
- Proposed Road
- Proposed Permeable Paving - 220mm Thick Sub-base Storage Layer
- Proposed Landscaping. Refer to landscaping drawings.
- Proposed Pedestrian Footway

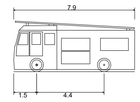
Block **A**
5 storeys
FFL +26.40

Block **B**
6 storeys
FFL +26.40

Block **C**
4 storeys
FFL +26.40

FOOTWAY TO BE WIDENED TO ALLOW FIRE TENDER ACCESS

HOLYWELL AVENUE



Pumping Appliance

Overall Length	7.900m
Overall Width	2.500m
Overall Body Height	3.300m
Min Body Ground Clearance	0.140m
Track Width	2.500m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	7.750m

PLAN LAYOUT
SCALE: 1:200@A1

No.	Revision	Date	By	Chk'd	App'd
P01	WORK IN PROGRESS	16/08/2023	SK	BDG	BDG
P02	PLANNING SUBMISSION	29/09/2023	SK	BDG	BDG

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Drawn: SK | Designed: BDG | Checked: BDG | Approved: SK | Status: S4 - Stage Approval

Project Title: HOUSING AT HOLYWELL, SWORDS, COUNTY DUBLIN

Drawing Title: PROPOSED VEHICLE TRACKING LAYOUT
Sheet 1 of 1

Drawing Number: Project SHH - Originator ROD - Volume XX - Location XX - Type DR - Role C - Number 0090

Scale (A1): 1:200 | Date: AUGUST 2023 | Job No: 23.130 | Rev: P02

Thursday 12 October 2023 14:32:26 Z:\2023\23130\23130-02_WIP\01 MODELS\01 CAD\01 DWG\01 STG 1 - EDIT AS NEEDED\HHP-ROD-XX-XX-DR-C-0090.DWG

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

Prepared by
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Tel: +353 1 2940800 Fax: +353 1 2940820
Email: info@rod.ie www.rod.ie

PROPOSED RESIDENTIAL DEVELOPMENT AT HOLYWELL, SWORDS, CO. DUBLIN

Engineering Report For Planning | September 2023

Housing at Holywell, Swords, County Dublin

Engineering Report For Planning

Document No: **HHP-ROD-XX-XX-RP-C-0001**

Made: ..... Angelo Sicilia (AS)

Checked:..... Ciaran McGee (CMG)

Approved:..... Sean Kennedy (SK)

Revision	Description	Made	Checked	Approved	Date
P01	Draft	AS	CMG	SK	31/08/2023
P02	Issued for Planning	AS	CMG	SK	29/09/2023
P03	Issued for Planning	BDG	SK	SK	17/10/2023

ROD
ROUGHAN & O'DONOVAN

Housing at Holywell, Swords, County Dublin

Engineering Report For Planning

TABLE OF CONTENTS

1. INTRODUCTION

1.1 Background

This report has been prepared to supplement a Planning Submission for a proposed residential development at Holywell, Swords, Co. Dublin. This engineering report sets out the basis for the planning submission in terms of surface and foul drainage, water supply and utilities. An Initial Site Specific Flood Risk Assessment is found in Appendix F. A Preliminary Construction & Environmental Management Plan is found in Appendix G. This report should be read in conjunction with the following drawings;

- HHP-ROD-XX-XX-DR-C-0001 Proposed Layout
- HHP-ROD-XX-XX-DR-C-0030 Surface Water Drainage Layout
- HHP-ROD-XX-XX-DR-C-0031 Foul Water Drainage Layout
- HHP-ROD-XX-XX-DR-C-0040 Water Main Supply Layout
- HHP-ROD-XX-XX-DR-C-0090 Proposed Vehicle Tracking Layout

2. PROPOSED DEVELOPMENT

The proposed development involves the construction of 57 no. apartments (21 no. one bedroom; 28 no. two bedroom; and 8 no. three bedroom) in 3 no. apartment blocks incorporating 33 car parking spaces, 166 no. long-stay bicycle parking and 57 no. short-stay bicycle parking.

The proposed development site has an area of approximately 0.77Ha.

3. SITE INFORMATION

3.1 Site Location

The proposed development is located at Holywell, Swords, Co. Dublin. The site is bounded by the Holywell Distributor Road to the north and west, existing residential development to the east and a residential landscaped area to the south. There is an existing ditch that runs along the southern boundary of the site. The site location is outlined in Figure 1.1 below.

The site is situated within the catchment of the River Gaybrook which generally flows in a west-east direction crossing the Holywell Distributer Road in proximity to the south-west corner of the site.

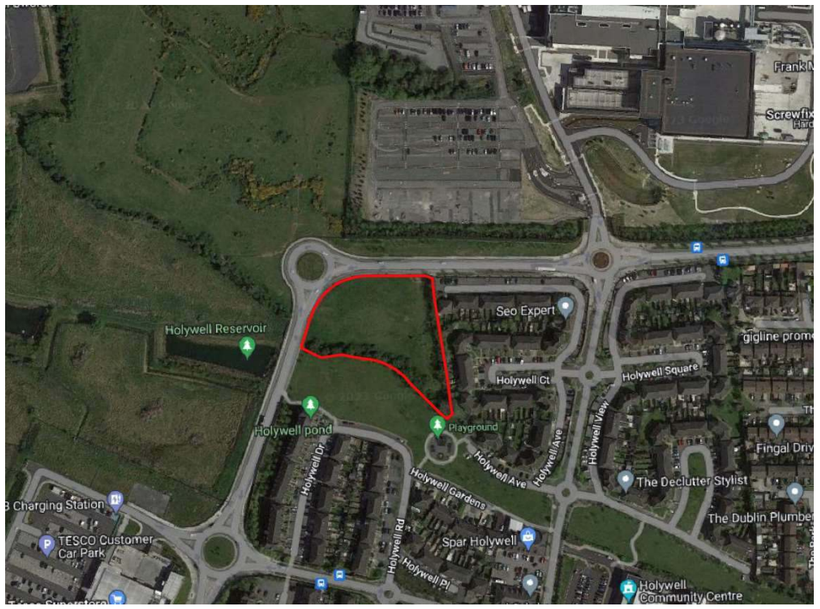


Figure 1.1 Site Location Map and Extents

3.2 Planning History

A planning application was lodged for this site on 30th October 2018 for the development of 29 dwelling units in the following mix: A 2/3 storey duplex/apartment building, 7 no. 2- bedroom ground floor apartments, 2 no. 1-bedroom ground floor apartments, 9 no. 3-bedroom duplex units and 2 no. 2-bedroom two storey apartments. The development also consisted of 9 no. houses comprising 3 no. 3-bedroom mid-terraced units; 2 no. 3-bedroom end of terrace units; 2 no. 4-bedroom semi-detached units and 2 no. 3-bedroom semi-detached units together with all associated site development/car parking/landscaping works. Planning permission was granted on 3rd January 2019 (Planning Ref F18A/0335).

3.3 Site Topography

The site generally slopes from northeast to southwest. The elevation across the site varies by approximately 2.5m from the highest to lowest points of the site (approximately 3.9% gradient). There is an existing drainage ditch located along the southern boundary of the site. Proposed ground levels are to be set above the flood level of the adjacent ditch.

3.4 Site Hydrology and Flood Risk Assessment

The site is located within the catchment of the River Gaybrook. The River Gaybrook rises approximately 930m southwest of the development site within the Airside Retail Park. The river generally flows in a north easterly direction, where it ultimately discharges to the Malahide Estuary, approximately 3.4km northeast of the development site. According to the OPW Flood Studies Update (FSU) Web Portal, the catchment measures approximately 5.26km^2 in size as outlined in Figure 3.1 below.

Refer to Appendix A for details of the GSI Maps.

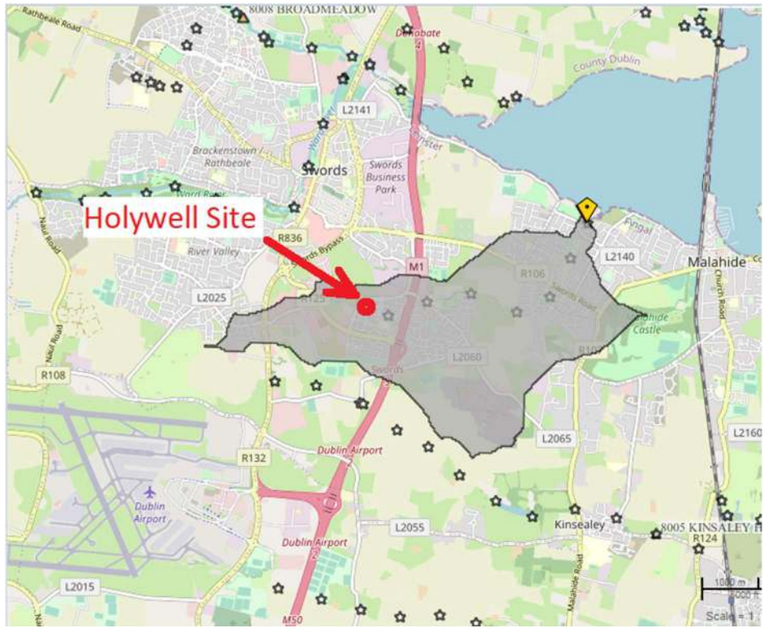


Figure 3.1 FSU Web Portal River Gaybrook Catchment

A detailed Flood Risk Assessment has been prepared to supplement this report. Compensatory flood storage will be provided on the site. Refer to Flood Risk assessment document HHP-ROD-XX-XX-RP-C-0002 for further details.

3.5 Site Geology

Bedrock information obtained from the GSI website indicates that the proposed development site is underlain by the Malahide Formation, consisting of argillaceous

bioclastic limestone shale. The records also show an anticlinal axis at the bedrock which crosses the northwest corner of the site.

Subsoil information obtained from the GSI website indicates that the site is underlain by till derived from limestones. These is also evidence of alluvium shown along the southern boundary of the site where the ditch is located.

Refer to Appendix A for GSI Maps.

4. WATER SUPPLY

This section describes the existing water supply network in the vicinity of the site and summarises the proposed watermain infrastructure required to serve the proposed development.

4.1 Existing Water Supply

The development lands are not currently served by a water supply, however there is an existing 300mm dia. watermain pipe located at Holywell Distributor Road, immediately to the north of the site. The records indicate that there is a spur from this watermain that crosses the Holywell Distributor Road to the north of the site and is capped at the northern site boundary.

Refer to Appendix B for Existing Drainage and Watermain Records.

4.2 Proposed Water Supply

The site is to be connected to the spur at the northern boundary of the site. This spur is connected to the existing water supply network on Holywell Distributer Road, which is indicated to be 300 mm in diameter from Irish Water records. It is proposed to provide a new 100mm dia. watermain to serve the proposed development.

A Pre-Connection Enquiry form was submitted to Irish Water and a Confirmation of Feasibility letter was subsequently received on the 2nd March 2023 which states that a connection to public water supply infrastructure is feasible without any upgrade works being required.

The daily demand has been calculated as 23.1m^3/day, refer to section 5.2.1 below.

All watermains will be constructed in accordance with Irish Water requirements.

Refer to Appendix B for Watermain Records provided by Fingal County Council.

Refer to Appendix C for Irish Water Correspondences.

Refer to Appendix D for Proposed Water Main Supply Layout.

5. FOUL DRAINAGE

It is proposed to provide new separate surface and foul drainage systems to serve the proposed development. This section describes the existing foul drainage services on or near the site and summarises the additional foul drainage infrastructure required to serve the proposed development.

5.1 Existing Foul Drainage

Drainage records obtained from Fingal County Council have identified an existing 225mm dia. foul water sewer located at Holywell Distributer Road, immediately north of the site. The records indicate that the existing asset flows in an eastly direction.

Refer to Appendix B for existing drainage and watermain Records.

5.2 Proposed Foul Drainage

It is proposed to construct a new foul sewer network to serve the development. Foul effluent from the site will discharge to the existing 225mm dia. foul sewer on Holywell Distributer Road.

A Confirmation of Feasibility letter received from Irish Water on the 2nd March 2023 states that a connection to the public foul infrastructure is feasible without any upgrade works being required.

Refer to Appendix C for Irish Water Correspondences.
Refer to Appendix D for the proposed Foul Drainage Layout

5.2.1 Hydraulic & Organic Loading

Daily foul discharge has been estimated based on proposed dwelling numbers and sizes in accordance with EPA and Irish Water guidelines.

The projected total wastewater discharges are indicated in Table 5.1 below:

Table 5.1 Hydraulic and Organic Loading

Dwelling	No. of Units	Population Equivalent (Avg. 2.7 persons per dwelling)	Per Capita WW Flow (l/person/day)	l/day	BOD (g/day per person)	Organic Loading (g/day BOD5)
Apartments	57	153.9	150	23,085	60	9,234

In accordance with Section 3.6 of the Irish Water Code of Practice for Wastewater Infrastructure (2020), a 10% of unit consumption allowance has been made for infiltration.

Dry Weather Flows (DWF):= 57*150*2.7*1.1 = 25,394 litres per day.

Assuming 6 times dry weather flow (DWF), the peak hydraulic discharge arising from this development is: 1.76 l/second.

The pipe network has been designed to ensure that sufficient hydraulic capacity and cleansing velocities are achieved, in accordance with Irish Water Code of Practice.

Max Organic Load:
= 9.234 kg (BOD_5)/day.
Population Equivalent Value:
= 153.9 P.E.

All foul drainage will be constructed in accordance with Greater Dublin Region Code of Practice for Drainage Works and Irish Water requirements.

6. SURFACE WATER DRAINAGE

It is proposed to provide new separate surface and foul drainage systems to serve the proposed development.

This section outlines the existing surface water drainage services onsite and the proposals for the additional surface water drainage requirements as part of the development.

6.1 Existing Surface Water Drainage

The site appears to have no existing surface water drainage infrastructure within the boundary. The nearest surface water networks are located immediately west and north of the site on Holywell Distributer Road.

It appears that the current drainage regime for the subject site is that surface water drains via infiltration and via overland flow routes to the surrounding surface water network.

6.2 Proposed Surface Water Drainage

As part of the development, a number of different SuDS measures are proposed to minimise the impact on water quality and water quantity of the runoff and maximise the amenity and biodiversity opportunities within the site.

The existing topography will allow for the site to drain by gravity to the nearby existing 1200 mm dia. surface water pipe located at Holywell Distributer Road to the southwest of the site.

It is proposed to construct a new surface water drainage system for the development to collect and convey runoff to the outfall location. The site will be served by a new network consisting of surface water pipes, blue / green roofs, permeable paving areas and a detention basin. The lower sub-base levels of the permeable paving, the blue/green roofs and detention basin will provide for the attenuation storage requirements on site as a result of the residential development.

6.2.1 SUDS Approach

The proposed SuDS measures for the site will include Source Control measures as part of a Management Train whereby the surface water is managed locally in small sub-catchments rather than being conveyed to and managed in large systems further down the catchment. The combination of the SuDS measures listed below will maximise the potential for surface water attenuation, reducing the impact on the existing surface water drainage network downstream. The proposed techniques will offer high level of treatment processes and nutrient removal of the runoff, particularly during the 'first flush'. Finally, the various measures will offer significant amenity and biodiversity opportunities compared to other drainage systems.
It is proposed to provide the following SuDS measures:

- Blue/green roof systems
- Permeable paving to all footway and parking bay areas
- Detention basin
- Flow control devices to limit discharge

A total of 297m^3 of storage will be provided for the 1 in 100-year event (including 20% for climate change). This storage will be provided within the permeable paving sub-base layers, the detention basin and the blue/green roofs. The permeable paving for the footpaths and parking bays and blue/green roofs for the buildings will attenuate the associated runoff from these areas at source. The runoff associated with the access road will be attenuated in the detention basin. The rate of surface water discharge shall be restricted to QBAR (2.13 l/s/ha) for the 1 in 100-year rainfall event in accordance with GDSDS Volume 2 New Development. This equates to a total permitted discharge of approximately 0.8 l/s from the site. Table 6.1 below summarises the attenuation storage provided on the site.

Table 6.1 – Attenuation Storage Provided

Location	Catchment Area	Attenuation Storage Required
Blue / Green Roofs – Apartment Blocks	1,343m^2	112.77m^3
Permeable Paving – Footpaths and Parking Bays	1,345m^2	112.98m^3
Detention Basins - Access Road and Turning Heads	846m^2	71.05m^3
Total Attenuation Provided		**296.8m^3**

The provision of SuDS measures to convey, store and manage the discharge of surface water to the receiving surface water network will aid in managing flood risk.

Refer to Appendix D for the proposed Surface Water Drainage Layout

7. UTILITIES

7.1 Existing Utilities

Existing utility records from major utility providers in Ireland were obtained for the purpose of this planning engineering report. The records obtained indicate that ESB, Eir, Gas Networks Ireland, and Virgin Media have existing services in the vicinity of the subject site. These services are located on Holywell Distributor Road adjacent to the site and in the adjacent residential developments. As part of the development, utility infrastructure will be provided to serve the subject site. Consultations at detailed design stage will be undertaken with the relevant utility providers.

Refer to Appendix F for Existing Utility Records.

8. SUMMARY

This report has outlined the engineering items that will be associated with a proposed residential development at the subject site at Holywell, Swords, Co. Dublin. The findings are summarised as follows:

- A detailed Flood Risk Assessment has been prepared to supplement this report. Compensatory flood storage will be provided on the site. Refer to Flood Risk assessment document HHP-ROD-XX-XX-RP-C-0002 for further details.
- The site is to be connected to the existing 300mm dia. watermain pipe located on the Holywell Distributer Road. A new 100mm dia. watermain is to be constructed to serve the development.

- Separate foul and surface water drainage systems will be constructed to serve the site.
- It is proposed to construct a new foul sewer to serve the development. Foul effluent from the site will discharge to the existing 225mm dia. foul sewer located on the Holywell Distributer Road immediately north of the site.
- The site will incorporate a number of SuDS measures.
- Surface water from the site will be collected and attenuated on site, with a peak discharge rate of 2.13 l/s/ha for the 1 in 100 year rainfall event in line with GDSDS, which equates to a total permitted discharge rate of 0.8 l/s.
- Attenuated surface water flows will discharge to the existing 1200mm dia. surface water pipe located at Holywell Distributer Road south-west of the site boundary.
- As part of the development, utility infrastructure will be provided to serve the subject site. Consultations at detailed design stage will be undertaken with the relevant utility providers.

Roughan & O'Donovan
Consulting Engineers
Proposed Residential Development at Holywell, Co. Dublin
Engineering Report for Planning

APPENDIX A
GSI MAPS AND GROUND INVESTIGATION DETAILS

Geological Survey
Suirbhéireacht Gheolaíochta
Ireland | Éireann

Bedrock

Scale: 1:5,000

Geological Survey Ireland

0 0.035 0.07 0.14 mi
0 0.05 0.1 0.2 km

Map Centre Coordinates (ITM) 719,142 745,486
02/08/2023, 11:28:15

Legend

Bedrock Linework 100k ITM 2018

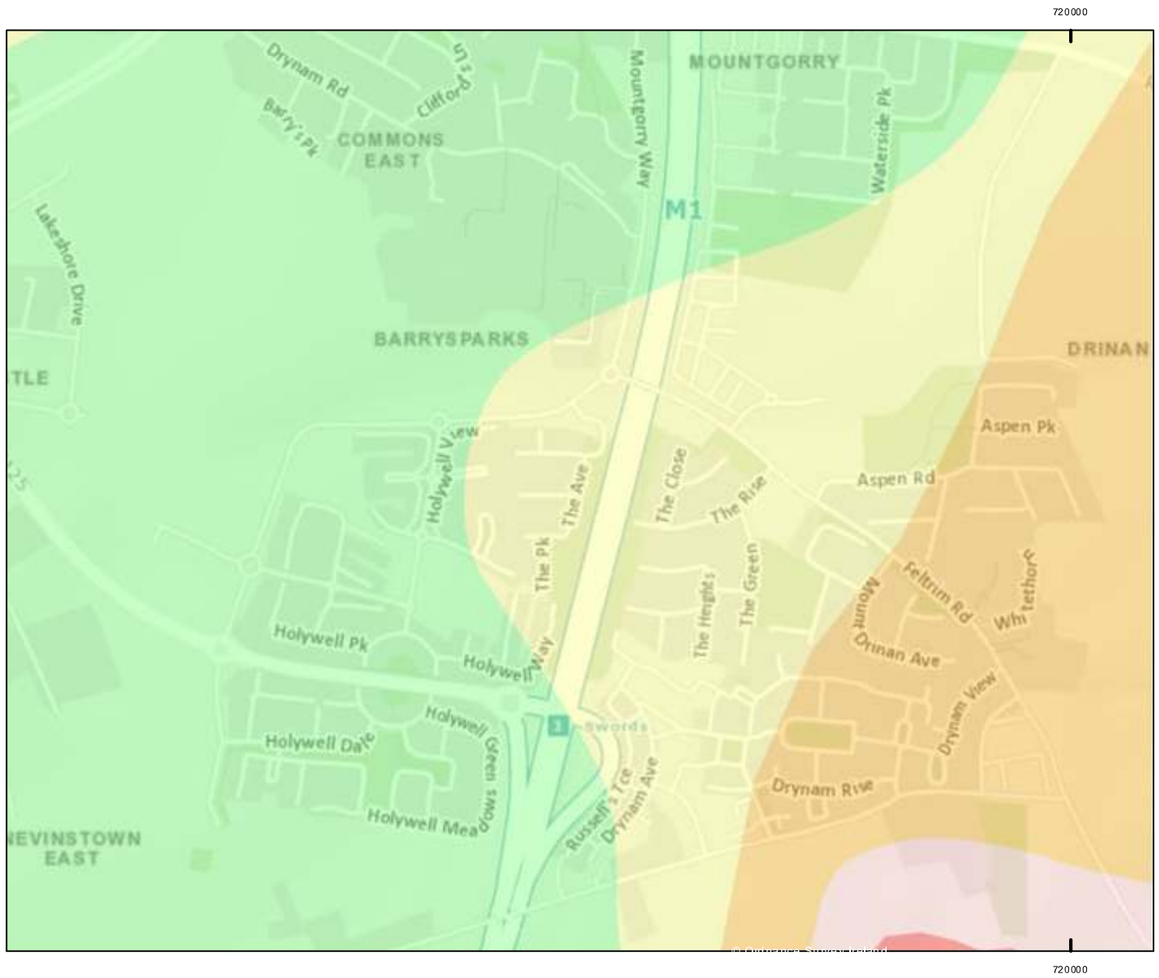
- Anticlinal Axis
- Fault

Bedrock Polygons 100k ITM 2018

- Malahide Formation

Geological Survey
Suirbhéireacht Gheolaíochta
Ireland | Éireann

Groundwater Vulnerability



Scale: 1:10,000

Geological Survey Ireland

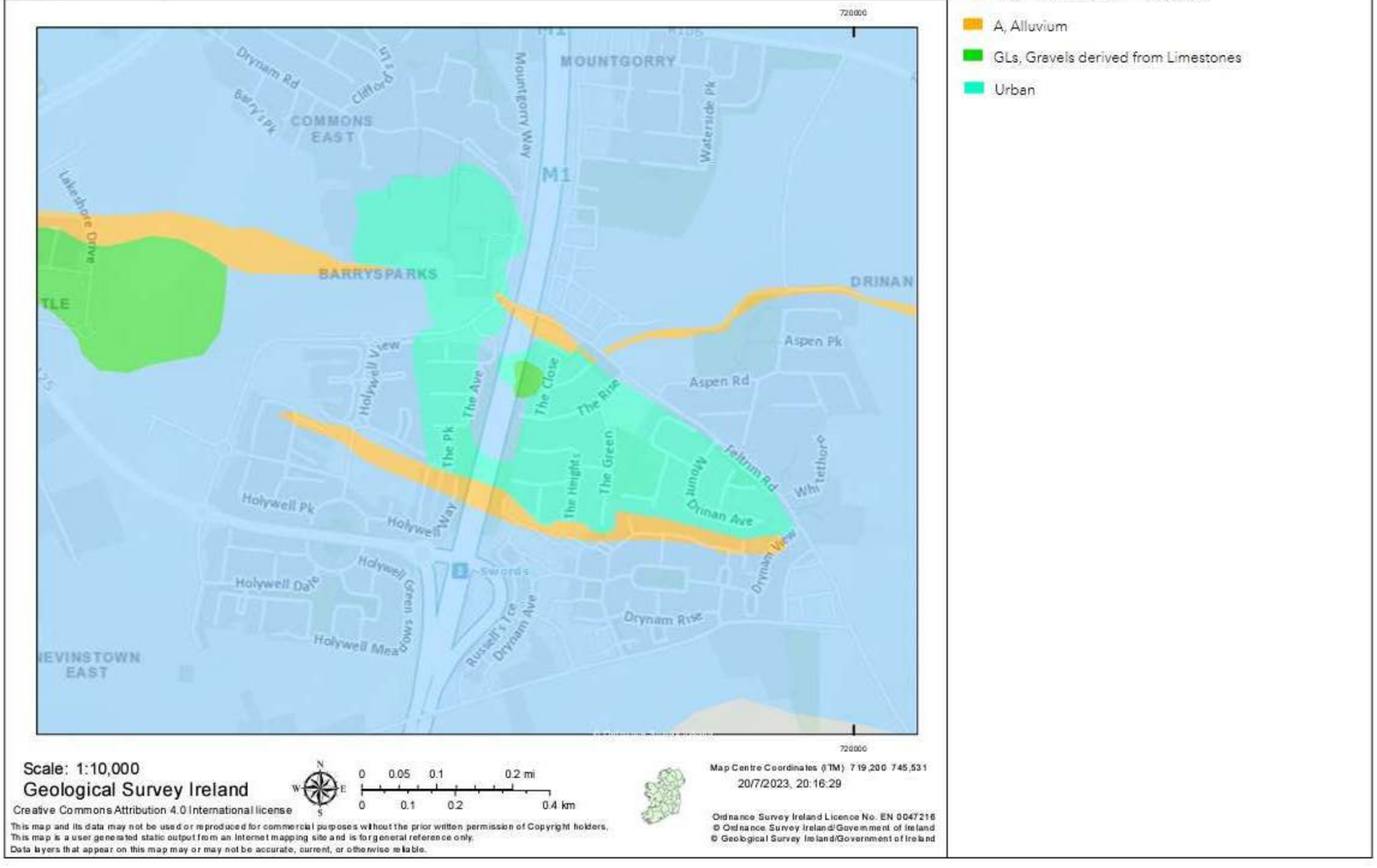
0 0.05 0.1 0.2 mi
0 0.1 0.2 0.4 km

Map Centre Coordinates (ITM) 719,200 745,511
20/7/2023, 20:12:24

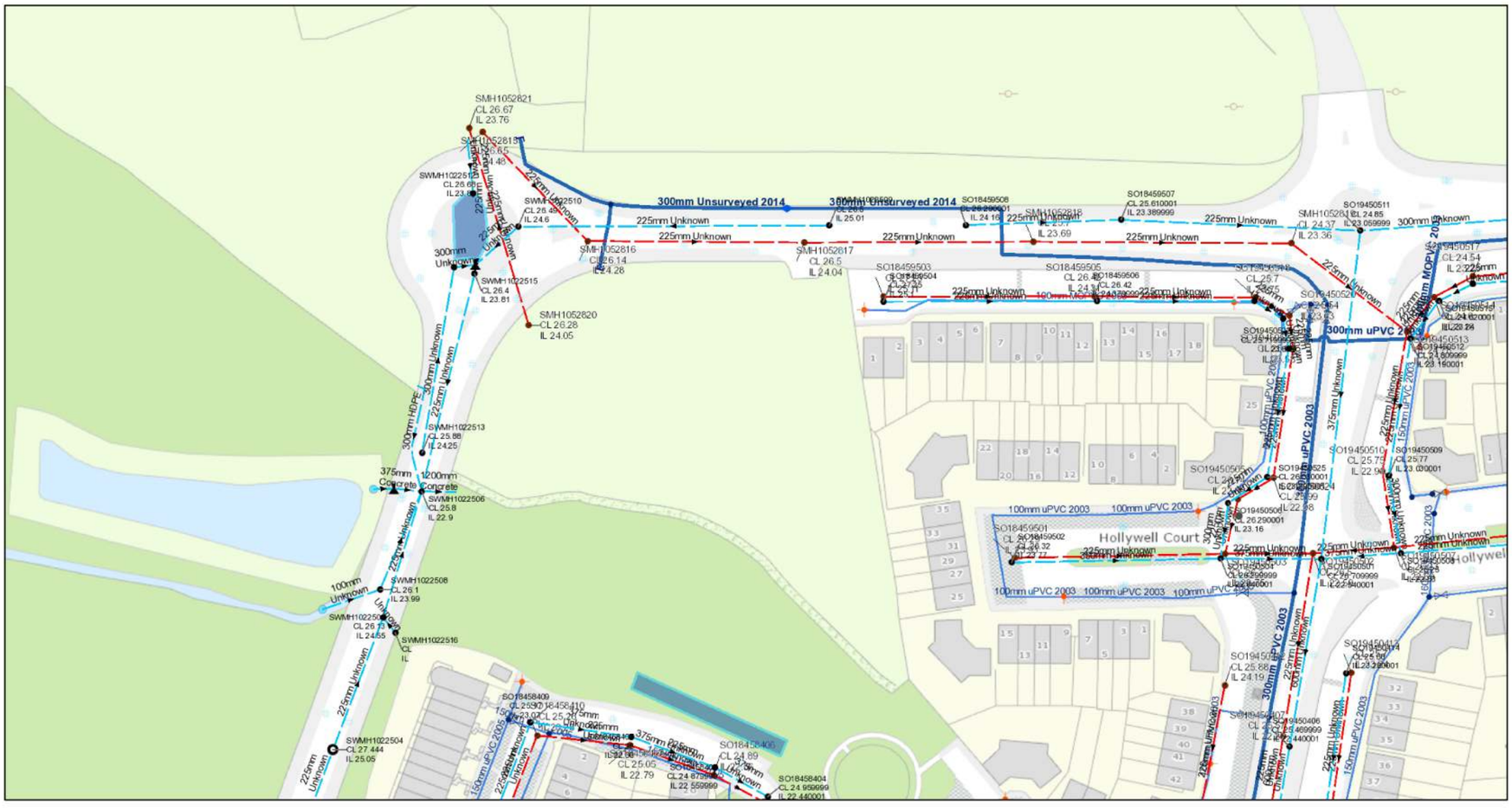
Legend

Groundwater Vulnerability

- Rock at or near Surface or Karst
- Extreme
- High
- Moderate
- Low
- Water



APPENDIX B
UTILITY RECORDS



ArcGIS Web Map

11/8/2022, 10:34:38 AM

- ☐ Storm chambers
- ▨ Storm Detention Areas
- Storm Open Drains
- Storm Weirs
- Storm Clean Outs
- Storm Culverts
- Storm Inlets
  - Gully
  - ● Standard
  - ○ Other; Unknown
- Surface Water Mains
  - Surface Gravity Mains
  - Surface Gravity Mains Private
- Surface Water Pressurised Mains
- Surface Water Pressurised Mains Private
- Storm Discharge Points
  - Outfall
  - Overflow
  - Soakaway

1:1,000

© Ordnance Survey Ireland

ArcGIS Web AppBuilder
© Ordnance Survey Ireland |

A3

open eir Civil Engineering Infrastructure Service	Scale: 1:500	Irish National Grid Co-Ordinates Centre XY: 318863 m, 245547 m
	Date 24/10/2022	Smallworld Powered by GE

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open eir

TITLE: 20221028-056_A3, HOLYWELL, SWORDS, DUBLIN

ESB Networks

COLOUR CODE:

- BLACK - 38KV & HIGHER VOLTAGE OVERHEAD LINES
- GREEN - MV(10KV/20KV) OVERHEAD LINES
- BLUE - LV (400V/230V) OVERHEAD LINES
- CYAN - 38KV & HIGHER VOLTAGE UNDERGROUND CABLE ROUTES
- RED - MV/LV (10KV/20KV/400V/230V) UNDERGROUND CABLE ROUTES

DATE: 28-Oct-2022

** SCALE: 1:1200

** SCALE WHEN PRINTED ON AN A3 PAGE
XY COORDINATES DISPLAYED IN IRISH GRID COORDINATE SYSTEM

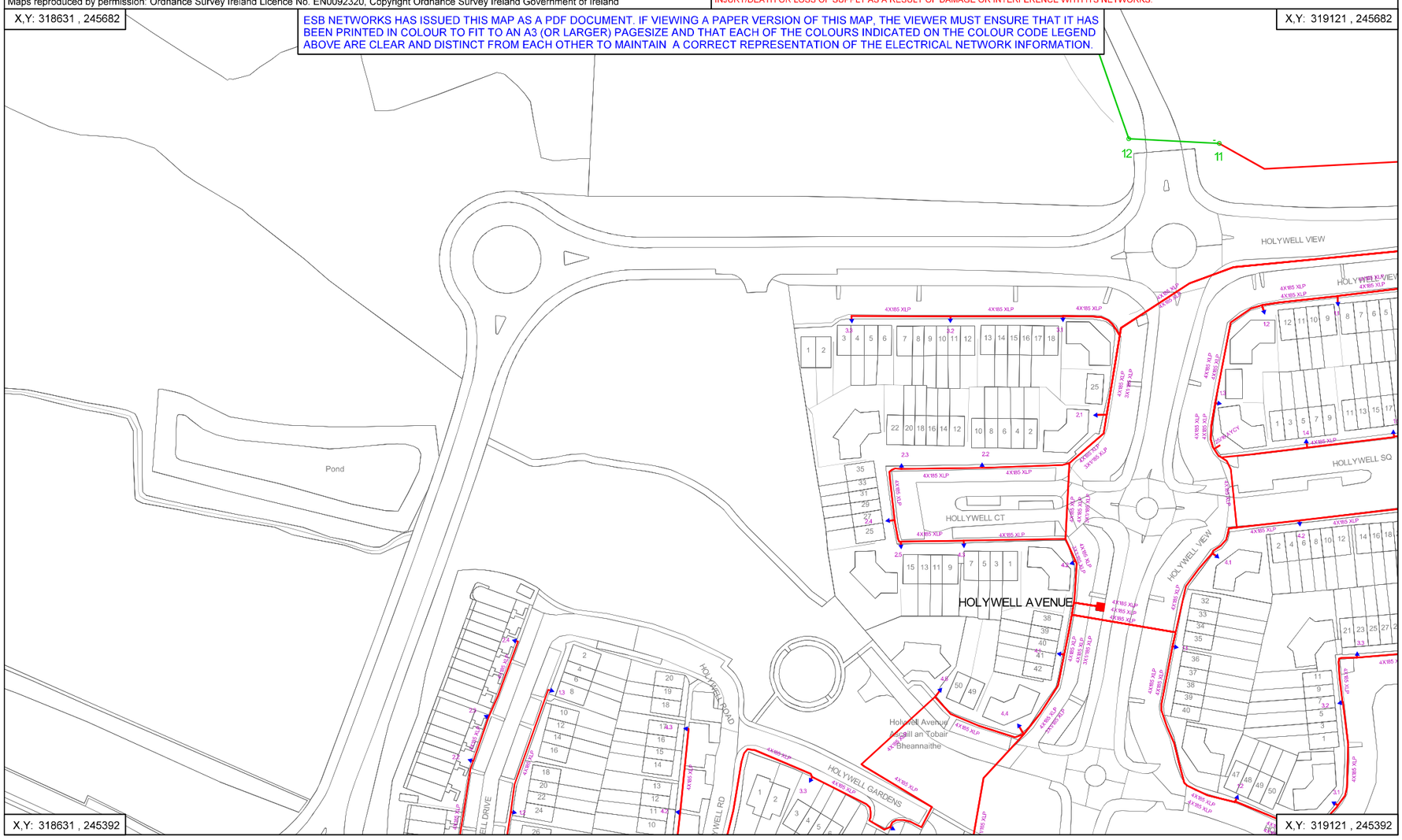
WARNING

THIS MAP INDICATES THE APPROXIMATE LOCATION OF ESB TRANSMISSION (400KV, 220KV, 110KV, 38KV) AND DISTRIBUTION (20KV, 10KV, 230V/400V) UNDERGROUND CABLES AND OVERHEAD LINES IN THE GENERAL AREA OF THE PROPOSED WORKS. ESB NETWORKS TAKES NO RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF THE MAP. IT IS THE USER'S RESPONSIBILITY TO INDEPENDENTLY VERIFY THE INFORMATION AND THE LOCATION OF UNDERGROUND CABLES AND OVERHEAD LINES. LOW VOLTAGE (230V/400V) SERVICE CABLES (E.G. HOUSE SERVICES, FACTORY/SHOP SERVICES, PUBLIC LIGHTING LAMP SERVICES, ETC) ARE NOT INCLUDED BUT THEIR PRESENCE SHOULD BE ANTICIPATED. THE DEPTHS OF UNDERGROUND CABLES MUST NEVER BE ASSUMED. ADDITIONAL MORE DETAILED INFORMATION IS AVAILABLE FOR HIGH VOLTAGE TRANSMISSION UNDERGROUND CABLES (38KV, 110KV, 220KV, 400KV) FROM THE LOCAL ESB NETWORKS TRANSMISSION REPRESENTATIVE - SEE ATTACHED LIST FOR CONTACT DETAILS OR CALL 1800 372 757. NO WORK SHOULD BE CARRIED OUT IN THE VICINITY OF 38KV OR HIGHER VOLTAGE UNDERGROUND CABLES WITHOUT PRIOR CONSULTATION WITH ESB NETWORKS. BEFORE ANY MECHANICAL EXCAVATION IS UNDERTAKEN, THE ACTUAL LOCATION OF ALL UNDERGROUND ELECTRICITY CABLES MUST BE ESTABLISHED AND VERIFIED ON THE SITE USING: (A) UP-TO-DATE MAP RECORDS, (B) CABLE LOCATER EQUIPMENT OPERATED IN BOTH POWER AND RADIO MODES; (C) CAREFUL HAND DIGGING OF TRIAL HOLES USING 'SAFE DIGGING PRACTICE'. REFER ALSO TO 'HSA CODE OF PRACTICE FOR AVOIDING DANGER FROM UNDERGROUND SERVICES'. ESB TAKES NO RESPONSIBILITY FOR AND SHALL BEAR NO LIABILITY, HOWSOEVER ARISING, IN RELATION TO ANY DAMAGE, INJURY/DEATH OR LOSS OF SUPPLY AS A RESULT OF DAMAGE OR INTERFERENCE WITH ITS NETWORKS.

X,Y: 318631 , 245682

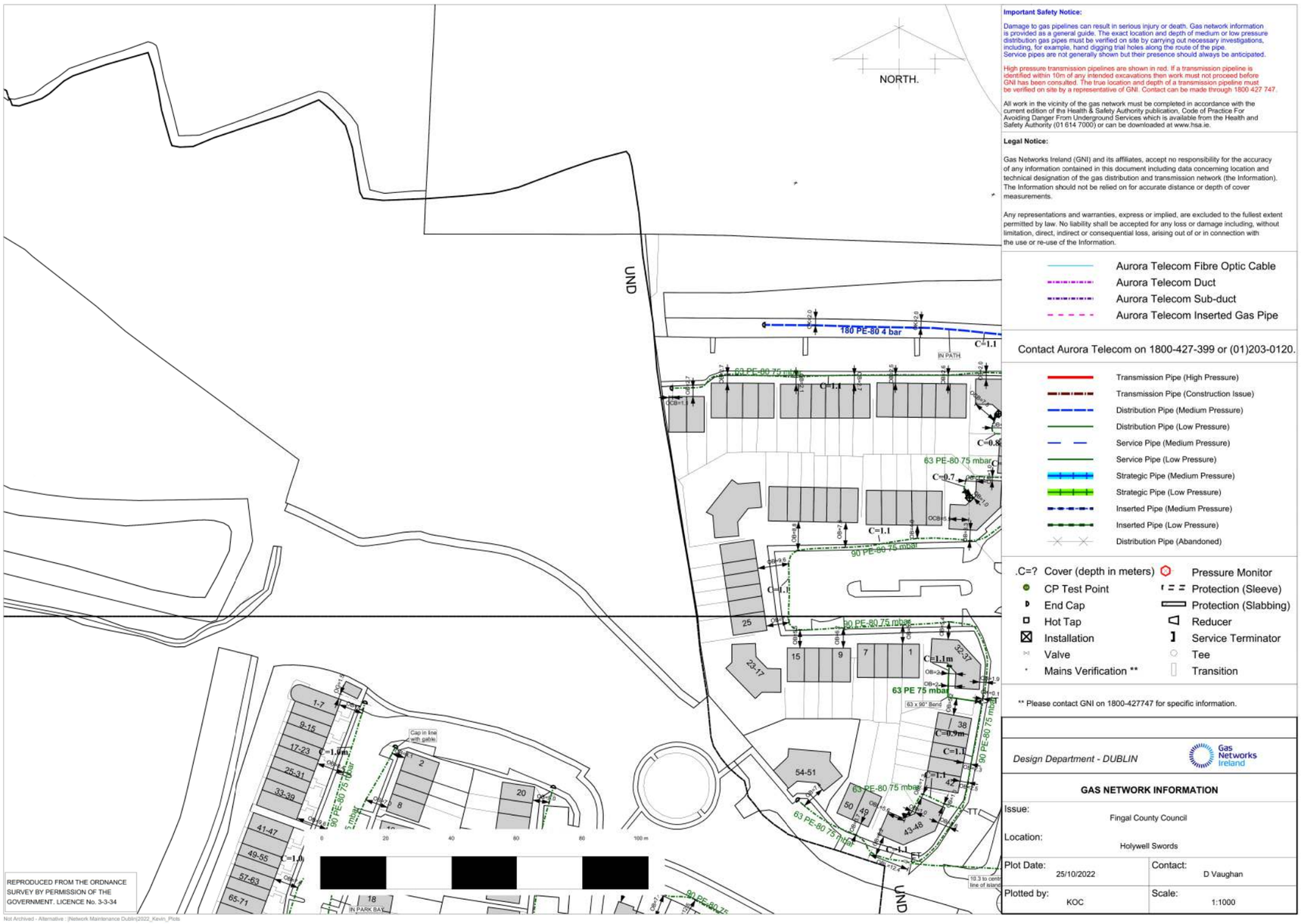
ESB NETWORKS HAS ISSUED THIS MAP AS A PDF DOCUMENT. IF VIEWING A PAPER VERSION OF THIS MAP, THE VIEWER MUST ENSURE THAT IT HAS BEEN PRINTED IN COLOUR TO FIT TO AN A3 (OR LARGER) PAGESIZE AND THAT EACH OF THE COLOURS INDICATED ON THE COLOUR CODE LEGEND ABOVE ARE CLEAR AND DISTINCT FROM EACH OTHER TO MAINTAIN A CORRECT REPRESENTATION OF THE ELECTRICAL NETWORK INFORMATION.

X,Y: 319121 , 245682



X,Y: 318631 , 245392

X,Y: 319121 , 245392



Important Safety Notice:

Damage to gas pipelines can result in serious injury or death. Gas network information is provided as a general guide. The exact location and depth of medium or low pressure distribution gas pipes must be verified on site by carrying out necessary investigations, including, for example, hand digging trial holes along the route of the pipe. Service pipes are not generally shown but their presence should always be anticipated.

High pressure transmission pipelines are shown in red. If a transmission pipeline is identified within 10m of any intended excavations then work must not proceed before GNI has been consulted. The true location and depth of a transmission pipeline must be verified on site by a representative of GNI. Contact can be made through 1800 427 747.

All work in the vicinity of the gas network must be completed in accordance with the current edition of the Health & Safety Authority publication, Code of Practice For Avoiding Danger From Underground Services which is available from the Health and Safety Authority (01 614 7000) or can be downloaded at www.hsa.ie.

Legal Notice:

Gas Networks Ireland (GNI) and its affiliates, accept no responsibility for the accuracy of any information contained in this document including data concerning location and technical designation of the gas distribution and transmission network (the Information). The Information should not be relied on for accurate distance or depth of cover measurements.

Any representations and warranties, express or implied, are excluded to the fullest extent permitted by law. No liability shall be accepted for any loss or damage including, without limitation, direct, indirect or consequential loss, arising out of or in connection with the use or re-use of the Information.

- Aurora Telecom Fibre Optic Cable
- Aurora Telecom Duct
- Aurora Telecom Sub-duct
- Aurora Telecom Inserted Gas Pipe

Contact Aurora Telecom on 1800-427-399 or (01)203-0120.

- Transmission Pipe (High Pressure)
- Transmission Pipe (Construction Issue)
- Distribution Pipe (Medium Pressure)
- Distribution Pipe (Low Pressure)
- Service Pipe (Medium Pressure)
- Service Pipe (Low Pressure)
- Strategic Pipe (Medium Pressure)
- Strategic Pipe (Low Pressure)
- Inserted Pipe (Medium Pressure)
- Inserted Pipe (Low Pressure)
- Distribution Pipe (Abandoned)

- .C=? Cover (depth in meters)
- CP Test Point
- End Cap
- Hot Tap
- Installation
- Valve
- Mains Verification **
- Pressure Monitor
- Protection (Sleeve)
- Protection (Slabbing)
- Reducer
- Service Terminator
- Tee
- Transition

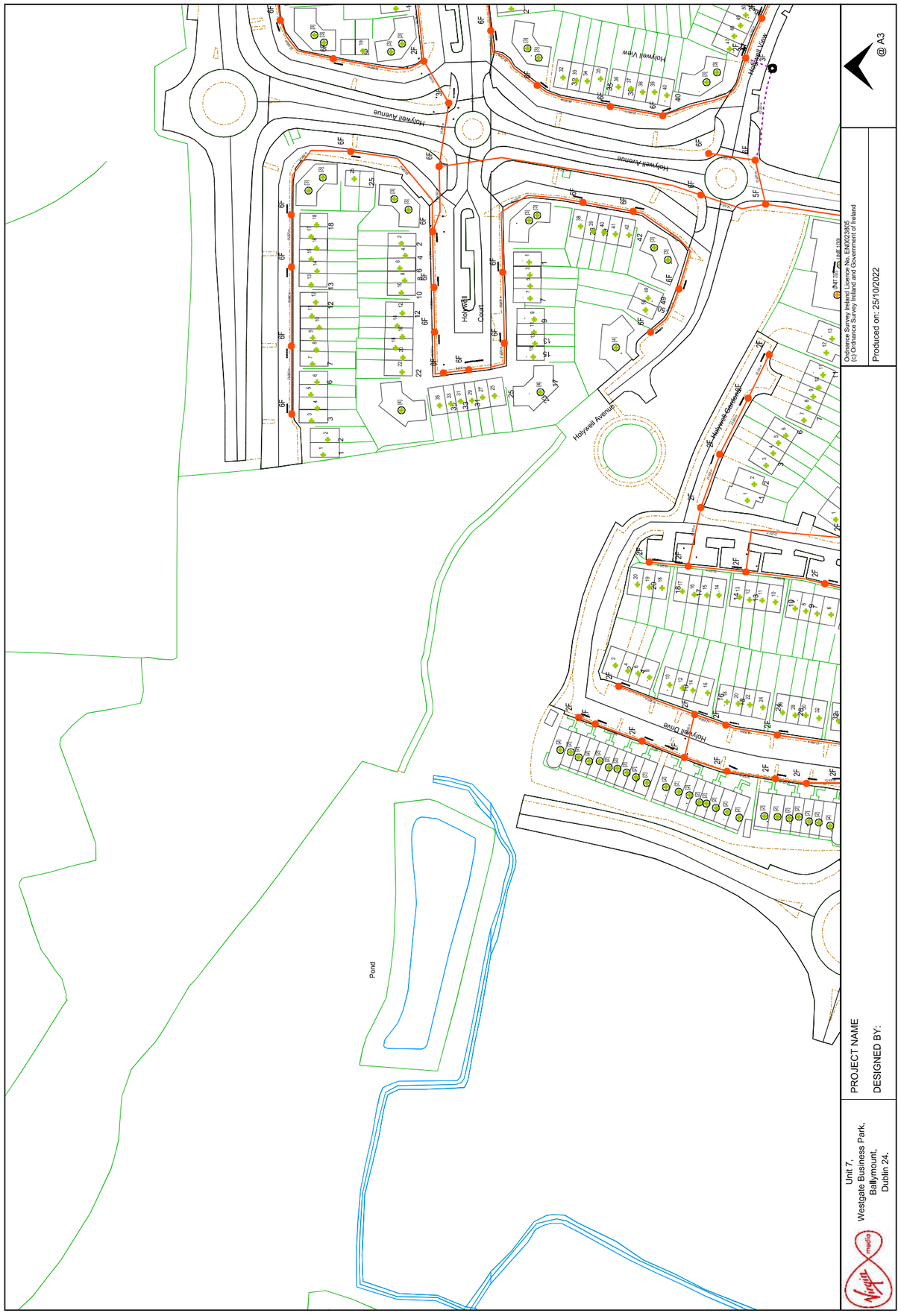
** Please contact GNI on 1800-427747 for specific information.

Design Department - DUBLIN

Gas Networks Ireland

GAS NETWORK INFORMATION

Issue: Fingal County Council	
Location: Holywell Swords	
Plot Date: 25/10/2022	Contact: D Vaughan
Plotted by: KOC	Scale: 1:1000



APPENDIX C
RECORD OF CORRESPONDENCE WITH IRISH WATER

CONFIRMATION OF FEASIBILITY

Antonio Campello

POGA Consulting Eng.
Unit C2, Nutgrove Office Park
Rathfarnham, Dublin 14
Co. Dublin
D14CR20

2 March 2023

Our Ref: CDS23001535 Pre-Connection Enquiry
Holywell, Swords, Dublin, Dublin

Dear Applicant/Agent,

We have completed the review of the Pre-Connection Enquiry.

Irish Water has reviewed the pre-connection enquiry in relation to a Water & Wastewater connection for a Housing Development of 62 unit(s) at Holywell, Swords, Dublin, Dublin, (the **Development).**

Based upon the details provided we can advise the following regarding connecting to the networks;

• **Water Connection**	-	Feasible without infrastructure upgrade by Irish Water
• **Wastewater Connection**	-	Feasible without infrastructure upgrade by Irish Water

This letter does not constitute an offer, in whole or in part, to provide a connection to any Irish Water infrastructure. Before the Development can be connected to our network(s) you must submit a connection application and be granted and sign a connection agreement with Irish Water.

As the network capacity changes constantly, this review is only valid at the time of its completion. As soon as planning permission has been granted for the Development, a completed connection application should be submitted. The connection application is available at www.water.ie/connections/get-connected/

UISCE ÉIREANN : IRISH WATER

Uisce Éireann
Bosca OP 448
Oifig Sheachadta na
Cathrach Theas
Cathair Chorcaí

Irish Water
PO Box 448,
South City
Delivery Office,
Cork City.

www.water.ie

Where can you find more information?

- **Section A -** What is important to know?

This letter is issued to provide information about the current feasibility of the proposed connection(s) to Irish Water's network(s). This is not a connection offer and capacity in Irish Water's network(s) may only be secured by entering into a connection agreement with Irish Water.

For any further information, visit **www.water.ie/connections, email newconnections@water.ie** or contact 1800 278 278**.**

Yours sincerely,

Yvonne Harris

Yvonne Harris
Head of Customer Operations

Section A - What is important to know?

What is important to know?	Why is this important?
Do you need a contract to connect?	• Yes, a contract is required to connect. This letter does not constitute a contract or an offer in whole or in part to provide a connection to Irish Water's network(s). • Before the Development can connect to Irish Water's network(s), you must submit a connection application and be granted and sign a connection agreement with Irish Water.
When should I submit a Connection Application?	• A connection application should only be submitted after planning permission has been granted.
Where can I find information on connection charges?	• Irish Water connection charges can be found at: https://www.water.ie/connections/information/charges/
Who will carry out the connection work?	• All works to Irish Water's network(s), including works in the public space, must be carried out by Irish Water*. *Where a Developer has been granted specific permission and has been issued a connection offer for Self-Lay in the Public Road/Area, they may complete the relevant connection works
Fire flow Requirements	• The Confirmation of Feasibility does not extend to fire flow requirements for the Development. Fire flow requirements are a matter for the Developer to determine. • **What to do?** - Contact the relevant Local Fire Authority
Plan for disposal of storm water	• The Confirmation of Feasibility does not extend to the management or disposal of storm water or ground waters. • **What to do?** - Contact the relevant Local Authority to discuss the management or disposal of proposed storm water or ground water discharges.
Where do I find details of Irish Water's network(s)?	• Requests for maps showing Irish Water's network(s) can be submitted to: datarequests@water.ie
What are the design requirements for the connection(s)?	• The design and construction of the Water & Wastewater pipes and related infrastructure to be installed in this Development shall comply with ***the Irish Water Connections and Developer Services Standard Details and Codes of Practice,*** available at www.water.ie/connections
Trade Effluent Licensing	• Any person discharging trade effluent** to a sewer, must have a Trade Effluent Licence issued pursuant to section 16 of the Local Government (Water Pollution) Act, 1977 (as amended). • More information and an application form for a Trade Effluent License can be found at the following link: https://www.water.ie/business/trade-effluent/about/ **trade effluent is defined in the Local Government (Water Pollution) Act, 1977 (as amended)

APPENDIX D
DESIGN DRAWINGS

HOUSING AT HOLYWELL, SWORDS, COUNTY DUBLIN

PROPOSED LAYOUT
Sheet 1 of 1

Drawing Number: HHP - ROD - XX - XX - DR - C - 0001
Project: HHP | Originator: ROD | Volume: XX | Level: - | Type: DR | Role: C | Number: 0001
Date: AUGUST 2023 | Job No: 23.130 | Rev: P02
Scale (A1): 1:200
Status: S4 - Stage Approval
Drawn: MA | Designed: AS | Checked: CMS | Approved: SK

Roughan & O'Donovan Consulting Engineers
Civil + Structural + Transportation + Environmental
Arena House, Arena Road, Sandyford, Dublin, Ireland
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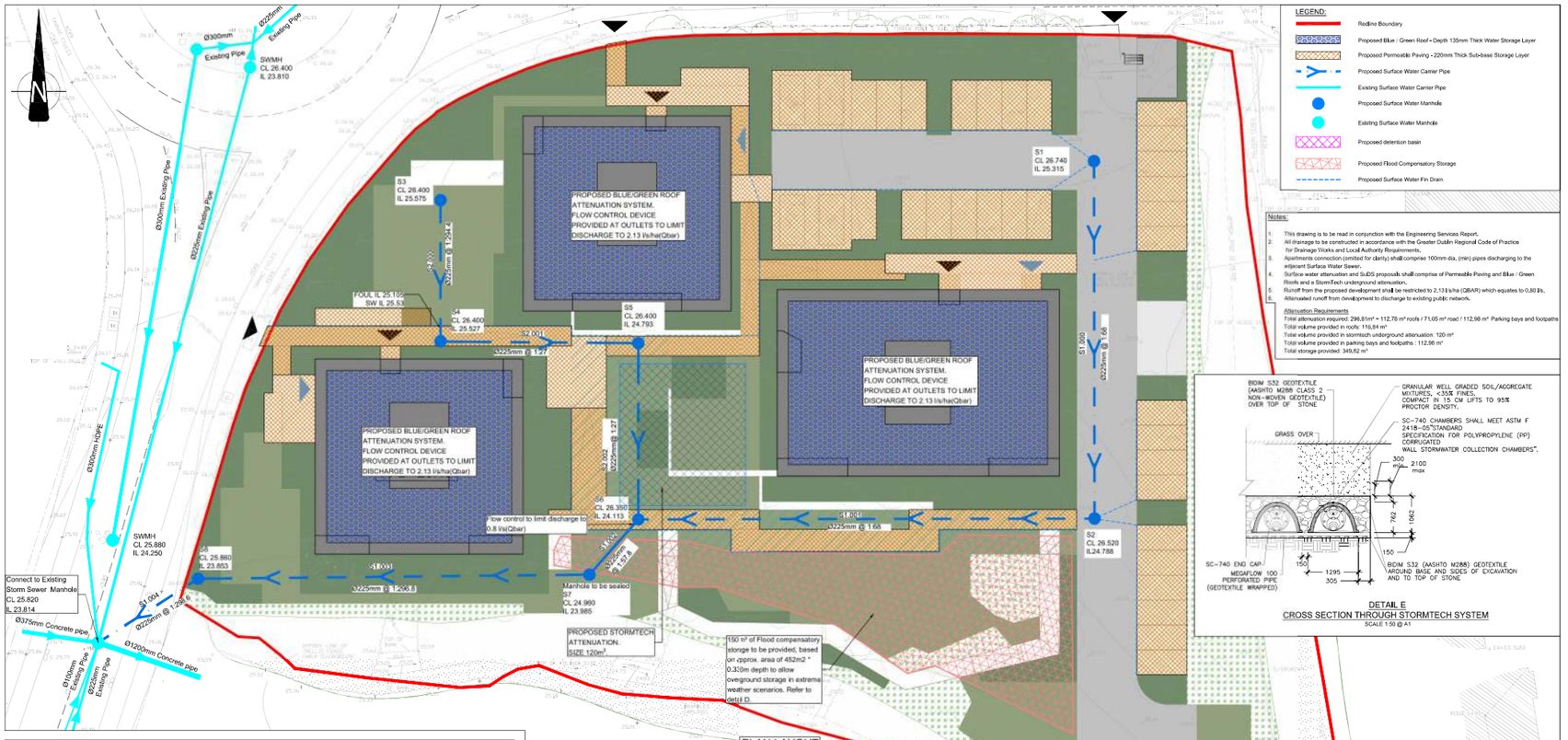
f +353 (0) 1 294 9820
www.rod.ie

No.	Revision	Date	By	Chk'd	App'd
P01	WORK IN PROGRESS	18/09/2023	AS	CMS	SK
P02	PLANNING SUBMISSION	29/09/2023	AS	CMS	SK

Thursday 12 October 2023 14:27:42 I:\2023\23130\03-DWG\L-WIP\01 MODELS\01 CAD\01 DWG\01 STG 1 - EDIT AS NEEDED\HHP-ROD-XX-XX-DR-C-0001.DWG

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



No.	Revision	Date	By	Chk'd	App'd
P01	WORK IN PROGRESS	16/08/2023	AS	CMG	SK
P02	WORK IN PROGRESS - MINOR CHANGES TO COVER LEVELS & GRADIENTS	23/08/2023	AS	CMG	SK
P03	PLANNING SUBMISSION	29/09/2023	AS	CMG	SK

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Project Title: HOUSING AT HOLYWELL, SWORDS, COUNTY DUBLIN

Drawing Title: SURFACE WATER DRAINAGE LAYOUT
Sheet 1 of 1

Drawing Number: Project HHP - Originator ROD - Volume XX - Location XX - Type DR - Role C - Number 0030

Drawn:	Designed:	Checked:	Approved:	Status:	Scale (A1):	Date:	Job No.	Rev:
MA	AS	CMG	SK	S4 - Stage Approval	1:200	AUGUST 2023	23.130	P03

Thursday 12 October 2023 14:31:30 2023\23130\23130-02_WIP\01 MODELS\01 CAD\01 DWG\01 STG 1 - EDIT AS NEEDED\HHP-ROD-XX-XX-DR-C-0030.DWG

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PLAN LAYOUT
SCALE: 1:200@A1

No.	Revision	Date	By	Chk'd	App'd
P01	WORK IN PROGRESS	16/08/2023	AS	CMG	SK
P02	WORK IN PROGRESS - MINOR CHANGES TO COVER LEVELS & GRADIENTS	23/08/2023	AS	CMG	SK
P03	PLANNING SUBMISSION	29/09/2023	AS	CMG	SK

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Project Title: HOUSING AT HOLYWELL, SWORDS, COUNTY DUBLIN

Drawing Title: FOUL WATER DRAINAGE LAYOUT
Sheet 1 of 1

Drawing Number: Project HHP - Originator ROD - Volume XX - Location XX - Type DR - Role C - Number 0031

Drawn:	Designed:	Checked:	Approved:	Status:	Scale (A1):	Date:	Job No.	Rev:
MA	AS	CMG	SK	S4 - Stage Approval	1:200	AUGUST 2023	23.130	P03

Thursday 12 October 2023 14:31:30 2023\23130\23130-02_WIP\01 MODELS\01 CAD\01 DWG\01 STG 1 - EDIT AS NEEDED\HHP-ROD-XX-XX-DR-C-0031.DWG

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

LEGEND:

- REDLINE BOUNDARY
- EXISTING WATERMAIN
- PROPOSED 100mm DIA.WATERMAIN TO IRISH WATER CODE OF PRACTICE
- SCV — PROPOSED SCOUR VALVE
- AV — PROPOSED AIR VALVE
- SV — PROPOSED SLUICE VALVE
- H — PROPOSED HYDRANT
- M — PROPOSED METER
- MC — PROPOSED MANIFOLD CHAMBER
- 46M HYDRANT RADIUS

NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING SERVICES REPORT.
2. ALL WATERMAINS TO BE CONSTRUCTED IN ACCORDANCE WITH IRISH WATER CODE OF PRACTICE AND STANDARD DETAILS.
3. HYDRANTS TO BE CONSTRUCTED IN ACCORDANCE WITH IRISH WATER DETAIL STD-W-18.
4. SLUICE VALVES TO BE CONSTRUCTED IN ACCORDANCE WITH IRISH WATER DETAIL STD-W-15.
5. PIPE BEDDING AND BACKFILL TO BE CONSTRUCTED IN ACCORDANCE WITH IRISH WATER DETAIL STD-W-13.
6. MARKER POSTS TO BE CONSTRUCTED IN ACCORDANCE WITH IRISH WATER DETAIL STD-W-27.
7. THRUST BLOCKS TO BE CONSTRUCTED IN ACCORDANCE WITH IRISH WATER DETAIL STD-W-28.
8. WATERMAIN PIPE MATERIAL, THE SPECIFICATION SHALL BE IN ACCORDANCE WITH SECTION 3.9 OF WATER CODE OF PRACTICE..
9. ALL HYDRANT COVERS, WHERE LOCATED IN GRASS AREAS, SHALL BE SURROUNDED BY A CONCRETE PUNTH. 200mm ALL ROUND AND 100mm DEEP FORMED WITH C20/25 CONCRETE, IN ACCORDANCE WITH SECTION 3.18 OF WATER CODE OF PRACTICE.
10. AIR VALVES TO BE CONSTRUCTED IN ACCORDANCE WITH IRISH WATER DETAIL STD-W-22.
11. SCOUR VALVES TO BE CONSTRUCTED IN ACCORDANCE WITH IRISH WATER DETAIL STD-W-30A.

Ø300mm PIPE WATERMAIN

Connect to Existing Spur Watermain on Holywell Distributor Road in Accordance with Irish Water Standard Detail STD-W-04

NOTE:
Fire-fighting flow rate of 2100lmin/2hrs (35l/s) required across the hydrant system, assuming low pressure this will result in a tank volume of 252m³.

Requirement of Fire Storage Tank to be confirmed following Fire Cert Applicaiton.
Proposed 252m³ Fire Fighting Tank in lieu of above. Detail and manufacturer TBC. Shown as indicative only.

100mm OD PE PIPE WATERMAIN

Fire Tender Connection

Block B
6 storeys
FFL +26.40

Block C
4 storeys
FFL +26.40

Block A
5 storeys
FFL +26.40

6.000

6.764

30.000

Scour Valve to Discharge to Nearest SW Manhole

NOTE:
The distance from a hydrant to a vehicle access roadway or hard standing area for fire appliances is not more than 30m (Kilkenny Fire and Rescue Service Guidance Specification for Fire Hydrants and Fire Fighting)

FOOTWAY TO BE WIDENED TO ALLOW FIRE TENDER ACCESS (EXTENT TO BE AGREED)

PLAN LAYOUT
SCALE: 1:200@A1

No.	Revision	Date	By	Chk'd	App'd
P01	WORK IN PROGRESS	16/08/2023	AS	CMG	SK
P02	PLANNING SUBMISSION	29/09/2023	AS	CMG	SK

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Project Title: HOUSING AT HOLYWELL, SWORDS, COUNTY DUBLIN

Drawing Title: WATER MAIN SUPPLY LAYOUT
Sheet 1 of 1

Drawing Number: Project HHP - Originator ROD - Volume XX - Location XX - Type DR - Role C - Number 0040

Drawn: MA | Designed: AS | Checked: CMG | Approved: SK | Status: S4 - Stage Approval

Scale (A1): 1:200 | Date: AUGUST 2023 | Job No: 23.130 | Rev: P02

Thursday 12 October 2023 14:32:26 2023\23130\23130-02_WIP\01 MODELS\01 CAD\01 DWG\01 STG 1 - EDIT AS NEEDED\HHP-ROD-XX-XX-DR-C-0040.DWG

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Notes:

1. This drawing is to be read in conjunction with the all relevant engineer's and architect's drawings, specifications and designer's risk assessments.
2. All levels are in metres to ordnance datum Malin Head.
3. The topographical information is replicated from information received from others and is issued as background information only.

LEGEND:

- Redline Boundary
- Proposed Road
- Proposed Permeable Paving - 220mm Thick Sub-base Storage Layer
- Proposed Landscaping. Refer to landscaping drawings.
- Proposed Pedestrian Footway

Block B
6 storeys
FFL +26.40

Block C
4 storeys
FFL +26.40

Block A
5 storeys
FFL +26.40

Pumping Appliance

HOLYWELL AVENUE

FOOTWAY TO BE WIDENED TO ALLOW FIRE TENDER ACCESS

Pumping Appliance
Overall Length 7.900m
Overall Width 2.500m
Overall Body Height 3.300m
Min Body Ground Clearance 0.140m
Track Width 2.500m
Lock-to-lock time 4.00s
Curb to Curb Turning Radius 7.750m

PLAN LAYOUT
SCALE: 1:200@A1

No.	Revision	Date	By	Chk'd	App'd
P01	WORK IN PROGRESS	16/08/2023	BDG	BDG	BDG
P02	PLANNING SUBMISSION	29/09/2023	SK	BDG	BDG

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Project Title: HOUSING AT HOLYWELL, SWORDS, COUNTY DUBLIN

Drawing Title: PROPOSED VEHICLE TRACKING LAYOUT
Sheet 1 of 1

Drawing Number: Project SHH - Originator ROD - Volume XX - Location XX - Type DR - Role C - Number 0090

Drawn: SK | Designed: BDG | Checked: BDG | Approved: SK | Status: S4 - Stage Approval

Scale (A1): 1:200 | Date: AUGUST 2023 | Job No: 23.130 | Rev: P02

Thursday 12 October 2023 14:32:26 2023\23130\23130-02_WIP\01 MODELS\01 CAD\01 DWG\01 STG 1 - EDIT AS NEEDED\HHP-ROD-XX-XX-DR-C-0090.DWG

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

APPENDIX E
DRAINAGE CALCULATIONS

Roughan & O'Donovan		Page 1
Arena Road Sandyford Dublin 18, Ireland		Micro Drainage
Date 25/08/2023 11:34 File 23130 SWD P06.MDX	Designed by ciaran.mcgee Checked by	
Innovyze	Network 2019.1	

STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for Storm

Pipe Sizes STANDARD Manhole Sizes STANDARD

FSR Rainfall Model - Scotland and Ireland

Return Period (years)	1	PIMP (%)	100
M5-60 (mm)	15.700	Add Flow / Climate Change (%)	20
Ratio R	0.280	Minimum Backdrop Height (m)	0.200
Maximum Rainfall (mm/hr)	50	Maximum Backdrop Height (m)	1.500
Maximum Time of Concentration (mins)	30	Min Design Depth for Optimisation (m)	0.600
Foul Sewage (l/s/ha)	0.000	Min Vel for Auto Design only (m/s)	0.75
Volumetric Runoff Coeff.	0.750	Min Slope for Optimisation (1:X)	500

Designed with Level Soffits

Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
S1.000	35.853	0.527	68.0	0.059	4.00	0.1	0.600	o	225	Pipe/Conduit	
S1.001	45.851	0.674	68.0	0.023	0.00	0.1	0.600	o	225	Pipe/Conduit	
S2.000	14.147	0.048	294.7	0.000	4.00	0.0	0.600	o	225	Pipe/Conduit	
S2.001	19.805	0.734	27.0	0.000	0.00	0.1	0.600	o	225	Pipe/Conduit	
S2.002	17.674	0.655	27.0	0.000	0.00	0.2	0.600	o	225	Pipe/Conduit	
S1.002	7.395	0.128	57.8	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
S1.003	39.182	0.132	296.8	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
S1.004	11.942	0.040	298.6	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S1.000	40.83	4.38	25.315	0.059	0.1	0.0	1.3	1.59	63.1	7.9
S1.001	39.34	4.86	24.788	0.082	0.2	0.0	1.8	1.59	63.1	10.7
S2.000	41.05	4.31	25.575	0.000	0.0	0.0	0.0	0.76	30.1	0.0
S2.001	40.62	4.44	25.527	0.000	0.1	0.0	0.0	2.53	100.5	0.1
S2.002	40.25	4.56	24.793	0.000	0.3	0.0	0.1	2.53	100.5	0.4
S1.002	39.13	4.93	24.113	0.082	0.5	0.0	1.8	1.72	68.6	11.0
S1.003	36.82	5.80	23.985	0.082	0.5	0.0	1.8	0.75	30.0	11.0
S1.004	36.19	6.06	23.853	0.082	0.5	0.0	1.8	0.75	29.9	11.0

Free Flowing Outfall Details for Storm

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
S1.004	S	25.820	23.813	23.000	0	0

Simulation Criteria for Storm

Volumetric Runoff Coeff	0.750	Additional Flow - % of Total Flow	20.000
Areal Reduction Factor	1.000	MADD Factor * 10m³/ha Storage	2.000
Hot Start (mins)	0	Inlet Coeffiecient	0.800
Hot Start Level (mm)	0	Flow per Person per Day (l/per/day)	0.000
Manhole Headloss Coeff (Global)	0.500	Run Time (mins)	60
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	1

Number of Input Hydrographs	0	Number of Storage Structures	1
Number of Online Controls	1	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FSR	Profile Type	Summer
Return Period (years)	1	Cv (Summer)	0.750
Region	Scotland and Ireland	Cv (Winter)	0.840
M5-60 (mm)	15.700	Storm Duration (mins)	30
Ratio R	0.280		

Online Controls for Storm

Orifice Manhole: S6, DS/PN: S1.002, Volume (m³): 5.0

Diameter (m) 0.021 Discharge Coefficient 0.600 Invert Level (m) 24.113

Storage Structures for Storm

Tank or Pond Manhole: S6, DS/PN: S1.002

Invert Level (m) 24.113

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	182.0	0.762	182.0	0.763	0.0

1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	20.000
Hot Start (mins)	0	MADD Factor * 10m³/ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Number of Input Hydrographs	0	Number of Storage Structures	1
Number of Online Controls	1	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.300
Region	Scotland and Ireland	Cv (Summer)	0.750
M5-60 (mm)	15.400	Cv (Winter)	0.840

Margin for Flood Risk Warning (mm)	300.0	DVD Status	OFF
Analysis Timestep	Fine	Inertia Status	ON
DTS Status	ON		

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	1, 30, 100
Climate Change (%)	0, 0, 0

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S1.000	S1	15 Winter	1	+0%					25.370
S1.001	S2	15 Winter	1	+0%					24.852
S2.000	S3	360 Winter	1	+0%					25.575
S2.001	S4	15 Winter	1	+0%					25.528
S2.002	S5	30 Winter	1	+0%					24.797
S1.002	S6	10080 Winter	1	+0%	1/720 Summer				24.621
S1.003	S7	10080 Winter	1	+0%					24.008
S1.004	S8	10080 Winter	1	+0%					23.877

PN	US/MH Name	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
S1.000	S1	-0.170	0.000	0.14		8.2	OK	
S1.001	S2	-0.161	0.000	0.18		10.8	OK	
S2.000	S3	-0.225	0.000	0.00		0.0	OK	
S2.001	S4	-0.224	0.000	0.00		0.1	OK	
S2.002	S5	-0.221	0.000	0.00		0.4	OK	

1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
S1.002	S6	0.283	0.000	0.01		0.6	SURCHARGED	
S1.003	S7	-0.202	0.000	0.02		0.6	OK	
S1.004	S8	-0.201	0.000	0.03		0.6	OK	

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	20.000
Hot Start (mins)	0	MADD Factor * 10m³/ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Number of Input Hydrographs	0	Number of Storage Structures	1
Number of Online Controls	1	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model		FSR	Ratio R 0.300
Region	Scotland and Ireland	Cv (Summer)	0.750
M5-60 (mm)	15.400	Cv (Winter)	0.840

Margin for Flood Risk Warning (mm)	300.0	DVD Status	OFF
Analysis Timestep	Fine	Inertia Status	ON
DTS Status	ON		

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	1, 30, 100
Climate Change (%)	0, 0, 0

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S1.000	S1	15 Winter	30	+0%					25.400
S1.001	S2	15 Winter	30	+0%					24.890
S2.000	S3	360 Winter	30	+0%					25.575
S2.001	S4	15 Winter	30	+0%					25.528
S2.002	S5	30 Winter	30	+0%					24.797
S1.002	S6	10080 Winter	30	+0%	1/720 Summer				24.724
S1.003	S7	10080 Winter	30	+0%					24.009
S1.004	S8	10080 Winter	30	+0%					23.878

PN	US/MH Name	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
S1.000	S1	-0.140	0.000	0.30		18.1	OK	
S1.001	S2	-0.123	0.000	0.41		25.0	OK	
S2.000	S3	-0.225	0.000	0.00		0.0	OK	
S2.001	S4	-0.224	0.000	0.00		0.1	OK	
S2.002	S5	-0.221	0.000	0.00		0.4	OK	

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
S1.002	S6	0.386	0.000	0.01		0.7	SURCHARGED	
S1.003	S7	-0.201	0.000	0.03		0.7	OK	
S1.004	S8	-0.200	0.000	0.03		0.7	OK	

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	20.000
Hot Start (mins)	0	MADD Factor * 10m³/ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Number of Input Hydrographs	0	Number of Storage Structures	1
Number of Online Controls	1	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model		FSR	Ratio R 0.300
Region	Scotland and Ireland	Cv (Summer)	0.750
M5-60 (mm)	15.400	Cv (Winter)	0.840

Margin for Flood Risk Warning (mm)	300.0	DVD Status	OFF
Analysis Timestep	Fine	Inertia Status	ON
DTS Status	ON		

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	1, 30, 100
Climate Change (%)	0, 0, 0

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S1.000	S1	15 Winter	100	+0%					25.413
S1.001	S2	15 Winter	100	+0%					24.906
S2.000	S3	360 Winter	100	+0%					25.575
S2.001	S4	15 Winter	100	+0%					25.528
S2.002	S5	10080 Winter	100	+0%					24.799
S1.002	S6	10080 Winter	100	+0%	1/720 Summer				24.774
S1.003	S7	10080 Winter	100	+0%					24.009
S1.004	S8	10080 Winter	100	+0%					23.878

PN	US/MH Name	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
S1.000	S1	-0.127	0.000	0.39		23.4	OK	
S1.001	S2	-0.107	0.000	0.53		31.9	OK	
S2.000	S3	-0.225	0.000	0.00		0.0	OK	
S2.001	S4	-0.224	0.000	0.00		0.1	OK	
S2.002	S5	-0.219	0.000	0.00		0.4	OK	

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
S1.002	S6	0.436	0.000	0.01		0.7	SURCHARGED	
S1.003	S7	-0.201	0.000	0.03		0.7	OK	
S1.004	S8	-0.200	0.000	0.03		0.7	OK	

Base flows added to the model to represent the attenuated runoff generated from the Permeable Paving areas and Blue/Green Roof systems.

FOUL SEWERAGE DESIGN

Design Criteria for Foul - Main

Pipe Sizes STANDARD Manhole Sizes STANDARD

Industrial Flow (l/s/ha)	0.00	Add Flow / Climate Change (%)	10
Industrial Peak Flow Factor	0.00	Minimum Backdrop Height (m)	0.200
Flow Per Person (l/per/day)	150.00	Maximum Backdrop Height (m)	1.500
Persons per House	2.70	Min Design Depth for Optimisation (m)	1.200
Domestic (l/s/ha)	0.00	Min Vel for Auto Design only (m/s)	0.75
Domestic Peak Flow Factor	6.00	Min Slope for Optimisation (1:X)	500

Designed with Level Soffits

Network Design Table for Foul - Main

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	Houses	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
F1.000	41.555	0.520	79.9	0.000	42	0.0	1.500	o	225	Pipe/Conduit	
F1.001	5.505	0.056	99.0	0.000	0	0.0	1.500	o	225	Pipe/Conduit	
F1.002	36.192	0.241	150.2	0.000	0	0.0	1.500	o	225	Pipe/Conduit	
F2.000	22.121	0.147	150.5	0.000	15	0.0	1.500	o	225	Pipe/Conduit	
F1.003	29.668	0.212	140.0	0.000	0	0.0	1.500	o	225	Pipe/Conduit	

Network Results Table

PN	US/IL (m)	Σ Area (ha)	Σ Base Flow (l/s)	Σ Hse	Add Flow (l/s)	P.Dep (mm)	P.Vel (m/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
F1.000	25.105	0.000	0.0	42	0.1	25	0.54	1.28	51.1	1.3
F1.001	24.585	0.000	0.0	42	0.1	26	0.50	1.15	45.9	1.3
F1.002	24.529	0.000	0.0	42	0.1	29	0.43	0.94	37.2	1.3
F2.000	25.095	0.000	0.0	15	0.0	18	0.31	0.93	37.2	0.5
F1.003	24.252	0.000	0.0	57	0.2	33	0.49	0.97	38.5	1.8

Roughan & O'Donovan		Page 2
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Innovyze	Network 2019.1	

PIPELINE SCHEDULES for Foul - Main

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
F1.000	o	225	F1	26.250	25.105	0.920	Open Manhole	1200
F1.001	o	225	F2	26.250	24.585	1.440	Open Manhole	1200
F1.002	o	225	F3	26.250	24.529	1.496	Open Manhole	1200
F2.000	o	225	F4	26.520	25.095	1.200	Open Manhole	1200
F1.003	o	225	F4	27.290	24.252	2.813	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
F1.000	41.555	79.9	F2	26.250	24.585	1.440	Open Manhole	1200
F1.001	5.505	99.0	F3	26.250	24.529	1.496	Open Manhole	1200
F1.002	36.192	150.2	F4	27.290	24.288	2.777	Open Manhole	1200
F2.000	22.121	150.5	F4	27.290	24.948	2.117	Open Manhole	1200
F1.003	29.668	140.0	F	26.490	24.040	2.225	Open Manhole	0

APPENDIX F
INITIAL SITE SPECIFIC FLOOD RISK ASSESSMENT

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PROPOSED RESIDENTIAL DEVELOPMENT AT HOLYWELL, CO. DUBLIN

Initial Site Specific Flood Risk Assessment | September 2023

Proposed Residential Development at Holywell Co. Dublin

Initial Site Specific Flood Risk Assessment

Document No: HHP-ROD-XX-XX-RP-C-0002

Author:..... Angelo Sicilia (AS)

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Approver:..... John Paul Rooney (JPR) / Seán Kennedy (SK)

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Proposed Residential Development at Holywell Co. Dublin

Initial Site-Specific Flood Risk Assessment

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APPENDICES

1. INTRODUCTION

Roughan & O'Donovan Consulting Engineers has carried out a Flood Risk Assessment for a greenfield site development at Holywell Co. Dublin for a proposed residential development. This report has been prepared to assess the flood risk to the subject sites and adjacent lands as a result of the proposed development.

1.1 Description of Proposed Development and Study Area

The site is located at Holywell, Swords, Co. Dublin. and is bounded by the Holywell Distributor Road to the north and west, existing residential development to the east and a residential landscaped area to the south. There is an existing ditch that runs along the southern boundary of the site. The site location is outlined in Figure 1.1 below.The site is situated within the catchment of the River Gaybrook which generally flows in a west-east direction and outfalls into the Malahide bay approximately 1 km west of the Malahide Marina.

The proposed development involves the construction of 57 no. apartments (21 no. one bedroom; 28 no. two bedroom; and 8 no. three bedroom) in 3 no. apartment blocks incorporating 33 car parking spaces, 166 no. long-stay bicycle parking and 57 no. short-stay bicycle parking.

Proposed access is located at the north-east corner of the site on Holywell Distribution Road. The proposed finished floor levels are set at 26.4 mOD. The proposed development will incorporate 150m^3 of compensatory flood storage. The development includes landscaping of the surrounding area within the development site and associated utilities & drainage work.

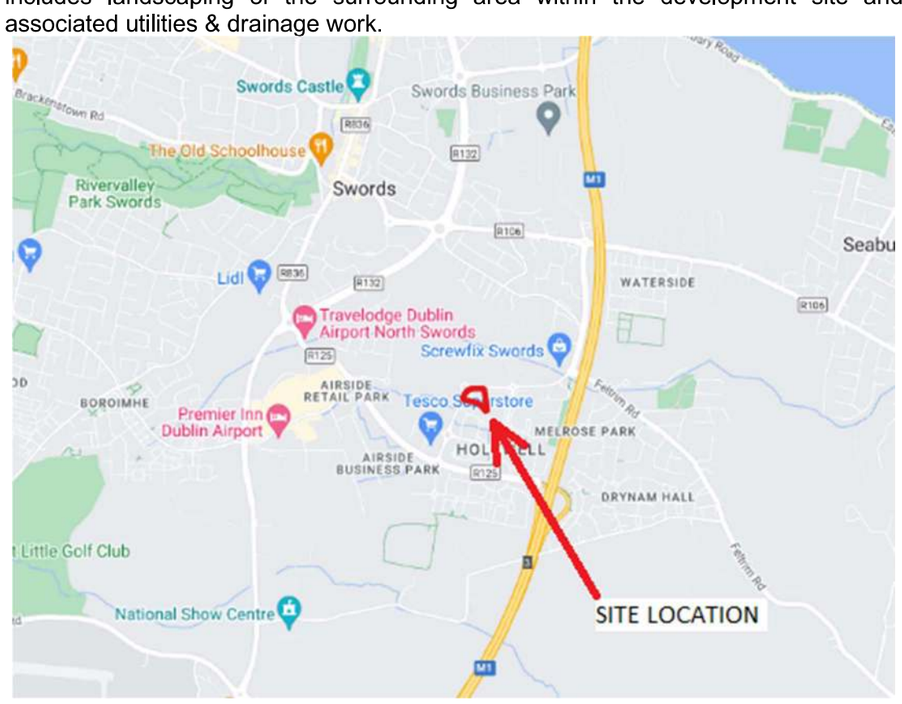


Figure 1.1 Site Location (map underlay source: Google Maps)

2. FLOOD RISK

2.1 Introduction

This report has been prepared in accordance with 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' herein referred to as 'The Guidelines' as published by the Office of Public Works (OPW) and Department of Environment, Heritage and Local Government (DoEHLG) in 2009.

2.2 Identification of Flood Risk

Flood risk is a combination of the likelihood of a flood event occurring and the potential consequences arising from that flood event and is then normally expressed in terms of the following relationship:

Flood risk = Likelihood of flooding x Consequences of flooding.

To fully assess flood risk an understanding of where the water comes from (i.e. the source), how and where it flows (i.e. the pathways) and the people and assets affected by it (i.e. the receptors) is required. Figure 2.1 below shows a source-pathway-receptor model reproduced from 'The Guidelines' (DEHLG-OPW, 2009).

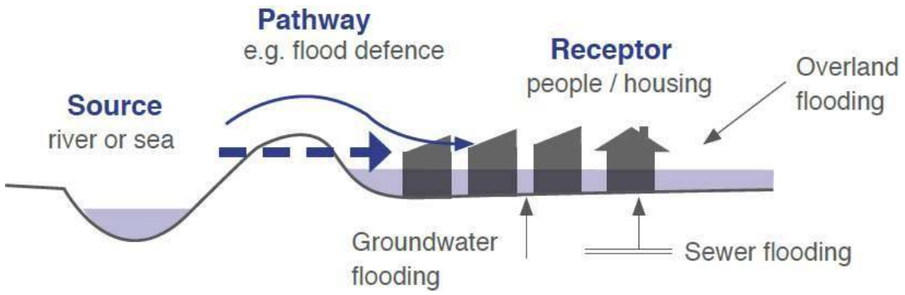


Figure 2.1 Sources, Pathways and Receptors of Flooding

The principal sources of flooding generally are rainfall or higher than normal sea levels. The principal pathways are rivers, drains, sewers, overland flow and river and coastal floodplains. The receptors can include people, their property and the environment. All three elements as well as the vulnerability and exposure of receptors must be examined to determine the potential consequences.

The Guidelines set out a staged approach to the assessment of flood risk with each stage carried out only as needed. The stages are listed below:

- *Stage I Flood Risk Identification* – to identify whether there may be any flooding or surface water management issues.
- *Stage II Initial Flood Risk Assessment* – to confirm sources of flooding that may affect an area or proposed development, to appraise the adequacy of existing information and to scope the extent of the risk of flooding which may involve preparing indicative flood zone maps.
- *Stage III Detailed Flood Risk Assessment* – to assess flood risk issues in sufficient detail and to provide a quantitative appraisal of potential flood risk to a proposed or existing development or land to be zoned, of its potential impact on flood risk elsewhere and of the effectiveness of any proposed mitigation measures.

2.3 Likelihood of Flooding

The Guidelines define the likelihood of flooding as the percentage probability of a flood of a given magnitude or severity occurring or being exceeded in any given year. It is generally expressed as a return period or annual exceedance probability (AEP). A 1% AEP flood indicates a flood event that will be equalled or exceeded on average once every hundred years and has a return period of 1 in 100 years. Annual Exceedance probability is the inverse of return period as shown Table 2.1 below.

Table 2.1 Correlation Between Return Period and AEP

Return Period (years)	Annual Exceedance Probability (%)
1	100
10	10
50	2
100	1
200	0.5
1000	0.1

2.4 Definition of Flood Zones

Flood zones are geographical areas within which the likelihood of flooding is in a particular range. These are split into three categories in The Guidelines:

Flood Zone A

Flood Zone A where the probability of flooding from rivers and the sea is highest (greater than 1% or 1 in 100 for river flooding or 0.5% or 1 in 200 for coastal/tidal flooding);

Flood Zone B

Flood Zone B where the probability of flooding from rivers and the sea is moderate (between 0.1% or 1 in 1000 and 1% or 1 in 100 for river flooding and between 0.1% or 1 in 1000 or 0.5% or 1 in 200 for coastal/tidal flooding);

Flood Zone C

Flood Zone C where the probability of flooding from rivers and the sea is low (less than 0.1% or 1 in 1000 for both river and coastal/tidal flooding. Flood Zone C covers all plan areas which are not in zones A or B.

It is important to note that when determining flood zones the presence of flood protection structures should be ignored. This is because areas protected by flood defences still carry a residual risk from overtopping or breach of defences and the fact that there is no guarantee that the defences will be maintained in perpetuity.

2.5 Sequential Approach & Justification Test

The Guidelines outline the sequential approach that is to be applied to all levels of the planning process. This approach should also be used in the design and layout of a development and the broad philosophy is shown in Figure 2.2 below. In general, development in areas with a high risk of flooding should be avoided as per the sequential approach. However, this is not always possible as many town and city centres are within flood zones and are targeted for development.

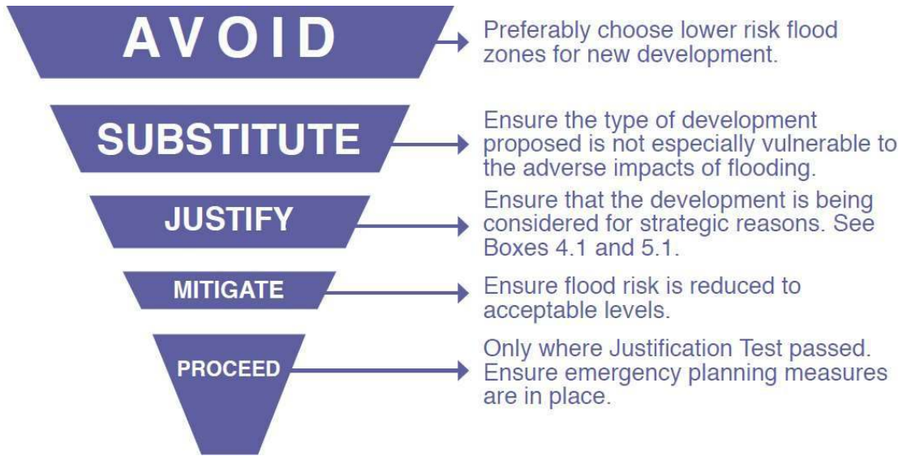


Figure 2.2 Sequential Approach (Source: The Planning System and Flood Risk Management)

The Justification Test has been designed to rigorously assess the appropriateness, or otherwise, of developments that are being considered in areas of moderate or high flood risk. The test comprises the following two processes.

- The first is the Plan-making Justification Test and is used at the plan preparation and adoption stage where it is intended to zone or otherwise designate land which is at moderate or high risk of flooding.
- The second is the Development Management Justification Test and is used at the planning application stage where it is intended to develop land at moderate or high risk of flooding for uses or development vulnerable to flooding that would generally be inappropriate for that land.

Table 2.2 Matrix of Vulnerability Versus Flood Zone to Illustrate Appropriate Development that is Required to Meet the Justification Test (Source: The Planning System and Flood Risk Management)

	Flood Zone A	Flood Zone B	Flood Zone C
Highly vulnerable development (including essential infrastructure)	Justification Test	Justification Test	Appropriate
Less vulnerable development	Justification Test	Appropriate	Appropriate
Water-compatible development	Appropriate	Appropriate	Appropriate

3. STAGE 1: FLOOD RISK IDENTIFICATION

3.1 General

This Stage 1 Flood Risk Identification includes a review of the existing information and the identification of any flooding or surface water management issues in the study area that may warrant further investigation.

3.2 Vulnerability

As per the OPW Guidelines, the proposed development is classified as "highly vulnerable" development as it comprises residential uses. The guidelines stipulate that typically highly vulnerable developments are only appropriate within Flood Zone C (low risk areas).

3.3 Information Sources Consulted

The following information sources were consulted as part of the Stage 1 Flood Risk Identification:

Table 3.1 Information Sources Consulted

Source	Data Gathered
Primary Sources of Baseline Data	
Catchment Flood Risk Assessment and Management Study (CFRAM): www.floodinfo.ie	Fluvial, Pluvial, Coastal flooding examined
National Indicative Fluvial Maps: www.floodinfo.ie	National Indicative Fluvial Maps examined
OPW Past Flood Events Mapping: www.floodinfo.ie	OPW Records of Fluvial, Pluvial, Coastal flooding examined
Fingal East Meath Flood Risk Assessment and Management Study www.floodinfo.ie	FEM FRAM Fluvial Maps consulted
Secondary Sources of Baseline Data	
Strategic Flood Risk Assessment (SFRA) of the Fingal County Development Plan 2023-2029	Fluvial, Coastal and Pluvial flooding examined
Stage 2 Site Specific Flood Risk Assessment Holywell, Swords, Co. Dublin – February 2022 (McCloy Consulting)	Flood Risk assessment examined
Geological Survey of Ireland (GSI) Maps	GSI Teagasc subsoils map consulted to identify if alluvial sediments are shown to be present at development site that may indicate historic flooding.
Historical Maps	OSI 25" mapping assessed
News Reports	News reports published in newspapers or digital news websites.

3.4 Primary Sources of Baseline Data

(i) Fingal East Meath Flood Risk Assessment and Management Study

The FEM FRAM was undertaken as a pilot study for the OPW's Catchment Flood Risk Assessment and Management (CFRAM) programme. The site and

surrounding area are included in the FEM FRAM Swords (south) Fluvial Extent Map. The mapping indicates flooding on site in the 1 in 1000 year event. The mapping also indicates flooding emanating from surface water sources in the upstream catchment.
An overview of the OPW FEM FRAM Swords (south) Fluvial Extent Mapping is reproduced in appendix B.

(ii) National Indicative Fluvial Maps (NIFM)

The indicative fluvial flood maps were finalised in December 2020. The mapping presents flood extents for river reaches that were not previously modelled as part of the CFRAMS and have catchments larger than 5 km2. As per the OPW the use of these maps is to "provide an indication of areas that may be prone to flooding. They are not necessarily locally accurate and should not be used as the sole basis for defining the Flood Zones nor for making decisions on planning applications." As the site was considered as part of the CFRAMS study the NIFM maps are not applicable.

(iii) OPW past flood Events (Floodinfo.ie)

The OPW National Flood Hazard Mapping was examined to identify any recorded flood events within the vicinity of the site. No flood events have been recorded on the site, however, a number of flood events have been recorded within 1 km from the site.
An overview of the OPW National Flood Hazard Mapping is reproduced in appendix B.

3.5 Secondary Sources of Baseline data

The following sources were also examined to identify areas that may be liable to flooding:

(i) Strategic Flood Risk Assessment (SFRA) of the Fingal County Development Plan 2023-2029

The site area is covered as part of the Fingal County Development Plan 2023-2029. There are indicators of flooding on site in the 1 1in 1000 year event in the current climate scenario maps, maps for medium range scenario Flood Extents and High-End future scenario Flood Extents also indicate that there is a probability of flooding on the site.
An overview of the Strategic Flood Risk Assessment Flood Extents Mapping is reproduced in appendix B.

(ii) Stage 2 Site Specific Flood Risk Assessment Holywell, Swords, Co. Dublin – February 2022

A Stage 2 Site Specific Flood Risk Assessment was undertaken for a residential development and associated access roads, car parking and open amenity space in February 2022.

The study concluded that the site is within Flood Zone C, as defined in the OPW Guidelines. However, the site has been shown to be affected by climate change fluvial flooding and pluvial / surface water flooding.

The study indicates that the southern extent of the site is at risk of fluvial flooding in a climate change scenario, and further detailed assessment is required.

(iii) Geological Survey of Ireland Maps

According to the Geological Survey Ireland (GSI), the underlying subsoil is Till derived from limestones, and there are no known karst features (swallow holes, enclosed depressions, wells or springs) within the footprint of the site.

(iv) Historical Maps

Historical Maps were studied. No areas of the site have been identified as liable to flooding.

(v) News reports

No News report of flooding have been found in relation to the site.

3.6 Source – Pathway – Receptor Model

The following source-pathway-receptor model has been developed using the information examined in the Stage I Flood Risk Identification to categorise the sources of flooding, where it flows to (pathway) and the people and infrastructure affected by it (receptors). The likelihood and consequences of each type of flooding have also been assessed to determine the risk. These are summarised in Table 3.2 (taken from Appendix A of the Guidelines).

Table 3.2 Source-Pathway-Receptor Model

Source	Pathway	Receptor	Likelihood	Consequence	Risk
Fluvial flooding	Overbank flow from the Gaybrook Stream	Dwelling houses	*Medium*	*High*	***Medium***
Pluvial / Surface Water flooding	Extreme rainfall events and inadequate surface water drainage	Dwelling houses	*Possible*	*High*	***Medium***
Coastal flooding	Extreme tides, storm surges or wave overtopping	Dwelling houses	*Highly Unlikely*	*High*	***Low***
Ground-water Flooding	Rising groundwater levels	Dwelling houses	*Low* (No reports or geological indicators)	*High*	***Low***

3.7 Stage 1 Conclusions

3.7.1 Fluvial Flooding

A number of sources of information including previous Site-Specific Flood Risk Assessment and Fingal Strategic Flood Risk Assessment Flood Extents maps indicates that the site is at risk of fluvial flooding. Therefore, the risk of fluvial flooding at the site is classified as medium and a Stage 2 – Initial Fluvial Flood Risk Assessment is required for the development.

3.7.2 Coastal Flooding

Coastal flooding was not identified as a source of flooding affecting the site in any of the sources of information consulted including CFRAM maps. The site is more than 20 m above sea level. Therefore, the risk of coastal flooding at the site is classified as low and further assessment is not required.

3.7.3 Surface Water / Pluvial Flooding

The sources consulted indicate that the site may be subject to surface water derived flooding. Flood maps from the SFRA of Fingal County Development Plan, show flood affecting the surrounding developments and road infrastructures on the southern part of the site, this might be related to inadequate drainage capacity of the existing drainage infrastructures and may result in increased runoff volume routed towards the site object of this study. Therefore, the risk of Surface Water flooding at the site is classified as medium and a stage 2 – Initial Surface Water Flood Risk Assessment is required for the development.

3.7.4 Groundwater Flooding

Groundwater flooding was not identified as a source of flooding affecting the site. Therefore, the risk of groundwater flooding is classified as Low and no further assessment is required.

4. STAGE 2 – INITIAL FLOOD RISK ASSESSMENT

4.1 General

The Stage 2 Initial Flood Risk Assessment will confirm the sources of flooding that may affect the proposed development site.

4.2 Sources of Flooding

Flooding from Fluvial / Surface Water

The subject site is situated within the catchment of the Gaybrook Stream. The sources consulted as part of this assessment indicate that as portion of the subject site is at risk of flooding in the present day 1 in 1000 year fluvial event, it is therefore within Flood Zone B as defined in the OPW Guidelines. Flooding of the surface water network upstream of the site also appears to create flow paths that converge on the subject site.

The FEM FRAMS flood map includes model nodes along the Gaybrook Stream indicating flood levels for the 1% AEP and the 0.1% AEP present day. The closest node (3Ga3779) is located just upstream of the subject site before the river enters a culvert that conveys the water to another open channel to the east of Holywell. Table 4.1 shows the predictive 1% AEP and 0.1% AEP present day flood levels at the node 3Ga3779.

Climate Scenario	1% AEP Water Level (mOD)	0.1% AEP Water Level (mOD)
Current	24.08	25.57
High End Future Scenario (HEFS)	N/A	25.88

Note: the location of the node 3Ga3779 upstream of the subject lands means it is likely that the estimated flood levels are higher than they are within the subject lands. For the purposes of this assessment they are seen as appropriate but may be subject to revision downward following further assessment.

As per the Strategic Flood Risk Assessment for the Fingal Development Plan 2023-2029, the development is to include an appropriate freeboard. As per the Fingal SFRA, freeboard for Highly Vulnerable developments is the greater of:

- 500mm freeboard above current scenario; or
- 250mm above the HEFS (for Highly vulnerable developments).

Levels are given in table below. The minimum design floor level is therefore 26.13mOD.

Table 4.1 Design Flood Level

	Current	HEFS
FEM FRAM Flood Maps	25.57	25.88
Freeboard (as per Fingal SFRA)	0.5	0.25
Total	26.07	26.13

As the proposed finished floor level is set at 26.4mOD, the highest water level anticipated from fluvial flooding is 0.27m below the proposed finished floor level.

The layout of the proposed building includes minor areas of structures within the floodplain as derived from the FEMFRAM levels. These structures may displace flood waters within the subject lands in extreme events. A Civils 3D surface model was created to overlay the flood level on the site layout to determine the volume of water displaced by the proposed buildings. Based on this and upon a desktop survey of hydraulic and topographic conditions, the site layout design includes for 150m^3 of compensatory storage. The FEMFRAM levels are seen as appropriately conservative for the site and may be subject to revision downward following further assessment. Further topographic survey and hydraulic analysis at compliance stage will confirm the volumes of compensatory storage required on site to appropriately manage the displaced volumes if required.

The output from the Civils 3D surface model can be found in Appendix C.

Surface Water Flooding

Surface water flooding occurs when the local drainage system cannot convey stormwater flows from extreme rainfall events. The rainwater does not drain away through the normal drainage pathways or infiltrate into the ground but instead ponds on or flows over the ground instead. Surface water flooding is unpredictable as it depends on a number of factors including ground levels, rainfall and the local drainage network. The drainage network for any development on the site will incorporate Sustainable Drainage Systems (SuDS) for the purpose for managing surface water in terms of both flow and quality.

5. JUSTIFICATION TEST

The flood risk assessment carried out for the purposes of the proposed residential development determined that the subject site is potentially within lands at risk of flooding. In this context, the proposed development satisfies the Justification Test as outlined below:

5.1 The subject lands have been zoned or otherwise designated for the use or form of development in an operative development plan, which has been adopted or varied taking account of these Guidelines.

The subject site is zoned "Residential". As per the Fingal Council Development Plan 2023-2029 Residential Zoning Objective states "Provide for residential development and protect and improve residential amenity". The proposed development is suitable for the zonings as it is a residential development. Therefore, the proposed development is suitable for the subject site zoning.

5.2. The proposal has been subject to an appropriate flood risk assessment that demonstrates:

5.2.1. The development proposed will not increase flood risk elsewhere and, if practicable, will reduce overall flood risk;

Fluvial flooding effects the proposed development in the 0.1%AEP event and above. The proposed development will not alter flow paths or existing flood defences. The proposed development will displace a minor amount of flood waters in extreme events though these volumes are to be compensated for on site.

5.2.2 The development proposal includes measures to minimise flood risk to people, property, the economy and the environment as far as reasonably possible;

The residential unit's minimum finished floor level will be in excess of the 0.1%AEP event level plus an appropriate freeboard. The proposed finished floor level was derived from FEMFRAM Study which included an allowance for climate change as per OPW Guidance. The proposed development will incorporate 150m^3 of compensatory storage in combination with flood resistant design features that will manage risk associated with increased risk as a result of future climate change.

5.2.3 The development proposed includes measures to ensure that residual risks to the area and/or development can be managed to an acceptable level as regards the adequacy of existing flood protection measures or the design, implementation and funding of any future flood risk management measures and provisions for emergency services access;

The proposed development has been designed with regard to flood resilient construction measures and materials. The proposed development will be subject to a maintenance plan, the maintenance of the proposed development will be undertaken by the relevant competent specialists.

5.2.4 The development proposed addresses the above in a manner that is also compatible with the achievement of wider planning objectives in relation to development of good urban design and vibrant and active streetscapes.

The proposed residential development will facilitate compact and sustainable urban growth. The proposed development is in keeping with the surrounding areas visuals and uses within Swords.

5.1 Justification Test Conclusions

The proposed development has been determined to have satisfied all requirements of the justification test.

6. CONCLUSION OF STAGE 2 SFRA

The available sources consulted above indicate that a portion of the proposed development site is liable to flood in the 1 in 1000 year current climate scenario from fluvial sources.

Flood risk management measures incorporated within the design will protect the development up to the design flood event (1 in 1000 year + 20% climate change factor) with an appropriate freeboard and shall ensure flood risk is not increased upstream or downstream of the site. Details of the proposed compensatory storage measures (~150m^3) shall be provided at compliance stage.

APPENDIX A

GLOSSARY OF TERMS

Roughan & O'Donovan
Consulting Engineers

Proposal Residential Development at Holywell Co. Dublin
Initial Site Specific Flood Risk Assessment

GLOSSARY OF TERMS

Catchment: The area that is drained by a river or artificial drainage system.

Catchment Flood Risk Assessment and Management Studies (CFRAMS): A catchment-based study involving an assessment of the risk of flooding in a catchment and the development of a strategy for managing that risk in order to reduce adverse effects on people, property and the environment. CFRAMS precede the preparation of Flood Risk Management Plans (see entry for FRMP).

Climate change: Long-term variations in global temperature and weather patterns, which occur both naturally and as a result of human activity, primarily through greenhouse gas emissions.

Core of an urban settlement: The core area of a city, town or village which acts as a centre for a broad range of employment, retail, community, residential and transport functions.

Detailed flood risk assessment: A methodology to assess flood risk issues in sufficient detail and to provide a quantitative appraisal of flood hazard and potential risk to an existing or proposed development, of its potential impact on flood elsewhere and of the effectiveness of any proposed measures.

Estuarial (or tidal) flooding: Flooding from an estuary, where water level may be influenced by both river flows and tidal conditions, with the latter usually being dominant.

Flooding (or inundation): Flooding is the overflowing of water onto land that is normally dry. It may be caused by overtopping or breach of banks or defences, inadequate or slow drainage of rainfall, underlying groundwater levels or blocked drains and sewers. It presents a risk only when people, human assets and ecosystems are present in the areas that flood.

Flood Relief Schemes (FRS): A scheme designed to reduce the risk of flooding at a specific location.

Flood Defence: A man-made structure (e.g. embankment, bund, sluice gate, reservoir or barrier) designed to prevent flooding of areas adjacent to the defence.

Flood Risk Assessment (FRA): FRA can be undertaken at any scale from the national down to the individual site and comprises 3 stages: Flood risk identification, initial flood risk assessment and detailed flood risk assessment.

Flood Risk Identification: A desk- based study to identify whether there may be any flooding or surface water management issues related to a plan area or proposed development site that may warrant further investigation.

Flood Hazard: The features of flooding which have harmful impacts on people, property or the environment (such as the depth of water, speed of flow, rate of onset, duration, water quality, etc.).

Floodplain: A flood plain is any low-lying area of land next to a river or stream, which is susceptible to partial or complete inundation by water during a flood event.

Flood Risk: An expression of the combination of the flood probability, or likelihood and the magnitude of the potential consequences of the flood event.

Flood Storage: The temporary storage of excess run-off, or river flow in ponds, basins, reservoirs or on the flood plain.

Flood Zones: A geographic area for which the probability of flooding from rivers, estuaries or the sea is within a particular range.

Fluvial flooding: Flooding from a river or other watercourse.

Groundwater flooding: Flooding caused by groundwater escaping from the ground when the water table rises to or above ground level.

Initial flood risk assessment: A qualitative or semi-quantitative study to confirm sources of flooding that may affect a plan area or proposed development site, to appraise the adequacy of existing information, to provide a qualitative appraisal of the risk of flooding to development, including the scope of possible mitigation measures, and the potential impact of development on flooding elsewhere, and to determine the need for further detailed assessment.

Freeboard: Factor of safety applied for water surfaces. Defines the distance between normal water level and the top of a structure, such as a dam, that impounds or restrains water.

Justification Test: An assessment of whether a development proposal within an area at risk of flooding meets specific criteria for proper planning and sustainable development and demonstrates that it will not be subject to unacceptable risk nor increase flood risk elsewhere. The justification test should be applied only where development is within flood risk areas that would be defined as inappropriate under the screening test of the sequential risk-based approach adopted by this guidance.

Likelihood (probability) of flooding: A general concept relating to the chance of an event occurring. Likelihood is generally expressed as a probability or a frequency of a flood of a given magnitude or severity occurring or being exceeded in any given year. It is based on the average frequency estimated, measured or extrapolated from records over a large number of years and is usually expressed as the chance of a particular flood level being exceeded in any one year. For example, a 1-in-100 or 1% flood is that which would, on average, be expected to occur once in 100 years, though it could happen at any time.

Ordnance Datum (or OD) Malin: is a vertical datum used by an ordnance survey as the basis for deriving altitudes on maps. A spot height may be expressed as AOD for "above ordnance datum". Usually mean sea level (MSL) is used for the datum. In the Republic of Ireland, OD for the Ordnance Survey of Ireland is Malin Ordnance Datum: the MSL at Portmoor Pier, Malin Head, County Donegal, between 1960 and 1969. Prior to 1970, Poolbeg Ordnance Datum was used: the low water of spring tide at Poolbeg lighthouse, Dublin, on 8 April 1837. Poolbeg OD was about 2.7 metres lower than Malin OD.

Management Train/Treatment Train: the sequence of drainage components that collect, convey, store and treat runoff as it drains through the site.

Mitigation: The term is used to describe an action that helps to lessen the impacts of a process or development on the receiving environment. It is used most often in association with measures that would seek to reduce negative impacts of a process or development.

Pathways: These provide the connection between a particular source (e.g. high river or tide level) and the receptor that may be harmed (e.g. property). In flood risk management, pathways are often 'blocked' by barriers, such as flood defence structures, or otherwise modified to reduce the incidence of flooding.

Pluvial flooding: Usually associated with convective summer thunderstorms or high intensity rainfall cells within longer duration events, pluvial flooding is a result of rainfall-generated overland flows which arise before run-off enters any watercourse or sewer. The intensity of rainfall can be such that the run-off totally overwhelms surface water and underground drainage systems.

Regional Planning Guidelines (RPG): These provide the regional context and priorities for applying national planning strategy to each NUTS III region and encourage greater co-ordination of planning policies at the city/county level. RPGs are an important part of the flood policy hierarchy as they can assist in co-ordinating flood risk management policies at the regional level.

Resilience: Sometimes known as "wet-proofing", resilience relates to how a building is constructed in such a way that, although flood water may enter the building, its impact is minimised, structural integrity is maintained, and repair, drying and cleaning and subsequent reoccupation are facilitated.

Receptors: Things that may be harmed by flooding (e.g. people, houses, buildings or the environment).

Residual risk: The risk which remains after all risk avoidance, substitution and mitigation measures have been implemented, on the basis that such measures can only reduce risk, not eliminate it.

Sequential Approach: The sequential approach is a risk-based method to guide development away from areas that have been identified through a flood risk assessment as being at risk from flooding. Sequential approaches are already established and working effectively in the plan-making and development management processes.

Sustainable Drainage System (SuDS): Drainage systems that are considered to be environmentally beneficial, causing minimal or no long-term detrimental impact.

Site-specific Flood Risk Assessment: An examination of the risks from all sources of flooding of the risks to and potentially arising from development on a specific site, including an examination of the effectiveness and impacts of any control or mitigation measures to be incorporated in that development.

Source: Refers to a source of hazard (e.g. the sea, heavy rainfall).

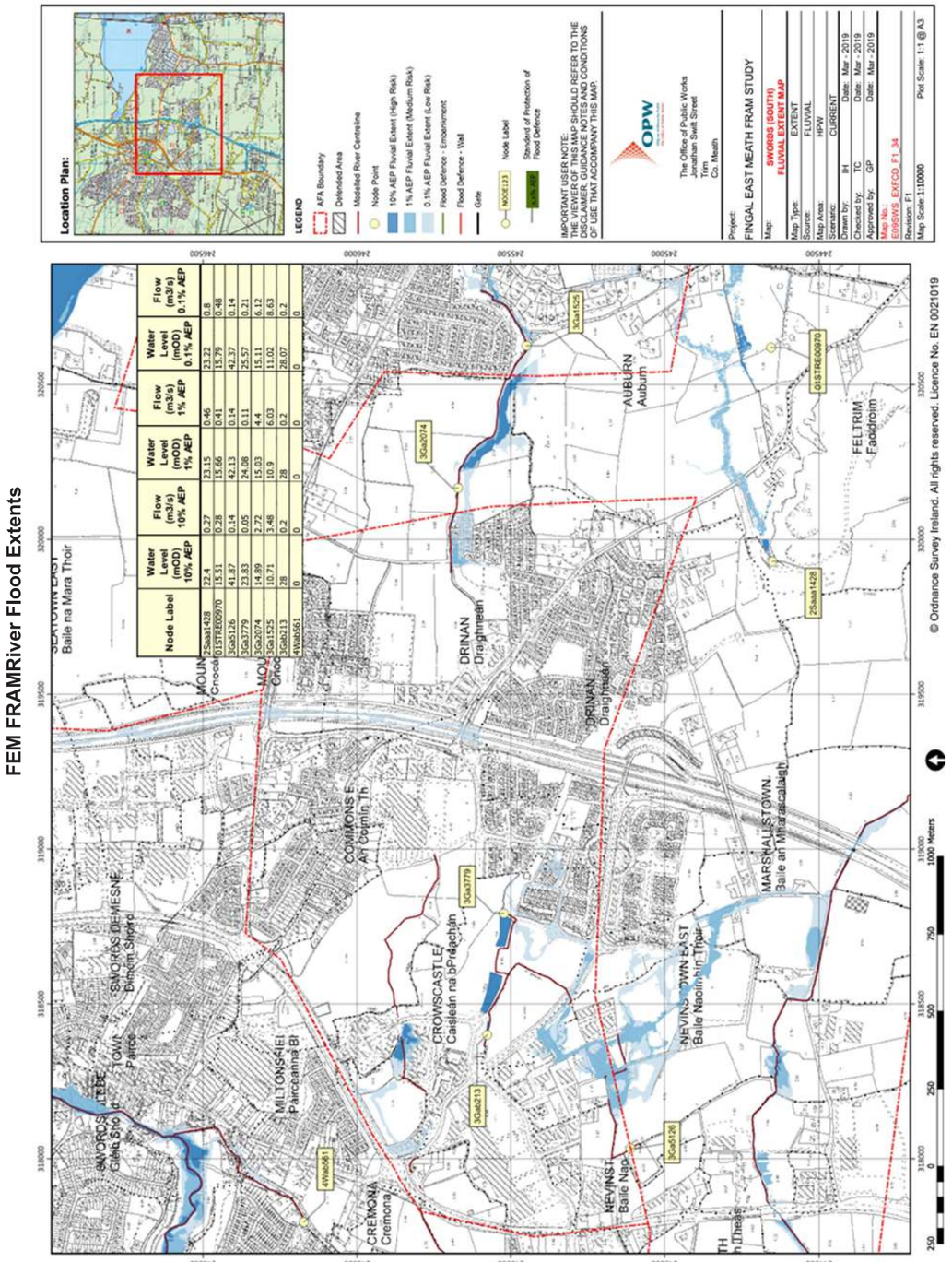
Strategic Flood Risk Assessment: The assessment of flood risk on a wide geographical area against which to assess development proposed in an area (Region, County, Town).

Vulnerability: The resilience of a particular group of people or types of property or habitats, ecosystems or species to flood risk, and their ability to respond to a hazardous condition and the damage or degree of impact they are likely to suffer in the event of a flood. For example, elderly people may be more likely to suffer injury, and be less able to evacuate, in the event of a rapid flood than younger people.

Source: *The definitions above are sourced from the DoEHLG Guidelines for Planning Authorities on 'The Planning System and Flood Risk Management, 2009' and Ciria 753 "the SuDS Manual".*

APPENDIX B

INDICATIVE FLOOD SOURCES



OPW – PAST FLOOD EVENTS LOCAL AREA SUMMARY REPORT

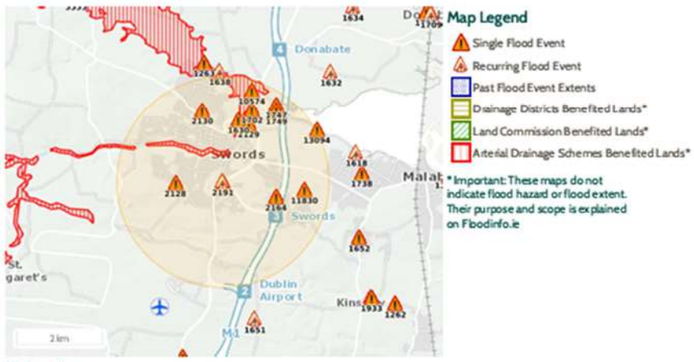
Past Flood Event Local Area Summary Report

OPW

Report Produced: 8/8/2023 15:27

This Past Flood Event Summary Report summarises all past flood events within 2.5 kilometres of the map centre.

This report has been downloaded from www.floodinfo.ie (the "Website"). The users should take account of the restrictions and limitations relating to the content and use of the Website that are explained in the Terms and Conditions. It is a condition of use of the Website that you agree to be bound by the disclaimer and other terms and conditions set out on the Website and to the privacy policy on the Website.



13 Results

	Name (Flood_ID)	Start Date	Event Location
1.	Ward North Street Swords Nov 2002 (ID-1630)	13/11/2002	Exact Point
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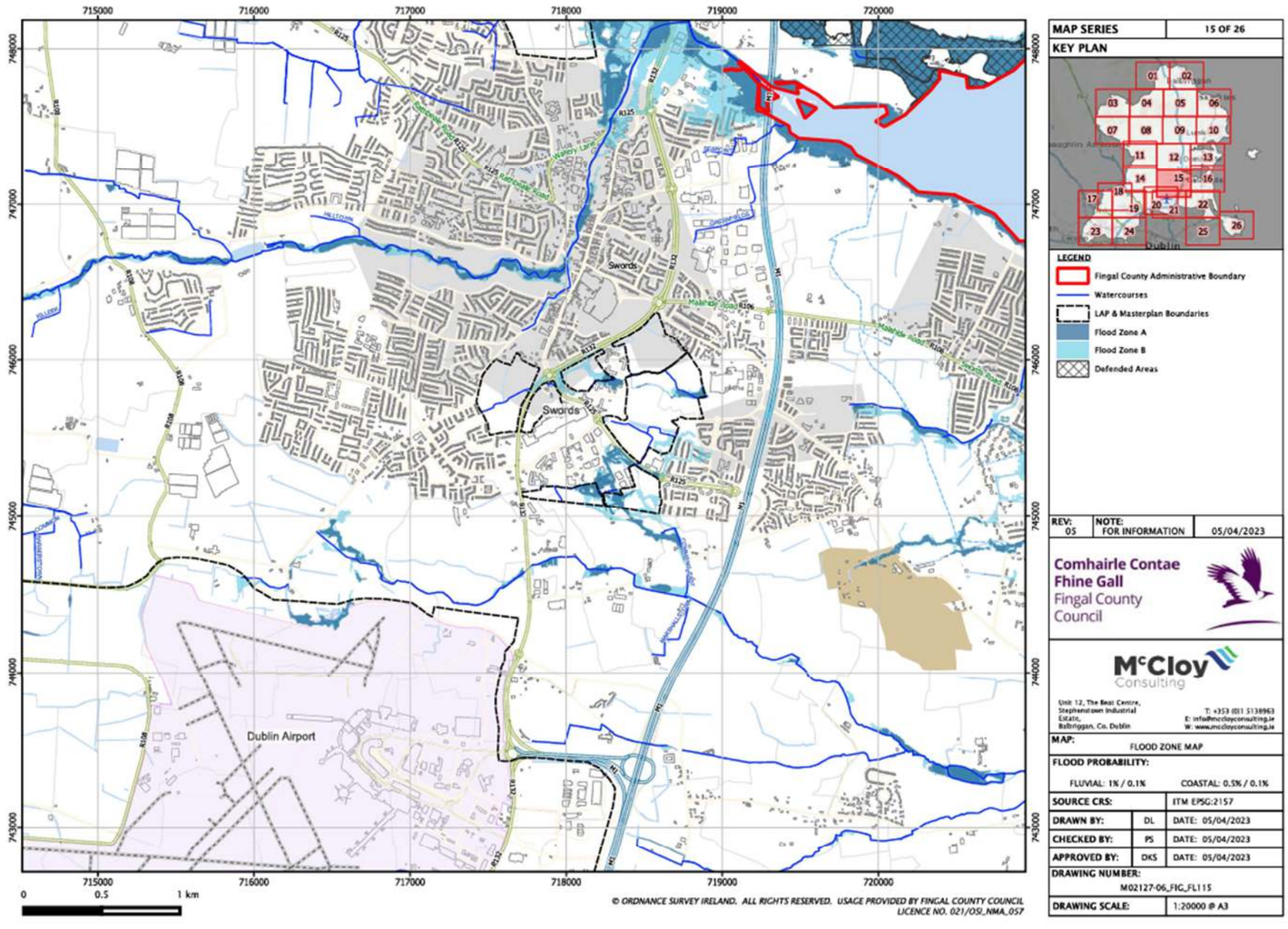
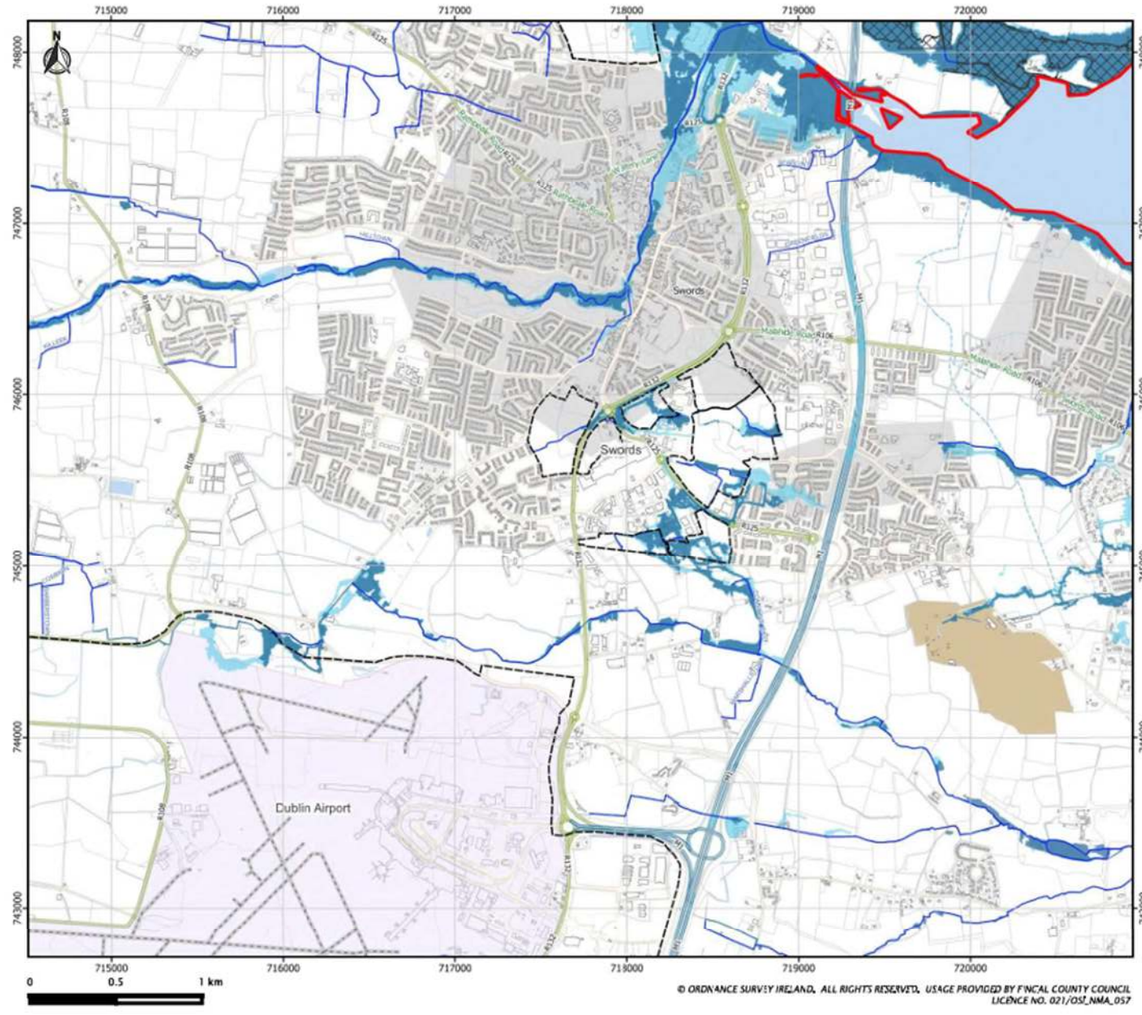
2.	N1 at Roundabout at Fingallions Nov 2002 (ID-1702)	13/11/2002	Exact Point
	Additional Information: Reports (1) Press Archive (0)		
3.	Estuary Road Swords Feb 2002 (ID-1747)	01/02/2002	Approximate Point
	Additional Information: Reports (1) Press Archive (0)		
4.	Gartan Court Swords Feb 2002 (ID-1749)	01/02/2002	Exact Point
	Additional Information: Reports (1) Press Archive (0)		
5.	Rathingle Swords Nov 1982 (ID-2128)	05/11/1982	Exact Point
	Additional Information: Reports (1) Press Archive (0)		
6.	Seatown Villas Swords Nov 1982 (ID-2129)	05/11/1982	Exact Point
	Additional Information: Reports (1) Press Archive (0)		
7.	Pine Grove Park Swords Nov 1982 (ID-2130)	05/11/1982	Exact Point
	Additional Information: Reports (1) Press Archive (0)		
8.	Melrose Park Oct 2002 (ID-2164)	19/10/2002	Exact Point
	Additional Information: Reports (1) Press Archive (0)		
9.	Pinnock Hill Nov 2002 (ID-2191)	14/11/2002	Exact Point
	Additional Information: Reports (1) Press Archive (0)		
10.	Pinnock Hill October 2002 (ID-1468)	19/10/2002	Exact Point
	Additional Information: Reports (4) Press Archive (0)		
11.	Pinnock Hill Swords Recurring (ID-1459)	n/a	Exact Point
	Additional Information: Reports (7) Press Archive (0)		
12.	Ward Swords Co.Dublin August 2008 (ID-10574)	08/08/2008	Approximate Point
	Additional Information: Reports (1) Press Archive (0)		
13.	Flooding at Kinsealy Court, Swords, Co. Dublin (ID-11830)	24/11/2011	Approximate Point
	Additional Information: Reports (1) Press Archive (0)		

FINGAL SFRA – FLOOD ZONE MAP

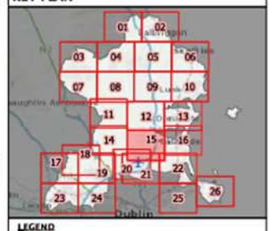


FINGAL SFRA – MID RANGE FUTURE SCENARIO FLOOD EXTENTS



MAP SERIES	15 OF 26

KEY PLAN



LEGEND

- Fingal County Administrative Boundary
- Watercourses
- LAP & Masterplan Boundaries
- 1% / 0.5% AEP MRFS Flood Extent
- 0.1% AEP MRFS Flood Extent
- No Climate Change Data Available; Present Day Flood Data Only.CC Flood Risk Subject to Site Specific Assessment

REV:	NOTE:	DATE:
05	FOR INFORMATION	05/04/2023

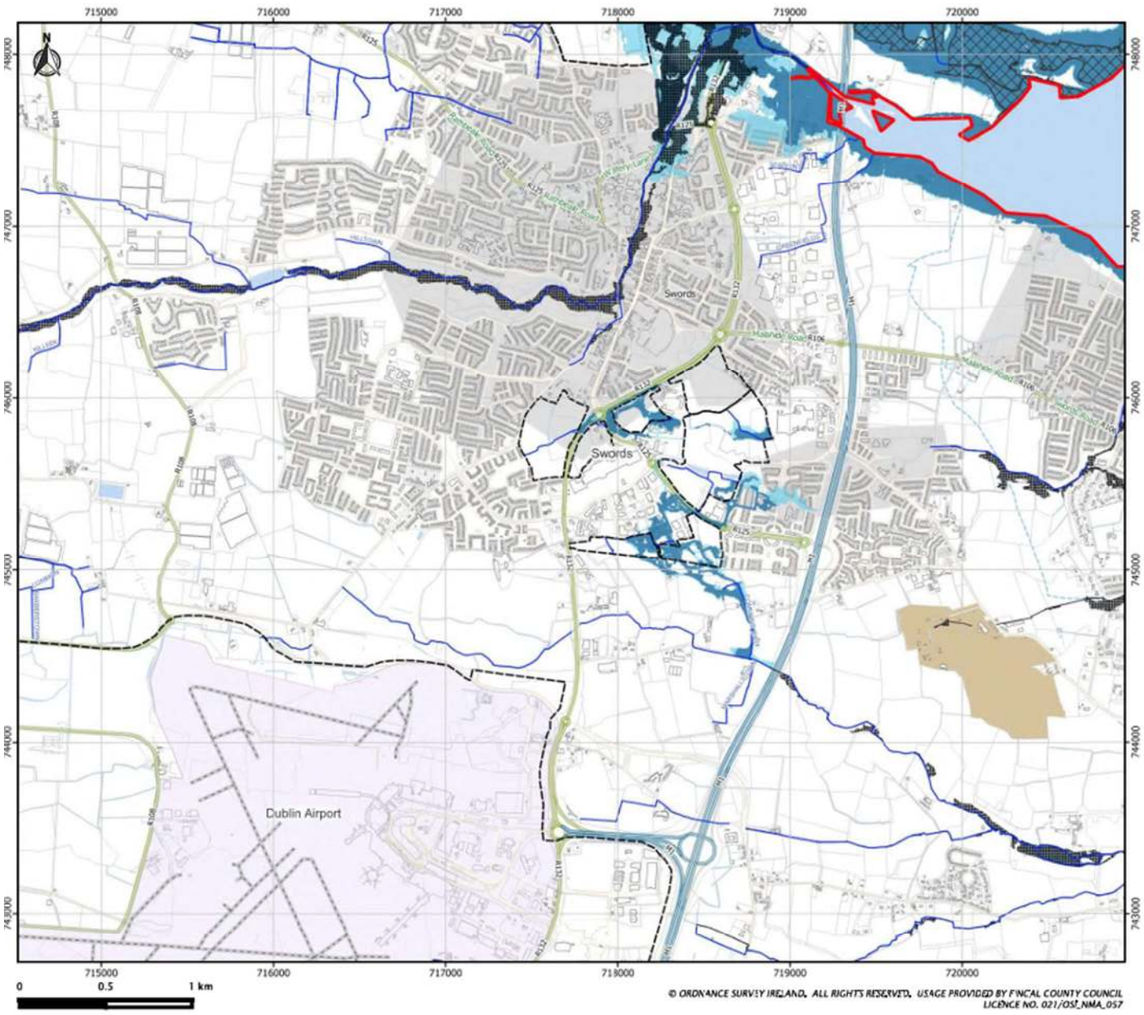
Comhairle Contae Fhine Gall
Fingal County Council

McCloy Consulting

Unit 12, The Beat Centre, Stephenstown Industrial Estate, Balbriggan, Co. Dublin
T: +353 (0)1 5138963
E: info@mccloyconsulting.ie
W: www.mccloyconsulting.ie

M.AP:	MID RANGE FUTURE SCENARIO FLOOD EXTENT	
FLOOD PROBABILITY:	FLUVIAL: 1% / 0.1%	COASTAL: 0.5% / 0.1%
SOURCE CRS:		ITM EPSG:2157
DRAWN BY:	DL	DATE: 05/04/2023
CHECKED BY:	PS	DATE: 05/04/2023
APPROVED BY:	DKS	DATE: 05/04/2023
DRAWING NUMBER:	M02127-06_FIG_FL215	
DRAWING SCALE:	1:20000 @ A3	

FINGAL SFRA – HIGH END FUTURE SCENARIO FLOOD EXTENTS



MAP SERIES	15 OF 26

KEY PLAN

LEGEND

- Fingal County Administrative Boundary
- Watercourses
- LAP & Masterplan Boundaries
- 1% / 0.5% AEP HEFS Flood Extent
- 0.1% AEP HEFS Flood Extent
- No Climate Change Data Available; Present Day Flood Data Only.CC Flood Risk Subject to Site Specific Assessment

REV:	NOTE:	DATE:
05	FOR INFORMATION	05/04/2023

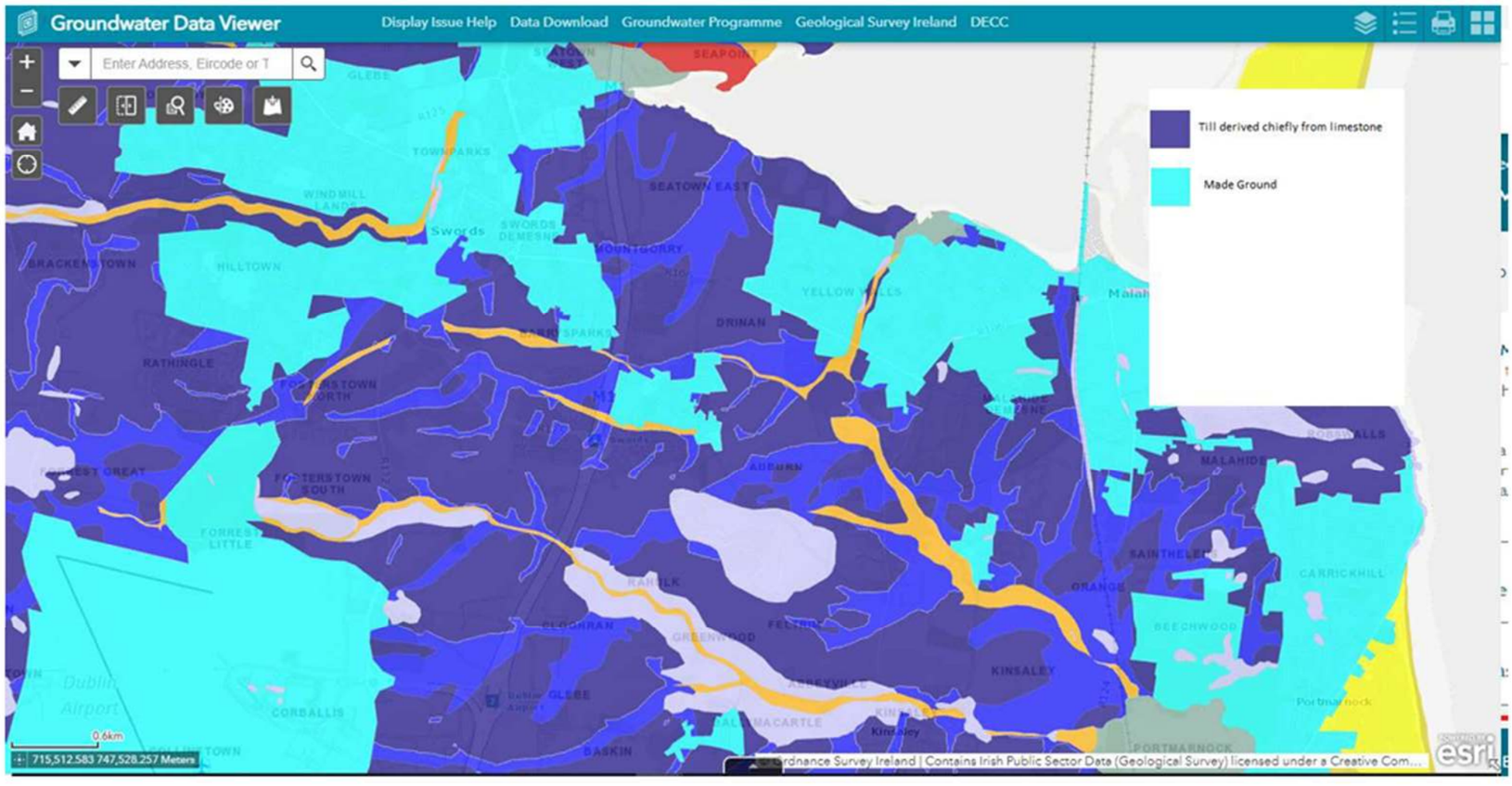
Comhairle Contae Fhine Gall
Fingal County Council

McCloy Consulting

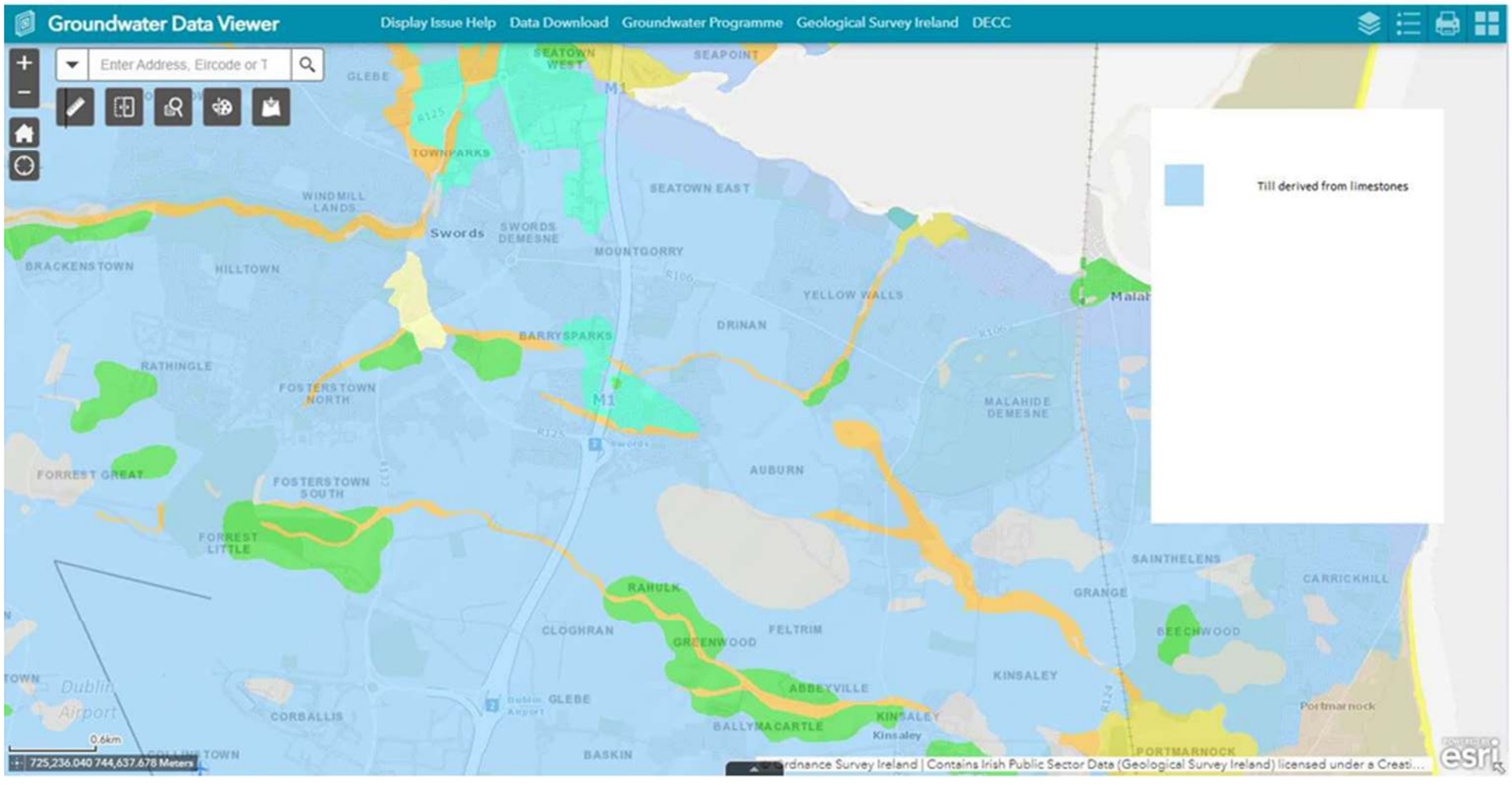
Unit 12, The Beat Centre, Stephenstown Industrial Estate, Balbriggan, Co. Dublin
T: +353 (0)1 5138963
E: info@mccloyconsulting.ie
W: www.mccloyconsulting.ie

M.AP:	HIGH END FUTURE SCENARIO FLOOD EXTENT	
FLOOD PROBABILITY:	FLUVIAL: 1% / 0.1%	COASTAL: 0.5% / 0.1%
SOURCE CRS:		ITM EPSG:2157
DRAWN BY:	DL	DATE: 05/04/2023
CHECKED BY:	PS	DATE: 05/04/2023
APPROVED BY:	DKS	DATE: 05/04/2023
DRAWING NUMBER:	M02127-06_FIG_FL315	
DRAWING SCALE:	1:20000 @ A3	

Geological Survey of Ireland: Teagasc Subsoil Mapping

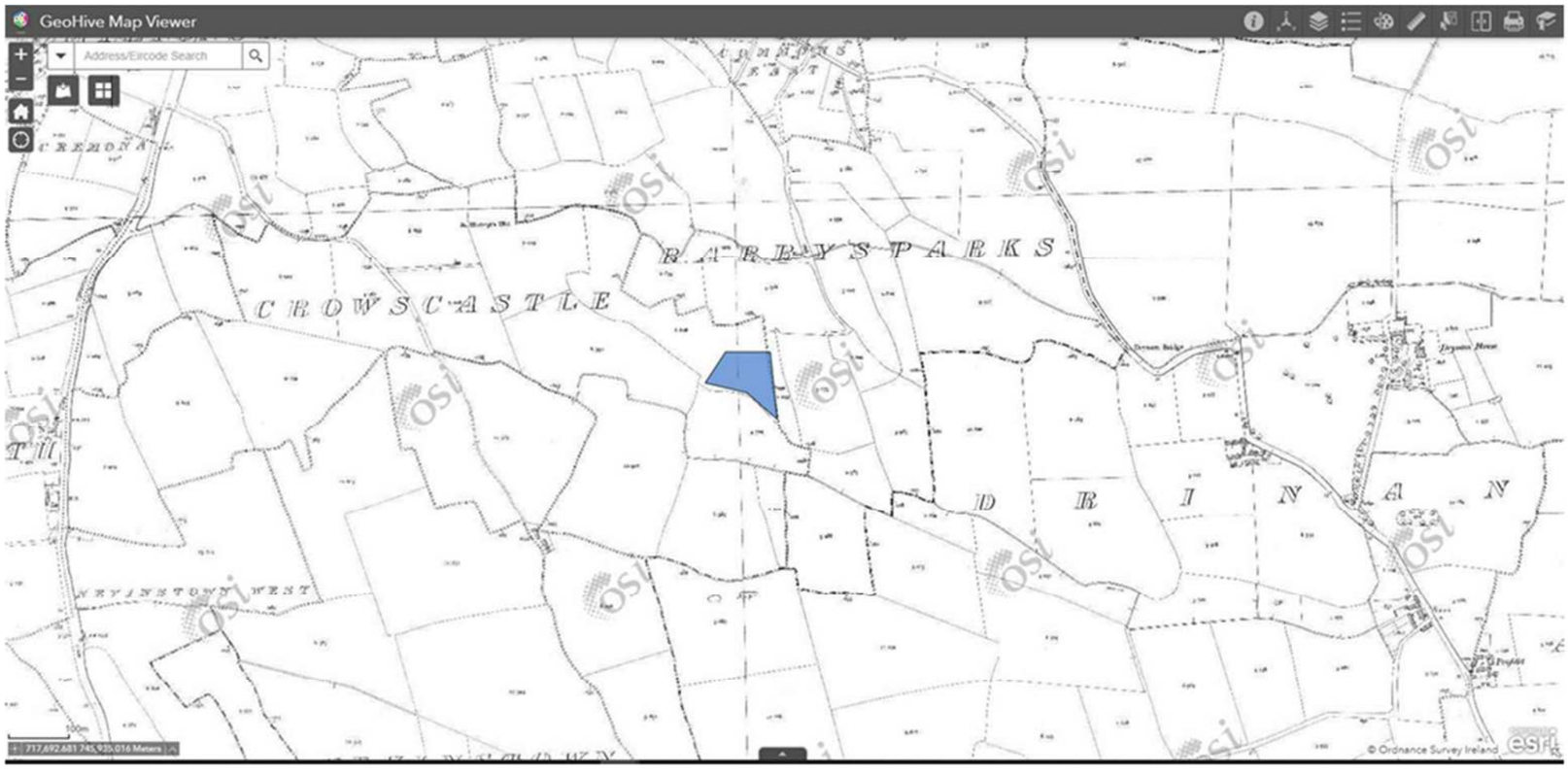


Geological Survey of Ireland: Subsoil (Quaternary Sediments)



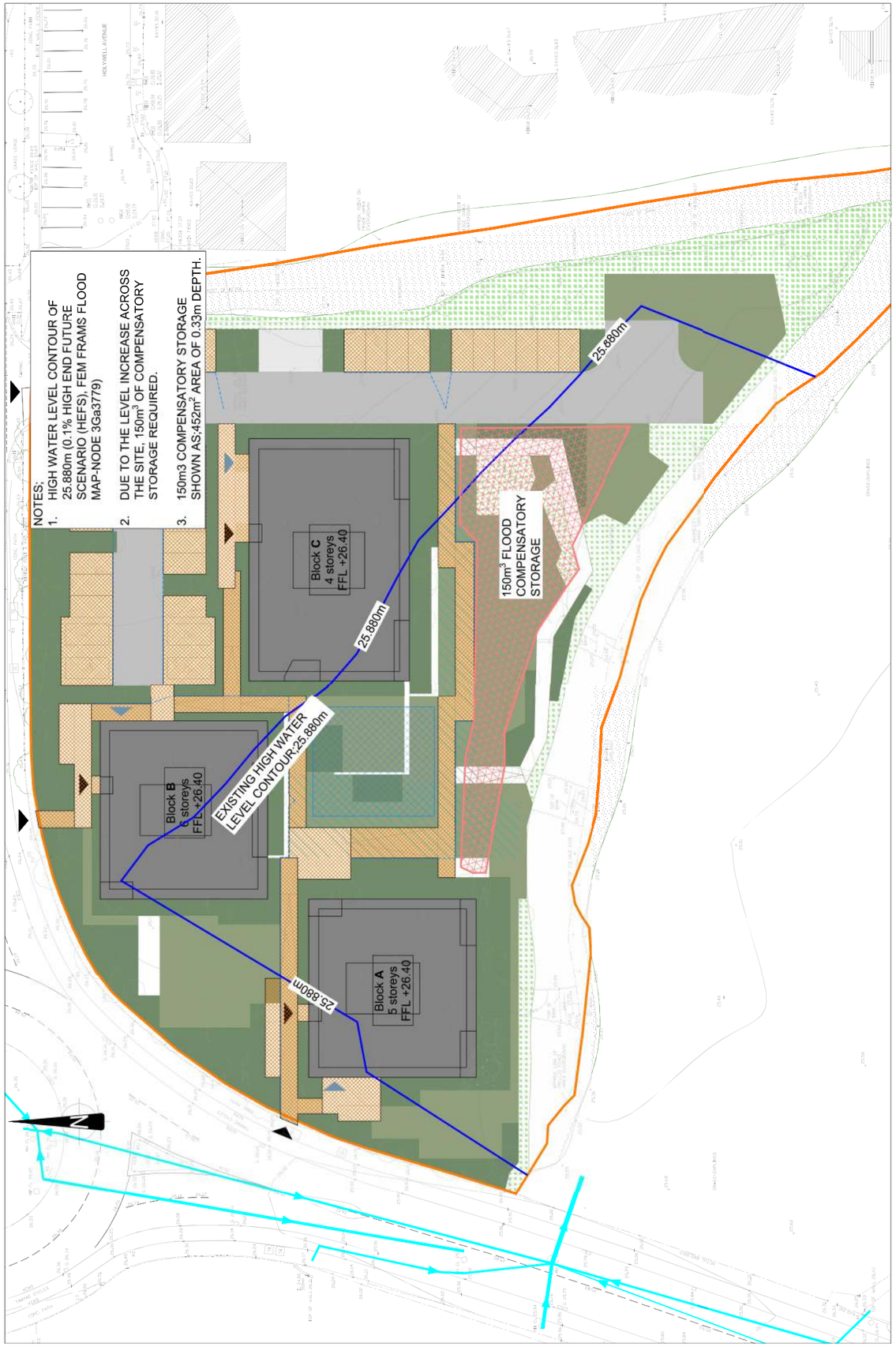
Historical Maps: 6" Genie

Historical Maps: 25" Genie



APPENDIX C

DISPLACED VOLUME CALCULATION



APPENDIX G
PRELIMINARY CONSTRUCTION & ENVIRONMENTAL MANAGEMENT PLAN

Prepared by
Roughan & O'Donovan
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PROPOSED RESIDENTIAL DEVELOPMENT AT HOLYWELL, SWORDS, CO. DUBLIN

Preliminary Construction & Environmental Management Plan | September 2023

Housing at Holywell, Swords, County Dublin

Preliminary Construction & Environmental Management Plan

Document No: HHP-ROD-XX-XX-RP-C-C0003

Made: ..... Ciaran McGee (CMG)

Checked:..... Sean Kennedy (SK)

Approved:..... Ben Gallery (BDG)

Revision	Description	Made	Checked	Approved	Date
P01	Issued for Planning	CMG	SK	-	29/09/2023
P02	Issued for Planning	CMG	SK	BDG	17/10/2023

Housing at Holywell, Swords, County Dublin
Preliminary Construction & Environmental Management Plan
TABLE OF CONTENTS

1. INTRODUCTION

This Preliminary Construction & Environmental Management Plan (CEMP) has been prepared to outline the envisaged procedures, sequencing, construction methodology and environmental control measures anticipated by the Project Team engaged in the planning, liaison, and construction of the proposed residential development at Holywell, Swords, Co. Dublin. The plan outlines proposals on traffic and environmental management measures to be adopted during construction. The appointed construction Contractor will prepare and be responsible for implementing the Final Construction & Environmental Management Plan for Construction.

This document is designed to be a live document which will eventually address how any planning conditions imposed on the project will be managed or discharged by the construction team.

The CEMP incorporates 3 main elements:

1. Description of the construction of the development.
2. Traffic management considerations.
3. Environmental management considerations, including demolition waste management.

2. CONSTRUCTION OF THE DEVELOPMENT

2.1 Site Location

The proposed development is located at Holywell, Swords, Co. Dublin. The site is bounded by the Holywell Distributor Road to the north and west, existing residential development to the east and a residential landscaped area to the south.

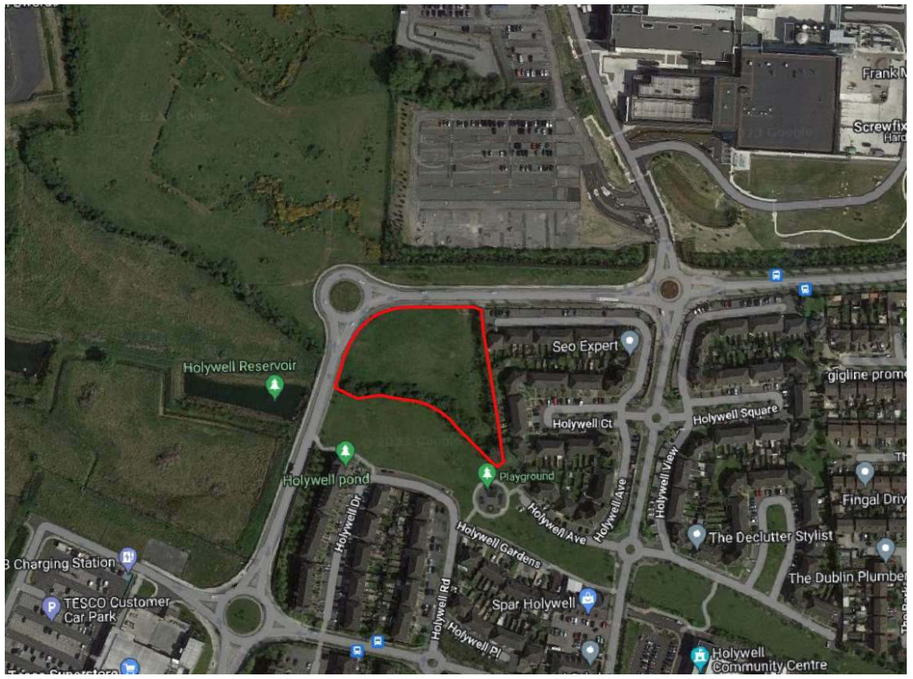

Figure 2.1 Proposed Development Location

2.2 Description of the Site

The site generally slopes from northeast to southwest. The elevation across the site varies by approximately 2.5m from the highest to lowest points of the site (approximately 3.9% gradient). There is an existing drainage ditch located along the southern boundary of the site. Proposed ground levels are to be set above the flood level of the adjacent ditch.

2.3 Project Details

Table 2.1 Description of Organisations

Organisations	
Client	Fingal County Council
Architect	Henchion & Reuter Architects
Engineering Consultants	Roughan & O'Donovan Consulting Engineers
Contractor	Yet to be Appointed

2.4 Programme

The project is due to commence in 2024 with a period of construction of approximately 12 months.

2.5 Working Hours

Except where otherwise agreed with Fingal County Council (FCC), working hours will be 07:00 – 19:00 Monday to Friday and 09:00 – 17:00 Saturday and closed on Sundays.

2.6 Pre-Start Survey

A Pre-Start Survey of the works will be carried out prior to construction works commencing. This will consist of a photographic aided report on the existing environment including; existing structures, boundaries, footpaths, roads, access points, fences lines, walls, hedge lines, kerb lines, lighting columns, street furniture and road signs. The findings of the survey will be documented and stored by the Contractor.

2.7 Construction Site Compounds, Accommodation, Welfare & Storage

It is envisaged that the main project offices will be established on the site, welfare facilities will be provided adjacent to the main project offices for operatives on the site. The site offices shall be located to minimise any potential impact on existing trees and landscape. It is envisaged that storage facilities shall be provided adjacent to the main project offices.

2.7.1 Accommodation

Site offices will be constructed from modular anti-vandal containers. The offices shall be provided with a metered mains power supply and electric heating. It is the contractors responsibility to obtain agreement for any connections from Uisce Éireann (IW) for temporary connections.

2.7.2 Welfare Facilities

The main offices must include welfare facilities including toilets and kitchen facilities for staff. Operative welfare facilities including drying rooms and locker rooms will be provided.

2.8 Construction of the Development

The construction and commissioning of the development will commence following planning and permitting consent approval, and will comprise of the following elements of work:

2.8.1 Site Set-up

Initially offices and storage containers will be transported to the site to provide accommodation and welfare in advance of the works commencing.

2.8.2 Existing Structures and Buildings

There are existing residential developments located to the east and south of the development site and existing industrial developments to the north. The contractor will incorporate protection measures such as minimising duct, noise and vibrations on site during construction to protect these existing developments.

2.8.3 Proposed Development

The proposed development involves the construction of 3 no. apartment blocks comprising of 57 no. units at Holywell, Swords, Co. Dublin. The proposed development has a gross site area of approximately 0.78 hectares.

2.8.4 Associated Civils Works

A new access will be constructed to serve the development off the Holywell Distributor Road. This access will be constructed at the northern boundary of the site, where the current access is located.

New connections to drainage, water supply and utilities will be brought into the site from the Holywell Distributor Road.

3. TRAFFIC MANAGEMENT

The proposed development will be accessed from the existing access off the Holywell Distributor Road. The Contractor will agree traffic management proposals with Fingal County Council and An Garda Síochána to facilitate traffic in the surrounding area at all times. Once all the necessary earth moving (minimal cut/fill) is completed, there will be limited construction traffic on the existing road network as the initial phase involves processing and moving aggregates within the site boundary. Typical construction associated traffic would include operatives travelling to and from work and deliveries of materials.

All Traffic Management proposals shall be agreed with Fingal County Council and An Garda Síochána prior to construction of the development.

3.1 Constraints

The main constraints for construction activities relates to the construction of the new services connections to the site and the construction of the new site entrance. There are a number of residential and industrial developments served by the Hollywell Distributor Road located within the vicinity of the development site. Road users will need to be accommodated throughout the works.

3.1.1 Associated Civil Works

It is proposed to carry out the construction of the service connections within the existing road / footpaths simultaneously. These works are intended to be undertaken concurrently to minimise the impacts on the surrounding road network.

3.1.2 Vehicular Access to Site

The site will be accessed from the existing access off the Hollywell Distributor Road. There will be no other access points to the site. Deliveries and general traffic from HGV's will be required to access the development via the Hollywell Distributor Road. The HGV's will be directed to the appropriate location and an appropriate member of staff from the contractor will be notified to meet the delivery and arrange offloading. Pedestrian safety barriers will be erected at the entrance to the site to permit safe passage for pedestrians across the access to the development segregating members of the public from the HGV's and other vehicles entering the development.

3.2 Construction Traffic

As with any construction project, the contractors will be obliged to carry out a comprehensive Construction Traffic Management Plan (CTMP) in consultation with the local authority, Fingal County Council (FCC) before the commencement of the construction phase. The purpose of such a plan is to outline the measures to manage the expected construction traffic during the construction period and will be revised accordingly as works progress. The CTMP will also detail how facilities for existing road users will be maintained whilst construction operations are proceeding.
During the construction phase the project will generate a range of traffic, which can be broken down into the main phases of construction as outlined below.

3.2.1 Site Set-up

Earthworks plant will be required to prepare the compound area, install services and commence enabling works. Portacabins will be required for the site compounds, as well as portable toilets/welfare facilities, and lock up containers.

It is expected that parking for site operatives will be a requirement throughout the construction of the development. It is considered that there will be adequate land within the curtilage of the site to accommodate temporary car and truck parking for site operatives. Site operatives will be encouraged to use public transport.

3.2.2 Services Connection Construction on Hollywell Distributor Road

Excavations may generate unsuitable fill material which will be transported by tipper lorries back to the site for use in landscaping or transported off site to a licensed waste disposal facility. Materials such as pipes, precast manhole rings, kerbs etc will all come to site on flatbed lorries. Additional construction plant will be required for resurfacing works.

3.2.3 Proposed Development

The commencement of the main construction works will require additional construction plant. Regular deliveries of materials and ready mixed concrete will take place during these works. There will also be an increase in the workforce resulting in more cars and vans accessing the site.

3.2.4 Routes for HGV's to Site

It is envisaged that HGV's travelling from the north, will access the site via the M1 Junction 4, heading south via the R132 and then west via the R125 before heading on to the Hollywell Distributor Road.

It is envisaged that HGV's travelling from the west will access the site via the R125 before heading on to the Hollywell Distributor Road.

It is envisaged that HGV's travelling from the east will access the site via the Feltrim Road before heading on to the Hollywell Distributor Road.

It is envisaged that HGV's travelling from the south will access the site via the M1 Junction 3, heading west via the R125 before heading on to the Hollywell Distributor Road.

Final routes for HGV's to site shall be agreed by the Contractor with Fingal County Council prior to construction commencing.

3.3 Maintenance of Public Roads

There will be potential for delivery vehicles and other site traffic to carry mud and silt onto the public roads when exiting the site. In order to prevent this, a wheelwash will be utilised on site. This will be used as required to wash down vehicles prior to leaving the site. If required a road sweeper may also be deployed on the immediately adjacent road network to the site to keep this clean and prevent vehicles carrying mud onto the surrounding road network. The road sweeper will be required during the works on the Hollywell Distributor Road. Roadside gullies will be maintained by the road sweeper contractor. Road line markings will be monitored and markings that require replacement throughout the duration of the project will be replaced by a specialist contractor.

3.3.1 Dust

Dust is a nuisance and can be damaging to humans, machinery, plants and animals. All workers on site are to consider the nuisance caused by the impacts of dust. The effects of dust will be minimised using the following techniques;

- Avoid creating unnecessary dust.

- Cover materials which could create dust when windy.
- Dampen down dust in operations which create dust.
- Ensure that vehicles leaving site do not leave mud on the road.

4. ENVIRONMENTAL MANAGEMENT SYSTEM

This CEMP shall be read in conjunction with the measures outlined in the environmental assessments that accompanies this planning application.

4.1 Identification

Prior to commencement of site works the Design Team and the Contractor will convene to identify the potential environmental issues which may arise throughout the duration of the Project. These will include off-site issues and cover the design, construction and commissioning phases of the Project, up to handover to operations staff. Each issue will be entered on a register of environmental risks.

4.2 Assessment

The Project Team will undertake an assessment of each of the identified environmental risks. This assessment will produce a clear definition of the risk, the potential impacts it may have and the consequences arising from the occurrence of the risk. The findings will be entered on the register of environmental risks.

4.3 Mitigation

Mitigation measures will be devised based upon the individually assessed risks. These could range from changes in design to remove the risk to on-site precautions to manage the risk and prevent the impact being realised. The agreed mitigation measures will be entered on the register of environmental risks. Any specific mitigation measures defined by planning conditions will also be addressed.

4.4 Monitoring, Recording & Reviewing

The register of environmental risks will act as the management tool for the control of environmental issues arising for the project. It will be reviewed on a regular basis to identify the efficiency of the mitigation measures employed based upon the monitoring data collected and records kept.

4.5 Minimising the Environmental Impacts

The Project Team and all its employees shall conduct their work in such a manner that unnecessary risks and disturbance to the environment are avoided. As part of the Environmental Management System, personnel are made aware of issues which may impact on the environment, and are encouraged to act responsibly.

4.6 External Stakeholders

With respect to environmental impacts, consultations will be undertaken with the Local Authority (Fingal County Council) and relevant environmental stakeholders as required.

4.7 Noise & Vibration

Noise will be generated from delivery vehicles and from concreting operations (vibrating concrete pokers etc). Noise hoarding will be erected around noisy equipment/activities where necessary. Effective management of noise on site will consist of the following measures;

- Ensure plant and equipment have properly operating silencers / mufflers.
- Do not leave plant and other vehicles / machinery running needlessly. This causes unnecessary pollution.

- Consider the location of noisy plant in order to minimise nuisance to nearby houses, motorists, and wildlife.

4.8 Protection of Watercourses

There is an existing drainage ditch located along the southern boundary of the site. However, following a number of site visits and discussions with FCC, the ditch appears to be dry. Flow from the Gaybrook steam is culverted to bypass the subject site. Run-off or surface water that is generated within the site will be discharged to the existing storm water network rather than to the ditch or other open watercourses.

Even though the ditch appears to be dry, as a further precaution, all works in proximity to the existing drainage ditch shall follow the generic best practice guidance outlined in the following documents:

- *Guidelines for Crossing Watercourses during the Construction of National Road Schemes* (NRA, 2008c).
- *Guidelines on Protection of Fisheries during Construction Works in and Adjacent to Waters* (IFI, 2016).
- *CIRIA C648 Control of water pollution from linear construction projects: technical guidance* (CIRIA, 2006).

The following protection measures will also be followed to ensure water quality discharged from site is maintained:

- All machinery will be refuelled from mobile tankers on the local/access/haul/site roads. No refuelling will take place within 50m the ditch.
- Mobile storage facilities, such as fuel bowsers, will be bunded to 110% capacity to prevent spills. Tanks for bowsers and generators will be double skinned.
- When not in use, all valves and fuel trigger guns from fuel storage containers will be locked.
- Only dedicated trained and competent personnel will carry out refuelling operations. A spill kit and drip tray will be on site at all times and available for all refuelling operations. Equipment will not be left unattended during refuelling. All pipework from containers to pump nozzles will have anti siphon valves fitted.
- Strict procedures for plant inspection, maintenance and repairs will be detailed in the contractor's method statements and machinery will be checked for leaks before arrival on site.
- All site plant will be inspected at the beginning of each day prior to use. Defective plant will not be used until the defect is satisfactorily fixed.
- All major repair and maintenance operations will take place off site.
- Care will be taken at all times to avoid contamination of the environment with contaminants other than hydrocarbons, such as uncured concrete and other chemicals.
- Surface water from the site be treated in attenuation ponds prior to discharging to the storm water network.

4.9 Waste / Demolition Management

The proper management and handling of waste on site is essential to ensure that pollution and increased levels of contamination are minimised. Effective management of waste on site will consist of the following measures;

- Closed skip containers
- Non dumping/littering policy on site
- Waste segregation
- Regular clean up of the site
- Careful handling and transportation to avoid damage to raw materials.
- Efficient ordering

Excavated material from the site will be tested accordingly. Acceptable material can be recycled and used as part of the development or as import on other schemes, while unacceptable material will be transported off site to a licensed waste disposal facility.

5. Conclusion

The Housing at Holywell project in Swords, County Dublin, envisage the construction of a residential development with three apartment blocks totalizing 57 units in an area of 0.78 Hectares. The site, located along the Holywell Distributor Road.

Key aspects of the plan include setting up construction facilities, accommodating workers, and implementing measures to manage traffic and minimize environmental impacts. The project aims to establish access via the Holywell Distributor Road and will adhere to regulations set forth by Fingal County Council and An Garda Síochána. The plan also outlines strategies to mitigate dust, noise, and vibration, as well as to protect watercourses and manage waste. The document underscores the importance of environmental responsibility and collaboration with stakeholders throughout the development process. The plan serves as a comprehensive guide for construction activities, traffic management, and environmental protection measures.

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PROPOSED RESIDENTIAL DEVELOPMENT AT HOLYWELL, CO. DUBLIN

Initial Site Specific Flood Risk Assessment | September 2023

Proposed Residential Development at Holywell Co. Dublin

Initial Site Specific Flood Risk Assessment

Document No: HHP-ROD-XX-XX-RP-C-0002

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Proposed Residential Development at Holywell Co. Dublin

Initial Site-Specific Flood Risk Assessment

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APPENDICES

1. INTRODUCTION

Roughan & O'Donovan Consulting Engineers has carried out a Flood Risk Assessment for a greenfield site development at Holywell Co. Dublin for a proposed residential development. This report has been prepared to assess the flood risk to the subject sites and adjacent lands as a result of the proposed development.

1.1 Description of Proposed Development and Study Area

The site is located at Holywell, Swords, Co. Dublin. and is bounded by the Holywell Distributor Road to the north and west, existing residential development to the east and a residential landscaped area to the south. There is an existing ditch that runs along the southern boundary of the site. The site location is outlined in Figure 1.1 below.The site is situated within the catchment of the River Gaybrook which generally flows in a west-east direction and outfalls into the Malahide bay approximately 1 km west of the Malahide Marina.

The proposed development involves the construction of 57 no. apartments (21 no. one bedroom; 28 no. two bedroom; and 8 no. three bedroom) in 3 no. apartment blocks incorporating 33 car parking spaces, 166 no. long-stay bicycle parking and 57 no. short-stay bicycle parking.

Proposed access is located at the north-east corner of the site on Holywell Distribution Road. The proposed finished floor levels are set at 26.4 mOD. The proposed development will incorporate 150m^3 of compensatory flood storage. The development includes landscaping of the surrounding area within the development site and associated utilities & drainage work.

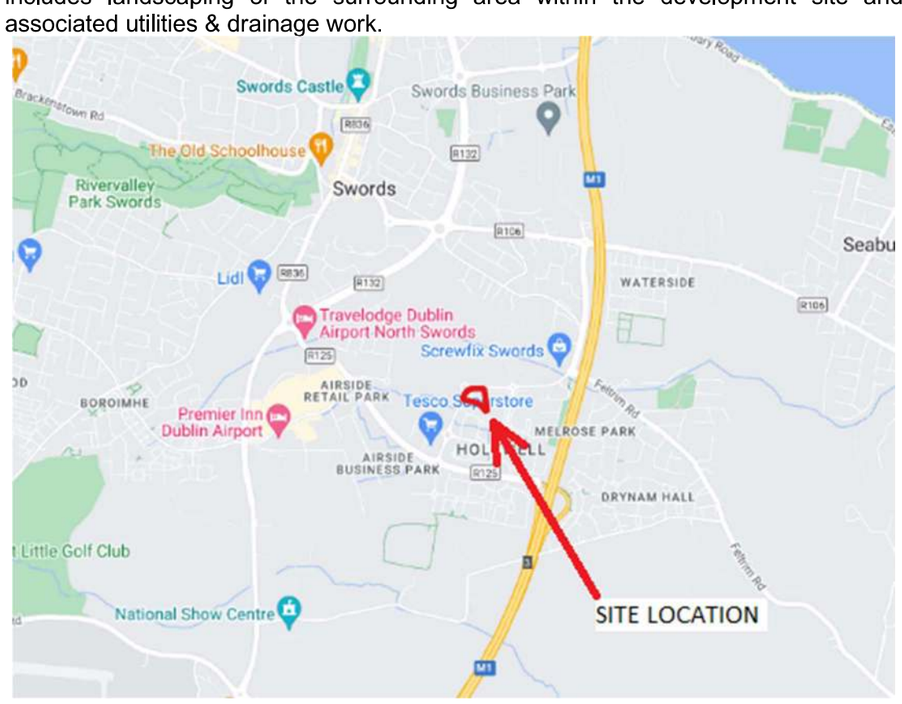


Figure 1.1 Site Location (map underlay source: Google Maps)

2. FLOOD RISK

2.1 Introduction

This report has been prepared in accordance with 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' herein referred to as 'The Guidelines' as published by the Office of Public Works (OPW) and Department of Environment, Heritage and Local Government (DoEHLG) in 2009.

2.2 Identification of Flood Risk

Flood risk is a combination of the likelihood of a flood event occurring and the potential consequences arising from that flood event and is then normally expressed in terms of the following relationship:

Flood risk = Likelihood of flooding x Consequences of flooding.

To fully assess flood risk an understanding of where the water comes from (i.e. the source), how and where it flows (i.e. the pathways) and the people and assets affected by it (i.e. the receptors) is required. Figure 2.1 below shows a source-pathway-receptor model reproduced from 'The Guidelines' (DEHLG-OPW, 2009).

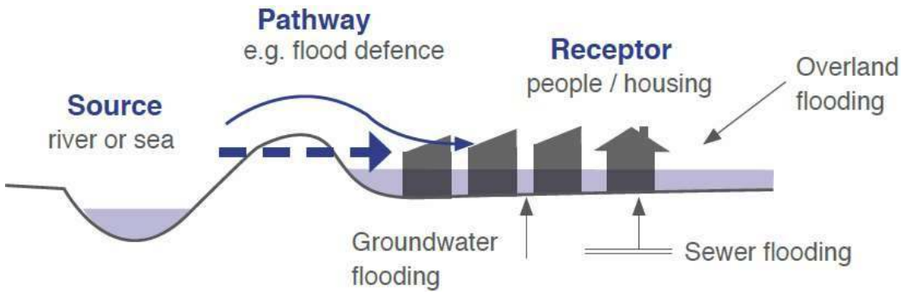


Figure 2.1 Sources, Pathways and Receptors of Flooding

The principal sources of flooding generally are rainfall or higher than normal sea levels. The principal pathways are rivers, drains, sewers, overland flow and river and coastal floodplains. The receptors can include people, their property and the environment. All three elements as well as the vulnerability and exposure of receptors must be examined to determine the potential consequences.

The Guidelines set out a staged approach to the assessment of flood risk with each stage carried out only as needed. The stages are listed below:

- *Stage I Flood Risk Identification* – to identify whether there may be any flooding or surface water management issues.
- *Stage II Initial Flood Risk Assessment* – to confirm sources of flooding that may affect an area or proposed development, to appraise the adequacy of existing information and to scope the extent of the risk of flooding which may involve preparing indicative flood zone maps.
- *Stage III Detailed Flood Risk Assessment* – to assess flood risk issues in sufficient detail and to provide a quantitative appraisal of potential flood risk to a proposed or existing development or land to be zoned, of its potential impact on flood risk elsewhere and of the effectiveness of any proposed mitigation measures.

2.3 Likelihood of Flooding

The Guidelines define the likelihood of flooding as the percentage probability of a flood of a given magnitude or severity occurring or being exceeded in any given year. It is generally expressed as a return period or annual exceedance probability (AEP). A 1% AEP flood indicates a flood event that will be equalled or exceeded on average once every hundred years and has a return period of 1 in 100 years. Annual Exceedance probability is the inverse of return period as shown Table 2.1 below.

Table 2.1 Correlation Between Return Period and AEP

Return Period (years)	Annual Exceedance Probability (%)
1	100
10	10
50	2
100	1
200	0.5
1000	0.1

2.4 Definition of Flood Zones

Flood zones are geographical areas within which the likelihood of flooding is in a particular range. These are split into three categories in The Guidelines:

Flood Zone A

Flood Zone A where the probability of flooding from rivers and the sea is highest (greater than 1% or 1 in 100 for river flooding or 0.5% or 1 in 200 for coastal/tidal flooding);

Flood Zone B

Flood Zone B where the probability of flooding from rivers and the sea is moderate (between 0.1% or 1 in 1000 and 1% or 1 in 100 for river flooding and between 0.1% or 1 in 1000 or 0.5% or 1 in 200 for coastal/tidal flooding);

Flood Zone C

Flood Zone C where the probability of flooding from rivers and the sea is low (less than 0.1% or 1 in 1000 for both river and coastal/tidal flooding. Flood Zone C covers all plan areas which are not in zones A or B.

It is important to note that when determining flood zones the presence of flood protection structures should be ignored. This is because areas protected by flood defences still carry a residual risk from overtopping or breach of defences and the fact that there is no guarantee that the defences will be maintained in perpetuity.

2.5 Sequential Approach & Justification Test

The Guidelines outline the sequential approach that is to be applied to all levels of the planning process. This approach should also be used in the design and layout of a development and the broad philosophy is shown in Figure 2.2 below. In general, development in areas with a high risk of flooding should be avoided as per the sequential approach. However, this is not always possible as many town and city centres are within flood zones and are targeted for development.

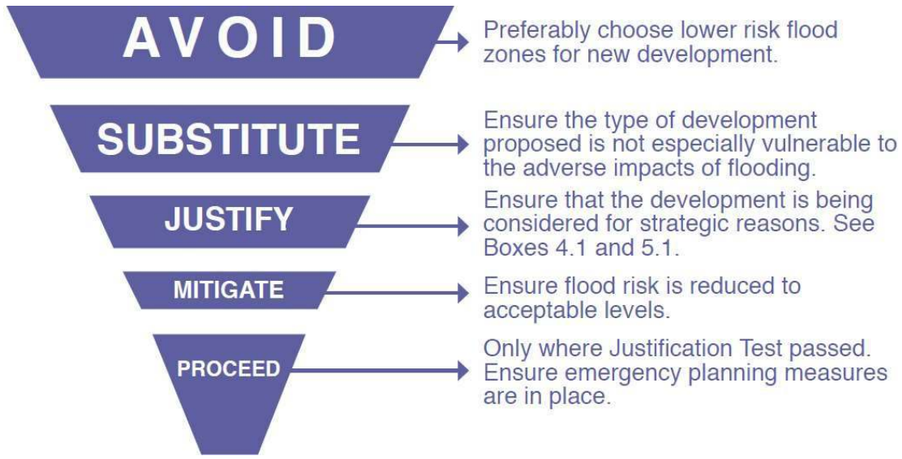


Figure 2.2 Sequential Approach (Source: The Planning System and Flood Risk Management)

The Justification Test has been designed to rigorously assess the appropriateness, or otherwise, of developments that are being considered in areas of moderate or high flood risk. The test comprises the following two processes.

- The first is the Plan-making Justification Test and is used at the plan preparation and adoption stage where it is intended to zone or otherwise designate land which is at moderate or high risk of flooding.
- The second is the Development Management Justification Test and is used at the planning application stage where it is intended to develop land at moderate or high risk of flooding for uses or development vulnerable to flooding that would generally be inappropriate for that land.

Table 2.2 Matrix of Vulnerability Versus Flood Zone to Illustrate Appropriate Development that is Required to Meet the Justification Test (Source: The Planning System and Flood Risk Management)

	Flood Zone A	Flood Zone B	Flood Zone C
Highly vulnerable development (including essential infrastructure)	Justification Test	Justification Test	Appropriate
Less vulnerable development	Justification Test	Appropriate	Appropriate
Water-compatible development	Appropriate	Appropriate	Appropriate

3. STAGE 1: FLOOD RISK IDENTIFICATION

3.1 General

This Stage 1 Flood Risk Identification includes a review of the existing information and the identification of any flooding or surface water management issues in the study area that may warrant further investigation.

3.2 Vulnerability

As per the OPW Guidelines, the proposed development is classified as "highly vulnerable" development as it comprises residential uses. The guidelines stipulate that typically highly vulnerable developments are only appropriate within Flood Zone C (low risk areas).

3.3 Information Sources Consulted

The following information sources were consulted as part of the Stage 1 Flood Risk Identification:

Table 3.1 Information Sources Consulted

Source	Data Gathered
Primary Sources of Baseline Data	
Catchment Flood Risk Assessment and Management Study (CFRAM): www.floodinfo.ie	Fluvial, Pluvial, Coastal flooding examined
National Indicative Fluvial Maps: www.floodinfo.ie	National Indicative Fluvial Maps examined
OPW Past Flood Events Mapping: www.floodinfo.ie	OPW Records of Fluvial, Pluvial, Coastal flooding examined
Fingal East Meath Flood Risk Assessment and Management Study www.floodinfo.ie	FEM FRAM Fluvial Maps consulted
Secondary Sources of Baseline Data	
Strategic Flood Risk Assessment (SFRA) of the Fingal County Development Plan 2023-2029	Fluvial, Coastal and Pluvial flooding examined
Stage 2 Site Specific Flood Risk Assessment Holywell, Swords, Co. Dublin – February 2022 (McCloy Consulting)	Flood Risk assessment examined
Geological Survey of Ireland (GSI) Maps	GSI Teagasc subsoils map consulted to identify if alluvial sediments are shown to be present at development site that may indicate historic flooding.
Historical Maps	OSI 25" mapping assessed
News Reports	News reports published in newspapers or digital news websites.

3.4 Primary Sources of Baseline Data

(i) Fingal East Meath Flood Risk Assessment and Management Study

The FEM FRAM was undertaken as a pilot study for the OPW's Catchment Flood Risk Assessment and Management (CFRAM) programme. The site and

surrounding area are included in the FEM FRAM Swords (south) Fluvial Extent Map. The mapping indicates flooding on site in the 1 in 1000 year event. The mapping also indicates flooding emanating from surface water sources in the upstream catchment.
An overview of the OPW FEM FRAM Swords (south) Fluvial Extent Mapping is reproduced in appendix B.

(ii) National Indicative Fluvial Maps (NIFM)

The indicative fluvial flood maps were finalised in December 2020. The mapping presents flood extents for river reaches that were not previously modelled as part of the CFRAMS and have catchments larger than 5 km2. As per the OPW the use of these maps is to "provide an indication of areas that may be prone to flooding. They are not necessarily locally accurate and should not be used as the sole basis for defining the Flood Zones nor for making decisions on planning applications." As the site was considered as part of the CFRAMS study the NIFM maps are not applicable.

(iii) OPW past flood Events (Floodinfo.ie)

The OPW National Flood Hazard Mapping was examined to identify any recorded flood events within the vicinity of the site. No flood events have been recorded on the site, however, a number of flood events have been recorded within 1 km from the site.
An overview of the OPW National Flood Hazard Mapping is reproduced in appendix B.

3.5 Secondary Sources of Baseline data

The following sources were also examined to identify areas that may be liable to flooding:

(i) Strategic Flood Risk Assessment (SFRA) of the Fingal County Development Plan 2023-2029

The site area is covered as part of the Fingal County Development Plan 2023-2029. There are indicators of flooding on site in the 1 1in 1000 year event in the current climate scenario maps, maps for medium range scenario Flood Extents and High-End future scenario Flood Extents also indicate that there is a probability of flooding on the site.
An overview of the Strategic Flood Risk Assessment Flood Extents Mapping is reproduced in appendix B.

(ii) Stage 2 Site Specific Flood Risk Assessment Holywell, Swords, Co. Dublin – February 2022

A Stage 2 Site Specific Flood Risk Assessment was undertaken for a residential development and associated access roads, car parking and open amenity space in February 2022.

The study concluded that the site is within Flood Zone C, as defined in the OPW Guidelines. However, the site has been shown to be affected by climate change fluvial flooding and pluvial / surface water flooding.

The study indicates that the southern extent of the site is at risk of fluvial flooding in a climate change scenario, and further detailed assessment is required.

(iii) Geological Survey of Ireland Maps

According to the Geological Survey Ireland (GSI), the underlying subsoil is Till derived from limestones, and there are no known karst features (swallow holes, enclosed depressions, wells or springs) within the footprint of the site.

(iv) Historical Maps

Historical Maps were studied. No areas of the site have been identified as liable to flooding.

(v) News reports

No News report of flooding have been found in relation to the site.

3.6 Source – Pathway – Receptor Model

The following source-pathway-receptor model has been developed using the information examined in the Stage I Flood Risk Identification to categorise the sources of flooding, where it flows to (pathway) and the people and infrastructure affected by it (receptors). The likelihood and consequences of each type of flooding have also been assessed to determine the risk. These are summarised in Table 3.2 (taken from Appendix A of the Guidelines).

Table 3.2 Source-Pathway-Receptor Model

Source	Pathway	Receptor	Likelihood	Consequence	Risk
Fluvial flooding	Overbank flow from the Gaybrook Stream	Dwelling houses	*Medium*	*High*	***Medium***
Pluvial / Surface Water flooding	Extreme rainfall events and inadequate surface water drainage	Dwelling houses	*Possible*	*High*	***Medium***
Coastal flooding	Extreme tides, storm surges or wave overtopping	Dwelling houses	*Highly Unlikely*	*High*	***Low***
Ground-water Flooding	Rising groundwater levels	Dwelling houses	*Low* (No reports or geological indicators)	*High*	***Low***

3.7 Stage 1 Conclusions

3.7.1 Fluvial Flooding

A number of sources of information including previous Site-Specific Flood Risk Assessment and Fingal Strategic Flood Risk Assessment Flood Extents maps indicates that the site is at risk of fluvial flooding. Therefore, the risk of fluvial flooding at the site is classified as medium and a Stage 2 – Initial Fluvial Flood Risk Assessment is required for the development.

3.7.2 Coastal Flooding

Coastal flooding was not identified as a source of flooding affecting the site in any of the sources of information consulted including CFRAM maps. The site is more than 20 m above sea level. Therefore, the risk of coastal flooding at the site is classified as low and further assessment is not required.

3.7.3 Surface Water / Pluvial Flooding

The sources consulted indicate that the site may be subject to surface water derived flooding. Flood maps from the SFRA of Fingal County Development Plan, show flood affecting the surrounding developments and road infrastructures on the southern part of the site, this might be related to inadequate drainage capacity of the existing drainage infrastructures and may result in increased runoff volume routed towards the site object of this study. Therefore, the risk of Surface Water flooding at the site is classified as medium and a stage 2 – Initial Surface Water Flood Risk Assessment is required for the development.

3.7.4 Groundwater Flooding

Groundwater flooding was not identified as a source of flooding affecting the site. Therefore, the risk of groundwater flooding is classified as Low and no further assessment is required.

4. STAGE 2 – INITIAL FLOOD RISK ASSESSMENT

4.1 General

The Stage 2 Initial Flood Risk Assessment will confirm the sources of flooding that may affect the proposed development site.

4.2 Sources of Flooding

Flooding from Fluvial / Surface Water

The subject site is situated within the catchment of the Gaybrook Stream. The sources consulted as part of this assessment indicate that as portion of the subject site is at risk of flooding in the present day 1 in 1000 year fluvial event, it is therefore within Flood Zone B as defined in the OPW Guidelines. Flooding of the surface water network upstream of the site also appears to create flow paths that converge on the subject site.

The FEM FRAMS flood map includes model nodes along the Gaybrook Stream indicating flood levels for the 1% AEP and the 0.1% AEP present day. The closest node (3Ga3779) is located just upstream of the subject site before the river enters a culvert that conveys the water to another open channel to the east of Holywell. Table 4.1 shows the predictive 1% AEP and 0.1% AEP present day flood levels at the node 3Ga3779.

Climate Scenario	1% AEP Water Level (mOD)	0.1% AEP Water Level (mOD)
Current	24.08	25.57
High End Future Scenario (HEFS)	N/A	25.88

Note: the location of the node 3Ga3779 upstream of the subject lands means it is likely that the estimated flood levels are higher than they are within the subject lands. For the purposes of this assessment they are seen as appropriate but may be subject to revision downward following further assessment.

As per the Strategic Flood Risk Assessment for the Fingal Development Plan 2023-2029, the development is to include an appropriate freeboard. As per the Fingal SFRA, freeboard for Highly Vulnerable developments is the greater of:

- 500mm freeboard above current scenario; or
- 250mm above the HEFS (for Highly vulnerable developments).

Levels are given in table below. The minimum design floor level is therefore 26.13mOD.

Table 4.1 Design Flood Level

	Current	HEFS
FEM FRAM Flood Maps	25.57	25.88
Freeboard (as per Fingal SFRA)	0.5	0.25
Total	26.07	26.13

As the proposed finished floor level is set at 26.4mOD, the highest water level anticipated from fluvial flooding is 0.27m below the proposed finished floor level.

The layout of the proposed building includes minor areas of structures within the floodplain as derived from the FEMFRAM levels. These structures may displace flood waters within the subject lands in extreme events. A Civils 3D surface model was created to overlay the flood level on the site layout to determine the volume of water displaced by the proposed buildings. Based on this and upon a desktop survey of hydraulic and topographic conditions, the site layout design includes for 150m^3 of compensatory storage. The FEMFRAM levels are seen as appropriately conservative for the site and may be subject to revision downward following further assessment. Further topographic survey and hydraulic analysis at compliance stage will confirm the volumes of compensatory storage required on site to appropriately manage the displaced volumes if required.

The output from the Civils 3D surface model can be found in Appendix C.

Surface Water Flooding

Surface water flooding occurs when the local drainage system cannot convey stormwater flows from extreme rainfall events. The rainwater does not drain away through the normal drainage pathways or infiltrate into the ground but instead ponds on or flows over the ground instead. Surface water flooding is unpredictable as it depends on a number of factors including ground levels, rainfall and the local drainage network. The drainage network for any development on the site will incorporate Sustainable Drainage Systems (SuDS) for the purpose for managing surface water in terms of both flow and quality.

5. JUSTIFICATION TEST

The flood risk assessment carried out for the purposes of the proposed residential development determined that the subject site is potentially within lands at risk of flooding. In this context, the proposed development satisfies the Justification Test as outlined below:

5.1 The subject lands have been zoned or otherwise designated for the use or form of development in an operative development plan, which has been adopted or varied taking account of these Guidelines.

The subject site is zoned "Residential". As per the Fingal Council Development Plan 2023-2029 Residential Zoning Objective states "Provide for residential development and protect and improve residential amenity". The proposed development is suitable for the zonings as it is a residential development. Therefore, the proposed development is suitable for the subject site zoning.

5.2. The proposal has been subject to an appropriate flood risk assessment that demonstrates:

5.2.1. The development proposed will not increase flood risk elsewhere and, if practicable, will reduce overall flood risk;

Fluvial flooding effects the proposed development in the 0.1%AEP event and above. The proposed development will not alter flow paths or existing flood defences. The proposed development will displace a minor amount of flood waters in extreme events though these volumes are to be compensated for on site.

5.2.2 The development proposal includes measures to minimise flood risk to people, property, the economy and the environment as far as reasonably possible;

The residential unit's minimum finished floor level will be in excess of the 0.1%AEP event level plus an appropriate freeboard. The proposed finished floor level was derived from FEMFRAM Study which included an allowance for climate change as per OPW Guidance. The proposed development will incorporate 150m^3 of compensatory storage in combination with flood resistant design features that will manage risk associated with increased risk as a result of future climate change.

5.2.3 The development proposed includes measures to ensure that residual risks to the area and/or development can be managed to an acceptable level as regards the adequacy of existing flood protection measures or the design, implementation and funding of any future flood risk management measures and provisions for emergency services access;

The proposed development has been designed with regard to flood resilient construction measures and materials. The proposed development will be subject to a maintenance plan, the maintenance of the proposed development will be undertaken by the relevant competent specialists.

5.2.4 The development proposed addresses the above in a manner that is also compatible with the achievement of wider planning objectives in relation to development of good urban design and vibrant and active streetscapes.

The proposed residential development will facilitate compact and sustainable urban growth. The proposed development is in keeping with the surrounding areas visuals and uses within Swords.

5.1 Justification Test Conclusions

The proposed development has been determined to have satisfied all requirements of the justification test.

6. CONCLUSION OF STAGE 2 SFRA

The available sources consulted above indicate that a portion of the proposed development site is liable to flood in the 1 in 1000 year current climate scenario from fluvial sources.

Flood risk management measures incorporated within the design will protect the development up to the design flood event (1 in 1000 year + 20% climate change factor) with an appropriate freeboard and shall ensure flood risk is not increased upstream or downstream of the site. Details of the proposed compensatory storage measures (~150m^3) shall be provided at compliance stage.

APPENDIX A

GLOSSARY OF TERMS

Roughan & O'Donovan
Consulting Engineers

Proposal Residential Development at Holywell Co. Dublin
Initial Site Specific Flood Risk Assessment

GLOSSARY OF TERMS

Catchment: The area that is drained by a river or artificial drainage system.

Catchment Flood Risk Assessment and Management Studies (CFRAMS): A catchment-based study involving an assessment of the risk of flooding in a catchment and the development of a strategy for managing that risk in order to reduce adverse effects on people, property and the environment. CFRAMS precede the preparation of Flood Risk Management Plans (see entry for FRMP).

Climate change: Long-term variations in global temperature and weather patterns, which occur both naturally and as a result of human activity, primarily through greenhouse gas emissions.

Core of an urban settlement: The core area of a city, town or village which acts as a centre for a broad range of employment, retail, community, residential and transport functions.

Detailed flood risk assessment: A methodology to assess flood risk issues in sufficient detail and to provide a quantitative appraisal of flood hazard and potential risk to an existing or proposed development, of its potential impact on flood elsewhere and of the effectiveness of any proposed measures.

Estuarial (or tidal) flooding: Flooding from an estuary, where water level may be influenced by both river flows and tidal conditions, with the latter usually being dominant.

Flooding (or inundation): Flooding is the overflowing of water onto land that is normally dry. It may be caused by overtopping or breach of banks or defences, inadequate or slow drainage of rainfall, underlying groundwater levels or blocked drains and sewers. It presents a risk only when people, human assets and ecosystems are present in the areas that flood.

Flood Relief Schemes (FRS): A scheme designed to reduce the risk of flooding at a specific location.

Flood Defence: A man-made structure (e.g. embankment, bund, sluice gate, reservoir or barrier) designed to prevent flooding of areas adjacent to the defence.

Flood Risk Assessment (FRA): FRA can be undertaken at any scale from the national down to the individual site and comprises 3 stages: Flood risk identification, initial flood risk assessment and detailed flood risk assessment.

Flood Risk Identification: A desk- based study to identify whether there may be any flooding or surface water management issues related to a plan area or proposed development site that may warrant further investigation.

Flood Hazard: The features of flooding which have harmful impacts on people, property or the environment (such as the depth of water, speed of flow, rate of onset, duration, water quality, etc.).

Floodplain: A flood plain is any low-lying area of land next to a river or stream, which is susceptible to partial or complete inundation by water during a flood event.

Flood Risk: An expression of the combination of the flood probability, or likelihood and the magnitude of the potential consequences of the flood event.

Flood Storage: The temporary storage of excess run-off, or river flow in ponds, basins, reservoirs or on the flood plain.

Flood Zones: A geographic area for which the probability of flooding from rivers, estuaries or the sea is within a particular range.

Fluvial flooding: Flooding from a river or other watercourse.

Groundwater flooding: Flooding caused by groundwater escaping from the ground when the water table rises to or above ground level.

Initial flood risk assessment: A qualitative or semi-quantitative study to confirm sources of flooding that may affect a plan area or proposed development site, to appraise the adequacy of existing information, to provide a qualitative appraisal of the risk of flooding to development, including the scope of possible mitigation measures, and the potential impact of development on flooding elsewhere, and to determine the need for further detailed assessment.

Freeboard: Factor of safety applied for water surfaces. Defines the distance between normal water level and the top of a structure, such as a dam, that impounds or restrains water.

Justification Test: An assessment of whether a development proposal within an area at risk of flooding meets specific criteria for proper planning and sustainable development and demonstrates that it will not be subject to unacceptable risk nor increase flood risk elsewhere. The justification test should be applied only where development is within flood risk areas that would be defined as inappropriate under the screening test of the sequential risk-based approach adopted by this guidance.

Likelihood (probability) of flooding: A general concept relating to the chance of an event occurring. Likelihood is generally expressed as a probability or a frequency of a flood of a given magnitude or severity occurring or being exceeded in any given year. It is based on the average frequency estimated, measured or extrapolated from records over a large number of years and is usually expressed as the chance of a particular flood level being exceeded in any one year. For example, a 1-in-100 or 1% flood is that which would, on average, be expected to occur once in 100 years, though it could happen at any time.

Ordnance Datum (or OD) Malin: is a vertical datum used by an ordnance survey as the basis for deriving altitudes on maps. A spot height may be expressed as AOD for "above ordnance datum". Usually mean sea level (MSL) is used for the datum. In the Republic of Ireland, OD for the Ordnance Survey of Ireland is Malin Ordnance Datum: the MSL at Portmoor Pier, Malin Head, County Donegal, between 1960 and 1969. Prior to 1970, Poolbeg Ordnance Datum was used: the low water of spring tide at Poolbeg lighthouse, Dublin, on 8 April 1837. Poolbeg OD was about 2.7 metres lower than Malin OD.

Management Train/Treatment Train: the sequence of drainage components that collect, convey, store and treat runoff as it drains through the site.

Mitigation: The term is used to describe an action that helps to lessen the impacts of a process or development on the receiving environment. It is used most often in association with measures that would seek to reduce negative impacts of a process or development.

Pathways: These provide the connection between a particular source (e.g. high river or tide level) and the receptor that may be harmed (e.g. property). In flood risk management, pathways are often 'blocked' by barriers, such as flood defence structures, or otherwise modified to reduce the incidence of flooding.

Pluvial flooding: Usually associated with convective summer thunderstorms or high intensity rainfall cells within longer duration events, pluvial flooding is a result of rainfall-generated overland flows which arise before run-off enters any watercourse or sewer. The intensity of rainfall can be such that the run-off totally overwhelms surface water and underground drainage systems.

Regional Planning Guidelines (RPG): These provide the regional context and priorities for applying national planning strategy to each NUTS III region and encourage greater co-ordination of planning policies at the city/county level. RPGs are an important part of the flood policy hierarchy as they can assist in co-ordinating flood risk management policies at the regional level.

Resilience: Sometimes known as "wet-proofing", resilience relates to how a building is constructed in such a way that, although flood water may enter the building, its impact is minimised, structural integrity is maintained, and repair, drying and cleaning and subsequent reoccupation are facilitated.

Receptors: Things that may be harmed by flooding (e.g. people, houses, buildings or the environment).

Residual risk: The risk which remains after all risk avoidance, substitution and mitigation measures have been implemented, on the basis that such measures can only reduce risk, not eliminate it.

Sequential Approach: The sequential approach is a risk-based method to guide development away from areas that have been identified through a flood risk assessment as being at risk from flooding. Sequential approaches are already established and working effectively in the plan-making and development management processes.

Sustainable Drainage System (SuDS): Drainage systems that are considered to be environmentally beneficial, causing minimal or no long-term detrimental impact.

Site-specific Flood Risk Assessment: An examination of the risks from all sources of flooding of the risks to and potentially arising from development on a specific site, including an examination of the effectiveness and impacts of any control or mitigation measures to be incorporated in that development.

Source: Refers to a source of hazard (e.g. the sea, heavy rainfall).

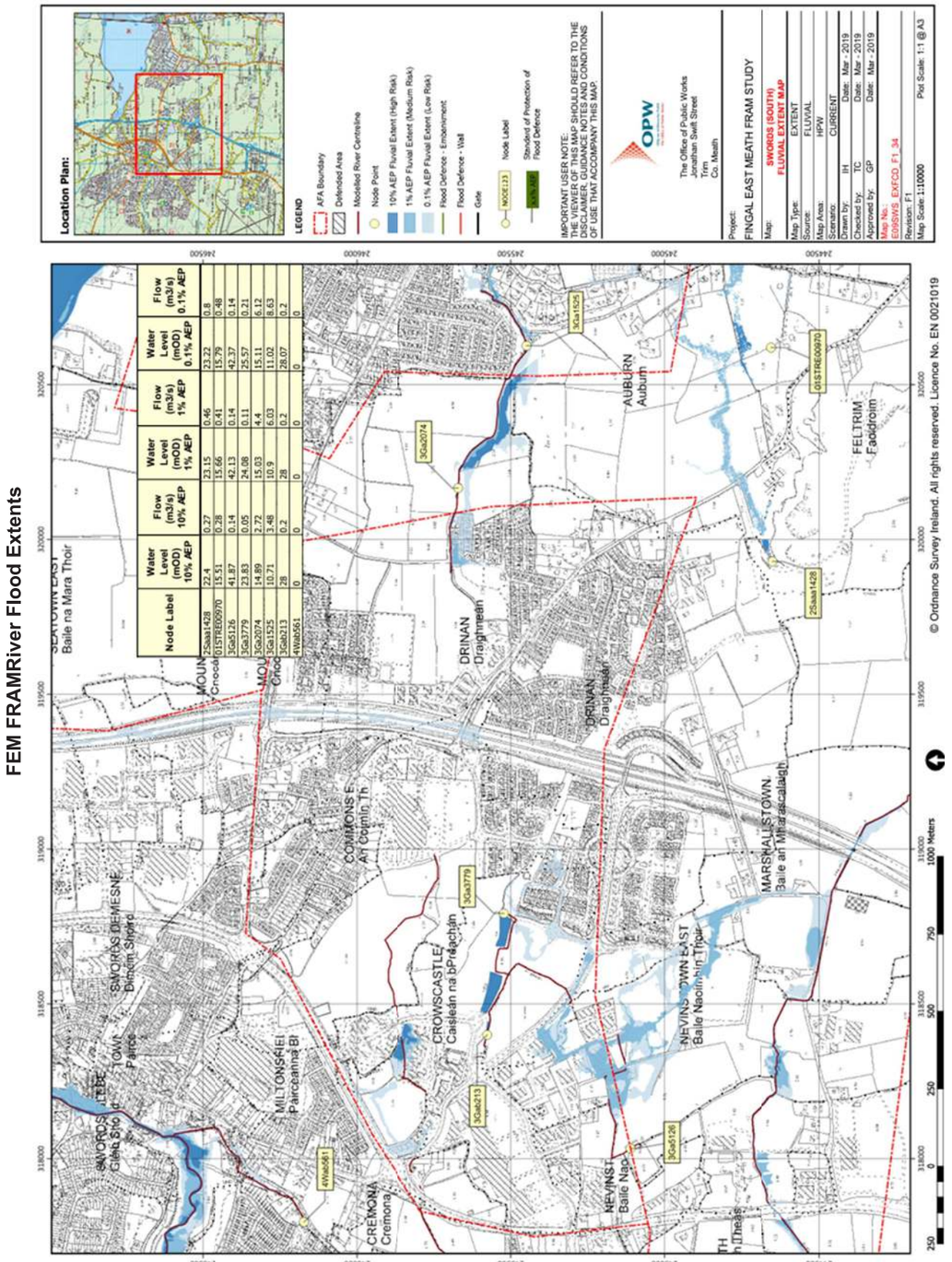
Strategic Flood Risk Assessment: The assessment of flood risk on a wide geographical area against which to assess development proposed in an area (Region, County, Town).

Vulnerability: The resilience of a particular group of people or types of property or habitats, ecosystems or species to flood risk, and their ability to respond to a hazardous condition and the damage or degree of impact they are likely to suffer in the event of a flood. For example, elderly people may be more likely to suffer injury, and be less able to evacuate, in the event of a rapid flood than younger people.

Source: *The definitions above are sourced from the DoEHLG Guidelines for Planning Authorities on 'The Planning System and Flood Risk Management, 2009' and Ciria 753 "the SuDS Manual".*

APPENDIX B

INDICATIVE FLOOD SOURCES



OPW – PAST FLOOD EVENTS LOCAL AREA SUMMARY REPORT

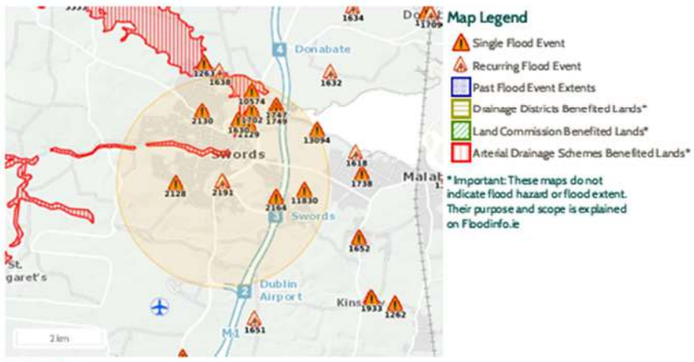
Past Flood Event Local Area Summary Report

OPW

Report Produced: 8/8/2023 15:27

This Past Flood Event Summary Report summarises all past flood events within 2.5 kilometres of the map centre.

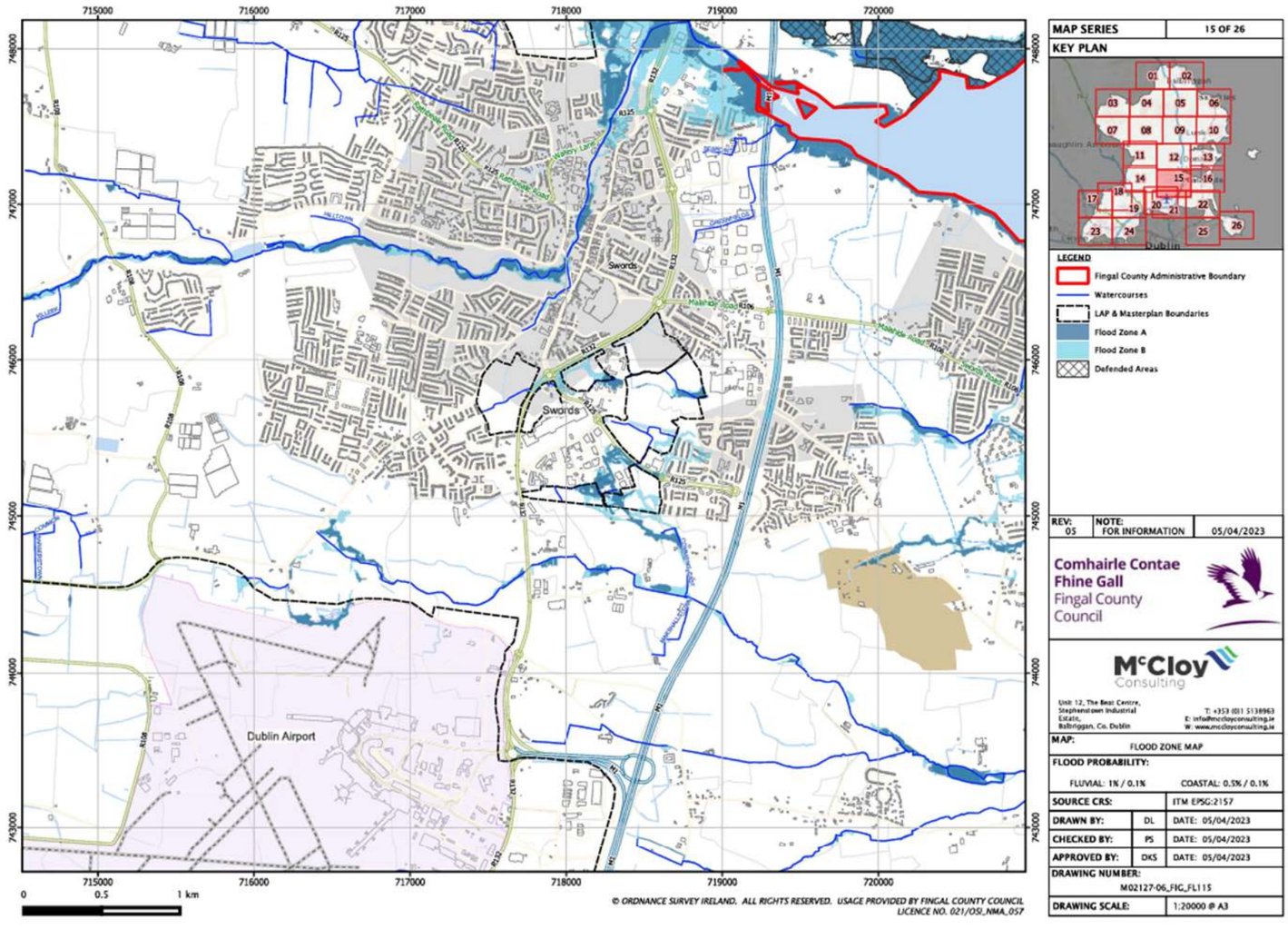
This report has been downloaded from www.floodinfo.ie (the "Website"). The users should take account of the restrictions and limitations relating to the content and use of the Website that are explained in the Terms and Conditions. It is a condition of use of the Website that you agree to be bound by the disclaimer and other terms and conditions set out on the Website and to the privacy policy on the Website.



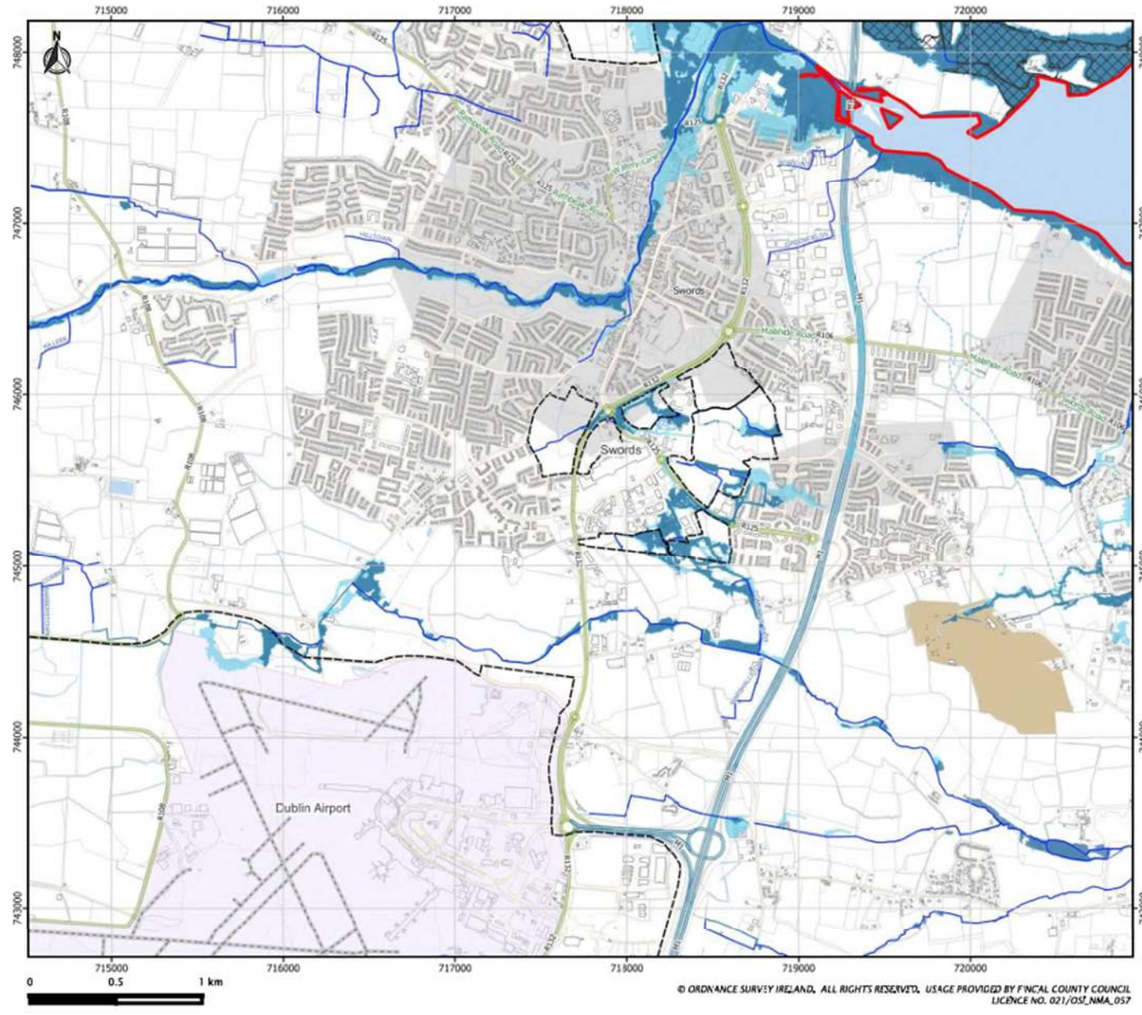
13 Results

	Name (Flood_ID)	Start Date	Event Location
1.	Ward North Street Swords Nov 2002 (ID-1630)	13/11/2002	Exact Point
	Additional Information: Reports (4) Press Archive (3)		
2.	N1 at Roundabout at Fingallions Nov 2002 (ID-1702)	13/11/2002	Exact Point
	Additional Information: Reports (1) Press Archive (0)		
3.	Estuary Road Swords Feb 2002 (ID-1747)	01/02/2002	Approximate Point
	Additional Information: Reports (1) Press Archive (0)		
4.	Gartan Court Swords Feb 2002 (ID-1749)	01/02/2002	Exact Point
	Additional Information: Reports (1) Press Archive (0)		
5.	Rathingle Swords Nov 1982 (ID-2128)	05/11/1982	Exact Point
	Additional Information: Reports (1) Press Archive (0)		
6.	Seatown Villas Swords Nov 1982 (ID-2129)	05/11/1982	Exact Point
	Additional Information: Reports (1) Press Archive (0)		
7.	Pine Grove Park Swords Nov 1982 (ID-2130)	05/11/1982	Exact Point
	Additional Information: Reports (1) Press Archive (0)		
8.	Melrose Park Oct 2002 (ID-2164)	19/10/2002	Exact Point
	Additional Information: Reports (1) Press Archive (0)		
9.	Pinnock Hill Nov 2002 (ID-2191)	14/11/2002	Exact Point
	Additional Information: Reports (1) Press Archive (0)		
10.	Pinnock Hill October 2002 (ID-1468)	19/10/2002	Exact Point
	Additional Information: Reports (4) Press Archive (0)		
11.	Pinnock Hill Swords Recurring (ID-1459)	n/a	Exact Point
	Additional Information: Reports (7) Press Archive (0)		
12.	Ward Swords Co.Dublin August 2008 (ID-10574)	08/08/2008	Approximate Point
	Additional Information: Reports (1) Press Archive (0)		
13.	Flooding at Kinsealy Court, Swords, Co. Dublin (ID-11830)	24/11/2011	Approximate Point
	Additional Information: Reports (1) Press Archive (0)		

FINGAL SFRA – FLOOD ZONE MAP

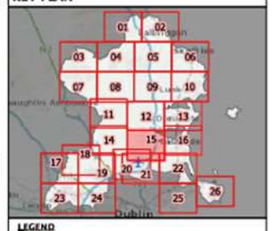


FINGAL SFRA – MID RANGE FUTURE SCENARIO FLOOD EXTENTS



MAP SERIES	15 OF 26

KEY PLAN



LEGEND

- Fingal County Administrative Boundary
- Watercourses
- LAP & Masterplan Boundaries
- 1% / 0.5% AEP MRFS Flood Extent
- 0.1% AEP MRFS Flood Extent
- No Climate Change Data Available; Present Day Flood Data Only.CC Flood Risk Subject to Site Specific Assessment

REV:	NOTE:	DATE:
05	FOR INFORMATION	05/04/2023

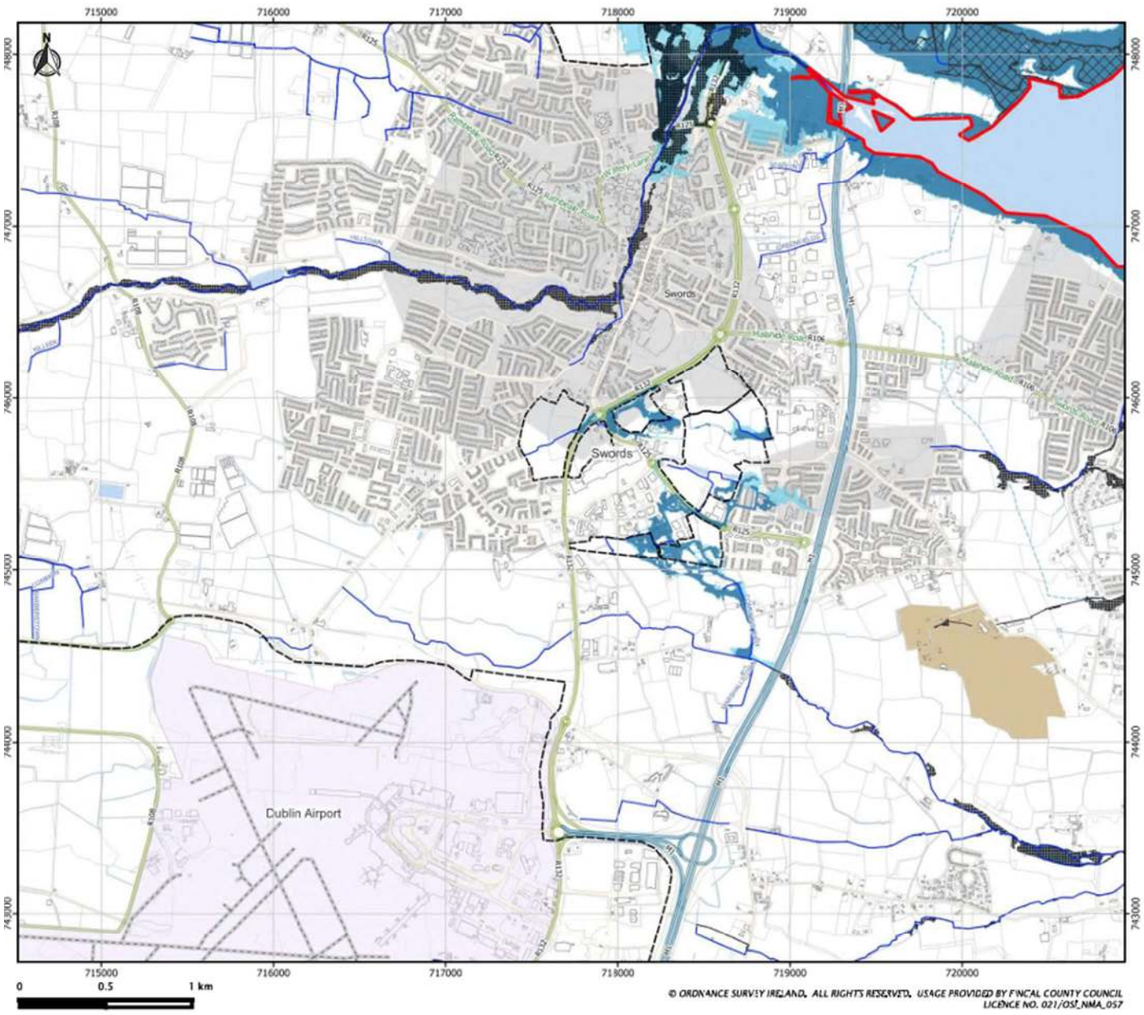
Comhairle Contae Fhine Gall
Fingal County Council

McCloy Consulting

Unit 12, The Beat Centre, Stephenstown Industrial Estate, Balbriggan, Co. Dublin
T: +353 (0)1 5138963
E: info@mccloyconsulting.ie
W: www.mccloyconsulting.ie

M.AP:	MID RANGE FUTURE SCENARIO FLOOD EXTENT	
FLOOD PROBABILITY:	FLUVIAL: 1% / 0.1%	COASTAL: 0.5% / 0.1%
SOURCE CRS:		ITM EPSG:2157
DRAWN BY:	DL	DATE: 05/04/2023
CHECKED BY:	PS	DATE: 05/04/2023
APPROVED BY:	DKS	DATE: 05/04/2023
DRAWING NUMBER:	M02127-06_FIG_FL215	
DRAWING SCALE:	1:20000 @ A3	

FINGAL SFRA – HIGH END FUTURE SCENARIO FLOOD EXTENTS



MAP SERIES	15 OF 26

KEY PLAN

LEGEND

- Fingal County Administrative Boundary
- Watercourses
- LAP & Masterplan Boundaries
- 1% / 0.5% AEP HEFS Flood Extent
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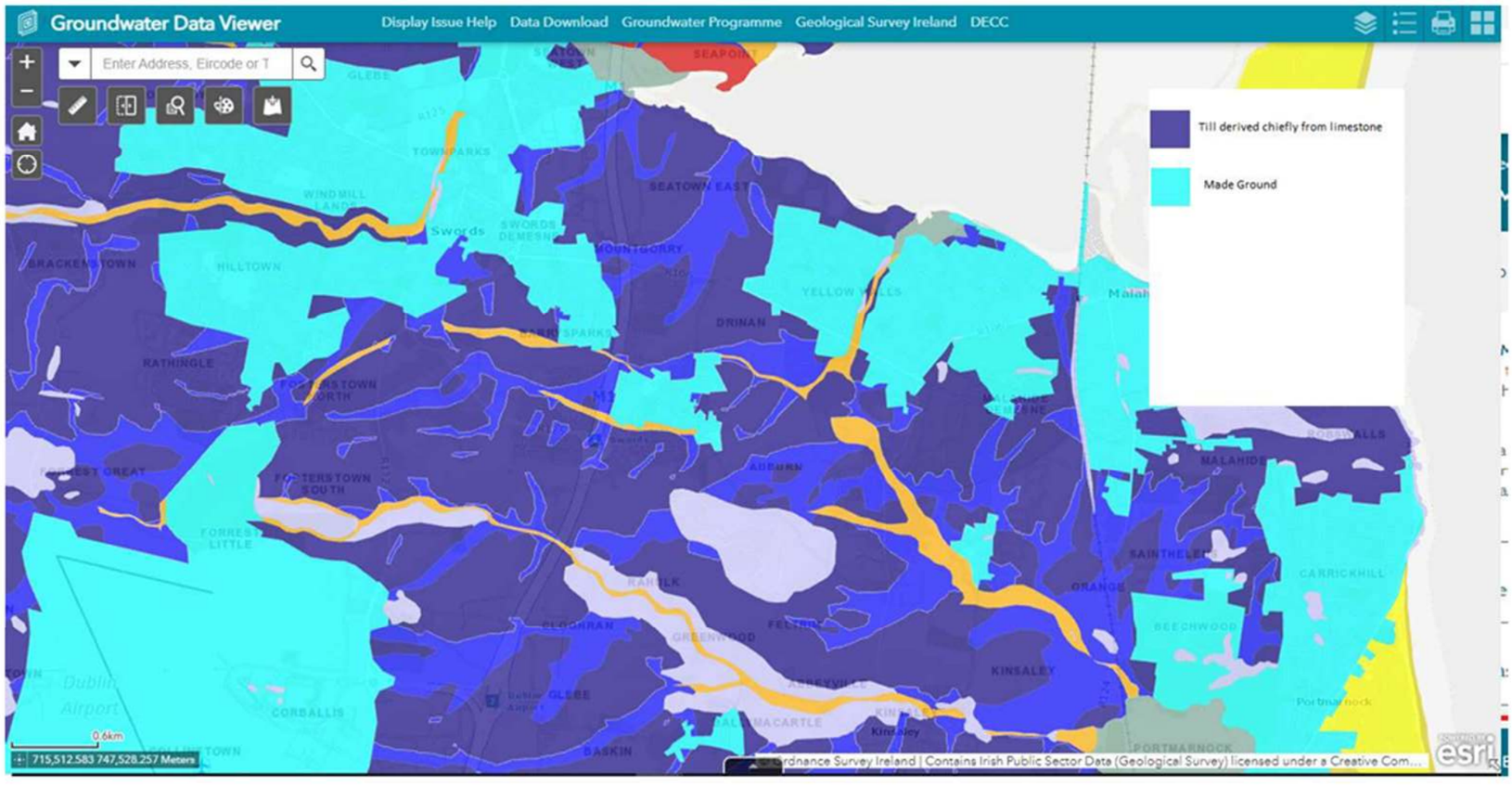
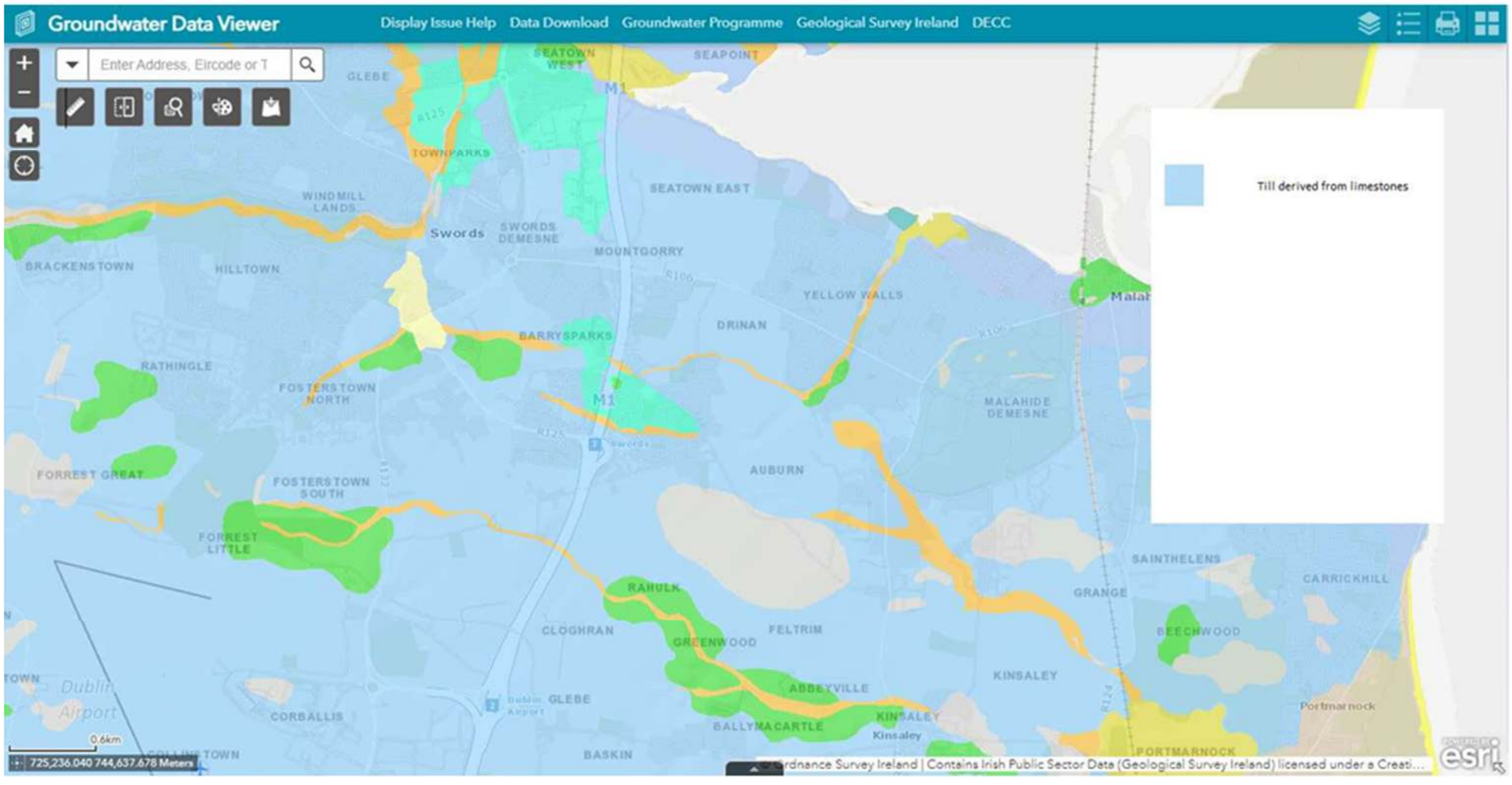
Unit 12, The Beat Centre, Stephenstown Industrial Estate, Balbriggan, Co. Dublin
T: +353 (0)1 5138963
E: info@mccloyconsulting.ie
W: www.mccloyconsulting.ie

M.AP:	HIGH END FUTURE SCENARIO FLOOD EXTENT	
FLOOD PROBABILITY:	FLUVIAL: 1% / 0.1%	COASTAL: 0.5% / 0.1%
SOURCE CRS:		ITM EPSG:2157
DRAWN BY:	DL	DATE: 05/04/2023
CHECKED BY:	PS	DATE: 05/04/2023
APPROVED BY:	DKS	DATE: 05/04/2023
DRAWING NUMBER:	M02127-06_FIG_FL315	
DRAWING SCALE:	1:20000 @ A3	

Geological Survey of Ireland: Teagasc Subsoil Mapping

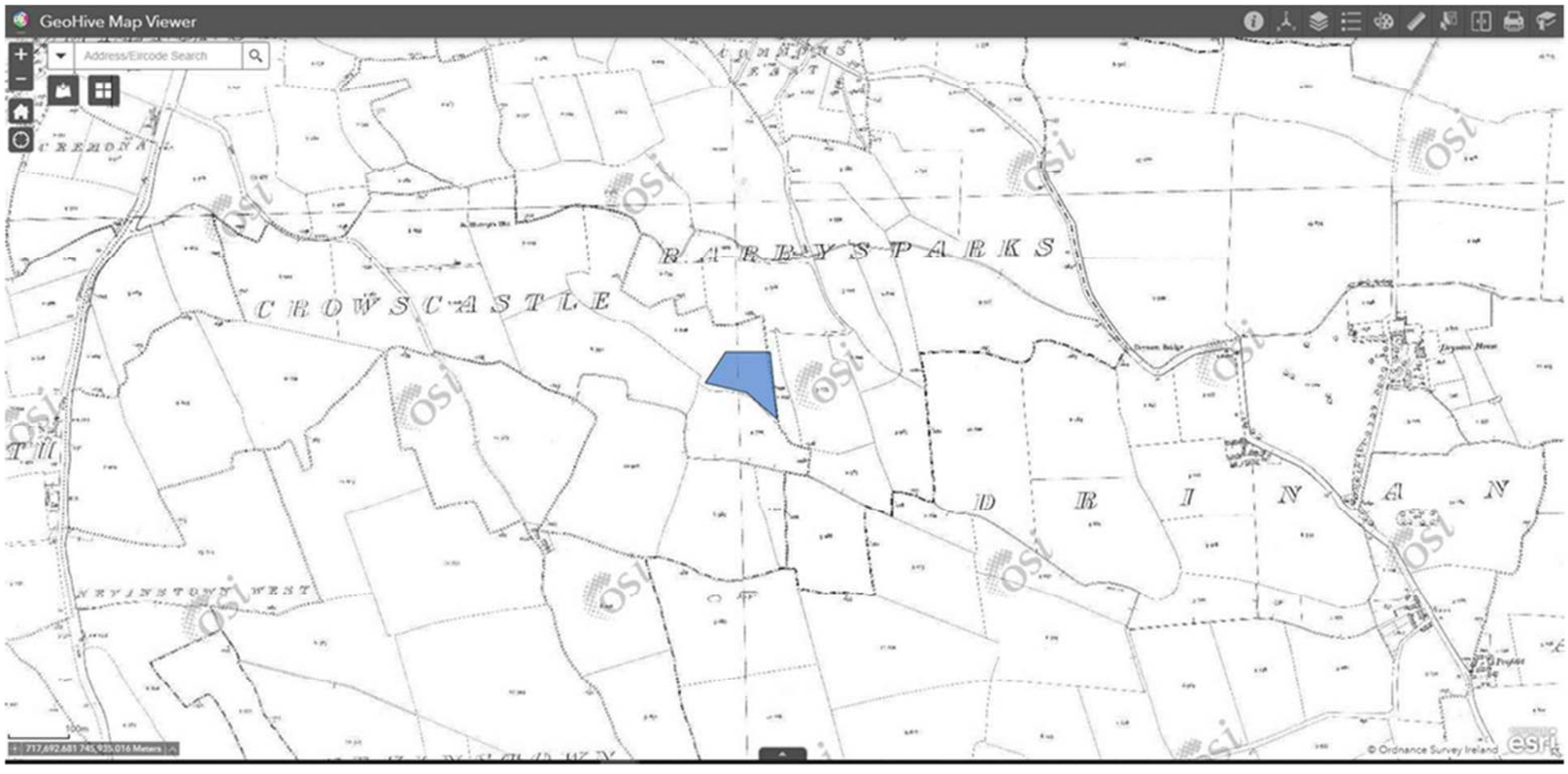


Geological Survey of Ireland: Subsoil (Quaternary Sediments)



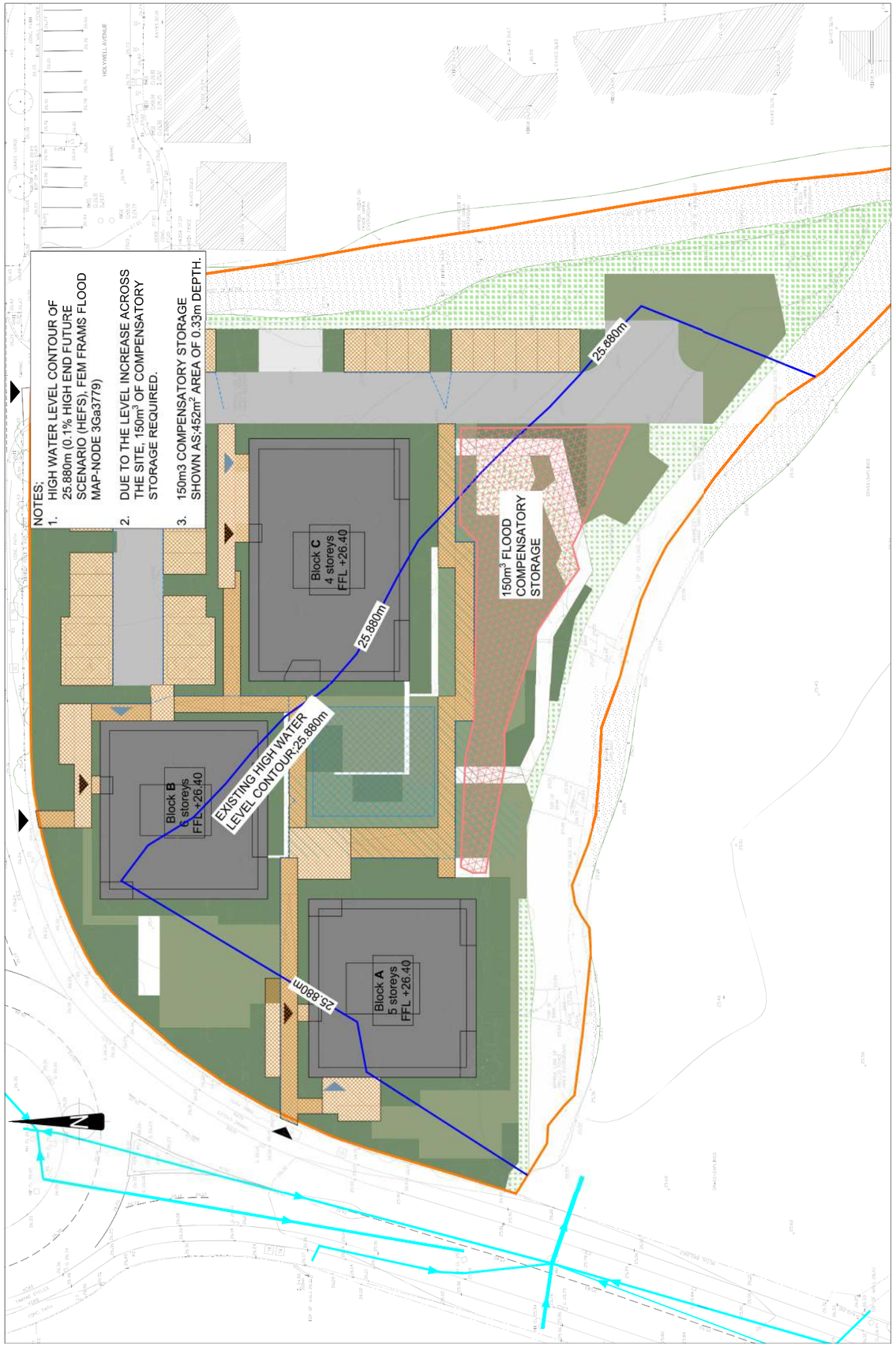
Historical Maps: 6" Genie

Historical Maps: 25" Genie



APPENDIX C

DISPLACED VOLUME CALCULATION



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Email: info@rod.ie www.rod.ie

PROPOSED RESIDENTIAL DEVELOPMENT AT HOLYWELL, SWORDS, CO. DUBLIN

Preliminary Construction & Environmental Management Plan | September 2023

Housing at Holywell, Swords, County Dublin

Preliminary Construction & Environmental Management Plan

Document No: HHP-ROD-XX-XX-RP-C-C0003

Made: ..... Ciaran McGee (CMG)

Checked:..... Sean Kennedy (SK)

Approved:..... Ben Gallery (BDG)

Revision	Description	Made	Checked	Approved	Date
P01	Issued for Planning	CMG	SK	-	29/09/2023
P02	Issued for Planning	CMG	SK	BDG	17/10/2023

ROD ROUGHAN & O'DONOVAN

Housing at Holywell, Swords, County Dublin
Preliminary Construction & Environmental Management Plan
TABLE OF CONTENTS

1. INTRODUCTION

This Preliminary Construction & Environmental Management Plan (CEMP) has been prepared to outline the envisaged procedures, sequencing, construction methodology and environmental control measures anticipated by the Project Team engaged in the planning, liaison, and construction of the proposed residential development at Holywell, Swords, Co. Dublin. The plan outlines proposals on traffic and environmental management measures to be adopted during construction. The appointed construction Contractor will prepare and be responsible for implementing the Final Construction & Environmental Management Plan for Construction.

This document is designed to be a live document which will eventually address how any planning conditions imposed on the project will be managed or discharged by the construction team.

The CEMP incorporates 3 main elements:

1. Description of the construction of the development.
2. Traffic management considerations.
3. Environmental management considerations, including demolition waste management.

2. CONSTRUCTION OF THE DEVELOPMENT

2.1 Site Location

The proposed development is located at Holywell, Swords, Co. Dublin. The site is bounded by the Holywell Distributor Road to the north and west, existing residential development to the east and a residential landscaped area to the south.

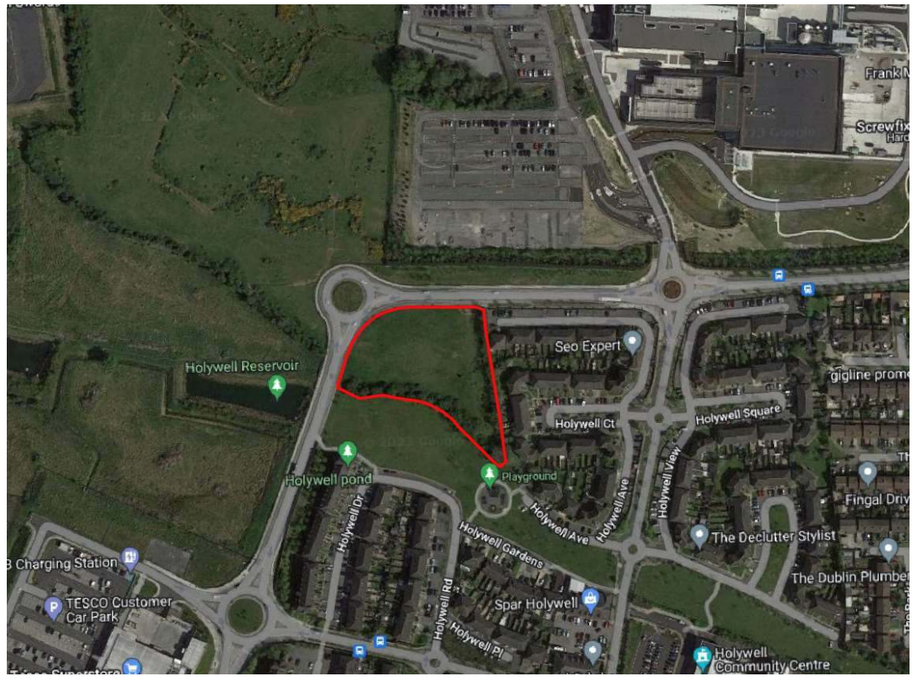

Figure 2.1 Proposed Development Location

2.2 Description of the Site

The site generally slopes from northeast to southwest. The elevation across the site varies by approximately 2.5m from the highest to lowest points of the site (approximately 3.9% gradient). There is an existing drainage ditch located along the southern boundary of the site. Proposed ground levels are to be set above the flood level of the adjacent ditch.

2.3 Project Details

Table 2.1 Description of Organisations

Organisations	
Client	Fingal County Council
Architect	Henchion & Reuter Architects
Engineering Consultants	Roughan & O'Donovan Consulting Engineers
Contractor	Yet to be Appointed

2.4 Programme

The project is due to commence in 2024 with a period of construction of approximately 12 months.

2.5 Working Hours

Except where otherwise agreed with Fingal County Council (FCC), working hours will be 07:00 – 19:00 Monday to Friday and 09:00 – 17:00 Saturday and closed on Sundays.

2.6 Pre-Start Survey

A Pre-Start Survey of the works will be carried out prior to construction works commencing. This will consist of a photographic aided report on the existing environment including; existing structures, boundaries, footpaths, roads, access points, fences lines, walls, hedge lines, kerb lines, lighting columns, street furniture and road signs. The findings of the survey will be documented and stored by the Contractor.

2.7 Construction Site Compounds, Accommodation, Welfare & Storage

It is envisaged that the main project offices will be established on the site, welfare facilities will be provided adjacent to the main project offices for operatives on the site. The site offices shall be located to minimise any potential impact on existing trees and landscape. It is envisaged that storage facilities shall be provided adjacent to the main project offices.

2.7.1 Accommodation

Site offices will be constructed from modular anti-vandal containers. The offices shall be provided with a metered mains power supply and electric heating. It is the contractors responsibility to obtain agreement for any connections from Uisce Éireann (IW) for temporary connections.

2.7.2 Welfare Facilities

The main offices must include welfare facilities including toilets and kitchen facilities for staff. Operative welfare facilities including drying rooms and locker rooms will be provided.

2.8 Construction of the Development

The construction and commissioning of the development will commence following planning and permitting consent approval, and will comprise of the following elements of work:

2.8.1 Site Set-up

Initially offices and storage containers will be transported to the site to provide accommodation and welfare in advance of the works commencing.

2.8.2 Existing Structures and Buildings

There are existing residential developments located to the east and south of the development site and existing industrial developments to the north. The contractor will incorporate protection measures such as minimising duct, noise and vibrations on site during construction to protect these existing developments.

2.8.3 Proposed Development

The proposed development involves the construction of 3 no. apartment blocks comprising of 57 no. units at Holywell, Swords, Co. Dublin. The proposed development has a gross site area of approximately 0.78 hectares.

2.8.4 Associated Civils Works

A new access will be constructed to serve the development off the Holywell Distributor Road. This access will be constructed at the northern boundary of the site, where the current access is located.

New connections to drainage, water supply and utilities will be brought into the site from the Holywell Distributor Road.

3. TRAFFIC MANAGEMENT

The proposed development will be accessed from the existing access off the Holywell Distributor Road. The Contractor will agree traffic management proposals with Fingal County Council and An Garda Síochána to facilitate traffic in the surrounding area at all times. Once all the necessary earth moving (minimal cut/fill) is completed, there will be limited construction traffic on the existing road network as the initial phase involves processing and moving aggregates within the site boundary. Typical construction associated traffic would include operatives travelling to and from work and deliveries of materials.

All Traffic Management proposals shall be agreed with Fingal County Council and An Garda Síochána prior to construction of the development.

3.1 Constraints

The main constraints for construction activities relates to the construction of the new services connections to the site and the construction of the new site entrance. There are a number of residential and industrial developments served by the Hollywell Distributor Road located within the vicinity of the development site. Road users will need to be accommodated throughout the works.

3.1.1 Associated Civil Works

It is proposed to carry out the construction of the service connections within the existing road / footpaths simultaneously. These works are intended to be undertaken concurrently to minimise the impacts on the surrounding road network.

3.1.2 Vehicular Access to Site

The site will be accessed from the existing access off the Hollywell Distributor Road. There will be no other access points to the site. Deliveries and general traffic from HGV's will be required to access the development via the Hollywell Distributor Road. The HGV's will be directed to the appropriate location and an appropriate member of staff from the contractor will be notified to meet the delivery and arrange offloading. Pedestrian safety barriers will be erected at the entrance to the site to permit safe passage for pedestrians across the access to the development segregating members of the public from the HGV's and other vehicles entering the development.

3.2 Construction Traffic

As with any construction project, the contractors will be obliged to carry out a comprehensive Construction Traffic Management Plan (CTMP) in consultation with the local authority, Fingal County Council (FCC) before the commencement of the construction phase. The purpose of such a plan is to outline the measures to manage the expected construction traffic during the construction period and will be revised accordingly as works progress. The CTMP will also detail how facilities for existing road users will be maintained whilst construction operations are proceeding.
During the construction phase the project will generate a range of traffic, which can be broken down into the main phases of construction as outlined below.

3.2.1 Site Set-up

Earthworks plant will be required to prepare the compound area, install services and commence enabling works. Portacabins will be required for the site compounds, as well as portable toilets/welfare facilities, and lock up containers.

It is expected that parking for site operatives will be a requirement throughout the construction of the development. It is considered that there will be adequate land within the curtilage of the site to accommodate temporary car and truck parking for site operatives. Site operatives will be encouraged to use public transport.

3.2.2 Services Connection Construction on Hollywell Distributor Road

Excavations may generate unsuitable fill material which will be transported by tipper lorries back to the site for use in landscaping or transported off site to a licensed waste disposal facility. Materials such as pipes, precast manhole rings, kerbs etc will all come to site on flatbed lorries. Additional construction plant will be required for resurfacing works.

3.2.3 Proposed Development

The commencement of the main construction works will require additional construction plant. Regular deliveries of materials and ready mixed concrete will take place during these works. There will also be an increase in the workforce resulting in more cars and vans accessing the site.

3.2.4 Routes for HGV's to Site

It is envisaged that HGV's travelling from the north, will access the site via the M1 Junction 4, heading south via the R132 and then west via the R125 before heading on to the Hollywell Distributor Road.

It is envisaged that HGV's travelling from the west will access the site via the R125 before heading on to the Hollywell Distributor Road.

It is envisaged that HGV's travelling from the east will access the site via the Feltrim Road before heading on to the Hollywell Distributor Road.

It is envisaged that HGV's travelling from the south will access the site via the M1 Junction 3, heading west via the R125 before heading on to the Hollywell Distributor Road.

Final routes for HGV's to site shall be agreed by the Contractor with Fingal County Council prior to construction commencing.

3.3 Maintenance of Public Roads

There will be potential for delivery vehicles and other site traffic to carry mud and silt onto the public roads when exiting the site. In order to prevent this, a wheelwash will be utilised on site. This will be used as required to wash down vehicles prior to leaving the site. If required a road sweeper may also be deployed on the immediately adjacent road network to the site to keep this clean and prevent vehicles carrying mud onto the surrounding road network. The road sweeper will be required during the works on the Hollywell Distributor Road. Roadside gullies will be maintained by the road sweeper contractor. Road line markings will be monitored and markings that require replacement throughout the duration of the project will be replaced by a specialist contractor.

3.3.1 Dust

Dust is a nuisance and can be damaging to humans, machinery, plants and animals. All workers on site are to consider the nuisance caused by the impacts of dust. The effects of dust will be minimised using the following techniques;

- Avoid creating unnecessary dust.

- Cover materials which could create dust when windy.
- Dampen down dust in operations which create dust.
- Ensure that vehicles leaving site do not leave mud on the road.

4. ENVIRONMENTAL MANAGEMENT SYSTEM

This CEMP shall be read in conjunction with the measures outlined in the environmental assessments that accompanies this planning application.

4.1 Identification

Prior to commencement of site works the Design Team and the Contractor will convene to identify the potential environmental issues which may arise throughout the duration of the Project. These will include off-site issues and cover the design, construction and commissioning phases of the Project, up to handover to operations staff. Each issue will be entered on a register of environmental risks.

4.2 Assessment

The Project Team will undertake an assessment of each of the identified environmental risks. This assessment will produce a clear definition of the risk, the potential impacts it may have and the consequences arising from the occurrence of the risk. The findings will be entered on the register of environmental risks.

4.3 Mitigation

Mitigation measures will be devised based upon the individually assessed risks. These could range from changes in design to remove the risk to on-site precautions to manage the risk and prevent the impact being realised. The agreed mitigation measures will be entered on the register of environmental risks. Any specific mitigation measures defined by planning conditions will also be addressed.

4.4 Monitoring, Recording & Reviewing

The register of environmental risks will act as the management tool for the control of environmental issues arising for the project. It will be reviewed on a regular basis to identify the efficiency of the mitigation measures employed based upon the monitoring data collected and records kept.

4.5 Minimising the Environmental Impacts

The Project Team and all its employees shall conduct their work in such a manner that unnecessary risks and disturbance to the environment are avoided. As part of the Environmental Management System, personnel are made aware of issues which may impact on the environment, and are encouraged to act responsibly.

4.6 External Stakeholders

With respect to environmental impacts, consultations will be undertaken with the Local Authority (Fingal County Council) and relevant environmental stakeholders as required.

4.7 Noise & Vibration

Noise will be generated from delivery vehicles and from concreting operations (vibrating concrete pokers etc). Noise hoarding will be erected around noisy equipment/activities where necessary. Effective management of noise on site will consist of the following measures;

- Ensure plant and equipment have properly operating silencers / mufflers.
- Do not leave plant and other vehicles / machinery running needlessly. This causes unnecessary pollution.

- Consider the location of noisy plant in order to minimise nuisance to nearby houses, motorists, and wildlife.

4.8 Protection of Watercourses

There is an existing drainage ditch located along the southern boundary of the site. However, following a number of site visits and discussions with FCC, the ditch appears to be dry. Flow from the Gaybrook steam is culverted to bypass the subject site. Run-off or surface water that is generated within the site will be discharged to the existing storm water network rather than to the ditch or other open watercourses.

Even though the ditch appears to be dry, as a further precaution, all works in proximity to the existing drainage ditch shall follow the generic best practice guidance outlined in the following documents:

- *Guidelines for Crossing Watercourses during the Construction of National Road Schemes* (NRA, 2008c).
- *Guidelines on Protection of Fisheries during Construction Works in and Adjacent to Waters* (IFI, 2016).
- *CIRIA C648 Control of water pollution from linear construction projects: technical guidance* (CIRIA, 2006).

The following protection measures will also be followed to ensure water quality discharged from site is maintained:

- All machinery will be refuelled from mobile tankers on the local/access/haul/site roads. No refuelling will take place within 50m the ditch.
- Mobile storage facilities, such as fuel bowsers, will be bunded to 110% capacity to prevent spills. Tanks for bowsers and generators will be double skinned.
- When not in use, all valves and fuel trigger guns from fuel storage containers will be locked.
- Only dedicated trained and competent personnel will carry out refuelling operations. A spill kit and drip tray will be on site at all times and available for all refuelling operations. Equipment will not be left unattended during refuelling. All pipework from containers to pump nozzles will have anti siphon valves fitted.
- Strict procedures for plant inspection, maintenance and repairs will be detailed in the contractor's method statements and machinery will be checked for leaks before arrival on site.
- All site plant will be inspected at the beginning of each day prior to use. Defective plant will not be used until the defect is satisfactorily fixed.
- All major repair and maintenance operations will take place off site.
- Care will be taken at all times to avoid contamination of the environment with contaminants other than hydrocarbons, such as uncured concrete and other chemicals.
- Surface water from the site be treated in attenuation ponds prior to discharging to the storm water network.

4.9 Waste / Demolition Management

The proper management and handling of waste on site is essential to ensure that pollution and increased levels of contamination are minimised. Effective management of waste on site will consist of the following measures;

- Closed skip containers
- Non dumping/littering policy on site
- Waste segregation
- Regular clean up of the site
- Careful handling and transportation to avoid damage to raw materials.
- Efficient ordering

Excavated material from the site will be tested accordingly. Acceptable material can be recycled and used as part of the development or as import on other schemes, while unacceptable material will be transported off site to a licensed waste disposal facility.

5. Conclusion

The Housing at Holywell project in Swords, County Dublin, envisage the construction of a residential development with three apartment blocks totalizing 57 units in an area of 0.78 Hectares. The site, located along the Holywell Distributor Road.

Key aspects of the plan include setting up construction facilities, accommodating workers, and implementing measures to manage traffic and minimize environmental impacts. The project aims to establish access via the Holywell Distributor Road and will adhere to regulations set forth by Fingal County Council and An Garda Síochána. The plan also outlines strategies to mitigate dust, noise, and vibration, as well as to protect watercourses and manage waste. The document underscores the importance of environmental responsibility and collaboration with stakeholders throughout the development process. The plan serves as a comprehensive guide for construction activities, traffic management, and environmental protection measures.

LEGEND AND SCHEDULE OF MATERIALS

- PROPOSED ROAD SURFACE TO ENGINEER'S DETAIL
- PROPOSED PERMEABLE BLOCK PAVING TYPE 1
- PROPOSED PERMEABLE BLOCK PAVING TYPE 2
- PROPOSED SMALL FORMAT NATURAL STONE PAVING
- PROPOSED PERMEABLE BLOCK PAVING TYPE 3 IN PARKING BAYS
- PROPOSED SELF-BINDING GRAVEL
- PROPOSED BICYCLE PARKING
- PROPOSED RETAINING WALL
- INDICATIVE EXTENT OF PROPOSED BELOW-GROUND ATTENUATION AREA
- INDICATIVE EXTENT OF PROPOSED ABOVE-GROUND ATTENUATION AREA
- PROPOSED NATURAL STONE BOULDERS IN SOFT LANDSCAPE
- PROPOSED SEAT
- PROPOSED PLAY EQUIPMENT
- PROPOSED LAWN
- PROPOSED GROUNDCOVER AND HERBACEOUS PLANTING
- PROPOSED UNCUT GRASS/ MANAGED MEADOW
- PROPOSED HEDGE
- PROPOSED TREE PLANTING
- EXISTING VEGETATION RETAINED AND PROTECTED IN ACCORDANCE WITH BS 5837:2012. ORANGE DASHED LINE REPRESENTS RPA (ROOT PROTECTION AREA)
- +26.40 PROPOSED LEVEL
- +26.25 ex. EXISTING LEVEL RETAINED

SCHEDULE OF PROPOSED PLAY EQUIPMENT:

REF.:	TYPE:
21 no. P-1	PLAY LOGS
4 no. P-2	BALANCE BEAMS
1 no. P-3	SEE-SAW

SCHEDULE OF PROPOSED PLANTING

TREE PLANTING

11 no. Ap	*Acer palmatum* 'Osakazuki' 6 x tr., wrb., multistem, min 5 stems, all stems to be min 2.2m h.
29 no. Al	*Amelanchier lamarckii* 3 xtr., wrb. 2m h., 2.5m spread, multistem
49 no. Bp	*Betula pubescens* 4 x tr., wrb., 3-4m h., 14-16cm g., feathered
28 no. Ca	*Corylus avellana* 4 x tr., wrb., multistem, min. 5 stems, all stems to be min 2.5m h.
31 no. Mk	*Magnolia kobus* 3 x tr., wrb., 2.5m h., 16-18cm g.
3 no. Ps+	*Pinus sylvestris (semi-mature)* 4-5 x tr., wrb., 3-4m h., 30-35cm clear stem min. 1.5m
15 no. Pc	*Pyrus calleryana* 'Chanticleer' 4 x tr., wrb., 3m h., 14-16 cm g., clear stem
3 no. Qr+	*Quercus robur (semi-mature)* 4 x tr., wrb., 4m h., 25-30cm g.
10 no. Qr	*Quercus robur* 3 x tr., wrb., 4-5m h., 14-16cm g., clear stem

HEDGE PLANTING TYPICALLY

Fagus sylvatica 1200-1600mm height
Sarcoccoca confusa 900-1200mm height

Planted at 450mm centres in single rows and 600mm centres in double staggered rows

GROUNDCOVER PLANTING TYPICALLY

Asplenium scolopendrium 2 ltr. cg.
Allium sphaerocephalon 2 ltr. cg.
Adiantum pedatum 2 ltr. cg.
Anemone hupehensis 2 ltr. cg.
Aquillegia vulgaris 2 ltr. cg.
Aster macrophyllus 'Twilight' 2 ltr. cg.
Bergenia 'Biedermeier' 2 ltr. cg.
Campanula glomerata 2 ltr. cg.
Delphinium elatum 2 ltr. cg.
Dryopteris filix-mas 2 ltr. cg.
Echinacea pallida 'Hula Dancer' 2 ltr. cg.
Heuchera 'Fireworks' 2 ltr. cg.
Lavandula angustifolia 2 ltr. cg.
Libertia grandiflora 2 ltr. cg.
Luzula sylvatica 2 ltr. cg.
Primula florindae 2 ltr. cg.
Sarcococca humilis 2 ltr. cg.
Verbena bonariensis 2 ltr. cg.

ABBREVIATIONS:

xtr.	number of transplants in nursery
h.	height
s.	spread
wrb.	wire root-balled
cmg.	girth of tree in centimeters measured 1m above ground
2 ltr. cg.	plants supplied in 2 litre volume containers

NOTES:

DATE	REV.	DESCRIPTION	DRAWN BY:	CHECKED BY:
-	-	-	-	-

CLIENT: FINGAL COUNTY COUNCIL
PROJECT: HOLYWELL HOUSING
DRAWING: LANDSCAPE PLAN

PROJECT NO	SCALE	SHEET SIZE	DRAWN BY	CHECKED BY	1st ISSUE
Fc.10	1:250	A1	lz	tk	20.09.2023

ISSUE STATUS: PLANNING
DRAWING NO. Fc.10-DR-2001
REVISION -
NORTH

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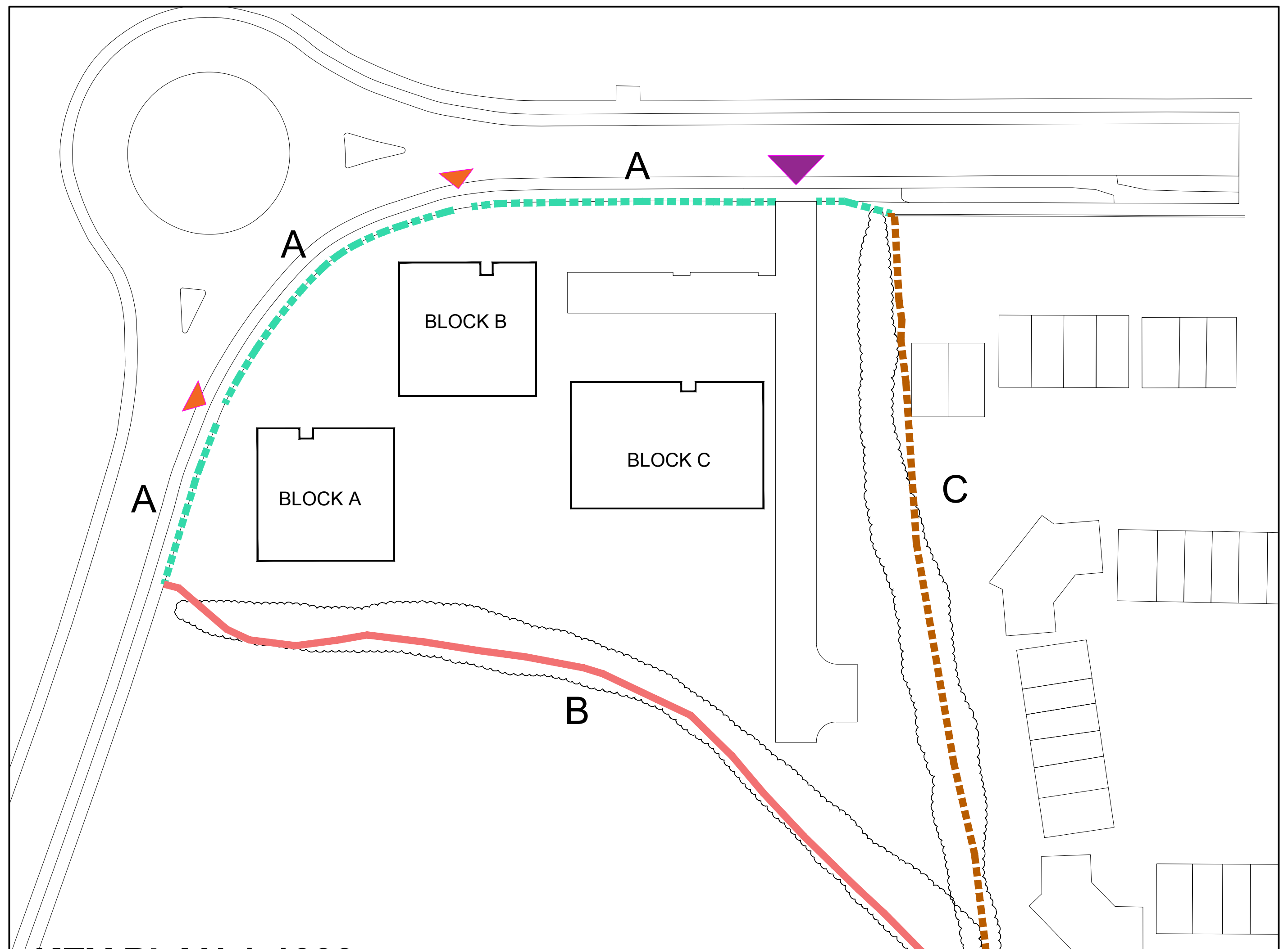


KEY PLAN 1:1000

LEGEND AND SCHEDULE OF BOUNDARIES:

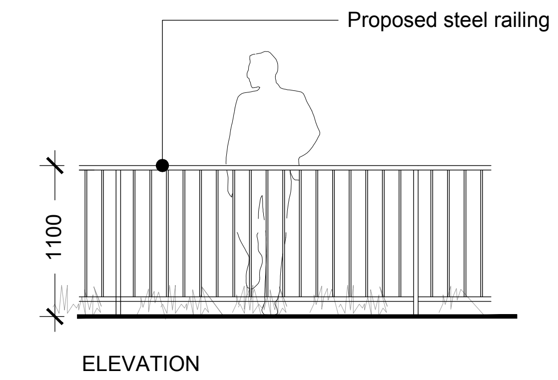
BOUNDARY TYPE A
PROPOSED STEEL RAILING WITH BUFFER PLANTING

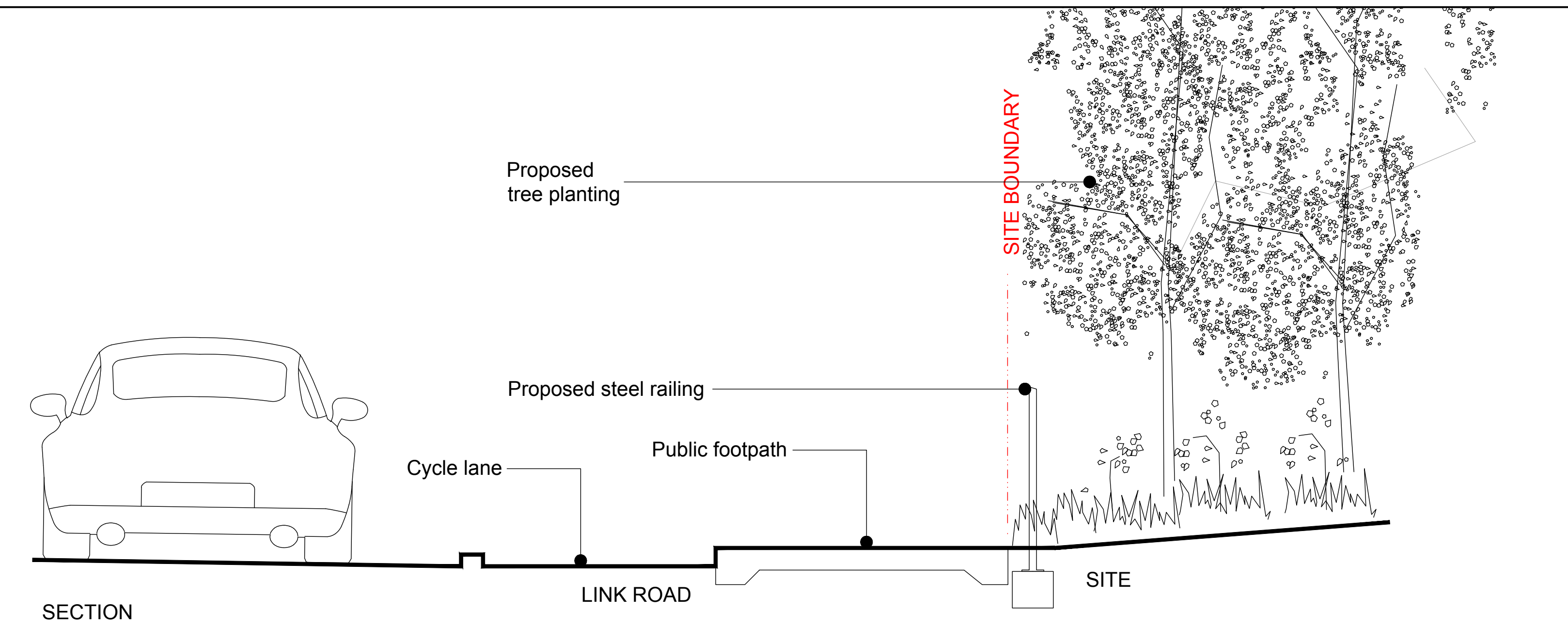
BOUNDARY TYPE B
EXISTING VEGETATION RETAINED,
EXISTING CONCRETE POST AND PANEL FENCE
RETAINED AND MADE GOOD WHERE REQUIRED

BOUNDARY TYPE C
EXISTING VEGETATION RETAINED,
EXISTING PALADIN FENCE/CONCRETE BLOCK WALL
RETAINED AND PROTECTED

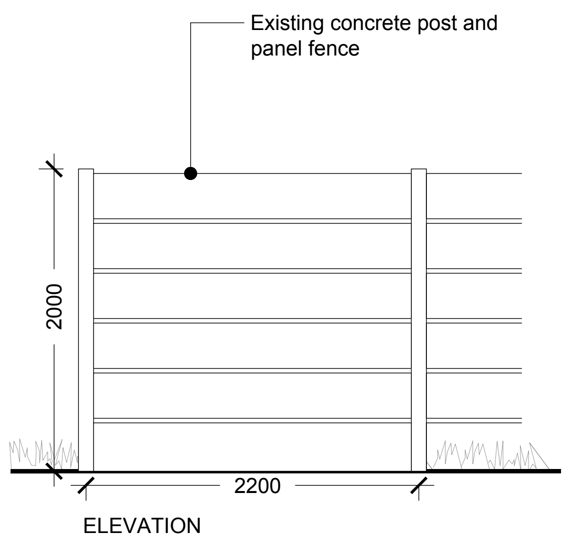
PROPOSED VEHICULAR SITE ACCESS

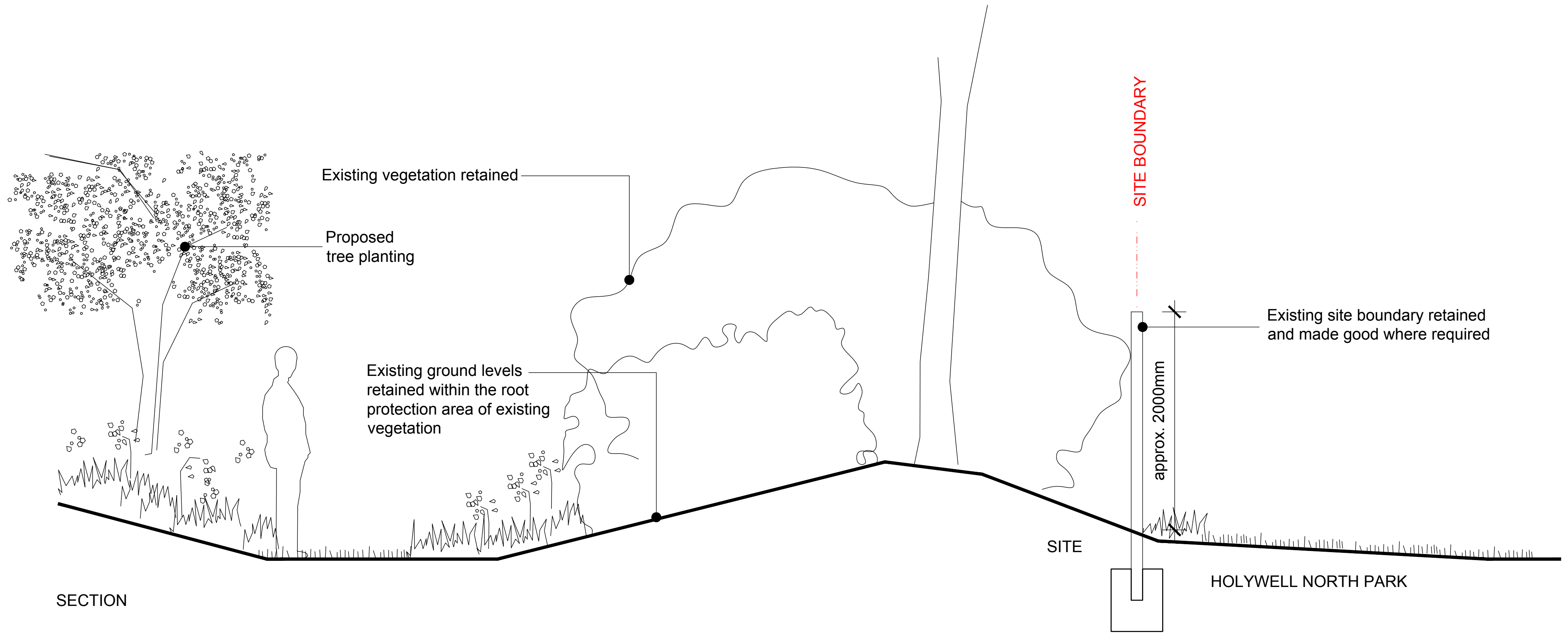
PROPOSED PEDESTRIAN SITE ACCES





BOUNDARY TYPE A





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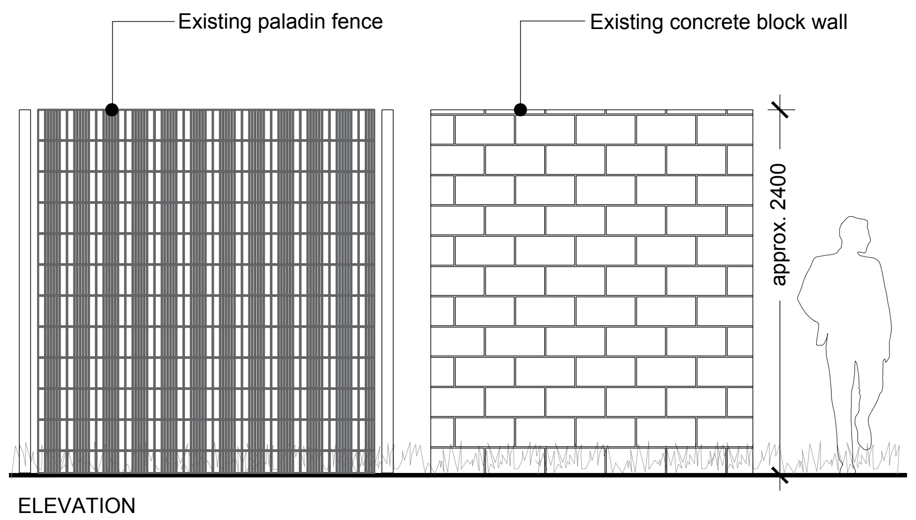

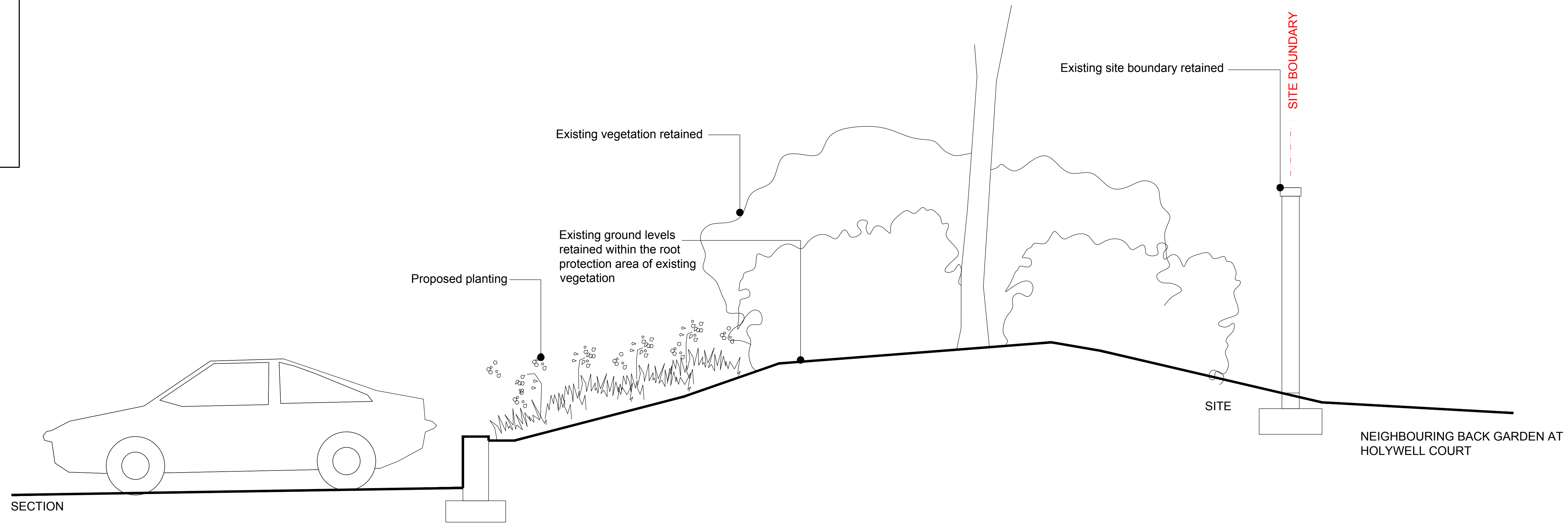

BOUNDARY TYPE C

NOTES:

DATE	REV.	DESCRIPTION	DRAWN BY:	CHECKED BY:
-	-	-	-	-

CLIENT:	FINGAL COUNTY COUNCIL	**ISSUE STATUS:**	NORTH
PROJECT:	HOLYWELL HOUSING	PLANNING	
DRAWING:	BOUNDARY TREATMENTS	**DRAWING NO.** Fc.10-DR-2002	**REVISION** -

PROJECT NO	SCALE	SHEET SIZE	DRAWN BY	CHECKED BY	1st ISSUE
Fc.10	1:1000/1:50	A2	lz	tk	20.09.2023

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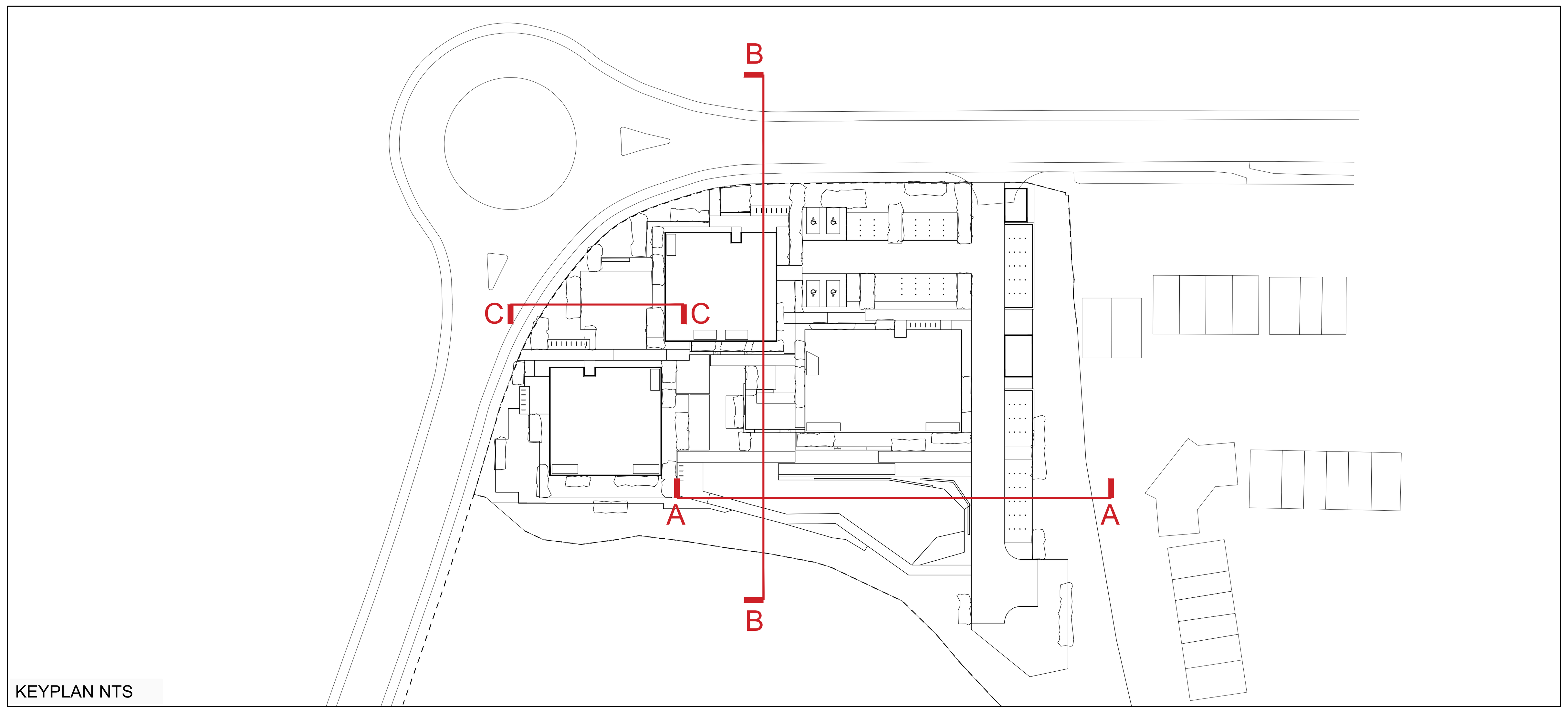

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DATE	REV	DESCRIPTION	DRAWN BY:	CHECKED BY:
-	-	-	-	-

CLIENT:	FINGAL COUNTY COUNCIL	**ISSUE STATUS:**	NORTH
PROJECT:	HOLYWELL HOUSING	PLANNING	
DRAWING:	LANDSCAPE SECTIONS	**DRAWING NO.** Fc.10-DR-2400	**REVISION** -

PROJECT NO	SCALE	SHEET SIZE	DRAWN BY	CHECKED BY	1st ISSUE
Fc.10	1:100	A1	lz	tk	20.09.2023

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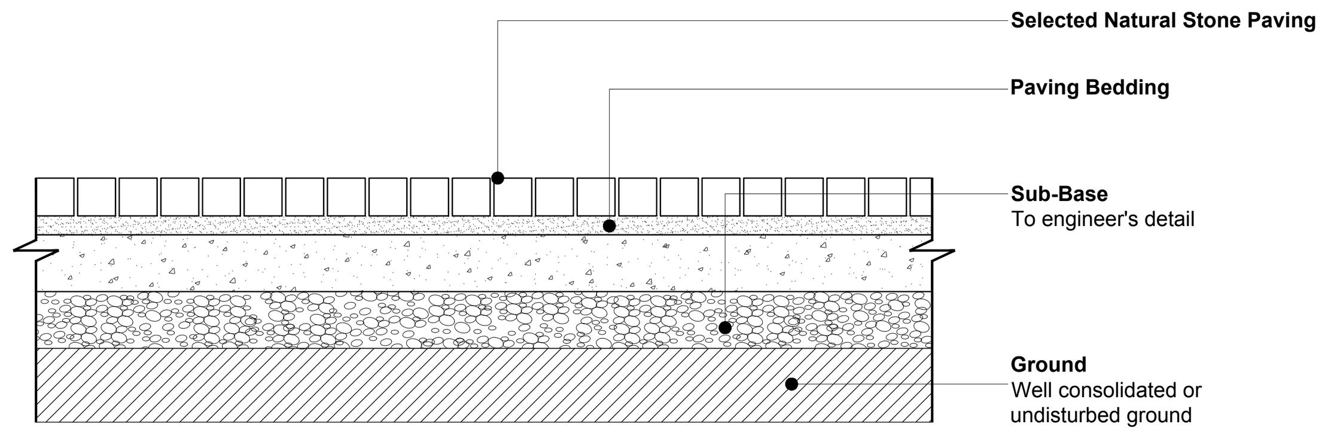
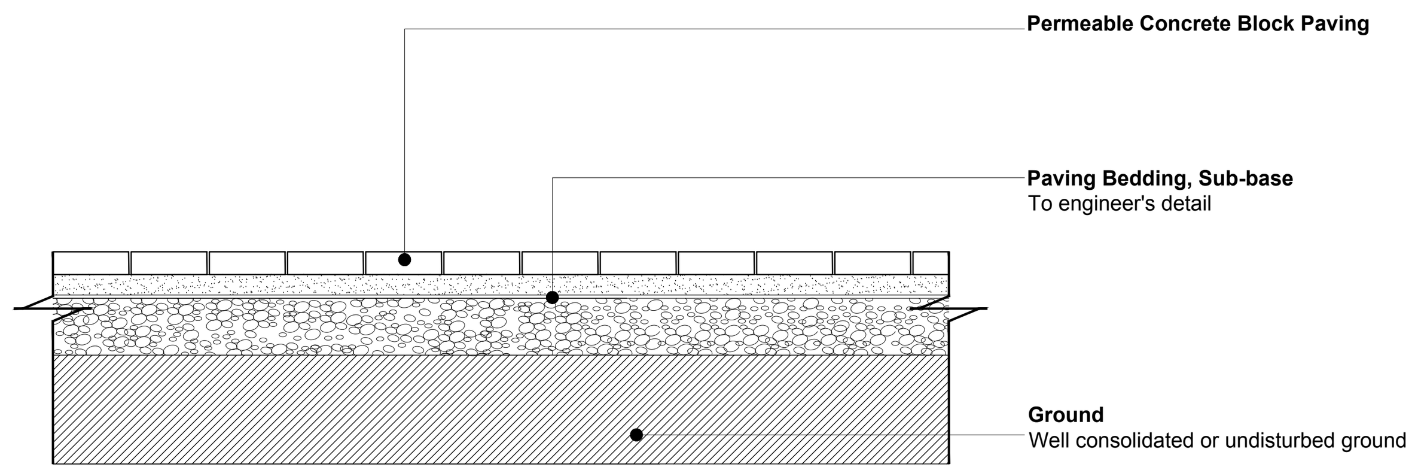


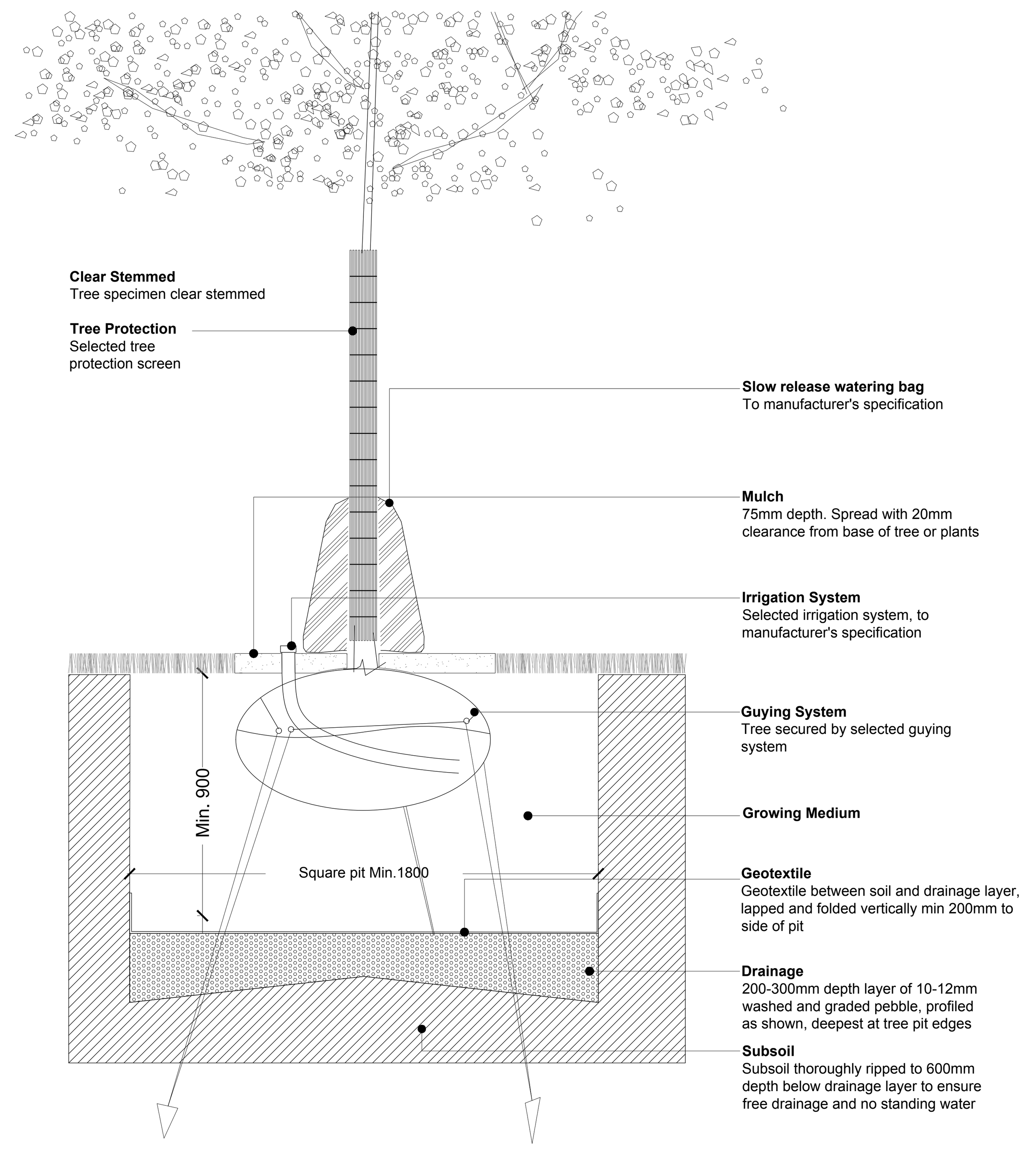
SMALL FORMAT NATURAL STONE PAVING

1
2500



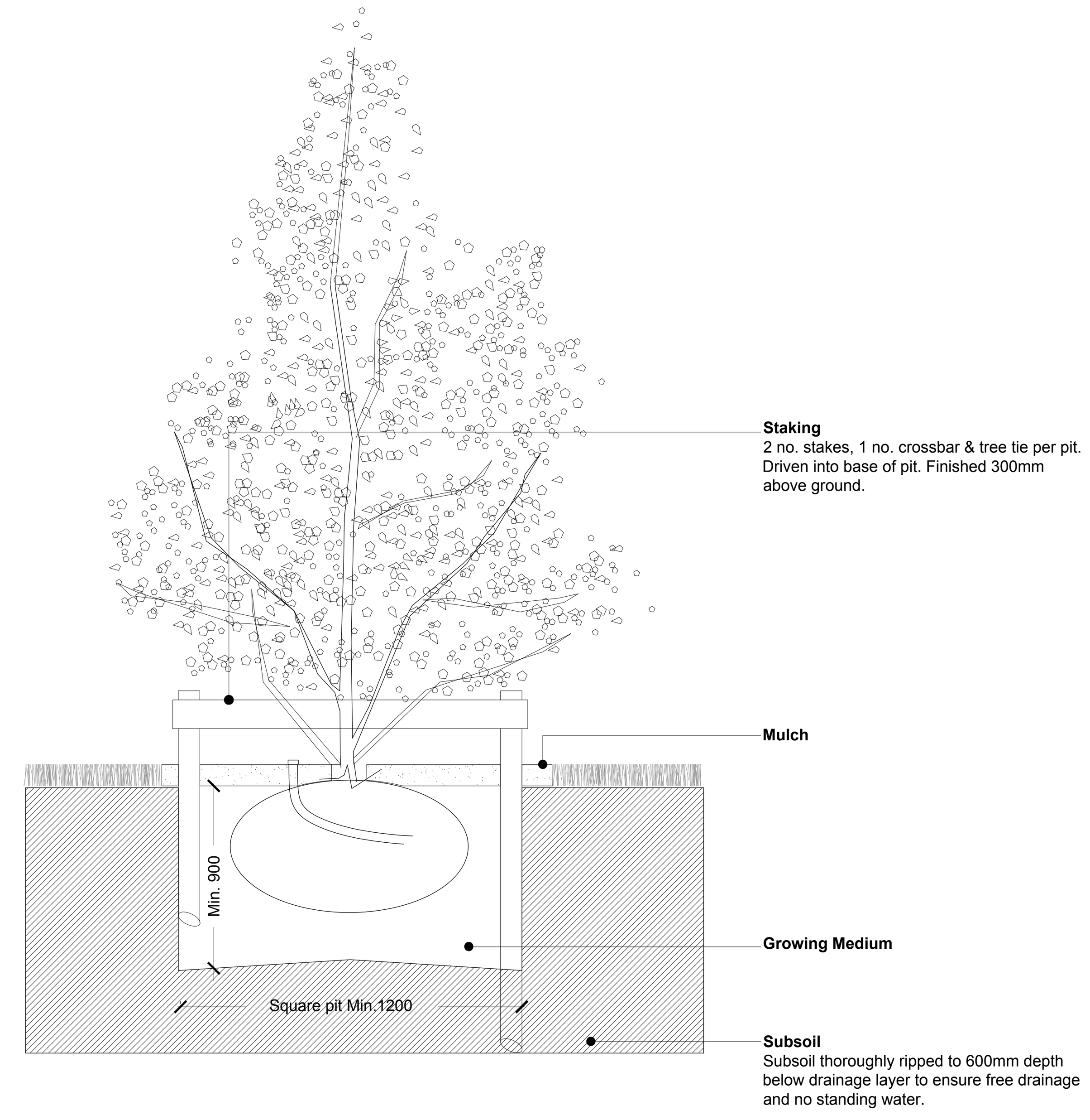
PERMEABLE BLOCK PAVING

5
2500



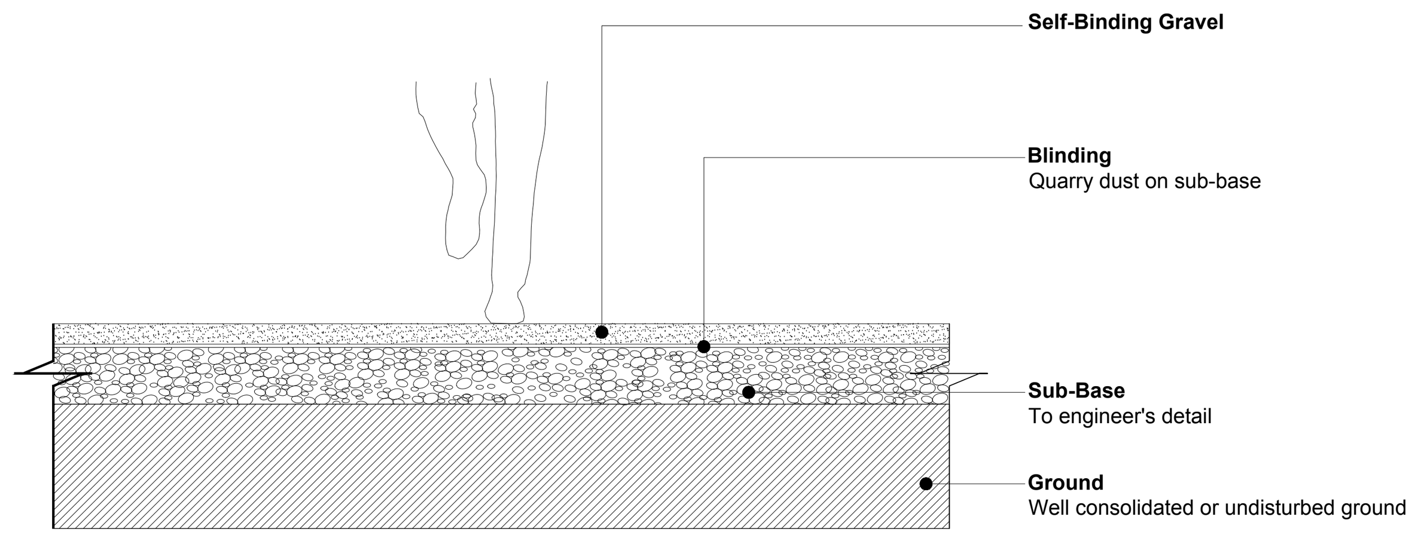
SPECIMEN TREE PLANTING IN SOFT LANDSCAPE

9
2500



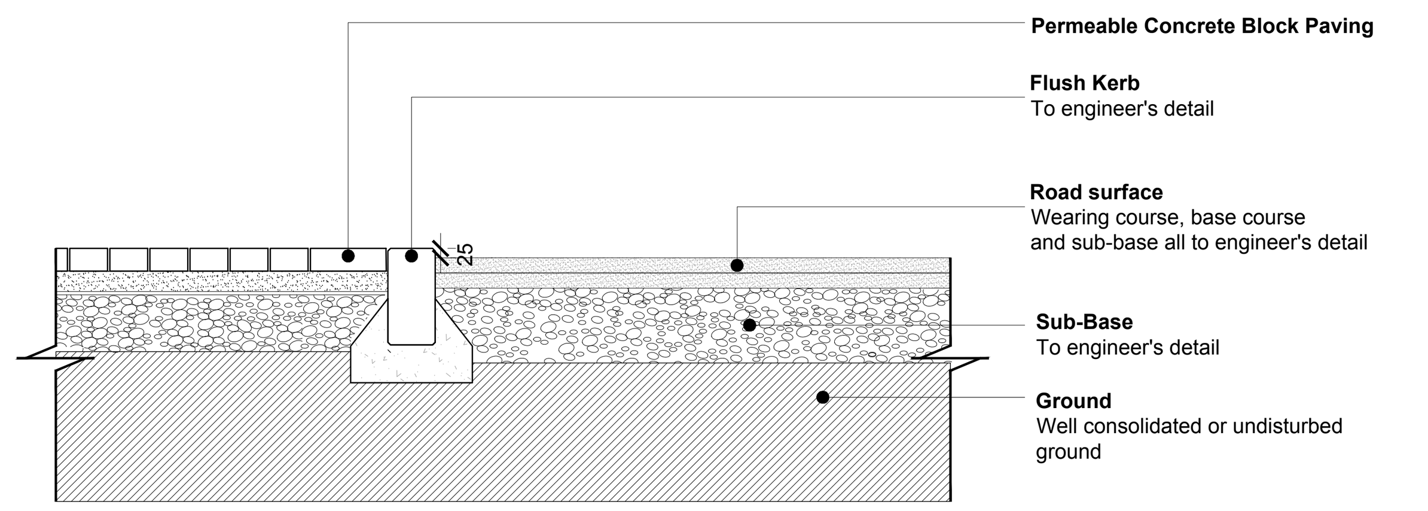
SMALL AND MULTISTEM TREE PLANTING IN SOFT LANDSCAPE

12
2500



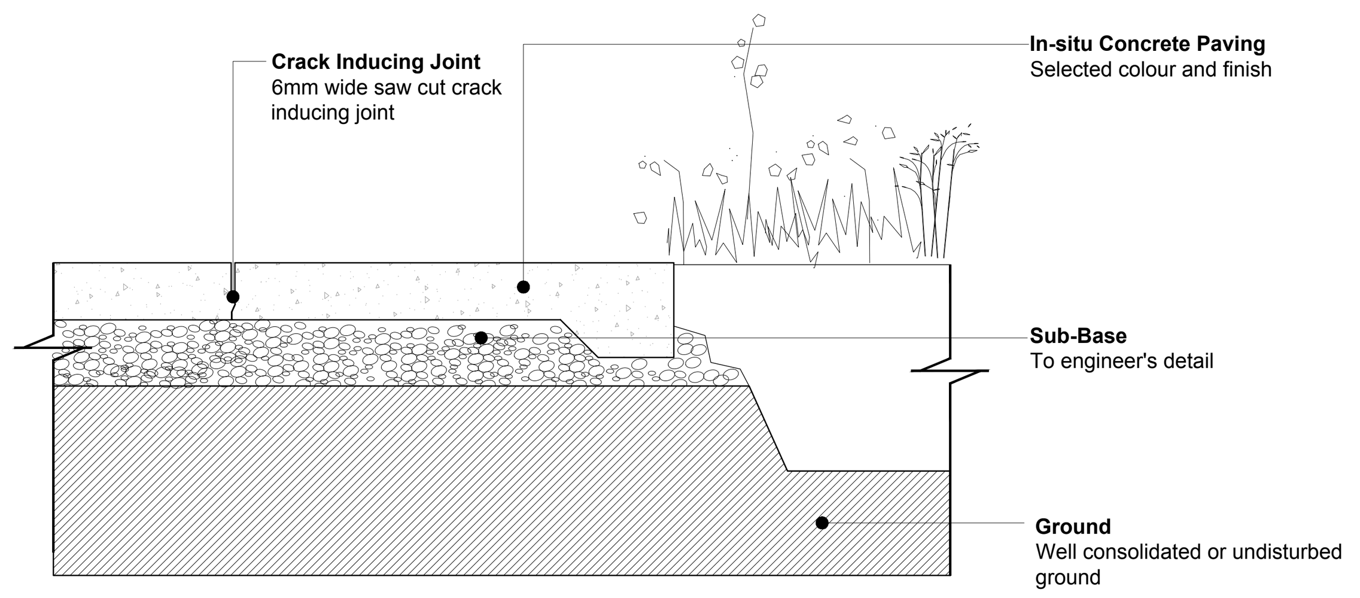
SELF-BINDING GRAVEL

2
2500



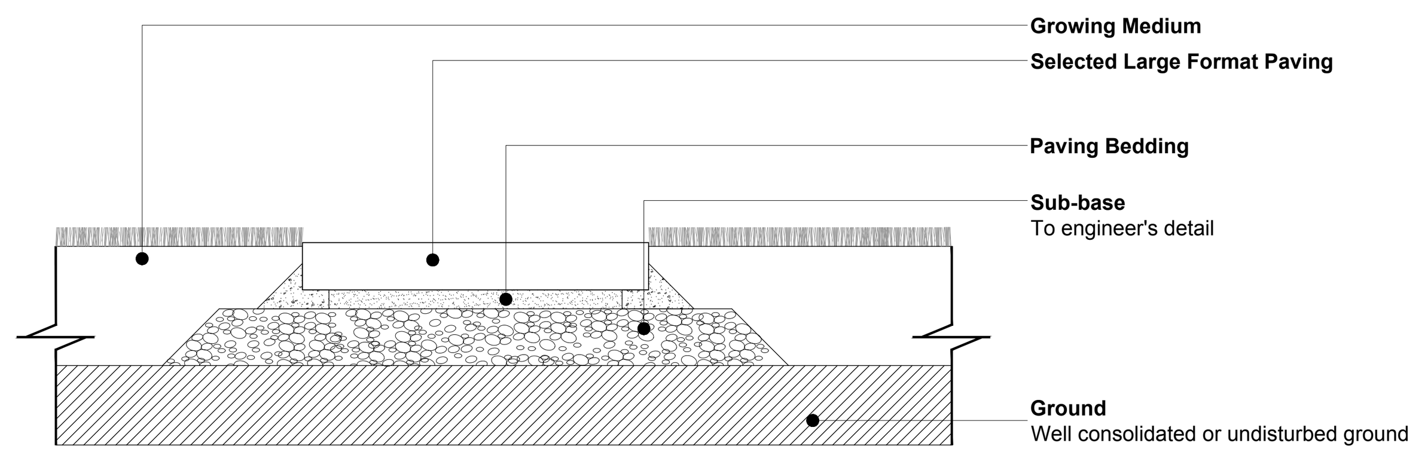
PERMEABLE BLOCK PAVING IN PARKING BAYS

6
2500



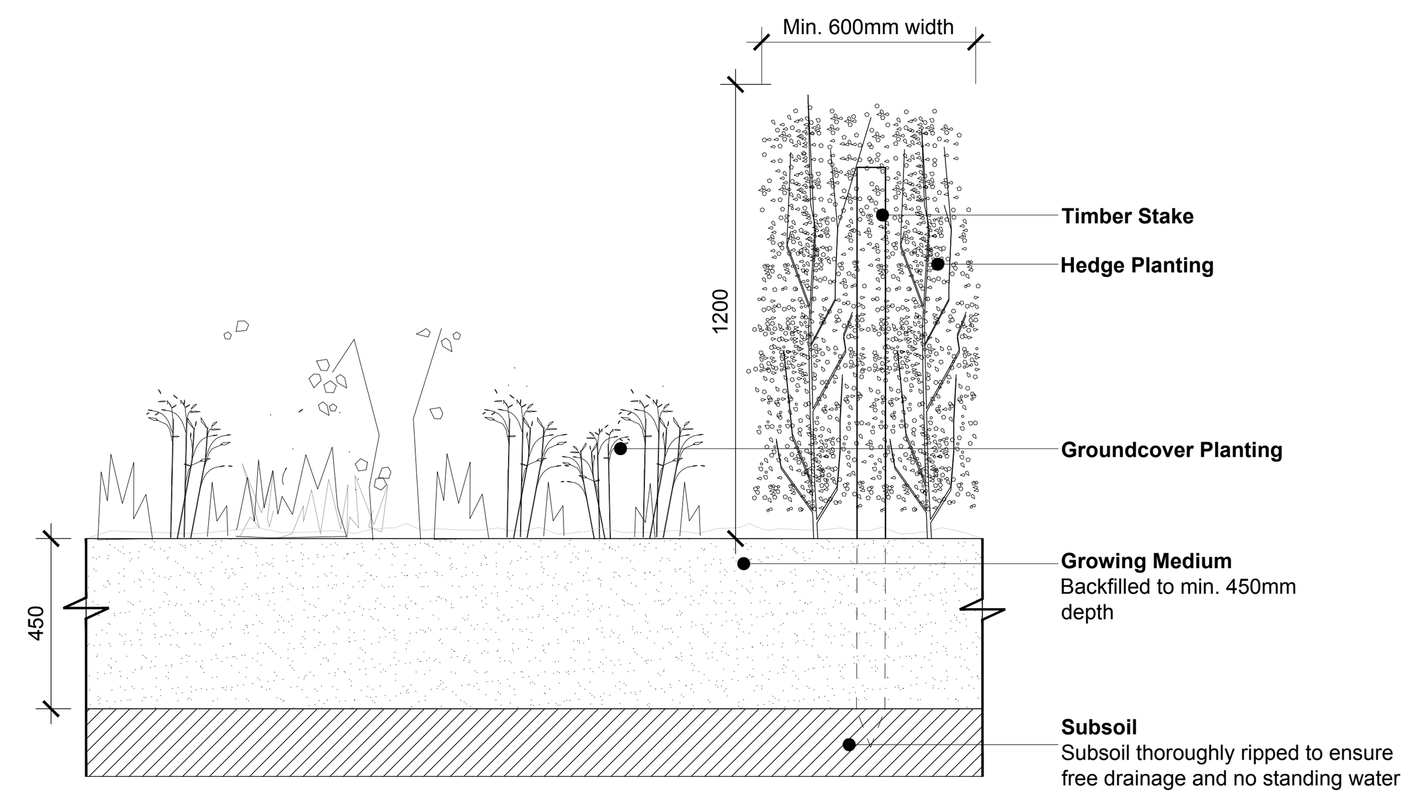
IN-SITU CONCRETE PAVING OVER FREE-DRAINING GROUND

3
2500



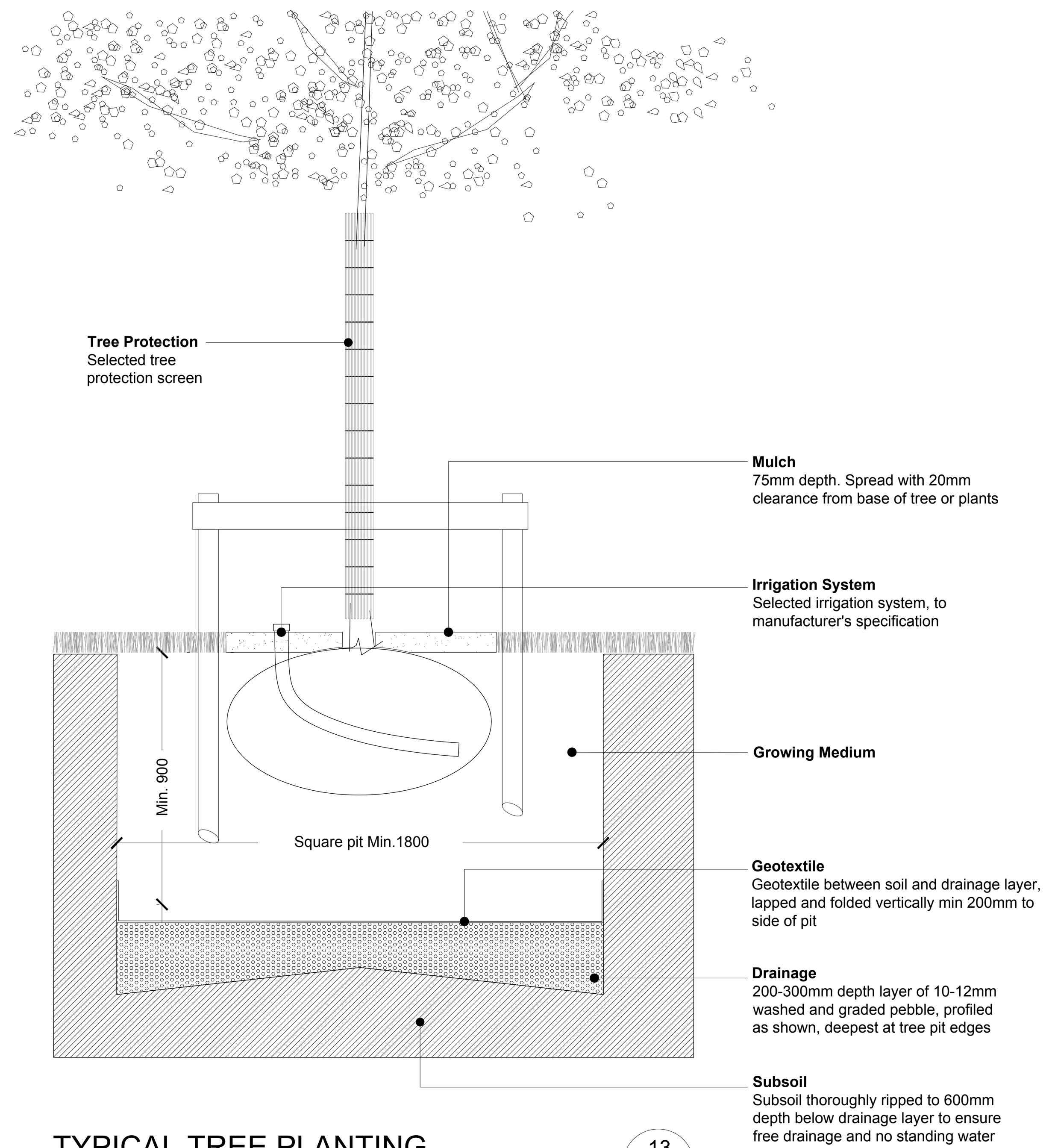
PAVING IN SOFT LANDSCAPE

7
2500



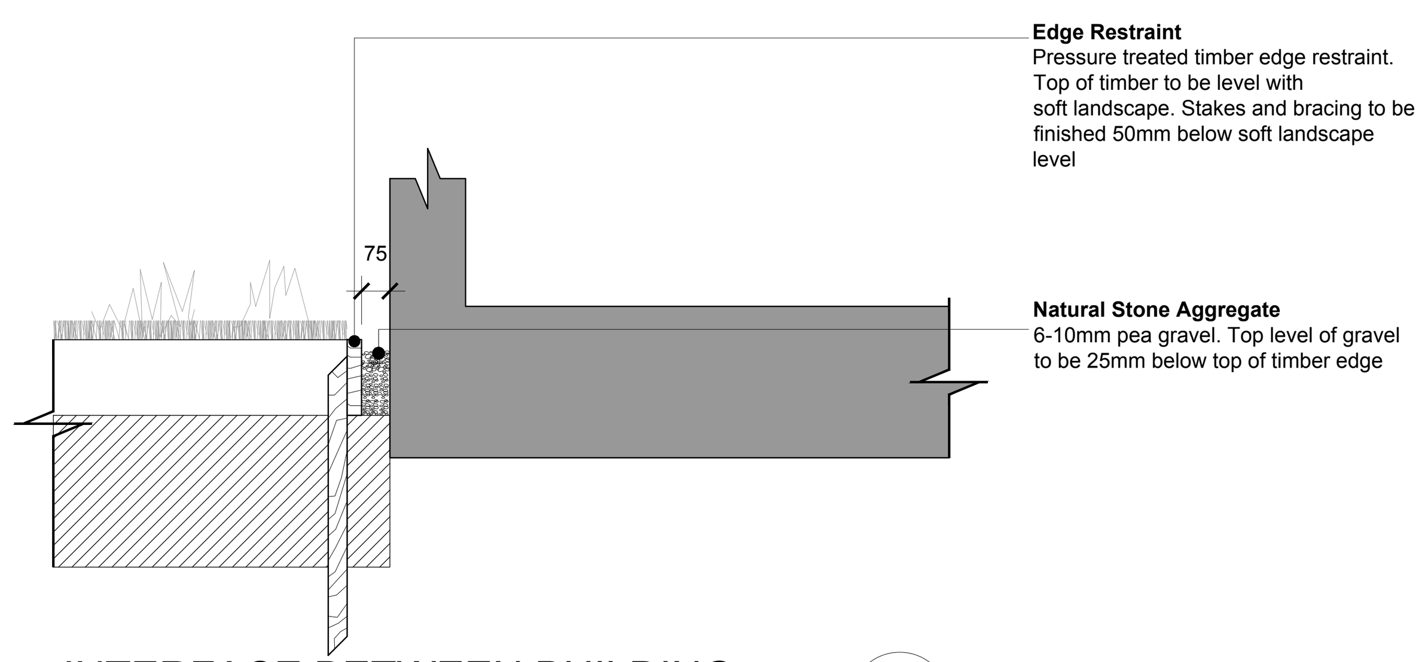
GROUNDCOVER AND HEDGE PLANTING

10
2500



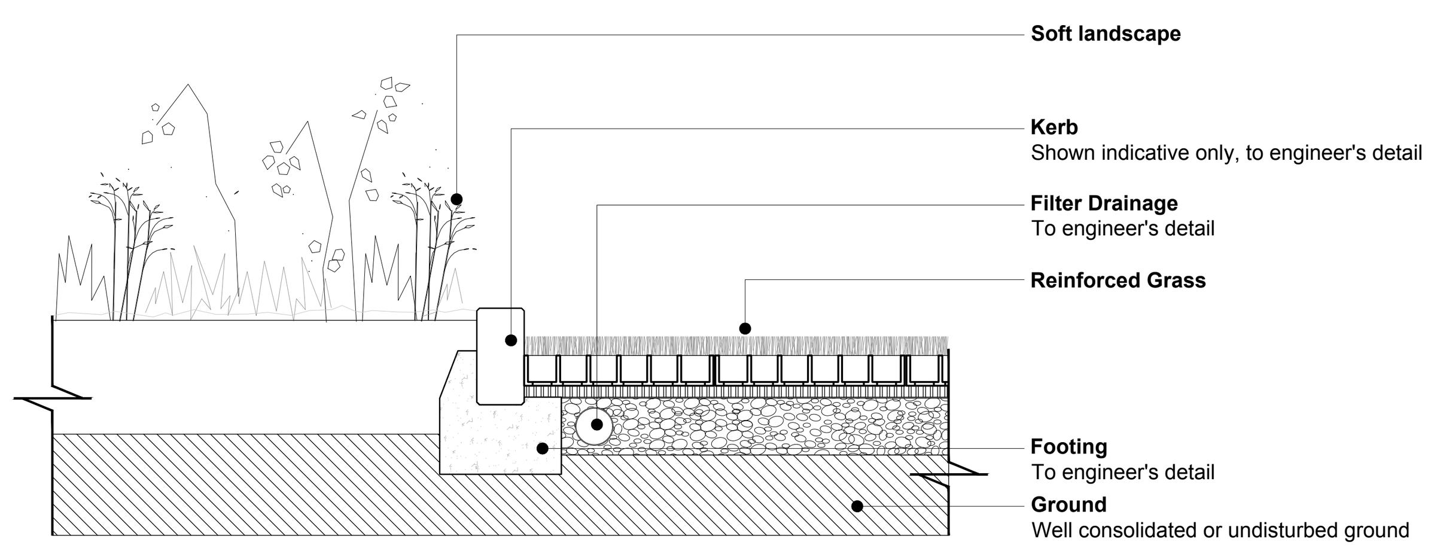
TYPICAL TREE PLANTING IN SOFT LANDSCAPE

13
2500



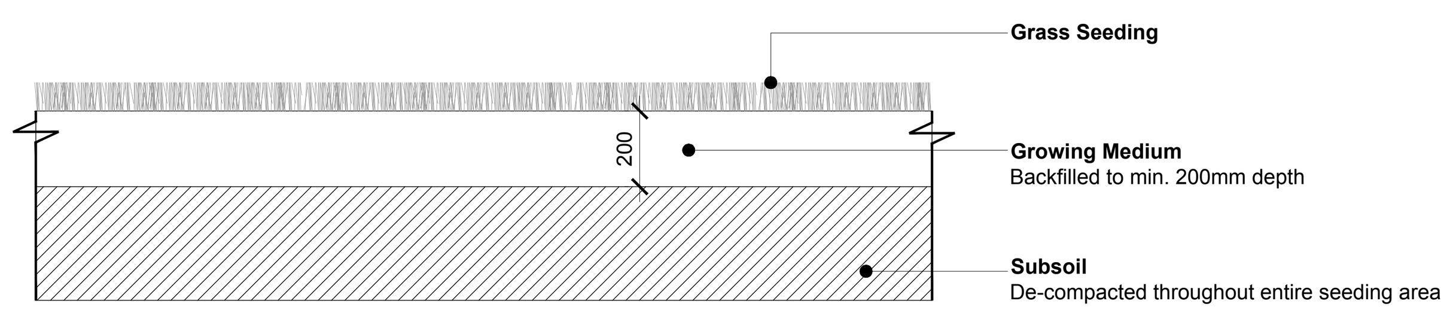
INTERFACE BETWEEN BUILDING AND SOFT LANDSCAPE

4
2500



REINFORCED GRASS AND SOFT LANDSCAPE INTERFACE

8
2500



GRASS SEEDED AREA

11
2500

NOTES:

DATE	REV	DESCRIPTION	DRAWN BY	CHECKED BY
-	-	-	-	-

CLIENT: FINGAL COUNTY COUNCIL

PROJECT: HOLYWELL HOUSING

DRAWING: TYPICAL LANDSCAPE DETAILS

ISSUE STATUS: N/A

PLANNING

DRAWING NO. Fc.10-DR-2500

REVISION -

PROJECT NO	SCALE	SHEET SIZE	DRAWN BY	CHECKED BY	1st ISSUE
Fc.10	1:20	A1	lz	tk	20.09.2023

DFLA

DESIGN RATIONALE - LANDSCAPE ARCHITECTURE

Project:	**Holywell Housing**
Project no.:	**Fc.10**
Prepared on behalf of:	**Fingal County Council**
Prepared by:	**DFLA**
Date of First Issue:	**20.09.2023**
Revisions:	**-**

1 Introduction

The objective of this report is to describe the proposed landscape and external works as part of the proposed residential development at Holywell, Swords, Co. Dublin. This report should be read in conjunction with documents issued and included in this submission by DFLA, Henchion + Reuter Architects, Roughan & O'Donovan Consulting Engineers, Matt O'Mahony & Associates, Walsh Associates, the Planning Partnership, and others.

DFLA visited the site in June 2023, to observe conditions on site, such as existing vegetation, conditions under foot, boundaries and other items which would have a bearing on the design process.

The following additional documents have been issued by DFLA as part of this submission:

No.	Scale	Size	Title
2001	1:250	A1	*Landscape Plan*
2002	1:1000/1:50	A2	*Boundary Treatments*
2400	1:100	A1	*Landscape Sections*
2500	1:20	A1	*Typical Landscape Details*

2 Landscape Appraisal

2.1 General

The subject site is approximately 0.7ha in size. It is broadly rectangular in shape. A public link road bounds the site to the north and west. To the south, the site borders a public open space which is associated with the adjoining residential developments of Holywell Drive and Holywell Gardens. Holywell Avenue and Holywell Court are situated to the east. The site is enclosed on all sides and is not open to the public at present. The lands are generally free-draining, gently sloping to the south. The site was formerly used for grazing and mainly comprises of grasslands.

2.2 Boundaries

The site boundaries vary in character. The northern and western boundaries are open to the link road and currently comprise of a low timber post and rail fence. The southern and eastern boundaries are lined with deciduous trees and shrubs. They comprise of concrete post and panel fence to the south and a mix of concrete block wall and paladin fence to the east.

Figure 1: Photograph taken from the south-western corner of the site, looking north-east towards the link road and the existing timber post and rail fence.

Figure 2: Photograph taken from the north-eastern corner of the site, looking east towards the existing vegetation along the boundary with Holywell Avenue and Holywell Court.

Figure 3: Photograph of the concrete post and panel fence along the southern boundary of the site.

3 Landscape Strategy

3.1 General

The proposed landscape strategy has been formulated by the entire design team and client in order to integrate residential amenity, civil engineering, and ecological considerations. The landscape design facilitates circulation, seating, bicycle parking, fire tender access and at the same time ensures abundance of vegetation and flexibility of use and provides opportunities for passive and active recreation and visual amenity.

The following components make up the overall landscape strategy:

1. A diverse and attractive range of open space, including hard and soft landscape areas with tree planting and ground flora;
2. Provision of informal natural play equipment within the communal open space;
3. Improved permeability throughout the site for pedestrians and cyclists, with consideration given to the wider masterplan strategy for Swords;
4. Integration of SUDS, functional landscape, and external works to ensure accessibility to parking areas and building cores.

3.2 Diverse Range of Open Space

A strong geometry and a clear landscape strategy create a distinct sense of place for the proposed development. Topography and level change are utilised as the main space-making elements across the site. The open space is designed as a sequence of spaces. Along the northern and western boundaries grids of trees and formal hedge and groundcover planting create a well-defined ‘entrance’ to the development and help to screen car parking. The existing timber post and rail fence to the north and west is proposed to be replaced with a low steel railing.

The vehicular access to the site is conceived as a pedestrian friendly surface with proposed traffic calming measures. Dense pockets of vegetation help to screen vehicles from view. The boundary treatments to the south and east are proposed to be retained and made good where required. The main pedestrian circulation route meanders through various landscape typologies, creating a safe, attractive environment for visitors and residents. A courtyard space is nestled between the building blocks. Tree and hedge planting along the periphery of the space create a sense of enclosure and act as a buffer, sheltering the private terraces at ground floor from the main usable open space. Clipped hedges and flowering, ornamental trees create an intimate, garden-like environment.

Figure 4: Artist’s impression of the landscape strategy for the proposed development.

Figure 5: Perspective view of the internal courtyard space of the proposed development. Image by Henchion + Reuter Architects

A generous lawn area to the south, which also acts as above-ground attenuation in rare flood events, accommodates active and passive recreation and a variety of natural play equipment catering for children up to twelve years of age. Nature play is proposed in the form of a rope course, trails of timber logs, various balancing equipment, and a see-saw. All play elements are located amongst proposed trees and surrounded by planting. A schedule of play equipment is outlined in Drawing *2001 Landscape Plan*, prepared by DFLA.

Figure 6: Precedent images for the character of incidental nature play proposed within the development site.

4 Proposed Planting

4.1 General

The existing vegetation along the northern and eastern site boundaries is proposed to be retained. In addition, substantial tree planting is proposed as part of the new development, to improve the proportion of native species on site and to build on the existing character of the area. Drawing *2001 Landscape Plan*, prepared by DFLA, includes detailed schedules of proposed planting and illustrate the location and extent of mown lawn, managed long grass/meadow, groundcover, hedge and tree planting.

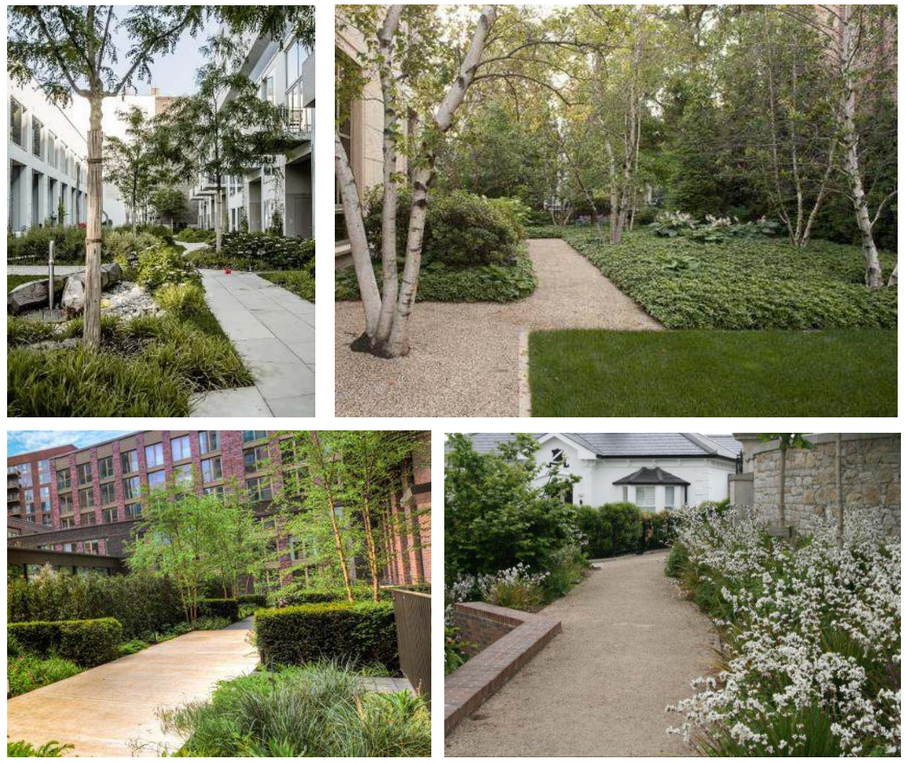


Figure 7: Precedent images showing character of proposed planting within the development site.

4.2 Tree Planting

Tree species are selected for longevity, suitability to local soil conditions and microclimate, biodiversity (native species) and suitability for proximity to residential buildings. Proposed tree sizes range from semi-mature (35-40cm girth) specimen trees to multi-stems. Typical tree species are illustrated on the following pages.

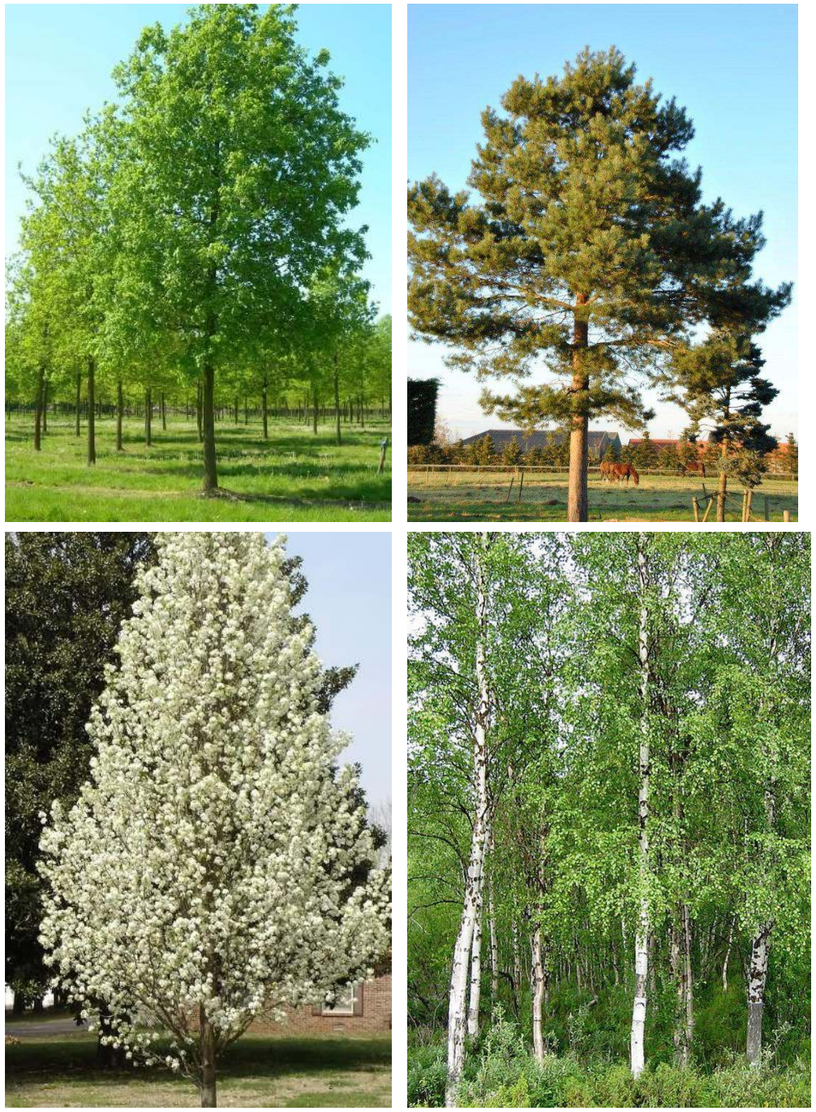


Figure 8: Selection of proposed tree species, clockwise from top left: Quercus robur, Pinus sylvestris, Betula pubescens and Pyrus calleryana 'Chanticleer'.

4.2 Hedge, Groundcover and Bulb Planting

Low planting is utilised to create and reinforce sub-spaces within the larger landscape; for visual screening, defensible space, visual interest, ecological purposes and to guide or direct pedestrian's movement. The low planting is conceived as subtle layering of greens within the open spaces. The planting is layered as follows; lowest - bulb planting, groundcover planting, highest - clipped hedge planting.

Figure 9: Species for shade groundcover – native & exotic including Darmera, Luzula, Dryopteris and Asplenium.

Helleborus spp. *Libertia grandiflora* *Luzula sylvatica*

Dianella nigra *Dryopteris filix- mas* *Asplenium scolopendrium*

Figure 10: Typical individual groundcover species.

5 Hard Landscape Materials and Finishes

The landscape strategy incorporates the full range of functions required by the proposed development. These include circulation, parking, bicycle parking, access for delivery and emergency vehicles and sustainable drainage systems. The surface water drainage strategy has been designed by the engineers to slow down run-off and retain stormwater on site. The choice of landscape materials reflects this strategy with porous/permeable products used where possible.

The selection of hard landscape materials is determined by function but also to provide a cohesive palette of materials across the site. The open spaces are proposed to incorporate several different hard landscape finishes to delineate the different spaces and recreational zones. The materials and furniture in these locations are chosen to create an intimate environment and encourage communal activities. Materials are chosen for permeability, durability, but where practical, are proposed to be constructed in a way which is sensitively integrated with lawn and soft landscape, in order to minimise the impact of hard landscape surfaces.

Primary vehicular, pedestrian and cycle circulation are proposed as durable, limited range of neutral materials with robust construction. The fire-tender route to the core of the development is designed to ‘play-down’ the impact of the road infrastructure in the landscape setting. Secondary pedestrian paths and informal access to private open space are proposed to be of ‘flexible’ construction and in some cases a mix of paving and lawn.

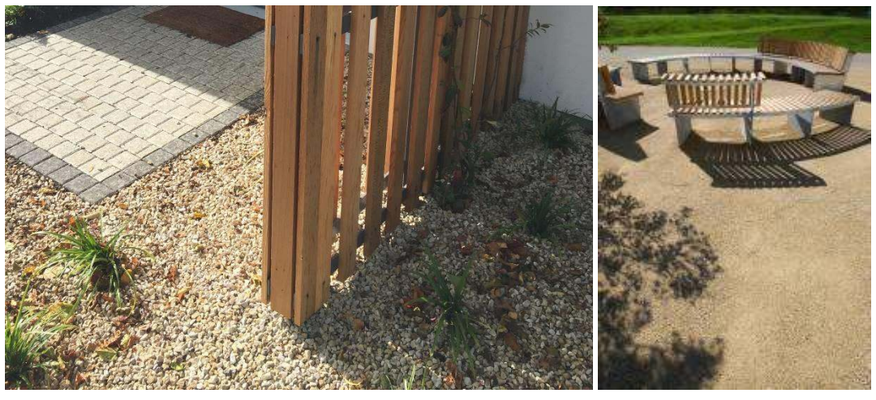


Figure 11: Range of hard landscape finish details (from left to right): permeable gravel detail, self-binding gravel.

Figure 12: Precedent image showing pedestrian footpath and reinforced grass for fire tender access in a residential development.

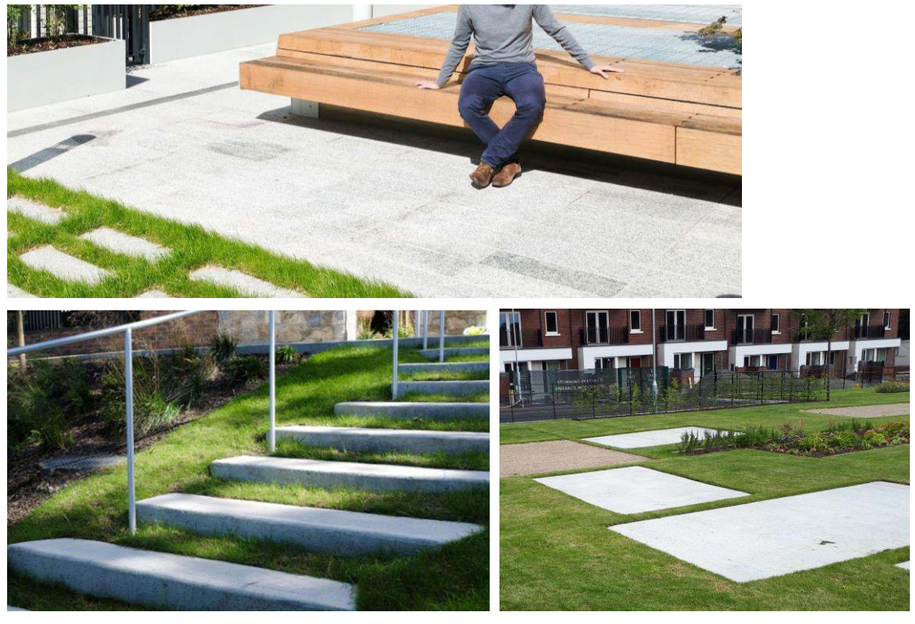


Figure 13: Mix of hard landscape materials integrated with soft landscape.

END

the planning partnership

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PLANNING STATEMENT

RESIDENTIAL DEVELOPMENT: HOLYWELL, SWORDS, FINGAL

September 2023

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1.0 INTRODUCTION AND DOCUMENT PURPOSE

The Planning Partnership, The Coach House, Dundanion, Blackrock, Cork, T12 T6YC, has been retained by Fingal County Council as part of a multi-disciplinary consultancy team to deliver a Residential Development (5,189 sq m Gross Floor Space) arranged over 3 no. buildings ranging in height from 4 to 6 storeys, consisting of no. 57 no. residential units (20 no. 1-bedroom apartments, 29 no. 2-bedroom apartments, and 8 no. 3-bedroom apartments), ancillary infrastructure and all associated site development works, at a site of approximately 0.77 ha located in the Townland of Crowcastle, Holywell, Swords, Co. Dublin. The site is located in a prominent position to deliver and cater for existing and projected population growth of Swords.

Key issues of the development *inter alia* included items such as tree and hedgerow details as part of the application, public realm and amenity, development impact, day light and sunlight assessments, boundary treatments integrated as part of the design, and the incorporation of SUD proposals.

The subject site benefits from current live Planning Permission (Fingal County Council Reg. Ref. No. F18A/0335) for 29 residential units within a 2/3 storey duplex/apartment, terraced and semi-detached buildings, and is due to expire in April 2024.

The design and conceptualisation of the scheme has been advised, informed and necessarily supplemented by the inputs of the following members of the Design Team:

- **Fingal County Council** (Promoter)
- **The Planning Partnership** (Planning Consultant)
- **Henchion and Reuter Architects** (Scheme Architect)
- **DFLA** (Landscape Architect)
- **Roughan & O'Donovan** (Consulting Engineers)
- **EOBA** (Fire Engineering)
- **Walsh Associates** (Quantity Surveying)

1.1 Planning Statement

This *Planning Statement* presents the planning and design rationale for a 57 no. unit residential development, forming an integrated and sustainable community.

The presented development represents a 'plan-led' development in accordance with land use zoning and housing objectives and development management standards contained within the relevant development plan(s) including the *Fingal Development Plan 2023-2029*, the *National Planning Framework* (2018) and *A New Housing Plan for Ireland Housing for All* (2021).

In presenting the proposal on the basis of the first principles, the design and the layout of the scheme have sought to positively respond to the challenges and character of the surrounding areas, to preserve and enhance residential amenity and connectivity, whilst achieving an appropriate increase in density at this zoned residential infill opportunity site as to reflect both the best use of urban lands whilst respectful of neighbouring amenities and surrounds.

The outline structure of this Planning Statement is as follows:

Section 1 – Introduction: introduces the subject application, providing details of the residential demand in Fingal for such a development and an executive summary which demonstrates the objective of the development as well as the residential and open space breakdown.

Section 2 – The Concept Proposal: A development description is included, the evolution of the concept is set out which outlines height, massing and mitigation efforts taken to integrate the development within its receiving environment, the key figures in the presented development, the flood risk and the planning history.

Section 3 – Policy Context: reviews and provides statements of compliance for relevant guidelines, policies and objectives as expressed at national, regional, and local scales to demonstrate the consistency of the subject development within the planning context.

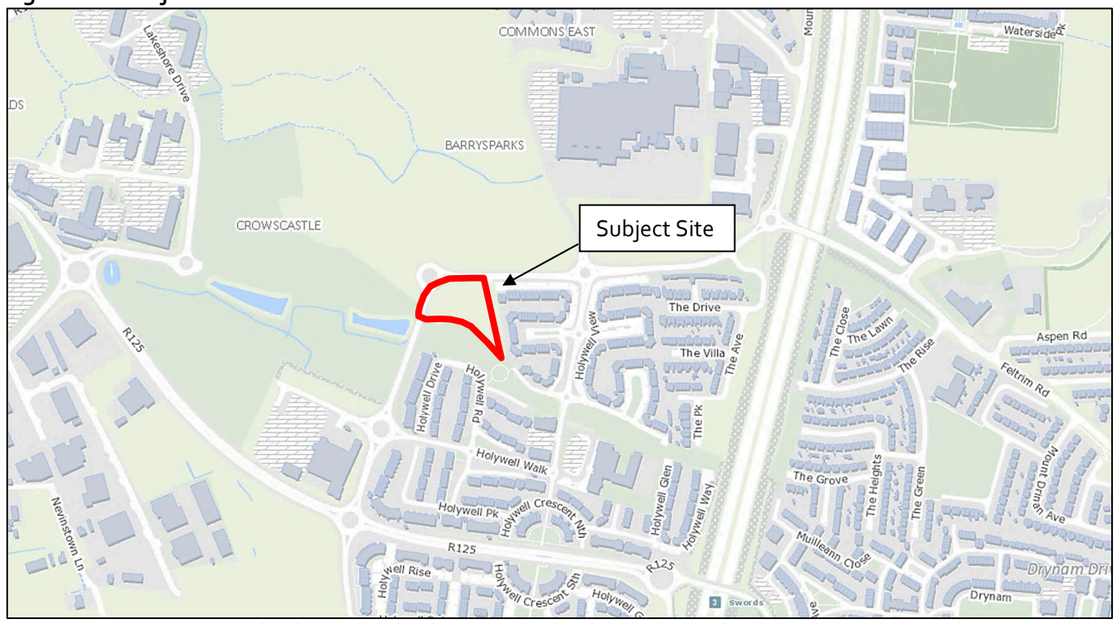
1.2 Site Location and Context

The lands are located to the southeast of Swords Town Centre approximately 2.2km distance from the town centre. The lands are formed by a greenfield site and bordered by Holywell North Park and residential development on the east and south sides of the site, and to the north and west by the link road section that links to the R125 to the south and Mountgorry Way to the east.

It is also noted that the site is bordered by hedgerows located along the southern and eastern edge of the site. To the north and northwest of the site, the area is characterised by extensive commercial uses.

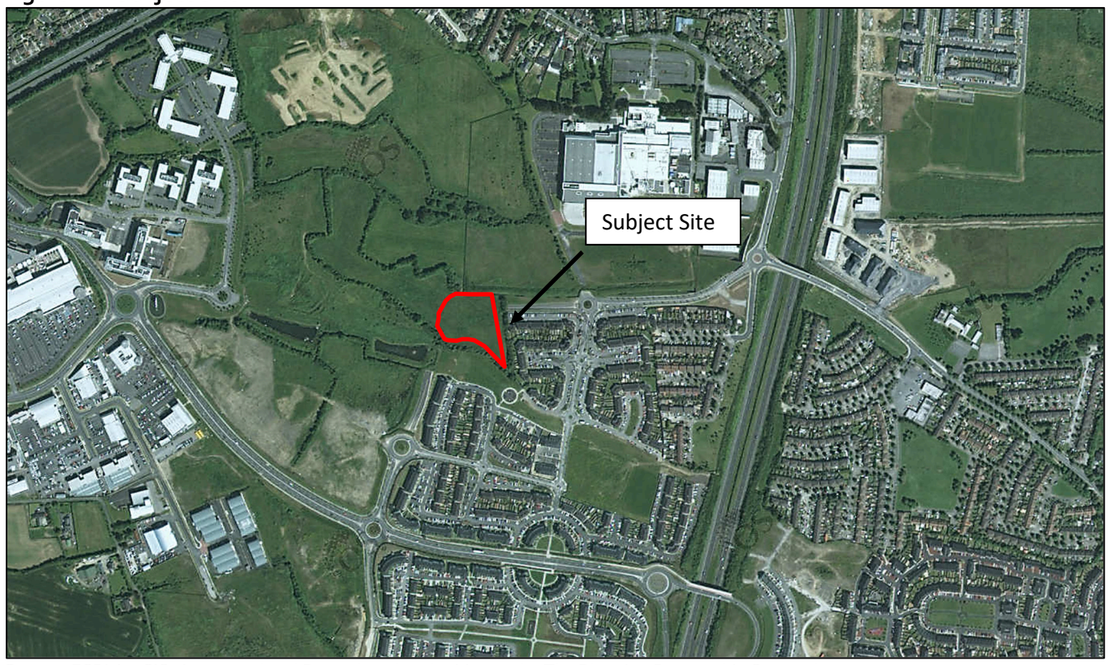
The subject site is considered an infill 'greenfield site' which is suitable for development.

Figure 1.1: Subject Site.



Source: ESRI ArcGIS, Annotated and Reproduced under Licence by The Planning Partnership September 2023

Figure 1.2: Subject Site.



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1.3 Residential Demand in Fingal

The surrounding built environment can be characterised by greenfield sites, residential developments and industrial/ commercial developments, a development pattern is emerging that supports the different industries that can be located to the north of Dublin City, the result of this is an increased demand for housing.

Regarding connectivity the site is serviced by a series of roads for private vehicle use, public transport, the M1 motorway and the proposed Metrolink. This will result in further pressure on the area for residential development. If the area is to continue to grow in a manner that is sustainable and fulfil the projections that have been detailed as part of RSES then further residential development will need to be facilitated.

In recent times, there has been much more focus on core policies for support of increases in residential developments. *Fingal Development Plan 2023-2029* has established that all zoned lands including the subject site are serviced and located alongside existing or planned public transport routes. Fingal County Council also aims to continue to pursue the goals of the consolidation of Dublin City through the compact development of the Dublin City and suburbs area within Fingal. It has been stated that one of the roles of Swords is to accommodate 20% of the phased population growth targeted in the principal city or suburban area to be accommodated in the wider metropolitan area. This will be subject to:

- Any relocated growth being in the form of compact development, such as infill or a sustainable urban extension.
- Any relocated growth being served by high-capacity public transport and/ or related to significant employment provision.
- National Policy Objective 9, as set out in Chapter 4 of the NPF.

The population of Fingal has been projected to grow by a further 369,000 people by 2031 which is a continuation in the trend that has been made visible over the last 10 years. Airport related business, commercial facilities and employment linked to the future development of the MetroLink is conducive to an increased demand for residential developments.

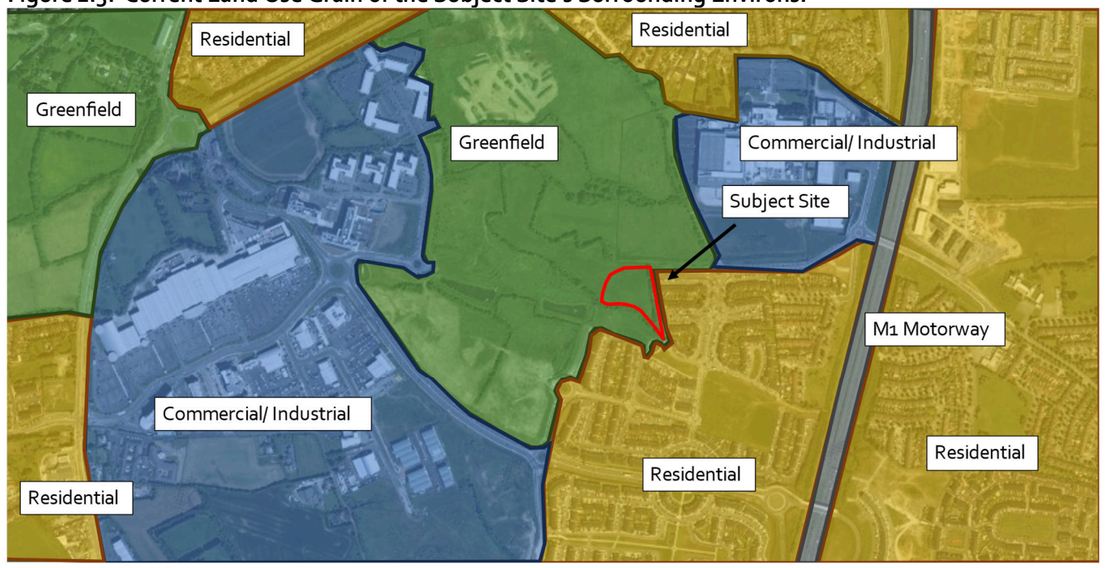
2.0 THE PRESENTED HOLYWELL DEVELOPMENT CONCEPT PROPOSAL

The objective of the project is to provide a Residential Development (5,189 sq m Gross Floor Space) arranged over 3 no. buildings ranging in height from 4 to 6 storeys, consisting 57 no. residential units (20 no. 1-bedroom apartments, 29 no. 2-bedroom apartments, and 8 no. 3-bedroom apartments), ancillary infrastructure and all associated site development works, at a site of approximately 0.77 ha located in the Townland of Crowcastle, Holywell, Swords, Co. Dublin, located to serve the projected growth in the population and to cater for any economic expansion in the area.

This development will facilitate the expansion and growth of Swords whilst working to consolidate its suburbs as part of this.

It is expected that the working population in Fingal will increase with an additional 18,612 people by 2029, with forecasted local employment availability of 13,090 between 2020 and 2029. In order to cater for this economic expansion, residential infrastructure is to be in place to cater for such projected demands.

Figure 1.3: Current Land Use Grain of the Subject Site's Surrounding Environs.



Source: ESRI ArcGIS, Annotated and Reproduced under Licence by The Planning Partnership September 2023

This Residential Development is to accommodate population and economic growth in the area while reducing potential impacts on the receiving environment and neighbouring developments.

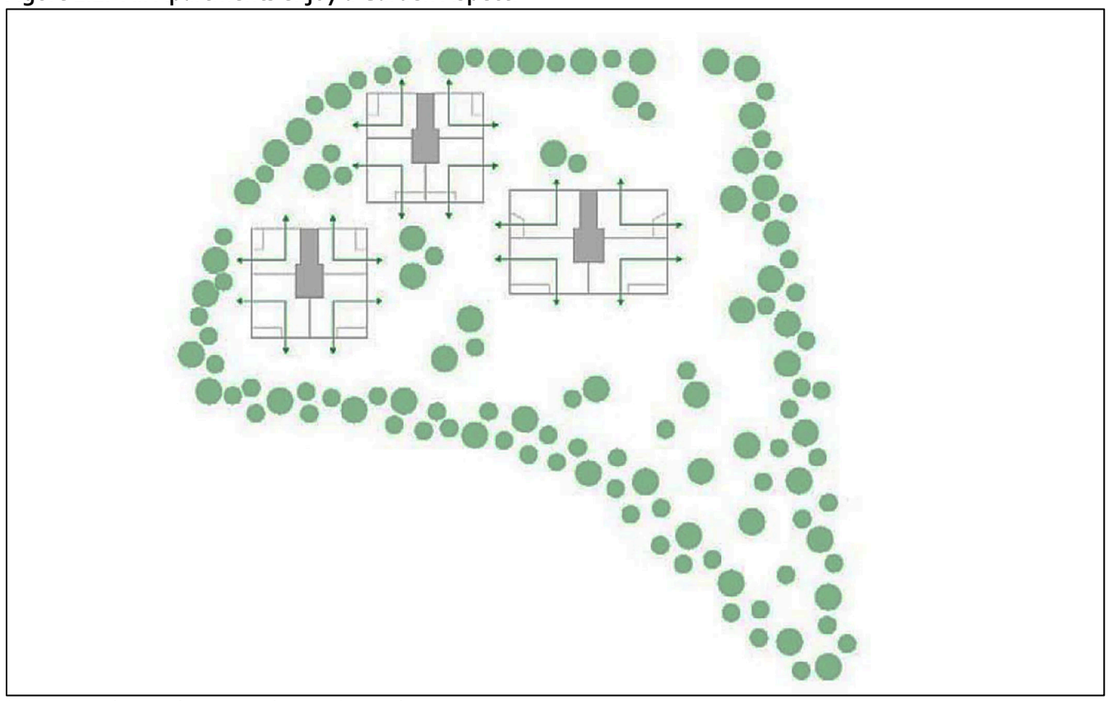
2.1 Concept Evolution and Design Justification

The subject site and its surrounding context present a rapidly growing network of business and residential developments. The provision of an adequate supply of housing in keeping and complementing neighbouring development, will not only contribute positively to an enhanced quality of life in the community but will ensure that the growth that does take place is sustainable and healthy.

To achieve such, the impact of the development is mitigated through careful and considerate design protocol. Statutory guidance and precedence set by neighbouring developments has guided the development to be implemented, and the design proposal anticipates the future development by adopting a pavilion typology with a landscape flowing between the pavilion blocks.

Fingal Development Plan 2023-2029 aims to promote growth and consolidation through the guidance of *Urban Development and Building Heights – Guidelines for Planning Authorities 2018*.

Figure 2.1: All Apartments enjoy a Garden Aspect.

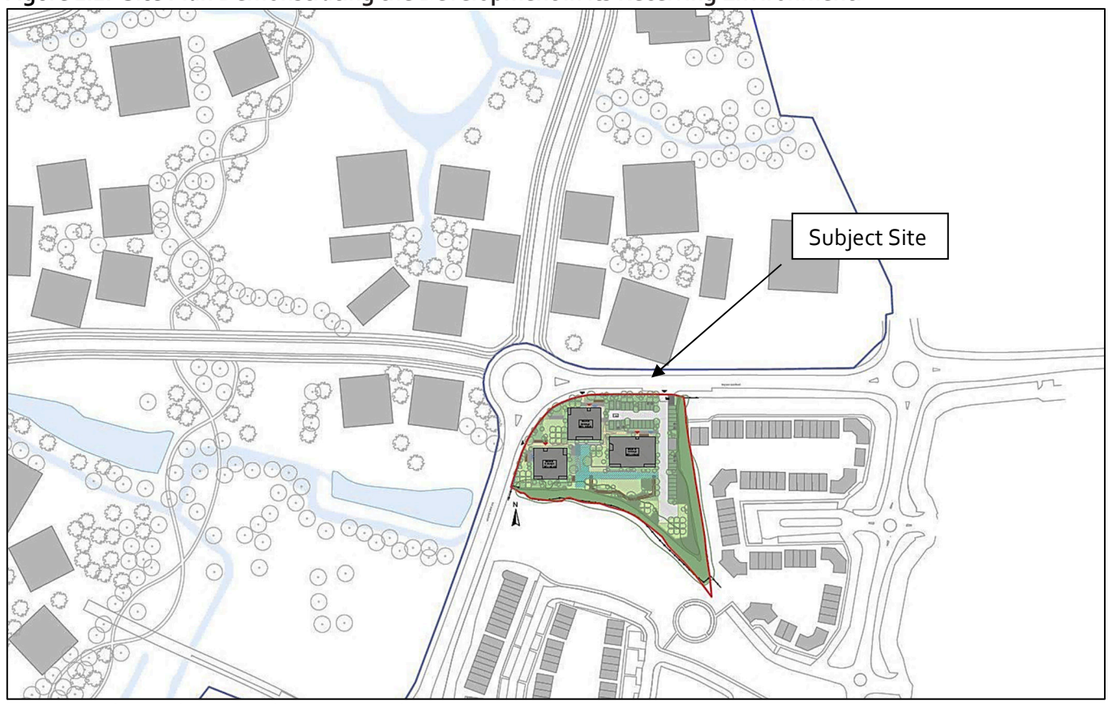


Source: Henchion and Reuter Architects, September 2023

Three detached blocks are distributed on the site to allow a continuous landscape to be threaded between them. In this way all apartments look out onto the shared landscape rather than being orientated to the street.

A mix of apartment Universal Design sizes (one, two and three bed apartments) has been presented to reflect the need to support different varieties of households. Within each apartment block, the larger apartments are placed on the southern side so that families have the benefit of the southern aspect and the deeper garden aspect. The southern side is also the quieter side of the building.

Figure 2.2: Site Plan Demonstrating the Development in its Receiving Environment.



Source: Henchion and Reuter Architects, September 2023

The presented development achieves a density of 74 no. residential units to the hectare and is in line with the 2009 *Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas,* and also in line with the aims of the *National Planning Framework* (NPF) which seeks to increase building heights and densities.

The presented development is in compliance with the *Sustainable Urban Housing: Design Standards for New Apartments 2020* and have been designed in accordance.

The following Key Design Objectives are identified:

Building Form, Height and Massing: The three pavilion blocks present Block A to the west at five storeys, the central Block B at 6 storeys, and Block C to the east is 4 storeys. This distribution of height and mass supports the articulation of the individual pavilions (thereby avoiding the perception of one large mass), appropriately scaled in keeping with the distance between them and the existing neighbouring residences.

The presented development does not create any blank gables, with the distribution of the landscaping 'softening' the visual impact of the new buildings. The facades of the buildings have been broken up with large windows and balconies creating an active frontage which improves how the building is received into its environment.

Dual Aspect Throughout: The pavilion typology with a compact central core in each block presents that all apartments are double aspect. In fact, most of the living spaces enjoy double aspect and all apartments enjoy a view of the shared landscape.

This layout has enabled the development to significantly reduce its volumetric presence in Holywell, Swords, while respecting the character and sensitivity of the existing landscape.

Universal Design: Acknowledging the *Fingal County Development Plan 2023* requirement that 30% of units (by area) are designed to be to Universal Design Standard. All units in Block C are laid out to this standard, inclusive of a larger 13 person lift service.

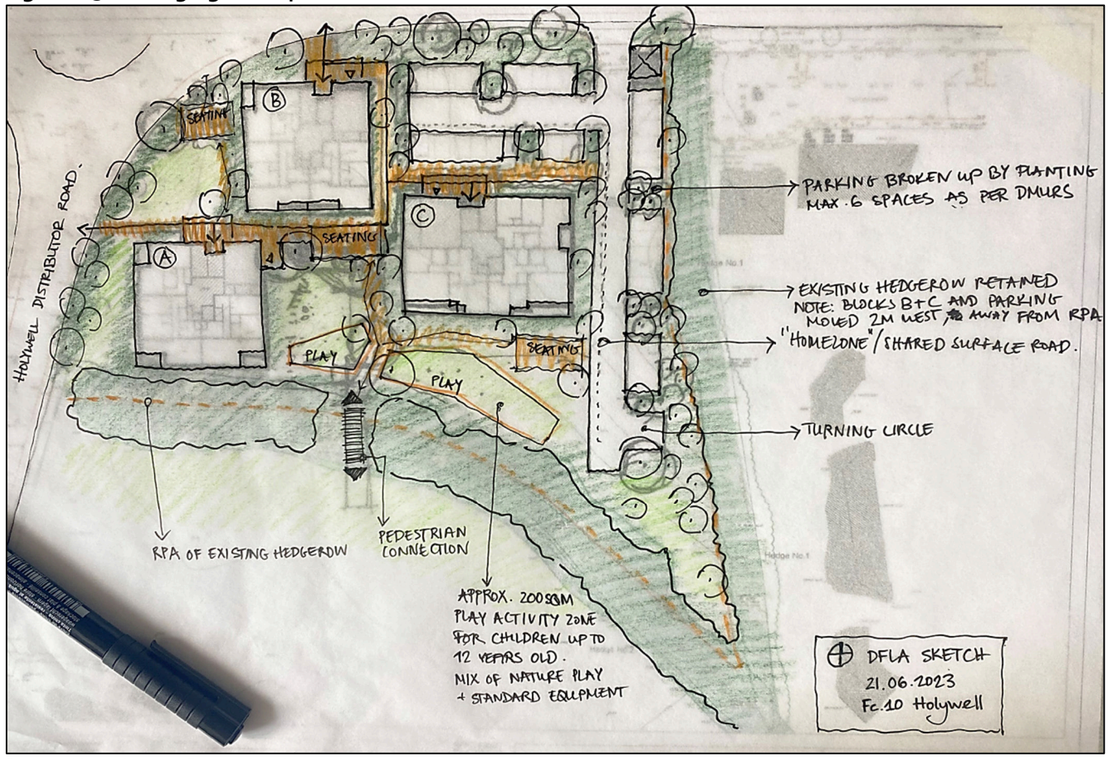
Optimisation of Residential Amenity for the Neighbouring Residents: The set back and distance of the presented development takes full advantage of such in order to effectively integrate the development within its receiving environment, with the distribution of the landscaping 'softening' the massing of the development from neighbouring sites as well as from the road.

As stated above, the presented development does not create any blank gables, and the distribution of varying building heights from 4 to 6 six storeys, supports the articulation of the individual pavilions (thereby avoiding the perception of one large mass), and is appropriately scaled in keeping with the distance between them and the existing neighbouring residences.

Entrances and Arrival: Primary vehicular and pedestrian access to the presented development will be at three different points at the north and the west of the site, these entrances will be located on the Holywell Distributor Road. Enhanced pedestrian permeability will be provided to surrounding open space. Landscaping will be used to enhance these features while mitigating the impact of them.

Walking and cycling are the most efficient modes of travel in terms of use of road-space, and the most sustainable in terms of environmental impacts. Cycle parking facilities have been conveniently located within a secure, easy to use, adequately lit and in a well signposted area.

Figure 2.3: Emerging Concept Evolution



Source: Henchion and Reuter Architects, July 2023

2.2 Landscape Integration

The presented development concept has been designed to have minimal environmental impact. To ensure this care was taken with the design and layout of the site as well as mitigation efforts through landscaping to reduce the impact of the development on surrounding sites. Biodiversity, ecology, and wildlife are key facets of consideration in the development of the site layout.

The protection of hedgerows as part of the environmental consideration in development have been referred to at length as part of the *Fingal Development Plan 2023-2029* for their role as part of habitats, biodiversity corridors as well as the role that they play as part of Fingal's green infrastructure network.

The existing hedgerows along the southern and eastern site boundaries are to be retained. In addition, substantial tree planting is introduced in the landscape proposals to improve the proportion of native species on site and to build on the existing character of the area.

The existing hedgerows are preserved and incorporated into the design where possible as recommended in the *Fingal Development Plan 2023-2029:*

> **Objective GI 18** *"Ensure trees, hedgerows and other features which demarcate townland boundaries are preserved and incorporated into the design of developments."*

The landscape design facilitates circulation, seating, bicycle parking, fire tender access and at the same time ensures abundance of vegetation and flexibility of use and provides opportunities for passive and active recreation and visual amenity.

The following components make up the overall landscape strategy:

- A diverse and attractive range of open space, including hard and soft landscape areas with tree planting and ground flora;
- Provision of informal natural play equipment within the communal open space;
- Improved permeability throughout the site for pedestrians and cyclists, with consideration given to the wider masterplan strategy for Swords;
- Integration of SUDS, functional landscape, and external works to ensure accessibility to parking areas and building cores.

Low planting is utilised to create and reinforce sub-spaces within the larger landscape; for visual screening, defensible space, visual interest, ecological purposes and to guide or direct pedestrian's movement. The low planting is conceived as subtle layering of greens within the open spaces. The planting is layered as follows; lowest - bulb planting, groundcover planting, highest - clipped hedge planting.

This low-planting strategy works in conjunction of promoting stepping stones as stated in the Development Plan.

> **Objective GI 15** *"Create a cohesive network of green corridors, green routes/ links and stepping stones throughout the lands that facilitate wildlife movement between the residential areas and the surrounding landscape."*

The selection of hard landscape materials is determined by function but also to provide a cohesive palette of materials across the site. The open spaces are presented to incorporate several different hard landscape finishes to delineate the different spaces and recreational zones. The materials and furniture in these locations are chosen to create an intimate environment and encourage communal activities.

Figure 2.4: Artist's impression of the Landscape Strategy for the Presented Development

Source: DBFL, September 2023

2.3 Key Figures of Presented Development

No.	Item	Quantum
1.	Site Area	0.77 ha
2.	Total No. Apartment	57
3.	No. of 1-bedroom apartments	20
4.	No. of 2-bed apartments	29
5.	No. of 3-bed apartments	8
6.	Total Development Gross Floor Area	5,189 sq m
7.	Apartment Building A Gross Floor Area	1,572.9 sq m
8.	Apartment Building B Gross Floor Area	1,894.6 sq m
9.	Apartment Building C Gross Floor Area	1,721.5 sq m
10.	No. Bicycle Storage Building A	48 no. spaces (43.4 sq m)
11.	No. Bicycle Storage Building B	58 no. spaces (45.3 sq m)
12.	No. Bicycle Storage Building C	61 no. spaces (64.8 sq m)
13.	Total Bicycle Storage	223 no. spaces (167 no. long term spaces) (56 no. short term spaces)
14.	Density	74 units per hectare
15.	Accessible/Disabled Parking	3 no. spaces
16.	Accessible/Disabled EV Parking and Charging	1 no. space
17.	EV Parking and Charging	7 no. spaces
18.	Vehicle Parking	23 no. spaces
19.	Total Vehicle Parking	34 no. spaces

2.4 Planning History

To derive an understanding of development trends and potential interactions between different forms of development associated with the subject site, a review of recent relevant Planning History was undertaken.

File No.	Application Status	Decision Date	Development Description
F18A/0335	This application was received by Fingal County Council on 18 Jun 2018 and registered on 30 Oct 2018. On 21 Nov 2018, the decision GRANT PERMISSION was made by Fingal County Council.	21/11/2018	A residential development on a 0.77 ha site bounded by Holywell Avenue & Holywell Court to the east, Holywell Drive & Holywell Gardens to the south and to the north and west by the recently constructed link road section that links to the R125 to the south and Mountgorry Way to the east. Access to the site is from the recently constructed link road section that bounds the development to the north. The proposed development comprises 29 dwellings in the following mix: A 2/3 storey duplex/apartment building 7 no. 2-bedroom ground floor apartments, 2 no. 1-bedroom ground floor apartments, 9 no. 3-bedroom duplex units and 2 no. 2-bedroom two storey apartments. The development also consists of 9 no. two houses comprising 3 no. 3-bedroom mid-terraced Type B units; 2 no. 3-bedroom end of terrace Type B1 units; 2 no. 4-bedroom semi-detached Type C units and 2 no. 3-bedroom semi-detached Type D units together with all associated site development/car parking/landscaping works.
F02A/0729	On 18 Feb 2003, a decision GRANT PERMISSION & REFUSE PERMISSION was made by Fingal County Council on this application. Subsequently, an appeal was lodged on 18 Mar 2003 and a decision to Appeal Withdrawn was made	18/02/2003	Residential development including local services centre, site for proposed primary school and open space. The site is bounded by proposed link road from Malahide to Feltrim to the north, The Melrose Housing Estate at Kinsealy, and M1 Motorway (presently under construction) at Drinan, to the west. The lands comprise those contained within the Nevinstown A1 Residential Action Plan. The residential development provides for a total of 1183 residential units, comprising 548 houses and 635 apartments, of which there are 46 one bedroom, 741 two bedroom, 386 three

File No.	Application Status	Decision Date	Development Description
	by An Bord Pleanála on 02 Apr 2003.		bedroom and 10 four-bedroom units ranging in height from 2/2 1/2 and 3 storeys. The development comprises one local services centre (697.2 sq.m.) containing 1 creche (390.2sq.m.), 1 retail unit (113 sq.m.), 1 medical facility (97 sq.m.) and a pharmacy (97 sq.m.) in a single building of 1 1/2 storeys. Access to the development is from the existing main road through Airside Business Park to form a new distributor road, extending from the existing N1 to the proposed M1 motorway. Pedestrian/cycle provisions will be incorporated alongside the proposed distributor road. An Environmental Impact Statement is being submitted with this planning application.
F03A/0936	This application was received by Fingal County Council on 23 Jul 2003 and registered on 23 Jul 2003. On 10 Mar 2004, the decision GRANT PERMISSION was made by Fingal County Council.	10/03/2004	A residential development including local services centre, site for proposed primary school and open space. The site is bounded by the proposed link road from the N1 to the realigned Feltrim Road, to the north and the Melrose housing estate at Kinsealy, and M1 motorway at Drinan to the east. The lands comprise those contained within the Nevinstown A1 Residential Action Plan. The residential development provides for a total of 1188 residential units, comprising 546 houses and 642 apartments, of which there are 44 one bedroom, 754 two bedroom, 380 three bedroom and 10 four bedroom units ranging in height from two to two and a half and three storeys. The development comprises 1 local services centre (730.95 sq.m.), containing 1 creche, (423.95 sq.m.), 1 retail unit (113 sq.m.), 1 medical facility (97sq.m.) and a pharmacy (97 sq.m.) in a single building of one and a half storeys. Access to the development is from the existing main road through Airside Business Park to form a new distributor road, extending from the existing N1 to a proposed interchange at the M1 motorway. Pedestrian/cycle provisions will be incorporated alongside the proposed distributor road. An Environmental Impact Statement is being submitted with the planning application.

3.0 SPATIAL PLANNING AND POLICY CONTEXT

The Statutory Development Planning Context is a constant fluid environment. Any proposals associated with the delivery of a new Residential Development within Holywell, Swords, will be informed by a wide range of national, regional and local planning policy documents.

The importance of the *Project Ireland 2040 National Planning Framework*, the *Eastern and Midland Regional Assembly Regional Spatial and Economic Strategy 2019-2031*, and the *Fingal Development Plan 2023-2029*, is acknowledged and of particular relevance in guiding the nature and extent of development proposals.

The following analysis of relevant guidelines, policies and objectives as expressed at a national, regional and local level has been prepared to demonstrate the consistency of the subject development within the planning context.

3.1 Delivering *Project Ireland 2040*

Project Ireland 2040 – National Planning Framework (NPF) was published in February 2018 and constitutes the primary strategic planning document for the country as a whole. This document has established a singular vision for development and investment in Ireland which is intended to guide population growth, infrastructure delivery, social and economic development throughout Ireland through to 2040. It is a strategic planning policy document prepared for the national tier of planning governance. It aims to improve the strategic planning of Ireland and its regions to improve economic performance and the quality of life of its citizens.

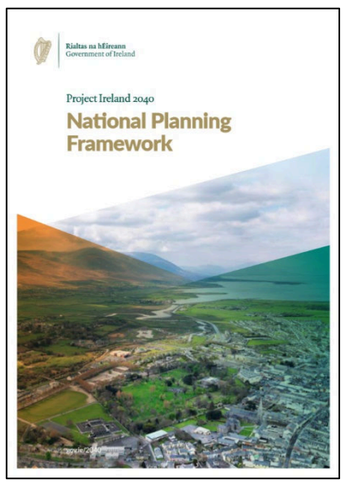
The NPF acknowledges that within the Eastern and Midland Region there needs to be more emphasis on consolidating the development of places that grew rapidly in the past decade or so with large scale commuter driven housing development which focuses on addressing local community and amenity facility provision in many of the larger commuter towns through targeted investment under relevant NPF National Strategic Outcomes.

The NPF sets out 10 National Strategic Outcomes and 75 National Policy Objectives, to enable all parts of Ireland, whether rural or urban, to successfully accommodate growth and change.

The presented Residential Development for Holywell, Swords, is in pursuance of the following National Strategic Outcomes as providing high quality housing, well-designed public realm and landscaping, extensive amenity infrastructure, and integrating *inter alia* the current Fingal built environment.

National Strategic Outcome No. 1 *Compact Growth* which outlines that:

> *"Carefully managing the sustainable growth of compact cities, towns and villages will add value and create more attractive places in which people can live and work. All our urban settlements contain many potential development areas, centrally located and frequently publicly owned, that are suitable and capable of re-use to provide housing, jobs, amenities and services, but which need a streamlined and co-ordinated approach to their development, with investment in enabling infrastructure and supporting amenities, to realise their potential. Activating these strategic areas and achieving effective density and consolidation, rather than more sprawl of urban development, is a top priority."*



National Strategic Outcome No. 5 *A Strong Economy, supported by Enterprise, Innovation and Skills* which outlines that:

> *"This will depend on creating places that can foster enterprise and innovation and attract investment and talent. It can be achieved by building regional economic drivers and by supporting opportunities to diversify and strengthen the rural economy, to leverage the potential of places. Delivering this outcome will require the coordination of growth and place making with investment in world class infrastructure, including digital connectivity, and in skills and talent to support economic competitiveness and enterprise growth."*

National Strategic Outcome No. 7 *Enhanced Amenity and Heritage* which outlines that:

> *"This will ensure that our cities, towns and villages are attractive and can offer a good quality of life. It will require investment in well-designed public realm, which includes public spaces, parks and streets, as well as recreational infrastructure. It also includes amenities in rural areas, such as national and forest parks, activity-based tourism and trails such as greenways, blueways and peatways. This is linked to and must integrate with our built, cultural and natural heritage, which has intrinsic value in defining the character of urban and rural areas and adding to their attractiveness and sense of place."*

Figure 3.1: Strategic Investment Priorities in response to National Strategic Outcomes

Source: *Project Ireland 2040 – National Planning Framework*

The presented new Residential Development for Holywell, Swords, is in pursuance of the following National Policy Objectives as providing high quality residential development through well-designed units and mitigation efforts taken to integrate the development within its receiving environment and neighbouring sites, all while integrating with *inter alia* the current Swords built environment.

National Policy Objective 3a

> *"Deliver at least 40% of all new homes nationally, within the built-up footprint of existing settlements."*

National Policy Objective 3a

> *"Deliver at least half (50%) of all new homes that are targeted in the five Cities and suburbs within their existing built-up footprints."*

National Policy Objective 4

> *"Ensure the creation of attractive, liveable, well designed, high quality urban places that are home to diverse and integrated communities that enjoy a high quality of life and well-being."*

National Policy Objective 6

> *"Regenerate and rejuvenate cities, towns and villages of all types and scale as environmental assets, that can accommodate changing roles and functions, increased residential population and employment activity and enhanced levels of amenity and design quality, in order to sustainably influence and support their surrounding area."*

National Policy Objective 13

> *"In urban areas, planning and related standards, including in particular building height and car parking will be based on performance criteria that seek to achieve well-designed high-quality outcomes in order to achieve targeted growth. These standards will be subject to a range of tolerance that enables alternative solutions to be proposed to achieve stated outcomes, provided public safety is not compromised and the environment is suitably protected."*

National Policy Objective 27

> *"Ensure the integration of safe and convenient alternatives to the car into the design of our communities, by prioritising walking and cycling accessibility to both existing and proposed developments, and integrating physical activity facilities for all ages."*

National Policy Objective 30

> *"Local planning, housing, transport/accessibility and leisure policies will be developed with a focus on meeting the needs and opportunities of an ageing population along with the inclusion of specific projections, supported by clear proposals in respect of ageing communities as part of the core strategy of city and county development plans."*

National Policy Objective 32

> *"To target the delivery of 550,000 additional households to 2040."*

National Policy Objective 33

> *"Prioritise the provision of new homes at locations that can support sustainable development and at an appropriate scale of provision relative to location."*

National Policy Objective 34

> *"Support the provision of lifetime adaptable homes that can accommodate the changing needs of a household over time."*

National Policy Objective 35

"Increase residential density in settlements, through a range of measures including reductions in vacancy, re-use of existing buildings, infill development schemes, area or site-based regeneration and increased building heights."

National Policy Objective 57

"Enhance water quality and resource management by:

- *Ensuring flood risk management informs place-making by avoiding inappropriate development in areas at risk of flooding in accordance with The Planning System and Flood Risk Management Guidelines for Planning Authorities."*

National Policy Objective 75

"Ensure that all plans, projects and activities requiring consent arising from the National Planning Framework are subject to the relevant environmental assessment requirements including SEA, EIA and AA as appropriate."

Statement of Consistency – National Planning Framework

The development is presented as an attractive, liveable, safe, and well-designed extension of an expanding residential neighbourhood on an infill residentially zoned site. It is respectfully presented to be in accordance with National Policy Objectives of achieving a significant proportion of future urban development in existing towns and as allowing for an increase in residential density which will build the critical mass of population growth as to support the projected expansion of Swords.

3.2 *Regional Spatial and Economic Strategy for the Eastern and Midland Regional Area*

The principal statutory purpose of the *Regional Spatial and Economic Strategy for the Eastern and Midland Regional Area* (RSES) is to support the implementation of Project Ireland 2040 and the economic policies and objectives of the Government by providing a long-term strategic planning and economic framework for the development of the Region. The RSES is required under the Planning and Development Act 2000 to address employment, retail, housing, transport, water services, energy and communications, waste management, education, health, sports and community facilities, environment and heritage, landscape, sustainable development, and climate change.

The Strategy is underpinned by three key principles:

- Healthy Placemaking;
- Climate Action; and
- Economic Opportunity.

The current RSES has made clear as part of its Strategic Investment Priorities that Housing and Sustainable Urban Development takes precedence at the top of its list. The vision that underpins this plan and principles makes direct reference to the development of residential space:

"To create a sustainable and competitive Region that supports the health and wellbeing of our people and places, from urban to rural, with access to quality housing, travel and employment opportunities for all".

In relation to the delivery of housing, RSES outlines a clear strategy underpinned by a number of objectives. The NPF and Rebuilding Ireland identifies a target of at least 25,000 annual new homes required nationally to satisfy housing needs to 2040 and an increased national output of 30,000 to 35,000 to 2027.

The MASP also identifies opportunities for some 113,000 residential units when fully built out to 2040, this will meet the projected populations in the MASP to 2026 to 2031. The MASP is focussed on a phased and sequential delivery of a steady stream of sites to meet demand including the identification of long term strategic future development areas.

The Residential Development at Holywell, Swords, is in pursuance of the following **RSES Regional Policy Objectives** associated with Housing Delivery as providing the supply of quality, affordable housing in underpinning economic growth and competitiveness of the Dublin metropolitan area.:

RPO 5.4: Future development of strategic residential development areas within the Dublin Metropolitan area shall provide for higher densities and qualitative standards as set out in the 'Sustainable Residential Development in Urban Areas'13, 'Sustainable Urban Housing: Design Standards for New Apartments' Guidelines and 'Urban Development and Building Heights Guidelines for Planning Authorities.

RPO 5.5: Future residential development supporting the right housing and tenure mix within the Dublin Metropolitan Area shall follow a clear sequential approach, with a primary focus on the consolidation of Dublin and suburbs, and the development of Key Metropolitan Towns, as set out in the Metropolitan Area Strategic Plan (MASP) and in line with the overall Settlement Strategy for the RSES. Identification of suitable residential development sites shall be supported by a quality site selection process that addresses environmental concerns.

Statement of Consistency – RSES

The residential development presented is consistent with the provisions of Sword's role in the *Regional Spatial and Economic Strategy for the Eastern and Midland Regional Area* in providing for high quality residential development and will provide for the population growth, and critical mass required, to drive economic development and a sustainable economy, while making the best us of under-utilised residentially zoned infill lands and of economic investment in critical infrastructure to date.

3.3 Local Authority Policy Context - Adhering to the Policies and Objectives of the *Fingal Development Plan 2023-2029*

The presented development will be in accordance with the policies and objectives within the *Fingal Development Plan 2023-2029.*

The delivery of quality housing and the practice of sustainable placemaking is a key component of the Development Plan. The projected population growth and requirement of a further 16,245 new homes by 2029 is also outlined within this plan.

In order to deliver these objectives and requirements, a series of strategic aims are detailed, the most applicable being:

- *Deliver successful and sustainable communities through the provision of infrastructure, a range of housing typologies and tenure options, open space, retail, leisure, employment, community, and cultural development supporting the needs of residents, workers, and visitors, whilst conserving our built and natural heritage;*
- *Require that the principle of healthy placemaking underpins the design and functionality of new and expanding communities;*
- *Ensure communities develop in a coordinated sustainable manner to create vibrant and viable places and ensure new development respects the character of existing centres.*

The presented new residential development for Holywell, Swords, is in pursuance of the following of the following policy associated with Sustainable Placemaking and Quality Homes as outlined in Chapter 3 of the *Fingal Development Plan 2023-2029.*

Policy SPQHP1: The Council will support the development and creation throughout Fingal of successful and sustainable settlements which endorse the principles of healthy placemaking and which through a multi-faceted approach to planning, design and management continue to ensure the development of attractive high-quality places to live, work, recreate, visit and invest in, served by a range of local services, provision of quality public realms, diverse and accessible community facilities for all genders, non-binary or none and open spaces for the benefit of the community.

Policy SPQHP42: Support the provision of family flats on suitable sites within established residential areas subject to specific design criteria.

Objective SPQHO46: Support development which enhances the quality of the built environment, promotes public health, and supports the development of sustainable, resilient communities.

Objective SPQHO6: Promote and facilitate a Universal Design for all developments.

Policy SPQHP9: Implement the adopted Fingal County Council Housing Strategy, which includes the *Housing Need and Demand Assessment 2023 - 2029* (and any superseding Housing Strategy agreed by the Members of Fingal County Council).

Policy SPQHP10: Support the implementation of and promote development consistent with the National Strategic Outcome of Compact Growth as outlined in the NPF and the Regional Strategic Outcome of Compact Growth and Regeneration as set out in RSES.

Objective SPQHO9: Consolidate within the existing urban footprint, by ensuring of 50% of all new homes within or contiguous to the built-up area of Dublin City and Suburbs and 30% of all new homes are targeted within the existing built-up areas to achieve compact growth of urban settlements, as advocated by the RSES.

Objective SPQHO10: Focus new residential development on appropriately zoned lands within the County, within appropriate locations proximate to existing settlement centres where infrastructural capacity is readily available, and along existing or proposed high quality public transport corridors and active travel infrastructure in a phased manner, alongside the delivery of appropriate physical and social infrastructure.

Objective SPQHO11: Ensure that adequate and appropriate housing is available to meet the needs of people of all incomes and needs including marginalised groups within our communities.

Policy SPQHP29: Support the initiatives proposed under Housing for All – A New Housing Plan for Ireland in providing for Fingal's requirements for social affordable and cost-rental housing provision within Fingal, including with a focus on the development of publicly owned sites with support from state agencies where appropriate and the preparation of Local Authority Delivery Action Plans.

Policy SPQHP30: Promote the provision of social, affordable and cost rental housing in accordance with the *Fingal County Council Housing Strategy*, Part V of the *Planning and Development Act 2000* (as amended) by the *Affordable Housing Act 2021* and government policy as outlined by the Department of Housing Local Government and Heritage *Housing for All – A new Housing Plan for Ireland to 2030*.

Policy SPQHP31: Support Local Authorities, Approved Housing Bodies and other sectoral agencies in the provision of a greater diversity of housing type and tenure including social and affordable housing and explore new models of low-cost rental and affordable home ownership.

Policy SPQHP35: Promote a high quality of design and layout in new residential developments at appropriate densities across Fingal, ensuring high-quality living environments for all residents in terms of the standard of individual dwelling units and the overall layout and appearance of developments.

Objective SPQHO31: Encourage the creation of attractive, mixed use and sustainable residential communities which contain a wide variety of housing and apartment types, sizes, tenures and typologies in accordance with the *Fingal County Council Housing Strategy*, the *Housing Need and Demand Assessment 2023 - 2029* with supporting community facilities, amenities and services.

The Development Plan also makes direct reference to the aims to promote compact growth and consolidation within Fingal's large urban areas and also how it will support appropriate densities as expressed in national and regional policies such as NPF, RSES and Section 28 Guidelines.

The site which is the focus for delivery of the new Residential Development in Holywell, is subject to *RS – Residential* land use zoning designation in terms of the *Fingal Development Plan 2023-2029*, the stated objective of which is to*: " Provide for residential development and protect and improve residential amenity".*

As illustrated within Figure 1. 3 above, and Figure 3.2 below, the character of this area is a mixture of residential, commercial, open space and greenfield in nature.

The Development Plan states that the vision for lands subject to this land use zoning designation is to:

> *"Ensure that any new development in existing areas would have a minimal impact on and enhance existing residential amenity."*

The following uses are permitted in principle, subject to conditions, on the *RS - Residential* lands:

> *Bed and Breakfast, Childcare Facilities, Community Facilities, Education, Guest House, Office Ancillary to Permitted Use, Open Space, Residential, Residential Care Home/ Retirement Home, Retirement Village, Sheltered Accommodation, Traveller Community Accommodation, Utility Installations.*

The presented new Residential Development for Holywell, Swords, is permitted in principle on the *RS – Residential* land use zoning designation of the lands at this location.

Figure 3.2: Land Use Zoning Designation of the Subject Site and the Surrounding Area

Source: *Fingal Development Plan 2023-2029*, extracted, reproduced and annotated under ESRI ArcGIS and OSI Licence by The Planning Partnership September 2023

The presented new Holywell Residential Development's layout and building design conform to the highest possible standards set out in statutory guidance, as to ensure effective integration of the development within its receiving environment.

The presented new Residential Development for Holywell, Swords, is in pursuance of the following development management standards as outlined within the *Fingal Development Plan 2023-2029*.

Objective DMS03 – Local Authority Development: Ensure Local Authority development proposals are subject to environmental assessment, as appropriate, including Screening for Appropriate Assessment and Environmental Impact Assessment.

Objective DMSO5 – Design Statement: All medium to large scale planning applications (in excess of 5 residential units or 300 sq m of retail/ commercial/office development in urban areas) or as otherwise required by the Planning Authority shall be accompanied by a Design Statement to address the contextual and design issues which have been taken into consideration as part of the scheme.

SPPR1: Support increased building height and density in locations with good public transport accessibility, particularly town/ city cores. Increased building height will be actively pursued for both redevelopment, regeneration and infill development to secure the objectives of the National Planning Framework and Regional Spatial and Economic Strategies and shall not provide for blanket numerical limitations on building height.

SPPR4: Secure minimum densities on greenfield or edge of city/town locations for housing purposes as required under Sustainable Residential Development in Urban Areas 2007, ensure a greater mix of building heights and typologies in planning for the future development of suburban locations; and avoid mono-type building typologies (e.g. two storey or own-door houses only), particularly, but not exclusively so in any one development of 100 units or more.

Objective DMSO19 – New Residential Development: Require that applications for Residential Developments comply with all design and floor area requirements set out in:

- *Quality Housing for Sustainable Communities – Best Practice Guidelines* 2007;
- *Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas* 2009, the companion Urban Design Manual – A Best Practice Guide, DEHLG 2009;
- *Sustainable Urban Housing: Design Standards for New Apartments* 2020.

Objective DMSO23 – Separation Distance: A separation distance of a minimum of 22 metres between directly opposing rear first floor windows shall generally be observed unless alternative provision has been designed to ensure privacy. In residential developments over three-storeys in height, minimum separation distances shall be increased in instances where overlooking or overshadowing occurs.

Objective DMSO24 – Apartment Development: All applications for apartment development are required to comply with the Specific Planning Policy Requirements (SPPRs).

Objective DMSO49 – Permeable and Accessible Open Spaces: Integrate and provide links through adjoining open spaces to create permeable and accessible areas, subject to Screening for Appropriate Assessment and consultation, including the public, as necessary.

Objective DMSO64 – Design of Open Space: Ensure open space provision is suitably proportioned and inappropriate narrow tracts are not provided.

Objective DMSO74 – Screening of Private Open Space: Require balconies, ground floor private open space, roof terraces or winter gardens be suitably screened in a manner complimenting the design of the building so as to provide an adequate level of privacy and shelter for residents.

Objective DMSO196 – Public Foul Sewerage Network Connections: Ensure that all new developments in areas served by a public foul sewerage network connect to the public sewerage system, to comply with the requirements of the Uisce Éireann Foul Sewer specification (where applicable).

Objective DMSO197 – Foul and Surface Water Drainage Systems: Require all new development to provide separate foul and surface water drainage systems and to prohibit the connection of surface water outflows to the foul drainage network and vice versa (prohibit foul to surface water) where separation systems are available.

Objective DMSO203 – FCC SuDS Guidance Document: SuDS shall be incorporated into all parts of a development (open spaces, roads, footpaths, private areas), and have regard to the FCC SuDs Guidance Document – *Green/ Blue Infrastructure for Development, as amended* (Appendix 11), and shall ensure:

- That the design of SuDS enhances the quality of open spaces and when included as part of any open space provision, it must contribute in a significant and positive way to the design and quality of the open space.
- Open space areas shall not be dominated by SuDS features.
- Underground tanked systems, whether concrete or plastic, are the least favoured means for surface water management and shall only be used when green solutions have proven not feasible.

See also Appendix 11 (SuDS Guidance Document) and Chapter 11, Infrastructure and Utilities (Section 11.5.2: Surface Water and Flood Risk Management).

Objective DMSO207 – Green Walls and Roofs for New Developments: Promote and encourage the use of green walls and roofs for new developments that demonstrate benefits in terms of SuDS as part of an integrated approach to green infrastructure provision.

The presented new Residential Development for Holywell, Swords, will complement the general principle that the location and provision of housing is a pre-requisite to the creation and enhancement of viable, sustainable and successful local communities.

223 no. cycle parking facilities have been provided on site as part of the presented development to the requirements of the Development Plan (No. 167 long stay bike spaces and No. 56 short stay bike spaces), these facilities will be located in areas that are secure, easy to use, and adequately lit.

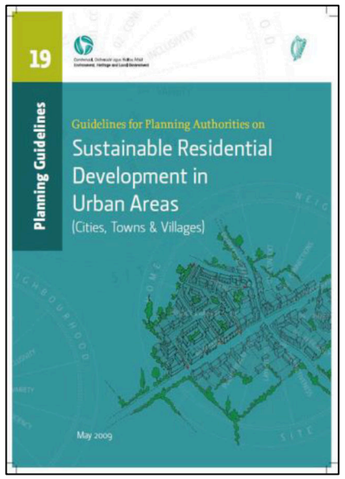
An off-street carpark providing no. 34 spaces (incl. 3 no. accessible/disabled, 1 no. accessible/disabled EV and 7 no. EV is presented as part of the new Residential Development for Holywell, Swords, and meets the standards that have been set out as part of *the Fingal Development Plan 2023-2029.*

Statement of Consistency – County Policy

The presented development will provide a greater variety and mix of available residential units proximate to the existing and expanding residential neighbourhoods, which can be supported due to the proximity of active travel options and public transport such as bus services and the planned MetroLink. Accessibility to a range of community infrastructure, employment opportunities, and educational institutes benefits and supports the presented development.

3.4 *Sustainable Residential Development in Urban Areas* (2009)

These guidelines, published by the Department of the Environment, Heritage and Local Government in 2009, provide specific information on new developments in towns and cities.



The guidance provided within this document emphasises "*…the importance of qualitative standards in relation to design…"* with the objective of achieving "*…an efficient use of land appropriate to its context…".* To this end, we highlight the following passages as being of particular relevance to the subject application:

5.1 Firm emphasis must be placed by planning authorities on the importance of qualitative standards in relation to design and layout in order to ensure that the highest quality of residential environment is achieved. Pre-planning discussions with developers will be helpful in achieving a quality environment. The objective should be the achievement of an efficient use of land appropriate to its context, while avoiding the problems of over-development.

5.3 Particular sensitivity is required in relation to the design and location of apartment blocks which are higher than existing adjacent residential development. As a general rule, where taller buildings are acceptable in principle, building heights should generally taper down towards the boundaries of a site within an established residential area.

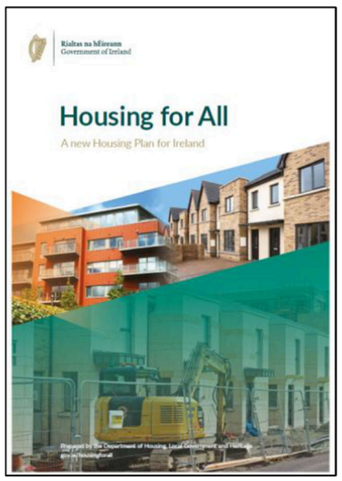
5.5 The increase of population within city or town centres with their range of employment, recreation, educational, commercial and retail uses can help to curtail travel demand; therefore, these locations have the greatest potential for the creation of sustainable patterns of development. Increasing populations in these locations can assist in regeneration, make more intensive use of existing infrastructure, support local services and employment, encourage affordable housing provision and sustain alternative modes of travel such as walking, cycling and public transport. While a mix of residential and other uses will often be desirable in city and town centres, particular care is needed to ensure that residential amenity is protected.

5.8 The State has committed very substantial investment in public transport under the Transport 21 capital programme. To maximise the return on this investment, it is important that land use planning underpins the efficiency of public transport services by sustainable settlement patterns – including higher densities – on lands within existing or planned transport corridors. The phasing of proposed major residential development in tandem with new public transport infrastructure / services (as in the case of the Adamstown Strategic Development Zone) should be considered.

Statement of Consistency – Ministerial Guidelines 19

The presented development is consistent with the policies outlined for large towns and cities in the *Guidelines for Planning Authorities on Sustainable Urban Development in Urban Areas 2009*. As well as being plan-led, the presented development contributes to the densification of the site and lands in a manner intended and which is envisaged by the Local Authority in Fingal.

3.5 *Housing for All – A New Housing Plan for Ireland* (2021)



The foreword to the document states:

The Programme for Government – Our Shared Future – sets out the Government's mission to tackle the Housing crisis. Our objective is that everybody should have access to sustainable, good quality housing to purchase or rent at an affordable price, built to a high standard, and located close to essential services, offering a high quality of life.

Housing for All details the concern around the delivery of the Irish housing system for the needs of the people through measures that range from affordability to the enhancement of social housing delivery.

There are several key Housing Policy Objectives that have been set out in which the presented development directly supports, these are:

- Enable Homeownership and Increase Affordability (No.1);
- Work towards Ending Homelessness by 2030 (No.3);

  "We will roll out the largest house building programme in the history of the State by getting Local Authorities and AHBs back building at scale".
- Increase Social Housing Delivery (No.4);

  "The Government will ensure that the ambition of Housing for All is translated into clear, target driven Local Authority delivery action plans".
- Drive social sustainability and foster sustainable communities (No.21) and;

  "Sustainable communities are places where people want to live and work. They meet the diverse needs of existing and future residents, are sensitive to their environment and contribute to high quality of life".
- Drive economic sustainability and reduce Construction Costs (No.23).

> *"Local Authorities are key enablers of housing within the State, through their planning and economic functions, and their direct responsibility for the delivery of social and affordable housing. They also play a key role in urban and rural regeneration and leading the Town Centre First approach, so that the focus is not only on new supply, but also on tackling vacancy and ensuring the sustainability of communities and the vibrancy of all our cities, towns and villages".*

The presented Residential Development at Holywell, Swords, supports the objectives of *Housing for All* and the Governments strategy to increase the delivery of social housing, promote social inclusion and to deliver a target of 33,000 homes per year by 2024. It will also aid in the reduction in availability of housing choice, the costs of construction and the rate of homelessness in the country. The implementation of such a strategy is believed to be able to embed environmental, economic, and social sustainability into the housing system.

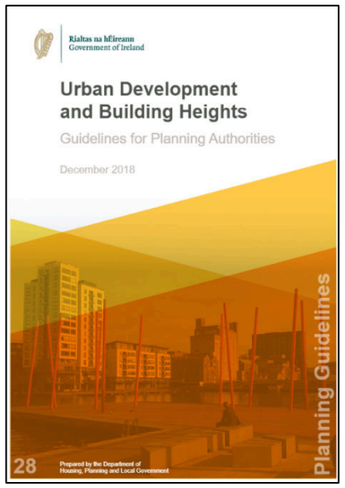
The development presented is therefore in line with the proper planning and sustainable development of the Holywell, Swords area.

Statement of Consistency – Housing for All

The presented scheme presents an opportunity to increase housing supply within the confines of the existing town on an infill greenfield site, appropriately serviced by existing road, transport and services infrastructure. All of these can be activated to assist in increasing new housing supply.

3.6 *Urban Development and Building Heights – Guidelines for Planning Authorities* (2018)

The purpose of these guidelines is to ensure that development which takes place as part of the National Planning Framework, is done so in a way that allows for an increase in scale, density and height. It must encompass an appropriate mix of both the living, working, social and recreational space available.



The presented Residential Development in Holywell, Swords, has been designed and laid out in such a way that can deliver additional housing and economic development to urban areas while reinforcing and contributing to the sense of place within its receiving environment. The presented development is in support of a number of different Specific Planning Policy Requirements:

> (SPPR 1) *In accordance with Government policy to support increased building height and density in locations with good public transport accessibility, particularly town/ city cores, planning authorities shall explicitly identify, through their statutory plans, areas where increased building height will be actively pursued for both redevelopment, regeneration and infill development to secure the objectives of the National Planning Framework and Regional Spatial and Economic Strategies and shall not provide for blanket numerical limitations on building height.*
>
> (SPPR 2) *In driving general increases in building heights, planning authorities shall also ensure appropriate mixtures of uses, such as housing and commercial or employment development, are provided for in statutory plan policy. Mechanisms such as block delivery sequencing in statutory plans could be utilised to link the provision of new office, commercial, appropriate retail provision and residential accommodation, thereby enabling urban redevelopment to proceed in a way that comprehensively meets contemporary economic and social needs, such as for housing, offices, social and community infrastructure, including leisure facilities.*

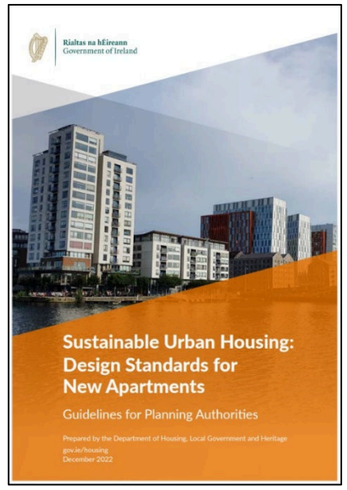
Statement of Consistency - *Urban Development and Building Heights – Guidelines for Planning Authorities*

The three pavilion blocks present Block A to the west at five storeys, the central Block B at 6 storeys, and Block C to the east is 4 storeys. This distribution of height and mass supports the articulation of the individual pavilions (thereby avoiding the perception of one large mass), appropriately scaled in keeping with the distance between them and the existing neighbouring residences.

The presented scheme is in compliance with the guidelines that have been set out and presents an opportunity to fulfil the objectives that have been outlined within the Guidelines above in relation to increasing building heights and density in areas that are appropriate. As a result of this it will be possible for it to remain consistent with national statutory guidance.

The presented Residential Development offers an opportunity to accommodate projected population increases in Fingal through the implementation and use of height and density with a minimal impact on the surrounding environment and residential amenity.

3.7 *Sustainable Urban Housing: Design Standards for New Apartments – Guidelines for Planning Authorities* (2022)



These guidelines issued by the Department of Housing, Local Government and Heritage in 2022 detail specific requirements in relation to the development of new apartments in Ireland as well as demonstrating the need for further apartments in urban areas. Future housing need projections indicate that there is a growing need for development in urban areas and apartments offer a solution to the requirements of an ageing and a young population.

The requirements set out in this document ensure that new apartments constructed are attractive, desirable and can accommodate a range of household types and tenures. They set out design standards as well as the role of apartments within statutory planning guidance. Apartment developments are continuing to become an increasingly more common form of development in urban areas however in order for Ireland to close the gap between itself European averages they need to become the norm for urban housing solutions.

The presented Residential Development at Holywell, Swords, recognises the need for further residential demand in Swords and in response offers a solution that is in line with the context for *Housing for All* and the *National Planning Framework*. The development is in compliance of the standards that have been set out in the above guidelines as well as the following Specific Planning Policy Requirement (SPPR):

(SPPR) Minimum Apartment Floor Areas:

- Studio apartment (1 person) 37 sq m;
- 1-bedroom apartment (2 persons) 45 sq m;
- 2-bedroom apartment (4 persons) 73 sq m; and
- 3-bedroom apartment (5 persons) 90 sq m.

Statement of Consistency – *Sustainable Urban Housing: Design Standards for New Apartments (2022)*

The presented scheme demonstrates that it is in compliance and support of the goals and the development criteria that has been outlined in the guidance document above through careful design and adherence. By developing to the aforementioned standards, it will allow for projected areas of expansion to be fulfilled as well as population growth and demographic trends to be accounted for to a manner that is in line with proper planning and sustainable development. The result of this will be the delivery of a series of high-quality residential units that are attractive in an area that is accessible and has been projected to expand.

4.0 CONCLUSION

Principle of Development Acceptable – Plan Led and Policy Consistent: It is submitted that the presented development is consistent with the zoning objectives for the subject site as discussed in the above sections as well as being in alignment with local and national planning policy. The presented use of this zoned land is for residential development and the typology of residential units that has been presented reflects the needs of the area.

The presented development fully accords with the land use category as set out by the *Fingal Development Plan 2023-2029*, for the reasons more fully examined within this *Planning Statement* and as supports the rationale for the application as being 'Plan-Led' and as further presented in terms of consistency herein.

Sustainable Neighbourhoods: We submit that the presented density of the subject application represents an efficient and sustainable use of serviced infill zoned lands and would be keeping the proper planning and sustainable development of the area.

The presented development will provide a mix of available residential units proximate to the existing and expanding residential neighbourhoods, which can be supported due to the proximity of active travel options and public transport such as bus services. Accessibility to a range of community infrastructure, employment opportunities, and educational institutes, as described above and referred, benefits and supports the subject development presented.

Better Use of Land: The presented development delivers a 57 no. residential unit development on an infill greenfield site, presenting a range of unit sizes (20 no. 1-bedroom apartments, 29 no. 2-bedroom apartments, and 8 no. 3-bedroom apartments) effectively integrated within its receiving environment acknowledging existing neighbouring residential amenity, and presents amenity space in alignment with the provisions of the Development Plan.

The subject scheme presents a reflective and respectful density of residential development within Fingal, in close proximity to places of employment, transport infrastructure and associated services, accessible by foot, bicycle and public transport, all key factors in ensuring the expected increase in population.

Principle of the Presented Development of a High-Quality Design and Layout: Development Management Standards as contained within the *Fingal County Development Plan 2023-2029* and as required to be in accordance with prevailing Ministerial Guidelines have been considered alongside the appropriate and previously referred *Guidelines for Sustainable Residential Development in Urban Areas* (2009), *Housing for All – A New Housing Plan for Ireland* (2021) and *Urban Development and Building Heights – Guidelines for Planning Authorities* (2018).

The presented development is consistent with the policies outlined for large towns and cities in the *Guidelines for Planning Authorities on Sustainable Urban Development in Urban Areas* (2009). As well as being plan-led, the presented development contributes to the densification of the infill greenfield subject site, allowing for higher density to occur in this location.

The presented development represents the introduction of a new range and mix of housing types and sizes, having a positive impact on the wider area without effecting the neighbourhood amenity. The 57 no. units are considered an appropriate design response presenting a high-quality housing scheme with a range of unit size, increasing the opportunity to access the housing market by providing housing units at a requisite scale and massing, with a permeable layout that allows the area to become more accessible for pedestrians while effectively integrating within its receiving environment by acknowledging existing neighbouring residential amenity.

A Connected, Inclusive and Distinctive Community: The presented development is consistent with the policies outlined for large towns and cities in the *Guidelines for Planning Authorities on Sustainable Urban Development in Urban Areas* (2009). As well as being plan-led, the presented development contributes to the densification of the infill greenfield site and lands in a manner intended envisaged by the Local Authority.

The guidelines as relate to, *inter alia*, daylight/sunlight and energy efficiency, privacy and security, car and bicycle parking, the provision of private and communal open space, residential density, accessibility, waste services have all been carefully considered in the design and layout of the presented scheme.

Having regard to the *Fingal Development Plan 2023-2029* and the development of a Residential Development as presented for the Holywell, Swords, site which is subject to the *RS- Residential* zoning designation confirming *inter alia* that a *Residential Development* is 'Permitted in Principle', Statutory Guidelines for Planning Authorities on residential development in response to *Project Ireland 2040*, National Policy Objectives contained within the *National Planning Framework*, as well as the availability of public services, amenities and facilities, it is considered that the presented development of a new residential development at a site in Holywell, Swords, will enhance both the character and amenity of the area and provide much needed housing to satisfy plans for local expansion and future housing targets.

Accordingly, the presented development integrates successfully within its receiving environment and neighbouring sites, is not detrimental to the visual or landscape amenities of the area, does not seriously injure the residential amenities of property in the vicinity, will not adversely impact on the cultural and build heritage of the area, is not prejudicial to public health and does not interfere with the existing land uses in the area. The presented development would, therefore, be in accordance with the proper planning and sustainable development of the area while integrating within the current Swords built environment.

Yours faithfully

Wessel Vosloo MIPI
Principal
The Planning Partnership

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ALTEMAR
Marine & Environmental Consultancy

Ecological Impact Assessment (EcIA) for a proposed Residential Development at Holywell, Swords, Co. Dublin.

20th October 2023

Prepared by: Bryan Deegan (MCIEEM) of Altemar Ltd.
On behalf of: Fingal County Council

Document Control Sheet			
Project	Ecological Impact Assessment (EcIA) for a proposed residential development at Holywell, Swords, Co. Dublin.		
Report	Ecological Impact Assessment		
Date	20th October 2023		
Project No:		Document Reference:	
Version	Author	Reviewed	Date
Draft 01	Bryan Deegan	Emma Peters	19th September 2023
Planning	Bryan Deegan		20th October 2023

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Table of Contents

Introduction

Background

Ecological Impact Assessment (EcIA) has been defined as '*the process of identifying, quantifying and evaluating the potential impacts of defined actions on ecosystems or their components*' (Treweek, 1999). "*The purpose of EcIA is to provide decision-makers with clear and concise information about the likely ecological effects associated with a project and their significance both directly and in a wider context. Protecting and enhancing biodiversity and landscapes and maintaining natural processes depends upon input from ecologists and other specialists at all stages in the decision-making and planning process; from the early design of a project through implementation to its decommissioning*" (IEEM, 2010).

The following EcIA has been prepared by Altemar Ltd. at the request of Fingal County Council for a proposed residential development at Holywell, Swords, Co. Dublin.

Study Objectives

The objectives of this EcIA are to:

1. Outline the project and any alternatives assessed;
2. Undertake a baseline ecological feature, resource and function assessment of the site and zone of influence;
3. Assess and define significance of the direct, indirect and cumulative ecological impacts of the project during its construction, lifetime and decommissioning stages;
4. Refine, where necessary, the project and propose mitigation measures to remove or reduce impacts through sustainable design and ecological planning; and
5. Suggest monitoring measures to follow up the implementation and success of mitigation measures and ecological outcomes.

The following guidelines have been used in preparation of this EcIA:

- Guidelines on the information to be contained in Environmental Impact Statements (EPA, 2002);
- Guidelines on the information to be contained in EIARs (2022);
- Guidelines for Ecological Impact Assessment (EcIA) (IEEM, 2019);
- Advice Notes on current practice in the preparation of EIS's (EPA, 2003);
- Institute of Ecology and Environmental Management Guidelines for EIA (IEEM, 2005).

Altemar Ltd.

Since its inception in 2001, Altemar has been delivering ecological and environmental services to a broad range of clients. Operational areas include: residential; infrastructural; renewable; oil & gas; private industry; Local Authorities; EC projects; and, State/semi-State Departments. Bryan Deegan, the managing director of Altemar, is an Environmental Scientist and Marine Biologist with 28 years' experience working in Irish terrestrial and aquatic environments, providing services to the State, Semi-State and industry. He is currently contracted to Inland Fisheries Ireland as the sole "External Expert" to environmentally assess internal and external projects. He is also chair of an internal IFI working group on environmental assessment. Bryan Deegan (MCIEEM) holds a MSc in Environmental Science, BSc (Hons.) in Applied Marine Biology, NCEA National Diploma in Applied Aquatic Science and a NCEA National Certificate in Science (Aquaculture). Emma Peters holds a BSc in Environmental Science and has 6 years ecological experience. She is trained in habitat restoration with a focus to increase biodiversity. She is also an active Bat Conservation Ireland member.

Description of the Proposed Project

Fingal County Council intend to apply for planning permission for a proposed residential development at Holywell, Swords, Co. Dublin.

The proposed development consists of the following:

Residential Development (5,189 sq m Gross Floor Space) arranged over 3 no. buildings, consisting of no. 57 no. residential units (20 no. 1-bedroom apartments, 29 no. 2-bedroom apartments, and 8 no. 3-bedroom apartments), at a site of approximately 0.77 ha located in the Townland of Crowcastle, Holywell, Swords, Co. Dublin. The proposed site outline, location, masterplan, and elevations are demonstrated in Figures 1-4.

Landscape

The landscape strategy for the subject site has been prepared by DFLA. The proposed landscape plan is demonstrated in Figure 5. It should be noted that this included the retention of the existing hedgerows on site.

Arborist

An Arboricultural Assessment of the Hegde Vegetation has been prepared by Arborist Associates Ltd. to accompany this planning application. In relation to arboricultural management, this report details the following:

'*Hedge No.1 would benefit from trimming on the site side to contain width and large size dead/unstable growth should be removed to address safety to the surrounding area which includes standing dead or dying Elm trees. These Elm stems should be removed from site to reduce breeding sites for the beetle that spreads this disease in order to try and contain the spread of this disease through the remaining Elm trees.*

Consideration should be given to cutting/coppicing the regeneration of Elm into the hedge to restrict size and their potential to being infected by 'Dutch Elm disease' (Ophiostoma Ulmi).

Hedge No.2 would benefit from trimming on the site side to contain width and large size dead/unstable growth should be removed to address safety to the surrounding area.

Tree Group No.1 would benefit from being fenced off to the grazing livestock so they can't cause further damage. The central tree could also be considered for removal as part of selective thinning to reduce density and to allow the other two trees more space to develop.'

The Tree Constraints Plan is demonstrated in Figure 6.

Figure 4. *Site outline and location on satellite imagery*

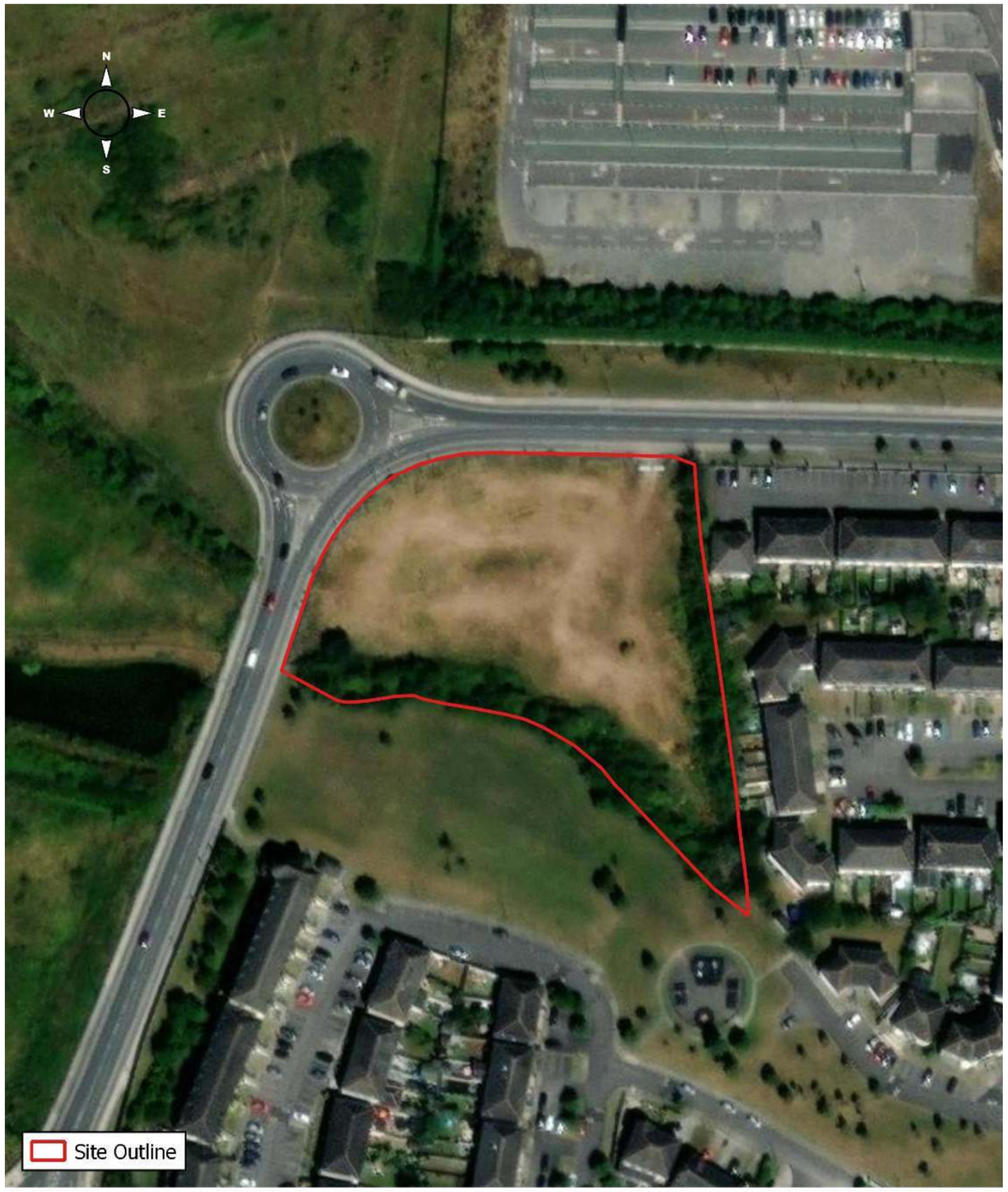

Figure 5. *Outline of proposed site.*

Figure 3. *Proposed site layout plan*

Figure 4. *Proposed site elevations*

Figure 5. *Proposed landscape plan*

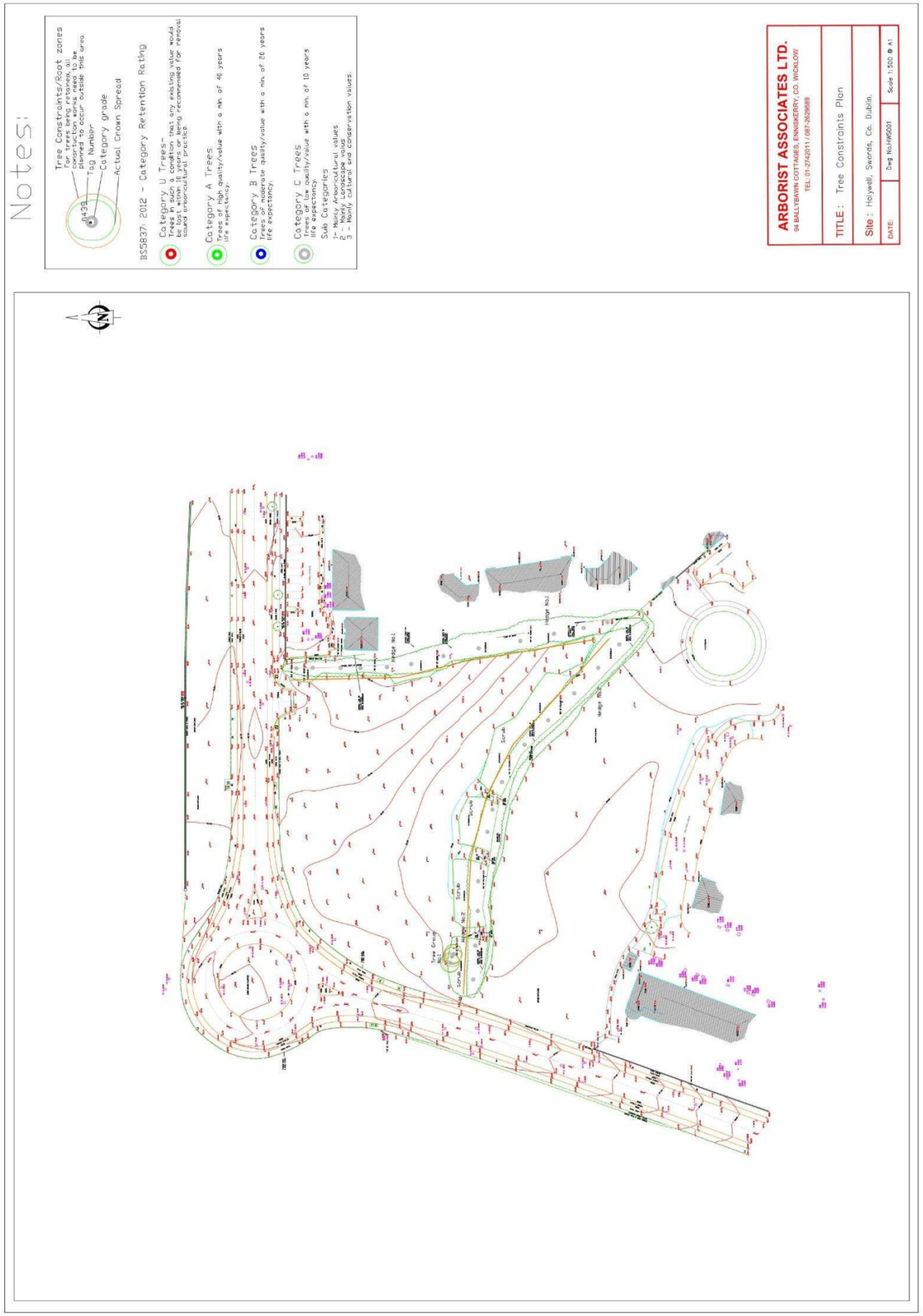

Figure 6. *Tree Constraints Plan*

Drainage

An Engineering Report for Planning has been prepared by ROD Consulting Engineers to accompany this planning application. This report outlines the existing site hydrology, and the following foul and surface water drainage strategy for the proposed development site:

Site Hydrology and Flood Risk Assessment

This report details the following in relation to the existing site hydrology:

'*The site is located within the catchment of the River Gaybrook. The River Gaybrook rises approximately 930m southwest of the development site within the Airside Retail Park. The river generally flows in a north easterly direction, where it ultimately discharges to the Malahide Estuary, approximately 3.4km northeast of the development site*.'

'A detailed Flood Risk Assessment has been prepared to supplement this report. Compensatory flood storage will be provided on the site.'

Surface Water Drainage

In terms of existing surface water drainage infrastructure, this report outlines the following:

'*The site appears to have no existing surface water drainage infrastructure within the boundary. The nearest surface water networks are located immediately west and north of the site on Holywell Distributer Road. It appears that the current drainage regime for the subject site is that surface water drains via infiltration and via overland flow routes to the surrounding surface water network*.'

In relation to the proposed surface water drainage strategy, this report details the following:

'*As part of the development, a number of different SuDS measures are proposed to minimise the impact on water quality and water quantity of the runoff and maximise the amenity and biodiversity opportunities within the site.*

The existing topography will allow for the site to drain by gravity to the nearby existing 1200 mm dia. surface water pipe located at Holywell Distributer Road to the southwest of the site. It is proposed to construct a new surface water drainage system for the development to collect and convey runoff to the outfall location. The site will be served by a new network consisting of surface water pipes, blue / green roofs, permeable paving areas and a detention basin. The lower sub-base levels of the permeable paving, the blue/green roofs and detention basin will provide for the attenuation storage requirements on site as a result of the residential development.'

Further, in relation to the proposed SuDS approach, this report outlines the following:

'*The proposed SuDS measures for the site will include Source Control measures as part of a Management Train whereby the surface water is managed locally in small sub-catchments rather than being conveyed to and managed in large systems further down the catchment. The combination of the SuDS measures listed below will maximise the potential for surface water attenuation, reducing the impact on the existing surface water drainage network downstream. The proposed techniques will offer high level of treatment processes and nutrient removal of the runoff, particularly during the 'first flush'. Finally, the various measures will offer significant amenity and biodiversity opportunities compared to other drainage systems.*

It is proposed to provide the following SuDS measures:

- Blue/Green Roof Systems
- Permeable Paving to all footway and parking bay areas
- Detention Basin
- Flow control devices to limit discharge.'

Foul Wastewater

In relation to the existing wastewater drainage, this report details the following:

'*Drainage records obtained from Fingal County Council have identified an existing 225mm dia. foul water sewer located at Holywell Distributer Road, immediately north of the site. The records indicate that the existing asset flows in an eastly direction.*'

In terms of the proposed wastewater drainage strategy this report outlines the following:

'*It is proposed to construct a new foul sewer network to serve the development. Foul effluent from the site will discharge to the existing 225mm dia. foul sewer on Holywell Distributer Road.*

A Confirmation of Feasibility letter received from Irish Water on the 2nd March 2023 states that a connection to the public foul infrastructure is feasible without any upgrade works being required.'

Foul wastewater will ultimately be treated within the existing public network.

The proposed foul and surface water layouts are demonstrated in Figures 7 & 8.

Flood Risk Assessment

An Initial Site Specific Flood Risk Assessment has been prepared by ROD Consulting Engineers to accompany this planning application. This report concludes with the following:

'*The available sources consulted above indicate that a portion of the proposed development site is liable to flood in the 1 in 1000 year current climate scenario from fluvial sources.*

Flood risk management measures incorporated within the design will protect the development up to the design flood event (1 in 1000 year + 20% climate change factor) with an appropriate freeboard and shall ensure flood risk is not increased upstream or downstream of the site. Details of the proposed compensatory storage measures (~150m3) shall be provided at compliance stage.'

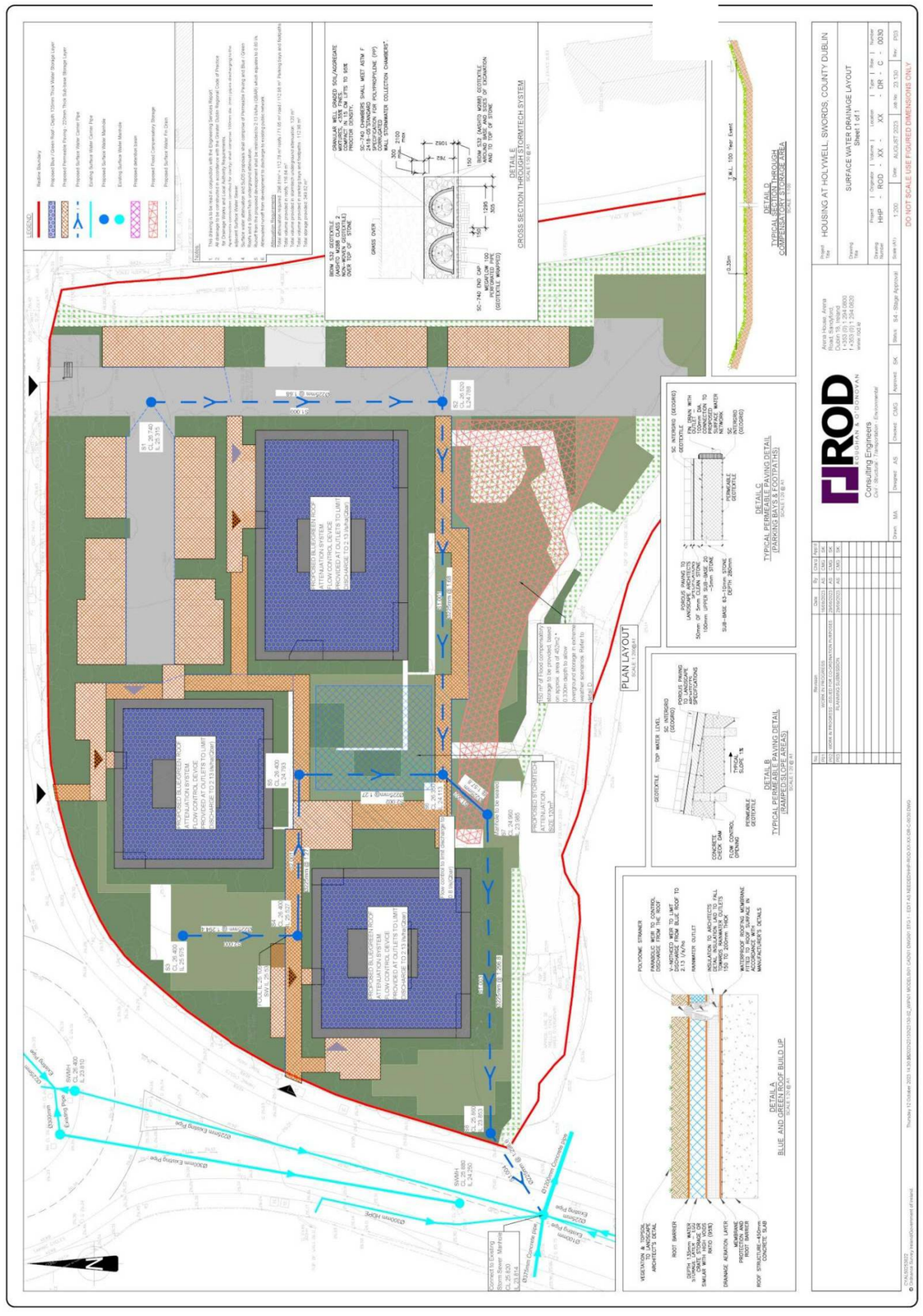

Figure 7. *Proposed surface water layout.*

Figure 8. *Proposed foul water drainage layout*

Ecological Assessment Methodology

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
- Bing Maps (ArcGIS)

A provisional desk-based assessment of the potential species and habitats of conservation importance was carried out in August 2023 and revised in September 2023. Altemar assessed the project, the proposed construction methodology and the operation of the proposed development.

Surveys

Habitats, Flora and Avian Ecology

An initial field survey was carried out by Altemar Ltd. on the 15th August 2023, following completion of the desk-based assessment. A site visit was carried out by Emma Peters in relation to flora and fauna. A bat survey was carried out by Altemar on the 26th September 2023. The 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 August and September 2023. This is within the period for a full species assessment of the floral cover. Weather conditions were mild and dry. However, this is a poor time to observe terrestrial mammal activity. It should be noted that good coverage of the site was possible and there was full and clear access to all areas. This is not considered to be a limitation in relation to the survey timings.

The bat survey was carried out in September 2023. This is within the active bat season and the survey covered the entire site multiple times during the night. Weather conditions were good with mild temperatures of 10°C after sunset. Winds were light and there was no rainfall. Insects were observed in flight during the survey.

Consultation

The National Parks and Wildlife Service (NPWS) were consulted in relation to species and sites of conservation interest. Data of rare and threatened species were acquired from NPWS. The National Biological Data Centre records were consulted for species of conservation significance.

Spatial Scope and Zone of Influence

As outlined in CIEEM (2018) '*The 'zone of influence' for a project is the area over which ecological features may be affected by biophysical changes as a result of the proposed project and associated activities. This is likely to extend beyond the project site, for example where there are ecological or hydrological links beyond the site boundaries.*' In line with best practice guidance an initial zone of influence be set at a radius of 2km for non-linear projects (IEA, 1995).

The potential ZOI of the construction phase of the project in the absence of mitigation was deemed to be within the site outline and, out of an abundance of caution, nearby sensitive receptors including the River Gaybrook. However, due to the self-contained nature and limited temporal/ geographical scale of the project, within a suburban/agricultural environment with set boundaries, in addition to compliance requirements in relation to SUDS, Water Pollution Acts and on site discharges, it is considered that the impacts of the proposed works, following mitigation, would not extend beyond site outline, with the exception of mammal and avian activity where the proposed site may form part of a larger territorial range. The project would also involve reprofiling, excavations and construction, which may impact beyond the site through noise, dust, light and surface water impacts. Standard but robust construction phase controls need to be implemented to limit the potential impact of the proposed development into the surrounding environment.

Impact Assessment Significance Criteria

This section of the EcIA examines the potential causes of impact that could result in likely significant effects to the species and habitats that occur within the ZOI of the proposed development. These impacts could arise during either the construction or operational phases of the proposed development. The following terms are derived from EPA EIAR Guidance and are used in the assessment to describe the predicted and potential residual impacts on the ecology by the construction and operation of the proposed development.

Magnitude of effect and typical descriptions

Magnitude of effect (change)		Typical description
High	Adverse	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements.
	Beneficial	Large scale or major improvement of resource quality; extensive restoration; major improvement of attribute quality.
Medium	Adverse	Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements
	Beneficial	Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality.
Low	Adverse	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements.
	Beneficial	Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial effect on attribute or a reduced risk of negative effect occurring
Negligible	Adverse	Very minor loss or alteration to one or more characteristics, features or elements.
	Beneficial	Very minor benefit to or positive addition of one or more characteristics, features or elements.

Criteria for Establishing Receptor Sensitivity/Importance

Importance	Ecological Valuation
International	Sites, habitats or species protected under international legislation e.g. Habitats and Species Directive. These include, amongst others: SACs, SPAs, Ramsar sites, Biosphere Reserves, including sites proposed for designation, plus undesignated sites that support populations of internationally important species.
National	Sites, habitats or species protected under national legislation e.g. Wildlife Act 1976 and amendments. Sites include designated and proposed NHAs, Statutory Nature Reserves, National Parks, plus areas supporting resident or regularly occurring populations of species of national importance (e.g. 1% national population) protected under the Wildlife Acts, and rare (Red Data List) species.
Regional	Sites, habitats or species which may have regional importance, but which are not protected under legislation (although Local Plans may specifically identify them) e.g. viable areas or populations of Regional Biodiversity Action Plan habitats or species.
Local/County	Areas supporting resident or regularly occurring populations of protected and red data listed-species of county importance (e.g. 1% of county population), Areas containing Annex I habitats not of international/national importance, County important populations of species or habitats identified in county plans, Areas of special amenity or subject to tree protection constraints.
Local	Areas supporting resident or regularly occurring populations of protected and red data listed-species of local importance (e.g. 1% of local population), Undesignated sites or features which enhance or enrich the local area, sites containing viable area or populations of local Biodiversity Plan habitats or species, local Red Data List species etc.
Site	Very low importance and rarity. Ecological feature of no significant value beyond the site boundary

Quality of Effects	Effect Description
Negative /Adverse Effect	A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem; or damaging health or property or by causing nuisance).
Neutral Effect	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
Positive Effect	A change which improves the quality of the environment (for example, by increasing species diversity, or improving the reproductive capacity of an ecosystem, or by removing nuisances or improving amenities).

Significance of Effects

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

Duration and Frequency of Effect	Description
Momentary	Effects lasting from seconds to minutes
Brief	Effects lasting less than a day
Temporary	Effects lasting less than a year
Short-term	Effects lasting one to seven years.
Medium-term	Effects lasting seven to fifteen years.
Long-term	Effects lasting fifteen to sixty years.
Permanent	Effects lasting over sixty years
Reversible	Effects that can be undone, for example through remediation or restoration

Describing the Probability of Effects	Description
Likely Effects	The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.
Unlikely Effects	The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.

Results

Proximity to Designated Conservation Sites

Designated sites are presented in Figure 9 (SAC within 15km), Figure 10 (SPA's within 15km), Figure 11 (NHA and pNHAs within 15km), Figure 12 (Ramsar Sites within 15km), Figure 13 (watercourses in proximity to the Site), Figure 14 (watercourses and SAC's within 1km), Figure 15 (Watercourses and SPA's within 1km), Figure 16 (Watercourses and Ramsar Sites within 1km), and Figure 17 (Watercourses and pNHA's within 1km). It should be noted that the Site of the proposed Project is not within a designated conservation site. The closest Natura 2000 sites are Malahide Estuary SAC & SPA, located 1.9 km from the proposed Project. There are no designated Natural Heritage Areas (NHA) within a 15km radius, however the nearest Proposed NHA (Feltrim Hill) is 1 km from the Site. The distance and details of the conservation sites within 15km of the proposed Project are presented in Table 1. There is no direct pathway to designated sites. There is an indirect pathway from the proposed Project to the Malahide Estuary SAC, SPA, pNHA, and Broadmeadow Estuary Ramsar Site via the existing 1200mm public surface water sewer located within the River Gaybrook catchment, a watercourse that ultimately outfalls to the marine environment at Malahide Estuary.

Table 1. European sites within 15km of the proposed site

NATURA 2000 Site	Distance
Special Areas of Conservation	
Malahide Estuary SAC	1.9 km
Baldoyle Bay SAC	5.5 km
Rogerstown Estuary SAC	5.7 km
North Dublin Bay SAC	8.2 km
Rockabill to Dalkey Island SAC	9.2 km
Ireland's Eye SAC	10.2 km
Howth Head SAC	11 km
South Dublin Bay SAC	11.7 km
Lambay Island SAC	12.5 km
Special Protection Areas	
Malahide Estuary SPA	1.9 km
Baldoyle Bay SPA	5.5 km
North-West Irish Sea SPA	5.5 km
Rogerstown Estuary SPA	6 km
North Bull Island SPA	8.2 km
South Dublin Bay and River Tolka Estuary SPA	9.3 km
Ireland's Eye SPA	9.9 km
Howth Head Coast SPA	12 km
Lambay Island SPA	12.5 km

Table 2. (proposed) NHAs and Ramsar sites within 15km of the proposed development site

Status	Site Name	Distance
pNHA	Feltrim Hill	1 km
pNHA	Malahide Estuary	1.9 km
pNHA	Sluice River Marsh	4.5 km
pNHA	Santry Demesne	5.1 km
pNHA	Baldoyle Bay	5.5 km
pNHA	Rogerstown Estuary	5.7 km
pNHA	Portraine Shore	7.2 km
pNHA	North Dublin Bay	8.1 km
pNHA	Royal Canal	9.8 km
pNHA	Ireland's Eye	10.1 km
pNHA	Howth Head	10.4 km
pNHA	Dolphins, Dublin Docks	11.5 km
pNHA	South Dublin Bay	11.8 km
pNHA	Lambay Island	12.5 km
pNHA	Liffey Valley	13.8 km
pNHA	Bog Of The Ring	13.9 km
pNHA	Loughshinny Coast	14.9 km
pNHA	Booterstown Marsh	14.9 km
pNHA	Knock Lake	14.9 km
Ramsar	Broadmeadow Estuary	1.9 km
Ramsar	Baldoyle Bay	5.5 km
Ramsar	Rogerstown Estuary	7.2 km
Ramsar	North Bull Island	8.1 km
Ramsar	Sandymount Strand/ Tolka Estuary	11.9 km

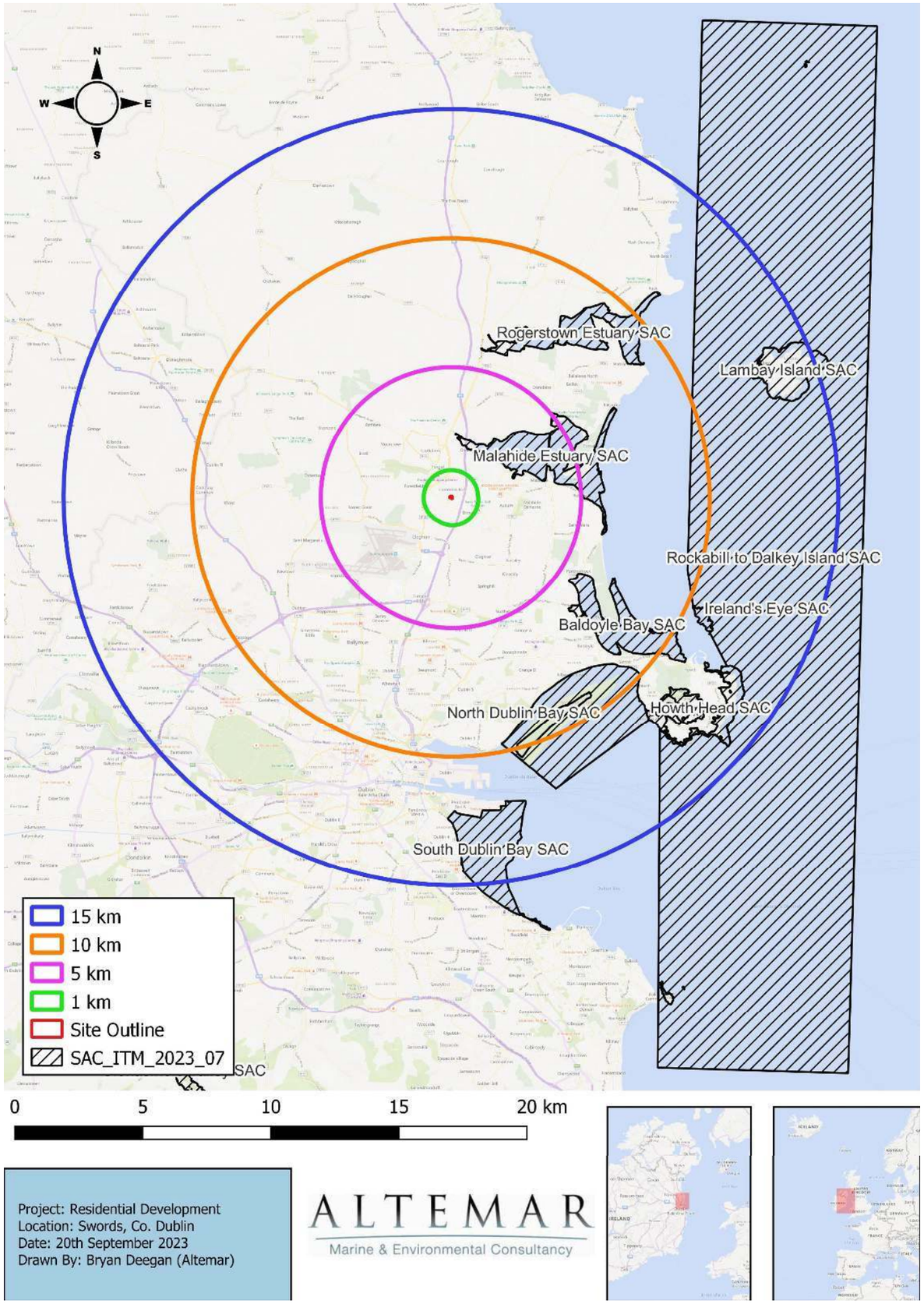

Figure 9. *Special Areas of Conservation (SAC) within 15km of proposed development*

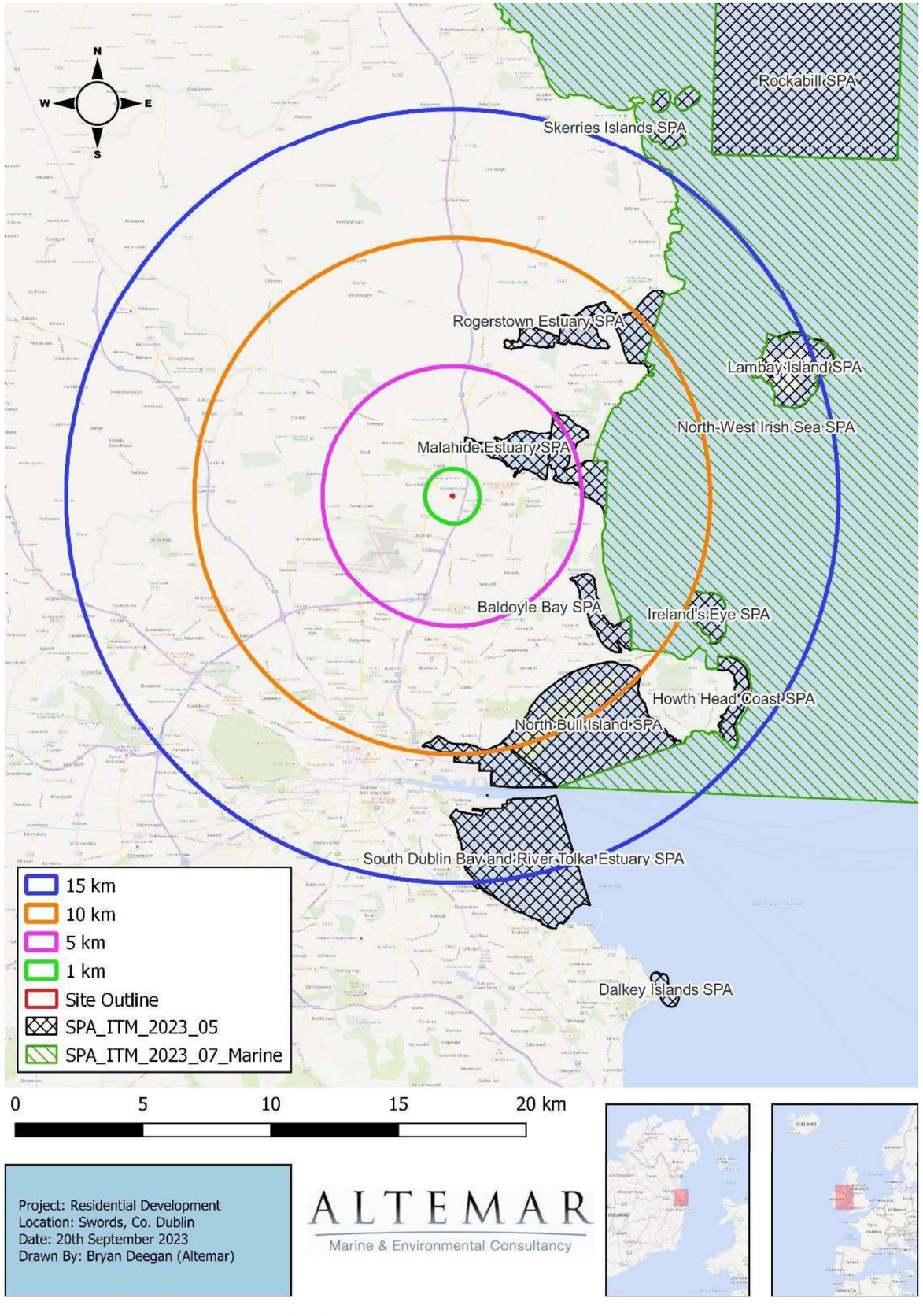

Figure 10. *Special Protection Areas (SPA) within 15km of proposed development*

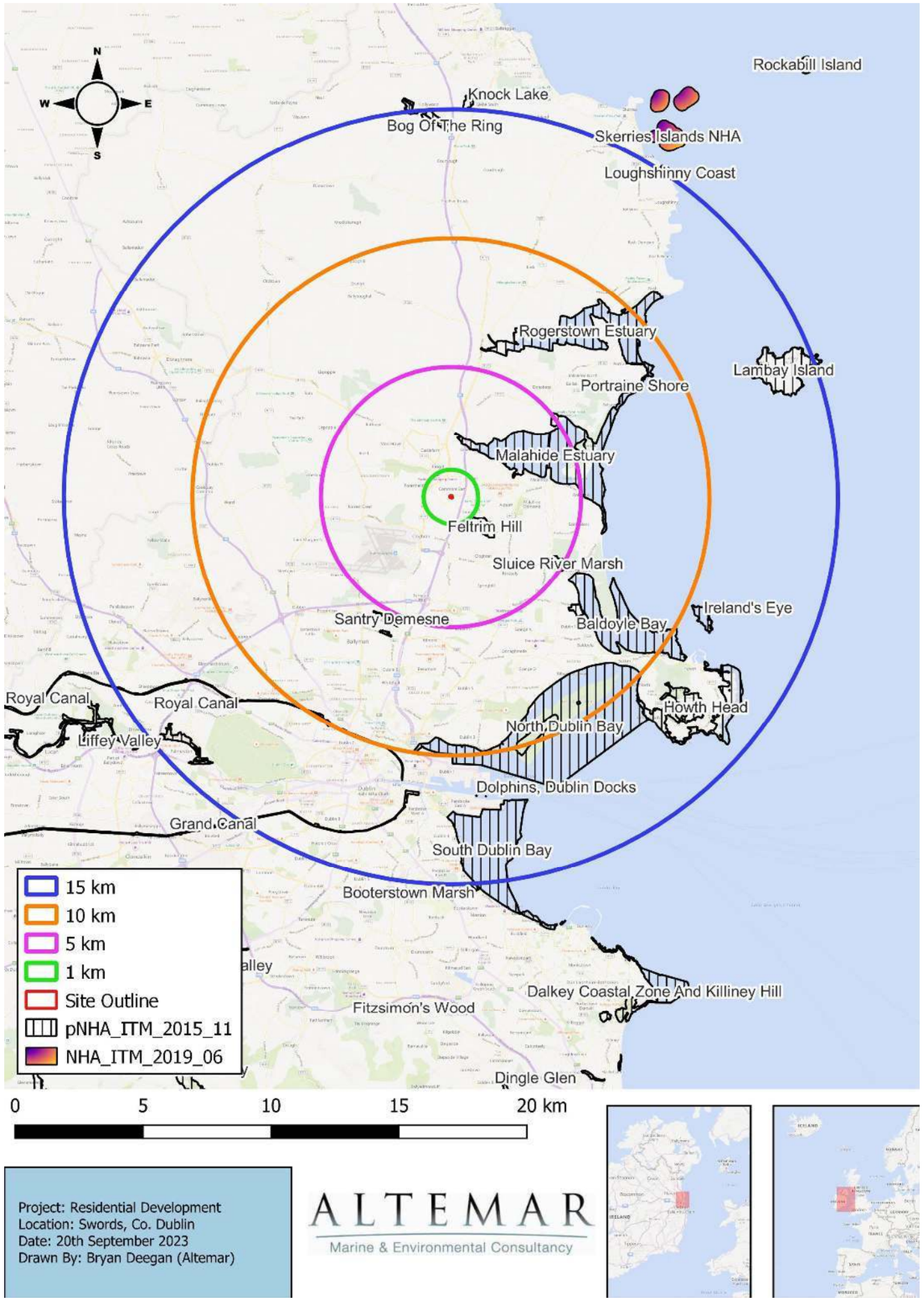

Figure 11. *Natural Heritage Areas (NHA) and proposed Natural Heritage Areas (pNHA) within 15km of proposed development*

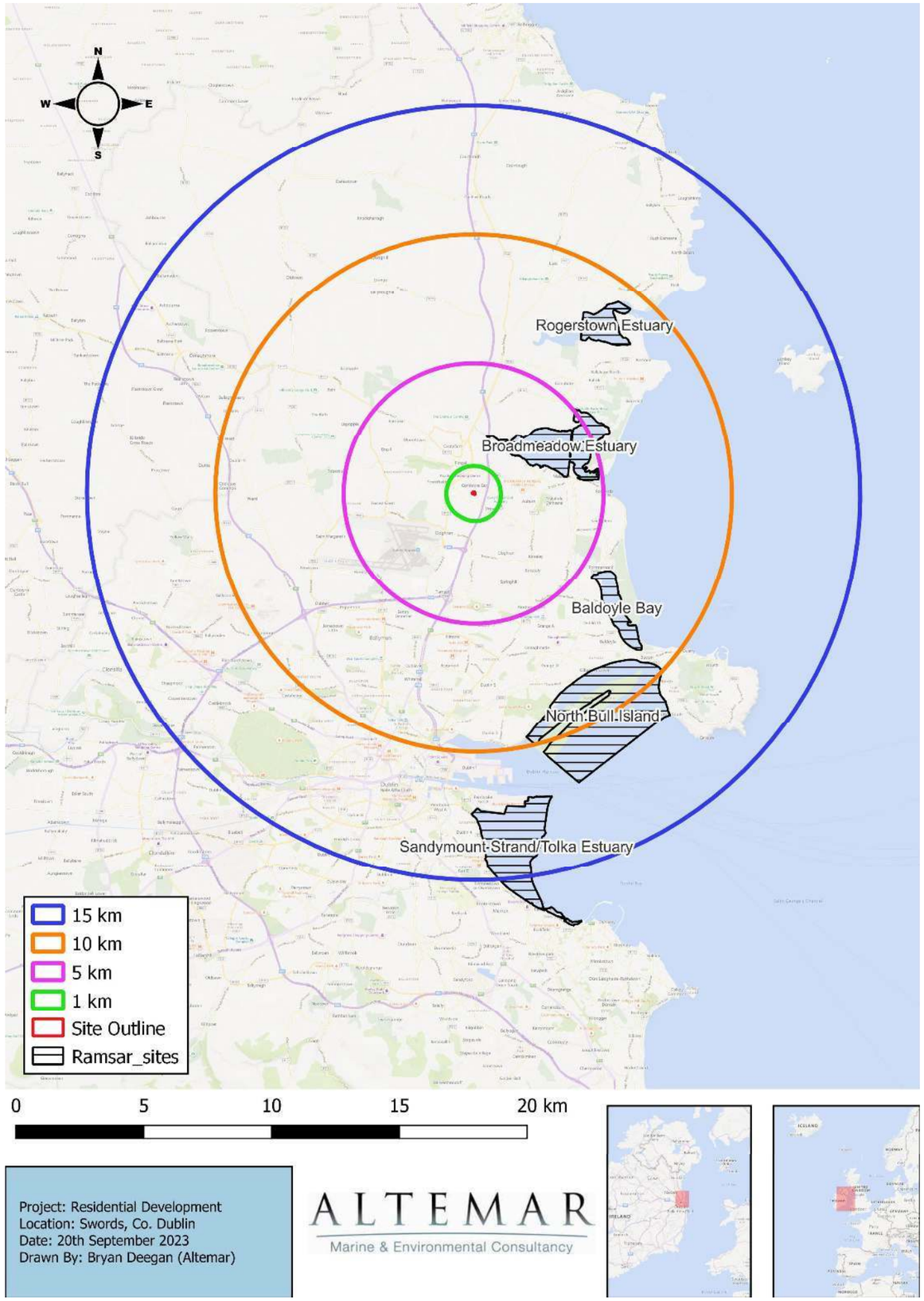

Figure 12. *Ramsar sites within 15km of proposed development*

Figure 13. *Watercourses within close proximity to proposed development*

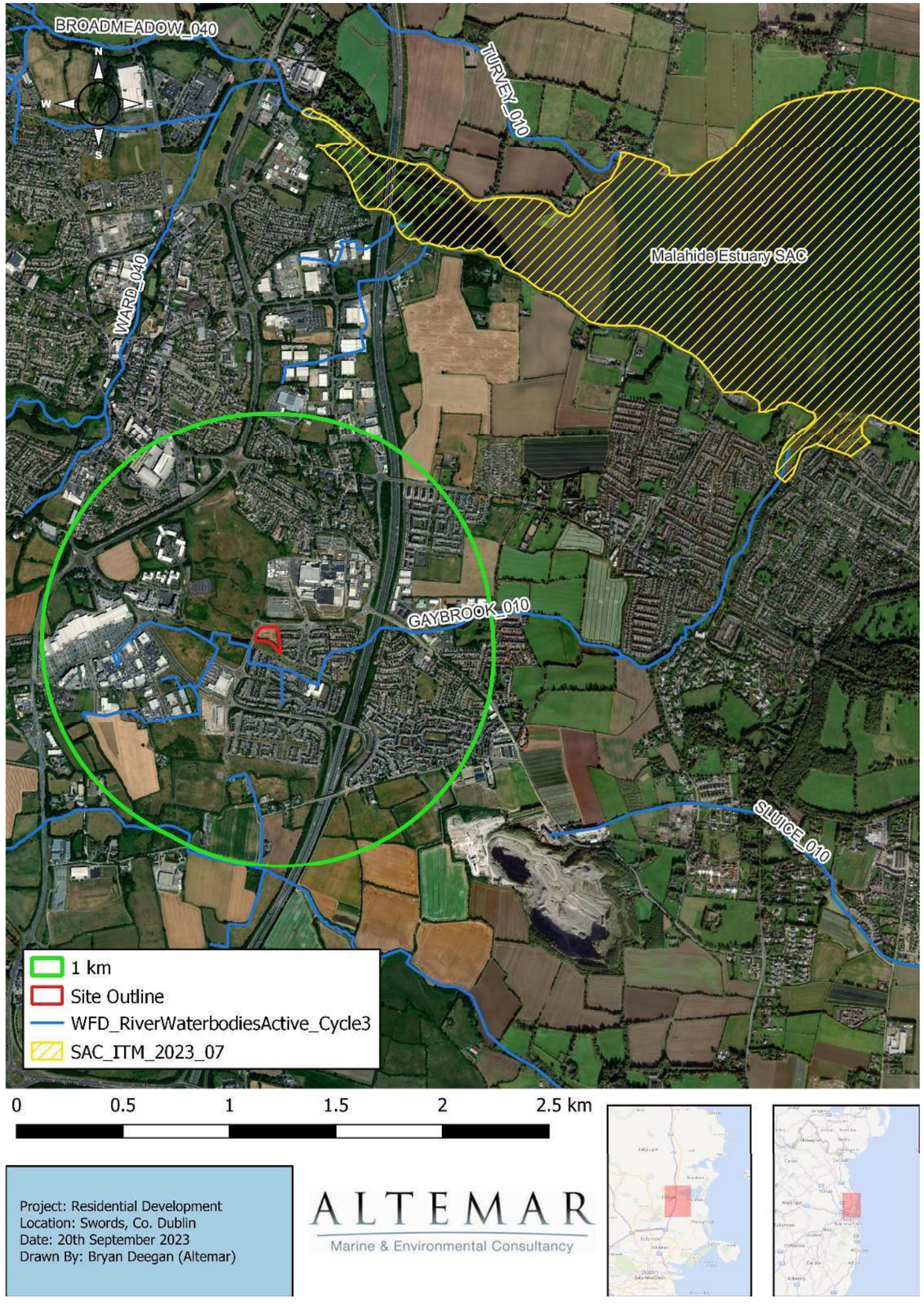

Figure 14. *Watercourses and SACs within 5km of the proposed development*

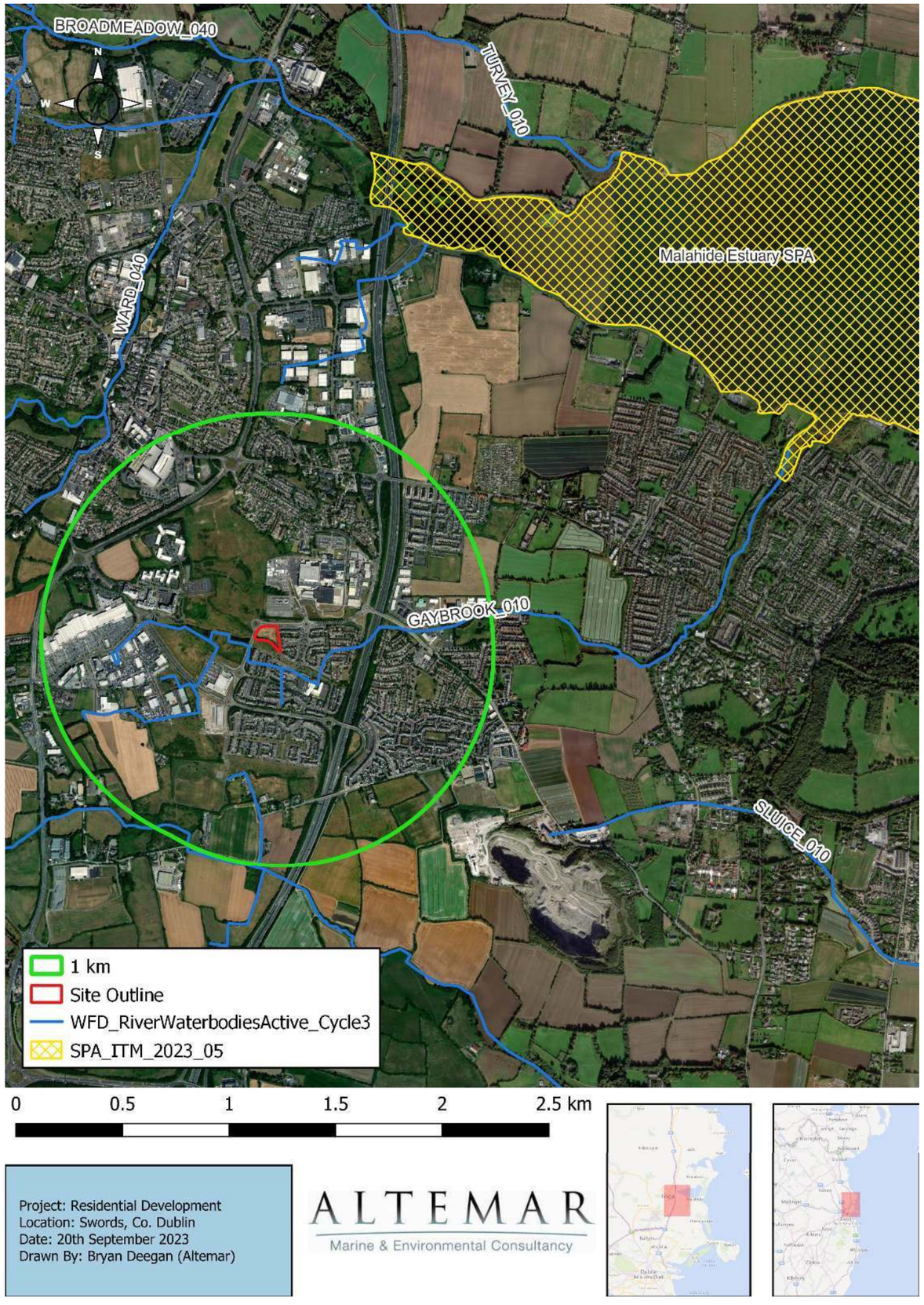

Figure 15. *Watercourses and SPAs within 5km of the proposed development*

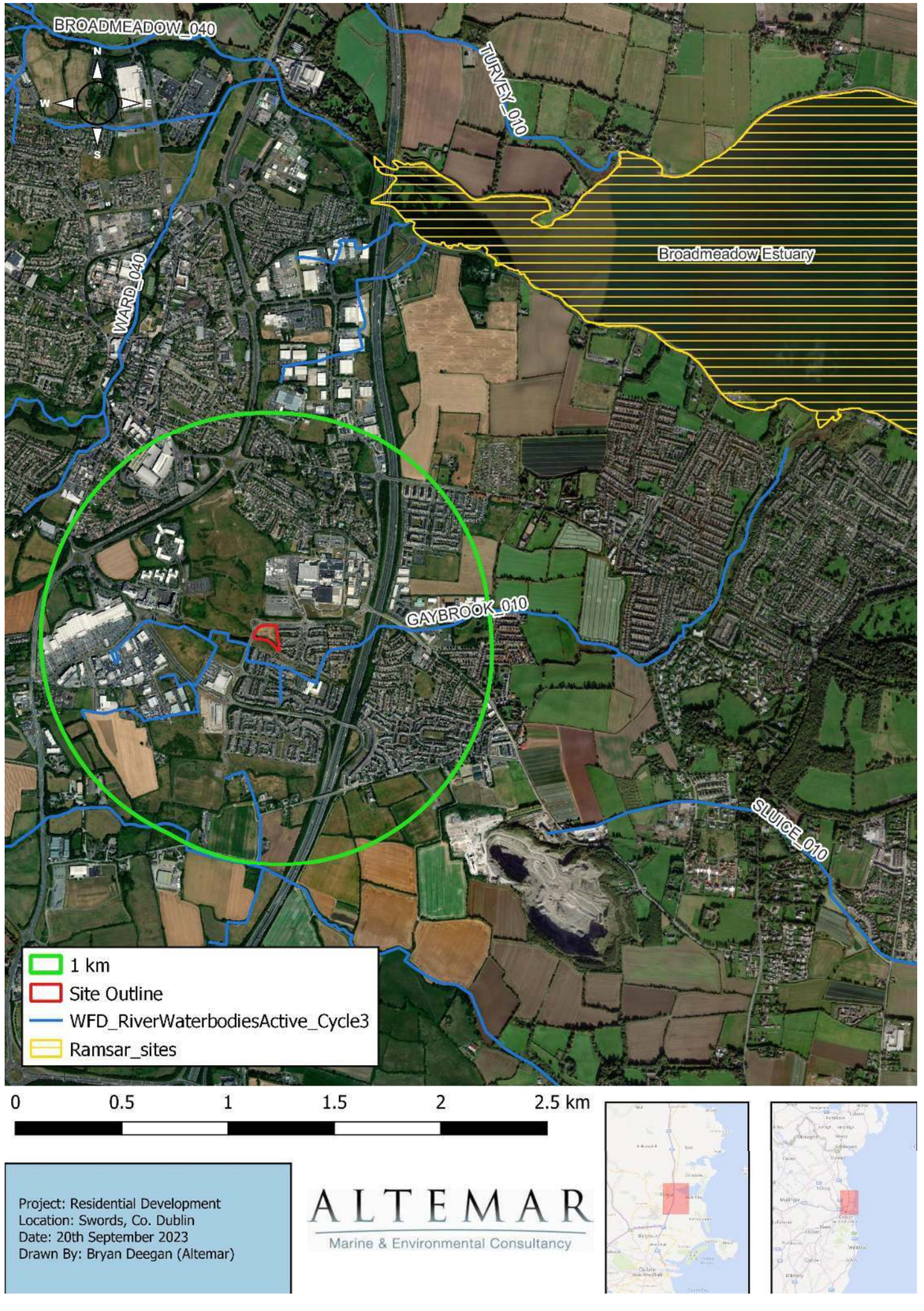

Figure 16. *Watercourses and Ramsar sites within 1 km of the proposed development*

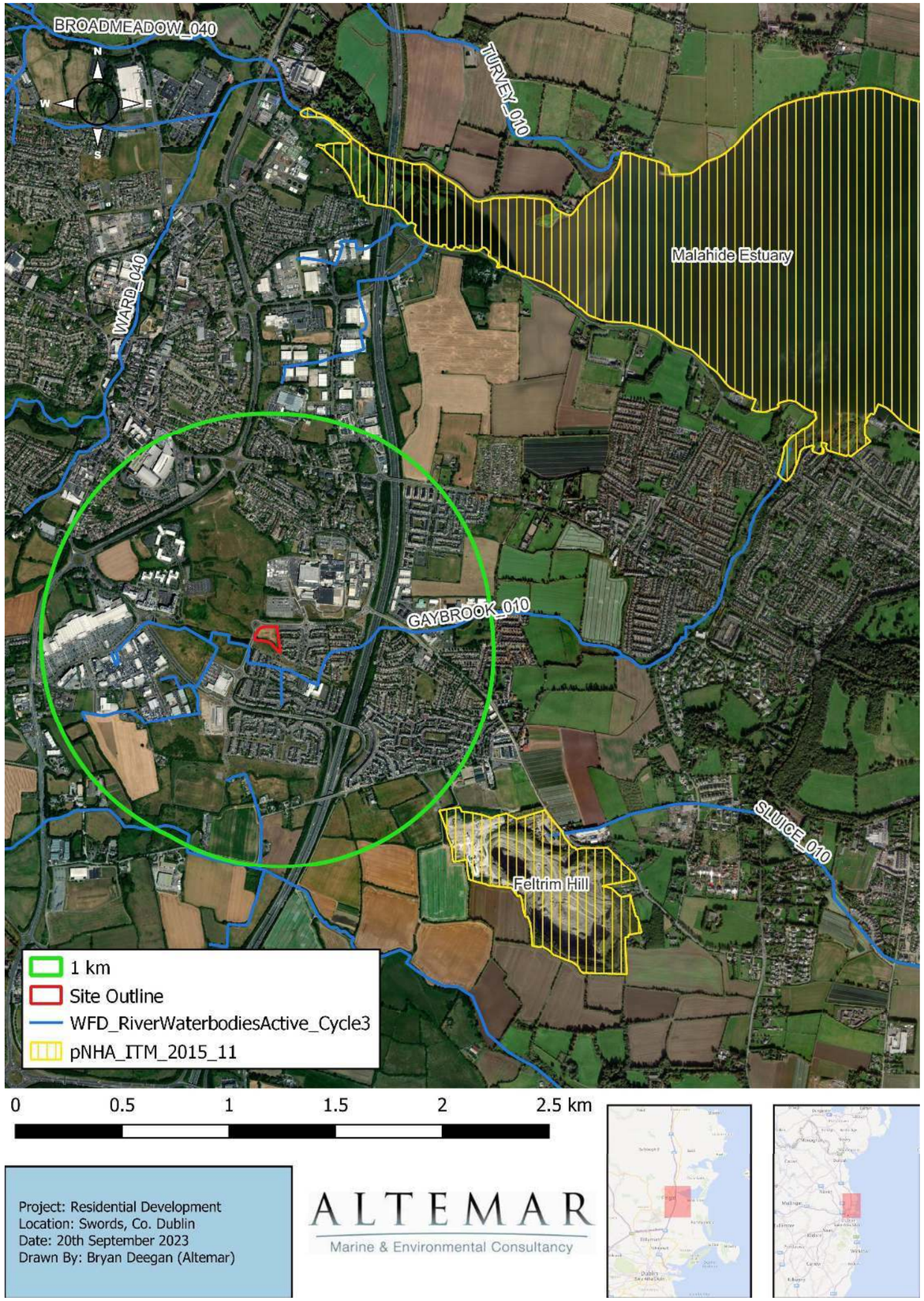

Figure 17. *Watercourses and pNHAs within 1km of proposed development*

Habitats and Species

A site assessment was carried out on 15th August 2023 and 26th September 2023. Habitats within the proposed site were classified according to Fossitt (2000) (Figure 18).

Fossitt (2000) Classification of the Site of the Proposed Project

Figure 18. *Fossitt (2000) habitat map.*

WL1- Hedgerow

The hedgerow lined the North and east boundary of the site consisting primarily of brambles (*Rubus fruticosus agg*), elder (*Sambucus nigra*), sycamore (*Acer pseudoplatanus*), ash (*Fraxinus excelsior*), hawthorn (*Crataegus monogyna)* and elm (*Ulmus spp.*). These trees were bound with ivy (*Hedera hibernica*). The hedgerow included blackthorn (*Prunus spinosa*), willow (*Salix spp*.), hedge bindweed (*Calystegia sepium*), nettles (*Urtica dioica*), buttercup (*Ranunculus spp.*), fools parsley (*Aethusa cynapium*), thistles (*Cirsium spp.*), docs (*Rumex spp.*), ivy (*Hedera helix*), holly (*Ilex aquifolium*), hogweed (*Heracleum sphondylium*), gorse (*Ulex europaeus*), honeysuckle (*Lonicera periclymenum*), dog-rose (*Rosa canina agg.)* and cleavers (*Galium aparine*).

Plate 1: Hedgerow habitat.

GS2- Dry meadows and grassy verges

The majority of the site consisted of this habitat. Flora identified here was rough hawksbit (*Leontodon hispidus*), knapweed (*Centaurea nigra*), dandelion (*Taraxacum officinale agg.*), ragwort (*Jacobaea vulgaris*), red bartsia (*Odontites vernus*), red clover (*Trifolium pratense*), white clover (*Trifolium repens*), ribwort plantain (*Plantago lanceolata*), greater plantain (*Plantago major*), selfheal (*Prunella vulgaris*), black medic (*Medicago lupulina*), bramble (*Rubus fruticosus agg*), docs (*Rumex spp.*), tufted vetch (*Vicia cracca*), silverweed (*Potentilla anserina*), yellowrattle (*Rhinanthus minor),* nettle (*Urtica dioica*), great willowherb (*Epilobium hirsutum),* hogweed (*Heracleum sphondylium*), pineappleweed (*Matricaria discoidea*), birdsfoot trefoil (*Lotus corniculatus*), hawthorn (*Crataegus* monogyna) bushes, elm (*Ulmus spp.*) sapling, groundsel (*Senecio vulgaris*), hedge bindweed (*Calystegia sepium*), cow parsley (*Anthriscus sylvestris*), gorse (*Ulex europaeus*) bushes, meadow vetchling (*Lathyrus pratensis*), tree mallow (*Malva arborea*) and common fleabane (*Pulicaria dysenterica*). This habitat is largely unsuitable as foraging grounds for significant numbers of SCI from nearby SPAs, such as Brent geese, who typically prefer well managed grassland (*Handby et al*., unpublished report 2022[1]).

[1] Handby, Bearhop and Colhoun (2022) Understanding patterns of urban habitat use in overwintering light-bellied Brent geese in Dublin, Ireland (Unpublished Project Report in collaboration with Irish Brent Goose Research Project)

Plate 2: View of grass meadow.

Evaluation of Habitats

The proposed development site consists of a dry meadow bordered by hedgerow and wooden fence. Outside the listed vegetation of the site is built land of footpath, road and a housing estate to the east of the site. Based on information from satellite imagery the site doesn't seem to be managed for any particular purpose. No protected habitats were noted on site. GS2- Dry meadow and grassy verges is an uncommon habitat in Ireland and usually found on roadside grassy verges, making this the most important habitat on this sight for wildlife pathways and foraging purposes. No pond and pools were found onsite.

Plant Species

The plant species encountered at the various locations on site are detailed above. No rare or plant species of conservation value were noted during the field assessment. Records of rare and threatened species from NBDC and NPWS were examined. No rare or threatened plant species were recorded within the proposed development site. No invasive plant species were noted on site.

Fauna

No mammal of conservation importance was noted on site. Records of rare and threatened species from NBDC and NPWS were examined. No rare or threatened terrestrial faunal species were recorded within the proposed site. No evidence of the resting or breeding places of badgers (*Meles meles*) was noted on site during the in season faunal assessment. Pathways through the hedges and shrubs were noted on this sight. Although no living areas of terrestrial animals were sighted, this site is likely used for foraging and a wildlife corridor.

Bats

A bat assessment was carried out and the results of the survey are seen in Appendix I. There were no seasonal or climatic constraints as the survey was undertaken within the active bat season in good weather conditions with temperatures of 10 C after dark. Winds were very light and there was no rainfall. The survey was carried out with an Echo Meter Touch Pro 2 bat detector. Bat foraging was noted across the site by one species of bat, the Lesser Noctule (*Nyctalus leisleri*). Foraging activity was noted along the southern hedgerow.

Birds

Birds noted on site are seen in Table 3. It should be noted that GS2 - Dry Meadow habitat is largely unsuitable as foraging grounds for significant numbers of SCI from nearby SPAs, such as Brent geese, who typically prefer well managed grassland (Handby *et al.,* unpublished report 2022). Handby, Bearhop and Colhoun (2022) Understanding patterns of urban habitat use in overwintering light-bellied Brent geese in Dublin, Ireland (Unpublished Project Report in collaboration with Irish Brent Goose Research Project).

Common Name	Scientific Name	Status
Blue tit	*Cyanistes caeruleus*	Green
Woodpigeon	*Columba palumbus*	Green
Blackbird	*Turdus merula*	Green
Magpie	*Pica pica*	Green

Historic Records of Biodiversity

The National Biodiversity Data Centre's online viewer was consulted in order to determine the extent of biodiversity and/or species of interest in the area. First, an assessment of the site specific area was carried out and it recorded no species of interest in the site area. Following this a 2km^2 grid (O14X) was assessed. Table 4 provides a list of all species recorded in both grid areas that possess a specific designation, such as Invasive Species or Protected Species.

Table 4. Recorded species, associated designations and grid references

Species Name	Date of Record	Designation
Eastern Grey Squirrel (Sciurus carolinensis)	*13/10/2012*	*Invasive Species: Invasive Species || Invasive Species: Invasive Species >> High Impact Invasive Species || Invasive Species: Invasive Species >> EU Regulation No. 1143/2014 || Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)*
Japanese Knotweed (Fallopia japonica)	*25/02/2018*	*Invasive Species: Invasive Species || Invasive Species: Invasive Species >> High Impact Invasive Species || Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)*
Himalayan Honeysuckle (Leycesteria formosa)	*21/09/2022*	*Invasive Species: Invasive Species || Invasive Species: Invasive Species >> Medium Impact Invasive Species*
West European Hedgehog (Erinaceus europaeus)	*02/10/2021*	*Protected Species: Wildlife Acts*
Rock Pigeon (Columba livia)	*31/12/2011*	*Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species*
Common Pheasant (Phasianus colchicus)	*31/12/2011*	*Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species || Protected Species: EU Birds Directive >> Annex III, Section I Bird Species*
Common Wood Pigeon (Columba palumbus)	*31/12/2011*	*Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species || Protected Species: EU Birds Directive >> Annex III, Section I Bird Species*
Northern Lapwing (Vanellus vanellus)	*31/12/2011*	*Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section II Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List*
Barn Swallow (Hirundo rustica)	*31/12/2011*	*Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List*
Common Linnet (Carduelis cannabina)	*31/12/2011*	*Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List*
Common Starling (Sturnus vulgaris)	*31/12/2011*	*Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List*
Common Swift (Apus apus)	*31/12/2011*	*Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List*
Eurasian Tree Sparrow (Passer montanus)	*31/12/2011*	*Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List*
House Sparrow (Passer domesticus)	*31/12/2011*	*Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List*
Sky Lark (Alauda arvensis)	*31/12/2011*	*Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List*
Stock Pigeon (Columba oenas)	*31/12/2011*	*Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List*
Black-headed Gull (Larus ridibundus)	*31/12/2011*	*Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List*
Yellowhammer (Emberiza citrinella)	*01/08/2019*	*Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List*
Large Red Tailed Bumble Bee (Bombus (Melanobombus) lapidarius)	*13/08/2016*	*Threatened Species: Near threatened*

An assessment of files received from the NPWS (Code No. 2022_120) which contain records of rare and protected species and grid references for sightings of these species was carried out as part of this EclA. No species of conservation importance were noted within the site boundaries. The following table provides a summary of the species identified, the year of identification, survey name and Grid Reference.

Table 5. Recorded species within NPWS Records proximate to the site.

Sample ID	Species	Survey Name	Sample Year
29046	Otter (*Lutra lutra*)	Otter survey of Ireland 1982 – Vincent Wildlife Trust	1980
33661	Eurasian Badger (*Meles meles*)	Hare Survey of Ireland 2006/2007: Non-hare records	2007
15171	Rough Poppy (*Papaver hybridum*)	*Papaver hybridum*	1985
4285	Common Frog (*Rana temporaria*)	Frog IPCC data	1997

Potential Impacts

This report has been prepared to outline the construction and operational phase measures in addition to detailing the potential impacts on sensitive receptors within the Zone of Influence (ZOI) in the absence of mitigation measures.

Potential Construction Impacts

The overall development of the site is likely to have direct negative impacts upon the existing habitats, fauna and flora. Direct negative effects will be manifested in terms of the removal of a substantial portion of the site's internal habitats. The removal of these habitats will result in a loss of species and habitats of low biodiversity importance. However, the removal of hedgerows will result in the loss of nesting foraging habitat for bird species.

Designated Conservation sites within 15km

The proposed Project is not within a designated conservation site. However, there is an indirect hydrological pathway to Malahide Estuary SAC, SPA, pNHA and Broadmeadow Estuary Ramsar site via surface water drainage.

Potential Impacts in the absence of mitigation: Negligible / International / Neutral Impact / Not significant / Long-term. Mitigation is not required.

Biodiversity

The impact of the development during construction phase will be a loss of existing habitats and species on site. It would be expected that the flora and fauna associated with these habitats would also be displaced.

Terrestrial mammalian species

No protected terrestrial mammals were noted on site. Loss of habitat and habitat fragmentation may affect some common mammalian species and there is expected to be mortality during construction.

Impacts: Low adverse / site / Negative Impact / Not significant / short term. Mitigation is needed in the form of a pre-construction survey for terrestrial mammals of conservation importance.

Bat Fauna

There are no trees or buildings of bat roosting potential located onsite. No significant impacts are foreseen. Lighting during construction could impact on foraging activity. Bat activity was noted on site (Appendix I).

Impacts: Low adverse / site / Negative Impact / Not significant / short term. Mitigation is needed in the form of light spill.

Aquatic Biodiversity

Due to the lack of any watercourse within the site boundary, and the lack of direct hydrological pathway to a watercourse, there is little potential for significant downstream impacts on biodiversity from silt or petrochemicals. However, there is potential for silt and pollution to enter the drainage network on adjacent roads during construction and once the drainage is connected to existing surface water infrastructure there is potential for downstream effects.

Impacts: Low adverse / local / Negative Impact / Slight Effects / short term. Mitigation is needed in the form of control of silt, surface water and petrochemical and dust during construction to prevent impacts on local biodiversity. However, these measures are not necessary for the protection of European/Natura 2000 sites.

Bird Fauna

No bird species of conservation importance have been noted on site. Hedgerows are to be retained on site. However, site clearance could impact on bird nesting.

Impacts: Low adverse / Local / Negative Impact / Not significant / short term. Mitigation is needed in the form of site clearance outside bird nesting season.

Potential Operational Impacts

Once constructed all onsite drainage will be connected to separate foul and surface water systems. Surface water runoff will comply with SUDS and discharge to the existing public surface water network located to the southeast of the site. The biodiversity value of the site would be expected to improve as the landscaping matures. It would be expected that the ecological impacts in the long term would be positive once landscaping has established.

Designated Conservation sites within 15km

The development must comply with County Council drainage requirements and the Water Pollution Acts. Measures will be in place to prevent downstream impacts. No significant impacts on designated sites are likely during operation.

Impacts: Negligible / International / Neutral Impact / Not significant / Long-term

Biodiversity

Biodiversity value of the site will improve as landscaping matures.

Terrestrial mammalian species

No protected terrestrial mammals were noted on site.

Impacts: Low adverse / site / Negative Impact / Not significant / short term.

Flora

No protected flora was noted on site. Landscaping will increase flora diversity on site.

Impacts: Negligible beneficial / site / Negative Impact / Not significant / long-term

Bat Fauna

The proposed development will change the local environment as new structures are to be erected and some of the existing vegetation will be removed. No bat roosts or potential bat roosts will be lost due to this development and the species expected to occur onsite should persist.

Effects: Low adverse / International / Negative Impact / Not significant / long term.

Aquatic Biodiversity

Standard measures will be in place in relation to surface water discharges. No additional mitigation is required.

Potential Impacts in the absence of mitigation: Low adverse / local / Negative Impact / Not significant / long term

Bird Fauna

The proposed development will change the local environment as new structures are to be erected. The buildings are comprised of solid materials consisting of a solid material on the exterior which includes sections of concrete and glass. These buildings would be clearly visible to bird species and would not pose a significant collision risk. The presence of buildings on site and landscaping may provide additional nesting and foraging potential for garden bird species. Impacts: Low adverse / site / Negative Impact / Not significant / long term.

Mitigation Measures & Monitoring

Standard construction and operational controls will be incorporated into the proposed development project to minimise the potential negative impacts on the ecology within the Zone of Influence (ZoI), biodiversity, and local biodiversity within / proximate to the subject site are outlined in Table 6.

Table 6. Mitigation Measures.

Sensitive Receptors	Potential Impacts on SPA & SAC	Mitigation Measures to Prevent Impacts on Baldoyle Bay SAC and Baldoyle Bay SPA
Biodiversity	• Habitat degradation • Dust deposition • Pollution • Silt ingress from site runoff • Downstream impacts • Negative impacts on aquatic and bird fauna. • Disturbance.	**As outlined in the Outline Construction and Environmental Management Plan (prepared by ROD Consulting Engineers), the following mitigation will be carried out in relation to prevent significant impcts:** ***'Protection of Watercourses*** *There is an existing drainage ditch located along the southern boundary of the site. However, following a number of site visits and discussions with FCC, the ditch appears to be dry. Flow from the Gaybrook steam is culverted to bypass the subject site. Runoff or surface water that is generated within the site will be discharged to the existing storm water network rather than to the ditch or other open watercourses.* *Even though the ditch appears to be dry, as a further precaution, all works in proximity to the existing drainage ditch shall follow the generic best practice guidance outlined in the following documents:* • *Guidelines for Crossing Watercourses during the Construction of National Road Schemes (NRA, 2008c).* • *Guidelines on Protection of Fisheries during Construction Works in and Adjacent to Waters (IFI, 2016).* • *CIRIA C648 Control of water pollution from linear construction projects: technical guidance (CIRIA, 2006).* • *The following protection measures will also be followed to ensure water quality discharged from site is maintained:* • *All machinery will be refuelled from mobile tankers on the local/access/haul/site roads. No refuelling will take place within 50m the ditch.* • *Mobile storage facilities, such as fuel bowsers, will be bunded to 110% capacity to prevent spills. Tanks for bowsers and generators will be double skinned.* • *When not in use, all valves and fuel trigger guns from fuel storage containers will be locked.* • *Only dedicated trained and competent personnel will carry out refuelling operations. A spill kit and drip tray will be on site at all times and available for all refuelling operations. Equipment will not be left unattended during refuelling. All pipework from containers to pump nozzles will have anti siphon valves fitted.* • *Strict procedures for plant inspection, maintenance and repairs will be detailed in the contractor's method statements and machinery will be checked for leaks before arrival on site.* • *All site plant will be inspected at the beginning of each day prior to use. Defective plant will not be used until the defect is satisfactorily fixed.* • *All major repair and maintenance operations will take place off site.* • *Care will be taken at all times to avoid contamination of the environment with contaminants other than hydrocarbons, such as uncured concrete and other.* • *Surface water from the site be treated in attenuation ponds prior to discharging to the storm water network.*

Table 6. Mitigation Measures.

Sensitive Receptors	Potential Impacts on SPA & SAC	Mitigation Measures to Prevent Impacts on Baldoyle Bay SAC and Baldoyle Bay SPA
		Additionally, the following mitigation measures will be implemented: **Construction Phase Mitigation** • Best available technology (BAT) mitigation measures designed by project ecologist • Staging of project will be carried out to reduce risks to surface water drainage network from contamination. • Local drains will be protected from dust, silt and surface water throughout the works. • Local silt traps established throughout site. • Mitigation measures on site include dust control, stockpiling away from drains • Stockpiling of loose materials will be kept to a minimum of 20m from drains. • Stockpiles and runoff areas following clearance will have suitable barriers to prevent runoff of fines into the drainage system. • Fuel, oil and chemical storage will be sited within a bunded area. The bund will be at least 50m away from drains, excavations and other locations where it may cause pollution. • Bunds will be kept clean and spills within the bund area will be cleaned immediately to prevent groundwater contamination. Prior to discharge of water from excavations adequate filtration will be provided to ensure no deterioration of water quality. • Mitigation measures on site include dust control, stockpiling away from drains • Stockpiling of loose materials will be kept away from drains. A risk based approach will be taken. • Stockpiles and runoff areas following clearance will have suitable barriers to prevent runoff of fines into the drainage system. • Fuel, oil and chemical storage will be sited within a bunded area. • Bunds will be kept clean and spills within the bund area will be cleaned immediately to prevent groundwater contamination. • During the construction works silt traps will be put in place in the vicinity of all runoff channels to drains to prevent sediment entering the drainage network. • On-site inspections will be carried out by project ecologist. • Maintenance of any drainage structures (e.g. de-silting operations) must not result in the release of contaminated water to the surface water network. • No entry of solids to the associated drainage network during the connection of pipework to the public water system • Silt traps established throughout site including a double silt fence between the site and the drainage network. • Sufficient onsite cleaning of vehicles prior to leaving the site and on nearby roads, will be carried out, particularly during groundworks. • The Site Manager will be responsible for the pollution prevention programme and will ensure that at least daily checks are carried out to ensure compliance. A record of these checks will be maintained. • A project ecologist will be appointed and be consulted in relation to all onsite drainage during construction works. Consultation with the project ecologist will not involve the formulation of new mitigation measures for the purposes of

Table 6. Mitigation Measures.

Sensitive Receptors	Potential Impacts on SPA & SAC	Mitigation Measures to Prevent Impacts on Baldoyle Bay SAC and Baldoyle Bay SPA
		protecting any European Site, and relate only to the implementation of those mitigation measures already stated in the submission or the formulation of mitigation for other purposes. • Dewatering of excavations may be necessary. Appropriate monitoring of groundwater levels during site works will be undertaken. Standard construction phase filtering of surface water for suspended solids will be carried out. Unfiltered surface water discharges or runoff will not be permitted from the site into the drainage network during the works. **Air & Dust** Dust may enter the drainage network via air or surface water with potential downstream impacts. Mitigation measures will be carried out reduce dust emissions to a level that avoids the possibility of adverse effects on the surface water drainage network. The main activities that may give rise to dust emissions during construction include the following: • Excavation of material; • Materials handling and storage; • Movement of vehicles (particularly HGV's) and mobile plant. • Contaminated surface runoff *Mitigation measures to be in place:* • Consultation will be carried with an ecologist throughout the construction phase; • Trucks leaving the site with excavated material will be covered so as to avoid dust emissions along the haulage routes. • Speed limits on site (15kmh) to reduce dust generation and mobilisation. • Drains to be protected from dust on site. *Site Management* • Regular inspections of the site and boundary should be carried out to monitor dust, records and notes on these inspections should be logged. • Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken. • Make the complaints log available to the local authority when asked. • Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the log book. *Monitoring* • Undertake daily on-site and off-site inspection, where receptors are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked. This should include regular dust soiling checks of surfaces within 100 m of site boundary, integrity of the silt control measures, with cleaning and / or repair to be provided if necessary.

Table 6. Mitigation Measures.

Sensitive Receptors	Potential Impacts on SPA & SAC	Mitigation Measures to Prevent Impacts on Baldoyle Bay SAC and Baldoyle Bay SPA
		Preparing and Maintaining the Site • Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible. • Fully enclose specific operations where there is a high potential for dust production and the site is active for an extensive period. • Avoid site runoff of water or mud. • Keep site fencing, barriers and scaffolding clean using wet methods. • Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below. • Cover, seed or fence stockpiles to prevent wind whipping. • Hard surface roads will be swept to remove mud and aggregate materials from their surface while any un-surfaced roads will be restricted to essential site traffic. *Operations* • Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems. • Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate. • Use enclosed chutes and conveyors and covered skips. • Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate. • Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods. *Waste* • Avoid bonfires and burning of waste materials. *Measures Specific to Earthworks* • Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable. • Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable. • Only remove the cover in small areas during work and not all at once. • During dry and windy periods, and when there is a likelihood of dust nuisance, a bowser will operate to ensure moisture content is high enough to increase the stability of the soil and thus suppress dust.

Table 6. Mitigation Measures.

Sensitive Receptors	Potential Impacts on SPA & SAC	Mitigation Measures to Prevent Impacts on Baldoyle Bay SAC and Baldoyle Bay SPA
		• The Contractor will be required to consult with an ecologist prior to the beginning of works to identify any additional measures that may be appropriate and/or required. **Operational Phase Mitigation** • A project ecologist will be appointed to oversee completion of all landscape and drainage works.
Birds (National Protection)	• Removal nesting habitat. • Removal foraging habitat. • Destruction and/or disturbance to nests (injury/death). • Predation .	• Relevant guidelines and legislation (Section 40 of the Wildlife Acts, 1976 to 2012) Should this not be possible, a pre-works check by a qualified ecologist should be undertaken to ensure nesting birds are absent. Should this not be possible, a pre-works check by a qualified ecologist should be undertaken to ensure nesting birds are absent. • Planting will provide suitable cover for nesting birds and encourage insect diversity that would sustain birds.
Amphibians	• Death/injury	• A pre-construction survey of the site will be carried out.
Mammals	• Death/injury • Disturbance	• A pre-construction survey will be carried out for terrestrial mammals of conservation importance. If terrestrial mammals of conservation importance are noted on site NPWS will be consulted in relation to removal and the appropriate permissions obtained.
Bats (International Protection)	• Lighting Impacts	• During construction lighting at all stages will be done sensitively with no direct lighting of hedgerows and treelines. • All lighting during construction and operation will be carried out in consultation with project ecologist and comply with bat lightning guidelines.

Adverse Effects likely to occur from the project (post mitigation)

Standard construction and operational mitigation measures are proposed. These would ensure that surface water runoff is clean and uncontaminated.

With the successful implementation of standard mitigation measures to limit surface water impacts on the watercourses, biodiversity mitigation/supervision, no significant impacts are foreseen from the construction or operation of the proposed project on terrestrial or aquatic ecology. Residual impacts of the proposed project will be localised to the immediate vicinity of the proposed works.

The construction and operational mitigation proposed for the development satisfactorily addresses the mitigation of potential impacts on terrestrial and aquatic biodiversity and nationally designated conservation sites through the application of the standard construction and operational phase controls as outlined above. In particular, mitigation measures to ensure compliance with Water Pollution Acts and prevent silt and pollution entering the existing surface water concrete pipe and downstream watercourses will satisfactorily address the potential impacts on downstream biodiversity. 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.

Cumulative Impacts

The following is a list of planning applications as identified on the Department of Housing, Local Government and Heritage's 'National Planning Application Database' portal[2]:

Table 7. Approved planning applications proximate to the subject site

Planning Ref.	Address	Proposal
F22A/0353	Holywell Educate Together National School, Holywell, Swords, Co. Dublin.	The developments will consist of (1) alterations to existing carpark to provide additional carparking spaces (2) Demolition of existing bin store with replacement bin store to be constructed (3) single storey extension to the rear of the existing school building to accommodate 1no. classroom and associated specialist ancillary rooms (4) minor amendments to existing classroom to facilitate access to extension (5) to connect to existing mains services (6) and all associated landscaping and ancillary works.
F21A/0100	Crowcastle, Swords, Co Dublin	A new link road from the roundabout to the south of Lakeshore Drive, Crowcastle, Swords, Co Dublin that will be constructed to a length of approximately 29om. The road will incorporate lighting, drainage, footpaths and cycle tracks.
F20A/0535	Site at Holywell Distributor Road, Mountgorry, Swords, Co. Dublin	The development will consist of a Petrol Filling Station to include: (i) A forecourt area with 3 no. fuel pump islands, illuminated forecourt canopy over, underground fuel storage tanks, associated pipework and over-ground fill points and vents, electric car charging points and associated infrastructure. (ii) An amenity building of 291 sqm gross floor area comprising a convenience shop (100 sq.m net retail area), restaurant/cafe area with 1 no food offering with hot and cold meals and refreshments for sale for consumption on and off the premises, associated customer seating, customer WCs, Back of House area with food preparation areas, ancillary office, staff welfare facilities, storage and plant areas. (iii) New vehicular entrance and exit, associated traffic signage, internal and external traffic calming measures. (iv) On-site facilities including, air/water services, car and bicycle parking.

[2] https://housinggovie.maps.arcgis.com/apps/webappviewer/index.html?id=9cf2a09799d74d8e9316a3d3a4d3a8de

Planning Ref.	Address	Proposal
		(v) Illuminated and non-illuminated operator signage including main ID Totem sign, canopy and facade signage. (vi) All associated site drainage, lighting, landscaping, boundary treatments and site development works.
F19A/0386	Lands to the north of the R125 road and accessed off Holywell Link Road and Lakeshore Drive, Swords, Co. Dublin.	The proposed development will consist of an eight storey hospital/healthcare facility (i.e. a seven storey over lower ground/undercroft level building) comprising main entrance/reception area, atrium winter garden, 1 no. café, 1 no. restaurant, 2 no. retail units, outpatients and diagnostics departments, GP departments and urgent care department all at ground floor level; out of hospital services/primary care at first and second floor levels; endoscopy unit and theatres at third floor level; theatre and building plant at fourth floor level; endoscopy unit and day hospital (20 beds) with staff hub at fifth floor level; day hospital (20 no. beds) with sky garden at sixth floor level; all with associated ancillary/common facilities and office/administration areas; FM department, water tank rooms, 115 no. car parking spaces, 72 no. bicycle spaces and 8 no. motorbike parking spaces all at lower ground floor level. Permission is also sought for an energy centre building; a service yard including plant, ESB substation and bin stores; 94 no. car parking spaces, 12 no. bicycle spaces and 2 no. motorbike spaces at surface level; foul pump station and associated works; 2 no. vehicular access roads to serve the development including works onto existing roundabout; landscaping; footpaths; public lighting; boundary treatments; and all associated site and engineering works necessary to facilitate the development.
F18A/0198	Drynam Road, Barrysparks, Commons East, Crowcastle, Swords, Co. Dublin.	Development at an existing pharmaceutical manufacturing facility (approximately 13.4 hectares). The development consists of the construction of a biopharmaceutical manufacturing campus with a total additional floor area of 12,046 square metres and specifically provides for:- (a) the conversion of an existing warehouse building to a biopharmaceutical manufacturing processes building which will require internal alterations, extension and modifications to the existing elevations; (b) the conversion of an existing manufacturing building to a central utilities and laboratory building requiring internal alterations, extension and modifications to the elevations including the addition of 3 no. flue stacks (to a maximum height of 18.68 metres); (c) construction of a two-storey quality control laboratory and single-storey with mezzanine warehouse building; (d) extension of the existing central spine corridor to provide connectivity to the new laboratory and warehouse buildings, including provision of new staff entrance; (e) demolition of existing utilities plant and buildings comprising 2 no. boiler rooms, compressor room, electrical room, generator compound, water tank and pump house, and 2 no. store buildings; (f) provision of new logistics yard and new ancillary external utilities yard comprising 2 no. electrical switch room buildings, water pump and treatment building, bunded water tank, bunded gas and diesel storage tanks, 3 no. emergency generators and waste water management facility; (g) installation of mechanical plant to the roof of the existing administration, laboratory and canteen building (h) all ancillary site works including diversion and partially reopening of the existing culverted stream within the site; underground services; surface water attenuation tank; modifications to the internal road network, modifications to existing car parking including removal of 212 spaces; 2 no. new bicycle shelters; lighting; CCTV; soft and hard landscaping. An Environmental Impact assessment Report (EIAR, formerly known as and EIS) and Natura Impact Statement (NIS) have been prepared and will be submitted to the Planning Authority with the application. The EIAR and NIS will be available for inspection or purchase at a fee not exceeding the reasonable cost of making a copy during office hours at the offices of the Planning Authority. The proposed development is for the purposes of an activity requiring an application to the Environmental Protection Agency for a licence under the Industrial Emissions Directive.

Planning Ref.	Address	Proposal
F18A/0467	Site of the existing temporary car park permitted under application register reference F14A/0041, Airside Business Park, Crowcastle, Swords, Fingal, Co. Dublin.	The construction of a six-storey office building plus rooftop plant, signage, bins stores, ESB substation, generator, and cycle shelters at Site A1. The proposed development will also consist of 593 no. surface car parking spaces, of which 160 no. spaces will be provided at Site A1 and 433 no. spaces will be provided at Site A2. The proposed 433 no. surface car parking spaces at Site A2 will include the continuation of use of the 235 no. surface car parking spaces permitted at Site A1 under application register reference F14A/0041, to be relocated to Site A2 for a further temporary period of 5 years. The proposed development will also consist of the construction of a new vehicular access off Lakeshore Drive to Site A2 (Site A1 will use the existing access of Lakeview Drive (the secondary access via the adjacent Ryanair HQ development will be removed), and a new pedestrian crossing over Lakeshore Drive connecting Site A1 with Site A2, including footpath, and all site development, drainage and landscaping works. A Natura Impact Statement (NIS) has been prepared in respect of the proposed development on Site of the existing temporary car park permitted under application register reference F14A/0041, bounded by Lakeview Drive and Lakeshore Drive (Site A1), as well as adjacent lands to the east of Lakeshore Drive (Site A2),

The projects outlined were reviewed. It is considered that cumulative effects on biodiversity, with other existing and proposed developments in proximity to the application area, would be unlikely, neutral, not significant and localised. It is concluded that no significant effects on biodiversity will be seen as a result of the proposed development alone or in combination with other projects.

No significant cumulative impacts are likely in relation to the proposed development.

Residual Impacts and Conclusion

The construction and operational mitigation proposed for the development satisfactorily addresses the mitigation of potential effects on the terrestrial, mammalian, avian and aquatic sensitive receptors through the application of the standard construction and operational phase controls outlined in this report. No significant effects on biodiversity are likely. Residual effects on biodiversity are considered to be: Slight adverse / site / Negative Impact / Not significant / short term.

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ALTEMAR
Marine & Environmental Consultancy

Appendix I. Bat Fauna Impact Assessment for a proposed residential development at Holywell, Swords, Co. Dublin.

27th September 2023

Prepared by: Bryan Deegan (MCIEEM) of Altemar Ltd.
On behalf of: Fingal County Council

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Document Control Sheet			
Client	Fingal County Council		
Project	Bat fauna impact assessment for a proposed residential development at Holywell, Swords, Co. Dublin		
Report	Bat Fauna Impact Assessment		
Date	27th September 2023		
Version	Author	Reviewed	Date
Planning	Bryan Deegan	Emma Peters	27th September 2023

SUMMARY

Structure:	There are no structures onsite. The site consists of dry meadows and grassy verges that is bordered by hedgerows.
Location:	Holywell, Swords, Co. Dublin.
Bat species present:	None Roosting. Two Lesser Noctules (*Nyctalus leisleri*) noted foraging onsite.
Proposed work:	Residential Development.
Impact on bats:	Two Lesser Noctules were noted foraging along the hedgerow located to the south of the site. This hedgerow will be retained. No confirmed bat roosts will be lost. No trees of bat roosting potential are noted on site. Existing light spill is onsite from adjacent streetlighting and residential properties. The proposed development will change the local environment as new structures are to be erected. The development is likely to displace bats from foraging at the site during construction. However, given that a very low level of bat activity of a single common bat species was noted using the site the displacement of bats from this site will not have any significant effect on local bat populations. No bat roosts or potential bat roosts will be lost due to this development and the species expected to occur onsite should persist. The proposed development is not in proximity to sensitive bat areas. The surrounding environment is brightly lit from existing lights. The potential for collision risk and impact on flight paths in relation to bats is considered low due to the low level of bat activity on site and the buildings would be deemed to be clearly visible to bats.
Survey by:	Emma Peters
Survey date:	26th September 2023

Receiving Environment

Background

Fingal County Council intend to apply for planning permission for a proposed residential development at Holywell, Swords, Co. Dublin.

The proposed development consists of the following:

Residential Development (5,189 sq m Gross Floor Space) arranged over 3 no. buildings, consisting of no. 57 no. residential units (20 no. 1-bedroom apartments, 29 no. 2-bedroom apartments, and 8 no. 3-bedroom apartments), at a site of approximately 0.77 ha located in the Townland of Crowcastle, Holywell, Swords, Co. Dublin.

The proposed site outline, location, masterplan, and elevations are demonstrated in Figures 1-3.

Landscape

The landscape strategy for the subject site has been prepared by DFLA. The proposed landscape plan is demonstrated in Figure 4.

Arborist

An Arboricultural Assessment of the Hegde Vegetation has been prepared by Arborist Associates Ltd. to accompany this planning application. In relation to arboricultural management, this report details the following:

'*Hedge No.1 would benefit from trimming on the site side to contain width and large size dead/unstable growth should be removed to address safety to the surrounding area which includes standing dead or dying Elm trees. These Elm stems should be removed from site to reduce breeding sites for the beetle that spreads this disease in order to try and contain the spread of this disease through the remaining Elm trees.*

Consideration should be given to cutting/coppicing the regeneration of Elm into the hedge to restrict size and their potential to being infected by 'Dutch Elm disease' (Ophiostoma Ulmi).

Hedge No.2 would benefit from trimming on the site side to contain width and large size dead/unstable growth should be removed to address safety to the surrounding area.

Tree Group No.1 would benefit from being fenced off to the grazing livestock so they can't cause further damage. The central tree could also be considered for removal as part of selective thinning to reduce density and to allow the other two trees more space to develop.'

The Tree Constraints Plan is demonstrated in Figure 5.

Figure 1. *Outline of proposed site.*

Figure 2. *Proposed site layout plan*

Figure 3. *Proposed site elevations*

Figure 4. *Proposed landscape plan*

Figure 5. *Tree Constraints Plan*

Competency of Assessor

This report has been prepared by Bryan Deegan MSc, BSc (MCIEEM). Bryan has over 26 years of experience providing ecological consultancy services in Ireland. He has extensive experience in carrying out a wide range of bat surveys including dusk emergence, dawn re-entry and static detector surveys. He also has extensive experience reducing the potential impact of projects that involve external lighting on Bats. Bryan trained with Conor Kelleher author of the Bat Mitigation Guidelines for Ireland (Kelleher and Marnell (2022)) and Bryan is currently providing bat ecology (impact assessment and enhancement) services to Dun Laoghaire Rathdown County Council primarily on the Shanganagh Park Masterplan. The desk and field surveys were carried out having regard to the guidance: Bat Surveys for Professional Ecologists – Good Practice Guidelines 3rd Edition (Collins, J. (Ed.) 2016) and Marnell, Kelleher and Mullen (2022), Bat Mitigation Guidelines for Ireland V2 (which update and replace the Bat Mitigation Guidelines for Ireland published in 2006). Emma Peters holds a BSc in Environmental Science and has 6 years ecological experience. She is trained in habitat restoration with a focus to increase biodiversity. She is also an active bat conservation Ireland member.

Legislative Context

Wildlife Act 1976 (as amended by, inter alia, the Wildlife (Amendment) Act 2000).

Bats in Ireland are protected by the Wildlife (Amendment) Act 2000. Based on this legislation it is an offence to wilfully interfere with or destroy the breeding or resting place of any species of bat. Under this legislation it is an offence to "*Intentionally kill, injure or take a bat, possess or control any live or dead specimen or anything derived from a bat, wilfully interfere with any structure or place used for breeding or resting by a bat, wilfully interfere with a bat while it is occupying a structure or place which it uses for that purpose. "*

Habitats Directive- Council Directive 92/43/EEC 1992 on the conservation of natural habitats and of wild fauna and flora has been transposed into Irish Law, including, via, *inter alia*, the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended). See Art.73 of the 2011 Regulations which revokes the 1997 Regulations.

Annex II of the Council Directive 92/43/EEC 1992 on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) lists animal and plant species of Community interest, the conservation of which requires the designation of Special Areas of Conservation (SACs); Annex IV lists animal and plant species of Community interest in need of strict protection. All bat species in Ireland are listed on Annex IV of the Directive, while the Lesser Horseshoe Bat (*Rhinolophus hipposideros*) is protected under Annex II which related to the designation of Special Areas of Conservation for a species.

Under the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended), all bat species are listed under the First Schedule and, pursuant to, *inter alia*, Part 6 and Regulation 51, it is an offence to:

- Deliberately capture or kill a bat;
- Deliberately disturb a bat particularly during the period of breeding, hibernating or migrating;
- Damage or destroy a breeding site or resting place of a bat;
- Keep, sell, transport, exchange, offer for sale or offer for exchange any bat taken in the wild.

Bat survey

This report presents the results of a site visit by Emma Peters on the 26th September 2023 (bat emergent and detector survey). No buildings are present on site. At dusk, a bat detector survey was carried out onsite using an Echo Meter Touch 2 Pro division detector to determine bat activity.

Survey methodology

As outlined in Marnell et al. 2022 '*The presence of a large maternity roost can normally be determined on a single visit at any time of year, provided that the entire structure is accessible and that any signs of bats have not been removed by others. However, most roosts are less obvious. A visit during the summer or autumn has the advantage that bats may be seen or heard. Buildings (which for this definition exclude cellars and other underground structures) are rarely used for hibernation alone, so droppings deposited by active bats provide the best clues. Roosts of species which habitually enter roof voids are probably the easiest to detect as the droppings will normally be readily visible. Roosts of crevice-dwelling species may require careful searching and, in some situations, the opening up of otherwise inaccessible areas. If this is not possible, best judgement might have to be used and a precautionary approach adopted. Roosts used by a small number of bats, as opposed to large maternity sites, can be particularly difficult to detect and may require extensive searching backed up by bat detector surveys (including static detectors) or emergence counts.'* In relation to the factors influencing survey results the guidelines outlines the following *'During the winter, bats will move around to find sites that present the optimum environmental conditions for their age, sex and bodyweight and some species will only be found in underground sites when the weather is particularly cold. During the summer, bats may be reluctant to leave their roost during heavy rain or when the temperature is unseasonably low, so exit counts should record the conditions under which they were made. Similarly, there may be times when females with young do not emerge at all or emerge only briefly and return while other bats are still emerging thus confusing the count. Within roosts, bats will move around according to the temperature and may or may not be visible on any particular visit. Bats also react to disturbance, so a survey the day after a disturbance event, may give a misleading picture of roost usage.'*

The survey involved the methodologies outlined in Collins (2016) which included the roost inspection methodologies i.e. external methodology outlined in section 5.2.4.1 and the internal survey outlines in section 5.2.4.2 of the guidelines. In addition, the methodologies for Presence absence surveys (Section 7) was carried out for dust emergent surveys.'

As outlined in Collins (2016) 'The bat active period is generally considered to be between April and October inclusive (although the season is likely to be shorter in northern latitudes). However, because bats wake up during mild conditions, bat activity can also be recorded during winter months.'

Survey Results

Trees as potential bat roosts.

A ground level roost assessment was carried and used to examine the trees on site for features that could form bat roosts. Potential roosting features include heavy ivy growth, broken limbs, areas of decay, vertical or horizontal cracks, cracks in bark etc. No trees on site had features that would be considered to be of importance to roosting bats. No evidence of bats or bat roost were identified onsite.

Emergent/detector surveys.

The detector surveys were undertaken within the active bat season and the transects covered the entire site multiple times during the night. Weather conditions were good with mild temperatures of 10°C after sunset. Winds were light and there was no rainfall. Insects were observed in flight during the survey.

As outlined in Collins (2016) in relation to weather conditions '*The aim should be to carry out surveys in conditions that are close to optimal (sunset temperature 10°C or above, no rain or strong wind.), particularly when only one survey is planned…. Where surveys are carried out when the temperature at sunset is below 10°C should be justified by the ecologist and the effect on bat behaviour considered.*' There were no constraints in relation to the surveys carried out. All areas of the site were accessible and weather conditions were optimal for bat assessments.

At dusk, bat detector surveys were carried out onsite using a*n Echo meter touch 2 Pro* detector to determine bat activity. Bats were identified by their ultrasonic calls coupled with behavioural and flight observations.

Two Lesser Noctule (*Nyctalus leisleri*) bats were noted foraging along the southern hedgerow. All bats were observed entering the site from the south (outside the site). No bats were observed emerging from any tree onsite. Foraging was noted primarily in the southern hedgerow of the site (Figure 6).

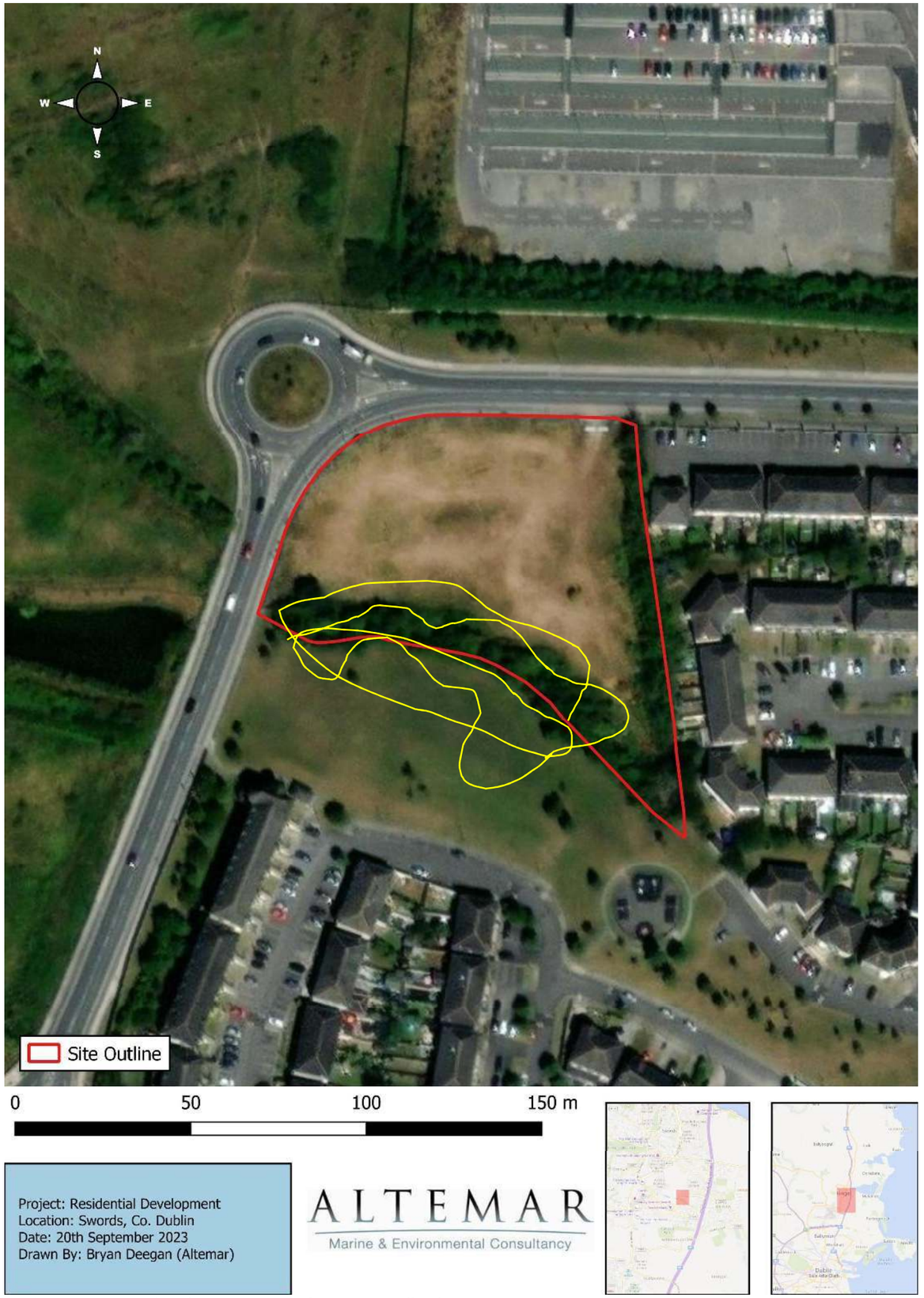

Figure 6: *Site outline (Lesser Noctule foraging = yellow)*

Bat Assessment Findings

Review of local bat records

The review of existing bat records (sourced from Bat Conservation Ireland's National Bat Records Database) within a 2km^2 grid (Reference grid O14X) encompassing the study area reveals that none of the nine known Irish species have been observed locally. The National Biodiversity Data Centre's online viewer was consulted in order to determine whether there have been recorded bat sightings in the wider area. This is visually represented in Figures 7-9. The following species were noted in the wider area: Brown Long-eared Bat (*Plecotus auritus*), Daubenton's Bat (*Myotis daubentonii*), Whiskered Bat (*Myotis mystacinus*), Lesser Noctule (*Nyctalus leisleri*), and Soprano Pipistrelle (Pipistrellus pygmaeus) (Figures 7-9).

Figure 7. Daubenton's Bat (*Myotis daubentonii*) (purple) and Brown Long-eared Bat (*Plecotus auritus*) (yellow) (Source: NBDC) (Site – red circle)

Figure 8. Whiskered Bat (*Myotis mystacinus*) (purple), Lesser Noctule (*Nyctalus leisleri*) (yellow), and both Whiskered Bat and Lesser Noctule (orange) (Source: NBDC) (Site – red circle)

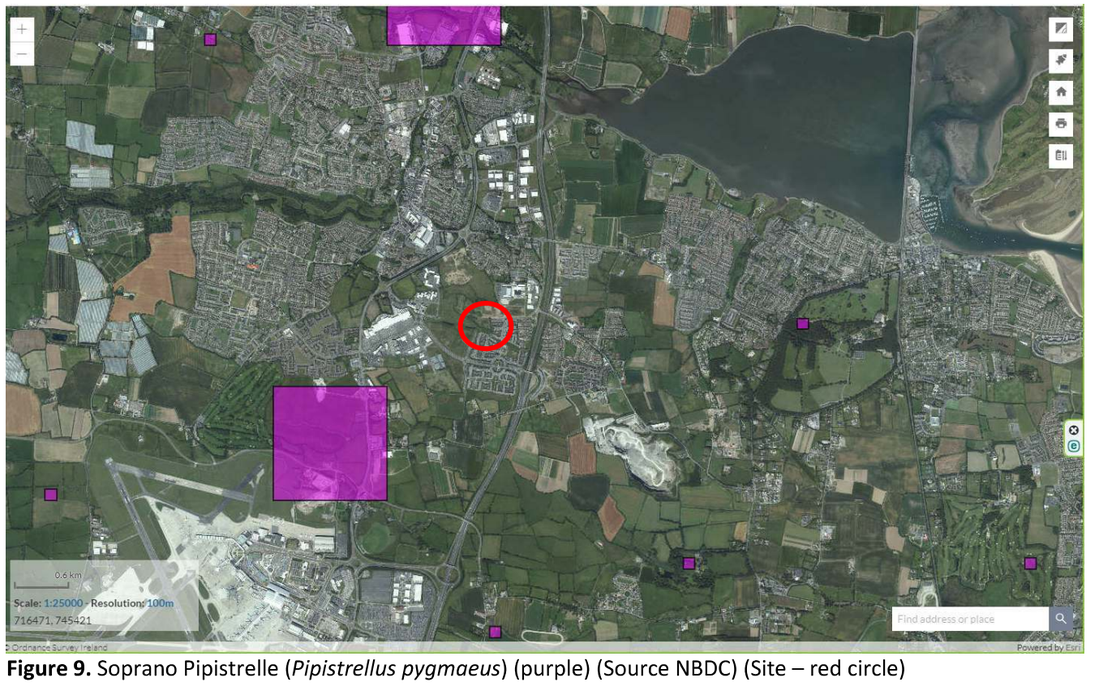

Figure 9. Soprano Pipistrelle (*Pipistrellus pygmaeus*) (purple) (Source NBDC) (Site – red circle)

Evaluation of Results

The bat survey complies with bat survey guidance documentation including Marnell et al (2022) and Collins (2016). No bats were observed emerging from trees on site. No evidence of bats roosting in trees onsite was noted. Foraging of common bat species was noted on site.

Potential Impact of the development on Bats

Two Lesser Noctules were noted foraging within the subject site along the southern hedgerow. Both bats were noted entering the site from the south. No bats were noted emerging from trees on site or adjacent buildings. Lighting during construction could impact on foraging activity. It should be noted that no trees of bat roosting potential will be felled as part of the proposed development. The existing hedgerows located to the south and east of the site will be retained. The proposed development will change the local environment as new structures are to be erected and some of the existing vegetation will be removed. Species expected to occur onsite should persist.

Mitigation Measures

As outlined in Marnell et al. (2022) "*Mitigation should be proportionate. The level of mitigation required depends on the size and type of impact, and the importance of the population affected*." In addition as outlined in Marnell et. al (2022) '*Mitigation for bats normally comprises the following elements:*

- *Avoidance of deliberate, killing, injury or disturbance – taking all reasonable steps to ensure works do not harm individuals by altering working methods or timing to avoid bats. The seasonal occupation of most roosts provides good opportunities for this*
- *Roost creation, restoration or enhancement – to provide appropriate replacements for roosts to be lost or damaged*
- *Long-term habitat management and maintenance – to ensure the population will persist*
- *Post-development population monitoring – to assess the success of the scheme and to inform management or remedial operations.*'

However, no bats were noted roosting on site. No trees of high bat roosting potential are noted on site. The following mitigation will be carried out:

- During construction lighting at all stages will be done sensitively with no direct lighting of hedgerows and treelines.
- All lighting during construction and operation will be carried out in consultation with project ecologist and comply with bat lighting guidelines.

Predicted Residual Impact of Planned Development on Bats

No bat roosts will be lost. No trees of bat roosting potential are noted on site. The proposed development will change the local environment as new structures are to be erected and some of the existing vegetation will be removed. Foraging was noted on site. The proposed development is not in proximity to sensitive bat areas. The potential for collision risk and impact on flight paths in relation to bats is considered is considered low due to the low level of bat activity on site and the buildings would be deemed to be clearly visible to bats. Foraging is expected to continue on site.

Impacts: ***Negative, slight, long-term, likely, localised, Not significant.***

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ALTEMAR
Marine & Environmental Consultancy

Appropriate Assessment Screening for a proposed Residential Development at Holywell, Swords, Co. Dublin.

20th October 2023

Prepared by: Bryan Deegan (MCIEEM) of Altemar Ltd.
On behalf of: Fingal County Council

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Date	20th October 2023		
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Draft 01	Bryan Deegan	Jack Doyle	18th September 2023
Planning	Bryan Deegan		20th October 2023

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Introduction

An Appropriate Assessment is an assessment of the potential effects of a proposed project or plan, on its own, or in combination with other plans or projects, on one or more European sites (Special Areas of Conservation (SAC) or Special Protection Areas (SPA)).

The following Appropriate Assessment Screening has been prepared by Altemar Ltd. at the request of Fingal County Council. Fingal County Council intend to apply for planning permission for a proposed residential development at Holywell, Swords, Co. Dublin.

The AA Screening stage examines the likely significant effects of the proposed development, either on its own, or in combination with other plans and projects, upon a European site and considers whether, on the basis of objective scientific evidence, it can be concluded, in view of best scientific knowledge and the conservation objectives of the relevant European sites, that there are not likely to be significant effects on any European site.

Altemar Ltd.

Since its inception in 2001, Altemar has been delivering ecological and environmental services to a broad range of clients. Operational areas include residential, infrastructural, renewable, oil & gas, private industry, local authorities, EC projects and State/semi-State Departments.

Statement of Authority

Bryan Deegan (MCIEEM) prepared this AA Screening. Bryan is the managing director of Altemar. Bryan is an environmental scientist, aquatic and marine biologist with 28 years' experience working in Irish terrestrial and aquatic environments, providing services to the State, Semi-State and industry. Bryan Deegan (MCIEEM) holds a MSc in Environmental Science, BSc (Hons.) in Applied Marine Biology, NCEA National Diploma in Applied Aquatic Science and a NCEA National Certificate in Science (Aquaculture). Bryan Deegan carried out all elements of this Appropriate Assessment Screening.

Background to the Appropriate Assessment

The Habitats Directive 92/43/EEC (together with the Birds Directive (2009/1477/EC)) forms the cornerstone of Europe's nature conservation policy. The Directive protects over 1000 animals and plant species and over 200 "habitat types" which are of European importance. In the Habitats Directive, Articles 3 to 9 provide the legislative means to protect habitats and species of European Community interest through the establishment and conservation of an EU-wide network of conservation sites (NATURA, 2000). These are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Birds Directive), Article 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect European sites (Annex 1.1). Article 6(3) establishes the requirement for Appropriate Assessment:

"Any plan or project not directly connected with or necessary to the management of the [NATURA 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans and projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implication for the site and subject to the provisions of paragraph 4, the component national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public."

As outlined in "Managing European sites, The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC" (European Commission, 21 November 2018) *"The purpose of the appropriate assessment is to assess the implications of the plan or project in respect of the site's conservation objectives, either individually or in combination with other plans or projects. The conclusions should enable the competent authorities to ascertain whether the plan or project will adversely affect the integrity of the site concerned. The focus of the appropriate assessment is therefore specifically on the species and/or the habitats for which the European site is designated."*

As outlined in the EC guidance document on Article 6(4) (January 2007)[1]:

"Appropriate assessments of the implications of the plan or project for the site concerned must precede its approval and take into account the cumulative effects which result from the combination of that plan or project with other plans or projects in view of the site's conservation objectives. This implies that all aspects of the plan or project which can, either individually or in combination with other plans or projects, affect those objectives must be identified in the light of the best scientific knowledge in the field.

Assessment procedures of plans or projects likely to affect European sites should guarantee full consideration of all elements contributing to the site integrity and to the overall coherence of the network, both in the definition of the baseline conditions and in the stages leading to identification of potential impacts, mitigation measures and residual impacts. These determine what has to be compensated, both in quality and quantity. Regardless of whether the provisions of Article 6(3) are delivered following existing environmental impact assessment procedures or other specific methods, it must be ensured that:

- *Article 6(3) assessment results allow full traceability of the decisions eventually made, including the selection of alternatives and any imperative reasons of overriding public interest.*
- *The assessment should include all elements contributing to the site's integrity and to the overall coherence of the network as defined in the site's conservation objectives and Standard Data Form, and be based on best available scientific knowledge in the field. The information required should be updated and could include the following issues:*
    - *Structure and function, and the respective role of the site's ecological assets;*
    - *Area, representativity and conservation status of the priority and nonpriority habitats in the site;*
    - *Population size, degree of isolation, ecotype, genetic pool, age class structure, and conservation status of species under Annex II of the Habitats Directive or Annex I of the Birds Directive present in the site;*
    - *Role of the site within the biographical region and in the coherence of the European network; and,*
    - *Any other ecological assets and functions identified in the site.*
- *It should include a comprehensive identification of all the potential impacts of the plan or project likely to be significant on the site, taking into account cumulative impacts and other impacts likely to arise as a result of the combined action of the plan or project under assessment and other plans or projects.*
- *The assessment under Article 6(3) applies the best available techniques and methods, to estimate the extent of the effects of the plan or project on the biological integrity of the site(s) likely to be damaged.*
- *The assessment provides for the incorporation of the most effective mitigation measures into the plan or project concerned, in order to avoid, reduce or even cancel the negative impacts on the site.*
- *The characterisation of the biological integrity and the impact assessment should be based on the best possible indicators specific to the European assets which must also be useful to monitor the plan or project implementation."*

[1] European Commission. (2007).Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission;

Stages of the Appropriate Assessment

This Appropriate Assessment screening report was undertaken in accordance with the European Commission Methodological Guidance on the provision of Article 6(3) and 6(4) of the 'Habitats' Directive 92/43/EEC (EC, 2001), Part XAB of the Planning and Development Act 2000, as amended, in addition to the December 2009 publication from the Department of Environment, Heritage and Local Government; 'Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities' and the European Communities (Birds and Natural Habitats) Regulations 2011. This AA screening report was prepared by to provide the competent authority (Board) with information necessary to meet their obligation of carrying out AA screening, to determine whether AA is required. In order to comply with the above Guidelines and legislation, the Appropriate Assessment process must be structured as follows:

1) Screening stage:
    - Description of plan or project
    - Identification of relevant European sites, and compilation of information on their qualifying interests and conservation objectives
    - Identification and description of individual in combination effects likely to result from the proposed project;
    - Assessment of the likely significance of the effects identified above. Exclusion of sites where it can be objectively concluded that there will be no likely significant effects; and,

    Conclusions
2) Appropriate Assessment (Natura Impact Statement):
    - Description of the European sites that will be considered further;
    - Identification and description of potential adverse impacts on the conservation objectives of these sites likely to occur from the project or plan; and,
    - Mitigation Measures that will be implemented to avoid, reduce or remedy any such potential adverse impacts
    - Assessment as to whether, following the implementation of the proposed mitigation measures, it can be concluded, beyond all reasonable scientific doubt, that there will be no adverse impact on the integrity of the relevant European Site in light of its conservation objectives"
    - Conclusions.

If it can be demonstrated during the AA screening phase (Stage 1), that the proposed project will not have a significant effect, whether alone or in combination with other plans or projects, on the conservation objectives of a Natura 2000 site, then no further AA (Stage 2) will be required. It is important to note that there is a requirement to apply a precautionary approach to AA screening. Therefore, where effects are possible, certain or unknown at the screening stage, AA will be required.

In addition, it should be noted that Article 6(3) of the Habitats Directive must be interpreted as meaning that, in order to determine whether it is necessary to carry out, subsequently, an AA of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of the measures intended to avoid or reduce the harmful effects of the plan or project on that site.

Stage 1 Screening Assessment

Description of the Proposed Project

Fingal County Council intend to apply for planning permission for a proposed residential development at Holywell, Swords, Co. Dublin.

The proposed development consists of the following:

A residential development (5,189 sq m Gross Floor Space) arranged over 3 no. buildings, consisting of no. 57 no. residential units (20 no. 1-bedroom apartments, 29 no. 2-bedroom apartments, and 8 no. 3-bedroom apartments), at a site of approximately 0.77 ha located in the Townland of Crowcastle, Holywell, Swords, Co. Dublin. The proposed site outline, location, masterplan, and elevations are demonstrated in Figures 1-4.

Habitats and Species

A site assessment was carried out on 15th August 2023 and on the 26th September 2023. Habitats within the proposed site were classified according to Fossitt (2000) (Appendix I).

Landscape

The landscape strategy for the subject site has been prepared by DFLA. The proposed landscape plan is demonstrated in Figure 5.

Drainage

An Engineering Report for Planning has been prepared by ROD Consulting Engineers to accompany this planning application. This report outlines the existing site hydrology, and the following foul and surface water drainage strategy for the proposed development site:

Site Hydrology and Flood Risk Assessment

This report details the following in relation to the existing site hydrology:

'*The site is located within the catchment of the River Gaybrook. The River Gaybrook rises approximately 930m southwest of the development site within the Airside Retail Park. The river generally flows in a north easterly direction, where it ultimately discharges to the Malahide Estuary, approximately 3.4km northeast of the development site*.'

'A detailed Flood Risk Assessment has been prepared to supplement this report. Compensatory flood storage will be provided on the site.'

Surface Water Drainage

In terms of existing surface water drainage infrastructure, this report outlines the following:

'*The site appears to have no existing surface water drainage infrastructure within the boundary. The nearest surface water networks are located immediately west and north of the site on Holywell Distributer Road. It appears that the current drainage regime for the subject site is that surface water drains via infiltration and via overland flow routes to the surrounding surface water network*.'

In relation to the proposed surface water drainage strategy, this report details the following:

'*As part of the development, a number of different SuDS measures are proposed to minimise the impact on water quality and water quantity of the runoff and maximise the amenity and biodiversity opportunities within the site.*

The existing topography will allow for the site to drain by gravity to the nearby existing 1200 mm dia. surface water pipe located at Holywell Distributer Road to the southwest of the site. It is proposed to construct a new surface water drainage system for the development to collect and convey runoff to the outfall location. The site will be served by a new network consisting of surface water pipes, blue / green roofs, permeable paving areas and a detention basin. The lower sub-base levels of the permeable paving, the blue/green roofs and detention basin will provide for the attenuation storage requirements on site as a result of the residential development.'

Figure 1. *Site outline and location on satellite imagery*

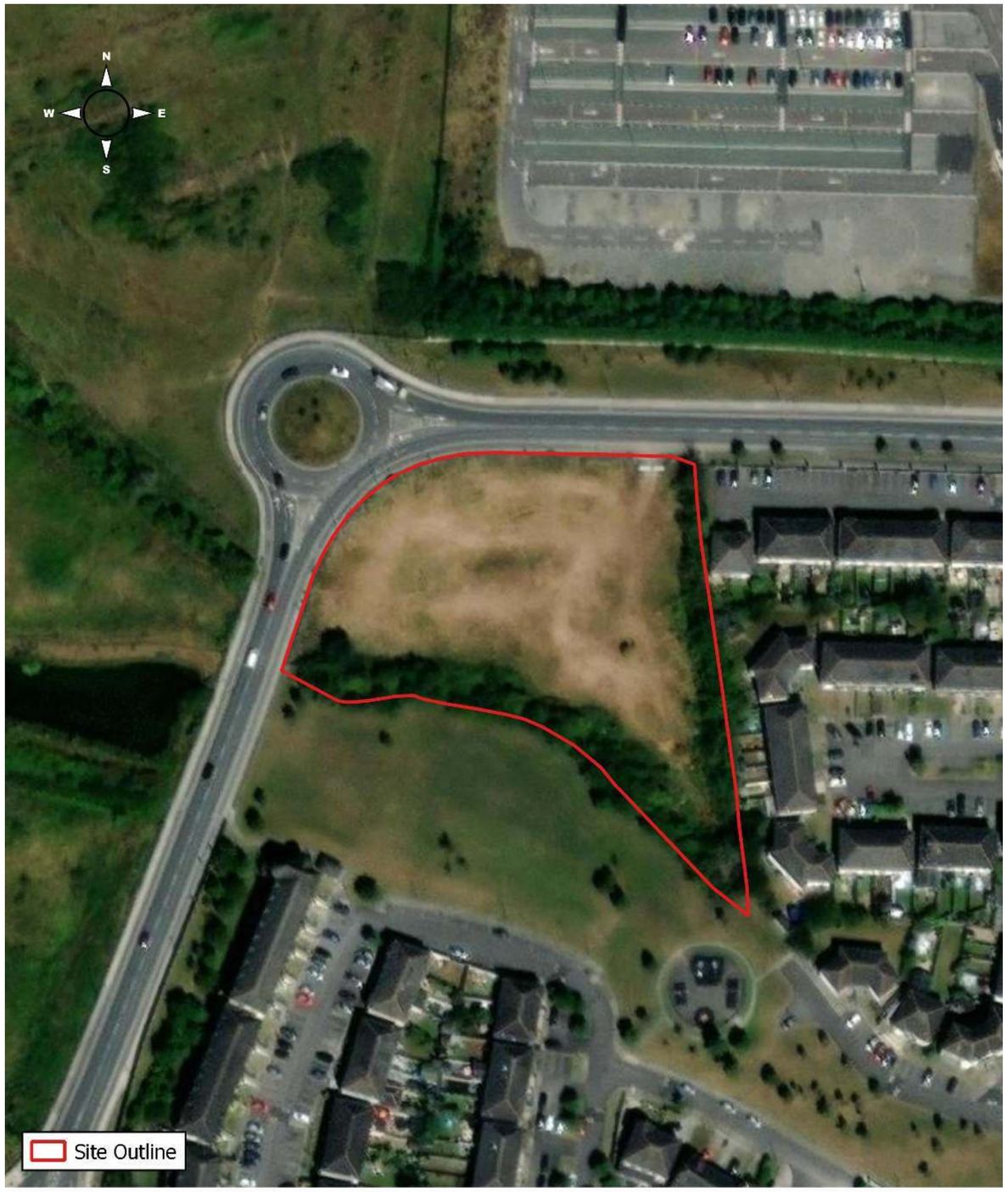

Figure 2. *Outline of proposed site.*

Figure 3. *Proposed site layout plan*

Figure 4. *Proposed site elevations*

Figure 5. *Proposed landscape plan*

Further, in relation to the proposed SuDS approach, this report outlines the following:

'*The proposed SuDS measures for the site will include Source Control measures as part of a Management Train whereby the surface water is managed locally in small sub-catchments rather than being conveyed to and managed in large systems further down the catchment. The combination of the SuDS measures listed below will maximise the potential for surface water attenuation, reducing the impact on the existing surface water drainage network downstream. The proposed techniques will offer high level of treatment processes and nutrient removal of the runoff, particularly during the 'first flush'. Finally, the various measures will offer significant amenity and biodiversity opportunities compared to other drainage systems.*

It is proposed to provide the following SuDS measures:

- Blue/Green Roof Systems
- Permeable Paving to all footway and parking bay areas
- Detention Basin
- Flow control devices to limit discharge.'

Foul Wastewater

In relation to the existing wastewater drainage, this report details the following:

'*Drainage records obtained from Fingal County Council have identified an existing 225mm dia. foul water sewer located at Holywell Distributer Road, immediately north of the site. The records indicate that the existing asset flows in an eastly direction.*'

In terms of the proposed wastewater drainage strategy this report outlines the following:

'*It is proposed to construct a new foul sewer network to serve the development. Foul effluent from the site will discharge to the existing 225mm dia. foul sewer on Holywell Distributer Road.*

A Confirmation of Feasibility letter received from Irish Water on the 2nd March 2023 states that a connection to the public foul infrastructure is feasible without any upgrade works being required.'

Foul wastewater will ultimately be treated within the existing public network.

The proposed foul and surface water layouts are demonstrated in Figures 6 & 7.

Flood Risk Assessment

An Initial Site Specific Flood Risk Assessment has been prepared by ROD Consulting Engineers to accompany this planning application. This report concludes with the following:

'*The available sources consulted above indicate that a portion of the proposed development site is liable to flood in the 1 in 1000 year current climate scenario from fluvial sources.*

Flood risk management measures incorporated within the design will protect the development up to the design flood event (1 in 1000 year + 20% climate change factor) with an appropriate freeboard and shall ensure flood risk is not increased upstream or downstream of the site. Details of the proposed compensatory storage measures (~150m^3) shall be provided at compliance stage.'

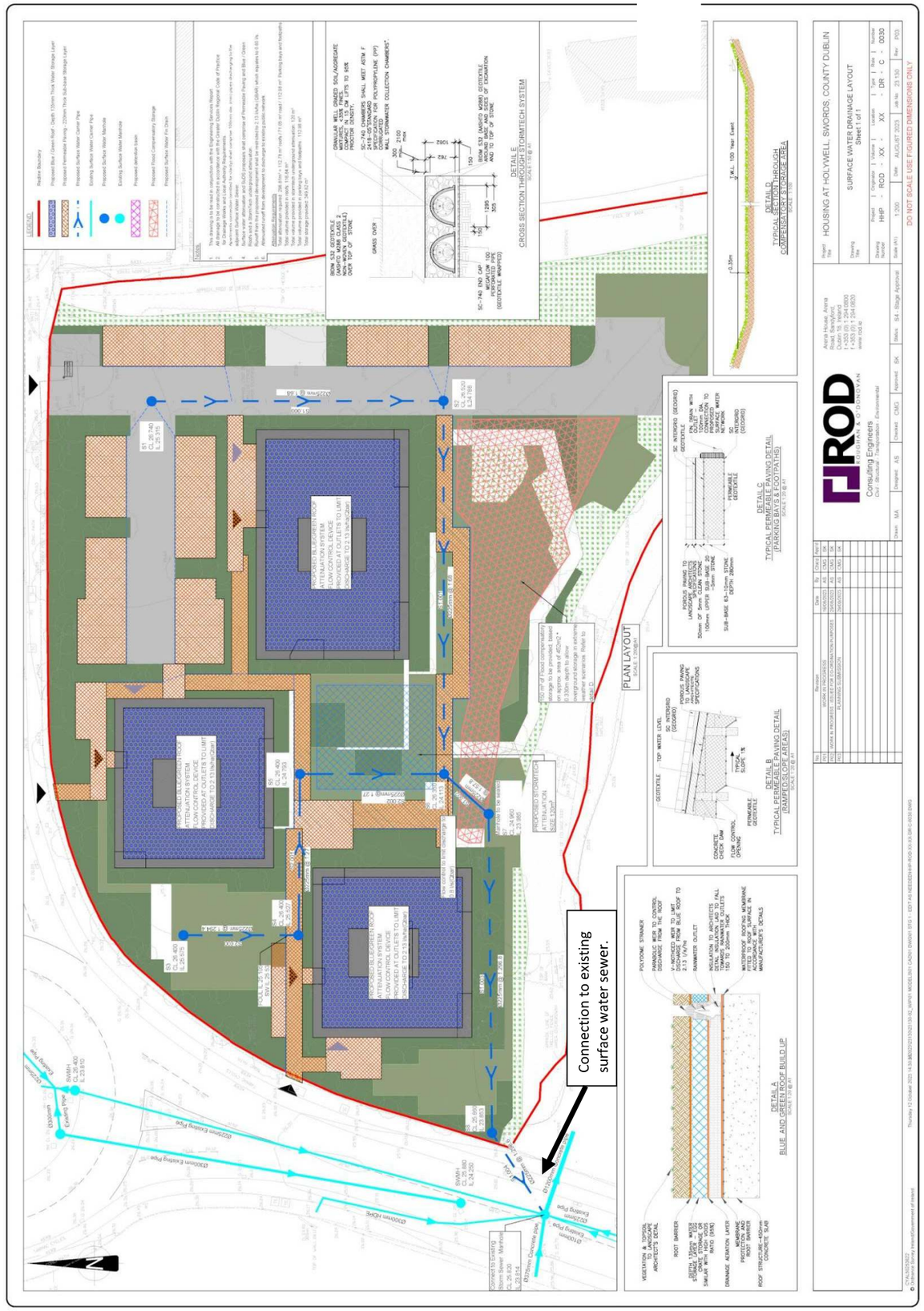

Figure 6. *Proposed surface water layout*

Figure 7. *Proposed foul water drainage layout*

Identification of Relevant Natura 2000 Sites

The following identifies the relevant European sites, and compiles information on their qualifying interests and conservation objectives in addition to outlining the potential for significant effects on each site. The proposed development site is not located within a European site. As outlined in Office of the Planning Regulator (2021) "*The zone of influence of a proposed development is the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. This should be established on a case-by-case basis using the Source-Pathway-Receptor framework and not by arbitrary distances (such as 15 km)*."

A key factor in the consideration as to whether or not a particular European site is likely to be affected by the proposed works is its distance from the location of the works. It is generally, but not necessarily, the case that the greater the distance from the plan or project the smaller the likelihood of impacts. In this case, the nearest European sites to the proposed development are 1.9 km away (Malahide Estuary SAC & SPA). Best practice guidance suggests that an initial zone of influence be set at a radius of 2km for non-linear projects (IEA, 1995). The potential zone of influence (ZOI) was set at a radius of 2km from the proposed Project. It should be noted that where there was a potential for the ZOI to be influenced by drainage connections, natural biodiversity corridors e.g. rivers or woodland these were also take into account and the assessment was extended.

There is an indirect hydrological connection to marine-based Natura 2000 sites via the proposed foul and surface water drainage strategy. Foul wastewater will be directed to an existing public foul network. Foul wastewater will ultimately be treated along this public network. After attenuation onsite, surface water drainage will be directed to an existing 1200mm dia. public surface water drainage pipe located to the south-east of the subject site. This network is located within the River Gaybrook catchment, a watercourse that ultimately discharges to the marine environment at Malahide Estuary.

The ZoI of the proposed project would be seen to be restricted to the site outline, with potential for minor localised noise and surface water impacts during construction which do not extend significantly beyond the site outline nor are they likely to have any significant effects on any European sites.

Despite a lack of direct hydrological connection to European Sites, but in the interest of carrying out a thorough assessment in line with both the Habitats Directive, and the precautionary principle, the area of assessment was expanded beyond the ZoI to include designated sites within 15km of the proposed development site, and sites beyond 15km with the potential for a hydrological connection. This was done in the interest of ensuring that any pathways, however indirect or remote, were taken into account. All European sites within 15km are listed in Table 1. The qualifying interests, and the potential impact of the proposed development on each European site and qualifying interest, are screened out in Table 2. No potential impacts are foreseen on European sites beyond 15km as there is no direct or indirect pathways to these sites.

SACs and SPAs within 15km of the subject site are demonstrated in Figures 8 and 9. Waterbodies and proximate Natura 2000 sites are demonstrated in Figures 10-12.

Table 1. Proximity to designated sites of conservation importance

NATURA 2000 Site	Distance
Special Areas of Conservation	
Malahide Estuary SAC	1.9 km
Baldoyle Bay SAC	5.5 km
Rogerstown Estuary SAC	5.7 km
North Dublin Bay SAC	8.2 km
Rockabill to Dalkey Island SAC	9.2 km
Ireland's Eye SAC	10.2 km
Howth Head SAC	11 km
South Dublin Bay SAC	11.7 km
Lambay Island SAC	12.5 km
Special Protection Areas	
Malahide Estuary SPA	1.9 km
Baldoyle Bay SPA	5.5 km
North-West Irish Sea SPA	5.5 km
Rogerstown Estuary SPA	6 km
North Bull Island SPA	8.2 km
South Dublin Bay and River Tolka Estuary SPA	9.3 km
Ireland's Eye SPA	9.9 km
Howth Head Coast SPA	12 km
Lambay Island SPA	12.5 km

Table 2. Initial screening of NATURA 2000 sites within 15km and NATURA 2000 sites beyond 15km with potential of hydrological connection to the proposed development

Natura Code	Name	Screened In/Out	Details/Reason
Special Areas of Conservation			
IE000205	Malahide Estuary SAC	**Screened OUT**	**Conservation Objectives** The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. **Qualifying Interests** Mudflats and sandflats not covered by seawater at low tide [1140] *Salicornia* and other annuals colonising mud and sand [1310] *Spartina* swards (Spartinion maritimae) [1320] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Mediterranean salt meadows (*Juncetalia maritimi*) [1410] Shifting dunes along the shoreline with white dunes (*Ammophila arenaria*) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]* * Priority habitat under the Habitats Directive **Potential Impact** The proposed development site is located within a suburban area, 1.9 km from this SAC. There is no direct hydrological connection between the subject site and this SAC. There is an indirect hydrological pathway to this SAC via the proposed foul and surface water drainage networks. Foul wastewater will be connected to an existing public foul sewer network. Any silt or pollutants will be treated along this network. After attenuation onsite, surface water drainage will be directed to an existing 1200mm dia. public surface water drainage pipe located to the south-east of the subject site. This network is located within the River Gaybrook catchment, a watercourse that ultimately discharges to the marine environment at Malahide Estuary. Given the minimum distance to this SAC along this pathway (1.9 km), the scale of the proposed development, and the fact that surface water will enter the public surface network where dilution, mixing and settlemt will occur, any silt or pollutants that may enter the Gaybrook Stream will settle, be dispersed, or diluted within the estuarine and will not impact on this SAC. In the absence of mitigation, no significant impacts on the qualifying interests of this SAC are likely as a result of this indirect hydrological pathway. No potential impact is foreseen. There is no direct pathway from this site to the SAC. The construction and operation of the proposed development will not impact on the conservation interests of the site. **No significant effects likely**

Natura Code	Name	Screened In/Out	Details/Reason
IE0000199	Baldoyle Bay SAC	**Screened OUT**	**Conservation Objectives** The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. **Qualifying Interests** Mudflats and sandflats not covered by seawater at low tide [1140] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Mediterranean salt meadows (*Juncetalia maritimi*) [1410] **Potential Impact** The proposed development site is located within a suburban environment, 5.5 km from this SAC. There is no direct hydrological connection between the subject site and this SAC. There is an indirect hydrological pathway to this SAC via the proposed foul and surface water drainage networks. Foul wastewater will be connected to an existing public foul sewer network. Any silt or pollutants will be treated along this network. After attenuation onsite, surface water drainage will be directed to an existing 1200mm dia. public surface water drainage pipe located to the south-east of the subject site. This network is located within the River Gaybrook catchment, a watercourse that ultimately discharges to the marine environment at Malahide Estuary. Given the minimum distance to this SAC along this pathway (5.5 km), the scale of the proposed development, and the fact that there is no requirement to discharge surface water to this watercourse during construction, any silt or pollutants that may enter the Gaybrook Stream will settle, be dispersed, or diluted within the marine environment in the Irish Sea and will not impact on this SAC. In the absence of mitigation, no significant impacts on the qualifying interests of this SAC are likely as a result of this indirect hydrological pathway. No potential impact is foreseen. There is no direct pathway from this site to the SAC. The construction and operation of the proposed development will not impact on the conservation interests of the site. **No significant effects likely**
IE000208	Rogerstown Estuary SAC	**Screened OUT**	**Conservation Objectives** The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. **Qualifying Interests** Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] *Salicornia* and other annuals colonising mud and sand [1310] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Mediterranean salt meadows (*Juncetalia maritimi*) [1410] Shifting dunes along the shoreline with white dunes (*Ammophila arenaria*) [2120]

Natura Code	Name	Screened In/Out	Details/Reason
			Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] * * Priority habitat under the Habitats Directive **Potential Impact** The proposed development site is located within a suburban environment, 5.7 km from this SAC. There is no direct hydrological connection between the subject site and this SAC. There is an indirect hydrological pathway to this SAC via the proposed foul and surface water drainage networks. Foul wastewater will be connected to an existing public foul sewer network. Any silt or pollutants will be treated along this network. After attenuation onsite, surface water drainage will be directed to an existing 1200mm dia. public surface water drainage pipe located to the south-east of the subject site. This network is located within the River Gaybrook catchment, a watercourse that ultimately discharges to the marine environment at Malahide Estuary. Given the minimum distance to this SAC along this pathway (5.7 km), the scale of the proposed development, and the fact that there is no requirement to discharge surface water to this watercourse during construction, any silt or pollutants that may enter the Gaybrook Stream will settle, be dispersed, or diluted within the marine environment in the Irish Sea and will not impact on this SAC. In the absence of mitigation, no significant impacts on the qualifying interests of this SAC are likely as a result of this indirect hydrological pathway. No potential impact is foreseen. There is no direct pathway from this site to the SAC. The construction and operation of the proposed development will not impact on the conservation interests of the site. **No significant effects likely**
IE000206	North Dublin Bay SAC	**Screened OUT**	**Conservation Objectives** The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. **Qualifying Interests** Mudflats and sandflats not covered by seawater at low tide [1140] Annual vegetation of drift lines [1210] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Mediterranean salt meadows (*Juncetalia maritimi*) [1410] Embryonic shifting dunes [2110] Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] * Humid dune slacks [2190] Petalwort (*Petalophyllum ralfsii*) [1395] * Priority habitat under the Habitats Directive **Potential Impact**

Natura Code	Name	Screened In/Out	Details/Reason
			The proposed development site is located within a suburban environment, 8.2 km from this SAC. There is no direct hydrological connection between the subject site and this SAC. There is an indirect hydrological pathway to this SAC via the proposed foul and surface water drainage networks. Foul wastewater will be connected to an existing public foul sewer network. Any silt or pollutants will be treated along this network. After attenuation onsite, surface water drainage will be directed to an existing 1200mm dia. public surface water drainage pipe located to the south-east of the subject site. This network is located within the River Gaybrook catchment, a watercourse that ultimately discharges to the marine environment at Malahide Estuary. Given the minimum distance to this SAC along this pathway (8.2 km), the scale of the proposed development, and the fact that surface water will enter the public surface network where dilution, mixing and settlemt will occur, any silt or pollutants that may enter the Gaybrook Stream will settle, be dispersed, or diluted within the marine environment in the Irish Sea and will not impact on this SAC. In the absence of mitigation, no significant impacts on the qualifying interests of this SAC are likely as a result of this indirect hydrological pathway. No potential impact is foreseen. There is no direct pathway from this site to the SAC. The construction and operation of the proposed development will not impact on the conservation interests of the site. **No significant effects likely**
IE003000	Rockabill to Dalkey Island SAC	**Screened OUT**	**Conservation Objectives** The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. **Qualifying Interests** Reefs [1170] Harbour Porpoise (*Phocoena phocoena*) [1351] **Potential Impact** The proposed development site is located within a suburban environment, 9.2 km from this SAC. There is no direct hydrological connection between the subject site and this SAC. There is an indirect hydrological pathway to this SAC via the proposed foul and surface water drainage networks. Foul wastewater will be connected to an existing public foul sewer network. Any silt or pollutants will be treated along this network. After attenuation onsite, surface water drainage will be directed to an existing 1200mm dia. public surface water drainage pipe located to the south-east of the subject site. This network is located within the River Gaybrook catchment, a watercourse that ultimately discharges to the marine environment at Malahide Estuary. Given the minimum distance to this SAC along this pathway (9.2 km), the scale of the proposed development, and the fact that surface water will enter the public surface network where dilution, mixing and settlemt will occur, any silt

Natura Code	Name	Screened In/Out	Details/Reason
			or pollutants that may enter the Gaybrook Stream will settle, be dispersed, or diluted within the marine environment in the Irish Sea and will not impact on this SAC. In the absence of mitigation, no significant impacts on the qualifying interests of this SAC are likely as a result of this indirect hydrological pathway. No potential impact is foreseen. There is no direct pathway from this site to the SAC. The construction and operation of the proposed development will not impact on the conservation interests of the site. **No significant effects likely**
IE002193	Ireland's Eye SAC	**Screened OUT**	**Conservation Objectives** The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. **Qualifying Interests** Perennial vegetation of stony banks [1220] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] **Potential Impact** The proposed development site is located within a suburban environment, 10.2 km from this SAC. There is no direct hydrological connection between the subject site and this SAC. There is an indirect hydrological pathway to this SAC via the proposed foul and surface water drainage networks. Foul wastewater will be connected to an existing public foul sewer network. Any silt or pollutants will be treated along this network. After attenuation onsite, surface water drainage will be directed to an existing 1200mm dia. public surface water drainage pipe located to the south-east of the subject site. This network is located within the River Gaybrook catchment, a watercourse that ultimately discharges to the marine environment at Malahide Estuary. Given the minimum distance to this SAC along this pathway (10.2 km), the scale of the proposed development, and the fact that surface water will enter the public surface network where dilution, mixing and settlemt will occur, any silt or pollutants that may enter the Gaybrook Stream will settle, be dispersed, or diluted within the marine environment in the Irish Sea and will not impact on this SAC. In the absence of mitigation, no significant impacts on the qualifying interests of this SAC are likely as a result of this indirect hydrological pathway. No potential impact is foreseen. There is no direct pathway from this site to the SAC. The construction and operation of the proposed development will not impact on the conservation interests of the site. **No significant effects likely**
IE000202	Howth Head SAC	**Screened OUT**	**Conservation Objectives** The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall

Natura Code	Name	Screened In/Out	Details/Reason
			maintenance of favourable conservation status of those habitats and species at a national level. **Qualifying Interests** Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] European dry heaths [4030] **Potential Impact** The proposed development site is located within a suburban environment, 11 km from this SAC. There is no direct hydrological connection between the subject site and this SAC. There is an indirect hydrological pathway to this SAC via the proposed foul and surface water drainage networks. Foul wastewater will be connected to an existing public foul sewer network. Any silt or pollutants will be treated along this network. After attenuation onsite, surface water drainage will be directed to an existing 1200mm dia. public surface water drainage pipe located to the south-east of the subject site. This network is located within the River Gaybrook catchment, a watercourse that ultimately discharges to the marine environment at Malahide Estuary. Given the minimum distance to this SAC along this pathway (11 km), the scale of the proposed development, and the fact that surface water will enter the public surface network where dilution, mixing and settlemt will occur, any silt or pollutants that may enter the Gaybrook Stream will settle, be dispersed, or diluted within the estuarine environment of Malahide Estuary and the marine environment in the Irish Sea and will not impact on this SAC. In the absence of mitigation, no significant impacts on the qualifying interests of this SAC are likely as a result of this indirect hydrological pathway. No potential impact is foreseen. There is no direct pathway from this site to the SAC. The construction and operation of the proposed development will not impact on the conservation interests of the site. **No significant effects likely**
IE000210	South Dublin Bay SAC	**Screened OUT**	**Conservation Objectives** The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. **Qualifying Interests** Mudflats and sandflats not covered by seawater at low tide [1140] Annual vegetation of drift lines [1210] Salicornia and other annuals colonising mud and sand [1310] Embryonic shifting dunes [2110] **Potential Impact** The proposed development site is located within a suburban environment, 11.7 km from this SAC. There is no direct hydrological connection between the subject site and this SAC.

Natura Code	Name	Screened In/Out	Details/Reason
			There is an indirect hydrological pathway to this SAC via the proposed foul and surface water drainage networks. Foul wastewater will be connected to an existing public foul sewer network. Any silt or pollutants will be treated along this network. After attenuation onsite, surface water drainage will be directed to an existing 1200mm dia. public surface water drainage pipe located to the south-east of the subject site. This network is located within the River Gaybrook catchment, a watercourse that ultimately discharges to the marine environment at Malahide Estuary. Given the minimum distance to this SAC along this pathway (11.7 km), the scale of the proposed development, and the fact that surface water will enter the public surface network where dilution, mixing and settlemt will occur, any silt or pollutants that may enter the Gaybrook Stream will settle, be dispersed, or diluted within the marine environment in the Irish Sea and will not impact on this SAC. In the absence of mitigation, no significant impacts on the qualifying interests of this SAC are likely as a result of this indirect hydrological pathway. No potential impact is foreseen. There is no direct pathway from this site to the SAC. The construction and operation of the proposed development will not impact on the conservation interests of the site. **No significant effects likely**
IE000204	Lambay Island SAC	**Screened OUT**	**Conservation Objectives** The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. **Qualifying Interests** Reefs [1170] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Grey Seal (*Halichoerus grypus*) [1364] Harbour Seal (*Phoca vitulina*) [1365] **Potential Impact** The proposed development site is located within a suburban environment, 12.5 km from this SAC. There is no direct hydrological connection between the subject site and this SAC. There is an indirect hydrological pathway to this SAC via the proposed foul and surface water drainage networks. Foul wastewater will be connected to an existing public foul sewer network. Any silt or pollutants will be treated along this network. After attenuation onsite, surface water drainage will be directed to an existing 1200mm dia. public surface water drainage pipe located to the south-east of the subject site. This network is located within the River Gaybrook catchment, a watercourse that ultimately discharges to the marine environment at Malahide Estuary. Given the minimum distance to this SAC along this pathway (12.5 km), the scale of the proposed development, and the fact that surface water will enter the public surface network where dilution, mixing and settlemt will occur, any silt or pollutants that may enter the Gaybrook Stream will settle, be

Natura Code	Name	Screened In/Out	Details/Reason
			dispersed, or diluted within the marine environment in the Irish Sea and will not impact on this SAC. In the absence of mitigation, no significant impacts on the qualifying interests of this SAC are likely as a result of this indirect hydrological pathway. No potential impact is foreseen. There is no direct pathway from this site to the SAC. The construction and operation of the proposed development will not impact on the conservation interests of the site. **No significant effects likely**
Special Protection Areas			
IE004025	Malahide Estuary SPA	**Screened OUT**	**Conservation Objectives** The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. **Qualifying Interests** Great Crested Grebe (*Podiceps cristatus*) [A005] Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Shelduck (*Tadorna tadorna*) [A048] Pintail (*Anas acuta*) [A054] Goldeneye (*Bucephala clangula*) [A067] Red-breasted Merganser (*Mergus serrator*) [A069] Oystercatcher (*Haematopus ostralegus*) [A130] Golden Plover (*Pluvialis apricaria*) [A140] Grey Plover (*Pluvialis squatarola*) [A141] Knot (*Calidris canutus*) [A143] Dunlin (*Calidris alpina*) [A149] Black-tailed Godwit (*Limosa limosa*) [A156] Bar-tailed Godwit (*Limosa lapponica*) [A157] Redshank (*Tringa totanus*) [A162] Wetland and Waterbirds [A999] **Potential Impact** The proposed development site is located within a suburban area, 1.9 km from this SPA. There is no direct hydrological connection between the subject site and this SPA. There is an indirect hydrological pathway to this SPA via the proposed foul and surface water drainage networks. Foul wastewater will be connected to an existing public foul sewer network. Any silt or pollutants will be treated along this network. After attenuation onsite, surface water drainage will be directed to an existing 1200mm dia. public surface water drainage pipe located to the south-east of the subject site. This network is located within the River Gaybrook catchment, a watercourse that ultimately discharges to the marine environment at Malahide Estuary. Given the minimum distance to this SPA along this pathway (1.9 km), the scale of the proposed development, and the fact that surface water will enter the public surface network where dilution, mixing and settlemt will occur, any silt or pollutants that may enter the Gaybrook Stream will settle, be dispersed, or diluted within the marine environment in the Irish Sea and will not impact on this SPA. In the absence of mitigation, no

Natura Code	Name	Screened In/Out	Details/Reason
			significant impacts on the qualifying interests of this SPA are likely as a result of this indirect hydrological pathway. Given the minimum distance to this SPA (1.9 km), no noise or vibration impacts on the qualifying interests of this SPA are foreseen. No potential impact is foreseen. There is no direct pathway from this site to the SPA. The construction and operation of the proposed development will not impact on the conservation interests of the site. **No significant effects likely**
IE004016	Baldoyle Bay SPA	**Screened OUT**	**Conservation Objectives** The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. **Qualifying Interests** Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Shelduck (*Tadorna tadorna*) [A048] Ringed Plover (*Charadrius hiaticula*) [A137] Golden Plover (*Pluvialis apricaria*) [A140] Grey Plover (*Pluvialis squatarola*) [A141] Bar-tailed Godwit (*Limosa lapponica*) [A157] Wetland and Waterbirds [A999] **Potential Impact** The proposed development site is located within a suburban area, 5.5 km from this SPA. There is no direct hydrological connection between the subject site and this SPA. There is an indirect hydrological pathway to this SPA via the proposed foul and surface water drainage networks. Foul wastewater will be connected to an existing public foul sewer network. Any silt or pollutants will be treated along this network. After attenuation onsite, surface water drainage will be directed to an existing 1200mm dia. public surface water drainage pipe located to the south-east of the subject site. This network is located within the River Gaybrook catchment, a watercourse that ultimately discharges to the marine environment at Malahide Estuary. Given the minimum distance to this SPA along this pathway (5.5 km), the scale of the proposed development, and the fact that surface water will enter the public surface network where dilution, mixing and settlemt will occur, any silt or pollutants that may enter the Gaybrook Stream will settle, be dispersed, or diluted within the marine environment in the Irish Sea and will not impact on this SPA. In the absence of mitigation, no significant impacts on the qualifying interests of this SPA are likely as a result of this indirect hydrological pathway. Given the minimum distance to this SPA (5.5 km), no noise or vibration impacts on the qualifying interests of this SPA are foreseen. No potential impact is foreseen. There is no direct pathway from this site to the SPA. The construction and operation of the proposed development will not impact on the conservation interests of the site.

Natura Code	Name	Screened In/Out	Details/Reason
			No significant effects likely
IE004236	North-West Irish Sea cSPA	**Screened OUT**	**Conservation Objectives** The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. **Qualifying Interests** Common Scoter (*Melanitta nigra*) [A065] Red-throated Diver (*Gavia stellata*) [A001] Great Northern Diver (*Gavia immer*) [A003] Fulmar (*Fulmarus glacialis*) [A009] Manx Shearwater (*Puffinus puffinus*) [A013] Shag (*Phalacrocorax aristotelis*) [A018] Cormorant (*Phalacrocorax carbo*) [A017] Little Gull (*Larus minutus*) [A177] Kittiwake (*Rissa tridactyla*) [A188] Black-headed Gull (*Chroicocephalus ridibundus*) [A179] Common Gull (*Larus canus*) [A182] Lesser Black-backed Gull (*Larus fuscus*) [A183] Herring Gull (*Larus argentatus*) [A184] Great Black-backed Gull (*Larus marinus*) [A187] Little Tern (*Sterna albifrons*) [A195] Roseate Tern (*Sterna dougallii*) [A192] Common Tern (*Sterna hirundo*) [A193] Arctic Tern (*Sterna paradisaea*) [A194] Puffin (*Fratercula a*rctica) [A204] Razorbill (*Alca t*orda) [A200] Guillemot (*Uria aalge*) [A199] **Potential Impact** The proposed development site is located within a suburban area, 5.5 km from this SPA. There is no direct hydrological connection between the subject site and this SPA. There is an indirect hydrological pathway to this SPA via the proposed foul and surface water drainage networks. Foul wastewater will be connected to an existing public foul sewer network. Any silt or pollutants will be treated along this network. After attenuation onsite, surface water drainage will be directed to an existing 1200mm dia. public surface water drainage pipe located to the south-east of the subject site. This network is located within the River Gaybrook catchment, a watercourse that ultimately discharges to the marine environment at Malahide Estuary. Given the minimum distance to this SPA along this pathway (5.5 km), the scale of the proposed development, and the fact that surface water will enter the public surface network where dilution, mixing and settlemt will occur, any silt or pollutants that may enter the Gaybrook Stream will settle, be dispersed, or diluted within the marine environment in the Irish Sea and will not impact on this SPA. In the absence of mitigation, no significant impacts on the qualifying interests of this SPA are likely as a result of this indirect hydrological pathway.

Natura Code	Name	Screened In/Out	Details/Reason
			Given the minimum distance to this SPA (5.5 km), no noise or vibration impacts on the qualifying interests of this SPA are foreseen. No potential impact is foreseen. There is no direct pathway from this site to the SPA. The construction and operation of the proposed development will not impact on the conservation interests of the site. **No significant effects likely**
IE004015	Rogerstown Estuary SPA	**Screened OUT**	**Conservation Objectives** The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. **Qualifying Interests** Greylag Goose (*Anser anser*) [A043] Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Shelduck (*Tadorna tadorna*) [A048] Shoveler (*Anas clypeata*) [A056] Oystercatcher (*Haematopus ostralegus*) [A130] Ringed Plover (*Charadrius hiaticula*) [A137] Grey Plover (*Pluvialis squatarola*) [A141] Knot (*Calidris canutus*) [A143] Dunlin (*Calidris alpina*) [A149] Black-tailed Godwit (*Limosa limosa*) [A156] Redshank (*Tringa totanus*) [A162] Wetland and Waterbirds [A999] **Potential Impact** The proposed development site is located within a suburban area, 6 km from this SPA. There is no direct hydrological connection between the subject site and this SPA. There is an indirect hydrological pathway to this SPA via the proposed foul and surface water drainage networks. Foul wastewater will be connected to an existing public foul sewer network. Any silt or pollutants will be treated along this network. After attenuation onsite, surface water drainage will be directed to an existing 1200mm dia. public surface water drainage pipe located to the south-east of the subject site. This network is located within the River Gaybrook catchment, a watercourse that ultimately discharges to the marine environment at Malahide Estuary. Given the minimum distance to this SPA along this pathway (6 km), the scale of the proposed development, and the fact that surface water will enter the public surface network where dilution, mixing and settlemt will occur, any silt or pollutants that may enter the Gaybrook Stream will settle, be dispersed, or diluted within the marine environment in the Irish Sea and will not impact on this SPA. In the absence of mitigation, no significant impacts on the qualifying interests of this SPA are likely as a result of this indirect hydrological pathway. Given the minimum distance to this SPA (6 km), no noise or vibration impacts on the qualifying interests of this SPA are foreseen.

Natura Code	Name	Screened In/Out	Details/Reason
			No potential impact is foreseen. There is no direct pathway from this site to the SPA. The construction and operation of the proposed development will not impact on the conservation interests of the site. **No significant effects likely**
IE004006	North Bull Island SPA	**Screened OUT**	**Conservation Objectives** The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. **Qualifying Interests** Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Shelduck (*Tadorna tadorna*) [A048] Teal (*Anas crecca*) [A052] Pintail (*Anas acuta*) [A054] Shoveler (*Anas clypeata*) [A056] Oystercatcher (*Haematopus ostralegus*) [A130] Golden Plover (*Pluvialis apricaria*) [A140] Grey Plover (*Pluvialis squatarola*) [A141] Knot (*Calidris canutus*) [A143] Sanderling (*Calidris alba*) [A144] Dunlin (*Calidris alpina*) [A149] Black-tailed Godwit (*Limosa limosa*) [A156] Bar-tailed Godwit (*Limosa lapponica*) [A157] Curlew (*Numenius arquata*) [A160] Redshank (*Tringa totanus*) [A162] Turnstone (*Arenaria interpres*) [A169] Black-headed Gull (*Chroicocephalus ridibundus*) [A179] Wetland and Waterbirds [A999] **Potential Impact** The proposed development site is located within a suburban area, 8.2 km from this SPA. There is no direct hydrological connection between the subject site and this SPA. There is an indirect hydrological pathway to this SPA via the proposed foul and surface water drainage networks. Foul wastewater will be connected to an existing public foul sewer network. Any silt or pollutants will be treated along this network. After attenuation onsite, surface water drainage will be directed to an existing 1200mm dia. public surface water drainage pipe located to the south-east of the subject site. This network is located within the River Gaybrook catchment, a watercourse that ultimately discharges to the marine environment at Malahide Estuary. Given the minimum distance to this SPA along this pathway (8.2 km), the scale of the proposed development, and the fact that surface water will enter the public surface network where dilution, mixing and settlemt will occur, any silt or pollutants that may enter the Gaybrook Stream will settle, be dispersed, or diluted within the marine environment in the Irish Sea and will not impact on this SPA. In the absence of mitigation, no

Natura Code	Name	Screened In/Out	Details/Reason
			significant impacts on the qualifying interests of this SPA are likely as a result of this indirect hydrological pathway. Given the minimum distance to this SPA (8.2 km), no noise or vibration impacts on the qualifying interests of this SPA are foreseen. No potential impact is foreseen. There is no direct pathway from this site to the SPA. The construction and operation of the proposed development will not impact on the conservation interests of the site. **No significant effects likely**
IE004024	South Dublin Bay and River Tolka Estuary SPA	**Screened OUT**	**Conservation Objectives** The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. **Qualifying Interests** Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Oystercatcher (*Haematopus ostralegus*) [A130] Ringed Plover (*Charadrius hiaticula*) [A137] Grey Plover (*Pluvialis squatarola*) [A141] Knot (*Calidris canutus*) [A143] Sanderling (*Calidris alba*) [A144] Dunlin (*Calidris alpina*) [A149] Bar-tailed Godwit (*Limosa lapponica*) [A157] Redshank (*Tringa totanus*) [A162] Black-headed Gull (*Chroicocephalus ridibundus*) [A179] Roseate Tern (*Sterna dougallii*) [A192] Common Tern (*Sterna hirundo*) [A193] Arctic Tern (*Sterna paradisaea*) [A194] Wetland and Waterbirds [A999] **Potential Impact** The proposed development site is located within a suburban area, 9.3 km from this SPA. There is no direct hydrological connection between the subject site and this SPA. There is an indirect hydrological pathway to this SPA via the proposed foul and surface water drainage networks. Foul wastewater will be connected to an existing public foul sewer network. Any silt or pollutants will be treated along this network. After attenuation onsite, surface water drainage will be directed to an existing 1200mm dia. public surface water drainage pipe located to the south-east of the subject site. This network is located within the River Gaybrook catchment, a watercourse that ultimately discharges to the marine environment at Malahide Estuary. Given the minimum distance to this SPA along this pathway (9.3 km), the scale of the proposed development, and the fact that surface water will enter the public surface network where dilution, mixing and settlemt will occur, any silt or pollutants that may enter the Gaybrook Stream will settle, be dispersed, or diluted within the marine environment in the Irish Sea and will not impact on this SPA. In the absence of mitigation, no

Natura Code	Name	Screened In/Out	Details/Reason
			significant impacts on the qualifying interests of this SPA are likely as a result of this indirect hydrological pathway. Given the minimum distance to this SPA (9.3 km), no noise or vibration impacts on the qualifying interests of this SPA are foreseen. No potential impact is foreseen. There is no direct pathway from this site to the SPA. The construction and operation of the proposed development will not impact on the conservation interests of the site. **No significant effects likely**
IE004117	Ireland's Eye SPA	**Screened OUT**	**Conservation Objectives** To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA. **Qualifying Interests** Cormorant (*Phalacrocorax carbo*) [A017] Herring Gull (*Larus argentatus*) [A184] Kittiwake (*Rissa tridactyla*) [A188] Guillemot (*Uria aalge*) [A199] Razorbill (*Alca torda*) [A200] **Potential Impact** The proposed development site is located within a suburban area, 9.9 km from this SPA. There is no direct hydrological connection between the subject site and this SPA. There is an indirect hydrological pathway to this SPA via the proposed foul and surface water drainage networks. Foul wastewater will be connected to an existing public foul sewer network. Any silt or pollutants will be treated along this network. After attenuation onsite, surface water drainage will be directed to an existing 1200mm dia. public surface water drainage pipe located to the south-east of the subject site. This network is located within the River Gaybrook catchment, a watercourse that ultimately discharges to the marine environment at Malahide Estuary. Given the minimum distance to this SPA along this pathway (9.9 km), the scale of the proposed development, and the fact that surface water will enter the public surface network where dilution, mixing and settlemt will occur, any silt or pollutants that may enter the Gaybrook Stream will settle, be dispersed, or diluted within the marine environment in the Irish Sea and will not impact on this SPA. In the absence of mitigation, no significant impacts on the qualifying interests of this SPA are likely as a result of this indirect hydrological pathway. Given the minimum distance to this SPA (9.9 km), no noise or vibration impacts on the qualifying interests of this SPA are foreseen. No potential impact is foreseen. There is no direct pathway from this site to the SPA. The construction and operation of the proposed development will not impact on the conservation interests of the site. **No significant effects likely**

Natura Code	Name	Screened In/Out	Details/Reason
IE004113	Howth Head Coast SPA	**Screened OUT**	**Conservation Objectives** To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA. **Qualifying Interests** Kittiwake (*Rissa tridactyla*) [A188] **Potential Impact** The proposed development site is located within a suburban area, 12 km from this SPA. There is no direct hydrological connection between the subject site and this SPA. There is an indirect hydrological pathway to this SPA via the proposed foul and surface water drainage networks. Foul wastewater will be connected to an existing public foul sewer network. Any silt or pollutants will be treated along this network. After attenuation onsite, surface water drainage will be directed to an existing 1200mm dia. public surface water drainage pipe located to the south-east of the subject site. This network is located within the River Gaybrook catchment, a watercourse that ultimately discharges to the marine environment at Malahide Estuary. Given the minimum distance to this SPA along this pathway (12 km), the scale of the proposed development, and the fact that surface water will enter the public surface network where dilution, mixing and settlemt will occur, any silt or pollutants that may enter the Gaybrook Stream will settle, be dispersed, or diluted within the marine environment in the Irish Sea and will not impact on this SPA. In the absence of mitigation, no significant impacts on the qualifying interests of this SPA are likely as a result of this indirect hydrological pathway. Given the minimum distance to this SPA (12 km), no noise or vibration impacts on the qualifying interests of this SPA are foreseen. No potential impact is foreseen. There is no direct pathway from this site to the SPA. The construction and operation of the proposed development will not impact on the conservation interests of the site. **No significant effects likely**
IE004069	Lambay Island SPA	**Screened OUT**	**Conservation Objectives** To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA. **Qualifying Interests** Fulmar (*Fulmarus glacialis*) [A009] Cormorant (*Phalacrocorax carbo*) [A017] Shag (*Phalacrocorax aristotelis*) [A018] Greylag Goose (*Anser anser*) [A043] Lesser Black-backed Gull (*Larus fuscus*) [A183] Herring Gull (*Larus argentatus*) [A184] Kittiwake (*Rissa tridactyla*) [A188] Guillemot (*Uria aalge*) [A199] Razorbill (*Alca torda*) [A200] Puffin (*Fratercula arctica*) [A204]

Natura Code	Name	Screened In/Out	Details/Reason
			Potential Impact The proposed development site is located within a suburban area, 12.5 km from this SPA. There is no direct hydrological connection between the subject site and this SPA. There is an indirect hydrological pathway to this SPA via the proposed foul and surface water drainage networks. Foul wastewater will be connected to an existing public foul sewer network. Any silt or pollutants will be treated along this network. After attenuation onsite, surface water drainage will be directed to an existing 1200mm dia. public surface water drainage pipe located to the south-east of the subject site. This network is located within the River Gaybrook catchment, a watercourse that ultimately discharges to the marine environment at Malahide Estuary. Given the minimum distance to this SPA along this pathway (12.5 km), the scale of the proposed development, and the fact that surface water will enter the public surface network where dilution, mixing and settlemt will occur, any silt or pollutants that may enter the Gaybrook Stream will settle, be dispersed, or diluted within the marine environment in the Irish Sea and will not impact on this SPA. In the absence of mitigation, no significant impacts on the qualifying interests of this SPA are likely as a result of this indirect hydrological pathway. Given the minimum distance to this SPA (12.5 km), no noise or vibration impacts on the qualifying interests of this SPA are foreseen. No potential impact is foreseen. There is no direct pathway from this site to the SPA. The construction and operation of the proposed development will not impact on the conservation interests of the site. **No significant effects likely**

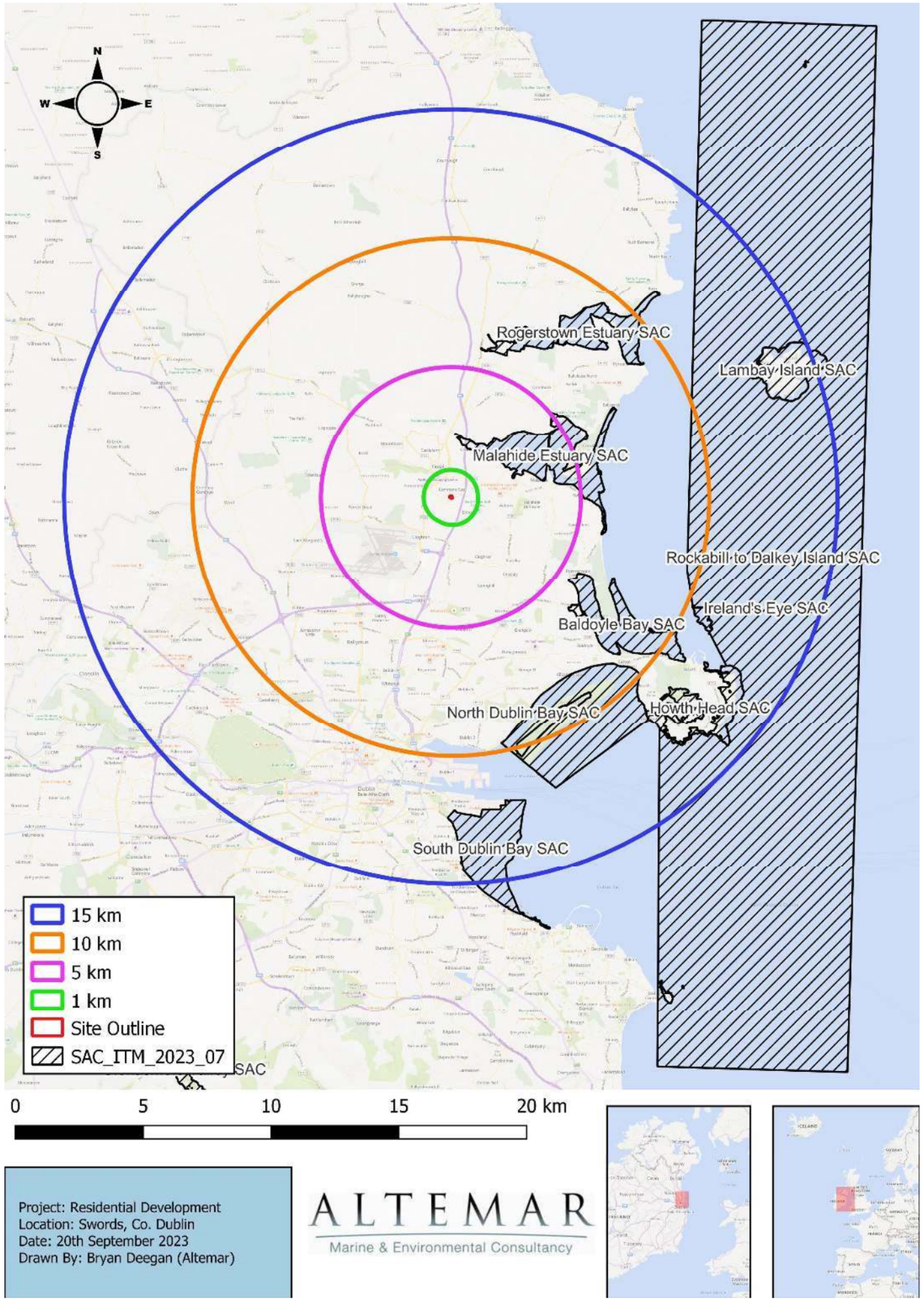

Figure 8. *Special Areas of Conservation (SAC) located within 15km of the proposed development*

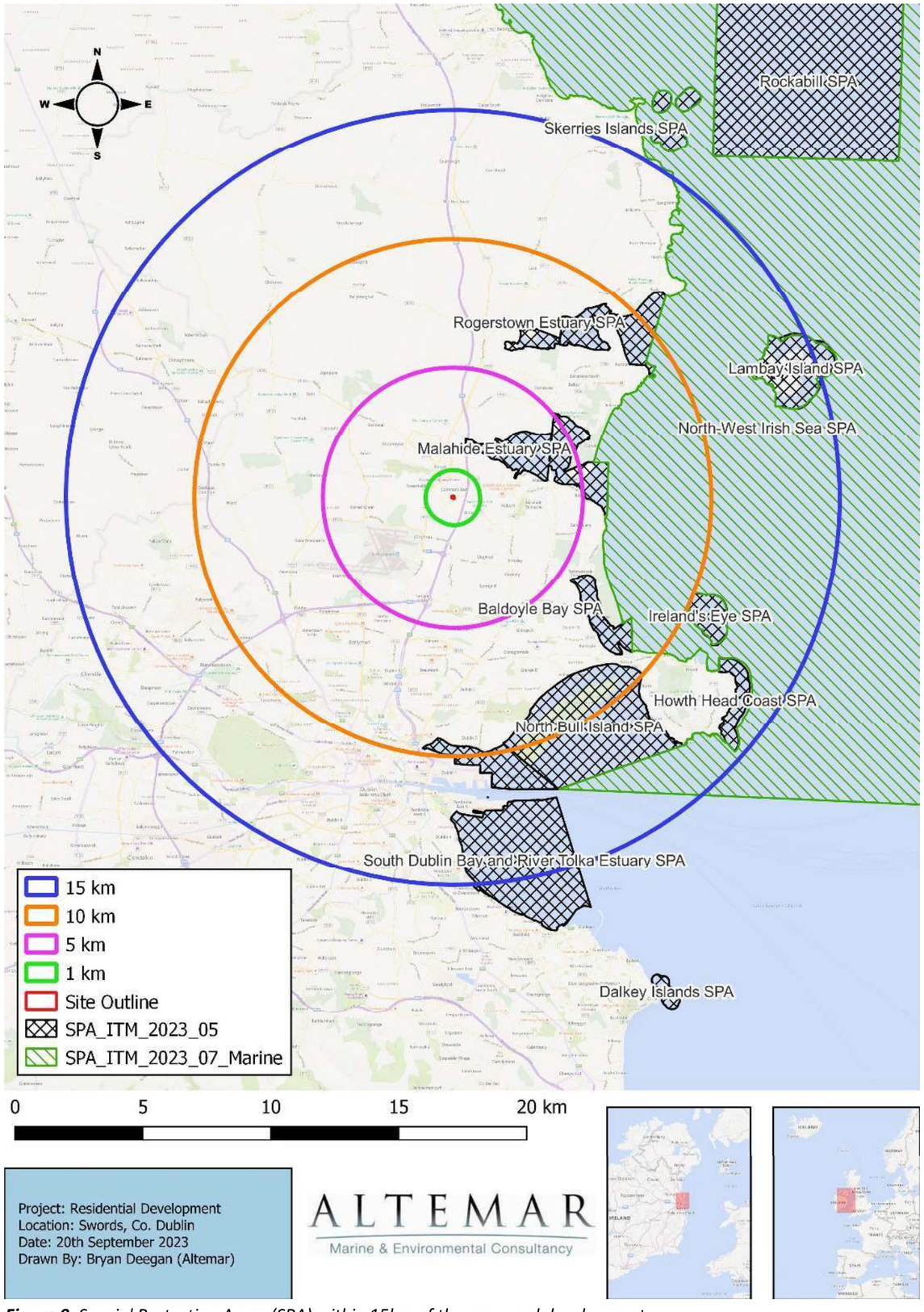

***Figure 9**. Special Protection Areas (SPA) within 15km of the proposed development.*

***Figure 10.** Watercourses proximate to the proposed development site*

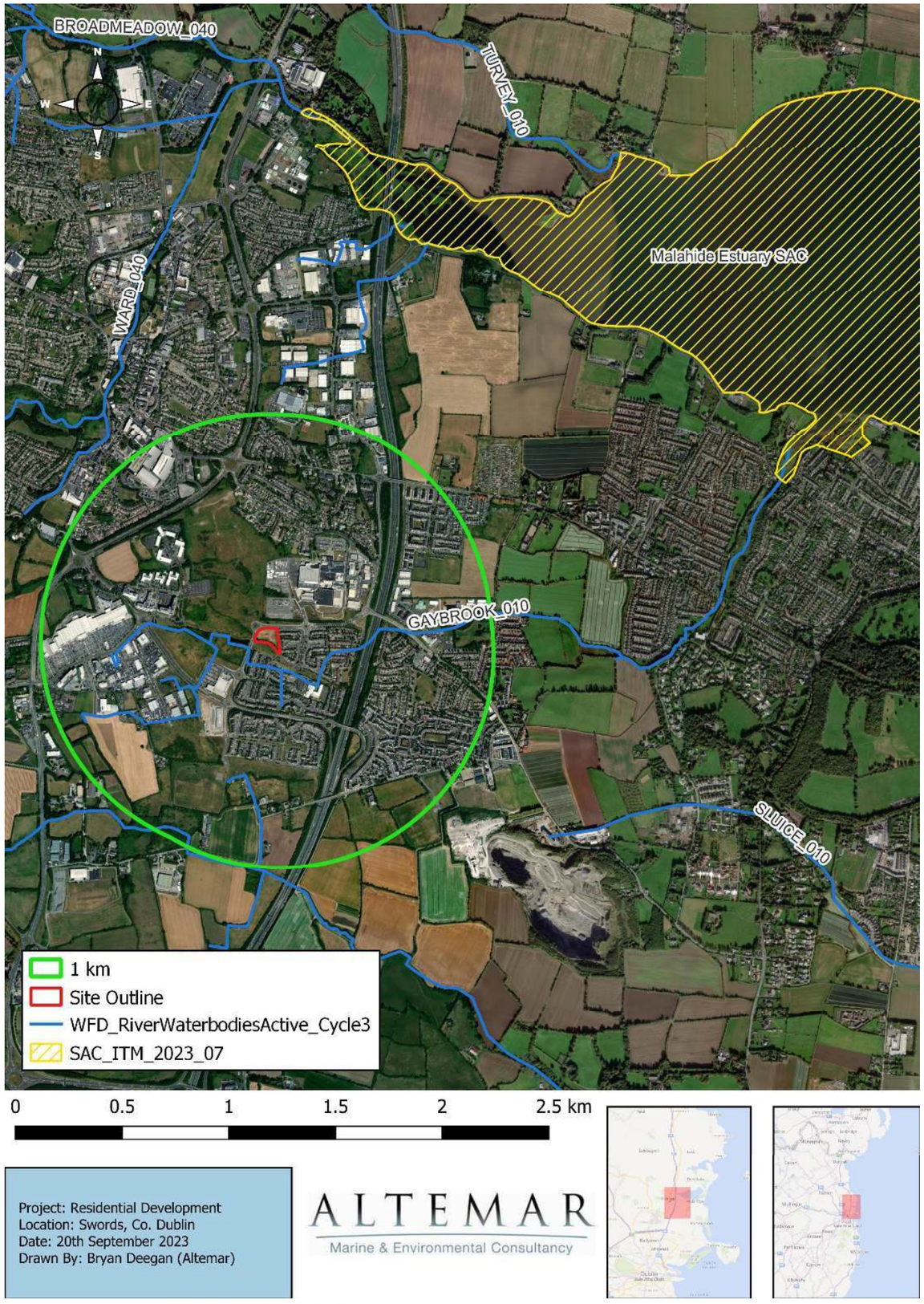

Figure 11. *Watercourses and SACs within 5km of the proposed development site*

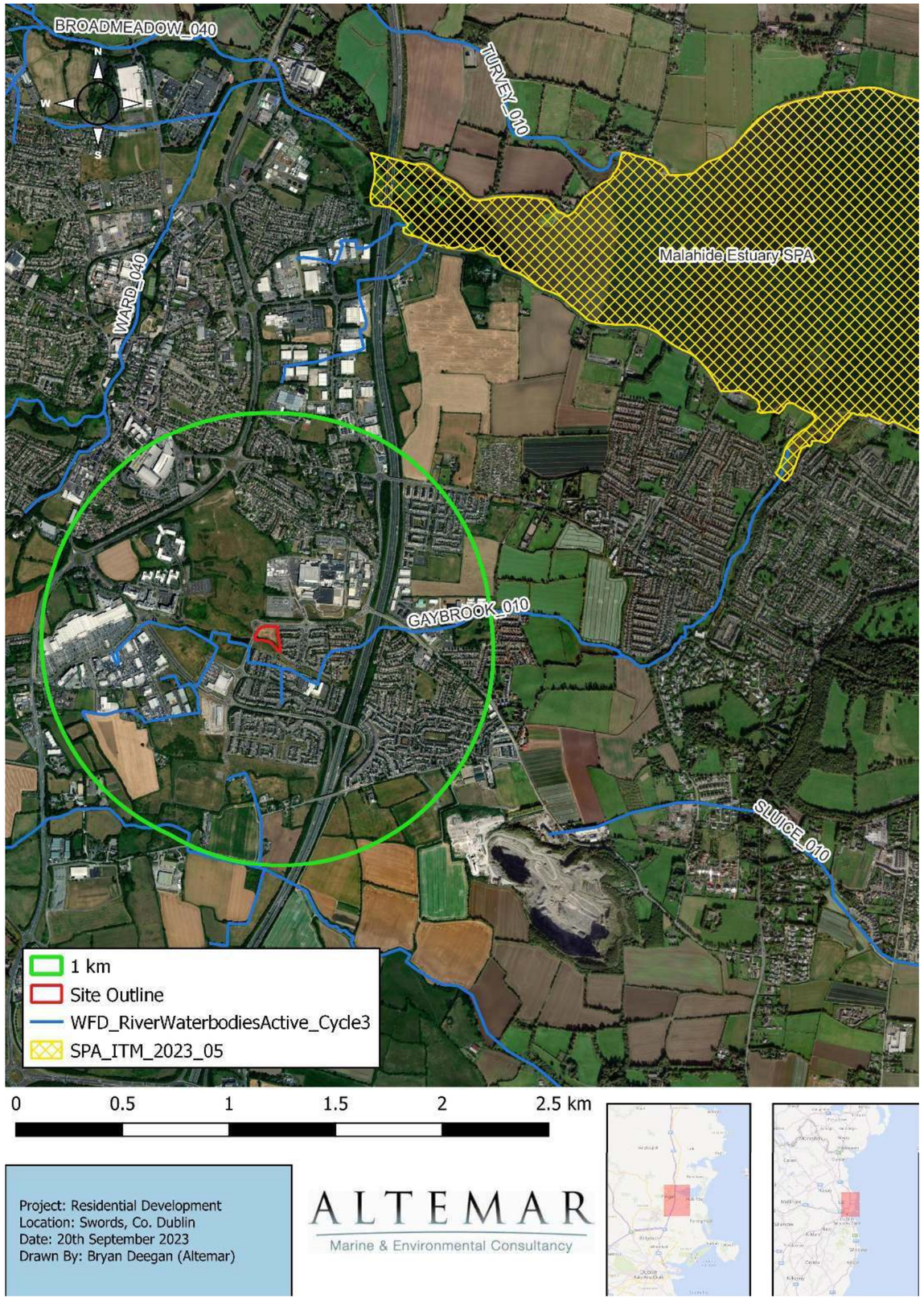

Figure 12. *Watercourses and SPAs within 5km of the proposed development site*

In-Combination Effects

There are several proposed developments located in the area immediately surrounding the subject site that have been assessed for potential in-combination effects through the examination of planning documentation. The following is a list of planning applications as in the vicinity of the proposed development on the Department of Housing, Local Government and Heritage's 'National Planning Application Map' portal:

Table 3. In combination effects evaluated (developments surrounding the subject site)

Planning Ref.	Address	Proposal
F22A/0353	Holywell Educate Together National School, Holywell, Swords, Co. Dublin.	The developments will consist of (1) alterations to existing carpark to provide additional carparking spaces (2) Demolition of existing bin store with replacement bin store to be constructed (3) single storey extension to the rear of the existing school building to accommodate 1no. classroom and associated specialist ancillary rooms (4) minor amendments to existing classroom to facilitate access to extension (5) to connect to existing mains services (6) and all associated landscaping and ancillary works.
F21A/0100	Crowcastle, Swords, Co Dublin	A new link road from the roundabout to the south of Lakeshore Drive, Crowcastle, Swords, Co Dublin that will be constructed to a length of approximately 29om. The road will incorporate lighting, drainage, footpaths and cycle tracks.
F20A/0535	Site at Holywell Distributor Road, Mountgorry, Swords, Co. Dublin	The development will consist of a Petrol Filling Station to include: (i) A forecourt area with 3 no. fuel pump islands, illuminated forecourt canopy over, underground fuel storage tanks, associated pipework and over-ground fill points and vents, electric car charging points and associated infrastructure. (ii) An amenity building of 291 sqm gross floor area comprising a convenience shop (100 sq.m net retail area), restaurant/cafe area with 1 no food offering with hot and cold meals and refreshments for sale for consumption on and off the premises, associated customer seating, customer WCs, Back of House area with food preparation areas, ancillary office, staff welfare facilities, storage and plant areas. (iii) New vehicular entrance and exit, associated traffic signage, internal and external traffic calming measures. (iv) On-site facilities including, air/water services, car and bicycle parking. (v) Illuminated and non-illuminated operator signage including main ID Totem sign, canopy and facade signage. (vi) All associated site drainage, lighting, landscaping, boundary treatments and site development works.
F19A/0386	Lands to the north of the R125 road and accessed off Holywell Link Road and Lakeshore Drive, Swords, Co. Dublin.	The proposed development will consist of an eight storey hospital/healthcare facility (i.e. a seven storey over lower ground/undercroft level building) comprising main entrance/reception area, atrium winter garden, 1 no. café, 1 no. restaurant, 2 no. retail units, outpatients and diagnostics departments, GP departments and urgent care department all at ground floor level; out of hospital services/primary care at first and second floor levels; endoscopy unit and theatres at third floor level; theatre and building plant at fourth floor level; endoscopy unit and day hospital (20 beds) with staff hub at fifth floor level; day hospital (20 no. beds) with sky garden at sixth floor level; all with associated ancillary/common facilities and office/administration areas; FM department, water tank rooms, 115 no. car parking spaces, 72 no. bicycle spaces and 8 no. motorbike parking spaces all at lower ground floor level. Permission is also sought for an energy centre building; a service yard including plant, ESB substation and bin stores; 94 no. car parking spaces, 12 no. bicycle spaces and 2 no. motorbike spaces at surface level; foul pump station and associated works; 2 no. vehicular access roads to serve the development including works onto existing roundabout; landscaping; footpaths; public lighting; boundary treatments; and all associated site and engineering works necessary to facilitate the development.
F18A/0198	Drynam Road, Barrysparks, Commons East, Crowcastle, Swords, Co. Dublin.	Development at an existing pharmaceutical manufacturing facility (approximately 13.4 hectares). The development consists of the construction of a biopharmaceutical manufacturing campus with a total additional floor area of 12,046 square metres and specifically provides for:- (a) the conversion of an existing warehouse building to a biopharmaceutical manufacturing processes building which will require internal alterations, extension and modifications to the existing elevations; (b) the conversion of an existing manufacturing building to a central utilities and laboratory building requiring internal alterations, extension and modifications to the elevations including the addition of 3 no. flue stacks (to a maximum height of 18.68 metres); (c) construction of a two-storey quality control laboratory and single-storey with mezzanine warehouse building; (d) extension of the existing central spine corridor to provide connectivity to the new laboratory and warehouse buildings, including provision of new staff entrance; (e) demolition of existing utilities plant and buildings comprising 2 no. boiler rooms, compressor room, electrical room, generator compound, water tank and pump house, and 2 no. store buildings; (f) provision of new logistics yard and new ancillary external utilities yard comprising 2 no. electrical switch room buildings, water pump and treatment building, bunded water tank, bunded gas and diesel storage tanks, 3 no. emergency generators and waste water management facility; (g) installation of mechanical plant to the roof of the existing administration, laboratory and canteen building (h) all ancillary site works including diversion and partially reopening of the existing culverted stream within the site; underground services; surface water attenuation tank; modifications to the internal road network, modifications to existing car parking including removal of 212 spaces; 2 no. new bicycle shelters; lighting; CCTV; soft and hard landscaping. An Environmental Impact assessment Report (EIAR, formerly known as and EIS) and Natura Impact Statement (NIS) have been prepared and will be submitted to the Planning Authority with the application. The EIAR and NIS will be available for inspection or purchase at a fee not exceeding the reasonable cost of making a copy during office hours at the offices of the Planning Authority. The proposed development is for the purposes of an activity requiring an application to the Environmental Protection Agency for a licence under the Industrial Emissions Directive.
F18A/0467	Site of the existing temporary car park permitted under application register reference F14A/0041, Airside Business Park, Crowcastle, Swords, Fingal, Co. Dublin.	The construction of a six-storey office building plus rooftop plant, signage, bins stores, ESB substation, generator, and cycle shelters at Site A1. The proposed development will also consist of 593 no. surface car parking spaces, of which 160 no. spaces will be provided at Site A1 and 433 no. spaces will be provided at Site A2. The proposed 433 no. surface car parking spaces at Site A2 will include the continuation of use of the 235 no. surface car parking spaces permitted at Site A1 under application register reference F14A/0041, to be relocated to Site A2 for a further temporary period of 5 years. The proposed development will also consist of the construction of a new vehicular access off Lakeshore Drive to Site A2 (Site A1 will use the existing access of Lakeview Drive (the secondary access via the adjacent Ryanair HQ development will be removed), and a new pedestrian crossing over Lakeshore Drive connecting Site A1 with Site A2, including footpath, and all site development, drainage and landscaping works. A Natura Impact Statement (NIS) has been prepared in respect of the proposed development on Site of the existing temporary car park permitted under application register reference F14A/0041, bounded by Lakeview Drive and Lakeshore Drive (Site A1), as well as adjacent lands to the east of Lakeshore Drive (Site A2),

There are no significant projects that have been granted planning or currently under construction, proximate to the development, that could potentially cause in combination effects on European sites.

Given this, it is considered that in-combination effects with other existing and proposed developments in proximity to the application area would be unlikely, neutral, insignificant and localised. It is concluded that no significant effects on Natura 2000 sites will occur due to the proposed development in combination with other projects. No in-combination effects are foreseen.

Following the implementation of mitigation measures, no significant effects are likely from in-combination effects.

Conclusions

The proposed development site is located within suburban environment. The nearest European sites are Malahide Estuary SAC & SPA (1.9 km). There is no direct hydrological pathway to any European Sites. There is an indirect hydrological connection to marine-based Natura 2000 sites via the proposed foul and surface water drainage strategy. Foul wastewater will be directed to an existing public foul network. Foul wastewater will ultimately be treated along this public network. After attenuation onsite, surface water drainage will be directed to an existing 1200mm dia. public surface water drainage pipe located to the south-east of the subject site. This network is located within the River Gaybrook catchment, a watercourse that ultimately discharges to the marine environment at Malahide Estuary. However, given the minimum distance to European Sites within Malahide Estuary along this pathway (1.9 km), the scale of the proposed development, any silt or pollutants that may enter the Gaybrook Stream will settle, be dispersed, or diluted within the marine environment in the Irish Sea and will not impact on this downstream European Sites. In the absence of mitigation, no significant effects on European sites are likely. No specific mitigation is required to prevent impacts on European sites.

Having taken into consideration foul and surface water drainage from the proposed development, the distance between the proposed development to designated conservation sites, lack of direct hydrological pathway or biodiversity corridor link to conservation sites, and the dilution effect with other effluent and surface runoff, it is concluded that the proposed development would not give rise to any significant effects to designated sites. The construction and operation of the proposed development will not impact on the conservation objectives of qualifying interests of European sites.

This report presents a Stage 1 Appropriate Assessment Screening for the Proposed Development, outlining the information required for the competent authority to screen for appropriate assessment and to determine whether or not the Proposed Development, either alone or in combination with other plans and projects, in view of best scientific knowledge, is likely to have a significant effect on any European or European site.

On the basis of the content of this report, the competent authority is enabled to conduct a Stage 1 Screening for Appropriate Assessment and consider whether, in view of best scientific knowledge and in view of the conservation objectives of the relevant European sites, the Proposed Development, individually or in combination with other plans or projects is likely to have a significant effect on any European site.

Data Used for AA Screening

NPWS site synopses and Conservation objectives of sites within 15km were assessed. The most recent SAC and SPA boundary shapefiles were downloaded and overlaid on Bing Road maps and satellite imagery. A site visit was carried out on the 15th August 2023, following completion of the desk-based assessment. A second site visit was carried out by Emma Peters (Altemar) in relation to flora and fauna. A bat survey was carried out by Altemar on the 26th September 2023.

Findings of No Significant Effects Report

Details of Project	Appropriate Assessment Screening for a proposed residential development at Holywell, Swords, Co. Dublin.
Name and Location of EUROPEAN Sites Within 15km	Malahide Estuary SAC Baldoyle Bay SAC Rogerstown Estuary SAC North Dublin Bay SAC Rockabill to Dalkey Island SAC Ireland's Eye SAC Howth Head SAC South Dublin Bay SAC Lambay Island SAC Malahide Estuary SPA Baldoyle Bay SPA North-West Irish Sea cSPA Rogerstown Estuary SPA North Bull Island SPA South Dublin Bay and River Tolka Estuary SPA Ireland's Eye SPA Howth Head Coast SPA Lambay Island SPA
Project Description	Residential Development
Is the Project directly connected with the management of the European site?	No
Details of any other projects or plans that together with this project could affect the EUROPEAN site	None
The assessment of significant effects	
Describe how the project is likely to affect the EUROPEAN site	No Impact Predicted
Response to consultation	N/A
Data collected to carry out the assessment	Site Visit and Supporting NPWS data.
Who carried out the assessment	Altemar Ltd.
Sources of data	NPWS website, standard data form, conservation objectives data of the site and references outlined in the AA Screening Report.
Explain why the effects are not considered significant	No European sites are within the zone of influence of these works. There is no direct hydrological pathway to European sites. Having taken into consideration the foul and surface water discharge from the proposed development is to combined sewer, the distance between the proposed development site to designated conservation sites, lack of direct hydrological pathway to conservation sites, and the dilution effect and treatment of effluent and surface runoff, it is concluded that, in the absence of mitigation, the proposed development would not give rise to any significant effects to designated sites.
Level of assessment completed	Stage 1 Screening
Overall conclusions	On the basis of the content of this report, the competent authority is enabled to conduct a Stage 1 Screening for Appropriate Assessment and consider whether, in view of best scientific knowledge and in view of the conservation objectives of the relevant European sites, the Proposed Development, individually or in combination with other plans or projects is likely to have a significant effect on any European site.

References

1. Department of Environment Heritage and Local Government Circular NPW 1/10 and PSSP 2/10 on Appropriate Assessment under Article 6 of the Habitats Directive – Guidance for Planning Authorities March 2010.
2. Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities, Department of the Environment, Heritage and Local Government 2009; http://www.npws.ie/publications/archive/NPWS_2009_AA_Guidance.pdf
3. Managing NATURA 2000 Sites: the provisions of Article 6 of the Habitats Directive 92/43/EEC, European Commission 2000; http://ec.europa.eu/environment/nature/Natura2000/management/docs/art6/provision_of_art6_en.pdf
4. Assessment of Plans and Projects Significantly Affecting NATURA 2000 Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC; http://ec.europa.eu/environment/nature/Natura2000management/docs/art6/Natura_2000_assess_en.pdf
5. Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission; http://ec.europa.eu/environment/nature/Natura2000/management/docs/art6/guidance_art6_4_en.pdf
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Appendix I- Habitats and Species

A site assessment was carried out on 15th August 2023 and 26th September 2023. Habitats within the proposed site were classified according to Fossitt (2000) (Figure AI-1).

Fossitt (2000) Classification of the Site of the Proposed Project

Figure AI-1. *Fossitt (2000) habitat map.*

WL1- Hedgerow

The hedgerow lined the North and east boundary of the site consisting primarily of brambles (*Rubus fruticosus agg*), elder (*Sambucus nigra*), sycamore (*Acer pseudoplatanus*), ash (*Fraxinus excelsior*), hawthorn (*Crataegus monogyna)* and elm (*Ulmus spp.*). These trees were bound with ivy (*Hedera hibernica*). The hedgerow included blackthorn (*Prunus spinosa*), willow (*Salix spp*.), hedge bindweed (*Calystegia sepium*), nettles (*Urtica dioica*), buttercup (*Ranunculus spp.*), fools parsley (*Aethusa cynapium*), thistles (*Cirsium spp.*), docs (*Rumex spp.*), ivy (*Hedera helix*), holly (*Ilex aquifolium*), hogweed (*Heracleum sphondylium*), gorse (*Ulex europaeus*), honeysuckle (*Lonicera periclymenum*), dog-rose (*Rosa canina agg.)* and cleavers (*Galium aparine*).

Plate 1: Hedgerow habitat.

GS2- Dry meadows and grassy verges

The majority of the site consisted of this habitat. Flora identified here was rough hawksbit (*Leontodon hispidus*), knapweed (*Centaurea nigra*), dandelion (*Taraxacum officinale agg.*), ragwort (*Jacobaea vulgaris*), red bartsia (*Odontites vernus*), red clover (*Trifolium pratense*), white clover (*Trifolium repens*), ribwort plantain (*Plantago lanceolata*), greater plantain (*Plantago major*), selfheal (*Prunella vulgaris*), black medic (*Medicago lupulina*), bramble (*Rubus fruticosus agg*), docs (*Rumex spp.*), tufted vetch (*Vicia cracca*), silverweed (*Potentilla anserina*), yellowrattle (*Rhinanthus minor),* nettle (*Urtica dioica*), great willowherb (*Epilobium hirsutum),* hogweed (*Heracleum sphondylium*), pineappleweed (*Matricaria discoidea*), birdsfoot trefoil (*Lotus corniculatus*), hawthorn (*Crataegus* monogyna) bushes, elm (*Ulmus spp.*) sapling, groundsel (*Senecio vulgaris*), hedge bindweed (*Calystegia sepium*), cow parsley (*Anthriscus sylvestris*), gorse (*Ulex europaeus*) bushes, meadow vetchling (*Lathyrus pratensis*), tree mallow (*Malva arborea*) and common fleabane (*Pulicaria dysenterica*). This habitat is largely unsuitable as foraging grounds for significant numbers of SCI from nearby SPAs, such as Brent geese, who typically prefer well managed grassland (*Handby et al*., unpublished report 2022[2]).

[2] Handby, Bearhop and Colhoun (2022) Understanding patterns of urban habitat use in overwintering light-bellied Brent geese in Dublin, Ireland (Unpublished Project Report in collaboration with Irish Brent Goose Research Project)

Plate 2: View of grass meadow.

Evaluation of Habitats

The proposed development site consists of a dry meadow bordered by hedgerow and wooden fence. Outside the listed vegetation of the site is built land of footpath, road and a housing estate to the east of the site. Based on information from satellite imagery the site doesn't seem to be managed for any particular purpose. No protected habitats were noted on site. GS2- Dry meadow and grassy verges is an uncommon habitat in Ireland and usually found on roadside grassy verges, making this the most important habitat on this sight for wildlife pathways and foraging purposes. No pond and pools were found onsite.

Plant Species

The plant species encountered at the various locations on site are detailed above. No rare or plant species of conservation value were noted during the field assessment. Records of rare and threatened species from NBDC and NPWS were examined. No rare or threatened plant species were recorded within the proposed development site. No invasive plant species were noted on site.

Fauna

No mammal of conservation importance was noted on site. Records of rare and threatened species from NBDC and NPWS were examined. No rare or threatened terrestrial faunal species were recorded within the proposed site. No evidence of the resting or breeding places of badgers (*Meles meles*) was noted on site during the in season faunal assessment. Pathways through the hedges and shrubs were noted on this sight. Although no living areas of terrestrial animals were sighted, this site is likely used for foraging and a wildlife corridor.

Bats

A bat assessment was carried out and the results of the survey are seen in Appendix I. There were no seasonal or climatic constraints as the survey was undertaken within the active bat season in good weather conditions with temperatures of 10 C after dark. Winds were very light and there was no rainfall. The survey was carried out with an Echo Meter Touch Pro 2 bat detector. Bat foraging was noted across the site by one species of bat, the Lesser Noctule (*Nyctalus leisleri*). Foraging activity was noted along the southern hedgerow.

Birds

Birds noted on site are seen in Table 3. It should be noted that GS2 - Dry Meadow habitat is largely unsuitable as foraging grounds for significant numbers of SCI from nearby SPAs, such as Brent geese, who typically prefer well managed grassland (Handby *et al.,* unpublished report 2022). Handby, Bearhop and Colhoun (2022) Understanding patterns of urban habitat use in overwintering light-bellied Brent geese in Dublin, Ireland (Unpublished Project Report in collaboration with Irish Brent Goose Research Project).

Common Name	Scientific Name	Status
Blue tit	*Cyanistes caeruleus*	Green
Woodpigeon	*Columba palumbus*	Green
Blackbird	*Turdus merula*	Green
Magpie	*Pica pica*	Green