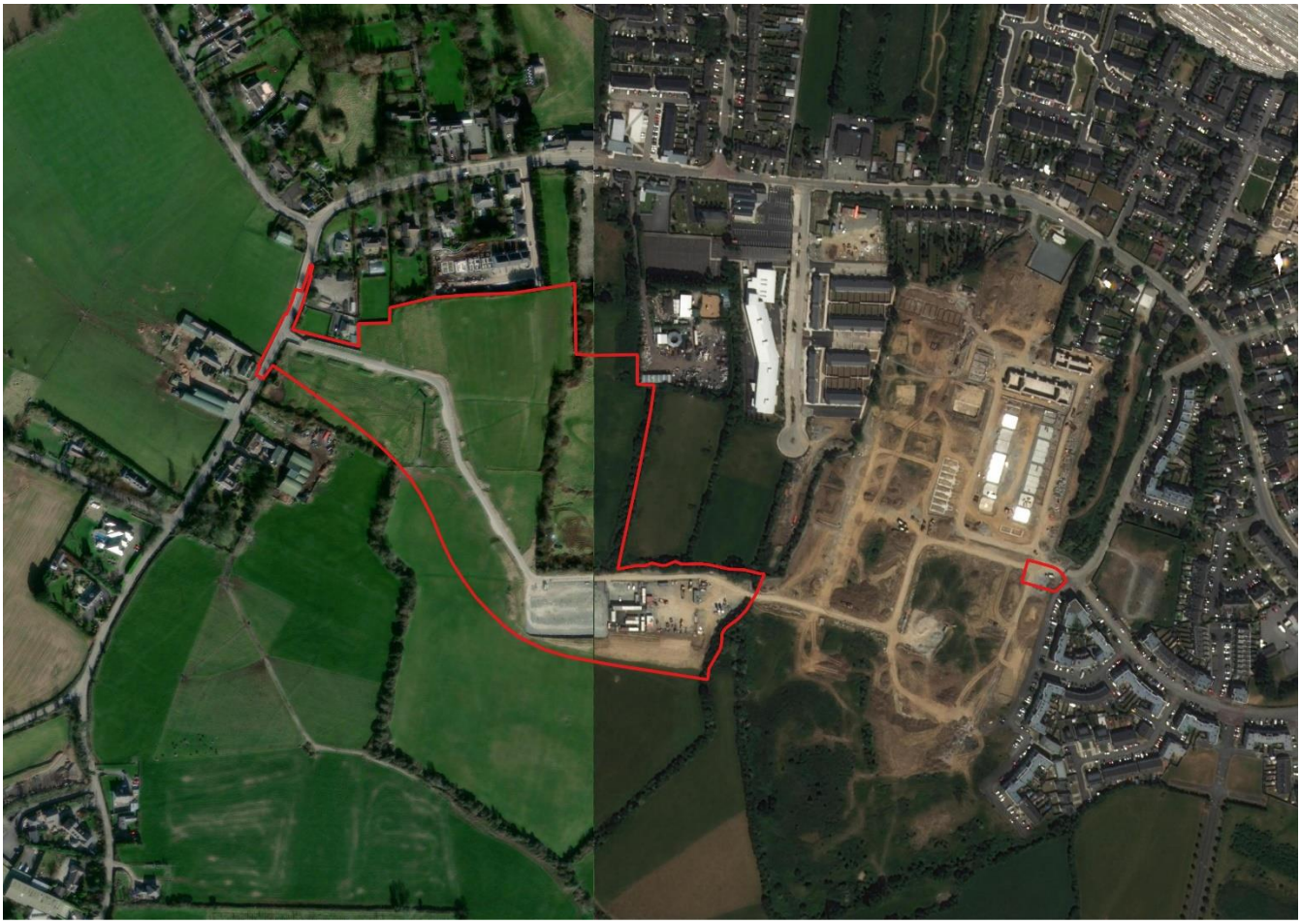
ALTEMAR
Marine & Environmental Consultancy

Appropriate Assessment Screening for a proposed strategic housing development at Newcastle South, Co. Dublin.



11th June 2022

Prepared by: Bryan Deegan (MCIEEM) of Altemar Ltd.
On behalf of: Cairn Homes Properties Limited.

Altemar Ltd., 50 Templecarrig Upper, Delgany, Co. Wicklow. 00-353-1-2010713. info@altemar.ie
Directors: Bryan Deegan and Sara Corcoran
Company No.427560 VAT No. 9649832U
www.altemar.ie

Document Control Sheet			
Project	Appropriate Assessment Screening for a proposed strategic housing development at Newcastle South, Newcastle, Co. Dublin.		
Report	Appropriate Assessment Screening		
Date	11th June 2022		
Version	Author	Reviewed	Date
Draft 01	Bryan Deegan	Jack Doyle	04th May 2022
Planning	Bryan Deegan		11th June 2022

Table of Contents

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 Cairn Homes Properties Limited. Cairn Homes Properties Limited intend to apply for planning permission for a proposed strategic housing development at Newcastle South, Newcastle, 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 27 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

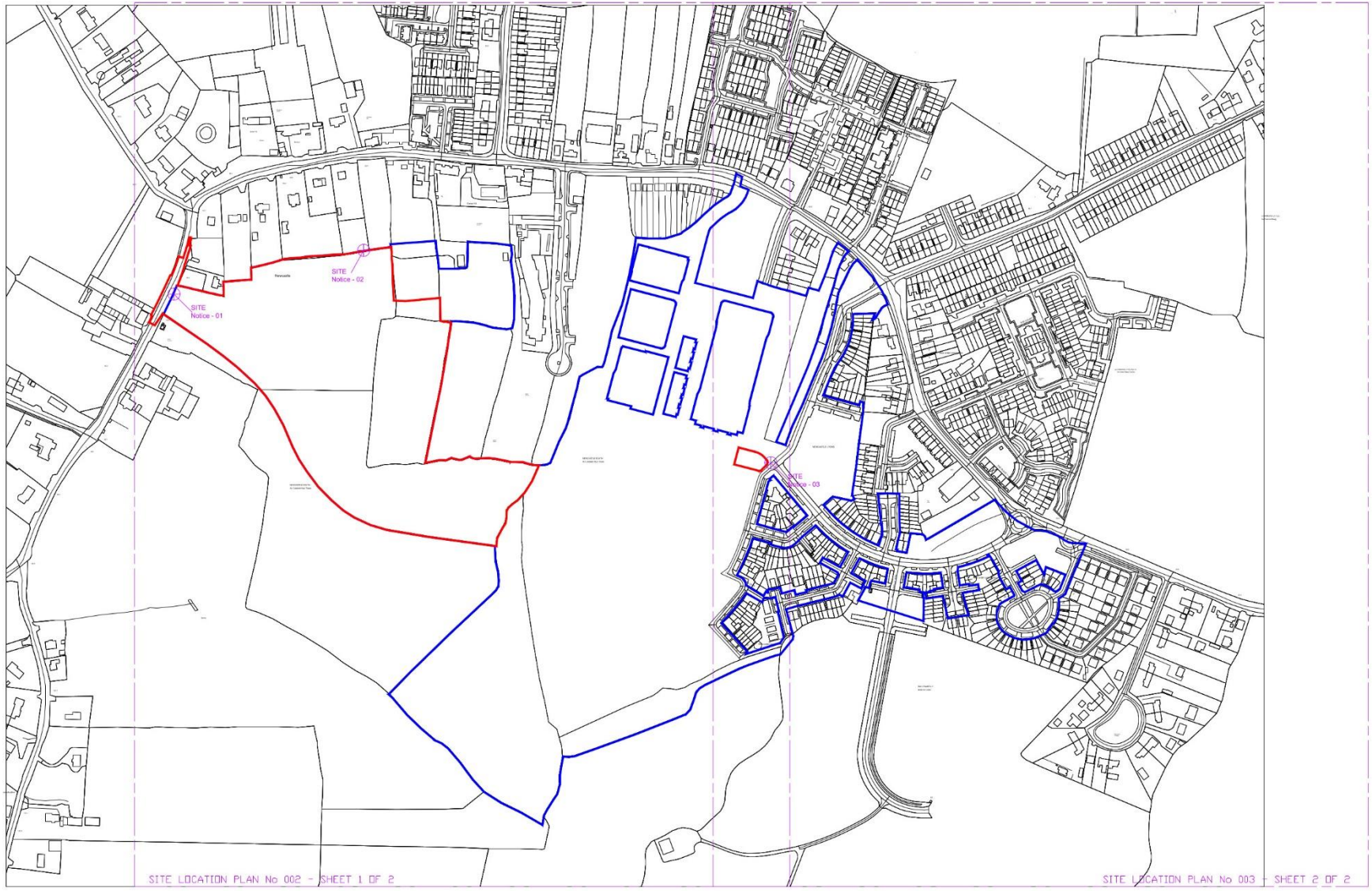
Cairn Homes Properties Ltd. Intend to apply to An Bord Pleanala for permission for a strategic housing development at this site on lands at Newcastle South, Newcastle, Co. Dublin.
The development will consist of the construction of 280 no. dwellings, a creche, and open space at this site within the townland of Newcastle South, Newcastle, Co. Dublin, on lands of c. 8.47 hectares (2 no. sites comprising main development site (8.4 ha.) and site relating to creche c. 0.07 ha. in 'Graydon' as follows:

A) 128 no. 2 storey houses (8 no. 2 bedroom houses, 94 no. 3 bedroom houses, 25 no. 4 bedroom houses and 1 no. 5 bedroom house;
B) 116 no. apartments in 2 no. 5 storey buildings comprising (54 no. 1 bedroom apartments & 62 no. 2 bedroom apartments, all with terrace or balcony along with solar panels and green roofs at roof level as well as telecommunications infrastructure comprising 9 no. support poles on ballast mounts (to accommodate 1No. 2m 2G/3G/4G antenna & 1No. 5G antenna each) & 3 no. poles on lift overrun (to accommodate 2No. Ø0.3m Microwave links each at roof level of Apartment building B, together with associated equipment and cabinets/shrouds);
C) 36 no. apartments/duplex apartments in 3 no. 3 storey buildings – (18 no. 2 bedroom apartments and 18 no. 3 bedroom duplex apartments) all with terrace;
D) Amendment to permitted Creche (c. 518sqm) in 'Graydon' (ABP References: TA06S.305343 & ABP-305343-19) to now provide a Creche of c. 778 sq. m of 2 no. storeys;
E) Open space, hard and soft landscaping (including public lighting & boundary treatment), communal open space for duplex apartments and apartments; along with single storey bicycle/bin stores and ESB substations;
F) Vehicular access from the Athgoe Road from a new signalised junction along with upgrades to footpath and pedestrian crossing as well as provision of vehicular/pedestrian/cycle link to permitted 'Graydon' (TA06S.305343) 'Newcastle Boulevard' to the east, as well as 423 no. car parking spaces and 370 no. bicycle spaces and all internal roads, cycleways, green routes and paths;
G) Provision of Surface water attenuation measures and underground attenuation systems, connection to water supply, and provision of foul drainage infrastructure as well as underground local pumping station to Irish Water specifications and all ancillary site development/construction/landscaping works.

In order to provide sufficient additional detail in relation to the project additional information in relation to the project layout, landscape, drainage, flood risk and hydrological risk assessment has been provided. The proposed site outline, location, masterplan, and elevations are demonstrated in Figures 1-6.

Figure 1. *Site outline and location on satellite imagery (ESRI)*

Figure 2. *Outline of proposed site.*



Description:
Digital Cartographic Model (3CM)

Publisher / Source:
Ordnance Survey Ireland (OSi)

Data Source / Reference:
PRIME2

File Format:
Autodesk AutoCAD (DWG_R2013)

File Name:
v_581303S3_1.dwg

Clip Extent / Area of Interest (AOI)
ULX,LLY= 699282.0,727861.0
LRX,LRY= 700866.0,727861.0
ULX,LLY= 699282.0,728970.0
URX,LRY= 700866.0,728970.0

Projection / Spatial Reference:
Projection= IRENET95_Irish_Transverse_Mercator

Centre Point Coordinates:
X,Y= 700074.0,7284155

Reference Index:
Map Series | Map Sheets
1:2,500 | 3388-A
1:2,500 | 3387-B

Data Extraction Date:
Date= 17-Jul-2020

Source Data Release:
OSi_MS Release V1130109a

Product Version:
Version= 1.3

License / Copyright:
Ordnance Survey Ireland Terms of Use apply.
Please visit www.osi.ie/about/terms-conditions.

Ordnance Survey Ireland Licence No. AR0102322
© Ordnance Survey Ireland /Government of Ireland.

NOTES / LEGEND

CURRENT APPLICANT SITE

OTHER LANDS WITHIN OWNERSHIP OF APPLICANT

North Point:

Rev:	Date:	Description:	By:
01	03/05/2022	DRAFT ISSUE	NN

Drawing Status: PLANNING

Client: CAIRN HOMES PROPERTIES LIMITED

Project: Newcastle South

Drawing: Site Overview Master Plan

Date: 09/04/2022 Scale: 1:2500 @ A1 Int. Job No: 20023

Drawing No: MOLA - XX - 00 - DR - A - XX - 001 - S0 Stage: 3 Revision: 01

MOLA Architecture
2 Donnybrook Road
Donnybrook
Dublin D04 NN50
Ireland
Telephone +353 1 218 3500
www.mola.ie

Notes:
Do not scale. Use figured dimensions only.
This drawing is to be read in conjunction with all relevant specifications and drawings.
All dimensions to be checked on site.
In the event of any discrepancies between drawings, the contractor is to inform the Architect immediately.

Figure 3. *Site location plan*

Figure 4. *Proposed site masterplan*

1 APARTMENT A - ELEVATION A
1 : 100

2 APARTMENT A - ELEVATION B
1 : 100

3 APARTMENT A - ELEVATION C
1 : 100

NOTES / LEGEND

Key Plan:

Rev:	Date:	Description:	By:
1	22/10/21	ISSUE FOR PLANNING	MOLA

Drawing Status: PLANNING

Reply Address: 2 Donnybrook Road, Donnybrook, Dublin 4, Ireland. Telephone +353 1 218 3909. www.molaarchitecture.com

Notes: Do not scale. Use figured dimensions only. This drawing is to be read in conjunction with all relevant specifications and drawings. All dimensions to be checked on site. In the event of any discrepancies between drawings the contractor is to inform the Architect immediately.

MOLA
■ ARCHITECTS ■ PLANNERS ■ URBAN DESIGNERS ■

Client: CAIRN Homes Properties Ltd.
Project: Newcastle South
Drawing: Apartment A Elevations Sheet 1 of 2

Date	Scale	Drawn By	Approved By	Mola Job No
22/10/21	1 : 100	KP	NN	20023

Project No. | Phase | System | Zone | Level | Type | Originator | Discipl. | Sheet No. | Rev.
NCS21-2-02- BX- ZZ- DR- MOLA- A- 0514 1

Figure 5. *Proposed elevations (Apartment A)*

1 APARTMENT B - ELEVATION A
1 : 100

2 APARTMENT B - ELEVATION B
1 : 100

3 APARTMENT B - ELEVATION C
1 : 100

NOTES / LEGEND

Key Plan:

Rev:	Date:	Description:	By:
1	22/10/21	ISSUE FOR PLANNING	MOLA

Drawing Status: PLANNING

Reply Address:
2 Donnybrook Road,
Donnybrook,
Dublin 4,
Ireland
Telephone +353 1 218 3900
www.molaarchitecture.com

Notes:
Do not scale.
Use figured dimensions only.
This drawing is to be read in conjunction with all relevant specifications and drawings.
All dimensions to be checked on site.
In the event of any discrepancies between drawings the contractor is to inform the Architect immediately.

MOLA
ARCHITECTS ■ PLANNERS ■ URBAN DESIGNERS

Client: CAIRN Homes Properties Ltd.
Project: Newcastle South
Drawing: Apartment B Elevations Sheet 1 of 2

Date	Scale	Drawn By	Approved By	Int. Job No.
22/10/21	1 : 100	KP	NN	20023

Project No.	Phase	System	Zone	Level	Type	Originator	Discipl.	Sheet No.	Rev.
NCS21	2-02	BX	ZZ	DR	MOLA	A	0516	1	

Figure 6. *Proposed elevations (Apartment B)*

Landscape

A Landscape Strategy has been prepared by Murray & Associates to accompany this planning application. In relation to the proposed design approach for the subject site, this report outlines the following:

'Design Approach & Open Space Planning Context

The design intent is to create a high quality and appropriate landscape for future residents, which will meet their recreational needs and provide an attractive visual setting and associated social amenity spaces. The principles of inclusivity for all age groups, universal accessibility and sustainable development are applied to ensure an inclusive and environmentally responsible design solution. The objective of the landscape strategy for the proposed development is not simply to apply greenery to open areas but to place the new residential and community facilities within a cohesive landscape that responds to and integrates the proposed development within the site. The landscape developments that are proposed are in accordance with the relevant Green Infrastructure policies of the South Dublin County Council Development Plan 2016 - 2022 and the Newcastle Local Area Plan 2012. The Local Area Plan seeks to create a permeable network of green infrastructure and open spaces across the LAP lands. This allows for the creation of a series of local parks within easy walking distance of future residents, along with a larger village park area (Taobh Chnoic Park) zoned to the south of the lands. Each of the smaller open spaces will cater for active and passive needs while the Taobh Chnoic Park will cater for more formal play activities, with the inclusion of a senior size playing pitch, a multi-use games area and a playground catering for a large range of age groups. These open spaces are linked with a Greenway pedestrian/cycle network. This network links existing developed areas to the east to the centre of Newcastle to the north through the new development and continues out to the existing roadway on the western side of Newcastle. The proposed greenway incorporates existing hedgerows where feasible and is separated from the proposed roadway system as much as possible.

Burgage Plots

Overarching this permeable pedestrian-focused network is the existing burgage plot and hedgerow system. The LAP sets out to retain, incorporate and reinstate the existing burgage plot boundaries associated with Newcastle. Within the proposed development the creation of successful streets and urban configurations has been carefully balanced with the need to retain the burgage character of the landscape. A study of existing and proposed hedge typology has been undertaken, which, along with recommendations from the LAP, and has formed the basis of a system of retention and reinstatement of plot boundaries and hedgerows.

Landscape Layout and Design

The site layout proposal aims to create a unifying streetscape which is rich in detail and diverse in textural and spatial qualities, with open spaces and boundary planting lending a verdant and visually attractive atmosphere. The open spaces are directly over-looked by dwellings, providing passive surveillance for safety. Within the open spaces there are areas for informal play, casual recreation and passive leisure. The quality of these spaces is enhanced by the inclusion of features such as, seating, paths, native planting and landform, and the utilisation of environmentally appropriate materials. Natural Play elements will be incorporated within the spaces. Natural Play incorporates designed elements that enable play spaces to blend in with their surroundings and encouraging interaction with the natural landscape. A restrained palette of materials will also be used to integrate the proposed architectural forms and materials within the landscape.'

The proposed landscape masterplan is demonstrated in Figure 7.

Figure 7. *Proposed landscape masterplan*

Drainage

An Infrastructure Design Report has been prepared by DBFL Consulting Engineers to accompany this planning application. This report outlines the following foul and surface water drainage strategy for the proposed development site:

Foul Water

In relation to existing foul drainage, this report outlines the following:

'*The existing site is predominantly greenfield, and the topography of the site generally falls to the north towards Main Street. A network of existing drainage ditches currently drains the site. Drainage infrastructure has been constructed as part of the Graydon development (under planning reference ABP 305343-19) to the east of the subject site in accordance with the Greater Dublin Strategic Drainage Study (GDSDS). The subject sites surface water network will not connect to any surface water infrastructure constructed under the Graydon development. There are existing 225mm surface water sewers located in Athgoe road to the west of the subject site.*'

In relation to the proposed foul wastewater design strategy, this report outlines the following:

'The proposed foul drainage system for the subject site will connect to the existing 225mm diameter foul sewer in the Graydon development provided under planning reference ABP 305343-19. A Wastewater Pumping Station is proposed to serve the majority of the subject site and forms part of this planning application. Foul drainage from the proposed development will drain to a proposed pumping station at the north of the site by gravity before being pumped back to a stand-off manhole at the south of the site and discharging to Graydon development infrastructure. The capacity of the foul infrastructure in the Graydon development was reviewed and found to have to have sufficient capacity to accommodate the subject site. The Creche will use the permitted Graydon infrastructure.'

Further, in relation to Foul Environmental Impacts, this report outlines the following:

'*This application comprises 280 residential units and a creche in the existing Graydon development. The majority of the development will discharge by gravity to a proposed pumping station at the subject site before being pumped back to the Graydon development where by gravity sewers it will discharge to the existing Newcastle Pumping Station which pumps foul water to a gravity sewer at the Rathcoole Interchange which ultimately discharges to Ringsend waste water treatment works. The estimated average daily load from the development is 190m3 with a total average BOD loading of 32 Kg per day. See below for calculations.'*

,

Surface Water

In relation to existing surface water drainage, this report outlines the following:

'The existing site is predominantly greenfield, and the topography of the site generally falls to the north towards Main Street. A network of existing drainage ditches currently drains the site. Drainage infrastructure has been constructed as part of the Graydon development (under planning reference ABP 305343-19) to the east of the subject site in accordance with the Greater Dublin Strategic Drainage Study (GDSDS). The subject sites surface water network will not connect to any surface water infrastructure constructed under the Graydon development. There are existing 225mm surface water sewers located in Athgoe road to the west of the subject site.

An existing "pond" is identified on the Newcastle LAP, 2012 in the south western area of the subject site. DBFL have reviewed this area on site and no pond was present but it appears there is a depression in this area of the site based on the topography. Some evidence of an overland flow route is present on historic aerial mapping.'

In relation to the proposed surface water drainage strategy for the proposed development site, this report outlines the following:

'*General*

An overall surface water drainage strategy was developed by DBFL Consulting Engineers for the overall development site including the Graydon development under planning reference ABP 305343-19 and future zoned lands. This strategy is shown on drawing number 210026-DBFL-CS-SP-DR-C-1202 which

outlines each catchment and its corresponding attenuation facility. Surface water runoff from the development will be attenuated to greenfield runoff rates (Qbar) in accordance with the Greater Dublin Strategic Drainage Study (GDSDS).

Where possible, attenuation facilities have been designed as above ground storage in order to maximize the use of SuDs and limit the requirement of underground tanks to promote biodiversity. This approach was adopted in line with SDCCs Sustainable Drainage Explanatory Design Guide 2022. The open ponds have been designed to cater for the 1:5 year storm in a low flow channel which will be predominantly wet and the 1:100 year storm will be stored at the next level which will be predominantly dry and lend itself to a usable amenity space except in adverse weather conditions. Where design constraints did not allow for open ponds, attenuation facilities will store up to the 30-year critical storm in underground stormtech attenuation systems and shallow detention basins will be used to store surface water for storms between the 30 year and the 100 year critical storms. The detention basins will be incorporated into the landscape plan with gently sloping side slopes. The maximum open water depth in the detention basins will be 1.14m in the 100 year critical storm. This arrangement ensures that the detention basins remain mainly dry and usable as an amenity space, with the detention basins only utilised during extreme events.'

SUDS

In accordance with the GDSDS it is proposed to use Sustainable Urban Drainage systems (SUDS) for managing storm-water for the proposed development. The aim of the SUDS strategy for the site will be to;

- *Attenuate storm-water runoff.*
- *Reduce storm-water runoff.*
- *Reduce pollution impact.*
- *Replicate the natural characteristics of rainfall runoff for the site.*
- *Recharge the groundwater profile'*

'An assessment of the potential SuDS that could be incorporated within the site was conducted using the SuDS Manual, CIRIA 753. The SuDS elements which were found applicable to the proposed scheme design and layout include the following:

1. *Permeable paving driveways for all on-curtilage driveways*
2. *Greenlinks to drain to swales for reduction and treatment of run-off*
3. *The attenuation storage systems will be an on-line system for treatment of run-off. The storage systems will be designed to maximise water quality.*
4. *Above ground attenuation provided where possible*
5. *Down pipes from roof surfaces diverted into driveway permeable paving to allow infiltration of run-off from roofs.*
6. *Green roofs at apartment blocks*
7. *Gully connections to tree pits*
8. *A petrol interceptor to be provided before the outfalls from the Subject Site.*

The incorporation of the above SuDS elements will provide a sustainable manner in which to disperse surface water from the site, encourage groundwater recharge and provide treatment of run-off and subsequent improvement of discharge quality.'

'Surface Attenuation Storage

Surface water run-off from the subject site, future phases and zoned lands as outlined on drawing number 210026-DBFL-CS-SP-DR-C-1202) will be attenuated to greenfield runoff rates (Qbar). This is calculated as 24.51l/s using the Institute of Hydrology equation as recommended in the Greater Dublin Strategic drainage Study (GDSDS) based on an area of 11.63Ha which is associated with the greater site area..'

'There are 5 catchments within the subject site. Catchment 2A, catchment 2D, catchment 2E and catchment 2F are within the subject site and will share the same outfall to an existing drainage ditch as catchments 2B, and catchment 2C which are included as future residential developments and will be attenuated. Catchment 3 is also within the subject site and will outfall to the existing surface water network in the Athgoe road. Refer to figure 3.4 below for indicative overall catchments areas within the subject site.'

Figure 3.4 – Overall catchment areas

This report continues:

'*Drainage Ditches and Overland Flow*

A network of drainage ditches exist within the existing hedgerows on the subject site. In general it is proposed to maintain these drainage ditches and incorporate them into the proposed development. Culverts and headwalls are required where roads cross the existing ditches. As noted in Section 3.1 above, an existing "pond" is identified on the Newcastle LAP, 2012 in the south western area of the subject site. DBFL have reviewed this area on site and no pond was present but it appears there is a depression in this area of the site based on the topography. Some evidence of an overland flow route is present on historic aerial mapping and appears to be emanating from an existing drainage ditch.

DBFL undertook a catchment analysis on the ditch upstream of the existing depression using the Institute of Hydrology (IOH) formula for small catchments less than 25km2. The flow for the 1% AEP event was calculated as 0.21m3/s. This flow was also multiplied by the Standard Factorial Error (1.65) for the IOH formula factored up by 20% for climate change. The resulting design flow for the culverts sizing was calculated as 0.25m3/s.

A network of drainage ditches exist within the existing hedgerows on the subject site. In general it is proposed to maintain these drainage ditches and incorporate them into the proposed development. Culverts and headwalls are required where roads cross the existing ditches. As noted in Section 3.1 above, an existing "pond" is identified on the Newcastle LAP, 2012 in the south western area of the subject site. DBFL have reviewed this area on site and no pond was present but it appears there is a depression in this area of the site based on the topography. Some evidence of an overland flow route is present on historic aerial mapping and appears to be emanating from an existing drainage ditch.

DBFL undertook a catchment analysis on the ditch upstream of the existing depression using the Institute of Hydrology (IOH) formula for small catchments less than 25km2. The flow for the 1% AEP event was calculated as 0.1m3/s. This flow was also multiplied by the Standard Factorial Error (1.65) for the IOH formula factored up by 20% for climate change. The resulting design flow for the culverts sizing was calculated as 0.2m3/s.

A 600m diameter culvert and swale have been designed to convey any overflow from the depression to the existing ditch network.'

'Pluvial Flooding Provision

The surface water network, attenuation storage and site levels are designed to accommodate a 100 year storm event and includes climate change provision. Floor levels of houses are set above the 100 year flood levels by a minimum of 0.5m for protection. For storms in excess of 100 years, the development has been designed to provide overland flood routes along the various development roads towards the surface water drainage outfall and adjoining roads. Refer to DBFL's Site Specific Flood Risk Assessment for further details.'

'Surface Water Quality Impact

Run-off rates from the site are controlled by vortex flow control devices. Surface water management proposals for the development also incorporate the following to reduce its impact;

- *Designed in accordance with GDSDS requirements;*
- *Incorporates SUDS features e.g. permeable paving in high risk parking areas at the front of houses;*
- *On-line attenuation/infiltration facilities with an oil separator prior to discharge to a public surface water sewer.'*

Hydrological Qualitative Risk Assessment

AWN have been requested by Cairn Homes Properties Limited to carry out a Hydrological Qualitative Risk Assessment for a Residential Development at a site at Newcastle South, Co. Dublin. The report concludes "*A conceptual site model (CSM) has been prepared following a desk top review of the site and surrounding environs. Based on this CSM, plausible Source-Pathway-Receptor linkages have been assessed assuming an absence of any measures intended to avoid or reduce harmful effects of the proposed project (i.e. mitigation measures) in place at the proposed development site.*

During construction and operation phases there is no direct source pathway linkage between the proposed development site and open waters. There is no direct source pathway linkage between the Proposed Development site and any Natura 2000 sites (i.e. South Dublin Bay SAC/SPA/pNHA). There are indirect source pathway linkage from the Proposed Development through the stormwater drainage which discharges into the River Liffey catchment and through the foul sewer which will eventually discharge to the Ringsend WWTP and ultimately discharges to South Dublin Bay SAC/SPA/pNHA. The future development has a peak foul discharge that would equate to 0.08% of the licensed discharge at Ringsend WWTP (peak hydraulic capacity).

Even disregarding the operation of design measures including an attenuation system and petrol interceptors on site, it is concluded that there will be imperceptible impacts from the proposed development to the water bodies due to emissions from the site stormwater drainage infrastructure to the wider drainage network. It should be noted the proposal also includes an attenuation system

and petrol interceptors as part of best practice project design, and these features will provide additional filtration from the site to the drainage network.

It is concluded that there are no pollutant linkages as a result of the construction or operation of the Proposed Development which could result in a water quality impact which could alter the habitat requirements of the Natura 2000 sites within Dublin Bay.

Finally, and in line with good practice, appropriate and effective mitigation measures will be included in the construction design, management of construction programme and during the operational phase of the proposed development. With regard the construction phase, adequate mitigation measures will be incorporated in the Construction Environmental Management Plan (CEMP). These specific measures will provide further protection to the receiving soil and water environments. However, the protection of downstream European sites is in no way reliant on these measures and they have not been taken into account in this assessment."

Flood Risk Assessment

A Site Specific Flood Risk Assessment has been prepared by DBFL Consulting Engineers to accompany this planning application. This report concludes with the following:
'*The Site Specific Flood Risk Assessment for the proposed development was undertaken in accordance with the requirements of the Planning System and Flood Risk Management Guidelines for Planning Authorities", November 2009.*
Following the flood risk assessment stages it was determined that the Site is within Flood Zone C as defined by the Guidelines.
It is concluded that the;
• Residential development proposed is appropriate for the Site's flood zone category.
• Planning System and Flood Risk Management Guidelines Sequential Approach is met and the 'Avoid' principal achieved.
• A Justification Test is not required as the site is in Flood Zone C.
The development was concluded as having a good level of flood protection up to the 100 year return event. For pluvial floods exceeding the 100 year capacity of the drainage system then proposed flood routing mitigation measures are recommended..'

Baseline Environment

Habitats within the combined site were classified according to Fossitt (2000) (Figure 4.10) based on the September 16th 2020, September 30th 2021, 27th April 2022 site visits and the species noted within each habitat are described.

Figure 6. *Proposed drainage layout*

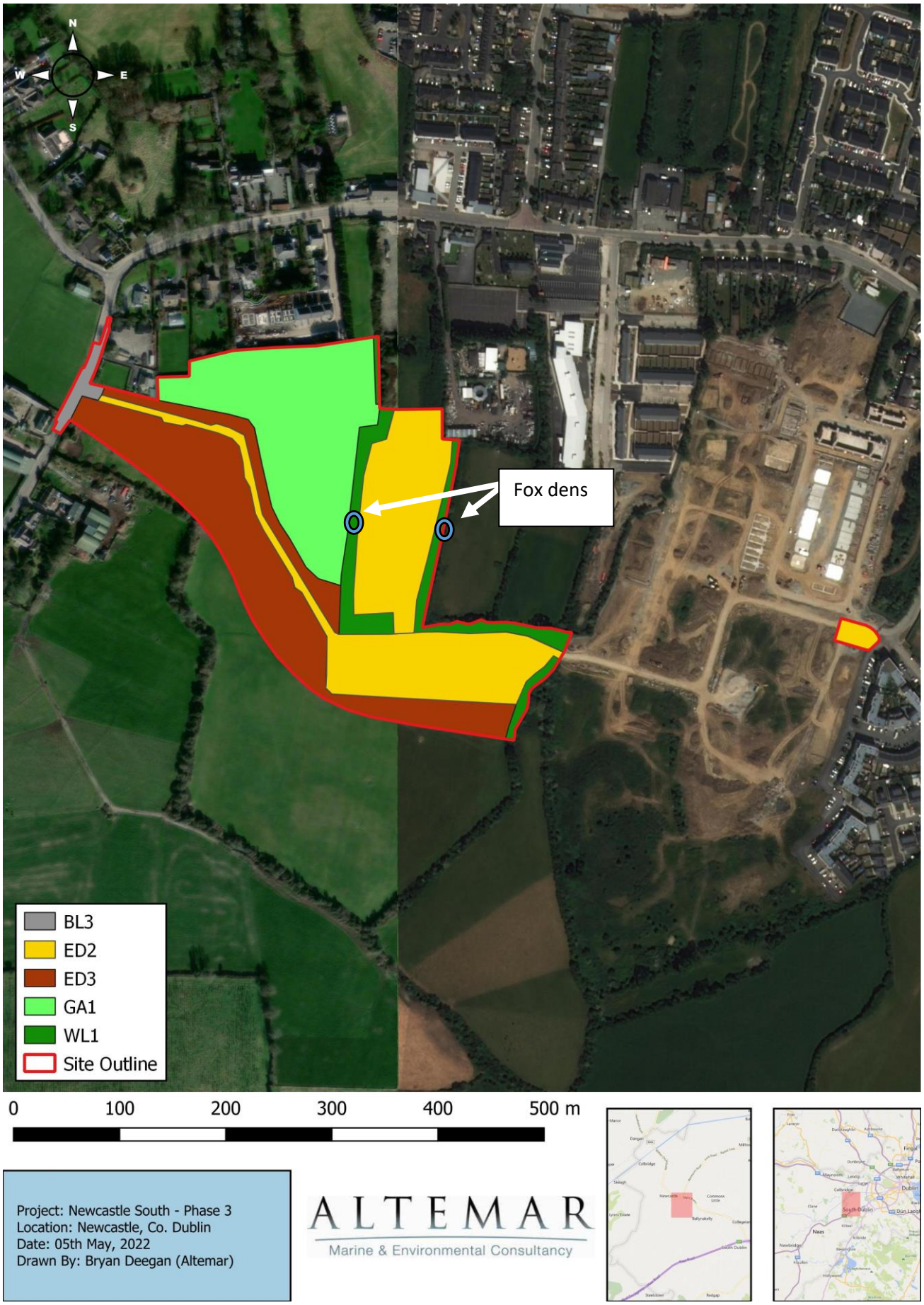


Figure 7 – Fossitt Habitat map of the proposed development site.

Habitats within the proposed development site.

ED3 Recolonising Bare Ground

As can be seen from figure 4.10 a substantial portion of the proposed development site consists of an area of Recolonising Bare Ground. This area appears to have been as a result of previous site clearance works for the adjacent development, including the preparation of a haul road and site compound which are within the site outline and classed as Spoil and Bare Ground (ED2). Based upon an examination of historic satellite imagery (Google Historic Imagery) significant works and site clearance and spoil storage was observed in the area from 2019. Since the initial site clearance for the haul road and site compound, the activity appears to have ceased while vegetation is recolonising the area. Of note is recent site clearance in an adjacent field surrounded by hedgerows. This now is an area of bare ground.

This section of recolonising bare ground is being recolonised by opportunistic species such as rape (*Brassica napus*), bramble (*Rubus fruticosus agg*.), clover (*Trifolium spp*.), docks (Rumex spp.), thistles (*Cirsium arvense & C. vulgare*), plantains (*Plantago spp*.), dandelion (Taraxacum spp.), hoary willowherb (*Epilobium parviflorum*), pineappleweed (*Matricaria discoidea*), cow parsley (*Anthriscus sylvestris*), daisy (*Bellis perennis*), creeping buttercup (*Ranunculus repens*), common vetch (*Vicia sativa ssp. Segetalis*) and oxeye daisy (*Leucanthemum vulgare*).

Plate 1. Recolonising bare Ground (2021)

WL1- Hedgerows

Unmaintained hedgerows are present in the centre and eastern section of the site. Species included ash (*Fraxinus excelsior*), holly (*Ilex aquifolium*), elder (*Sambucus nigra*), blackthorn (*Prunus spinosa*), hawthorn (*Crataegus monogyna*), dog-rose (*Rosa canina*), bramble (*Rubus fruticosus agg*.), sycamore (*Acer pseudoplatanus*), ivy (*Hedera helix*), hedge bindweed (*Calystegia sepium*), honeysuckle (*Lonicera periclymenum*), cleavers (*Galium aparine*), gorse (*Ulex europaeus*), devils poker (*Arum maculatum*) and bramble (*Rubus fruticosus agg*.). Within the central hedgerow is a drainage ditch. The outer edge of the hedgerow were suffering from bramble encroachment.

Bats Bat surveys were carried out and noted Soprano Pipistrelle (*Pipistrellus pygmaeus*), Leisler's Bat (*Nyctalus leisleri*) and common pipistrelle (*Pipistrellus pipistrellus*) foraging on site, primarily in the vicinity of hedgerows.

Plate 2. WL1-Hedgerow.

GA1-Improved Agricultural Grassland

The grassland areas appeared to be regularly managed. Species noted within the Improved agricultural grassland included creeping buttercup (*Ranunculus repens*), dandelion (*Taraxacum spp*.), docks (Rumex spp.), plantains (*Plantago spp*.), meadowsweet (*Filipendula ulmaria*),nettle (*Urtica dioica),* cat's-ear (*Hypochaeris radicata*) and Common Vetch (*Vicia sativa ssp. Segetalis*). No species of conservation importance were noted.

Flora

The plant species encountered at the various locations on site are detailed at 4.3.3 above. No plant species that are rare or are 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 in the vicinity of the proposed site. No invasive plant species that could hinder removal of soil from the site during groundworks, such as Japanese knotweed, giant rhubarb, Himalayan balsam or giant hogweed were noted on site.

Fauna

Amphibians/Reptiles

The common frog (*Rana temporaria*) was not observed on site. Drainage ditches are present on site and the presence of frogs on site cannot be ruled out. The common lizard (*Zootoca vivipara*) or smooth newt (*Lissotriton vulgaris*) were not recorded on site.

Plate 3. Camera trap image of fox beside western den.

Terrestrial Mammals

Badgers have been noted within the 1km^2 grid (NBDC). No terrestrial fauna of conservation importance were noted on the proposed development site. Camera traps were placed at several large burrows on site. A family of foxes are noted in the den to the west seen in figure 4.10.

Bats

Foraging activity on site was moderate on site with soprano pipistrelle (Pipistrellus pygmaeus), Leisler's Bat (Nyctalus leisleri) and a common pipistrelle (Pipistrellus pipistrellus) bats foraging along hedgerows.' 'There is no evidence of a current bat roost on site.

Birds

Although there is construction activity proximate to the site the birds noted on site were traditional hedgerow/farmland species. The following bird species were noted on site:

Table 0.1 – Bird Species noted in the vicinity of the proposed development.

Common Name	***Scientific Name***
Woodpigeon	*Columba palumbus*
Jackdaw	*Corvus monedula*
Goldfinch	*Carduelis carduelis*
Dunnock	*Prunella modularis*
Coal Tit	*Periparus ater*
Wren	*Troglodytes troglodytes*
Robin	*Erithacus rubecula*
Blue Tit	*Cyanistes caeruleus*
Blackbird	*Turdus merula*
Goldfinch	*Carduelis carduelis*

Common Name	***Scientific Name***
Great Tit	*Parus major*
Song Thrush	*Parus major*
Pheasant	*Phasianus colchicus*
House Martin	*Delichon urbicum (Amber)*
Mistle Thrush	*Turdus viscivorus*
Buzzard (overhead)	*Buteo buteo*

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 site to the proposed development is 7.1 km away (Rye Water valley/Carton SAC). 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. After consultation with DBFL Consulting Engineers, it was outlined that all surface water outfalls are to local field drainage, including existing drainage in the Athgoe Road. Specifically, there are 4 catchments within the subject site. Catchments 1 and 2 will share the same outfall to an existing drainage ditch on the subject site and will be attenuated to 11.67l/s. Catchment 3 will outfall to the existing surface water network in the Athgoe road and will be attenuated to 1l/s. Catchment 4 will outfall to the same existing drainage ditch as catchment 1 and 2 and will be attenuated to 3.83l/s. Further investigation is required to determine the precise pathway and ultimate destination of surface water drainage from the proposed residential development at Newcastle, Co. Dublin. Out of an abundance of caution, this report continues on the premise that all surface water drainage ultimately outfalls to the River Liffey, via the Griffeen Stream. In this case, the potential ZOI extends beyond the site, with the potential for downstream impacts to extend beyond the proposed development area via the surface water/foul water networks.

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. The Natura 2000 sites within 15km are seen in Figures 7 & 8. Watercourses, SACs and SPAs proximate to the proposed development are demonstrated in Figures 9 - 11. The potential hydrological pathways based on EPA Water Framework Directive nomenclature are seen in Figure 12. All Natura 2000 sites within 15km are listed in Table 1. The conservation objectives, qualifying interests, and the potential impact of the development on each European site and qualifying interest, are outlined in Table 2. There is no direct pathway to Natura 2000 sites beyond 15km.

Table 2. Proximity to designated sites of conservation importance

NATURA 2000 Site	Distance
Special Areas of Conservation	
Rye Water Valley/Carton SAC	7.1 km
Glenasmole Valley SAC	9.2 km
Wicklow Mountains SAC	10.2 km
Red Bog, Kildare SAC	11 km
South Dublin Bay SAC	19.3 km
North Dublin Bay SAC	22.1 km
Special Protection Areas	
Poulaphouca Reservoir SPA	12.5 km
Wicklow Mountains SPA	13.6 km
South Dublin Bay and River Tolka Estuary SPA	19.3 km

North Bull Island SPA	22.1 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			
IE001398	Rye Water Valley/Carton SAC	**OUT**	**Conservation Objectives** To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected. **Qualifying Interests** Petrifying springs with tufa formation (*Cratoneurion*) [7220] Narrow-mouthed Whorl Snail (*Vertigo angustior*) [1014] Desmoulin's Whorl Snail (*Vertigo moulinsiana*) [1016] **Potential Impact** The proposed development site is located within a suburban/agricultural area, 7.1 km from this SAC. There is no 'direct' or 'indirect' Source-Pathway-Receptor linkage between the proposed development site and the SAC. No potential impact is foreseen. There is no direct or indirect 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 are likely.**
IE001209	Glenasmole Valley SAC	**OUT**	**Conservation Objectives** To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected. **Qualifying Interests** Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) [6210] Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) [6410] Petrifying springs with tufa formation (*Cratoneurion*) [7220] **Potential Impact** The proposed development site is located within a suburban/agricultural area, 9.2 km from this SAC. There is no 'direct' or 'indirect' Source-Pathway-Receptor linkage between the proposed development site and the SAC. No potential impact is foreseen. There is no direct or indirect 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 are likely.**

Natura Code	Name	Screened In/Out	Details/Reason
IE002122	Wicklow Mountains SAC	**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** Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) [3110] Natural dystrophic lakes and ponds [3160] Northern Atlantic wet heaths with Erica tetralix [4010] European dry heaths [4030] Alpine and Boreal heaths [4060] Calaminarian grasslands of the Violetalia calaminariae [6130] Species-rich Nardus grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) [6230] Blanket bogs (* if active bog) [7130] Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*) [8110] Calcareous rocky slopes with chasmophytic vegetation [8210] Siliceous rocky slopes with chasmophytic vegetation [8220] Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] *Lutra lutra* (Otter) [1355] **Potential Impact** The proposed development site is located within a suburban/agricultural area, 10.2 km from this SAC. There is no 'direct' or 'indirect' Source-Pathway-Receptor linkage between the proposed development site and the SAC. No potential impact is foreseen. There is no direct or indirect 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 are likely.**
IE000397	Red Bog, Kildare SAC	**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** Transition mires and quaking bogs [7140] **Potential Impact** The proposed development site is located within a suburban/agricultural area, 11 km from this SAC. There is no 'direct' or 'indirect' Source-Pathway-Receptor linkage between the proposed development site and the SAC. No potential impact is foreseen. There is no direct or indirect pathway from this site to the SAC. The construction and operation of the

Natura Code	Name	Screened In/Out	Details/Reason
			proposed development will not impact on the conservation interests of the site. **No significant effects are likely.**
IE000210	South Dublin Bay SAC	**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/agricultural area, 19.3 km from this SAC. There is no 'direct' or Source-Pathway-Receptor linkage between the proposed development site and the SAC. Out of an abundance of caution, it is considered that there is an indirect hydrological pathway to this SAC via the proposed foul and surface water drainage strategy. Foul wastewater will discharge to Newcastle Pumping Station, which in turn discharges to the Rathcoole Interchange, and ultimately discharges to Ringsend Wastewater Treatment Plant (WwTP) which is operating within capacity[2]. The nearest surface water receptor is the Cornerpark Stream (WFD code: IE_EA_09L012100; EPA code: 09_1529), which is located c. 400m to the east of the Proposed Development site. Surface water drainage from the subject site will ultimately outfall to the Cornerpark Stream and then the Griffeen River, which in turn outfalls to the River Liffey. In this case, in the absence of mitigation measures, given the extensive distance (19.3km) to this SAC, settlement within drainage ditches, missing and dilution, any silt or pollutants will settle, be dispersed or diluted and will not impact on the qualifying interests of this SAC. 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 are likely.**
IE000206	North Dublin Bay SAC	**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]

Natura Code	Name	Screened In/Out	Details/Reason
			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] **Potential Impact** The proposed development site is located within a suburban/agricultural area, 22.1 km from this SAC. There is no 'direct' or Source-Pathway-Receptor linkage between the proposed development site and the SAC. Out of an abundance of caution, it is considered that there is an indirect hydrological pathway to this SAC via the proposed foul and surface water drainage strategy. Foul wastewater will discharge to Newcastle Pumping Station, which in turn discharges to the Rathcoole Interchange, and ultimately discharges to Ringsend Wastewater Treatment Plant (WwTP) which is operating within capacity[2] The nearest surface water receptor is the Cornerpark Stream (WFD code: IE_EA_09L012100; EPA code: 09_1529), which is located c. 400m to the east of the Proposed Development site. Surface water drainage from the subject site will ultimately outfall to the Cornerpark Stream and then the Griffeen River, which in turn outfalls to the River Liffey. In this case, in the absence of mitigation measures, given the extensive distance (22.1km) to this SAC, settlement within drainage ditches, missing and dilution, any silt or pollutants will settle, be dispersed or diluted and will not impact on the qualifying interests of this SAC. 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 are likely.**
Special Protection Areas			
IE004063	Poulaphouca Reservoir SPA	**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** Greylag Goose (*Anser anser*) [A043] Lesser Black-backed Gull (*Larus fuscus*) [A183] **Potential Impact** The proposed development site is located within a suburban/agricultural area, 12.5 km from this SPA. There is no 'direct' or 'indirect' Source-Pathway-Receptor linkage between the proposed development site and the SPA.

[2] https://www.water.ie/__uuid/eed266bd-5646-4b6a-bf9d-6ddb57049930/2020-IW-WWCR-Web-Version_Dublins.pdf

Natura Code	Name	Screened In/Out	Details/Reason
			No potential impact is foreseen. There is no direct or indirect 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 are likely.**
IE004040	Wicklow Mountains SPA	**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** Merlin (*Falco columbarius*) [A098] Peregrine (*Falco peregrinus*) [A103] **Potential Impact** The proposed development site is located within a suburban/agricultural area, 13.6 km from this SPA. There is no 'direct' or 'indirect' Source-Pathway-Receptor linkage between the proposed development site and the SPA. No potential impact is foreseen. There is no direct or indirect 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 are likely.**
IE0004024	South Dublin Bay and River Tolka Estuary SPA	**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/agricultural area, 19.3 km from this SPA. There is no 'direct' or Source-Pathway-Receptor linkage between the proposed development site and the SPA.

Natura Code	Name	Screened In/Out	Details/Reason
			Out of an abundance of caution, it is considered that there is an indirect hydrological pathway to this SPA via the proposed foul and surface water drainage strategy. Foul wastewater will discharge to Newcastle Pumping Station, which in turn discharges to the Rathcoole Interchange, and ultimately discharges to Ringsend Wastewater Treatment Plant (WwTP)[2]. The nearest surface water receptor is the Cornerpark Stream (WFD code: IE_EA_09L012100; EPA code: 09_1529), which is located c. 400m to the east of the Proposed Development site. Surface water drainage from the subject site will ultimately outfall to the Cornerpark Stream and then the Griffeen River, which in turn outfalls to the River Liffey. In this case, in the absence of mitigation measures, given the extensive distance (19.3km) to this SPA, settlement within drainage ditches, missing and dilution, any silt or pollutants will settle, be dispersed or diluted and will not impact on the qualifying interests of this SPA. In addition, given that the majority of the site has previously been cleared, is proximate to an active construction site. Further, given the distance between the subject site and this SPA (19.3 km), in the absence of mitigation, no significant impacts on the qualifying interests of this SPA are predicted via noise and vibration during the construction phase of development. 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	**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]

Natura Code	Name	Screened In/Out	Details/Reason
			Potential Impact The proposed development site is located within a suburban/agricultural area, 22.1 km from this SPA. There is no 'direct' or Source-Pathway-Receptor linkage between the proposed development site and the SPA. Out of an abundance of caution, it is considered that there is an indirect hydrological pathway to this SPA via the proposed foul and surface water drainage strategy. Foul wastewater will discharge to Newcastle Pumping Station, which in turn discharges to the Rathcoole Interchange, and ultimately discharges to Ringsend Wastewater Treatment Plant (WwTP)which is operating within capacity[2]. The nearest surface water receptor is the Cornerpark Stream (WFD code: IE_EA_09L012100; EPA code: 09_1529), which is located c. 400m to the east of the Proposed Development site. Surface water drainage from the subject site will ultimately outfall to the Cornerpark Stream and then the Griffeen River, which in turn outfalls to the River Liffey. In this case, in the absence of mitigation measures, given the extensive distance (22.3km) to this SPA, settlement within drainage ditches, missing and dilution, any silt or pollutants will settle, be dispersed or diluted and will not impact on the qualifying interests of this SPA. In addition, given that the majority of the site has previously been cleared and the subject site is proximate to an active construction site is not considered to be an important foraging or roosting ground for the bird species protected within this SPA. Further, given the distance between the subject site and this SPA (22.3 km), in the absence of mitigation, no significant impacts on the qualifying interests of this SPA are predicted via noise and vibration during the construction phase of development. 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**

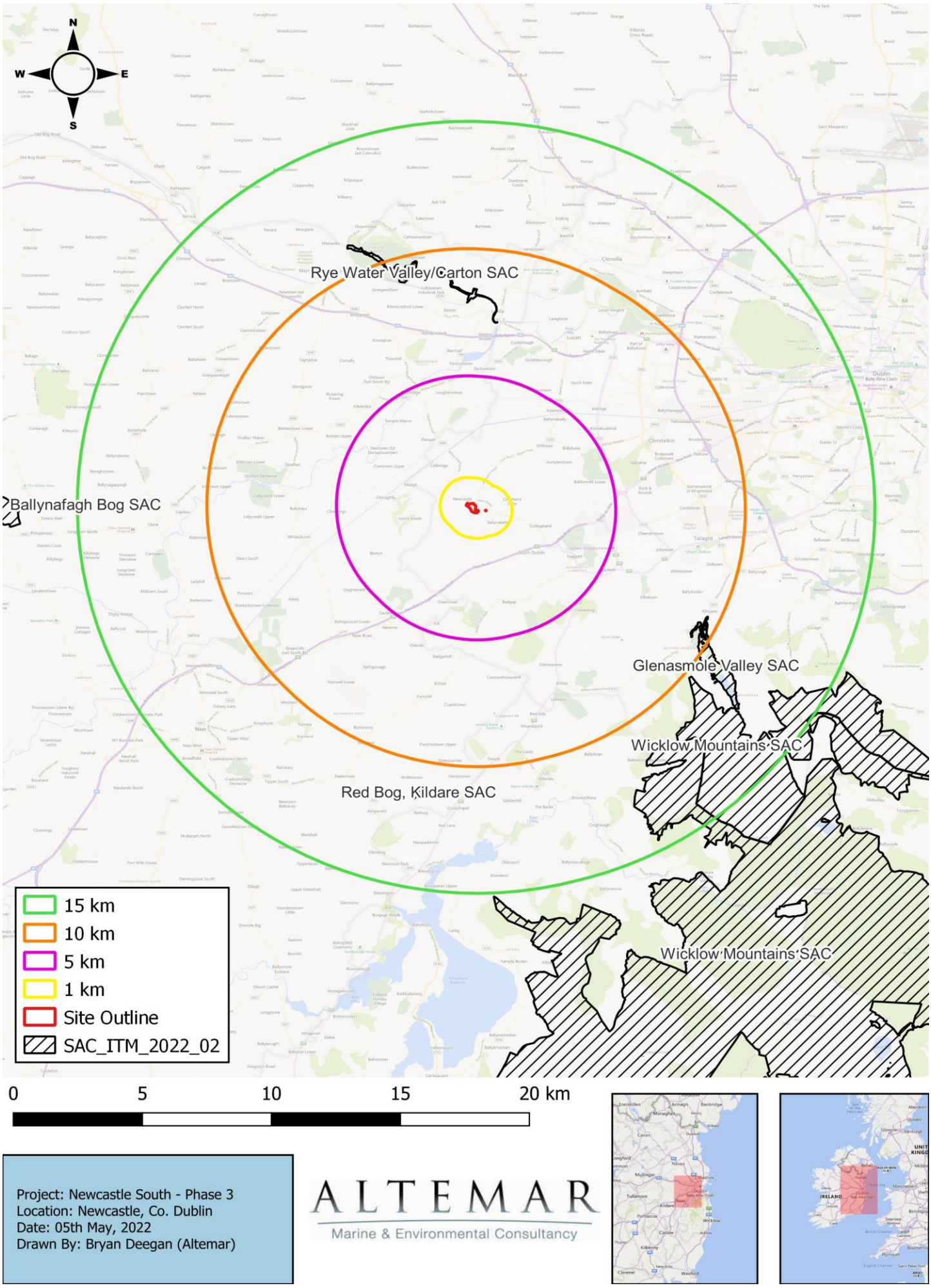


Figure 7. *Special Areas of Conservation (SAC) located within 15km of the proposed development*

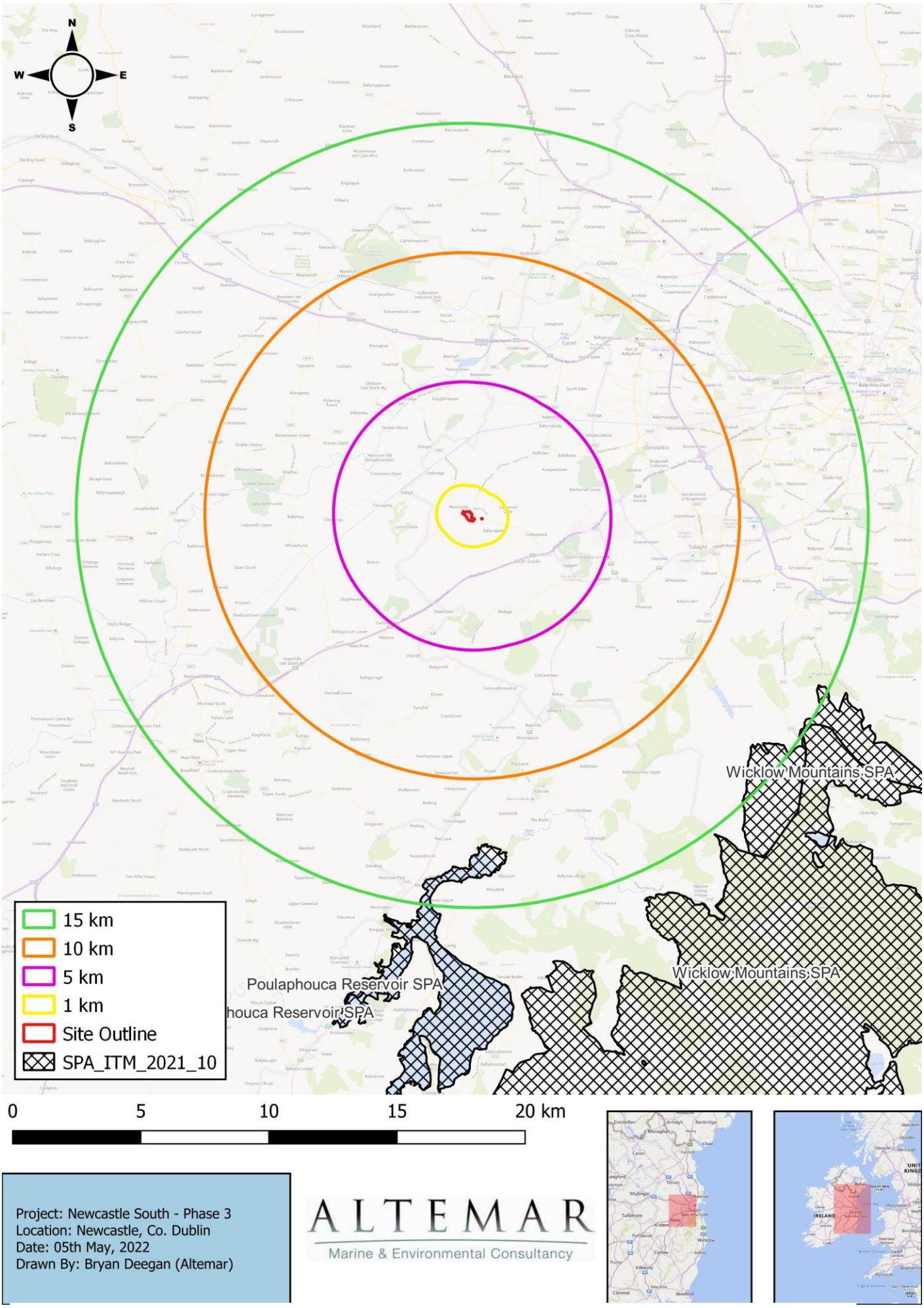


***Figure 8**. Special Protection Areas (SPA) within 15km of the proposed development*

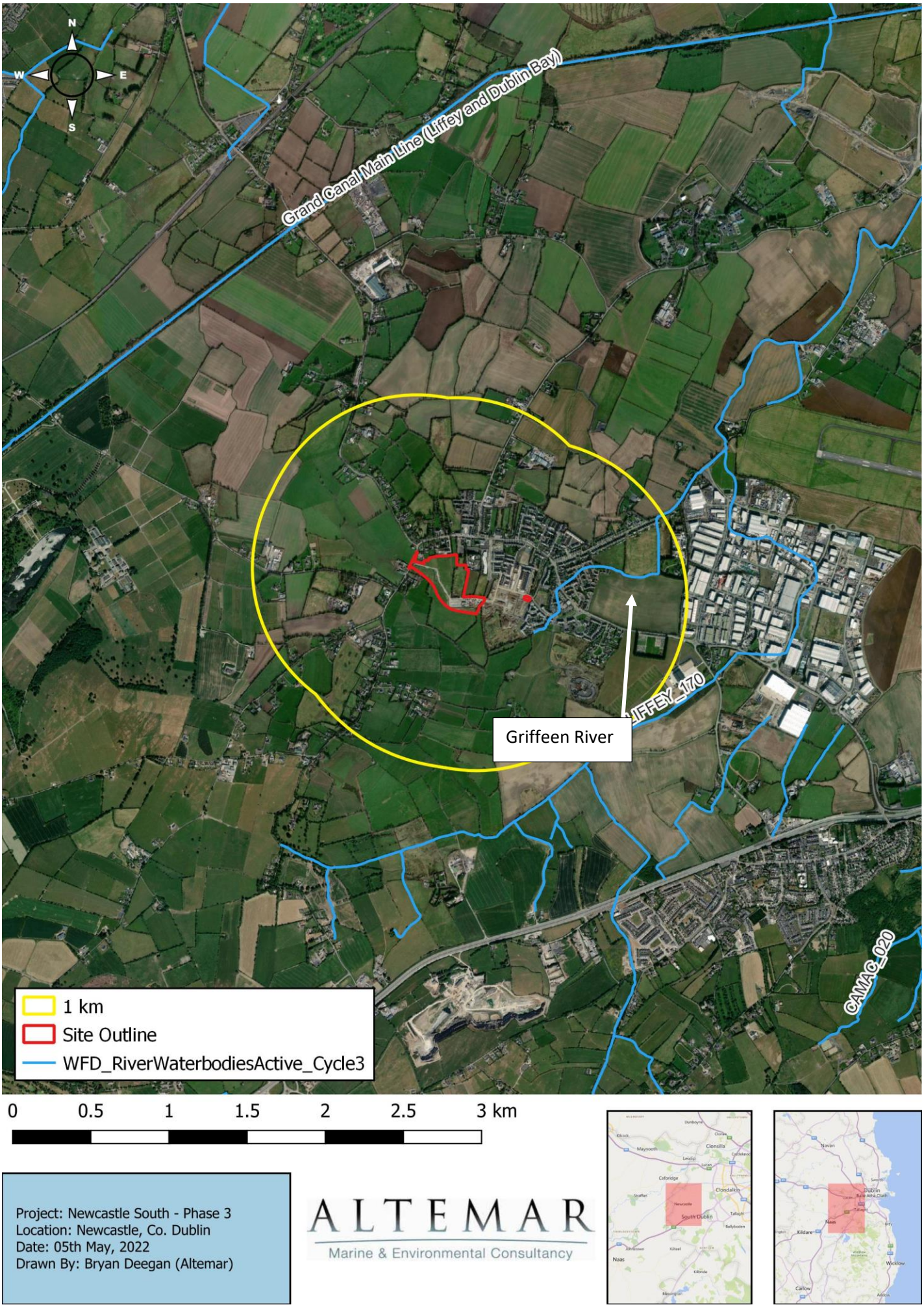


Figure 9. *Watercourses proximate to the proposed development site*

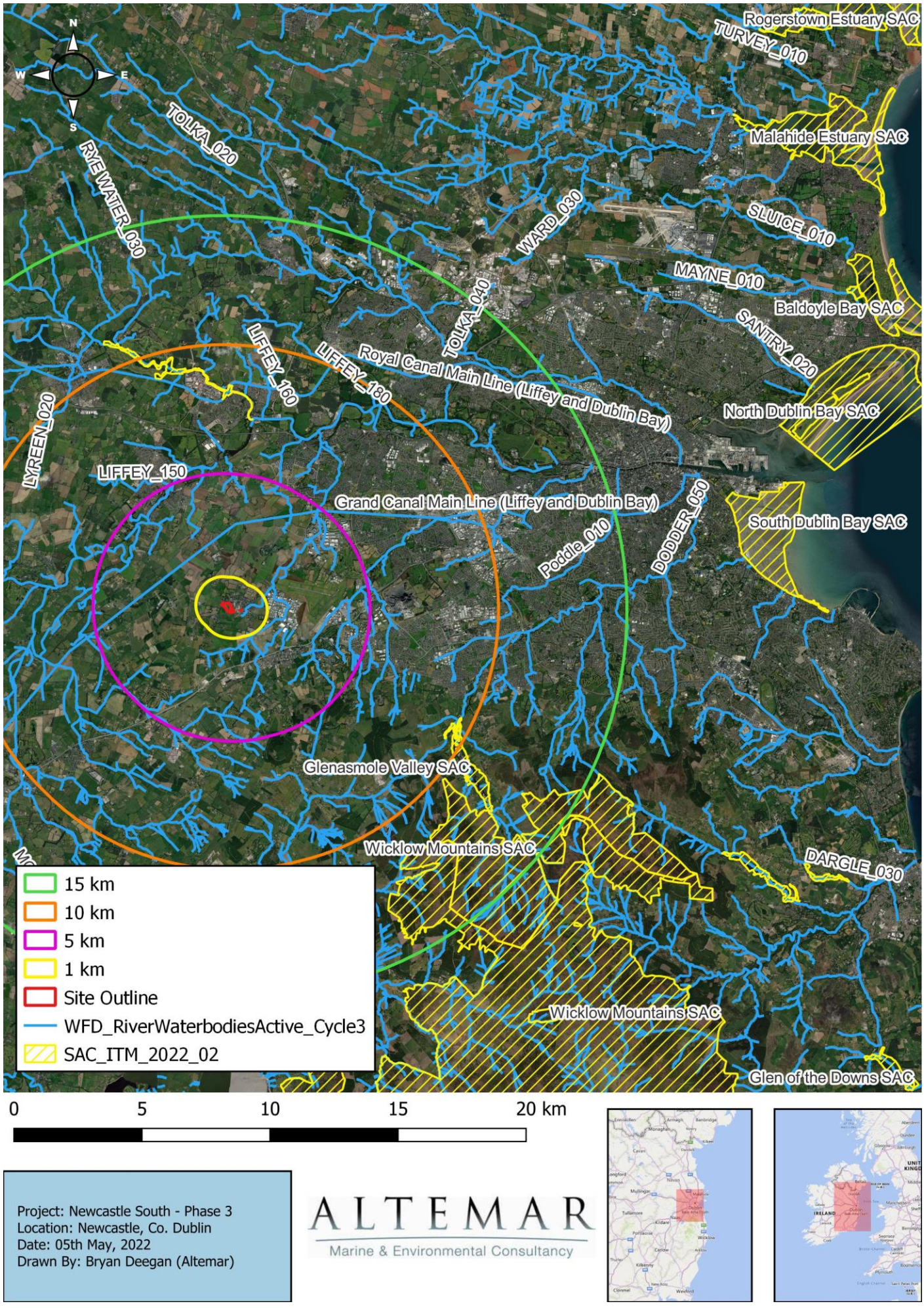


Figure 10. *Watercourses and SACs within and beyond 15km of the proposed development site*

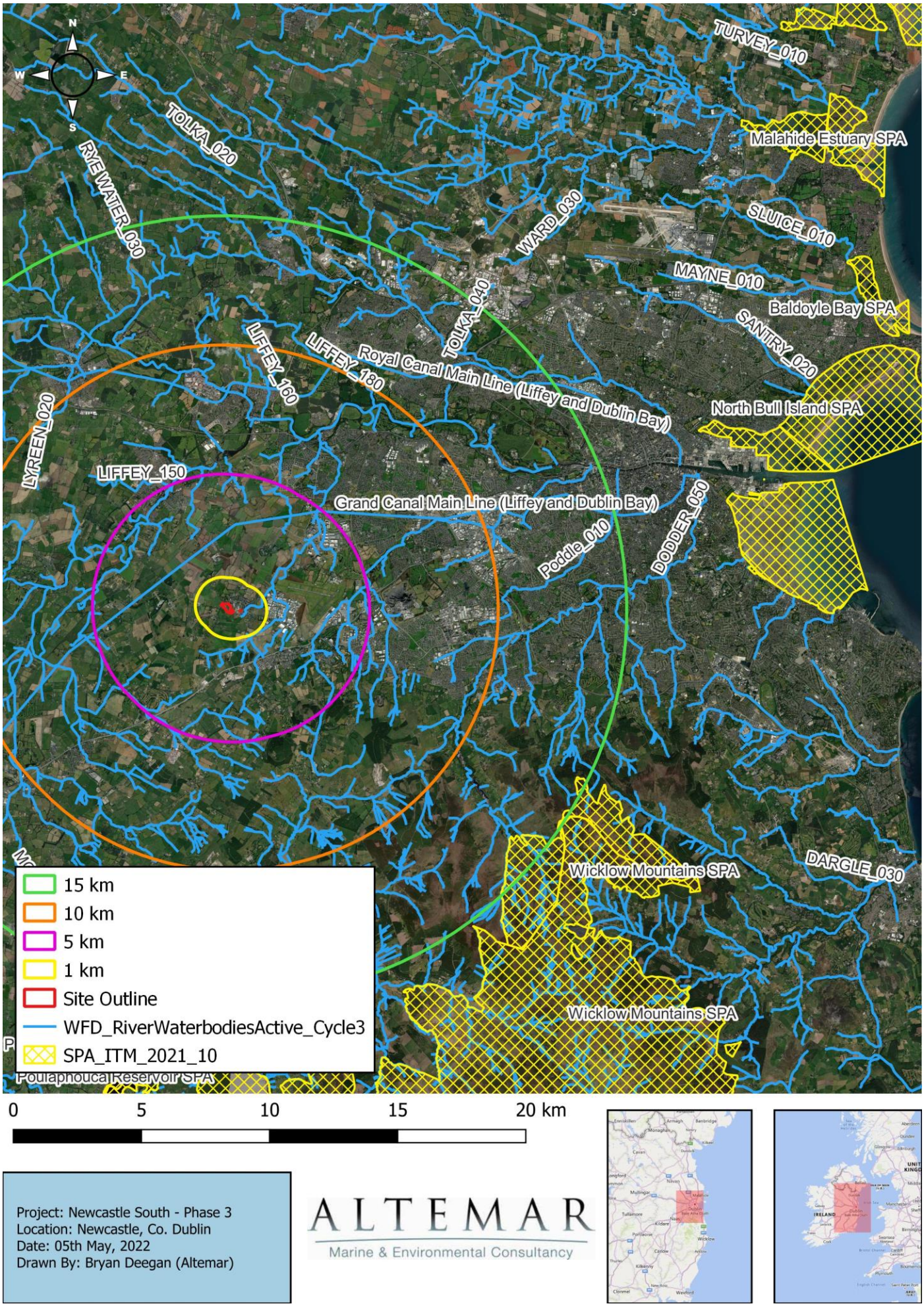


Figure 11. *Watercourses and SPAs within and beyond 15km of the proposed development site*

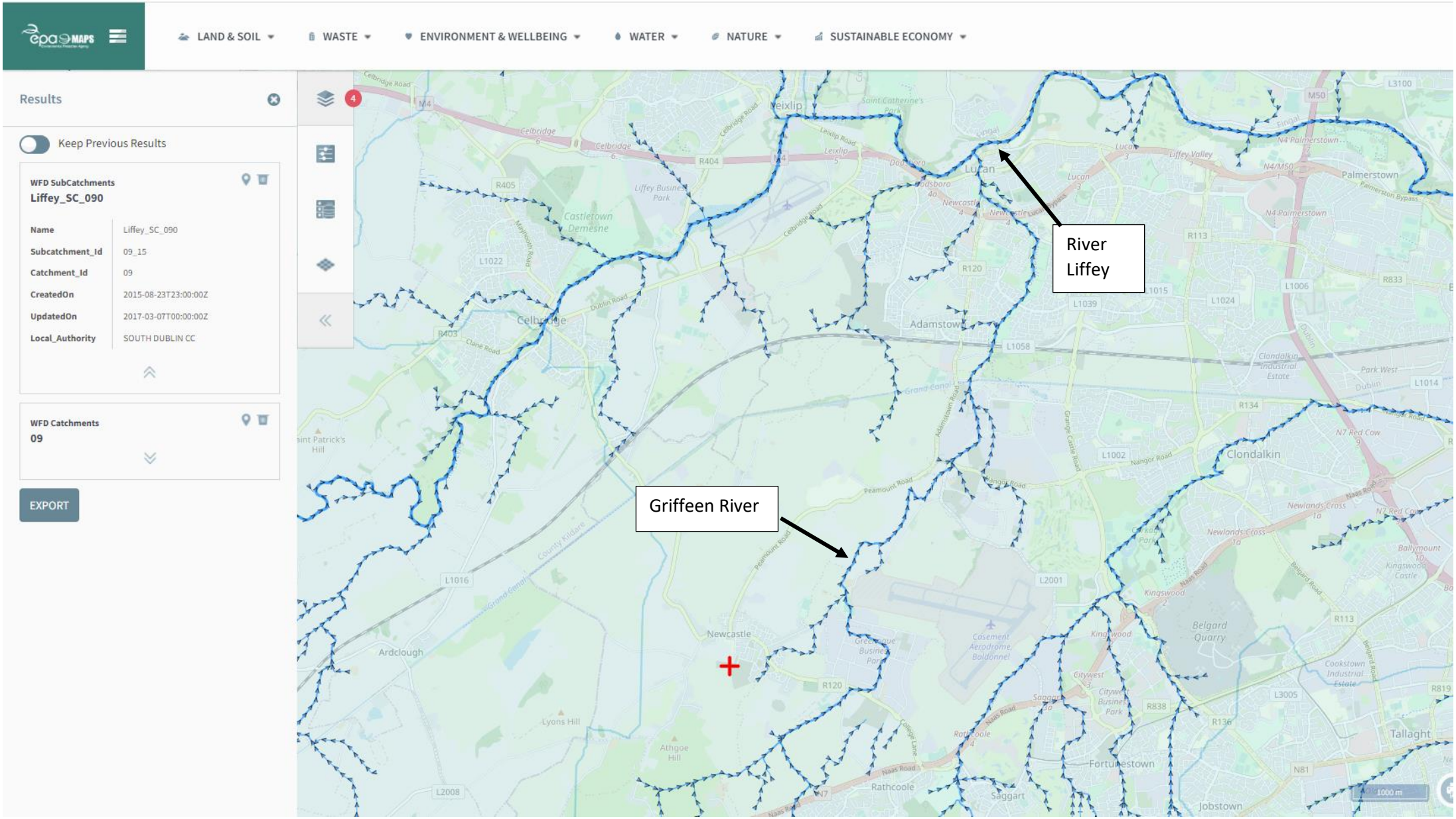


Figure 12. *Sub-catchments and river flow direction of watercourses proximate to the proposed development site (red cross) (EPA WFD maps)*

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
SD21A/0311	Lands at Main Steet, Newcastle, Co. Dublin	Change of use of the permitted cafe unit (approx. 225sq.m net) as granted under ref. S020A/0037 to use as a pharmacy (approx. 251sq.m net) and all associated internal and external layout alterations to facilitate this change of use; internal layout changes at ground floor include the removal of the internal escape stair and internal lobby from the permitted layout; inclusion of an accessible WC at first floor level within the permitted community use space (area not affected by subject application); external alterations include amendments to the external glazing to replace permitted access doors with solid glazing (no alteration to appearance) and the provision of an external plant space at first floor level with a 1200mm high louvre screen.
SD20A/0343	Lands at Main Street, Newcastle, Co. Dublin	Amendments to a previously permitted development (Reg SD20A/0037); relocation of the staff welfare and ancillary office accommodation to a new approx. 192sq.m first floor mezzanine level within the permitted anchor supermarket unit; relocation of the staff welfare and office accommodation to mezzanine level will allow for additional warehouse floor space at the ground floor level (approx. 150sq.m increase; there is no proposed increase to the net retail floor space; external amendments to the permitted elevations including glazing and material changes; 2 roof lights will also be provided at roof level; no other changes are proposed to the anchor supermarket unit or the remainder of the development permitted under Reg. SD20A/0037
SD20A/0037	Main Street, Newcastle, Co. Dublin	Demolition of 3 existing structures on site (total c.226sq.m) comprising of 1 habitable house and 2 associated outbuildings/sheds (permitted under Ref. ABP-305343-19), and the construction of 1 double storey (c.9.2m overall height) retail development in the form of a convenience supermarket (GFA c.1,759sq.m); 1 two storey mixed-use building (c.10.7m overall height) comprising of a café (c.225sq.m) at ground floor and a community centre at the first floor (c.140sq.m) with associated ground floor access (total GFA c.468sq.m); an ESB sub-station (c.22sq.m); the anchor supermarket unit will provide for a net retail sales area of c.1,222sq.m; a warehouse of c.200sq.m; welfare area of c.190sq.m including ancillary office accommodation; a delivery and loading dock; service yard; customer lobby and wc and entrance lobby; the development shall also provide for 98 car parking spaces and 50 bicycle parking spaces; advertising structures and signage (totalling c.81sq.m); new pedestrian and cyclist connections; public realm areas; refuse storage; a trolley shelter; new priority controlled junction at Main Street; a new access road and shared pedestrian/cyclist greenlink from Main Street (permitted under Ref. ABP-305343-19); vehicular entrances to the surface car park and service yard; all associated site development, site services and landscape works at Lands at Main Street, Newcastle, Co. Dublin, bordered by Main Street to the north, Orchard Grove to the east, greenfield land to the south and residential properties fronting Main Street to the west (new road will be adjacent to 1 Main Street, Newcastle, Co. Dublin.)
SD22A/0045	St. Finians Way, Main Street, Newcastle, Co. Dublin	Construction of 6 three bedroom dwelling houses; construction of proposed access road and footpaths; provision of car parking facilities to serve the proposed development which shall connect into existing adjoining foul sewer network; construction of a water surface sewer network to serve the proposed development including the connections/amendments to the existing adjoining surface water network; the provision of watermain to serve the proposed development and connection to existing adjoining water main; the provision of all necessary utility services and all ancillary site works
SD21A/0247	Main Street, Newcastle, Co. Dublin	Demolition of existing derelict dwelling and the construction of a replacement two storey, four bedroom detached dwelling (169.97sq.m) together with all associated landscape, boundary, site and development works.

SD20A/0186	Newcastle South & Ballynakelly, Newcastle, Co. Dublin	Option of the inclusion of an ancillary single storey garden room structure (c.12.5sq.m) in gardens of permitted dwellings under planning Reg. Ref. ABP-305343-19
SD20A/0178	Newcastle South, Newcastle, Co. Dublin	Amendments to the development permitted under Reg. ABP 305343-19 at Newcastle South (development to be known as Graydon) as required under Condition 6(d) of An Bord Pleanala's decision. Amendments consist of: (a) re-alignment of Graydon Drive; (b) provision of 9 three bedroom two storey houses as previously proposed and omitted by Condition 6(d) of permission Reg. ABP 305343-19; (c) extension of Graydon Row by 4m and the provision of 1 additional three bedroom, two storey terraced house; (d) minor revisions to the positioning of 6 houses, necessitated by re-alignment of the road and (e) all associated and ancillary works associated with the development. Proposed amendment will result in the provision of 16 houses where there were 15 previously proposed.
SD20A/0312	Parson's Court, Ballynakelly, Newcastle, Co. Dublin	Construction of 9 residential units distributed in 2 blocks, three storey in height reducing to 2 storey end of terrace; Block A consisting of 4 3-bed duplex apartments with private rear gardens at ground level, and 2 3-bed apartments at second floor level with private balconies; Block B: 2 3-bed duplex apartments with private rear gardens at ground level, and 1 3-bed apartment at second floor level with private balcony; new pedestrian access between Parson's Court and Burgage Green and all ancillary site development works. Total floor area of the proposal is 1025.6sq.m
SHD3ABP-305343-19	Newcastle South & Ballynakelly, Newcastle, Co. Dublin	1) The demolition of 5 structures on site, total area measuring 359sq.m, comprising 2 habitable dwellings and 3 associated outbuildings/sheds located to the northwest of the site; (2) development of 406 residential homes; (3) a childcare facility (518sq.m GFA); (4) 1 commercial unit (67.7sq.m GFA); (5) reservation of a school site (1.5ha); (6) new vehicular, cycle and pedestrain access from Main Street; (7) continuation of Newcastle Boulevard forming part of a new east-west link street; (8) a new Public Park (2ha); (9) pocket parks and greenway together with associated internal access roads, pedestrain and cycle paths and linkages; (10) 1 single storey marketing suite (81sqm) and signage (including hoarding) during the construction phase of development only and (11) all associated site and development works.The overall site comprises lands to the south of Main Street (c.15ha) together with 3 additional infill sites at the corner of Burgage Street and Newcastle Boulevard (c. 0.8ha); No. 32 Ballynakelly Edge (c.0.05ha); and Ballynakelly Rise (c.0.18ha).

In relation to Planning Ref. **SHD3ABP-305343-19**, a Screening Report for Appropriate Assessment has been prepared by OPENFIELD Ecological Services to accompany this planning application. This report concludes with the following:

'*This project has been screened for AA under the appropriate methodology. It has found that significant effects are not likely to arise, either alone or in combination with other plans or projects that will result in significant effects to the integrity of the Natura 2000 network*'

In relation to Planning Ref. **SD20A/0037**, a Screening Report for Appropriate Assessment has been prepared by OPENFIELD Ecological Services to accompany this planning application. This report concludes with the following:

'*This project has been screened for AA under the appropriate methodology. It has found that significant effects are not likely to arise, either alone or in combination with other plans or projects to the Natura 2000 network. This conclusion is based on best scientific knowledge*.'

An evaluation of the projects in the vicinity of the proposed development through an an assessment of planning documentation and observations during fieldwork indicated that there are no significant projects are proposed or currently under construction that could potentially cause in combination effects on Natura 2000 sites.

The Newcastle Local Area Plan was adopted by the Elected Representatives of South Dublin County Council on the 12th November 2012 and came into operation on the 10th December 2012. On the 23rd October 2017, by resolution, the Local Area Plan was extended for further period (in accordance with Section 19 of

the Planning and Development Act 2000, as amended). The Local Area Plan will now expire on 9th December 2022. The Appropriate Assessment Screening Report for the Newcastle Local Area Plan concluded that 'This screening report has evaluated the draft Newcastle Local Area Plan to determine whether or not significant negative impacts on Natura 2000 sites are likely to arise by virtue of the Plan's implementation. The report finds that the Plan has been formulated to ensure that developments and effects arising from the Plan, either individually or in combination with other plans and projects, shall not give rise to significant effects on the integrity of any Natura 2000 site.

The Appropriate Assessment procedure for this proposed Plan is therefore concluded at this Screening Stage and a detailed (Stage 2) Appropriate Assessment is not required.'

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, not significant and localised. It is concluded that no significant effects on Natura 2000 sites will be seen as a result of the proposed development alone or combination with other projects. There is no direct pathway from the proposed development site to Natura 2000 sites. **No projects in the vicinity of the proposed development would have a significant in combination effect on Natura 2000 sites.**

Conclusions

Altemar have carried out an appropriate Assessment Screening Report for the proposed project and conclude that no Natura 2000 sites are within the zone of influence of this development. Having taken into consideration the proposed project, the effluent discharge from the proposed development works, the distance between the proposed development site to designated conservation sites, lack of direct hydrological pathway or biodiversity corridor link to conservation sites and the settlement of silt over the intervening distance and dilution effect with other effluent and surface runoff, it is concluded that this 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 features of interest of Natura 2000 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 Natura 2000 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. There is no possibility of significant impacts on Natura 2000 sites, features of interest or site specific conservation objectives.

Accordingly, having carried out the Stage 1 Appropriate Assessment Screening, the competent authority may determine that a Stage 2 Appropriate Assessment of the Proposed Development is not required as it can be excluded, on the basis of objective scientific information following screening under the Habitats Directive 92/43/EEC (as amended, that the Proposed Development, individually or in combination with other plans or projects, will have a significant effect on any European site.

Findings of No Significant Effects Report

Details of Project	Appropriate Assessment Screening for a proposed strategic housing development at Newcastle South, Newcastle, Co. Dublin.
Name and Location of NATURA 2000 Sites Within 15km / outside 15km with a potential pathway	Rye Water Valley/Carton SAC Glenasmole Valley SAC Wicklow Mountains SAC Red Bog, Kildare SAC South Dublin Bay SAC North Dublin Bay SAC Poulaphouca Reservoir SPA Wicklow Mountains SPA South Dublin Bay and River Tolka Estuary SPA North Bull Island SPA
Project Description	Proposed strategic housing development at Newcastle South, Newcastle, Co. Dublin.
Is the Project directly connected with the management of the NATURA 2000 site?	No
Details of any other projects or plans that together with this project could affect the NATURA 2000 site	None
The assessment of significant effects	
Describe how the project is likely to affect the NATURA 2000 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	Having taken into consideration the effluent discharge from the proposed development works, 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 this development that 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

The following references were used in the preparation of this AA screening report.

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
6. Guidance document on the implementation of the birds and habitats directive in estuaries and coastal zones with particular attention to port development and dredging; http://ec.europa.eu/environment/nature/Natura2000/management/docs/guidance_doc.pdf
7. The Status of EU Protected Habitats and Species in Ireland. http://www.npws.ie/publications/euconservationstatus/NPWS_2007_Conservation_Status_Report.pdf
8. NPWS (2021) Conservation objectives for Rye Water Valley/Carton SAC [001398]. Generic Version 8.0. Department of Housing, Local Government and Heritage.
9. NPWS (2021) Conservation objectives for Glenasmole Valley SAC [001209]. Generic Version 8.0. Department of Housing, Local Government and Heritage.
10. NPWS (2017) Conservation Objectives: Wicklow Mountains SAC 002122. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.
11. NPWS (2019) Conservation Objectives: Red Bog, Kildare SAC 000397. Version 1. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht.
12. NPWS (2022) Conservation objectives for Poulaphouca Reservoir SPA [004063]. Generic Version 9.0. Department of Housing, Local Government and Heritage.
13. NPWS (2022) Conservation objectives for Wicklow Mountains SPA [004040]. Generic Version 9.0. Department of Housing, Local Government and Heritage.
14. NPWS (2013) Conservation Objectives: South Dublin Bay SAC 000210. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
15. NPWS (2015) Conservation Objectives: South Dublin Bay and River Tolka Estuary SPA 004024. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
16. NPWS (2013) Conservation Objectives: North Dublin Bay SAC 000206. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
17. NPWS (2015) Conservation Objectives: North Bull Island SPA 004006. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.